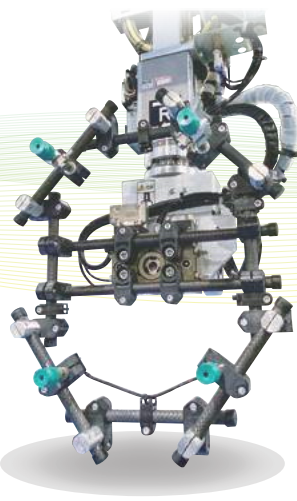
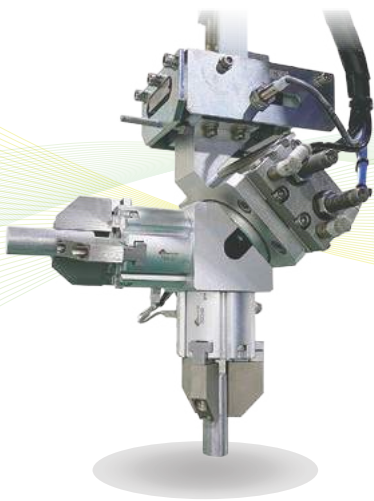
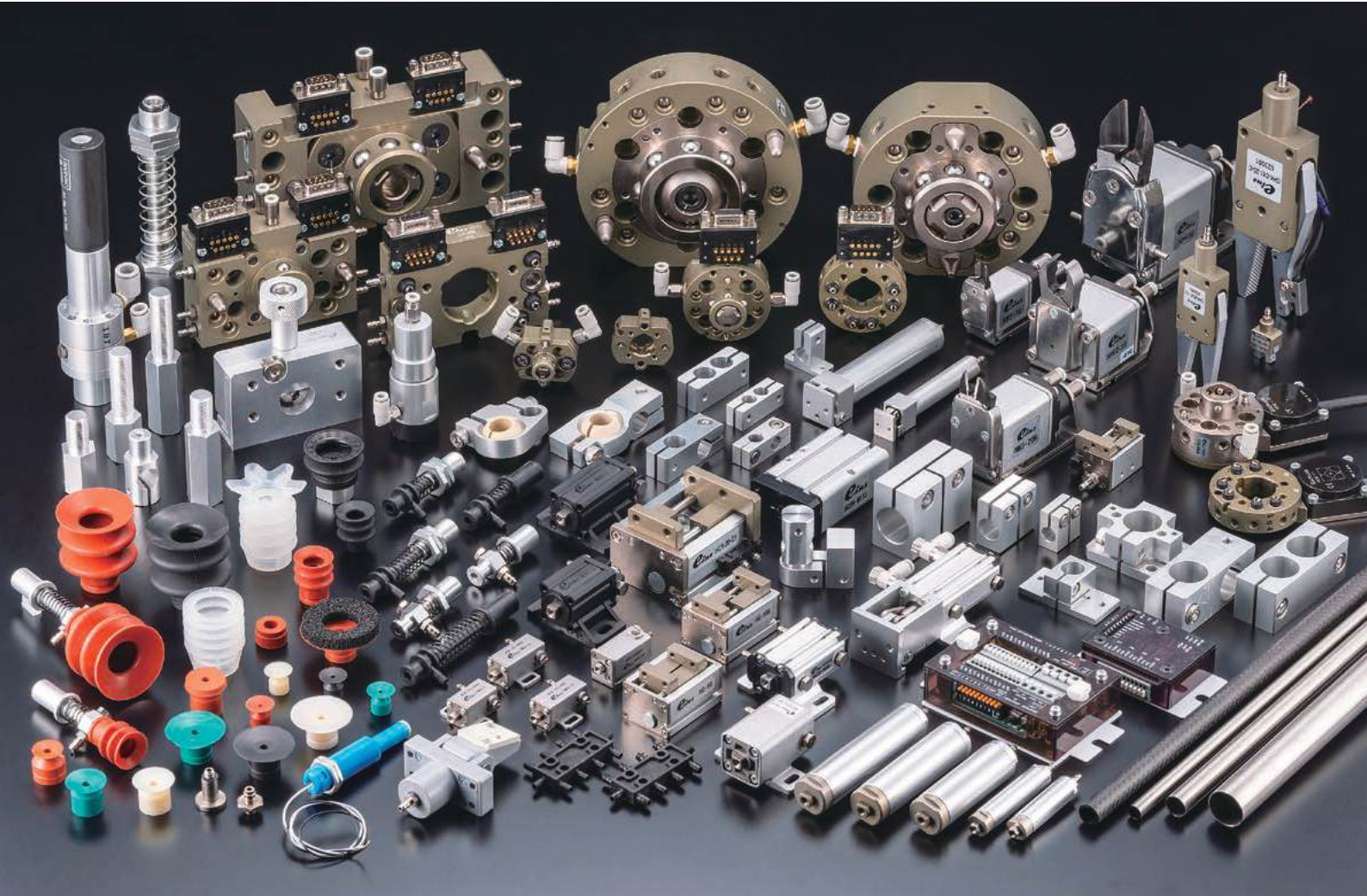




# Robot End of Arm Tooling

Components Catalog **Vol.7**



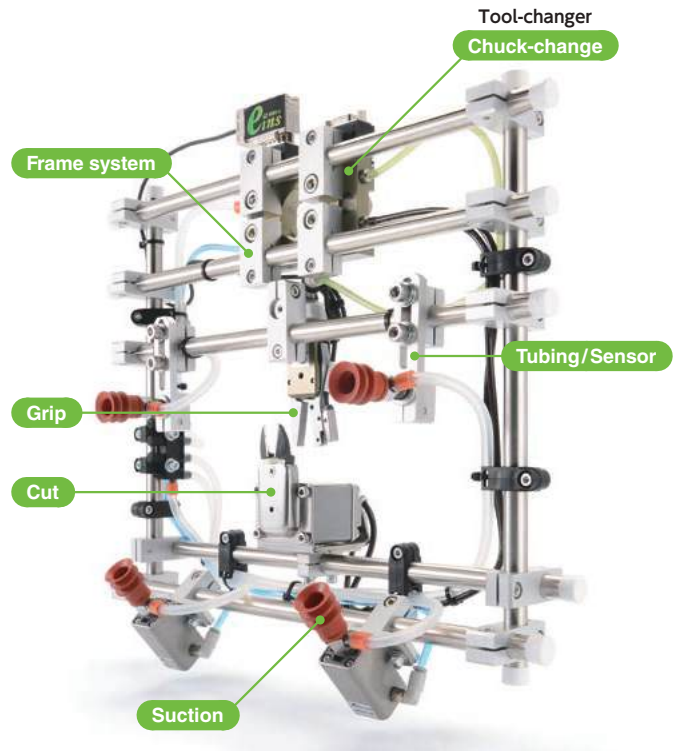
# 3 Features of EINS



**1** Extensive experience!

Experts of EINS chuck-plate will teach you how to assemble.

- Extensive experience with over 16,000 types.
- Reliable management by 3D design.



**2** Extensive parts for robo-hand more than 1,600 kinds!  
EINS can cover all!

<p><b>Grip</b></p>	<p><b>Suction</b></p>
<p><b>Cut</b></p>	<p><b>Tubing/Sensor</b></p>
<p><b>Steel-Sheet Tool</b></p>	<p><b>Module</b></p>

**3** Field leader of Chuck tool changer!  
Faster, Easier and inexpensively Chuck-change!

- For unloader

- For articulated robot

**Sharply reduce labor and time for mold change!**



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- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

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- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

- Jungle Gym
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- Rectangular Tube
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**Pneumatic Components / Sensors**

- Pneumatic Components
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**Lightweight Parts Series**

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**By Industry**

- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

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Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

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# Information about new product



**Quick Chuck Change Manual**

Order code No.	TYPE
140382	OM-50
140383	OM-50I
140384	OM-90
140385	OM-90I
140388	OMR-CBX20



**Air Opion Parts**

Order code No.	TYPE
140391	OX-SCA-10
140392	OX-SCIA-10



**Tool Changer After Parts**

Order code No.	TYPE
230117	XL0054-206A
110739	LX0219-203
152755	PHI.11
200320	UR10-10
221487	WRBC15-8-3
131773	NPB10



**Tool Changer For Articulated Robot**

Order code No.	TYPE
140373	OX-120A
140374	OX-120AI
140314	OX-230A
140319	OX-230AI



**Prove Connector**

Order code No.	TYPE
140393	OXR-MPS0508
140394	OXR-MPS1304
140395	OXR-MPS0508-I
140396	OXR-MPS1304-I
140397	OXR-PCS



**Micro Mini Cylinder (Pull)**

Order code No.	TYPE
200260	UMCD-5T
200261	UMCD-10T
023357	CPUM-10
023358	CPUM-11



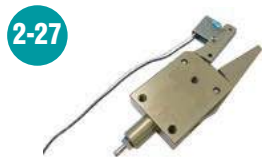
**Mini Cylinder - Side Type**

Order code No.	TYPE
123929	MCDP-10
123930	MCDP-20
123931	MCDP-AJBKT



**Container Cylinder W/ Guided - Double Action**

Order code No.	TYPE
131686	NGCYL20 * 20
131687	NGCYL20 * 40
131688	NGCYL20 * 50
131689	NGCYL20 * 75
131690	NGCYL20 * 100



**Runner Chuck (With Limit SW)**

Order code No.	TYPE
023456	CHK-ES-08-C1
023457	CHK-EM-12-C1
023458	CHK-EL-12-C1
023459	CHK-EX-20-C1



**Runner Chuck EMR (W/O Sensor)**

Order code No.	TYPE
023440	CHK-EMR-12
023443	CHK-EMR-CPE



**Runner Chuck Buffer Unit**

Order code No.	TYPE
023439	CHK-BU



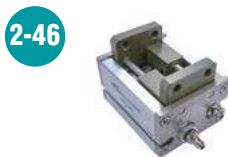
**Pipe Combination Chuck - Grip**

Order code No.	TYPE
090262	J25410G-40
090263	J25410G-30



**Three Claws Chuck**

Order code No.	TYPE
197258	TCC-16
197259	TCC-25
197260	TCC-32



**Parallel Chucks 20st**

Order code No.	TYPE
073318	HC-20
073319	HC-20S



**Aluminum LAMIZIP**

Order code No.	TYPE
002407	AL-22



**Suction Cups - Silicon (Vaccum)**

Order code No.	TYPE
042095	EPJG-2-S
042096	EPJG-4-S
042097	EPJG-2-F-RA
042098	EPJG-4-F-RA
042099	EPJG-6-F-RA
042100	EPJG-8-F-RA



**Outer Stem Attachment Head**

Order code No.	TYPE
042111	ETN-PS-2A-M5
042112	ETN-PS-10-M5



**Suction Cups - Bellows - Silicon**

Order code No.	TYPE
042101	EPCG-3-S



**Suction Cups - Multistage Bellows - Silicon**

Order code No.	TYPE
042102	EPLG-15-S5
042103	EPLG-20-S5



**Suction Cups - Star-shaped Pouch - Silicon**

Order code No.	TYPE
042107	EPMG-56L-S4
042108	EPMG-24S-S4
042109	EPMG-40S-S4
042110	EPMG-56S-S4



Please refer to the relations pages for more information about the products.

Example) 1-7 → Please refer to Page 1-7.

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Suction Cups • Pouch • 2 stage Bellows

注文コードNo.	TYPE
042104	EPNG-132B-S4
042105	EPNG-133B-S4
042106	EPNG-134B-S4

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Non-Contact Suction Pad

注文コードNo.	TYPE
042113	ECOPS-40-Y
042114	ECOPS-60-Y
042115	ECOPS-80-Y

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Resin Suction Stem • Mini

注文コードNo.	TYPE
211144	VFILPL-SS-5
211145	VFILPL-SS-10
211146	VFILPL-SS-20
211147	VFILPL-SS-30

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Resin Suction Stem • Small

注文コードNo.	TYPE
211148	VFILPL-S-5
211149	VFILPL-S-10
211150	VFILPL-S-20
211151	VFILPL-S-30

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Air Ejectors

Order code No.	TYPE
042116	ESVP10-A
042129	ESVP10-A-20
042117	ESVP-A-PA
010749	B1.5/60-MU65-N6-G-F2-38M
010750	B1.5/60-MU80-N6-G-F2-38M
042118	ESVP-A-SA

Order code No.	TYPE
042119	ESVP-FILT
042130	ESVP10-BKTJT12
042131	ESVP10-BKTJT20
042132	ESVP10-SEAL
042133	ESVP10-NOZL-UT

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Mini Air Nipper • W/ Blade Open Adjust Mechanism

Order code No.	TYPE
131722	NW3-35-BAST
131723	NW3-35R-BAST
131724	NW3-20-BAST
131725	NW3-20R-BAST

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Nipper Adjustment Bracket

Order code No.	TYPE
131732	NW-ADJBKT
131770	NW-MOUNT12-20

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Mini Air Nipper • HNW

Order code No.	TYPE
073301	HNW-10
073302	HNW-101
073303	HNW-10R
073304	HNW-20
073305	HNW-201
073306	HNW-20-V001S
073307	HNW-20-01C
073308	HNW-20R

Order code No.	TYPE
073309	HNW-20R-V001S
073310	HNW-35
073311	HNW-35-V001S
073312	HNW-35-01C
073313	HNW-35R
073314	HNW-35R-V001S
073355	HNW1-50
073356	HNW1-50R

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Rotation BRT (For NR Nipper)

Order code No.	TYPE
131712	NP-RTB-NR10
131713	NP-RTB-NR20
131714	NP-RTB-NR30

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Sprue Cut Unit

Order code No.	TYPE
131717	NS20UR

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Robot Hand

Order code No.	TYPE
171372	RHK10-150
171373	RHK10-200
171374	RHK10-250
171375	RHK10-FA
171376	RHK10-FB

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Pipe Fixtures

Order code No.	TYPE
102051	KQ2L06-M6A
101596	KQ2T04-00A
101597	KQ2T06-00A
100817	KCH04-M5
100818	KCH06-M5

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Limit Switch • Sensor

Order code No.	TYPE
250006	Z-15GW55-B
002433	ACH02LN
002434	ACH02LS

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Tool • Static Elimination

Added the convenient tools for assembling on the robot. Add the static elimination parts when extracting and releasing the work piece. For details, see section 9-8

For specifics on the new parts. Please access our home page of Our company business.

Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

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Information

Various Products Information

# Notice of specification changes

## ▶ Product of specification change

Order Code No.	Product before change	Part Name	→	Order Code No.	Specification	Part Name	Detailed contents of change	Page
140311	OX-35A	Tool changer for Articulated robot · robot side	→	140398	OX-35B	Tool changer for Articulated robot · robot side	Change inside piston	1-27
140312	OX-35AT	Tool changer for Articulated robot · robot side	→	140399	OX-35BT	Tool changer for Articulated robot · robot side		1-29
131281	NCON-CP-06	Pad · for mini container cylinder	→	131677	NCON-CP-06A	Pad · for mini container cylinder	Change in shape of pad	2-25
131603	NW-50	Mini Air Nipper	→	131771	NW1-50	Mini Air Nipper	Blade fixing method change	4-8
131604	NW-50R	Mini Air Nipper	→	131772	NW1-50R	Mini Air Nipper		4-8
041955	EG-NW50	Mini Air Nipper Replacement Blades	→	042134	EG1-NW50	Mini Air Nipper Replacement Blades		4-17
041956	EG-NW50R	Mini Air Nipper Replacement Blades	→	042135	EG1-NW50R	Mini Air Nipper Replacement Blades		4-17
131045	N01913-104	Connector plate25·D	→	131408	N01913-104	Connector plate25·D	Change in material and thickness	5-37
131047	N01913-106	Connector plate25·F	→	131410	N01913-106	Connector plate25·F	Change in material, thickness and shape	5-37
131051	N01913-301	Connector plate25·A	→	131414	N01913-301	Connector plate50·A	Change in material and thickness	5-37
050794	FCK1-1006	Sliding holder(mini)	→	054323	FCK1-1006	Sliding holder	Change of material treatment	5-50
000012	AZ8166	Limit Switch	→	073334	HL-5300	Limit Switch	Change of manufacturer	6-18
371677	AX-139 (SUPER-X8008 135ML)	Adhesive cemedine 135ML	→	002481	AX-250 (SUPER-X8008 135ML)	Adhesive cemedine 135ML	Substitute product due to discontinuation of production	2-52 9-8
054352	FS600-3	Lead free solder	→	073361	HS-304	Lead free solder	Change of manufactured	9-6



# Notification of changes to sales methods and completing sales order.

► The following module (set) is changed from set sale to individual item sale.

Order Code No.	Name	TYPE	Page
<b>042024</b>	Base frame for jungle gym	<b>EFCK-2500B</b>	<b>5-28</b>
<b>041664</b>	Base frame for jungle gym $\phi$ 8	<b>EFCK-1005</b>	<b>5-28</b>
<b>041662</b>	Base frame for jungle gym $\phi$ 8	<b>EFCK-1003</b>	<b>5-28</b>
<b>041663</b>	Base frame for jungle gym $\phi$ 8	<b>EFCK-1004</b>	<b>5-28</b>
<b>041666</b>	Base frame for jungle gym $\phi$ 20	<b>EFCK-2003</b>	<b>5-28</b>
<b>041670</b>	Base frame for jungle gym $\phi$ 20	<b>EFCK-2005</b>	<b>5-28</b>
<b>041672</b>	Base frame for jungle gym $\phi$ 20	<b>EFCK-2501</b>	<b>5-28</b>
<b>041673</b>	Base frame for jungle gym $\phi$ 20	<b>EFCK-2502</b>	<b>5-28</b>
<b>041686</b>	Base frame for let's joint	<b>EFCK-7500</b>	<b>5-39</b>
<b>041689</b>	Base frame for let's joint	<b>EFCK-7600</b>	<b>5-39</b>
<b>041692</b>	Base frame for let's joint	<b>EFCK-8000</b>	<b>5-39</b>
<b>041684</b>	Base frame for let's joint	<b>EFCK-7001</b>	<b>5-39</b>
<b>110571</b>	Base frame for let's joint	<b>LSM-003</b>	<b>5-39</b>

► Sales end

Order Code No.	Name	TYPE	Page
<b>131086</b>	Spacers 25 · T5 · P25	<b>N01918-101</b>	<b>5-37</b>
<b>041686</b>	Base frame for let's joint	<b>EFCK-7500</b>	<b>5-39</b>
<b>041689</b>	Base frame for let's joint	<b>EFCK-7600</b>	<b>5-39</b>
<b>041692</b>	Base frame for let's joint	<b>EFCK-8000</b>	<b>5-39</b>
<b>042024</b>	Base frame for jungle gym	<b>EFCK-2500B</b>	<b>5-29</b>
<b>090171</b>	Gripper module for jungle gym	<b>JGM-009</b>	<b>5-31</b>
<b>090175</b>	Gripper module for jungle gym	<b>JGM-013</b>	<b>5-31</b>
<b>090178</b>	Gripper module for jungle gym	<b>JGM-016</b>	<b>5-32</b>
<b>090180</b>	Gripper module for jungle gym	<b>JGM-018</b>	<b>5-32</b>
<b>090190</b>	Limit switch module for jungle gym	<b>JLM-003</b>	<b>5-33</b>
<b>090216</b>	Suction module for jungle gym	<b>JSM-003B</b>	<b>5-30</b>
<b>090219</b>	Limit switch module for jungle gym	<b>JLM-001B</b>	<b>5-33</b>
<b>090235</b>	Gripper module for jungle gym	<b>JGM1-004</b>	<b>5-31</b>
<b>090245</b>	Gripper module for jungle gym	<b>JGM1-023</b>	<b>5-32</b>
<b>110569</b>	Suction module for let's joint	<b>LSM-001</b>	<b>5-40</b>
<b>110583</b>	Gripper module for let's joint	<b>LGM-008</b>	<b>5-41</b>
<b>110584</b>	Gripper module for let's joint	<b>LGM-009</b>	<b>5-41</b>
<b>110589</b>	Gripper module for let's joint	<b>LGM-014</b>	<b>5-42</b>
<b>110590</b>	Gripper module for let's joint	<b>LGM-015</b>	<b>5-42</b>
<b>110592</b>	Gripper module for let's joint	<b>LGM-017</b>	<b>5-42</b>
<b>110599</b>	Limit switch module for let's joint	<b>LLM-003</b>	<b>5-42</b>

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools

Tool / Jig


## Information

Various Products Information


# Notice Regarding Suction Cups

The suction cups will be changed to a silicone material that complies with the standards of the FDA (U.S. Food and Drug Administration) and BfR (German Federal Institute for Risk Assessment). Please see the table below for the affected products. (Ordering codes, product names, models, and pad colors will be changed.) There will be no change in the price. We will switch over as soon as stock runs out. Please check our website for the latest information.

## ▶ Suction Cups (Standard / Screw Mount Type)

Suction Cups	Order code No.	Product name	TYPE
	<b>210789</b>	Suction Cups · Standard · Micro · Brown	VAPH-4M
	<b>210790</b>	Suction Cups · Standard · Micro · Brown	VAPH-6M
	<b>210700</b>	Suction Cups · Standard · Silicone · Brown	VAPH-4C
	<b>210255</b>	Suction Cups · Standard · Silicone · Brown	VAPH-6C
	<b>210191</b>	Suction Cups · Standard · Silicone · Brown	VAPH-8C
	<b>210615</b>	Suction Cups · Standard · Silicone · Brown	VAPH-10C
	<b>210192</b>	Suction Cups · Standard · Silicone · Brown	VAPH-12C
	<b>210616</b>	Suction Cups · Standard · Silicone · Brown	VAPH-14C
	<b>210193</b>	Suction Cups · Standard · Silicone · Brown	VAPH-15C
	<b>210194</b>	Suction Cups · Standard · Silicone · Brown	VAPH-20C
	<b>210617</b>	Suction Cups · Standard · Silicone · Brown	VAPH-25C
	<b>210195</b>	Suction Cups · Standard · Silicone · Brown	VAPH-30C
	<b>210618</b>	Suction Cups · Standard · Silicone · Brown	VAPH-35C
	<b>210196</b>	Suction Cups · Standard · Silicone · Brown	VAPH-40C
	<b>210621</b>	Suction Cups · Standard · Silicone · Brown	VAPH-45C
	<b>210619</b>	Suction Cups · Screw Mount · Silicone · Brown	VAPH-50F
	<b>210311</b>	Suction Cups · Screw Mount · Silicone · Brown	VAPH-60F
	<b>210044</b>	Suction Cups · Screw Mount · Free · Silicone · Brown	VAPH-60F-2
	<b>210620</b>	Suction Cups · Screw Mount · Silicone · Brown	VAPH-70F


## ▶ Suction Cups (Standard / Screw Mount Type)

Suction Cups	Order code No.	Product name	TYPE
	<b>211312</b>	Suction Cups · Standard · Micro · $\phi$ 4	VAPS-4M
	<b>211313</b>	Suction Cups · Standard · Micro · $\phi$ 6	VAPS-6M
	<b>211300</b>	Suction Cups · Standard · $\phi$ 4	VAPS-4C
	<b>211277</b>	Suction Cups · Standard · $\phi$ 6	VAPS-6C
	<b>211271</b>	Suction Cups · Standard · $\phi$ 8	VAPS-8C
	<b>211288</b>	Suction Cups · Standard · $\phi$ 10	VAPS-10C
	<b>211272</b>	Suction Cups · Standard · $\phi$ 12	VAPS-12C
	<b>211289</b>	Suction Cups · Standard · $\phi$ 14	VAPS-14C
	<b>211273</b>	Suction Cups · Standard · $\phi$ 15	VAPS-15C
	<b>211274</b>	Suction Cups · Standard · $\phi$ 20	VAPS-20C
	<b>211290</b>	Suction Cups · Standard · $\phi$ 25	VAPS-25C
	<b>211275</b>	Suction Cups · Standard · $\phi$ 30	VAPS-30C
	<b>211291</b>	Suction Cups · Standard · $\phi$ 35	VAPS-35C
	<b>211276</b>	Suction Cups · Standard · $\phi$ 40	VAPS-40C
	<b>211294</b>	Suction Cups · Standard · $\phi$ 45	VAPS-45C
	<b>211292</b>	Suction Cups · Screw Mount · $\phi$ 50	VAPS-50F
	<b>211280</b>	Suction Cups · Screw Mount · $\phi$ 60	VAPS-60F
	<b>211270</b>	Suction Cups · Screw Mount · Free · $\phi$ 60	VAPS-60F-2
	<b>211293</b>	Suction Cups · Screw Mount · $\phi$ 70	VAPS-70F

## ▶ Suction Cups (Bellows Type)

Suction Cups	Order code No.	Product name	TYPE
	<b>210897</b>	Suction Cups · Bellows · Silicone · Brown	VAPH-3C-3
	<b>210697</b>	Suction Cups · Bellows · Silicone · Brown	VAPH-15C-3
	<b>210661</b>	Suction Cups · Bellows · Silicone · Brown	VAPH-20C-3
	<b>210662</b>	Suction Cups · Bellows · Silicone · Brown	VAPH-30C-3
	<b>210663</b>	Suction Cups · Bellows · Silicone · Brown	VAPH-40C-3

## ▶ Suction Cups (Bellows Type)

Suction Cups	Order code No.	Product name	TYPE
	<b>211307</b>	Suction Cups · Bellows · $\phi$ 3	VAPS-3C-3
	<b>211311</b>	Suction Cups · Bellows · $\phi$ 15	VAPS-15C-3
	<b>211295</b>	Suction Cups · Bellows · $\phi$ 20	VAPS-20C-3
	<b>211296</b>	Suction Cups · Bellows · $\phi$ 30	VAPS-30C-3
	<b>211297</b>	Suction Cups · Bellows · $\phi$ 40	VAPS-40C-3

## ▶ Suction Cups (TR Type)


Suction Cups	Order code No.	Product name	TYPE
	<b>196327</b>	Suction Cups · TR · $\phi$ 6 · Brown. Mini (シリコン)	TR-1062-1M
	<b>196342</b>	Suction Cups · TR · $\phi$ 8 · Brown. Mini (シリコン)	TR-1062-2M
	<b>196406</b>	Suction Cups · TR · $\phi$ 10 · Brown. Mini (シリコン)	TR-1062-3M
	<b>196405</b>	Suction Cups · TR · $\phi$ 12 · Brown. Mini (シリコン)	TR-1062-4M
	<b>193511</b>	Suction Cups · TR · $\phi$ 6 · Brown. Small (シリコン)	TR-1062-1
	<b>193512</b>	Suction Cups · TR · $\phi$ 8 · Brown. Small (シリコン)	TR-1062-2
	<b>196135</b>	Suction Cups · TR · $\phi$ 10 · Brown. Small (シリコン)	TR-1062-3
	<b>196136</b>	Suction Cups · TR · $\phi$ 12 · Brown. Small (シリコン)	TR-1062-4

## ▶ Suction Cups (TR Type)

Suction Cups	Order code No.	Product name	TYPE
	<b>197513</b>	Suction Cups · TRS · $\phi$ 6 · Mini	TRS-1062-1M
	<b>197514</b>	Suction Cups · TRS · $\phi$ 8 · Mini	TRS-1062-2M
	<b>197516</b>	Suction Cups · TRS · $\phi$ 10 · Mini	TRS-1062-3M
	<b>197515</b>	Suction Cups · TRS · $\phi$ 12 · Mini	TRS-1062-4M
	<b>197509</b>	Suction Cups · TRS · $\phi$ 6 · Small	TRS-1062-1
	<b>197510</b>	Suction Cups · TRS · $\phi$ 8 · Small	TRS-1062-2
	<b>197511</b>	Suction Cups · TRS · $\phi$ 10 · Small	TRS-1062-3
	<b>197512</b>	Suction Cups · TRS · $\phi$ 12 · Small	TRS-1062-4




► Suction Cups (W/ Sponge Type • Standard)

Suction Cups	Order code No.	Product name	TYPE
	210664	Suction Cups • W/Sponge • Silicone • Brown	VAPH-8C-SP
	210665	Suction Cups • W/Sponge • Silicone • Brown	VAPH-12C-SP
	210534	Suction Cups • W/Sponge • Silicone • Brown	VAPH-15C-SP
	210535	Suction Cups • W/Sponge • Silicone • Brown	VAPH-20C-SP
	210536	Suction Cups • W/Sponge • Silicone • Brown	VAPH-30C-SP
	210537	Suction Cups • W/Sponge • Silicone • Brown	VAPH-40C-SP
	210538	Suction Cups • W/Sponge • Silicone • Brown	VAPH-60F-SP


► Suction Cups (W/ Sponge Type • Standard)

Suction Cups	Order code No.	Product name	TYPE
	211298	Suction Cups • W/Sponge • φ 8	VAPS-8C-SP
	211299	Suction Cups • W/Sponge • φ 12	VAPS-12C-SP
	211283	Suction Cups • W/Sponge • φ 15	VAPS-15C-SP
	211284	Suction Cups • W/Sponge • φ 20	VAPS-20C-SP
	211285	Suction Cups • W/Sponge • φ 30	VAPS-30C-SP
	211286	Suction Cups • W/Sponge • φ 40	VAPS-40C-SP
	211287	Suction Cups • W/Sponge • φ 60	VAPS-60F-SP

► Suction Cups (W/ Sponge Type • Bellows)

Suction Cups	Order code No.	Product name	TYPE
	210914	Suction Cups • w/sp Bellows • Silicone • Brown	VAPH-20C-10-3-SP
	210915	Suction Cups • w/sp Bellows • Silicone • Brown	VAPH-30C-15-3-SP
	210916	Suction Cups • w/sp Bellows • Silicone • Brown	VAPH-40C-20-3-SP


► Suction Cups (W/ Sponge Type • Bellows)

Suction Cups	Order code No.	Product name	TYPE
	211308	Suction Cups • w/sp Bellows • φ 20	VAPS-20C-10-3-SP
	211309	Suction Cups • w/sp Bellows • φ 30	VAPS-30C-15-3-SP
	211310	Suction Cups • w/sp Bellows • φ 40	VAPS-40C-20-3-SP

► Suction Cups (Flat Face Type)

Suction Cups	Order code No.	Product name	TYPE
	210389	Suction Cups • Flat Face • Silicone • Brown	VAPH-15C-1
	210390	Suction Cups • Flat Face • Silicone • Brown	VAPH-20C-1


► Suction Cups (Flat Face Type)

Suction Cups	Order code No.	Product name	TYPE
	211281	Suction Cups • Flat Face • φ 15	VAPS-15C-1
	211282	Suction Cups • Flat Face • φ 20	VAPS-20C-1


► Suction Cups (Free Type)

Suction Cups	Order code No.	Product name	TYPE
	210280	Suction Cups • Free • Silicone • Brown	VAPH-12C-2
	210310	Suction Cups • Free • Silicone • Brown	VAPH-20C-2


► Suction Cups (Free Type)

Suction Cups	Order code No.	Product name	TYPE
	211278	Suction Cups • Free • φ 12	VAPS-12C-2
	211279	Suction Cups • Free • φ 20	VAPS-20C-2

► Suction Stem Covers

Suction Cups	Order code No.	Product name	TYPE
	211023	Suction Stem Cover	VAPH-SC
	211024	Suction Stem Cover	VAPH-SSC

► Suction Stem Covers

Suction Cups	Order code No.	Product name	TYPE
	211314	Suction Stem Cover	VAPS-SC
	211315	Suction Stem Cover	VAPS-SSC

► Suction Cups (W/ EP Sponge • Standard)

Suction Cups	Order code No.	Product name	TYPE
	210859	Suction Cups • W/EPsponge • Silicone • Brown	VAPH-14C-EPSP
	210860	Suction Cups • W/EPsponge • Silicone • Brown	VAPH-20C-EPSP
	210861	Suction Cups • W/EPsponge • Silicone • Brown	VAPH-30C-EPSP
	210862	Suction Cups • W/EPsponge • Silicone • Brown	VAPH-40C-EPSP
	210863	Suction Cups • W/EPsponge • Silicone • Brown	VAPH-50F-EPSP
	210864	Suction Cups • W/EPsponge • Silicone • Brown	VAPH-60F-EPSP

► Suction Cups (W/ EP Sponge • Standard)

Suction Cups	Order code No.	Product name	TYPE
	211301	Suction Cups • W/EPsponge • φ 14	VAPS-14C-EPSP
	211302	Suction Cups • W/EPsponge • φ 20	VAPS-20C-EPSP
	211303	Suction Cups • W/EPsponge • φ 30	VAPS-30C-EPSP
	211304	Suction Cups • W/EPsponge • φ 40	VAPS-40C-EPSP
	211305	Suction Cups • W/EPsponge • φ 50	VAPS-50F-EPSP
	211306	Suction Cups • W/EPsponge • φ 60	VAPS-60F-EPSP

Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

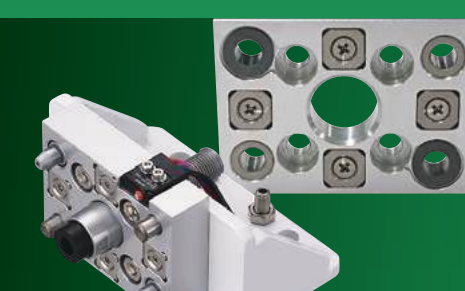
Information

Various Products Information

# MEMO

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# Quick Chuck (Hand) Change



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Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

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Lightweight Parts Series

Frame / Section / Base Cylinder / Pads / Bush Manifolds

By Industry

Logistics / Palletizing / Steel Metal / Stamping / Metal Fabrication

Assembling Tools

Tool / Jig

Information

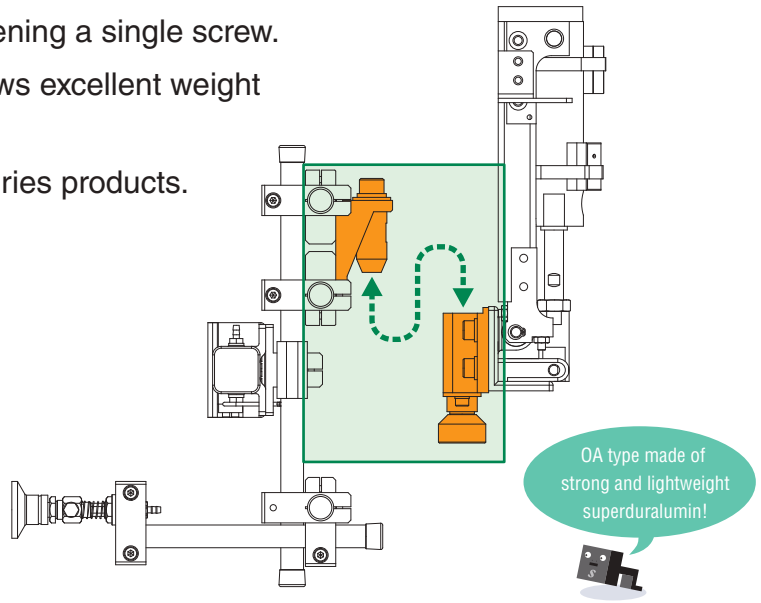
Various Products Information





Please check the performance table on the web site.

- ▶ Switch Robot hands merely by tightening a single screw.
- ▶ Using super duralumin material allows excellent weight reduction and superior strength.
- ▶ Interchangeable with existing OC series products.

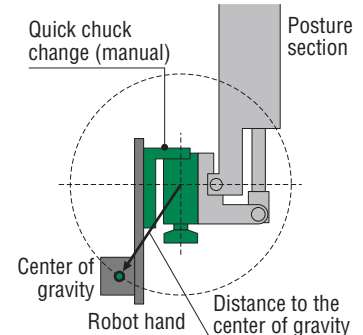
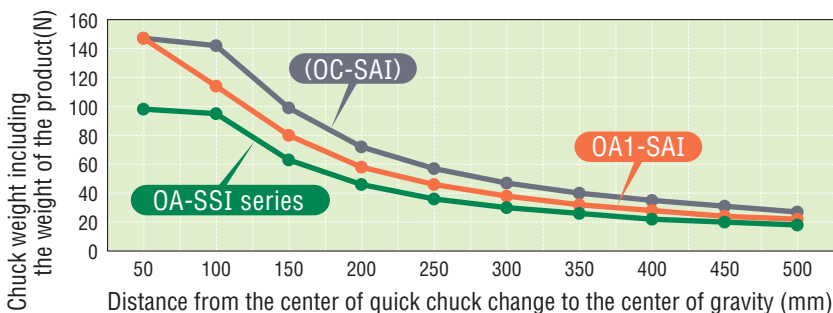


## Specification

Product name	Order code No. TYPE	Weight (g)	Weight capacity (kg)	Injection press range (ton)	Page of details
<b>▶ Superduralumin</b>					
Quick chuck change Manual	<b>140219</b>	166	~ 10	40 ~ 650	1-3
	<b>OA-SSL</b>				
	<b>140151</b>	97			
	<b>OA-SSI</b>				
	<b>140290</b>	190			
<b>OA1-SA</b>					
<b>140257</b>	228	~ 15			
<b>OA1-SAI</b>					
<b>▶ Stainless steel (SUS)</b>					
Quick chuck change Manual	<b>140271</b>	370	~ 10	40 ~ 650	1-5
	<b>OA-SSL (SUS)</b>				
	<b>140272</b>	265			
<b>OA-SSI (SUS)</b>					

Product name	Order code No. TYPE	Weight (g)	Weight capacity (kg)	Injection press range (ton)	Page of details
<b>▶ Superduralumin</b>					
Quick chuck change Manual	<b>140291</b>	547	~ 35	650 } 1,600	1-4
	<b>OA2-LA</b>				
	<b>140155</b>	548			
<b>OA-LAI</b>					
<b>▶ Made of steel</b>					
Quick Chuck Attachment	<b>140042</b>	1,283	~ 35	650 } 1,600	1-5
	<b>OC-LA</b>				
	<b>140043</b>	1,000			
<b>OC-LAII</b>					
<b>▶ Plastic</b>					
Spacer	<b>041645</b>	35	-	-	1-4
	<b>ECP-031</b>				

Allowable-load curve of OA-SSI, OA1-SAI (OC-SAI) (see → 1-4 for comparison between OA-LAI and OC-LAII)





# Quick Chuck Change Manual (Super Duralumin)

Switch chucks merely by tightening a single screw.

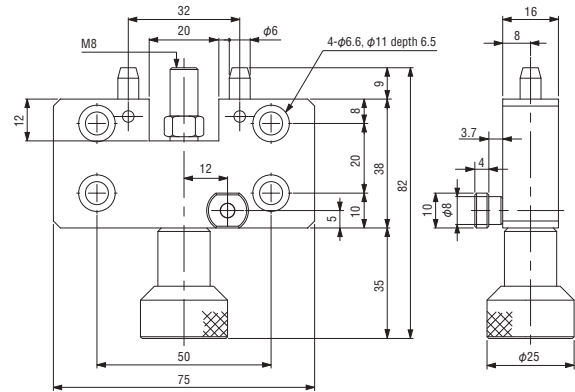
▶ Mounting bolt for OA-SS was extended.



Robot Side

Order code No.	<b>140219</b>
TYPE	<b>OA-SSL</b>

- Superduralumin
- Weight: 166g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Thickness after connection: 24mm



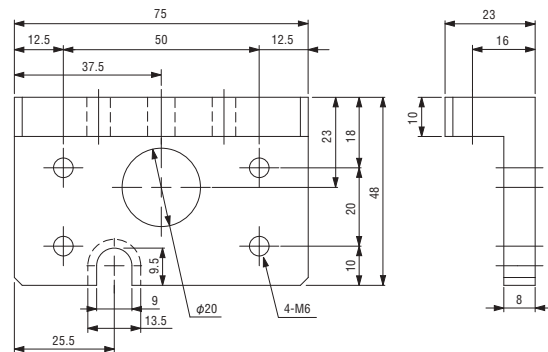
▶ Compatible with OC type QCC for robot side.



Tool Side

Order code No.	<b>140151</b>
TYPE	<b>OA-SSI</b>

- Superduralumin
- Weight: 97g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 24mm



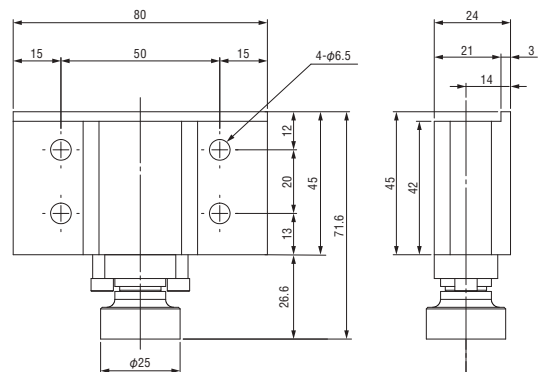
▶ Because it is made of super duralumin, it's lightweight and has excellent rigidity.



Robot Side

Order code No.	<b>140290</b>
TYPE	<b>OA1-SA</b>

- Superduralumin
- Weight: 190g
- Mounting position: robot side
- Weight capacity: ~ 15kg
- Thickness after connection: 33mm



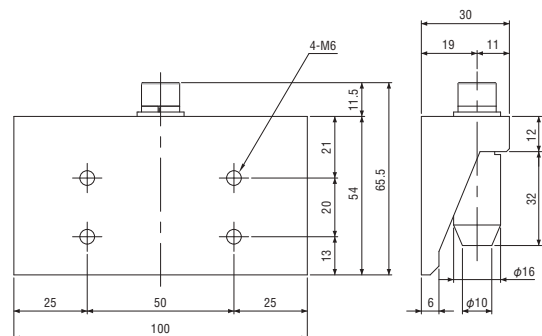
▶ Compatible with OC type QCC for robot side.



Tool Side

Order code No.	<b>140257</b>
TYPE	<b>OA1-SAI</b>

- Superduralumin
- Weight: 228g
- Mounting position: tool side
- Weight capacity: ~ 15kg
- Thickness after connection: 33mm



## Quick Chuck Change

### Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Quick Chuck Change Manual (Super Duralumin) / Chuck Spacer

Switch robot hands merely by tightening a single screw.

- ▶ Because it is made of super duralumin, it's lightweight and has excellent rigidity. suitable for medium-sized robots.

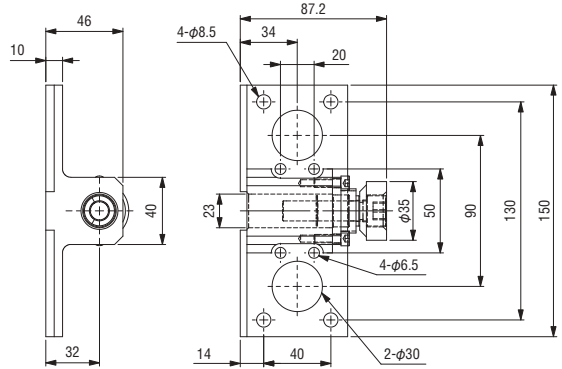


Attachable to medium-size robots. Mounting hole

### Robot Side

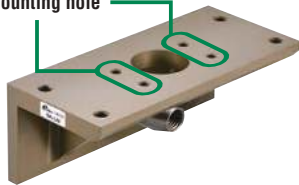
Order code No.	140291
TYPE	OA2-LA

- Superduralumin
- Weight: 547g
- Mounting position: robot side
- Weight capacity: ~ 35kg
- Thickness after connection: 61mm



- ▶ Compatible with OC type for robot side.

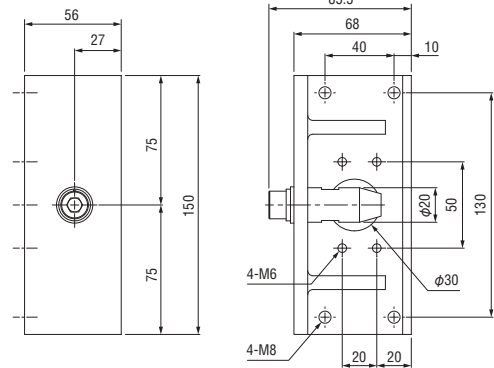
Attachable to medium-size robots. Mounting hole



### Tool Side

Order code No.	140155
TYPE	OA-LAI

- Superduralumin
- Weight: 548g
- Mounting position: tool side
- Weight capacity: ~ 35kg
- Thickness after connection: 61mm



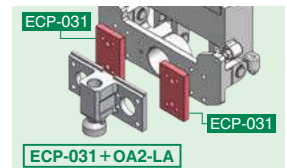
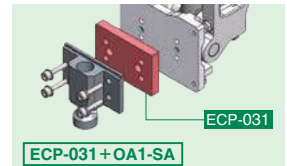
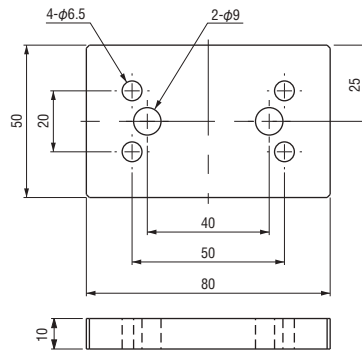
- ▶ Mounting spacer Use it when changing the height.



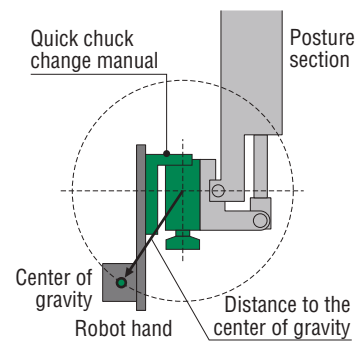
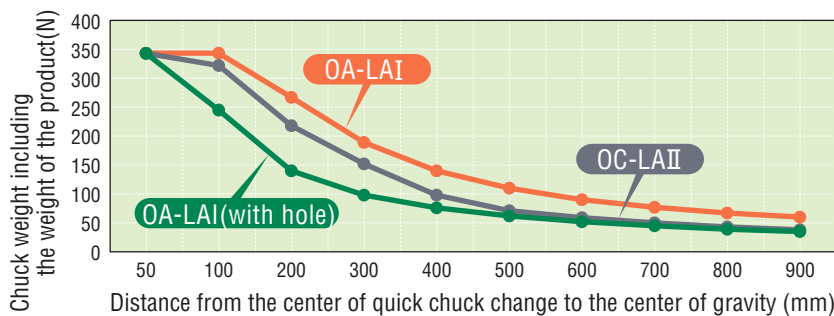
### Chuck Spacer • Plastic • for chuck

Order code No.	041645
TYPE	ECP-031

- Plastic (polypropylene)
- Weight: 35g



### Allowable-load Curve of OA-LAI(with hole), OA-LAI, and OC-LAI







# Quick Chuck Change Manual (Stainless) / Quick Chuck Attachment (Steel)

Switch robot hands merely by tightening a single screw.

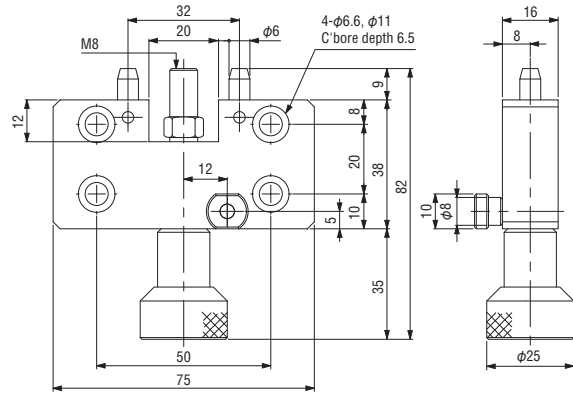
- ▶ Robot hands plate stainless steel (SUS) can be used for food and medicinal industries.



Robot Side

Order code No.	<b>140271</b>
TYPE	<b>OA-SSL (SUS)</b>

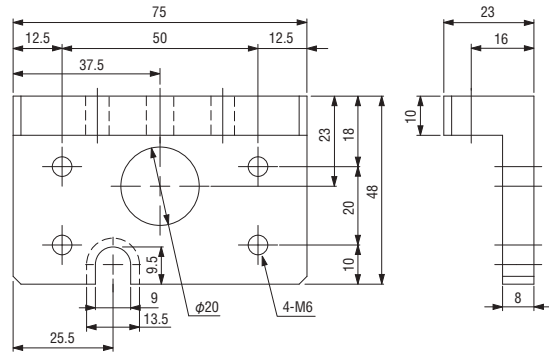
- Stainless steel
- Weight: 370g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Thickness after connection: 24mm



Tool Side

Order code No.	<b>140272</b>
TYPE	<b>OA-SSI (SUS)</b>

- Stainless steel
- Weight: 265g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 24mm



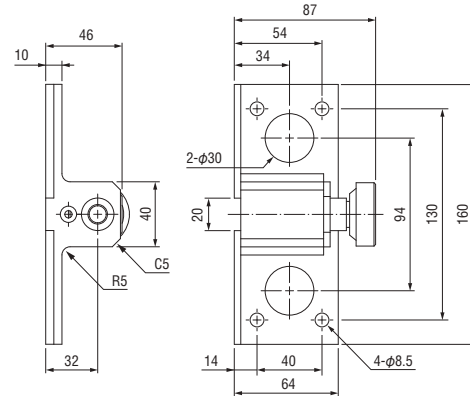
- ▶ Less deformation and excellent in rigidity.



Robot Side

Order code No.	<b>140042</b>
TYPE	<b>OC-LA</b>

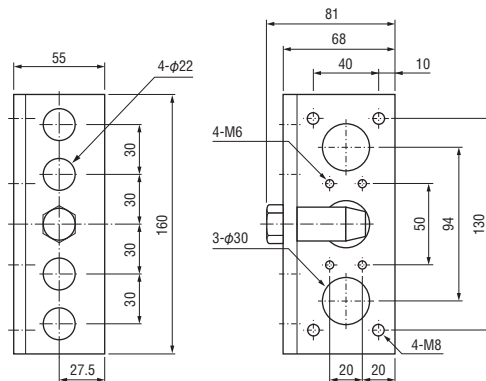
- Steel
- Weight: 1,283g
- Mounting position: robot side
- Weight capacity: ~ 35kg
- Thickness after connection: 59.5mm



Tool Side

Order code No.	<b>140043</b>
TYPE	<b>OC-LAII</b>

- Steel
- Weight: 1,000g
- Mounting position: tool side
- Weight capacity: ~ 35kg
- Thickness after connection: 59.5mm



## Quick Chuck Change

### Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



Please check the performance table on the web site.

- ▶ The qcc can be replaced by rotating the locking bolt on the robot side chuck.
- ▶ Qcc can help eliminate air connection mistakes.

Quick Chuck Change • Quick Chuck Change Manual (OM Type)

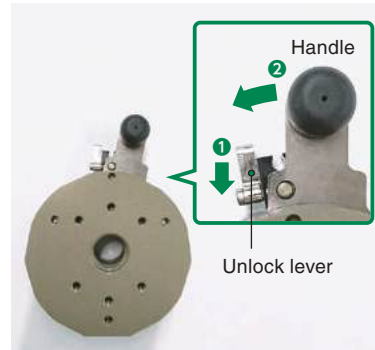


### Mounting method



Attach the tool side qcc to the robot qcc by rotating the locking bolt on robot side qcc. Make sure the tool is secure and not loose.

### Unlock method



To disengage the lock pin, press the release lever located adjacent to the handle with your finger, and then rotate the handle to the left.

## Specification

Product name	Order code No.	TYPE	Weight (g)	Weight capacity (kg)	Connection pipe	Lever rotation angle	Fixed rotation torque	Unlock rotation torque	Electric contact Connector shape	Fixed pin number	Repeatability and Accuracy
<b>NEW</b> Quick Chuck Change Manual (OM Type)	<b>140382</b>	<b>OM-50</b>	105	~ 5	4pins (M5)	20°	30N·m	15N·m	9 pin 2A DC24V Max Connector sold separately	3	±0.02
	<b>140383</b>	<b>OM-50I</b>	65						11 pin 2A DC24V Max Connector sold separately		
	<b>140384</b>	<b>OM-90</b>	328	~ 20	6pins (PT1/8)	20°	180N·m	100N·m	16 pin 2A DC24V Max Connector sold separately	3	±0.02
	<b>140385</b>	<b>OM-90I</b>	212						16 pin 2A DC24V Max Connector sold separately		

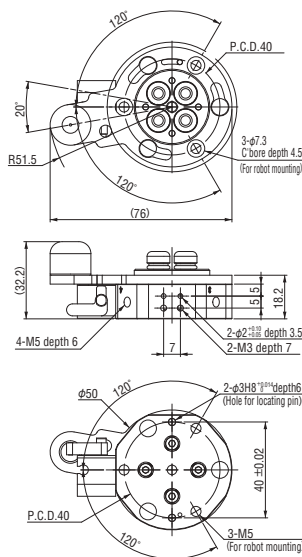
※Check the web site for allowable static load curves. (above the QR code)

## Quick Chuck Attachment



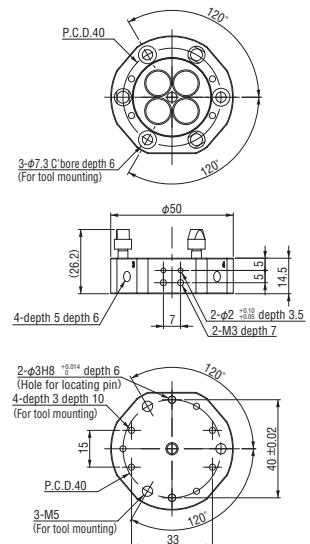
Order code No.	<b>140382</b>
TYPE	<b>OM-50</b>

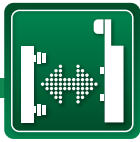
- Superduralumin
- Weight: 105g
- Mounting position : robot side
- Weight capacity : 5kg
- Thickness after connection : 32.7mm
- Connection pipe: 4 circuits (M5)



Order code No.	<b>140383</b>
TYPE	<b>OM-50I</b>

- Superduralumin
- Weight: 65g
- Mounting position : tool side
- Weight capacity : 5kg
- Thickness after connection : 32.7mm
- Connection pipe: 4 circuits (M5)





# Quick Chuck Change Manual (OM Type)

It can be replaced by simply rotating the locking bolt on the robot chuck.

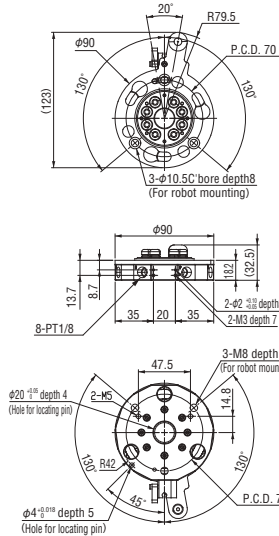
Quick Chuck Change Manual (OM Type)



You can see moving images of products by using QR code reader of your smartphone.

## Quick Chuck Attachment

NEW

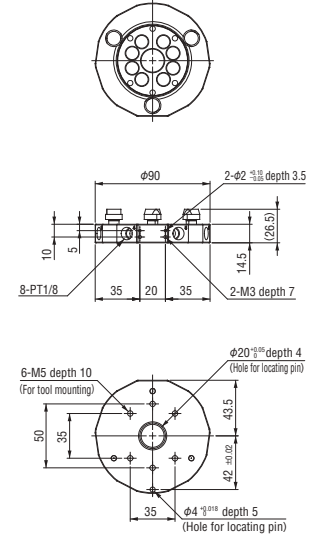


Robot Side	
Order code No.	<b>140384</b>
TYPE	<b>OM-90</b>

- Superduralumin
- Weight: 328g
- Mounting position: robot side
- Weight capacity: 20kg
- Thickness after connection: 32.7mm
- Connection pipe: 8 circuits (PT1/8)

Connector drawing → See 1-33.


NEW



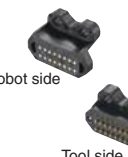
Tool Side	
Order code No.	<b>140385</b>
TYPE	<b>OM-90I</b>

- Superduralumin
- Weight: 212g
- Mounting position: tool side
- Weight capacity: 20kg
- Thickness after connection: 32.7mm
- Connection pipe: 8 circuits (PT1/8)


## Connector Accessories

D-sub & probe connector	Robot side	Tool Side
		
Order code No.	<b>140190</b>	<b>140192</b>
TYPE	<b>OXR-DPS09</b>	<b>OXR-DPS09-I</b>
Weight	25g	
Wiring Specification	AWG22	
Electric contact	9 pin (2A)	
Attached screw	Flat head screw with cross recess M4×10 [123515]	

● Connector drawing → See (1-33)


Probe connector (solder)	Robot side	Tool Side
		
Order code No.	<b>140264</b>	<b>140265</b>
TYPE	<b>OXR-PS16</b>	<b>OXR-PS16-I</b>
Weight	8g	11g
Wiring Specification	AWG22	
Electric contact	16 pin (2A)	
Attached screw	Flat head screw with cross recess M4×10 [123515]	

● Connector drawing → See (1-33)

Probe connector	Robot side	Tool Side
		
Order code No.	<b>140362</b>	<b>140363</b>
TYPE	<b>OXR-PSH11</b>	<b>OXR-PSH11-I</b>
Weight	53g	
Wiring Specification	Solder-fix type (AWG23) 500mm	
Electric contact	11 pin (2A)	
Attached screw	Flat head screw with cross recess M4×10 [123515]	

● Connector drawing → See (1-33)

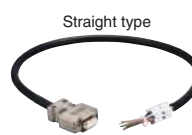
NEW

Probe connector bracket	Order code No.	Weight
	<b>140388</b>	10g
TYPE	<b>OMR-CBX20</b>	

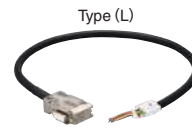
● Accessories : positioning pin, mounting bolt

● It is necessary when attaching the electrical contact connector. (Drawing → (1-33) )

## Cable Accessories

D-SUB cable •for OX(for OX-B type)	Robot side		Tool Side	
				
Order code No.	<b>140197</b>	<b>140247</b>	<b>140202</b>	<b>140364</b>
TYPE	<b>OX-DS09S-H</b>	<b>OX-DS09S-H (1.5M)</b>	<b>OX-DS09P-I-H</b>	<b>OX-DS09P-I-H (1.5M)</b>
Weight	60g	138g	60g	140g
Cable length	0.5m	1.5m	0.5m	1.5m
Electric contact	9 pin			
Wiring Specification	Movable cable (AWG22), for UL			

● Bending radius (mm) : R46

D-SUB cable •for OX(for OX-B type)	Robot side (L)		Tool Side (L)	
				
Order code No.	<b>140203</b>	<b>140248</b>	<b>140204</b>	<b>140365</b>
TYPE	<b>OX-DS09SL-H</b>	<b>OX-DS09SL-H (1.5M)</b>	<b>OX-DS09PL-I-H</b>	<b>OX-DS09PL-I-H (1.5M)</b>
Weight	60g	138g	60g	140g
Cable length	0.5m	1.5m	0.5m	1.5m
Electric contact	9 pin			
Wiring Specification	Movable cable (AWG22), for UL			

● Bending radius (mm) : R46

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

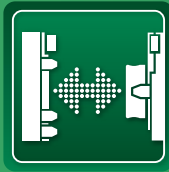
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



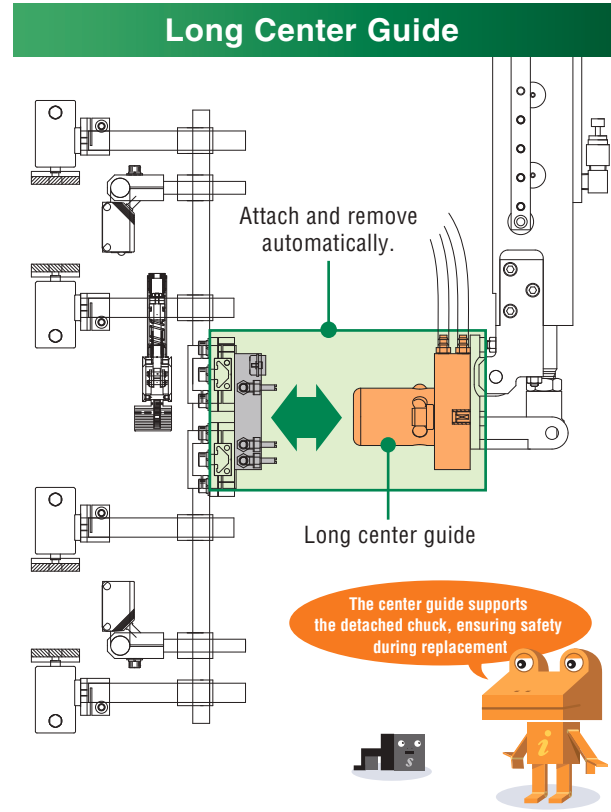
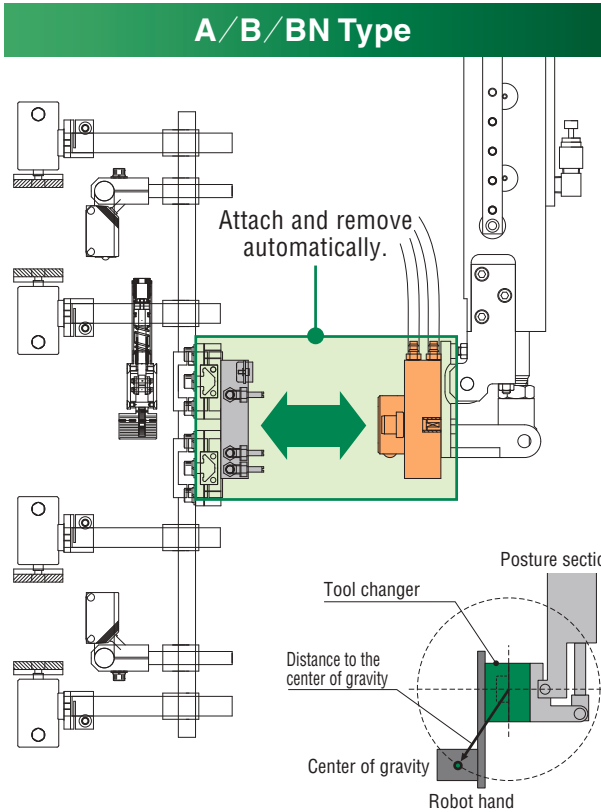
# Tool Changer

"Multifunction of the robot" and "shortening the setup time" are two capabilities of the tool changer. We increase productivity and offer a range of small-quantity items.

**[Features]**

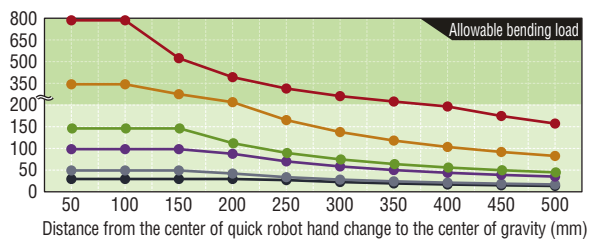
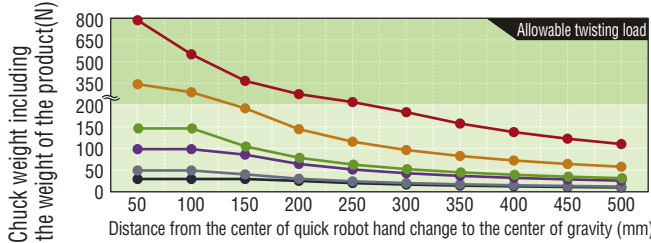
- The connecting mechanism is the ball locking type, so it's convenient to assemble and disassemble.
- Equipped with "Pull in function" and "detachable function" when assembling and disassembling.
- With air cut-off circuit (stops air supplies when detached).
- Made of Super Duralumin-strong rigidity and long operating life.
- Safety is ensured by "fail safe mechanism (drop prevention)" when air intercepts.

Quick Chuck Change • Tool Changer



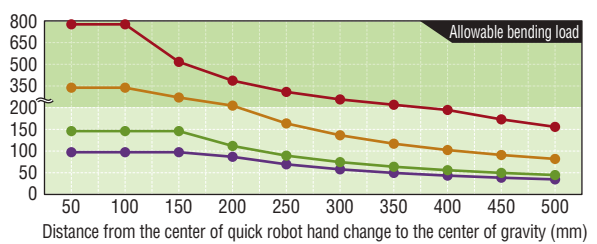
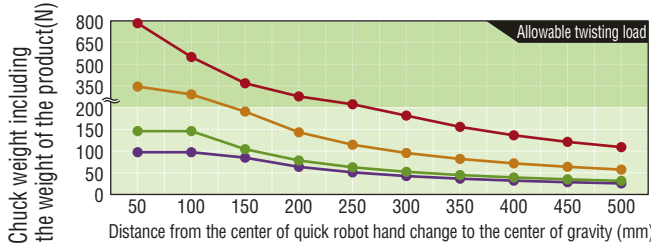
**Allowable-load curve of OX-B series**

- OX-SSB OX-SBS OX-SB TYPE OX-WSB OX-LB OX-WLB



**Allowable-load curve of OX-A series**

- OX-SA OX-WSA OX-LA OX-WLA





Description of type

OX-SBNI

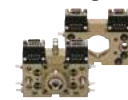
Installation side None (ROBOT SIDE)  
I (TOOL SIDE)  
Connector N (NONE)  
No (w / connector)

Type (size)



Please check the performance table on the web site.

Tool changer



You can see moving images of products by using QR code reader of your smartphone.

Specification

Product name	Order code No.	TYPE	Weight (g)	Weight capacity (kg)	Injection press range (ton)	Allowable bending moment (Nm)	Allowable torsional moment (Nm)	Power to draw(N) Power to force(N)	Electric contact Connector shape	Piping connect	Page of details												
Tool changer	140266	OX-SSB	330	~ 3	40 } 80	6.7	5.0	1500 480	7Pin×2 1A DC24V Max Prove connector Solder fixed type	4 port (M5)	1-11												
	140268	OX-SSBI	120																				
	140181	OX-SB	475	~ 10	80 } 650	17.5	12.8	1700 550	—	6 port (M5)	1-11												
	140182	OX-SBI	235																				
	140299	OX-WSB	845	~ 15	200 } 650	22.5	15.7	2,000 700	—	12 port (M5)	1-12												
	140301	OX-WSBI	365																				
	140183	OX-LB	1,290	~ 35	650 } 1,600	41.2	28.7	4,000 750	9Pin×2 2A DC24V Max D-SUB Connector Prove connector	6 port (M5)		1-13											
	140186	OX-LBI	615																				
	140274	OX-LBF	1,485																				
	140273	OX-LBFI	760																				
	140184	OX-WLB	2,720	~ 80	1,600 } 5,000	78.4	54.8	7,000 1,500	—	10 port (M5)	1-14												
	140187	OX-WLBI	1,385																				
	140217	OX-SBY	475	~ 10	80 } 650	17.5	12.8	1,700 500	—	6 port (M5)	1-15												
	140218	OX-SBYI	235																				
	140275	OX-SBH	440																				
	140276	OX-SBHI	245																				
	140233	OX-SBS	305	~ 5	80 } 300	8.4	6.0	1,000 280	9Pin×1 2A DC24V Max D-SUB Connector Prove connector	6 port (M5)	1-15												
	140234	OX-SBSI	122																				
	140280	OX-SSBN	318	~ 3	40 } 80	6.7	5.0	1,500 480	—	6 port (M5)	1-11												
	140281	OX-SSBNI	108																				
	140225	OX-SBN	431	~ 10	80 } 650	17.5	12.8	1,700 550	—	12 port (M5)	1-12												
	140226	OX-SBNI	197																				
	140300	OX-WSBN	787	~ 15	200 } 650	22.5	15.7	2,000 700	—	12 port (M5)													
	140302	OX-WSBNI	320																				
	140231	OX-LBN	1,250	~ 35	650 } 1,600	41.2	28.7	4,000 750	—	6 port (M5)	1-13												
	140232	OX-LBNI	575																				
140258	OX-LBFN	1,478																					
140259	OX-LBFNI	756																					
B type (with connector)																							
												B / BN type (w/o connector)											

Please use manual push button "PB1-E (152308), PBW1-E(152306)" for manual exchange (1-18, 6-11).

Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig












Information

Various Products Information



Please check the performance table on the web site.

## Specification

Product name	Order code No.	TYPE	Weight (g)	Weight capacity (kg)	Injection press range (ton)	Allowable bending moment (Nm)	Allowable torsional moment (Nm)	Power to draw(N) Power to force(N)	Electric contact Connector shape	Piping connect	Page of details		
B/BN type (w/o connector)	 140277	OX-WLBN	2,680	~ 80	1,600 } 5,000	78.4	54.8	7,000 1,500	—	10 port (M5)	1-13		
	 140278	OX-WLBNI	1,345										
	 140229	OX-SBYN	435	~ 10	80 } 650	17.5	12.8	1,700 550		6 port (M5)	1-14		
	 140230	OX-SBYNI	195										
	 140260	OX-SBHNI	399										
	 140261	OX-SBHN	202										
Long center guide (with connector)	 140228	OX-LB-30	1,370	~ 35	650 } 1,600	41.2	28.7	4,000 750	9Pin×2 2A DC24V Max D-SUB connector Probe connector			6 port (M5)	1-16
	 140283	OX-WLB-30	2,905	~ 80	1,600 } 5,000	78.4	54.8	7,000 1,500	9Pin×2 2A DC24V Max D-SUB connector			10 port (M5)	
Long center guide (w/o connector)	 140345	OX-SBN-30	470	~ 10	80 } 650	17.5	12.8	1,700 550	—	6 port (M5)			
	 140279	OX-LBN-30	1,330	~ 35	650 } 1,600	41.2	28.7	4,000 750		6 port (M5)			
	 140267	OX-WLBN-30	2,865	~ 80	1,600 } 5,000	78.4	54.8	7,000 1,500		10 port (M5)			

Please use manual push button "PB1-E (152308), PBW1-E(152306)" for manual exchange ( 1-18 , 6-11 ).

## Common specification

Positional reproduction Accuracy	Used air pressure	Drive piping	Acceptable electric wiring	Allowable temperature/humidity range
±0.02mm*1	0.5~0.7MPa	Clean air, piping of $\phi 6$ ( $\phi 4^{*2}$ ), double action type	AWG20 Max.	0°C -55°C, 0% -95% (w/o condensation)

\*1 Based on our measurement

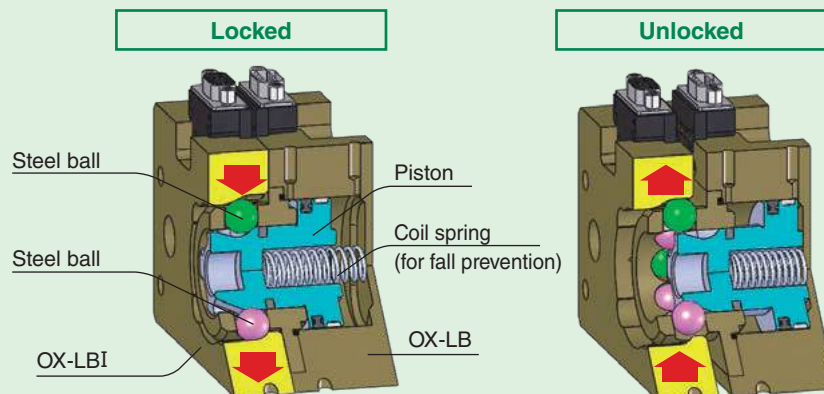
\*2  $\phi 4$ : OX-SB series (SSB, SB, SBY, SBH, SBS, SBN, SBYN, SBHN)

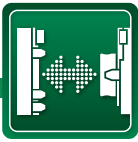
## Features

- Original detachable mechanism  
(The U.S. US: 7,559,265  
Europe: EP 1 970 170)
- Fail-safe mechanism  
(Prevention of falling off)
- Air check valve

## Merits

- Reduction of setup change time
- Reproducibility of mounting position
- Prevention of different piping/wiring connection

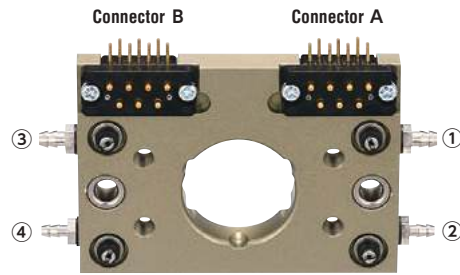
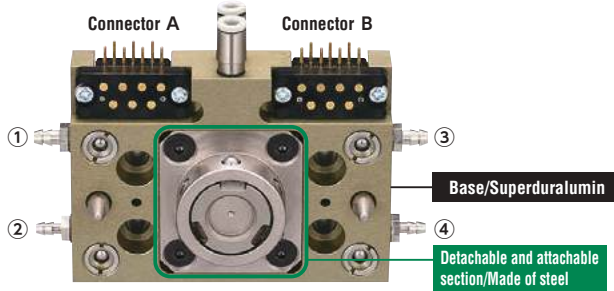




# B/BN Type

The chuck on the robot and carrier loader can be easily replaced in a short time.

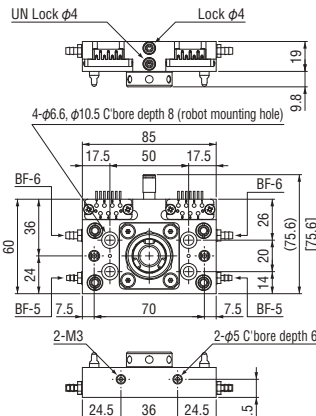
## ► Weight capacity 3kg Type



### Robot Side

Order code No.	<b>140266</b>
TYPE	<b>OX-SSB</b>

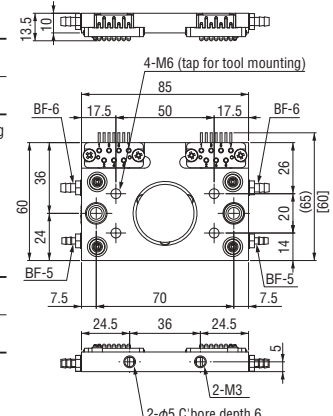
- Weight: 330g
- Mounting position: robot side
- Weight capacity: ~3kg
- Thickness after connection: 29mm



### Tool Side

Order code No.	<b>140268</b>
TYPE	<b>OX-SSBI</b>

- Superduralumin
- Weight: 120g
- Mounting position: tool side
- Weight capacity: ~3kg
- Thickness after connection: 29mm



### W/o connector

Order code No.	<b>140280</b>
TYPE	<b>OX-SSBN</b>

- Weight: 318g
- Mounting position: robot side
- Weight capacity: ~3kg
- Thickness after connection: 29mm



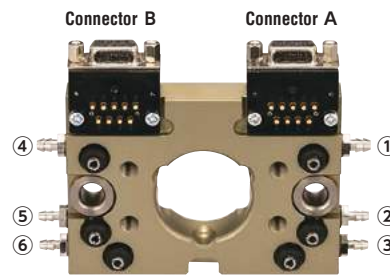
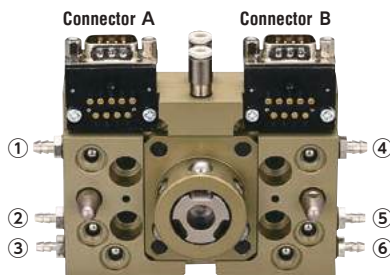
### W/o connector

Order code No.	<b>140281</b>
TYPE	<b>OX-SSBNI</b>

- Superduralumin
- Weight: 108g
- Mounting position: tool side
- Weight capacity: ~3kg
- Thickness after connection: 29mm



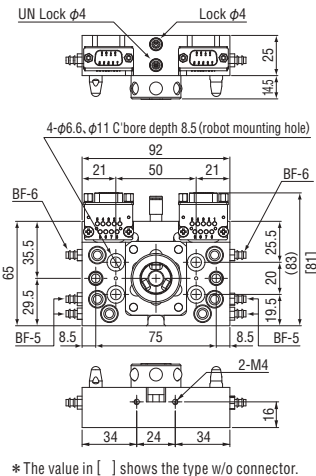
## ► Weight capacity 10kg Type



### Robot Side

Order code No.	<b>140181</b>
TYPE	<b>OX-SB</b>

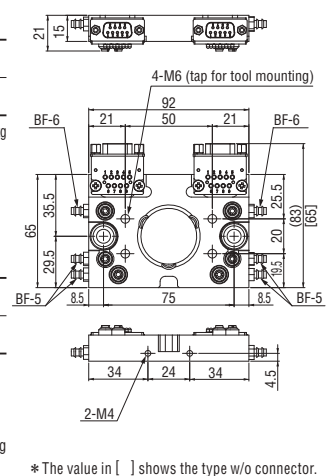
- Superduralumin
- Weight: 475g
- Mounting position: robot side
- Weight capacity: ~10kg
- Thickness after connection: 40mm



### Tool Side

Order code No.	<b>140182</b>
TYPE	<b>OX-SBI</b>

- Superduralumin
- Weight: 235g
- Mounting position: tool side
- Weight capacity: ~10kg
- Thickness after connection: 40mm
- Can be installed on OX-SBY



### W/o connector

Order code No.	<b>140225</b>
TYPE	<b>OX-SBN</b>

- Superduralumin
- Weight: 431g
- Mounting position: robot side
- Weight capacity: ~10kg
- Thickness after connection: 40mm



### W/o connector

Order code No.	<b>140226</b>
TYPE	<b>OX-SBNI</b>

- Superduralumin
- Weight: 197g
- Mounting position: tool side
- Weight capacity: ~10kg
- Thickness after connection: 40mm
- Can be installed on OX-SBY



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Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

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Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

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Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

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By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

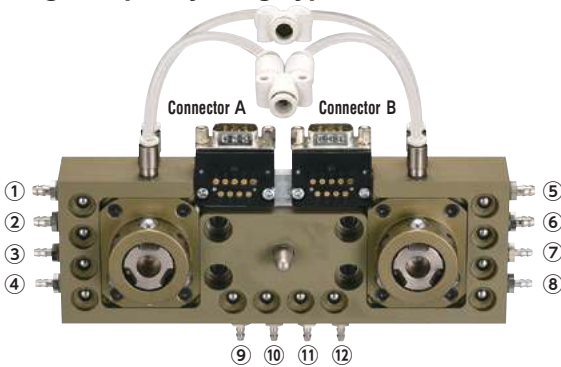
Tool / Jig

### Information

Various Products Information

# B/BN Type

## ▶ Weight capacity 15kg Type



### Robot Side

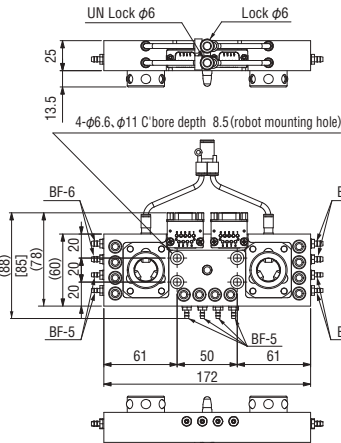
Order code No.	<b>140299</b>
TYPE	<b>OX-WSB</b>

- Superduralumin
- Weight: 845g
- Mounting position: robot side
- Weight capacity: ~ 15kg
- Thickness after connection: 39mm

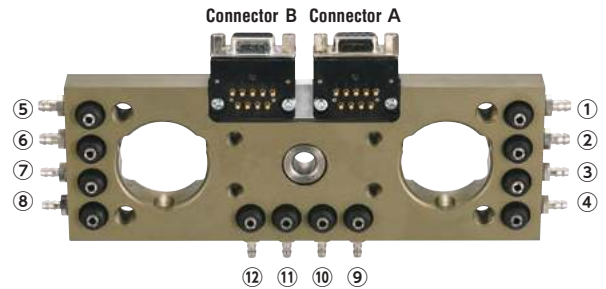
### W/o connector

Order code No.	<b>140300</b>
TYPE	<b>OX-WSBN</b>

- Superduralumin
- Weight: 787g
- Mounting position: robot side
- Weight capacity: ~ 15kg
- Thickness after connection: 39mm



\* The value in [ ] shows the type w/o connector.



### Tool Side

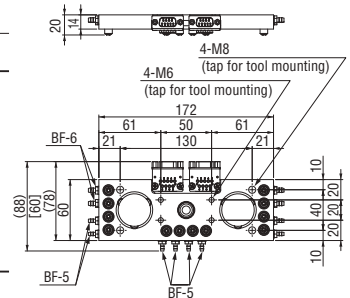
Order code No.	<b>140301</b>
TYPE	<b>OX-WSBI</b>

- Superduralumin
- Weight: 365g
- Mounting position: tool side
- Weight capacity: ~ 15kg
- Thickness after connection: 39mm

### W/o connector

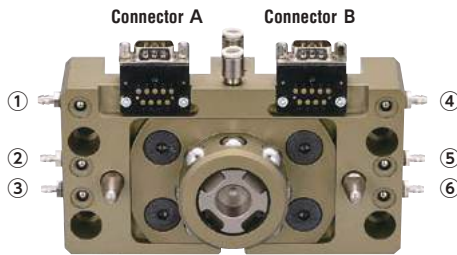
Order code No.	<b>140302</b>
TYPE	<b>OX-WSBNI</b>

- Superduralumin
- Weight: 320g
- Mounting position: tool side
- Weight capacity: ~ 15kg
- Thickness after connection: 39mm



\* The value in [ ] shows the type w/o connector.

## ▶ Weight capacity 35kg Type



### Robot Side

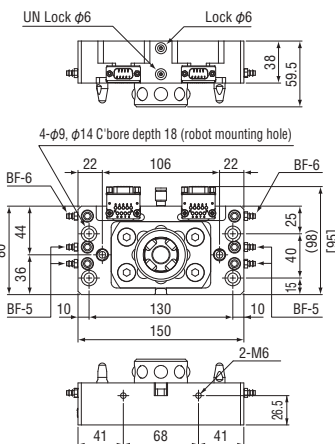
Order code No.	<b>140183</b>
TYPE	<b>OX-LB</b>

- Superduralumin
- Weight: 1,290g
- Mounting position: robot side
- Weight capacity: ~ 35kg
- Thickness after connection: 60mm

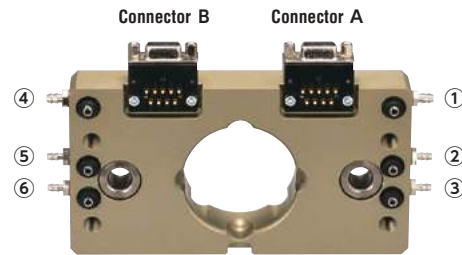
### W/o connector

Order code No.	<b>140231</b>
TYPE	<b>OX-LBN</b>

- Superduralumin
- Weight: 1,250g
- Mounting position: robot side
- Weight capacity: ~ 35kg
- Thickness after connection: 60mm



\* The value in [ ] shows the type w/o connector.



### Tool Side

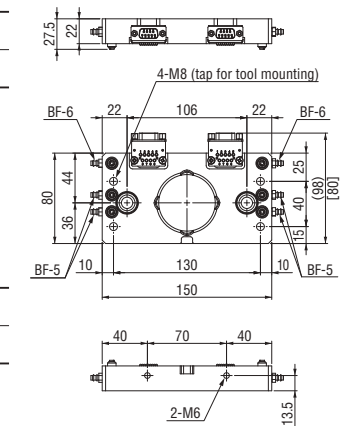
Order code No.	<b>140186</b>
TYPE	<b>OX-LBI</b>

- Superduralumin
- Weight: 615g
- Mounting position: tool side
- Weight capacity: ~ 35kg
- Thickness after connection: 60mm

### W/o connector

Order code No.	<b>140232</b>
TYPE	<b>OX-LBNI</b>

- Superduralumin
- Weight: 575g
- Mounting position: tool side
- Weight capacity: ~ 35kg
- Thickness after connection: 60mm



\* The value in [ ] shows the type w/o connector.



**Description of type**

**OX-LBNI**

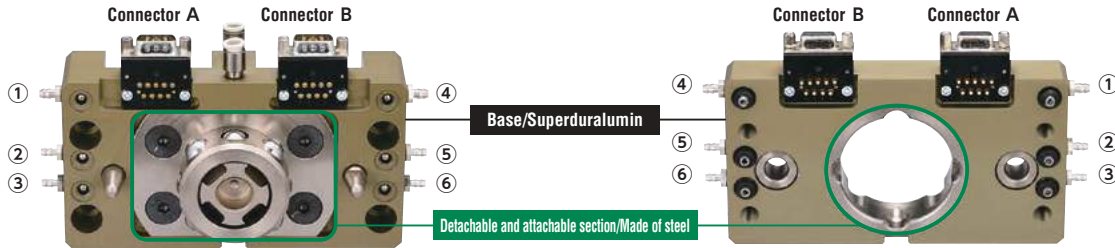
Installation side None (ROBOT SIDE)  
I (TOOL SIDE)

Type (size)

Connector N (NONE)  
No (w / connector)

**▶ Weight capacity 35kg Type**

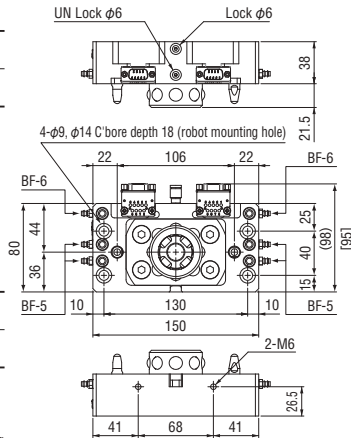
▶ Super duralumin-made frame. Improved durability: steel hybrid structure of detachable and attachable section.



**Robot Side**

Order code No.	<b>140274</b>
TYPE	<b>OX-LBF</b>

- Weight : 1,485g
- Mounting position : robot side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm

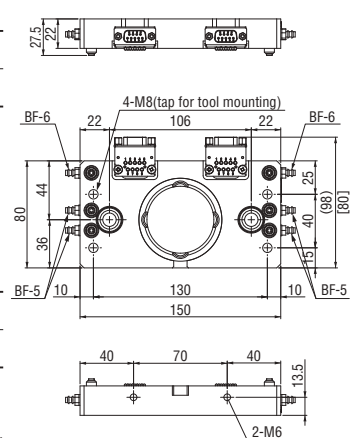


\* The value in [ ] shows the type w/o connector.

**Tool Side**

Order code No.	<b>140273</b>
TYPE	<b>OX-LBFI</b>

- Weight : 760g
- Mounting position : tool side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm



\* The value in [ ] shows the type w/o connector.

**W/o connector**

Order code No.	<b>140258</b>
TYPE	<b>OX-LBFN</b>

- Weight : 1,478g
- Mounting position : robot side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm



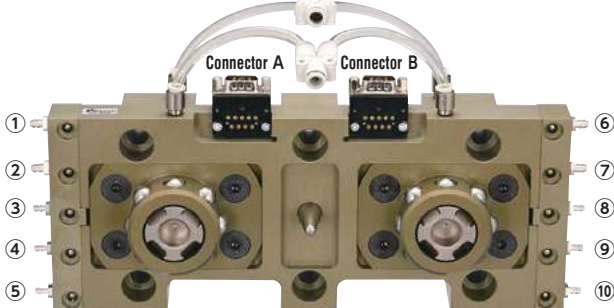
**W/o connector**

Order code No.	<b>140259</b>
TYPE	<b>OX-LBFNI</b>

- Weight : 756g
- Mounting position : tool side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm



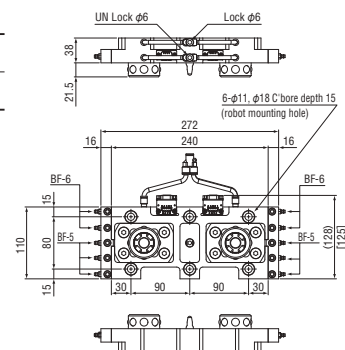
**▶ Weight capacity 80kg Type**



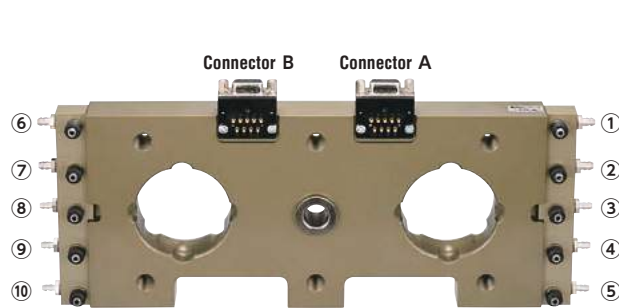
**Robot Side**

Order code No.	<b>140184</b>
TYPE	<b>OX-WLB</b>

- Superduralumin
- Weight : 2,720g
- Mounting position : robot side
- Weight capacity : ~ 80kg
- Thickness after connection : 60mm



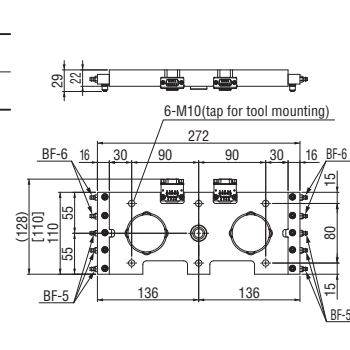
\* The value in [ ] shows the type w/o connector.



**Tool Side**

Order code No.	<b>140187</b>
TYPE	<b>OX-WLBI</b>

- Superduralumin
- Weight : 1,385g
- Mounting position : tool side
- Weight capacity : ~ 80kg
- Thickness after connection : 60mm

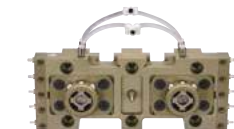


\* The value in [ ] shows the type w/o connector.

**W/o connector**

Order code No.	<b>140277</b>
TYPE	<b>OX-WLBN</b>

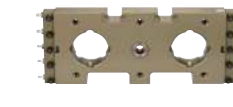
- Superduralumin
- Weight : 2,680g
- Mounting position : robot side
- Weight capacity : ~ 80kg
- Thickness after connection : 60mm



**W/o connector**

Order code No.	<b>140278</b>
TYPE	<b>OX-WLBNI</b>

- Superduralumin
- Weight : 1,345g
- Mounting position : tool side
- Weight capacity : ~ 80kg
- Thickness after connection : 60mm



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Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

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**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

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Rectangular Tube

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Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

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**By Industry**

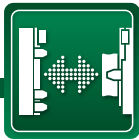
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

Various Products Information

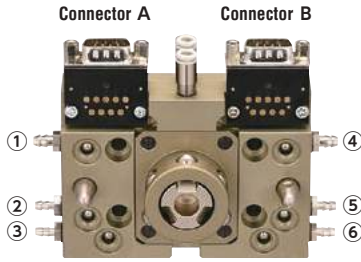


# B/BN Type

Also compatible with the mounting pattern of cartesian robots made by many other manufacturers.

## ▶ Weight capacity 10kg Type

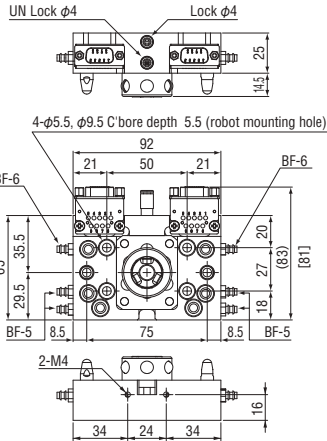
Mounting pitch  
**27×50**



Robot Side

Order code No.	<b>140217</b>
TYPE	<b>OX-SBY</b>

- Superduralumin
- Weight: 475g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm



### W/o connector

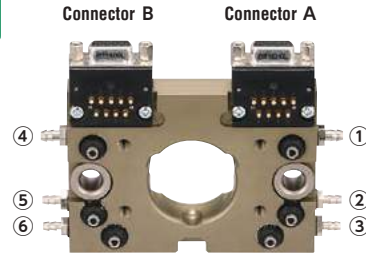
Order code No.	<b>140229</b>
TYPE	<b>OX-SBYN</b>

- Superduralumin
- Weight: 435g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm



\* The value in [ ] shows the type w/o connector.

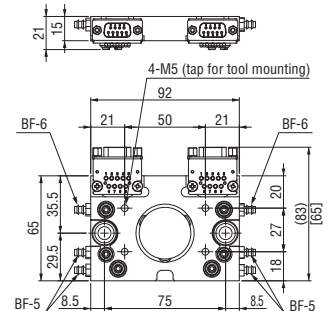
Mounting pitch  
**27×50**



Tool Side

Order code No.	<b>140218</b>
TYPE	<b>OX-SBYI</b>

- Superduralumin
- Weight: 235g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm
- Can be Installable on OX-SB



### W/o connector

Order code No.	<b>140230</b>
TYPE	<b>OX-SBYNI</b>

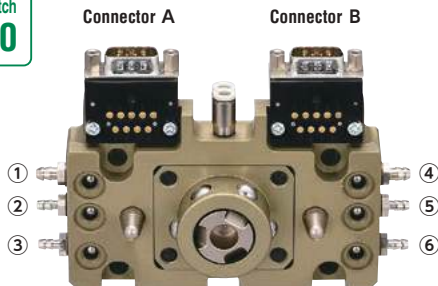
- Superduralumin
- Weight: 195g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm
- Can be Installable on OX-SB



\* The value in [ ] shows the type w/o connector.

## ▶ Weight capacity 10kg Type

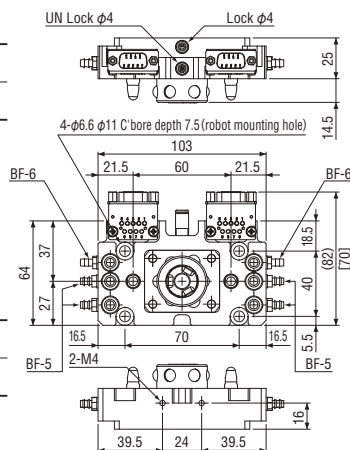
Mounting pitch  
**40×70**



Robot Side

Order code No.	<b>140275</b>
TYPE	<b>OX-SBH</b>

- Superduralumin
- Weight: 440g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm



### W/o connector

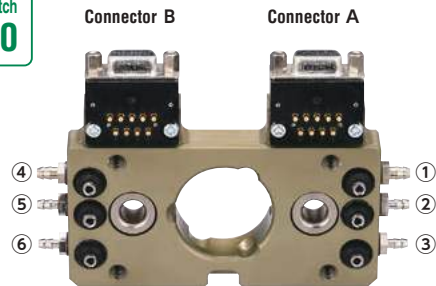
Order code No.	<b>140260</b>
TYPE	<b>OX-SBHN</b>

- Superduralumin
- Weight: 399g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm



\* The value in [ ] shows the type w/o connector.

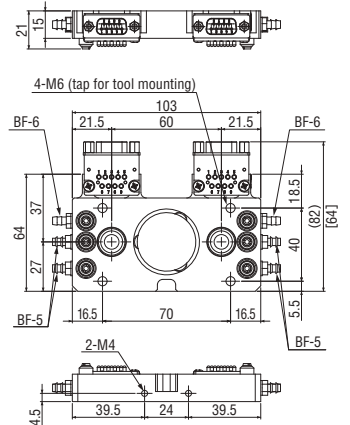
Mounting pitch  
**40×70**



Tool Side

Order code No.	<b>140276</b>
TYPE	<b>OX-SBHI</b>

- Superduralumin
- Weight: 245g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm



### W/o connector

Order code No.	<b>140261</b>
TYPE	<b>OX-SBHNI</b>

- Superduralumin
- Weight: 202g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 40mm



\* The value in [ ] shows the type w/o connector.

**Description of type**

**OX-SBYNI**

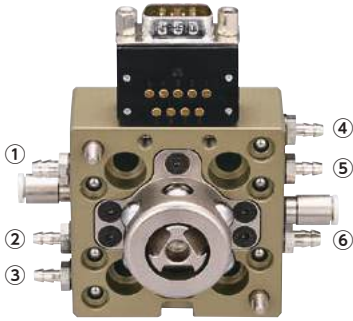
Installation side None (ROBOT SIDE)  
I (TOOL SIDE)

Type (size)

Connector N (NONE)  
No (w / connector)

**▶ Weight capacity 5kg Type**

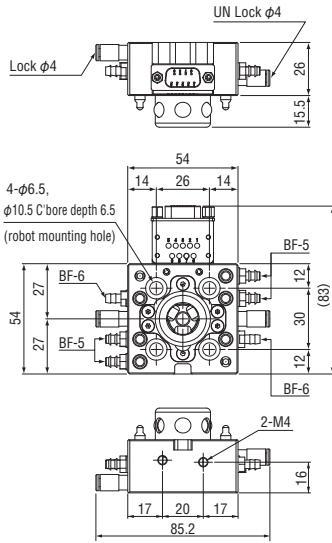
Mounting pitch  
**30×26**



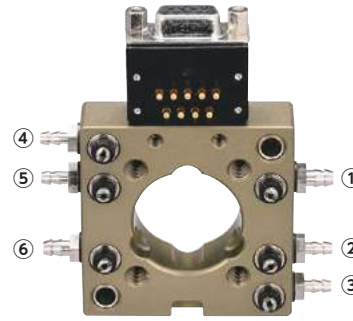
**Robot Side**

Order code No.	<b>140233</b>
TYPE	<b>OX-SBS</b>

- Superduralumin
  - Weight: 305g
  - Mounting position: robot side
  - Weight capacity: ~ 5kg
  - Thickness after connection: 42mm
  - The connector used is OXR for articulation
- See (1-31)



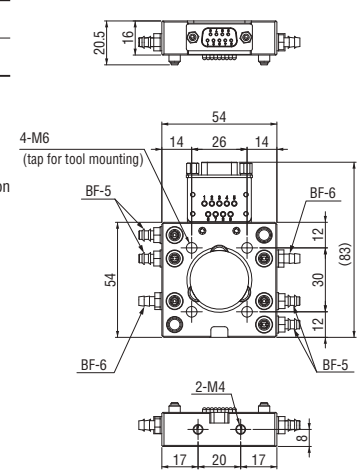
Mounting pitch  
**30×26**



**Tool Side**

Order code No.	<b>140234</b>
TYPE	<b>OX-SBSI</b>

- Superduralumin
  - Weight: 122g
  - Mounting position: tool side
  - Weight capacity: ~ 5kg
  - Thickness after connection: 42mm
  - The connector used is OXR for articulation
- See (1-31)



**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

**Tool Changer**

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

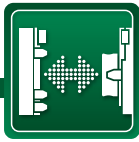
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

Various Products Information



# Long Center Guide

Easy exchange of heavy chuck plate with long center guide.

Tool changer  
(Long center guide)



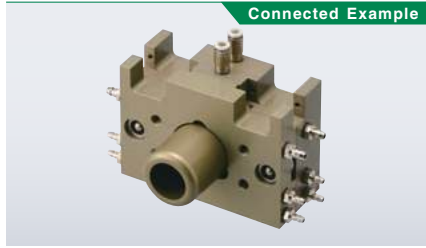
You can see moving images of products by using QR code reader of your smartphone.

- Since the center guide comes out of the tool mounting surface about 30 mm in combination, When assembled, the center guide protrudes about 30mm from the tool mounting surface, so it is necessary to be careful about EOAT/Chuck robot hand design.

## Weight capacity 10kg Type



Connected Example

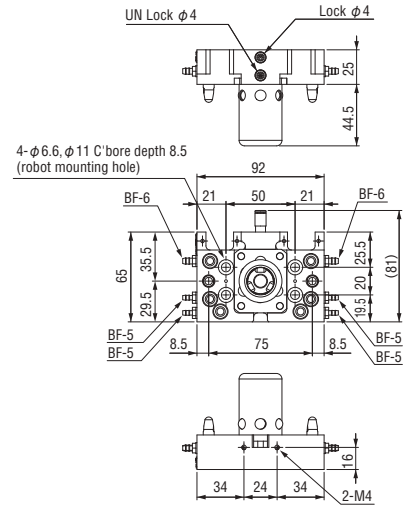


Robot Side

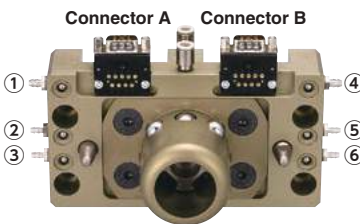
W/o connector

Order code No.	140345
TYPE	OX-SBN-30

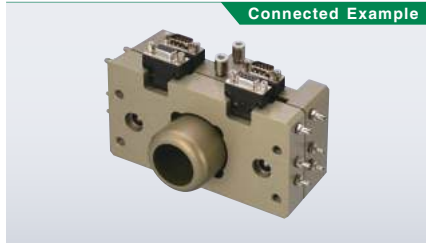
- Superduralumin
- Weight: 470g
- Mounting position: robot side
- Weight capacity: ~ 10kg
- Tools: OX-SBN1, OX-SBYN1



## Weight capacity 35kg Type



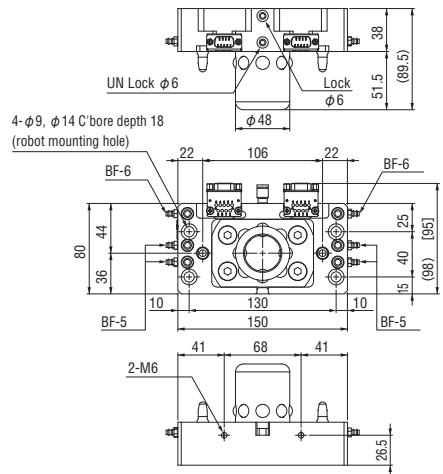
Connected Example



Robot Side

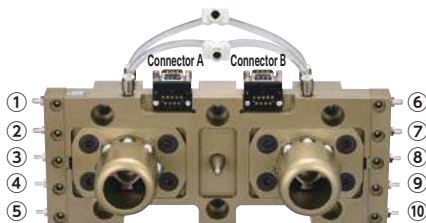
Order code No.	140228
TYPE	OX-LB-30

- Superduralumin
- Weight: 1,370g
- Mounting position: robot side
- Weight capacity: ~ 35kg
- Tools: OX-LB1

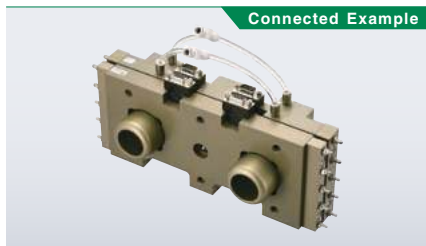


\* The value in [ ] shows the type w/o connector.

## Weight capacity 80kg Type



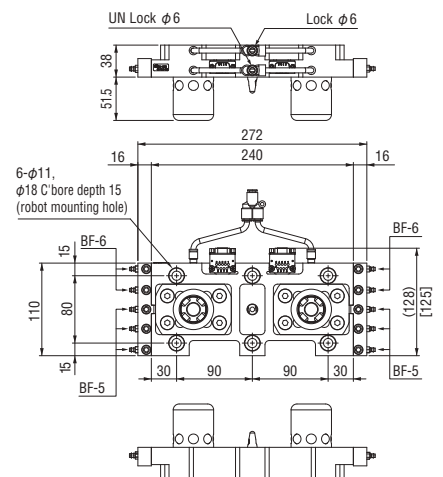
Connected Example



Robot Side

Order code No.	140283
TYPE	OX-WLB-30

- Superduralumin
- Weight: 2,905g
- Mounting position: robot side
- Weight capacity: ~ 80kg
- Tools: OX-WLB1



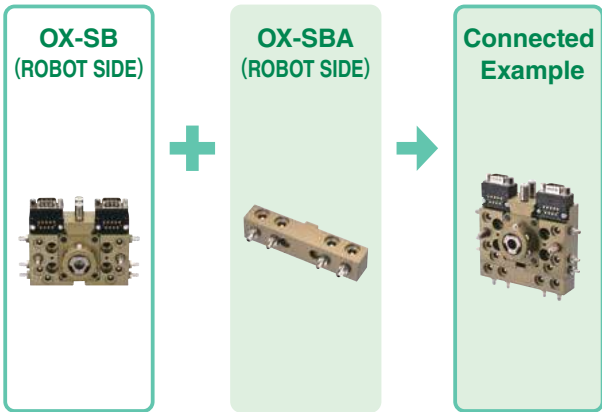
\* The value in [ ] shows the type w/o connector.





# Additional Air Expansion

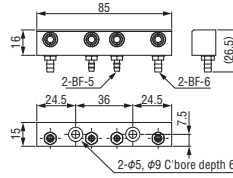
A Type / B Type / BN Type



## FOR OX-SSB (Robot Side)

Order code No.	140294
TYPE	OX-SSBA

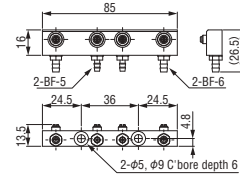
- Weight: 56g
- Attachments: mounting bolt (M3) × 2
- Air port: M5 hole × 4
- 8 ports in total including the air port of robot side body



## FOR OX-SSBI (Tool Side)

Order code No.	140295
TYPE	OX-SSBIA

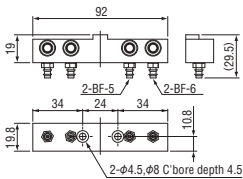
- Weight: 33g
- Attachments: mounting bolt (M3) × 2
- Air port: M5 hole × 4
- 8 ports in total including the air port of tool side body



## FOR OX-SA/OX-SB (Robot Side)

Order code No.	140193
TYPE	OX-SBA

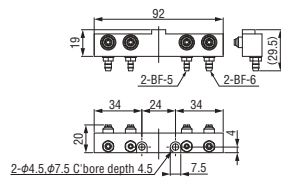
- Weight: 90g
- Attachments: mounting bolt (M4) × 2
- Air port: M5 hole × 4
- 10 ports in total including the air port of robot side body



## FOR OX-SAI/OX-SBI (Tool Side)

Order code No.	140194
TYPE	OX-SBIA

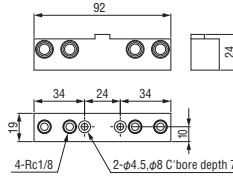
- Weight: 70g
- Attachments: mounting bolt (M4) × 2
- Air port: M5 hole × 4
- 10 ports in total including the air port of tool side body



## FOR OX-SA/OX-SB (Robot Side)

Order code No.	140251
TYPE	OX-SBA1

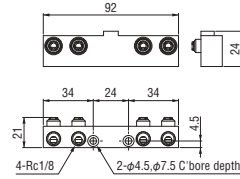
- Weight: 91g
- Attachments: mounting bolt (M4) × 2
- Air port: 1/8 hole × 4, w/o check valve
- 10 ports in total including the air port of robot side body



## FOR OX-SAI/OX-SBI (Tool Side)

Order code No.	140252
TYPE	OX-SBIA1

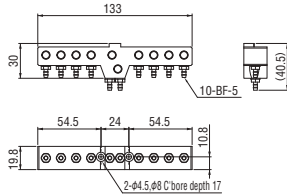
- Weight: 72g
- Attachments: mounting bolt (M4) × 2
- Air port: 1/8 hole × 4
- 10 ports in total including the air port of tool side body



## NEW FOR OX-SB (Robot Side)

Order code No.	140391
TYPE	OX-SCA-10

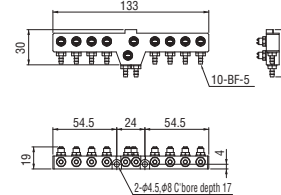
- Weight: 144g
- Attachments: mounting bolt (M4) × 2
- Air port: M5 hole × 10
- 16 ports in total including the air port of robot side body



## NEW FOR OX-SBI (Tool Side)

Order code No.	140392
TYPE	OX-SCIA-10

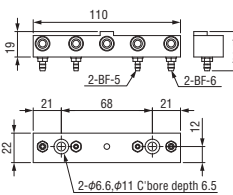
- Weight: 90.7g
- Attachments: mounting bolt (M4) × 2
- Air port: M5 hole × 10
- 16 ports in total including the air port of tool side body



## FOR X-LA/OX-LB (Robot Side)

Order code No.	140195
TYPE	OX-LBA

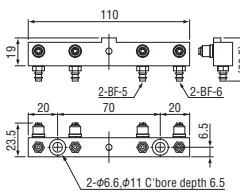
- Weight: 115g
- Attachments: mounting bolt (M6) × 2
- Air port: M5 hole × 4
- 10 ports in total including the air port of robot side body



## FOR OX-LAI/OX-LBI (Tool Side)

Order code No.	140196
TYPE	OX-LBIA

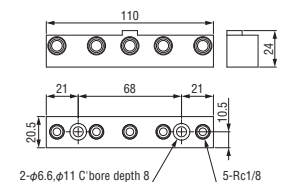
- Weight: 82g
- Attachments: mounting bolt (M6) × 2
- Air port: M5 hole × 4
- 10 ports in total including the air port of robot side body



## FOR OX-LA/OX-LB (Robot Side)

Order code No.	140253
TYPE	OX-LBA1

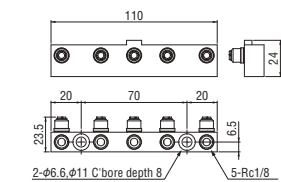
- Weight: 113g
- Attachments: mounting bolt (M6) × 2
- Air port: 1/8 hole × 5, w/o check valve
- 11 ports in total including the air port of robot side body



## FOR OX-LAI/OX-LBI (Tool Side)

Order code No.	140254
TYPE	OX-LBIA1

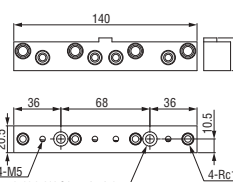
- Weight: 77g
- Attachments: mounting bolt (M6) × 2
- Air port: 1/8 hole × 5
- 11 ports in total including the air port of tool side body



## FOR OX-LA/OX-LB (Robot Side)

Order code No.	140287
TYPE	OX-LBA3

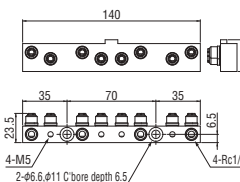
- Weight: 160g
- Attachments: mounting bolt (M6) × 2
- Air port: 1/8 hole × 5, w/o check valve, hole (M5) × 4
- 14 ports in total including the air port of robot side body



## FOR OX-LAI/OX-LBI (Tool Side)

Order code No.	140288
TYPE	OX-LBIA3

- Weight: 112g
- Attachments: mounting bolt (M6) × 2
- Air port: 1/8 hole × 5, hole (M5) × 4
- 14 ports in total including the air port of tool side body



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

### Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Section

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

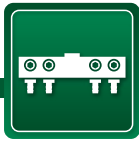
Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Accessories

A Type / B Type / BN Type

## ▶ Remote valve for manual tool change actuation

### Manual air valve push button (Return Type)



Order code No.	<b>152308</b>
TYPE	<b>PB1-E</b>
Weight	65g

### Manual air valve push slide button (Retention Type)



Order code No.	<b>152306</b>
TYPE	<b>PBW1-E</b>
Weight	75g

## ▶ Replacement Parts

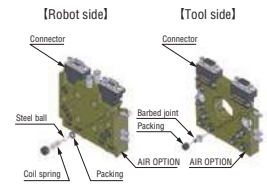
Barbed joint	Tool side			
	For OX-*A/*B	For OX-SSB	For OX-SBS	For WSBI
Order code No.	<b>110623</b>	<b>230116</b>	<b>230117</b>	<b>110722</b>
TYPE	<b>LX0004-101</b>	<b>XL0054-106A</b>	<b>XL0054-206A</b>	<b>LX0181-203</b>
Weight	2g	1g	1g	1g



Steel ball *Material:SUS304	Robot side	
	For OX-*A/*B	For OX-SSB/SBS
Order code No.	<b>323000</b>	<b>310607</b>
TYPE	<b>φ6.35</b>	<b>φ5.5</b>
Weight	1g	1g



Coil spring	Robot side			
	For OX-SB/SBY/LA	For OX-LB	OX-WLB/SBH/SA/WSA/ Additional air expansion	For OX-SSB/SBS
Order code No.	<b>110649</b>	<b>185221</b>	<b>110619</b>	<b>200223</b>
TYPE	<b>L00999-420</b>	<b>SAWANE5115</b>	<b>L00999-316</b>	<b>UR5-10</b>
Weight	0.2g	0.4g	0.1g	0.1g



Packing *Material: CR (chloroprene rubber)	For OX-*A/*B		For OX-SSB/SBS	
	Tool side	Robot side	Tool side	Robot side
Order code No.	<b>110551</b>	<b>184474</b>	<b>230077</b>	<b>271742</b>
TYPE	<b>L00999-313</b>	<b>S6 (C00503-A00X8)</b>	<b>XL0054-204</b>	<b>1ASS-5</b>
Weight	0.2g	0.05g	0.1g	0.05g



L00999-313  
XL0054-204



S6  
1ASS-5

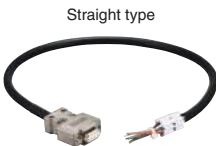
## ▶ Cable Accessories

D-SUB cable (OX-*A type)	Robot side	Tool side	Robot side	Tool side
Order code No.	<b>140168</b>	<b>140167</b>	<b>140170</b>	<b>140169</b>
TYPE	<b>OX-DS09-H</b>	<b>OX-DS09-I-H</b>	<b>OX-DS15-H</b>	<b>OX-DS15-I-H</b>
Weight	40g			
Cable length	0.5m			
Electric contact	9Pin		15Pin	
Electrical wiring	Movable cable (AWG22), for UL			



● Bending radius (mm): R46

D-SUB cable for OX (OX-*B type)	Robot side	Robot side	Tool side	Tool side
Order code No.	<b>140197</b>	<b>140247</b>	<b>140202</b>	<b>140364</b>
TYPE	<b>OX-DS09S-H</b>	<b>OX-DS09S-H (1.5M)</b>	<b>OX-DS09P-I-H</b>	<b>OX-DS09P-I-H (1.5M)</b>
Weight	60g	138g	60g	140g
Cable length	0.5m	1.5m	0.5m	1.5m
Electric contact	9Pin			
Electrical wiring	Movable cable (AWG22), for UL			



Straight type

● Bending radius (mm): R46


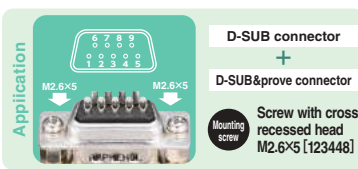
D-SUB cable for OX (OX-*B type)	Robot side (L)	Robot side (L)	Tool side (L)	Tool side (L)
Order code No.	<b>140203</b>	<b>140248</b>	<b>140204</b>	<b>140365</b>
TYPE	<b>OX-DS09SL-H</b>	<b>OX-DS09SL-H (1.5M)</b>	<b>OX-DS09PL-I-H</b>	<b>OX-DS09PL-I-H (1.5M)</b>
Weight	60g	138g	60g	140g
Cable length	0.5m	1.5m	0.5m	1.5m
Electric contact	9Pin			
Electrical wiring	Movable cable (AWG22), for UL			



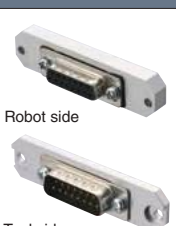
L type


● Bending radius (mm): R46

## Connector Accessories

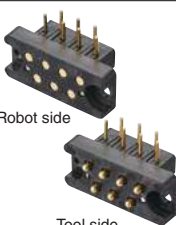
D-SUB connector (OX-A type)		Robot side	Tool side	Robot side	Tool side
 <p>Robot side      Tool side</p> <p>* Screws are not included.</p>	Order code No.	<b>140172</b>	<b>140171</b>	<b>140174</b>	<b>140173</b>
	TYPE	<b>OX-DS09</b>	<b>OX-DS09-I</b>	<b>OX-DS15</b>	<b>OX-DS15-I</b>
	Weight	4g			
	Electrical wiring	AWG22			
	Electric contact	9Pin (2A DC24V MAX)		15Pin (2A DC24V MAX)	
 <p>Application</p> <p>D-SUB connector + D-SUB&amp;probe connector</p> <p>Screw with cross recessed head M2.6×5 [123448]</p> <p>Mounting screw</p>	Mounting screw size	<b>OX-A TYPE</b> <b>OX-B TYPE</b>	Screw with cross recessed head M3×6[123446]	Screw with cross recessed head M3×16 (NUT 4PCS) [123449] M3 NUT [123301]	Screw with cross recessed head M3×10 [123447]
		<b>D-SUB&amp; probe connector</b>	Screw with cross recessed head M2.6×5[123448]		

\*D-SUB connector can be mounted on cable wiring.

D-SUB connector (for WSB)		Robot side	Tool side
 <p>Robot side      Tool side</p>	Order code No.	<b>140304</b>	<b>140305</b>
	TYPE	<b>OX-DS15-WS</b>	<b>OX-DS15-I-WS</b>
	Weight	21g	13g
	Electrical wiring	AWG22	
	Electric contact	15Pin (2A)	
	Attached screw	Bolt with Hexagon Socket M3×8	

D-SUB & probe connector (for OX-A/B)		Robot side	Tool side
 <p>Robot side      Tool side</p>	Order code No.	<b>140324</b>	<b>140325</b>
	TYPE	<b>OX-DPS09A</b>	<b>OX-DPS09A-I</b>
	Weight	24g	
	Electrical wiring	AWG22	
	Electric contact	9Pin (2A)	
	Attached screw	Screw with cross recessed head M3×6 [123446]	

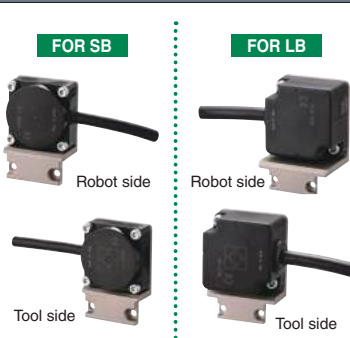
• Connector drawing → See [1-33](#)

Probe connector (OX-SSB/A/B type) solder-fix type		Robot side	Tool side
 <p>Robot side      Tool side</p>	Order code No.	<b>140286</b>	<b>140285</b>
	TYPE	<b>OX-PLA-07</b>	<b>OX-PLA-07-I</b>
	Weight	6g	
	Electrical wiring	AWG22	
	Electric contact	7Pin (1A)	
	Attached screw	Screw with cross recessed head M3×6 [123446]	

• Connector drawing → See [1-33](#)

## Wireless connector

Can be used for the place with moisture and dust with contactless design

Wireless connector		FOR SB ROBOT SIDE	FOR SB TOOL SIDE	FOR LB ROBOT SIDE	FOR LB TOOL SIDE
 <p>FOR SB      FOR LB</p> <p>Robot side      Robot side</p> <p>Tool side      Tool side</p>	Order code No.	<b>140306</b>	<b>140307</b>	<b>140308</b>	<b>140378</b>
	TYPE	<b>OX-RS04R-SB</b>	<b>OX-RS04T-SBI</b>	<b>OX-RS12R-LB</b>	<b>OX-RS12T1-LBI</b>
	Weight	195g	140g	417g	290g
	Drive voltage	12V ± 1.5VDC		12V ± 1.5VDC	
	Input and output points	4 points + 1 point	4 points	12 points + 1 point	12 points
	Attached screw	Screw with cross recessed head M3×8	Screw with cross recessed head M3×8	Screw with cross recessed head M3×8	Screw with cross recessed head M3×8



\*Check the specification and precautions concerning handling. → [1-38](#)


\*Check the drawing. → [1-35](#)

\*OX-RS12 is basically for the tool changer with load capacity 35kg or more. \*For protection structure IP67

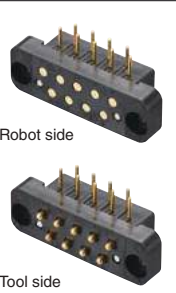
\*The output type is NPN type. \*Power supply voltage DC24V \*Cable Length: robot side 2m tool side 1m

\*To avoid interference between wireless connectors, no more than 1 wireless connector should be installed per tool changer.

Connector plate		Order code No.	140289
 <p>*Required to attach D-SUB connector to OX-B type. → <a href="#">1-22,23</a></p>	TYPE	<b>OX-DS09CNP</b>	
	Weight	2g	
 <p>*Required to attach D-SUB &amp; probe connector (for OX-A/B) to OX-WSBN type.</p>	Order code No.	<b>140303</b>	
	TYPE	<b>OX-DPS09WCNP</b>	
	Weight	6g	

Probe connector (OX-A/B type) solder-fix type		Robot side	Tool side
 <p>Robot side      Tool side</p>	Order code No.	<b>140361</b>	<b>140360</b>
	TYPE	<b>OX-PS15</b>	<b>OX-PS15-I</b>
	Weight	5g	8g
	Electrical wiring	AWG22	
	Electric contact	15Pin (2A)	
	Attached screw	Screw with cross recessed head M3×6 [123446]	

• Connector drawing → See [1-33](#)

Probe connector (OX-WSA type) solder-fix type		Robot side	Tool side
 <p>Robot side      Tool side</p>	Order code No.	<b>140220</b>	<b>140221</b>
	TYPE	<b>OX-PL09</b>	<b>OX-PL09-I</b>
	Weight	9g	
	Electrical wiring	AWG22	
	Electric contact	9Pin (1A)	
	Attached screw	Screw with cross recessed head M3×16 (NUT 4PCS) [123449]	Screw with cross recessed head M3×10 [123447]

• Connector drawing → See [1-33](#)

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

### Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information






Various Products Information

# Tool changers for Take-out Robot Option & Replacement Parts

		Order code No.	TYPE	Tool changer																			
				Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side		
				140266 (140280)	140268 (140281)	140181 (140225)	140182 (140226)	140299 (140300)	140301 (140302)	140183 (140231)	140186 (140232)	140274 (140258)	140273 (140259)	140184 (140277)	140187 (140278)	140217 (140229)	140218 (140230)	140275 (140260)	140276 (140261)	140233	140234	140345 (140345)	140228 (140279)
Air option	Robot side	140294	OX-SSBA	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140295	OX-SSBIA	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140193	OX-SBA	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140194	OX-SBIA	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140251	OX-SBA1	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140252	OX-SBIA1	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140391	OX-SCA-10	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140392	OX-SCIA-10	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140195	OX-LBA	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—		
	Tool side	140196	OX-LBIA	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—		
	Robot side	140253	OX-LBA1	—	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—	—		
	Tool side	140254	OX-LBIA1	—	—	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—		
	Robot side	140287	OX-LBA3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140288	OX-LBIA3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Maintenance parts	Barbed joint	110623	LX0004-101	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		230116	XL0054-106A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		230117	XL0054-206A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		110722	LX0181-203	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Steel ball	323000	φ6.35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		310607	φ5.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Coil spring	110649	L00999-420	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		185221	SAWANE5115	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		110619	L00999-316	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		200223	UR5-10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Packing (Robot side)	184474	S6(C00503-A00X8)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Packing (Tool side)	271742	1ASS-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	110551	L00999-313	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	230077	XL0054-204	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Cable Accessories	Robot side	140168	OX-DS09-H	—	—	○※1	—	○※1	—	○※1	—	○※1	—	○※1	—	○※1	—	○※1	—	○※1	○※1		
	Tool side	140167	OX-DS09-I-H	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	—	—		
	Robot side	140197	OX-DS09S-H	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1	○※1		
		140247	OX-DS09S-H(1.5M)	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1	○※1		
	Tool side	140202	OX-DS09P-I-H	—	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1		
		140364	OX-DS09P-I-H(1.5M)	—	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1		
	Robot side	140203	OX-DS09SL-H	—	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1		
		140248	OX-DS09SL-H(1.5M)	—	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1		
	Tool side	140204	OX-DS09PL-I-H	—	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1		
		140365	OX-DS09PL-I-H(1.5M)	—	—	—	—	○※1	—	○※1	—	—	○※1	—	—	○※1	—	—	○※1	—	○※1		
Connector Accessories	Robot side	140172	OX-DS09	—	—	○※2	—	○※2	—	○※2	—	○※2	—	○※2	—	○※2	—	○※2	—	○※2	○※2		
	Tool side	140171	OX-DS09-I	—	—	—	○※2	—	○※2	—	—	○※2	—	—	○※2	—	—	○※2	—	—	—		
	Robot side	140174	OX-DS15	—	—	—	—	○※3	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140173	OX-DS15-I	—	—	—	—	—	○※3	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140304	OX-DS15-WS	—	—	—	—	—	—	○※3	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140305	OX-DS15-I-WS	—	—	—	—	—	—	—	○※3	—	—	—	—	—	—	—	—	—	—		
	Connector plate	140289	OX-DS09CNP	—	—	—	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	○※2	
		140303	OX-DPS09WCNP	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140324	OX-DPS09A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140325	OX-DPS09A-I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Robot side	140361	OX-PS15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Tool side	140360	OX-PS15-I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Robot side	140286	OX-PLA-07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Tool side	140285	OX-PLA-07-I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Robot side	140190	OXR-DPS09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Tool side	140192	OXR-DPS09-I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Wireless connector	Robot side	140306	OX-RS04R-SB	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140307	OX-RS04T-SBI	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140321	OXR-RS04R-10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Tool side	140323	OXR-RS04T-10I	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Robot side	140308	OX-RS12R-LB	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Tool side	140378	OX-RS12T1-LBI	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

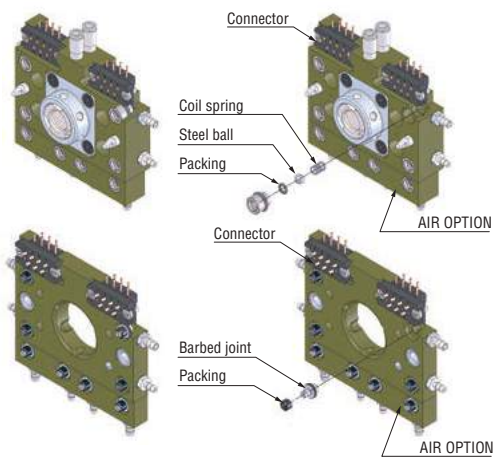
\* 1 If you use a cable accessory with no connector, you will need the proper D-sub & probe connectors (★ mark).  
 \* 2 To install the D-SUB connector (140172, 140171), use the connector plate (140289) OX-DS09CNP as a set.  
 \* 3 The D-SUB connectors (140304) OX-DS15WS, (140305) OX-DS15-I-WS, (140174) OX-DS15, and (140173) OX-DS15-I are dedicated to the OX-WSB・WSB I type.  
 \* 4 The connector plate (140303) OX-DPS09WCNP is required for mounting on the type without a connector.  
 \* 5 Because of the thickness of the wireless connector, it will come out or same as the mounting surface of the tool changer, please confirm the size.



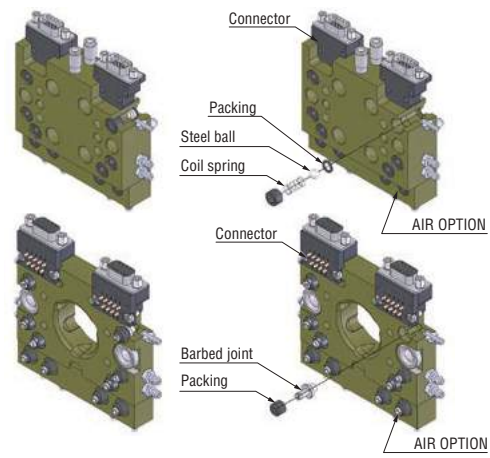
			Air option														
			Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side			
			Order code No.	140294	140295	140193	140194	140251	140252	140195	140196	140253	140254	140287	140288		
			Order code No.	OX-SSBA	OX-SSBIA	OX-SBA	OX-SBIA	OX-SBA1	OX-SBIA1	OX-LBA	OX-LBIA	OX-LBA1	OX-LBIA1	OX-LBA3	OX-LBIA3 ※		
Maintenance parts	Barbed joint		110623	LX0004-101	—	—	—	○	—	—	—	○	—	—	—	○	
		230116	XL0054-106A	—	○	—	—	—	—	—	—	—	—	—	—	—	—
	Steel ball		110686	LX0120-202	—	—	—	—	—	○	—	—	—	○	—	—	○
		323000	φ6.35	—	—	○	—	—	—	—	○	—	—	—	—	—	—
	Coil spring		310607	φ5.5	○	—	—	—	—	—	—	—	—	—	—	—	—
		110649	L00999-420	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Packing (Robot side)		185221	SAWANE5115	○	—	—	—	—	—	—	—	—	—	—	—	—
		110619	L00999-316	—	—	○	—	—	—	—	○	—	—	—	—	—	—
		200223	UR5-10	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	Packing (Tool side)		184474	S6 (C00503-A00X8)	—	—	—	—	—	—	○	—	—	—	—	—	—
		271742	1ASS-5	○	—	—	—	—	—	—	—	—	—	—	—	—	—
		110551	L00999-313	—	—	—	○	—	—	—	—	○	—	—	—	—	○
			230077	XL0054-204	—	○	—	—	—	—	—	—	—	—	—	—	—
			110687	LX0120-203	—	—	—	—	—	○	—	—	—	○	—	—	○

※ (140288) OX-LBIA3 [for M5 port: (110623) LX0004-101+(110551) L00999-313, for M6 port: (110686) LX0120-202+(110687) LX0120-203]

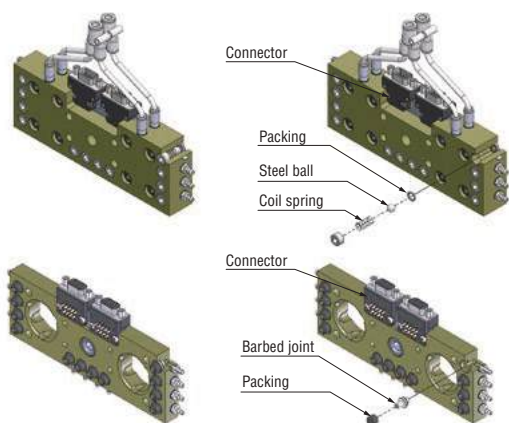
### OX-SSB/SSBI



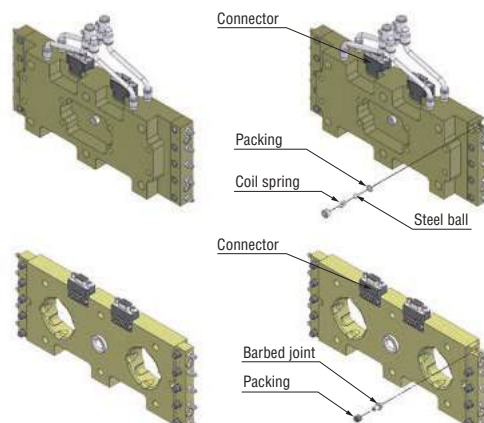
### OX-SB/SBI



### OX-WSB/WSBI



### OX-WLB/WLBI



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

#### Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig


#### Information


Various Products Information

# Substitute Product of Tool Changer (A type)

## Repairing parts of tool changer (A type)

\*For more information, please contact our sales office nearest you.

Piston		For OX-SA
	Order code No.	<b>140249</b>
	TYPE	<b>OX-SAP</b>
	Weight	94g
	Attachments PARTS	Piston set, Spring, Steel ball, Steel ball holder

Piston		For OX-LA
	Order code No.	<b>140250</b>
	TYPE	<b>OX-LAP</b>
	Weight	336g
	Attachments PARTS	Piston set, Spring, Steel ball, Steel ball holder

## Substitute product of tool changer (A type)

\*For more information, please contact our sales office nearest you.

Production stopped	
Order code No.	TYPE
140156	OX-SA
140157	OX-SAI
140158	OX-LA
140159	OX-LAI
140162	OX-WSA
140163	OX-WSAI
140160	OX-WLA
140161	OX-WLAI
140164	OX-SA-30
140165	OX-LA-30
140166	OX-WLA-30



Substitute		
Order code No.	TYPE	Thickness (mm)
<b>140225</b>	<b>OX-SBN</b>	+5
<b>140226</b>	<b>OX-SBNI</b>	0
<b>140231</b>	<b>OX-LBN</b>	+9
<b>140232</b>	<b>OX-LBNI</b>	0
<b>140300</b>	<b>OX-WSBN</b>	+4.5
<b>140302</b>	<b>OX-WSBNI</b>	0
<b>140277</b>	<b>OX-WLBN</b>	+8
<b>140278</b>	<b>OX-WLBNI</b>	0
<b>140345</b>	<b>OX-SBN-30</b>	+5
<b>140279</b>	<b>OX-LBN-30</b>	+8
<b>140267</b>	<b>OX-WLBN-30</b>	+7.5

## Subroutine product of additional air expansion for A type

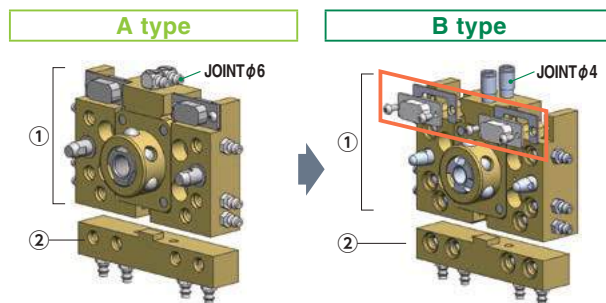
\*For more information, please contact our sales office nearest you.

Production stopped	
Order code No.	TYPE
110547	L00999-306 SET
110548	L00999-207 SET
110545	L00999-406 SET
110546	L00999-407 SET



Substitute	
Order code No.	TYPE
<b>140193</b>	<b>OX-SBA</b>
<b>140194</b>	<b>OX-SBIA</b>
<b>140195</b>	<b>OX-LBA</b>
<b>140196</b>	<b>OX-LBIA</b>

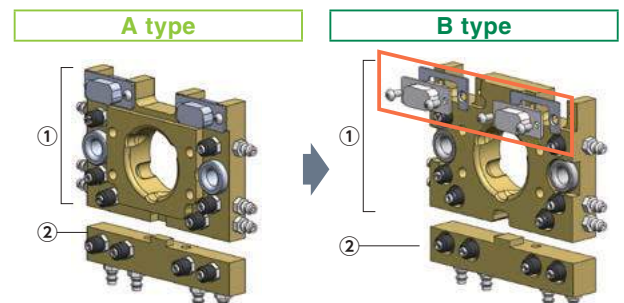
### OX-SA (ROBOT SIDE)



	Order code No.	TYPE	Remarks	Qty
	<b>140225</b>	OX-SBN	Tool changer	1
①	<b>140289</b>	OX-DS09CNP	Connector plate	2
	<b>140172</b>	OX-DS09	D-SUB connector	2
	<b>123446</b>	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
②	<b>140193</b>	OX-SBA	Additional air expansion	1

\* ② : If not used, purchase order is not required.

### OX-SAI (TOOL SIDE)



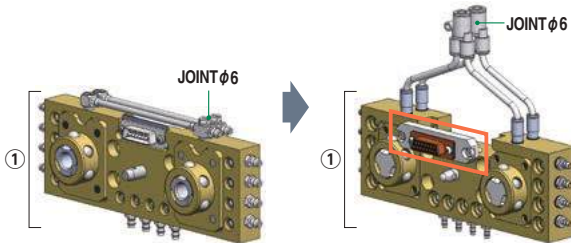
	Order code No.	TYPE	Remarks	Qty
	<b>140226</b>	OX-SBNI	Tool changer	1
①	<b>140289</b>	OX-DS09CNP	Connector plate	2
	<b>140171</b>	OX-DS09-I	D-SUB connector	2
	<b>123446</b>	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
②	<b>140194</b>	OX-SBIA	Additional air expansion	1

\* ② : If not used, purchase order is not required.

## OX-WSA (ROBOT SIDE)

A type

B type

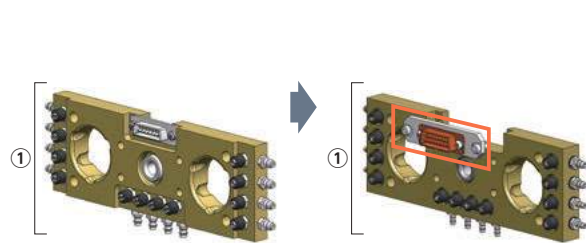


	Order code No.	TYPE	Remarks	Qty
①	140300	OX-WSBN	Tool changer	1
	140304	OX-DS15-WS	D-SUB connector	1

## OX-WSAI (TOOL SIDE)

A type

B type

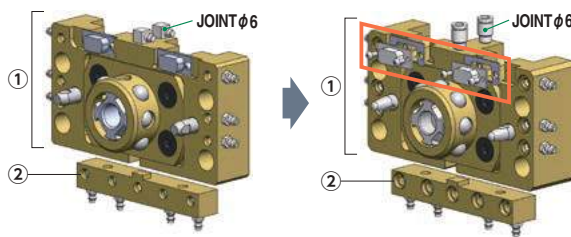


	Order code No.	TYPE	Remarks	Qty
①	140302	OX-WSBNI	Tool changer	1
	140305	OX-DS15-I-WS	D-SUB connector	1

## OX-LA (ROBOT SIDE)

A type

B type



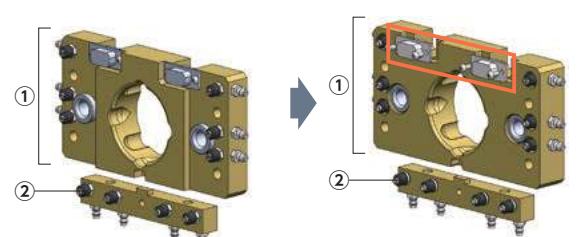
	Order code No.	TYPE	Remarks	Qty
①	140231	OX-LBN	Tool changer	1
	140289	OX-DS09CNP	Connector plate	2
	140172	OX-DS09	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
	140195	OX-LBA	Additional air expansion	1

\* ② : If not used, purchase order is not required.

## OX-LAI (TOOL SIDE)

A type

B type



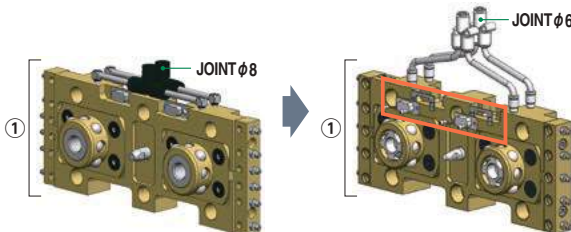
	Order code No.	TYPE	Remarks	Qty
①	140232	OX-LBNI	Tool changer	1
	140171	OX-DS09-I	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
	140196	OX-LBIA	Additional air expansion	1

\* ② : If not used, purchase order is not required.

## OX-WLA (ROBOT SIDE)

A type

B type

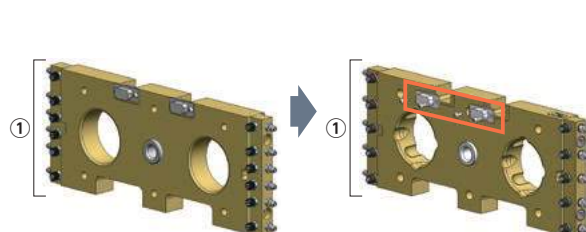


	Order code No.	TYPE	Remarks	Qty
①	140277	OX-WLBN	Tool changer	1
	140289	OX-DS09CNP	Connector plate	2
	140172	OX-DS09	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4

## OX-WLAI (TOOL SIDE)

A type

B type



	Order code No.	TYPE	Remarks	Qty
①	140278	OX-WLBNI	Tool changer	1
	140171	OX-DS09-I	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

### Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

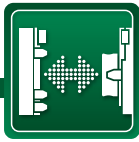
Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# For Articulated Robots

Essential tool for high performance of robot.



Please check the performance table on the web site.

Tool changer  
(for articulated robots)



You can see moving images of products by using QR code reader of your smartphone.

## Specification

Product name	Order code No.	TYPE	Weight (g)	Weight capacity (kg)	Power to draw (N)		Allowable bending moment (Nm)	Allowable torsional moment (Nm)	Electric contact Connector shape	Piping connect	Page of details
						Power to force (N)					
Tool changer	140310	OX-005A	38	~ 0.5	60/50	1.7	0.9	6Pin 2A DC24V Max Connector(option)	2port (M3)	1-25	
	140315	OX-005AI	17								
	140235	OX-03A	125	~ 3	600/160	5.2	1.0	9Pin 2A DC24V Max Connector(option)	6port (M5)		
	140236	OX-03AI	45								
	140237	OX-05A	250	~ 5	1,350/400	17.5	12.8	11Pin 2A DC24V Max Connector(option)	6port (M5)		
	140238	OX-05AI	115								
	140262	OX-10B	199	~ 10	2,200/420	28.0	20.0	16Pin 2A DC24V Max Connector(option)	6port (M5)		
	140263	OX-10BI	115								
	140292	OX-20B	507	~ 20	4,000/750	91.8	55.5	9Pin 2A DC24V Max Connector(option)	6port (Rc1/8)		
	140293	OX-20BI	226								
	140398	OX-35B	1225	~ 35	6,000(180)*2	185.0	225.0	11Pin 2A DC24V Max Connector(option)	8port (Rc1/8)		
	140316	OX-35AI	545								
	140313	OX-60A*1	1440	~ 60	14,000(2,350)	750.0	750.0	16Pin 2A DC24V Max Connector(option)	8port (PT1/4)		
	140318	OX-60AI	734								
	140373	OX-120A	3671	~ 120	20,000(3,500)	15,000	15,000	8Pin 5A AC/DC200V Max Connector(option)	10port (Rc3/8)		
	140374	OX-120AI	1770								
	140314	OX-230A	6240	~ 230	4,000/750	91.8	55.5	4Pin 13A AC/DC200V Max Connector(option)	6port (Rc1/8)		
140319	OX-230AI	3360									
140399	OX-35BT	1445	~ 35								
140317	OX-35ATI	535									

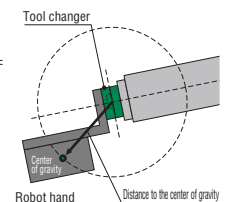
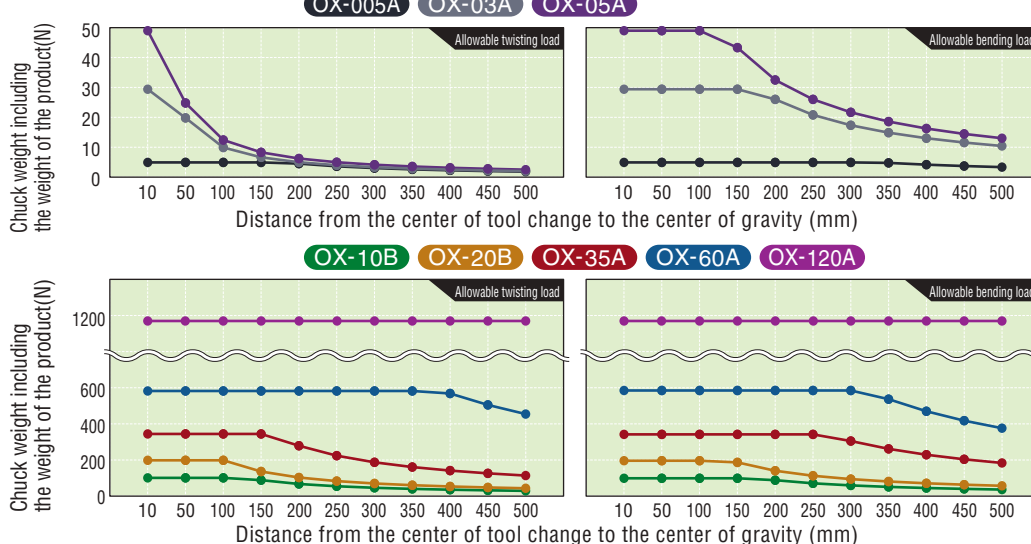
\*Please use manual push button "PB1-E(152308), PBW1-E(152306)" for manual exchange. → 1-30 6-11  
 ※1 There is no detachable mechanism for the OX-60A. ※2 The power to force (n) is the reaction value of the packing.

## Common specification

Positional reproduction Accuracy	Used Air pressure	Drive piping	Acceptable electric wiring	Allowable temperature/humidity range
±0.02mm*1	0.5~0.7MPa	Clean air, piping of φ6(φ4*2), double action type	AWG20 Max.	0°C-55°C, 0%-95%(w/o condensation)

\*1 Based on our measurement  
 \*2 φ6 : OX-35A, OX-35AT, OX-60A, OX-120A, OX-230A

## Allowable-load curve



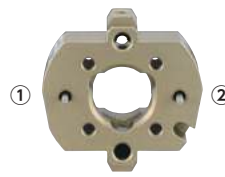


► Supports high-speed operation of parallel link robots. (Weight capacity 500g)



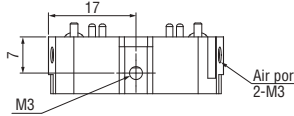
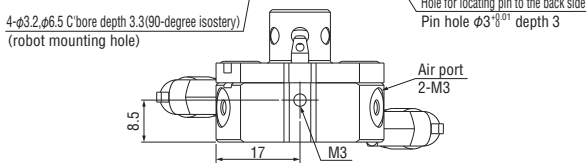
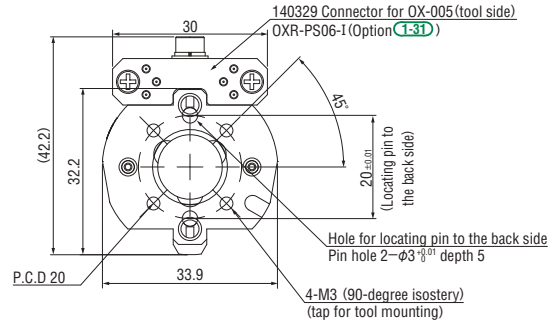
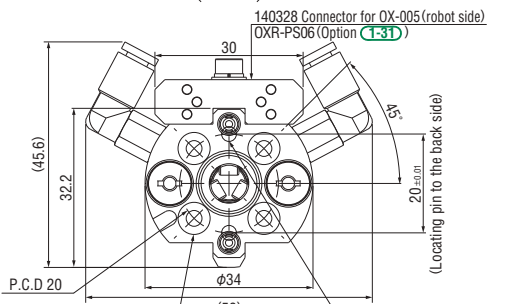
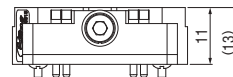
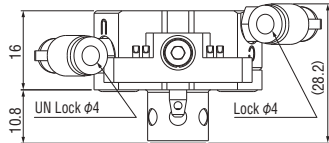
Robot Side	
Order code No.	140310
TYPE	OX-005A

- Superduralumin
- Weight : 38g
- Mounting position : robot side
- Weight capacity : ~ 500g
- Thickness after connection : 27mm

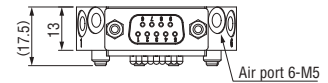
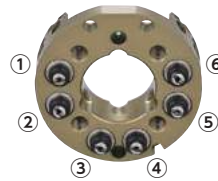
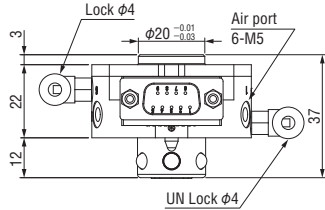


Tool Side	
Order code No.	140315
TYPE	OX-005AI

- Superduralumin
- Weight : 17g
- Mounting position : tool side
- Weight capacity : ~ 500g
- Thickness after connection : 27mm

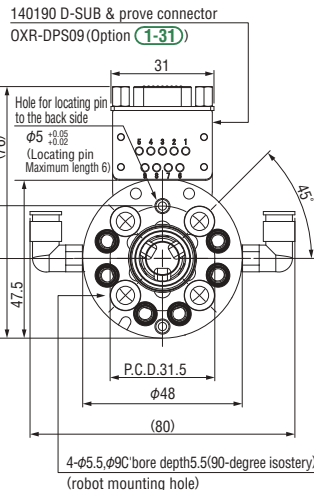


► For small-size robots. (Weight capacity 3kg, 5kg)



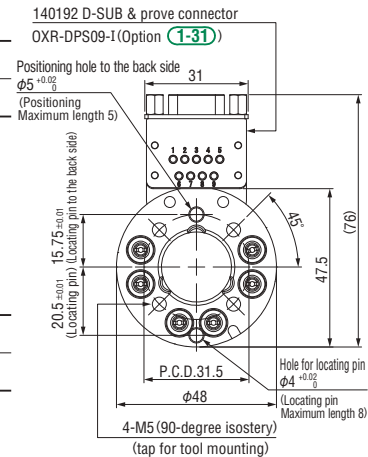
Robot Side	
Order code No.	140235
TYPE	OX-03A

- Superduralumin
- Weight : 125g
- Mounting position : robot side
- Weight capacity : ~ 3kg
- Thickness after connection : 38mm



Tool Side	
Order code No.	140236
TYPE	OX-03AI

- Superduralumin
- Weight : 45g
- Mounting position : tool side
- Weight capacity : ~ 3kg
- Thickness after connection : 38mm



Robot Side	
Order code No.	140237
TYPE	OX-05A

- Steel
- Weight : 250g
- Mounting position : robot side
- Weight capacity : ~ 5kg
- Thickness after connection : 38mm

Tool Side	
Order code No.	140238
TYPE	OX-05AI

- Steel
- Weight : 115g
- Mounting position : tool side
- Weight capacity : ~ 5kg
- Thickness after connection : 38mm

Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

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Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

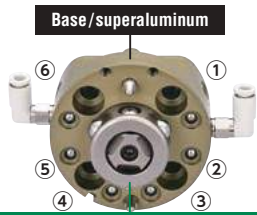
Tool / Jig

Information

Various Products Information

# For Articulated Robots

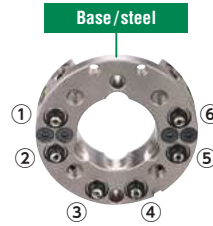
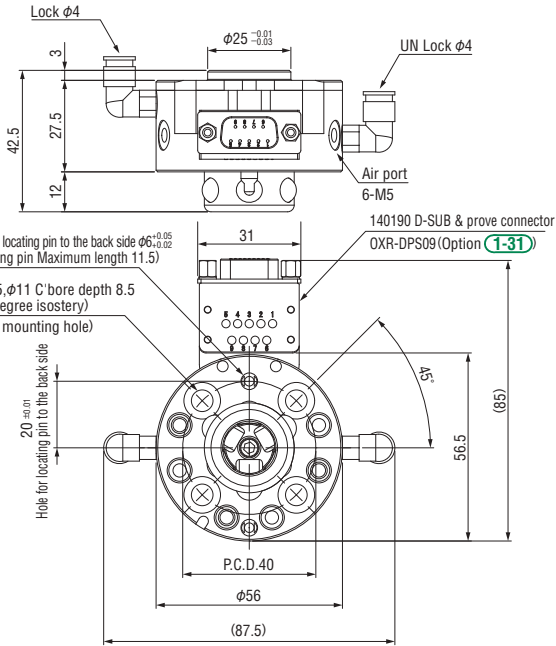
## ► For small-size robots. (Weight capacity 10kg)



Detachable and attachable section / Made of steel

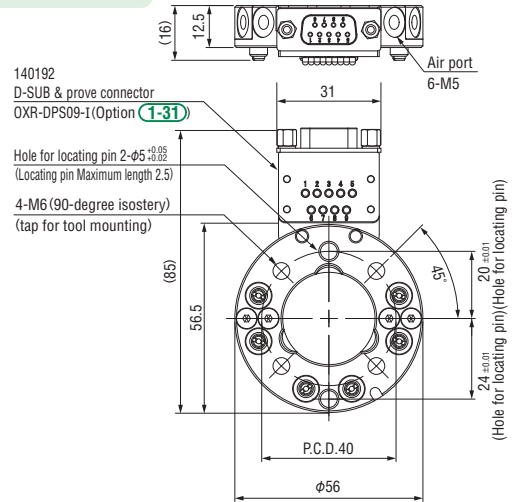
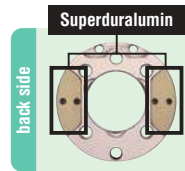
Robot Side	
Order code No.	<b>140262</b>
TYPE	<b>OX-10B</b>

- Weight : 199g
- Mounting position : robot side
- Weight capacity : ~ 10kg
- Thickness after connection : 43mm

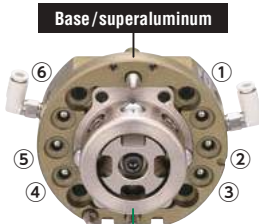


Tool Side	
Order code No.	<b>140263</b>
TYPE	<b>OX-10BI</b>

- Weight : 115g
- Mounting position : tool side
- Weight capacity : ~ 10kg
- Thickness after connection : 43mm



## ► For small-size robots. (Weight capacity 20kg)



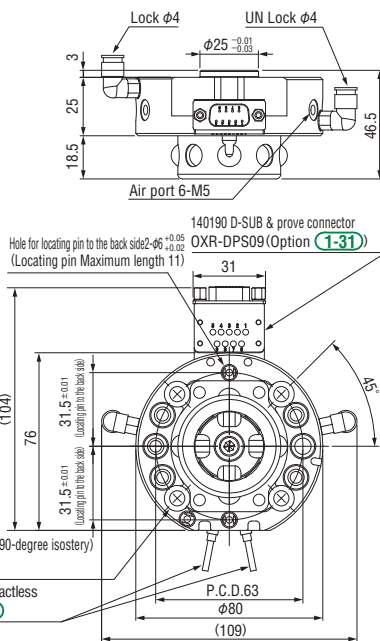
Detachable and attachable section / Made of steel

Robot Side	
Order code No.	<b>140292</b>
TYPE	<b>OX-20B</b>

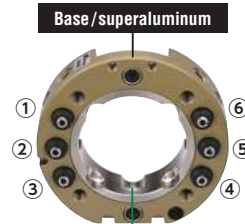
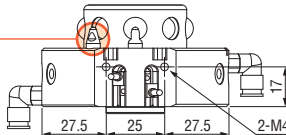
- Weight : 507g
- Mounting position : robot side
- Weight capacity : ~ 20kg
- Thickness after connection : 47mm
- Compatibility with A type
- Confirmation sensor of piston operation can be attached (OP).

4-φ6.5, φ11 C' bore depth 6.5 (90-degree isostery)  
(robot mounting hole)

030500 Auto switch-contactless  
D-F8N (Option) (1-31)



Positioning pin should be removed to connect with 20A1.



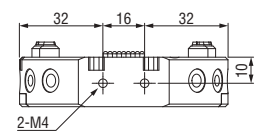
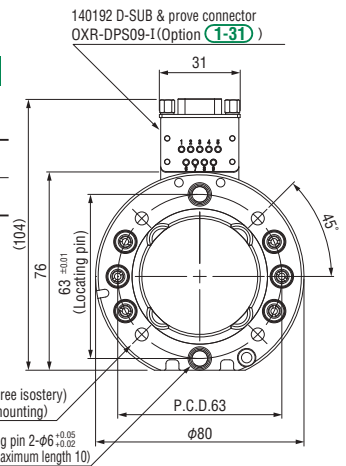
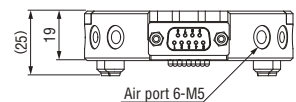
Detachable and attachable section / Made of steel

Tool Side	
Order code No.	<b>140293</b>
TYPE	<b>OX-20BI</b>

- Weight : 226g
- Mounting position : tool side
- Weight capacity : ~ 20kg
- Thickness after connection : 47mm
- Compatibility with A type

4-M6 (90-degree isostery)  
(tap for tool mounting)

Hole for locating pin 2-φ6 (90-degree isostery)  
(Locating pin Maximum length 10)



**Description of type**

**OX-35 B I**

Installation side None(Robot side)  
I (Tool side)

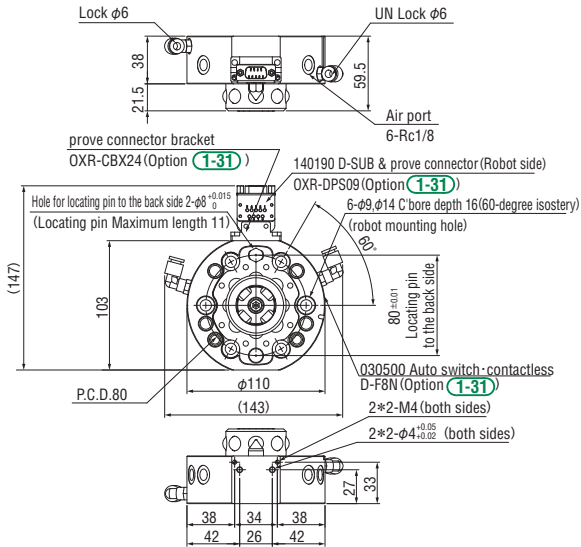
Maximum weight capacity(kg)

Version

**► For middle-size robot. (Weight capacity 35kg)**

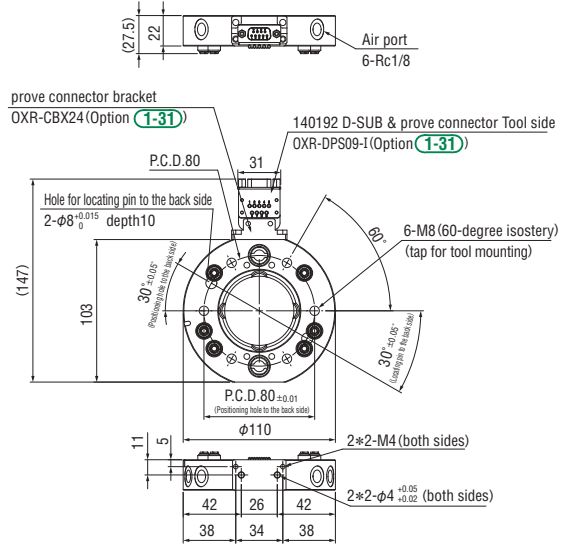
<b>Base/superaluminum</b>	<b>Robot Side</b>
	<b>Order code No. 140398</b>
	<b>TYPE OX-35B</b>
	<ul style="list-style-type: none"> <li>● Weight : 1225g</li> <li>● Mounting position : robot side</li> <li>● Weight capacity : ~ 35kg</li> <li>● Thickness after connection : 60mm</li> </ul>

**Detachable and attachable section/ Made of steel**



<b>Base/superaluminum</b>	<b>Tool Side</b>
	<b>Order code No. 140316</b>
	<b>TYPE OX-35AI</b>
	<ul style="list-style-type: none"> <li>● Weight : 545g</li> <li>● Mounting position : tool side</li> <li>● Weight capacity : ~ 35kg</li> <li>● Thickness after connection : 60mm</li> </ul>

**Detachable and attachable section/ Made of steel**

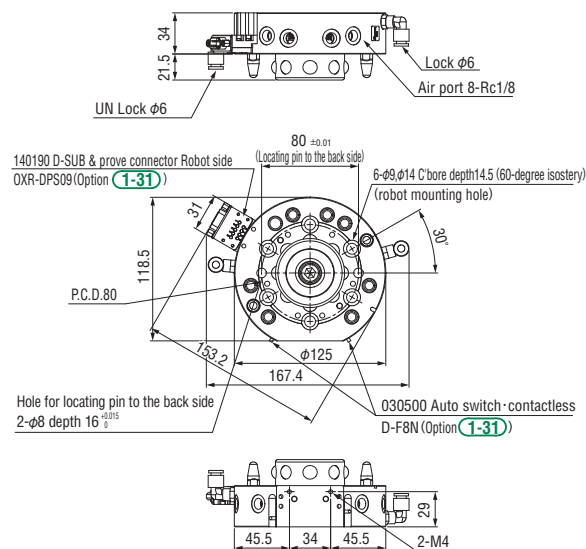


**► For middle-size robot. (Weight capacity 60kg)**

<b>Base/superaluminum</b>	<b>Robot Side</b>
	<b>Order code No. 140313</b>
	<b>TYPE OX-60A</b>
	<ul style="list-style-type: none"> <li>● Weight : 1440g</li> <li>● Mounting position : robot side</li> <li>● Weight capacity : ~ 60kg</li> <li>● Thickness after connection : 56mm</li> </ul>

**Detachable and attachable section/ Made of steel**

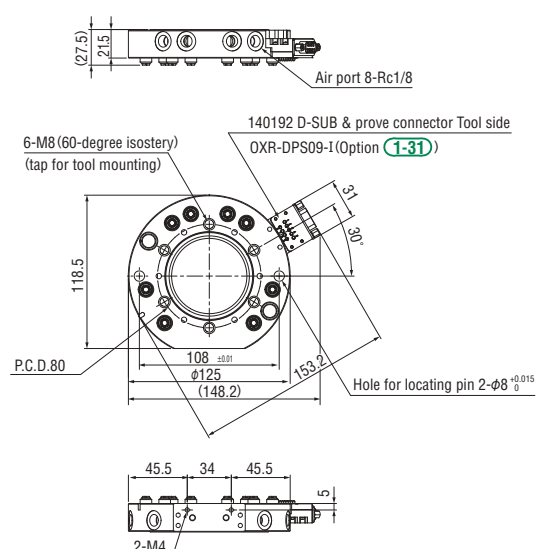
Note: without detachable mechanism



<b>Base/superaluminum</b>	<b>Tool Side</b>
	<b>Order code No. 140318</b>
	<b>TYPE OX-60AI</b>
	<ul style="list-style-type: none"> <li>● Weight : 734g</li> <li>● Mounting position : tool side</li> <li>● Weight capacity : ~ 60kg</li> <li>● Thickness after connection : 56mm</li> </ul>

**Detachable and attachable section/ Made of steel**

Note: without detachable mechanism



**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

**Tool Changer**

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Section**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

Various Products Information

# Quick Chuck Change Automatic for Articulated Robots

## ► For large robot. (Weight capacity 120kg)

**NEW** Base/superaluminum

**Robot Side**

Order code No.	<b>140373</b>
TYPE	<b>OX-120A</b>

- Weight : 3,671g
- Mounting position : robot side
- Weight capacity : ~ 120kg
- Thickness after connection : 75mm

Detachable and attachable section / Made of steel

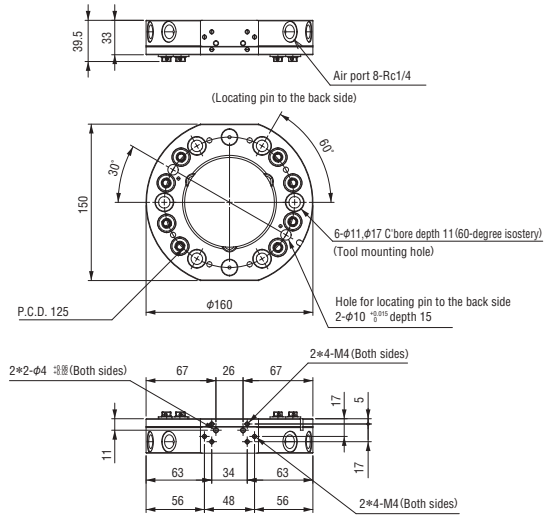
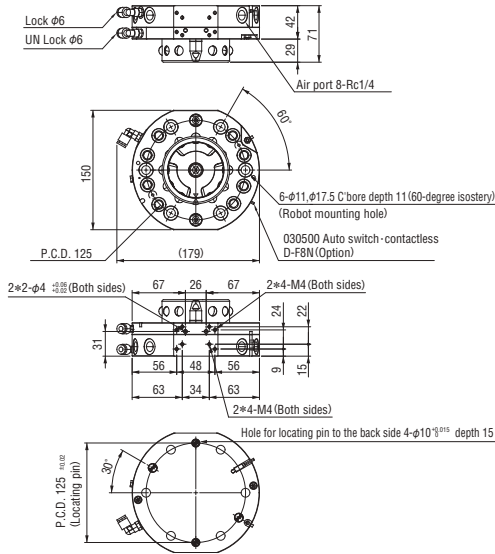
**NEW** Base/superaluminum

**Tool Side**

Order code No.	<b>140374</b>
TYPE	<b>OX-120AI</b>

- Weight : 1,770g
- Mounting position : tool side
- Weight capacity : ~ 120kg
- Thickness after connection : 75mm

Detachable and attachable section / Made of steel



## ► For large robot. (Weight capacity 230kg)

**NEW** Base/superaluminum

**Robot Side**

Order code No.	<b>140314</b>
TYPE	<b>OX-230A</b>

- Weight : 6,240g
- Mounting position : robot side
- Weight capacity : ~ 230kg
- Thickness after connection : 83mm

Detachable and attachable section / Made of steel

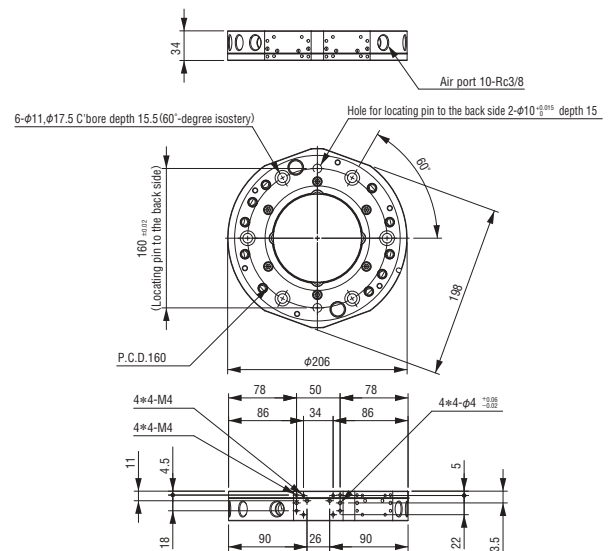
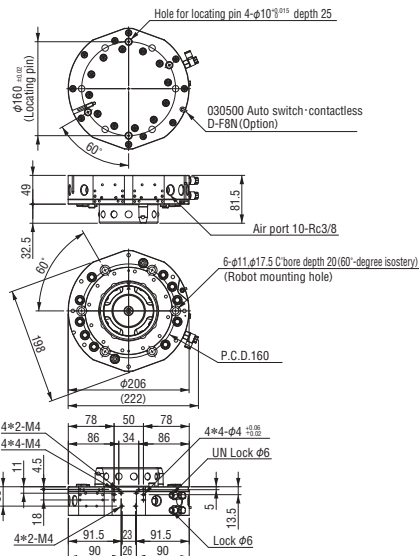
**NEW** Base/superaluminum

**Tool Side**

Order code No.	<b>140319</b>
TYPE	<b>OX-230AI</b>

- Weight : 3,360g
- Mounting position : tool side
- Weight capacity : ~ 230kg
- Thickness after connection : 83mm

Detachable and attachable section / Made of steel

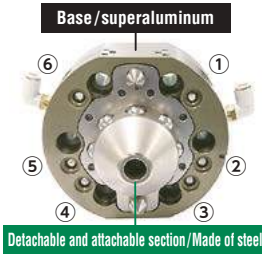


Will be on sale soon. Please contact us about the availability of the product.



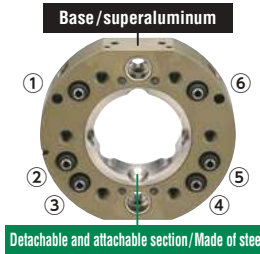
► Junction error absorbing type in high speed operation (Weight capacity 35kg)

● The products are created after your order. Please contact our sales offices for more information about delivery date / price.



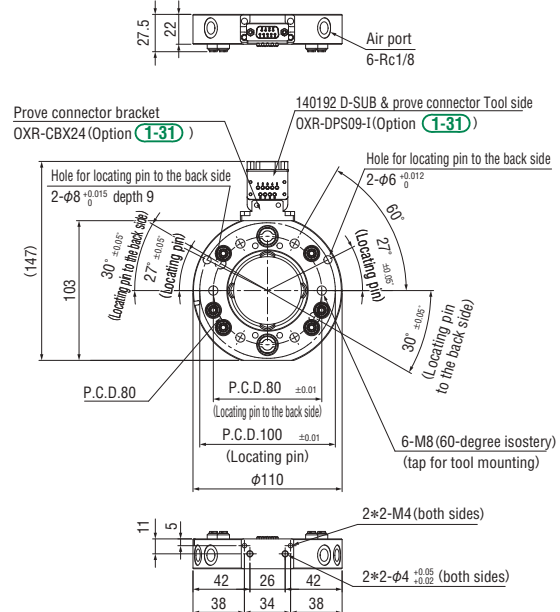
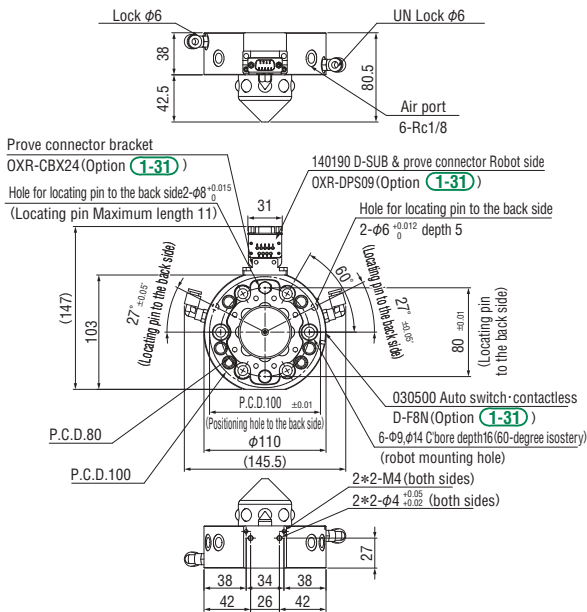
Robot Side	Order code No. <b>140399</b>
	TYPE <b>OX-35BT</b>

- Weight : 1445g
- Mounting position : robot side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm (max 74.5mm)
- Accommodates for errors up to ± 10mm.



Tool Side	Order code No. <b>140317</b>
	TYPE <b>OX-35ATI</b>

- Weight : 535g
- Mounting position : tool side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm (max 74.5mm)



Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

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By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



# Accessories

For articulated robots

## ► Remote valve for manual tool change actuation

### Manual air valve push button (Return Type)



Order code No.	<b>152308</b>
TYPE	<b>PB1-E</b>
Weight	65g

### Manual air valve push slide button (Retention Type)

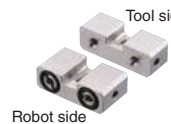


Order code No.	<b>152306</b>
TYPE	<b>PBW1-E</b>
Weight	75g

## ► Air port Accessories

### ■ OX-005A

#### Additional air expansion



	For OX-005A	
	Robot side	Tool side
Order code No.	<b>140326</b>	<b>140327</b>
TYPE	<b>OX-005AA</b>	<b>OX-005AIA</b>
Weight	12g	7g

● Attachments : mounting bolt (M3×8) × 1pic

### ■ For OX-20B

#### Additional air expansion



	For OX-20B	
	Robot side	Tool side
Order code No.	<b>140296</b>	<b>140297</b>
TYPE	<b>OX-20BA</b>	<b>OX-20BIA</b>
Weight	76g	57g

● Attachments : mounting bolt (M4×6) × 2pic

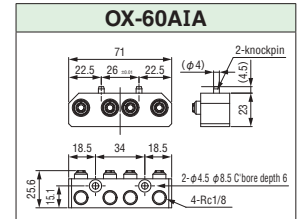
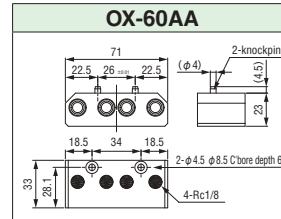
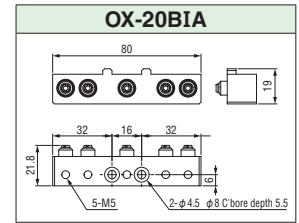
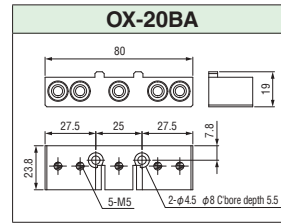
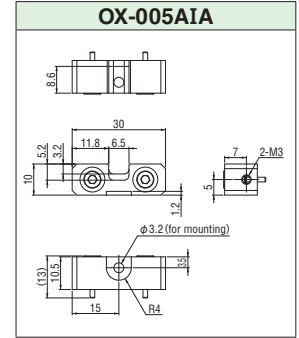
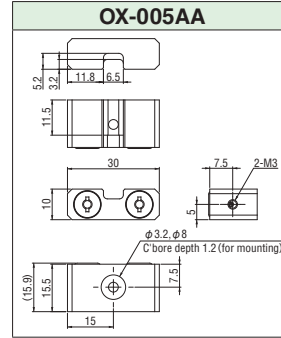
### ■ For OX-35A, 60A

#### Additional air expansion



	For OX-35/60	
	Robot side	Tool side
Order code No.	<b>140342</b>	<b>140343</b>
TYPE	<b>OX-60AA</b>	<b>OX-60AIA</b>
Weight	147g	80g

● Attachments : mounting bolt (M4×25) × 2pic



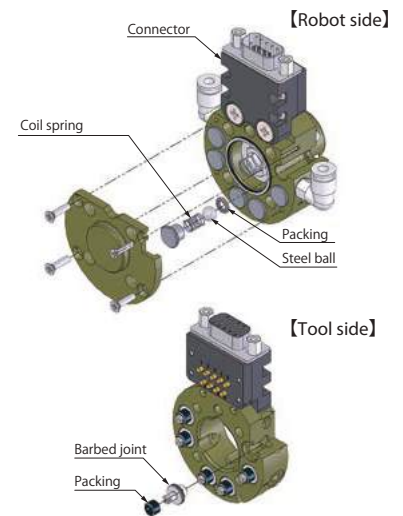
## ► Replacement Parts

Barbed joint	Tool side				
	NEW For OX-03/05	For OX-10	For OX-20	For OX-35/60	NEW For OX-120A
Order code No.	<b>230117</b>	<b>230116</b>	<b>110623</b>	<b>110686</b>	<b>110739</b>
TYPE	<b>XL0054-206A</b>	<b>XL0054-106A</b>	<b>LX0004-101</b>	<b>LX0120-202</b>	<b>LX0219-203</b>
Weight	1g	1g	2g	2g	3.5g

Steel ball *Material: SUS304	Robot side				
	For OX-005	For OX-03/05/10	For OX-20	For OX-35/60	NEW For OX-120AI
Order code No.	<b>382583</b>	<b>310607</b>	<b>323000</b>	<b>152561</b>	<b>152755</b>
TYPE	<b>φ3</b>	<b>φ5.5</b>	<b>φ6.35</b>	<b>φ10</b>	<b>φ11</b>
Weight	1g	1g	1g	3g	5.5g


Coil spring	Robot side				
	For OX-005	For OX-03/05/10	For OX-20	For OX-35/60	NEW For OX-120A
Order code No.	<b>230115</b>	<b>200223</b>	<b>110649</b>	<b>200257</b>	<b>200320</b>
TYPE	<b>XL0060-106-2</b>	<b>UR5-10</b>	<b>L00999-420</b>	<b>UR8-15</b>	<b>UR10-10</b>
Weight	1g	0.1g	0.2g	1g	1g

Packing			For OX-005		For OX-03/05/10		For OX-20		For OX-35/60		NEW For OX-120A	
	Tool side	Robot side	Robot side (piping)	Robot side (check valve)	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side
Order code No.			<b>152547</b>	<b>186738</b>	<b>230077</b>	<b>271742</b>	<b>110551</b>	<b>184474</b>	<b>110687</b>	<b>152689</b>	<b>221487</b>	<b>131773</b>
TYPE			P5 (C000002-S7)	SS3 (C03700-A0)	XL0054-204	1ASS-5	L00999-313	S6 (C00503-A00X8)	LX0120-203	P8 NBR-70	WRBC15-8-3	NPB10
Weight			1g	1g	0.1g	0.05g	0.2g	0.05g	1g	0.06g	1g	0.1g




Quick Chuck Change ● Tool Changer


## ▶ Connector Accessories

Connector for OX-005		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140328</b>	<b>140329</b>
	TYPE	<b>OXR-PS06</b>	<b>OXR-PS06-I</b>
	Weight	3g	
	Electric contact	6Pin (2A)	


● Connector drawing → [1-33](#)

Probe connector		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140362</b>	<b>140363</b>
	TYPE	<b>OXR-PSH11</b>	<b>OXR-PSH11-I</b>
	Weight	53g	
	Wiring specification	solder-fix type (AWG23) 500mm	
	Electric contact	11Pin (2A)	
Attached screw	Flat head screw with cross recessed M4×10 [123515]		


● Connector drawing → [1-33](#)

D-SUB connector (OX-A type)		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140172</b>	<b>140171</b>
	TYPE	<b>OX-DS09</b>	<b>OX-DS09-I</b>
	Weight	4g	
	Wiring specification	AWG22	
Electric contact	9Pin		

● Screws are not included.

NEW Probe connector 05A		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140393</b>	<b>140395</b>
	TYPE	<b>OXR-MPS0508</b>	<b>OXR-MPS0508-I</b>
	Weight	225g	195g
	Electric contact	8Pin (5A)	
	Electrical connector	NJC-2410-RM	NJC-2410-RF
Subject	OX-35 or higher		


● Connector drawings and aviation connector standards in cable side → Please refer to [1-34](#)

NEW Probe connector mounting spacer		Order code No.	<b>140397</b>
	TYPE	<b>OXR-PCS</b>	
	Weight	35g	
	Subject	OX-35	

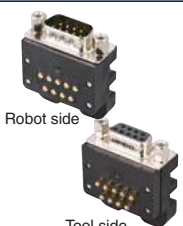
● Connector drawing → [1-34](#)

Required when attaching the probe connectors 05A, 13A to the OX-35B, OX-35AI.


## ▶ Auto switch · contactless

Auto switch		Order code No.	<b>030500</b>
	TYPE	<b>D-F8N</b>	
	Weight	7g	

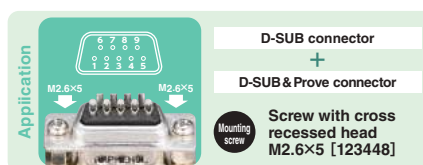
- Applied load : relay PLC
- Load voltage : DC24V
- Load electric current : 5 ~ 40mA
- W/ indicator lamp
- Cable Length : 0.5m
- Wiring : → [6-20](#)


D-SUB & Probe connector		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140190</b>	<b>140192</b>
	TYPE	<b>OXR-DPS09</b>	<b>OXR-DPS09-I</b>
	Weight	25g	
	Wiring specification	AWG22	
	Electric contact	9Pin (2A)	
Attached screw	Flat head screw with cross recessed M4×10 [123515]		

● Connector drawing → [1-33](#)


Probe connector (solder)		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140264</b>	<b>140265</b>
	TYPE	<b>OXR-PS16</b>	<b>OXR-PS16-I</b>
	Weight	8g	11g
	Wiring specification	AWG22	
	Electric contact	16Pin (2A)	
Attached screw	Flat head screw with cross recessed M4×10 [123515]		

● Connector drawing → [1-33](#)



NEW Probe connector 13A		Robot side	Tool side
 <p>Robot side</p> <p>Tool side</p>	Order code No.	<b>140394</b>	<b>140396</b>
	TYPE	<b>OXR-MPS1304</b>	<b>OXR-MPS1304-I</b>
	Weight	240g	215g
	Electric contact	4Pin (13A)	
	Electrical connector	D/MS3102A-18-10-P	D/MS3102A-18-10-S
Subject	OX-35 or higher		

● Connector drawings and aviation connector standards in cable side → Please refer to [1-34](#)

Probe connector mounting bracket		Order code No.	<b>140344</b>
	TYPE	<b>OXR-CBX24</b>	
	Weight	33g	

● Accessories : positioning pin, mounting bolt ● Connector drawing → [1-33](#)

Required when attaching D-sub & probe connector to the OX-35B, OX-35AI, OX-35BT, OX-35ATI, OX-120A and OX-120AI.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

### Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information

# Accessories

## Wireless connector

Can be used for the place with moisture and dust with contactless design

Wireless connector		For 03/05 Robot side	For 03/05 Tool side	For 10/20 Robot side	For 10/20 Tool side
	Order code No.	<b>140320</b>	<b>140322</b>	<b>140321</b>	<b>140323</b>
	TYPE	<b>OXR-RS04R-03</b>	<b>OXR-RS04T-03I</b>	<b>OXR-RS04R-10</b>	<b>OXR-RS04T-10I</b>
	Weight	176g	122g	180g	115g
	Drive voltage	12V ± 1.5VDC	—	12V ± 1.5VDC	—
	Input and output points	4points + 1point	4points	4points + 1point	4points
	Attached screw	Flat head screw with cross recess M4 × 14		Flat head screw with cross recess M4 × 20	
<p>*Check the specification and precautions concerning handling. → <a href="#">1-38</a> *Check the drawing. → <a href="#">1-35</a> *For protection structure IP67            *The output type is NPN type. *Power supply voltage DC24V *Cable Length : robot side 2m tool side 1m            *To avoid interference between wireless connectors, no more than 1 wireless connector should be installed per tool changer.</p>					

		For 20 Robot side	For 20 Tool side
	Order code No.	<b>140330</b>	<b>140379</b>
	TYPE	<b>OXR-RS12R-20</b>	<b>OXR-RS12T1-20I</b>
	Weight	366g	260g
	Drive voltage	12V ± 1.5VDC	—
	Input and output points	12points + 1point	12points
	Attached screw	Flat head screw with cross recess M4 × 10	
<p>*Please be sure to check the specifications and handling precautions. → <a href="#">1-38</a> *Please refer to the drawing. → <a href="#">1-35</a>            *For protection structure IP67            *OXR-RS12 is basically for the tool changer with load capacity 20kg or more. *Power supply voltage DC24V            *Cable Length : robot side 2m tool side 1m *The output type is NPN type.            *To avoid interference between wireless connectors, no more than 1 wireless connector should be installed per tool changer.</p>			

## Cable Accessories

D-SUB cable (OX-A type)	Robot side		Tool side	
	Order code No.	<b>140168</b>	<b>140167</b>	
	TYPE	<b>OX-DS09-H</b>	<b>OX-DS09-I-H</b>	
	Weight		40g	
	Cable length		0.5m	
	Electric contact		9Pin	
	Wiring specification		Movable cable (AWG22), for UL	
● Bending radius (mm) : R46				

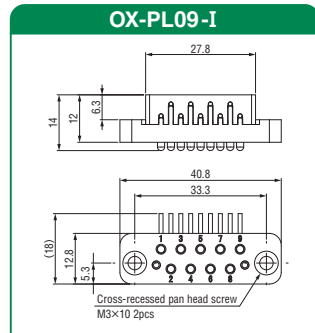
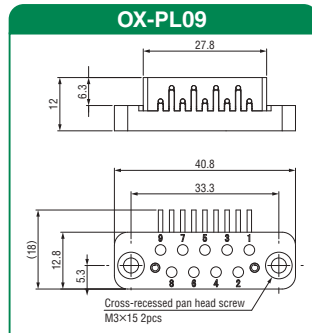
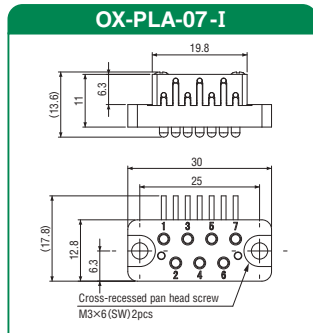
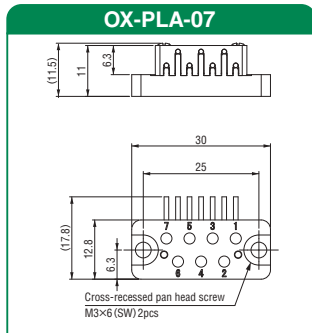
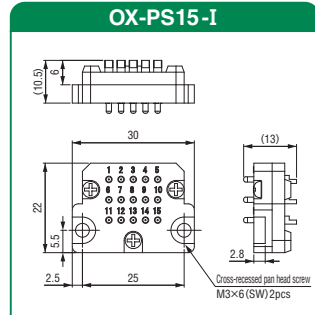
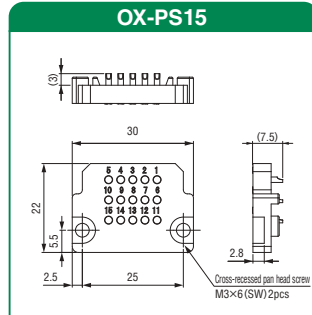
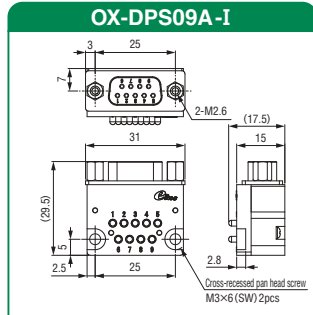
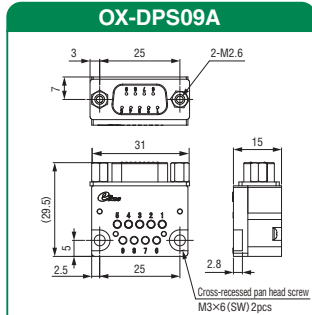
D-SUB cable for OX (for OX-B)	Robot side		Tool side		
	Order code No.	<b>140197</b>	<b>140247</b>	<b>140202</b>	<b>140364</b>
	TYPE	<b>OX-DS09S-H</b>	<b>OX-DS09S-H (1.5M)</b>	<b>OX-DS09P-I-H</b>	<b>OX-DS09P-I-H (1.5M)</b>
	Weight	60g	138g	60g	140g
	Cable length	0.5m	1.5m	0.5m	1.5m
	Electric contact	9Pin			
	Wiring specification	Movable cable (AWG22), for UL			
● Bending radius (mm) : R46					

D-SUB cable for OX (for OX-B)	Robot side (L)		Tool side (L)		
	Order code No.	<b>140203</b>	<b>140248</b>	<b>140204</b>	<b>140365</b>
	TYPE	<b>OX-DS09SL-H</b>	<b>OX-DS09SL-H (1.5M)</b>	<b>OX-DS09PL-I-H</b>	<b>OX-DS09PL-I-H (1.5M)</b>
	Weight	60g	138g	60g	140g
	Cable length	0.5m	1.5m	0.5m	1.5m
	Electric contact	9Pin			
	Wiring specification	Movable cable (AWG22), for UL			
● Bending radius (mm) : R46					

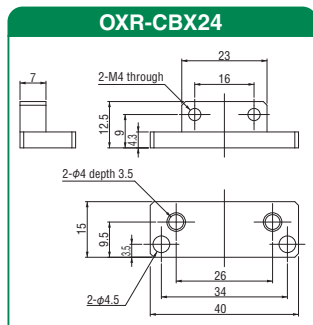
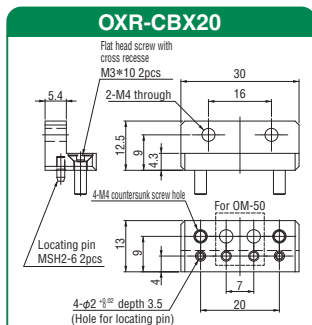
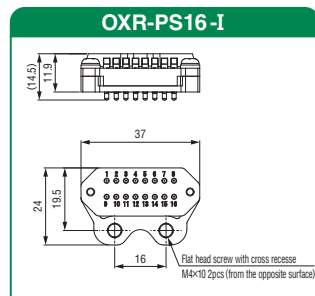
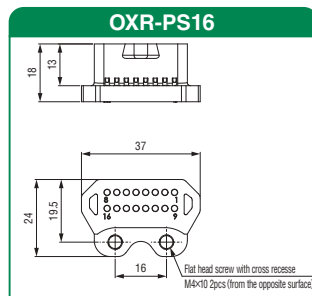
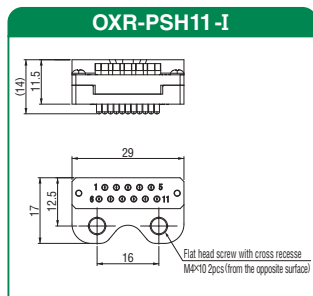
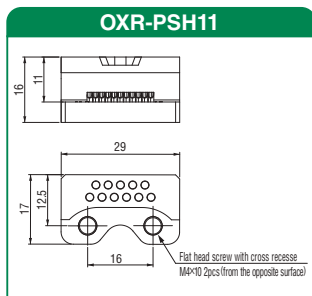
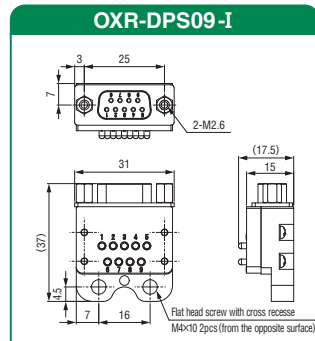
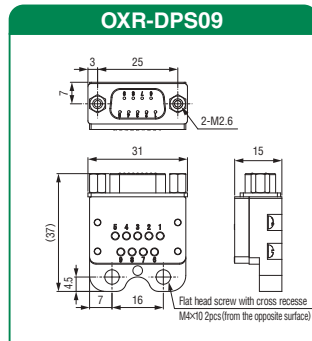
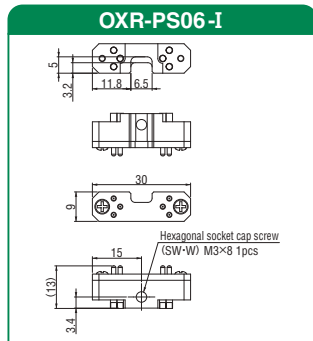
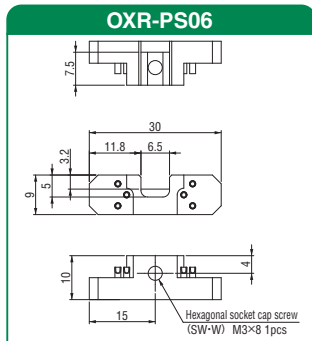


# Drawing of Probe connector

► A Type / B Type / BN Type (Take-out Robot) → 1-19



► Quick Chuck Change Manual (OM Type) → 1-7 / For Articulated Robots → 1-31



**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

**Tool Changer**

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

Logistics / Palletizing / Sheet Metal / Stamping / Metal Fabrication

**Assembling Tools**

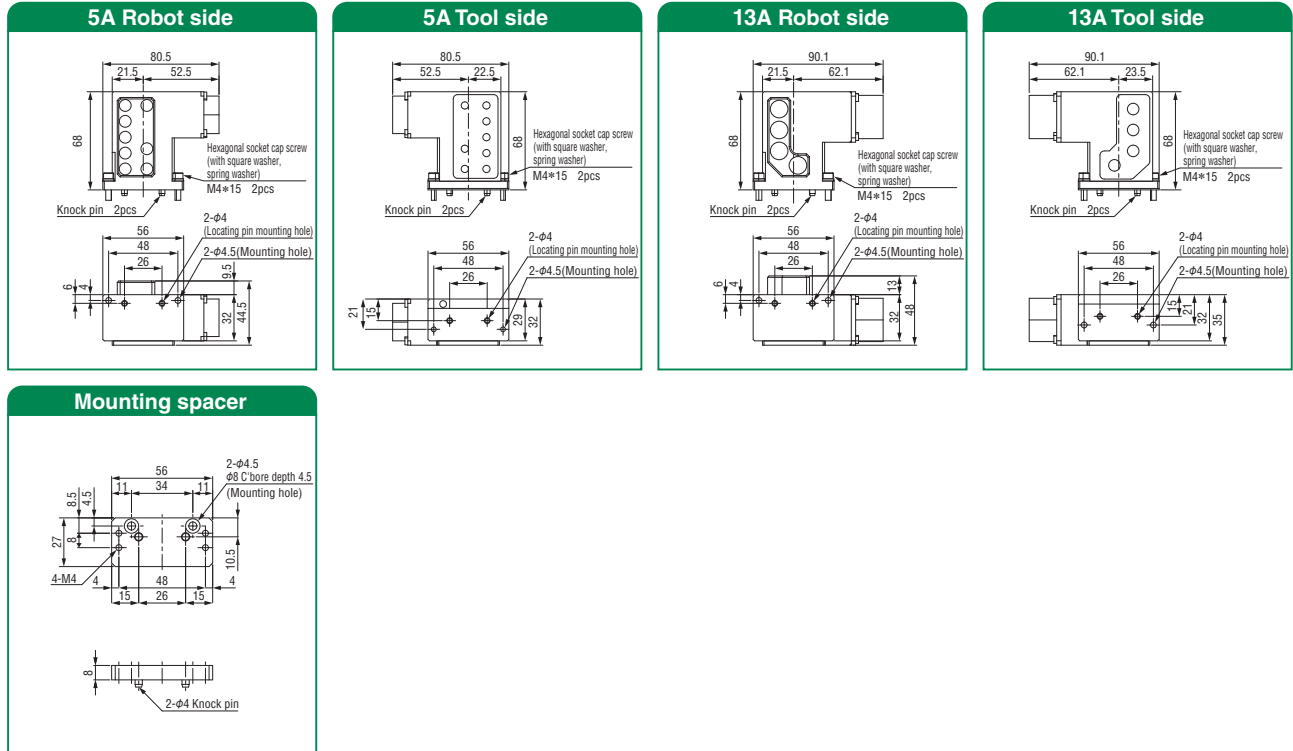
Tool / Jig

**Information**

Various Products Information

## Drawing of Probe connector

► For Articulated Robots ▶ 1-31



### List of high capacity connectors

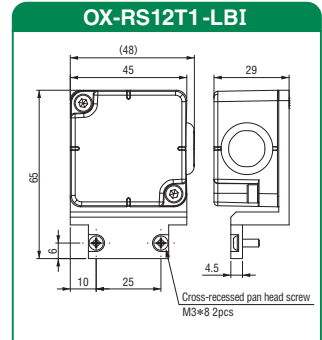
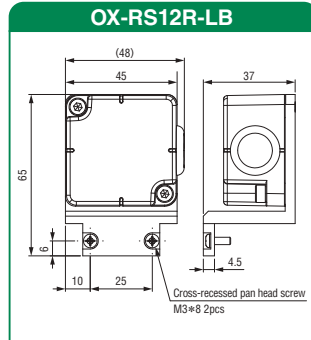
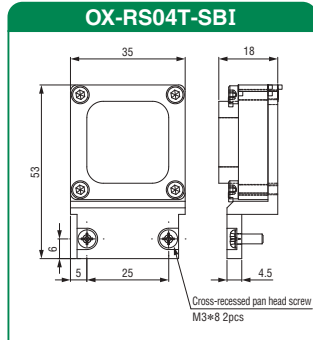
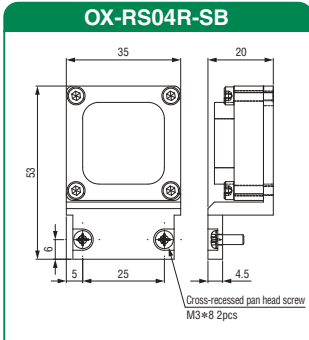
Order code No.	140393	140395	140394	140396
TYPE	OXR-MPS0508	OXR-MPS0508-I	OXR-MPS1304	OXR-MPS1304-I
Rating	5A AC200V/DC200V		13A AC200V/DC200V	
Electric contact	8Pin		4Pin	
Wiring specifications ※ 1	AWG19		AWG15	
Connector shape	Elecelectrical connector NJC-2410-RM (NANABOSHI)	Elecelectrical connector NJC-2410-RM (NANABOSHI)	Elecelectrical connector D/MS3102A-18-10-P (DDK)	Elecelectrical connector D/MS3102A-18-10-S (DDK)
Recommended electrical connector on cable side	NJC-2410-PM (NANABOSHI)	NJC-2410-PF (NANABOSHI)	D/MS3106A-18-10-S (DDK)	D/MS3106A-18-10-P (DDK)
Wiring precautions (check the pin number from combined surface )				
	The electrical connector is 10 pin, but the 9,10 pin are blank, and the power won't be on even if connected.			
Subject tool changer ※ 2	OX-35B (with OXR-PCS) OX-60A OX-120A	OX-35AI (with OXR-PCS) OX-60AI OX-120AI	OX-35B (with OXR-PCS) OX-60A OX-120A	OX-35AI (with OXR-PCS) OX-60AI OX-120AI
Maintenance	Repeated use causes wear powder on the contact surface of the probe pin. The wear powder will cause the temperature rise, so please clean the surface regularly.			

※1 Wiring information in connectors

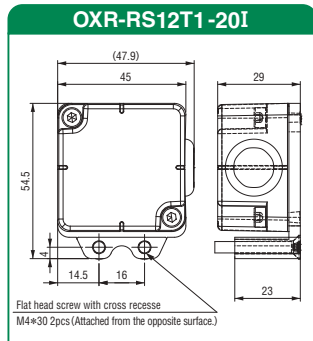
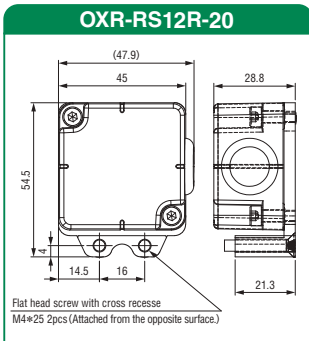
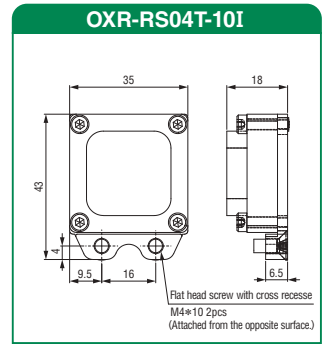
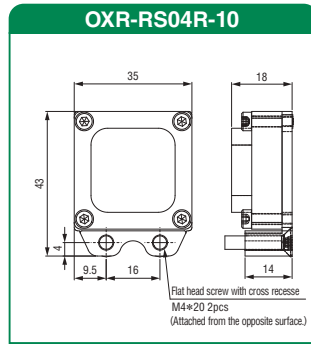
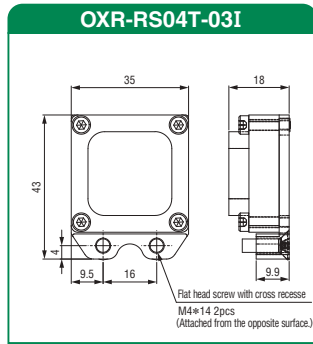
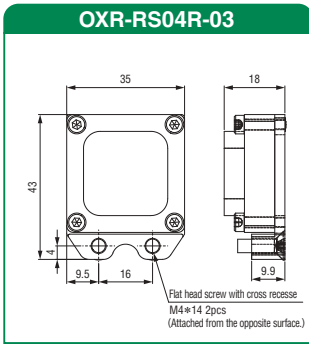
※2 OXR-PCS (140397) is needed when using large capacity connectors on OX-35B, 35AI.

# Drawing of Wireless connector

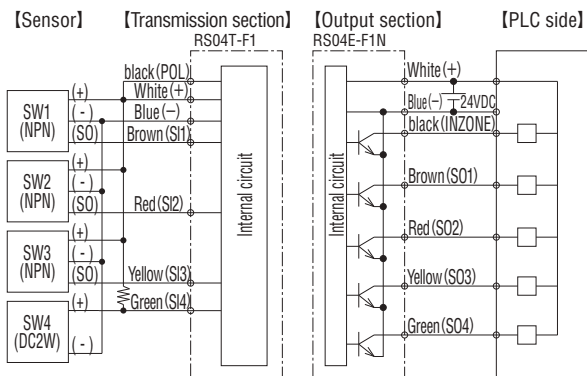
► A Type / B Type / BN Type (Take-out Robot) → 1-19



► For Articulated Robots → 1-32

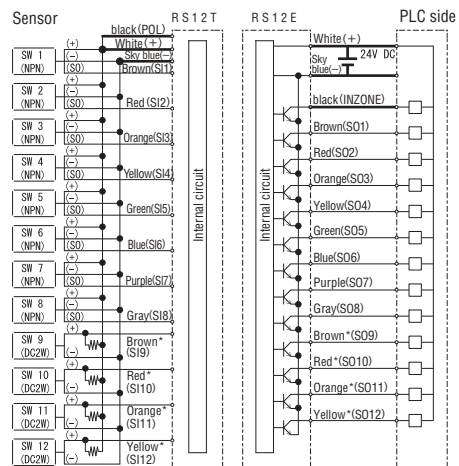


## ■ OXR-RS04 series Wiring diagram (NPN)



\* SW4 in the above figure is a wiring example of a DC 2-wire sensor (wire a resistor of about 1 to 2 K $\Omega$ ).  
A DC 3-wire sensor can also be used.

## ■ OXR-RS12 series Wiring diagram (NPN)



\* SW9 to 12 in the above figure are wiring examples of the DC 2-wire sensor (wire the resistance to about 1 to 2 K $\Omega$ ).  
\* The green\*, blue\*, and purple\* cables of RS12E and RS12T are unused

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

### Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information






# Tool Changer for Articulated Robots Option & Replacement Parts

Quick Chuck Change ● Tool Changer

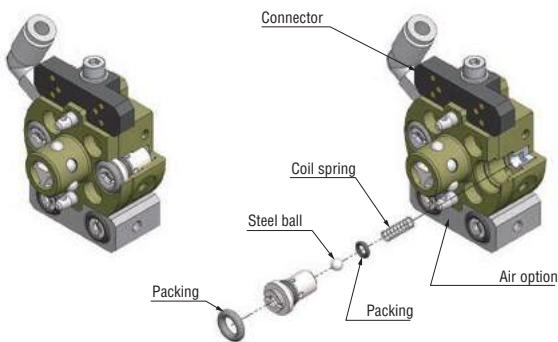
		Order code No.	TYPE	Tool changer																		
				Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	
Air Option	Robot side	140326	OX-005AA	○																		
	Tool side	140327	OX-005A1A		○																	
	Robot side	140296	OX-20BA																			
	Tool side	140297	OX-20B1A																			
	Robot side	140342	OX-60AA												○							
	Tool side	140343	OX-60A1A												○							
Maintenance parts	Barbed joint	230116	XL0054-106A																			
		230117	XL0054-206A				○															
		110623	LX0004-101												○							
		110686	LX0120-202													○						
	Steel ball	110739	LX0219-203																		○	
		382583	φ3		○																	
		310607	φ5.5				○				○											
		323000	φ6.35												○							
		152561	φ10																			
	Coil spring	152755	φ11																			
		230115	XL0060-106-2		○																	
		200223	UR5-10				○				○											
110649		L00999-420												○								
Packing (Robot side)	200257	UR8-15												○								
	200320	UR10-10																	○			
	152547	P5(C000002-S7)		○																		
	186738	SS3(C03700-A0)		○																		
	271742	1ASS-5				○				○												
Packing (Tool side)	184474	S6(C00503-A00X8)												○								
	152689	P8 NBR-70													○							
	131773	NPB10																		○		
	230077	XL0054-204													○							
	110551	L00999-313																				
Cable Accessories	Robot side	110687	LX0120-203																			
		221487	WRBC15-8-3																	○		
		140168	OX-DS09-H					○*1			○*1			○*1		○*1			○*1		○*1	
		140167	OX-DS09-I-H						○*1			○*1			○*1		○*1			○*1		
	Tool side	140197	OX-DS09S-H					○*1			○*1			○*1		○*1			○*1		○*1	
		140247	OX-DS09S-H(1.5m)					○*1			○*1			○*1		○*1			○*1		○*1	
	Robot side	140202	OX-DS09P-I-H						○*1			○*1			○*1		○*1			○*1		
		140364	OX-DS09P-I-H(1.5m)						○*1			○*1			○*1		○*1			○*1		
		140203	OX-DS09SL-H						○*1			○*1			○*1		○*1			○*1		
		140248	OX-DS09SL-H(1.5m)						○*1			○*1			○*1		○*1			○*1		
	Tool side	140204	OX-DS09PL-I-H							○*1			○*1			○*1			○*1		○*1	
		140365	OX-DS09PL-I-H(1.5m)							○*1			○*1			○*1			○*1		○*1	
140328		OXR-PS06		○																		
140329		OXR-PS06-I			○																	
Connector Accessories	Robot side	140190	OXR-DPS09				○			○					○*2			○*2		○*2		
	Tool side	140192	OXR-DPS09-I													○*2			○*2	○*2		
	Robot side	140264	OXR-PS16				○			○					○*2			○*2		○*2		
	Tool side	140265	OXR-PS16-I													○*2			○*2	○*2		
	Robot side	140362	OXR-PSH11				○			○					○*2			○*2		○*2		
	Tool side	140363	OXR-PSH11-I													○*2			○*2	○*2		
	Probe connector Mounting bracket	140344	OXR-CBX24													○			○	○		
	Robot side	140172	OX-DS09					○*1			○*1				○*1			○*1		○*1		
	Tool side	140171	OX-DS09-I						○*1			○*1				○*1			○*1	○*1		
	Auto switch	030500	D-F8N													○			○	○		
	Wireless connector	Robot side	140320	OXR-RS04R-03				○			○											
Tool side		140322	OXR-RS04T-03I																			
Robot side		140321	OXR-RS04R-10												○			○*2				
Tool side		140323	OXR-RS04T-10I												○			○*2				
Robot side		140330	OXR-RS12R-20											○*3			○*2		○*2			
Tool side		140331	OXR-RS12T1-20I													○*3		○*2		○*2		
Robot side		140393	OXR-MPS0508													○*4			○*4			
Tool side		140395	OXR-MPS0508-I														○*4			○*4		
High capacity connectors	Robot side	140394	OXR-MPS1304																○*4	○*4		
	Tool side	140396	OXR-MPS1304-I																○*4	○*4		
Probe connector mounting spacer		140397	OXR-PCS																			

\* 1 If you use a cable accessory with no connector, you will need the proper D-sub & probe connectors (★ mark).  
 \* 2 The probe connector mounting bracket (140344) is required for the installation of the electrical connector.  
 \* 3 Because of the thickness of the wireless connector, it will come out from the mounting surface of the tool changer, please confirm the dimension.  
 \* 4 Probe connector mounting spacer is needed when mounting the connector.

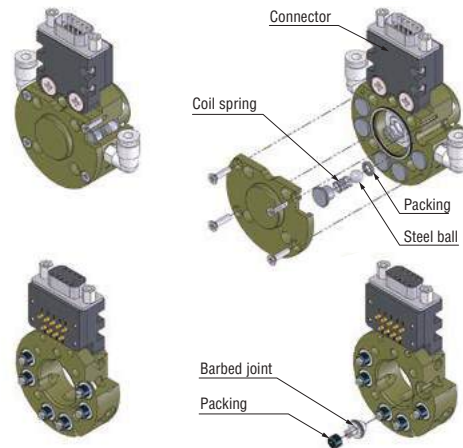


			Air option					
			Robot side	Robot side	Tool side	Robot side	Tool side	
			Order code No.	140326	140296	140297	140342	140343
			Order code No.	OX-005AA	OX-20BA	OX-20BIA	OX-60AA	OX-60AIA
			TYPE					
Barbed joint		110623	LX0004-101	—	—	○	—	—
		110686	LX0120-202	—	—	—	—	○
Steel ball		382583	φ3	○	—	—	—	—
		323000	φ6.35	—	○	—	—	—
		152561	φ10	—	—	—	○	—
Coil spring		230115	XL0060-106-2	○	—	—	—	—
		110649	L00999-420	—	○	—	—	—
		200257	UR8-15	—	—	—	○	—
Packing (Robot side)		152547	P5 (C000002-S7)	○	—	—	—	—
		186738	SS3 (C03700-A0)	○	—	—	—	—
		184474	S6 (C00503-A00X8)	—	○	—	—	—
		152689	P8 NBR-70	—	—	—	○	—
Packing (Tool side)		110551	L00999-313	—	—	○	—	—
		110687	LX0120-203	—	—	—	—	○

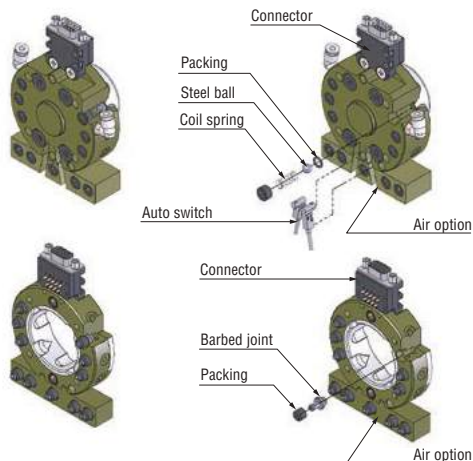
### OX-005A/005A I



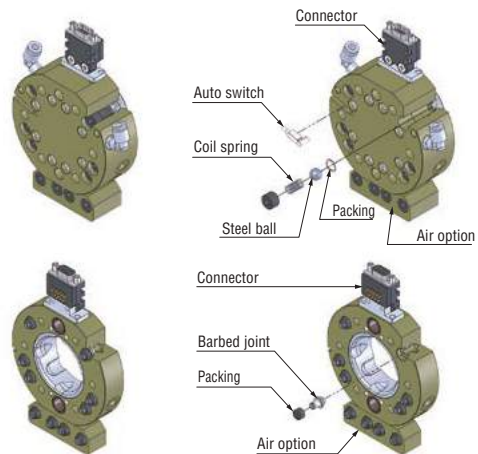
### OX-03A (05A, 10B) /03A (05A, 10B) I



### OX-20B/20B I



### OX-35B (60A) /35A (60A) I



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

#### Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information

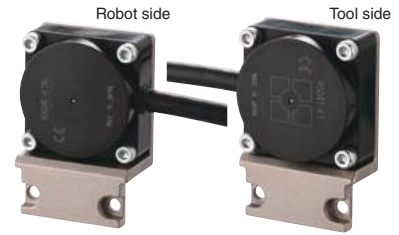
# Wireless connector specification and precautions concerning handling

● See (1-19) and (1-32) for more information about wireless connector.

## ► Cautions in installation (Please be sure to read before use.)

Please read this manual well to gain a thorough understanding of the contents to make safe and proper operation.

- Make installation / maintenance / measures at the failure after you turn off the power.
- Please use constant voltage power supply such as switching power supply.  
(Malfunction may occur if you use the power with ripple of more than the rated value such as full wave rectifying power.)
- Carry out wiring of each unit properly according to the wiring diagram.
- Carry out wiring of cable well away from power line and high voltage apparatus to prevent malfunction caused by induction noise.
- Be careful not splash organic solvent and such liquid on case and transmission face if they are made of resin (ABS or ABS + PBT).
- Be careful not splash water and cutting water on the cable end (wiring section).  
(Liquid penetration from cable core to the main body may cause problems such as short circuit and corrosion.)
- Install the output section not always faced with metal. Metal section may be overheated or internal element may be damaged.
- To avoid interference between wireless connectors, no more than 1 wireless connector should be installed per tool changer.



## ► 4 contact specification

### ■ Specification

TYPE	Tool side	
	OXR-RS04T-__I	
Sensor	Direct current three-wire sensor	
Drive voltage	12V ± 1.5V DC	
No. of input signals	4 points	
Drive voltage	≤ 30mA	≤ 60mA
Transmission distance	0...3mm	0...2mm
Allowable axis misalignment	± 2mm	± 1mm
Ambient temperature	0...+50°C	
Protection structure	IP67	
Connection cable	PUR φ 6.3 7x0.259mm <sup>2</sup>	
Material	ABS	
Weight	Main body 25g + Cable 60g/m	

TYPE	NPN output	Robot side	
		OXR-RS04R-__	
Power supply voltage		24V DC ± 10% (ripple included)	
Current consumption		≤ 200mA	
No. of input signals		4 points + 1 point	
Load electric current		≤ 50mA/1 Output	
LED display		Status (green), in-zone (orange)	
Circuit protection		Short-circuit protection, reverse connection protection surge protection	
Ambient temperature		0...+50°C	
Protection structure		IP67	
Connection cable		PUR φ 6.3 7x0.259mm <sup>2</sup>	
Material		ABS	
Weight		Main body 25g + Cable 60g/m	

\*Total current consumption value of each sensor should be less than the drive current value to use two or more sensors for detection.

\*Decrease the number of connected sensors if the actual value exceeds the drive current value.

## ► 12 contact specification

### ■ Specification

TYPE	Tool side	
	OXR-RS12T-__I	
Sensor	Direct current three-wire sensor	
Drive voltage	12V ± 1.5V DC	
No. of input signals	12 points	
Drive voltage	≤ 230mA	
Transmission distance	2...5mm	
Allowable axis misalignment	± 3mm	
Ambient temperature	0...+50°C	
Protection structure	IP67	
Connection cable	PUR φ 8.6 2×0.5mm <sup>2</sup> + 13×0.18mm <sup>2</sup>	
Material	ABS	
Weight	Main body 75g + Cable 105g/m	

TYPE	NPN output	Robot side	
		OXR-RS12R-__	
Power supply voltage		24V DC ± 10% (ripple included)	
Current consumption		≤ 600mA	
No. of output signals		12+1 (status)	
Load electric current		≤ 50mA/1 出力	
LED display		Status (green), Output (orange)	
Allowable axis misalignment		Short-circuit protection, reverse connection protection surge protection	
Ambient temperature		0...+50°C	
Protection structure		IP67	
Connection cable		PUR φ 8.6 2×0.5mm <sup>2</sup> + 13×0.18mm <sup>2</sup>	
Material		ABS	
Weight		Main body 80g + Cable 105g/m	

\*Total current consumption value of each sensor should be less than the drive current value to use two or more sensors for detection.

\*Decrease the number of connected sensors if the actual value exceeds the drive current value.

### ■ Allowed sensors

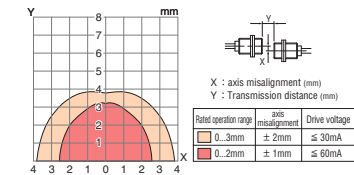
Power supply voltage	12V DC
Total consumption current	≤ 60mA
Residual voltage	≤ 3.5V
Load electric current	—

Use the sensor properly operates under the condition of above list.

### ■ Transmission area drawing

(Example : power supply voltage 24V/metal not imbedded)

OXR-RS04R-\_\_ / OXR-RS04T-\_\_I



### ■ Allowed sensors

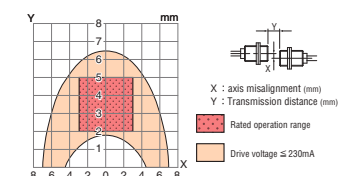
Power supply voltage	12V DC
Total consumption current	≤ 230mA
Residual voltage	≤ 3.5V
Load electric current	—

Use the sensor properly operates under the condition of above list.

### ■ Transmission area drawing

(Example : power supply voltage 24V/metal not imbedded)

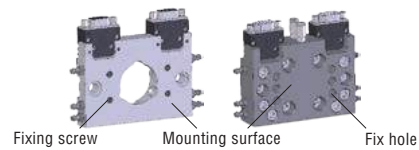
OXR-RS12R-\_\_ / OXR-RS12T-\_\_I



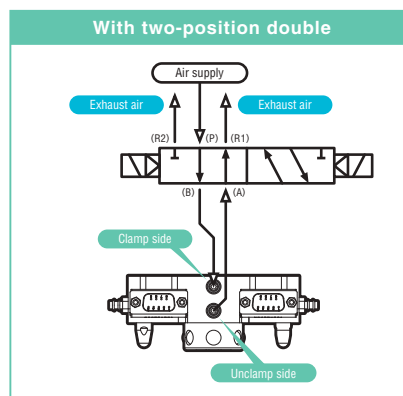
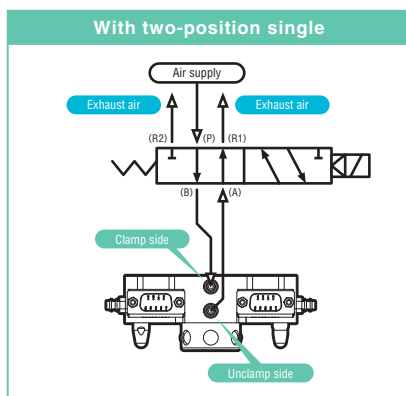


## Cautions when using tool changer

- Tool clamp / unclamp will cause tool pull and push. Please watch out for pinch point fingers / hands.
- To prevent equipment troubles, use clean air that has been dried through a dryer or mist separator and is free of oil. For the compressor, replace the hydraulic oil specified by each manufacturer at specified intervals. Inappropriate hydraulic oil may damage air equipment such as packing due to oil mixed in the air.
- Do not use the clamp / unclamp of tool changer rather than air supply of 0.5 to 0.7 MPa. There is a risk of damaging the tool changer mechanism and surrounding devices.
- When not using for prolong periods, please remove tool from robot.
- When restarting from the state that the air is not supplied, please make sure that the air is supplied to the clamp side , then start confirm air supply port.
- When assembling the tool changer to the robot or the hand, please fasten the surface so that there is no gap between the mounting surfaces where there are fixing holes and screw.
- We do not take any responsibility for any faults arising in the combination with improper product.
- If the robot side piston is repeatedly clamped / unclamped with the tool side of the tool changer disconnected, it may interfere with the clamping with the tool side, so please stop. If the piston is misaligned, align the  $\triangle$  mark.
- When using the air port for vacuum line, please remove the check valve on the robot side.
- If you would like restore the air port that is used for vacuum line, please assemble with the check valve parts coil spring, stainless ball and packing
- Please note that if the plug is tightened too much, it cannot be clamped normally and may come off.
- Before you start the operation of the assembled equipment, please do the safety-check to confirm the bolts and other parts are not loosen. Do not exceed the allowable value (moment torque) load of the product when using It may not only affects the function and life span of the product, but also causes an unexpected accident. Not only does it affect the function and life of the product, it can also cause unexpected accidents.
- As to the installment of the additional air option, please adjust the concave part of the main body and the convex part of the additional air option, and make it parallel to the connecting surface with the other side.
- If the electrical connector is installed, please make sure the electrical power is OFF during the tool changer clamp / unclamp process. If it is operated with power is on, the front of the probe pin will erode, and poor contact or melt may happen.
- Never connect the electrical power tool changer itself. It might cause electrical shock which lead to the product damage. There is a risk of electric shock and the product may be damaged due to a short circuit.
- It shall not be used in any of the following locations
  - Locations with ambient temperature lower than 0°C or higher than 55°C
  - Locations with liquid, dripping water, water vapor
  - Locations with humidity is more than 95% or condensation
  - Locations with corrosive gases
  - Locations with metal, carbon or spatter conductive dust
  - Locations with a strong electric field magnetic field



### Reference Piping connection diagram



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

#### Tool Changer

Automated Hand Exchange System

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Accessories for Container Cylinder

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Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

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Air Nipper (Small-Medium)

Air Nipper (Large)

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Let's Joint

Rectangular Tube

Base Aluminum Material

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Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

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Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information

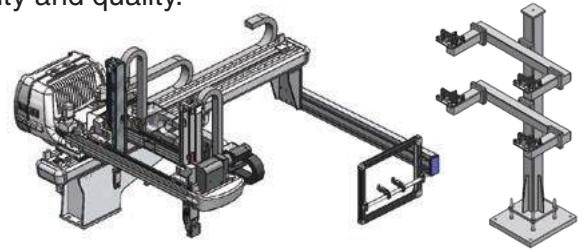


'Shorten the setup time', 'Reduce the burden of the worker', 'Reduce the connection mistake' by automated robot exchange, will improve the productivity and quality.

## ▶ Example of tool station

Tool station types : floorstanding tree type, NT type (attached to traverse rail). Stations are created according to the number of setup changes and facility spaces.

\* Please contact our sales office nearest your office or Eins.



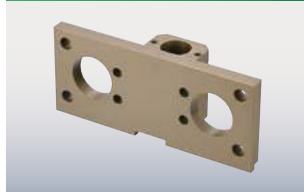
### Auto Quick Chuck Change Hanger



Hanger unit attached to tool station. (Station Side)

1-41

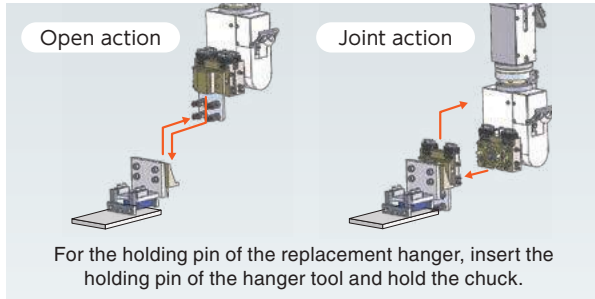
### Hanger Tool



Hold unit attached to the tool side.

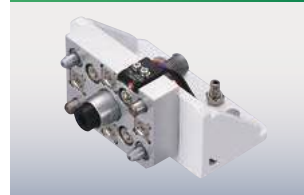
1-41

### Action example



For the holding pin of the replacement hanger, insert the holding pin of the hanger tool and hold the chuck.

### Magnet Chuck Hanger (Fix Side)



Hanger unit to use and hold the magnet power of Neodymium. (Station Side)

1-42

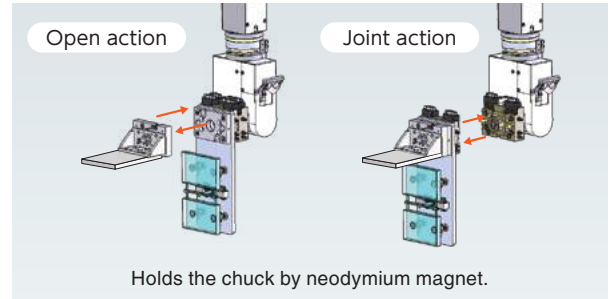
### Magnet Chuck Hanger (Tool Side)



Hold unit attached to the tool side.

1-42

### Action example



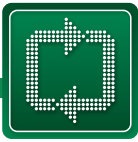
Holds the chuck by neodymium magnet.

## ■ Specification

	Product name	Order code No.	Weight (g)	Weight capacity (kg)	Page of details		
		TYPE					
Auto Quick Robot hand Change Hanger		072600	182	~ 3	1-41		
		HSL					
		072601					
Auto Quick Robot hand Change Hanger		HSAL	1,300	~ 10	1-41		
		072602	2,800	~ 35			
		HLAL					
Hanger tool		196532	43	~ 3	1-41		
		TS					
		196533				99	~ 10
		TSA					
Hanger tool		196656	356	~ 35	1-41		
		TLA1					

	Product name	Order code No.	Weight (g)	Weight capacity (kg)	Page of details
		TYPE			
Magnet chuck Hanger (fix side)		072732	540	~ 1 (9.8N)	1-42
		HNE-48			
		072733	680		1-43
		HNE-S			
Magnet chuck Hanger (tool side)		072811	632	~ 1 (9.8N)	1-42
		HNE-SL			
		196636	70		
Magnet chuck Hanger (tool side)		TNE-48I	140	~ 1 (9.8N)	1-43
		196637			
		TNE-SI	115		
Magnet chuck Hanger (tool side)		196727	115	~ 1 (9.8N)	1-43
		TNE-SLI			





# Auto Quick Chuck Change Hanger / Hanger Tool

Auto quick robot hand change hanger attached to station side. And hanger tool attached to tool side.

Auto quick chuck change hanger (Hook Specification)



You can see moving images of products by using QR code reader of your smartphone.

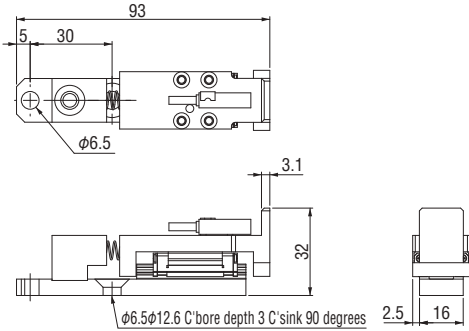
## ▶ Station side



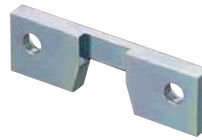
### Auto quick chuck change hanger

Order code No.	<b>072600</b>
TYPE	<b>HSL</b>

- Weight: 182g ● Weight capacity: ~ 3kg
- The chuck has a residual sensor (E2S-Q13)



## ▶ Tool side

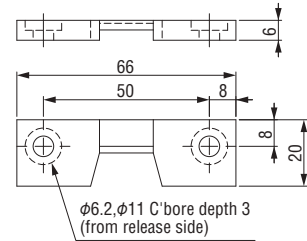
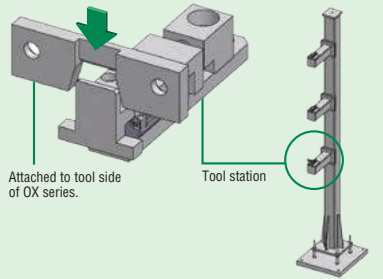


### Hanger tool

Order code No.	<b>196532</b>
TYPE	<b>TS</b>

- Weight: 43g ● Weight capacity: ~ 3kg

### Example of combination: HSL and TS



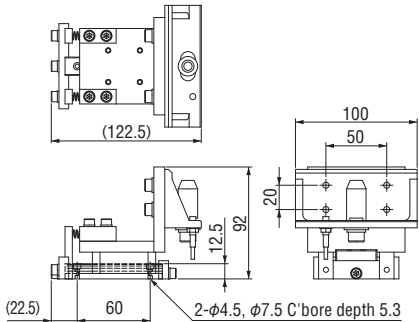
## ▶ Station side



### Auto quick chuck change hanger

Order code No.	<b>072601</b>
TYPE	<b>HSAL</b>

- Weight: 1,300g ● Weight capacity: ~ 10kg
- The chuck has a residual sensor (E2E-S05S12-WC-C1)
- Detects sensor with mounting bolt of hanger tool.



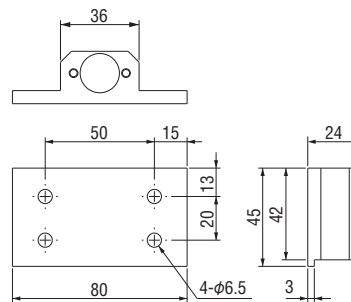
## ▶ Tool side



### Hanger tool

Order code No.	<b>196533</b>
TYPE	<b>TSA</b>

- Weight: 99g ● Weight capacity: ~ 10kg



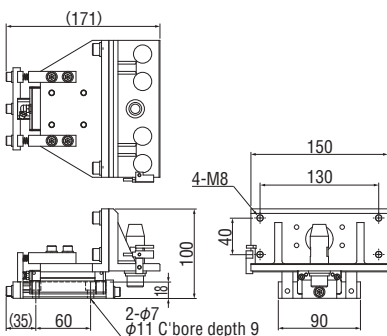
## ▶ Station side



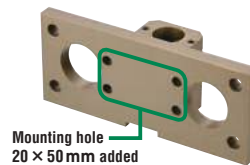
### Auto quick chuck change hanger

Order code No.	<b>072602</b>
TYPE	<b>HLAL</b>

- Weight: 2,800g ● Weight capacity: ~ 35kg
- The chuck has a residual sensor (E2S-W21)
- Detects sensor with mounting bolt of hanger tool.



## ▶ Tool side

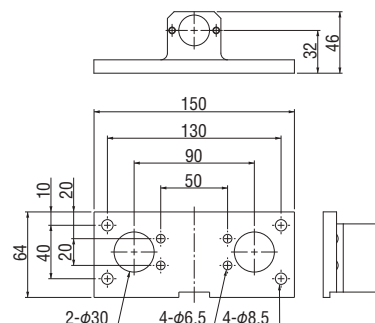


Mounting hole 20 × 50 mm added

### Hanger tool

Order code No.	<b>196656</b>
TYPE	<b>TLA1</b>

- Weight: 356g ● Weight capacity: ~ 35kg



## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

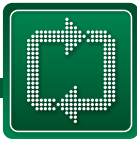
Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Magnet Chuck Hanger

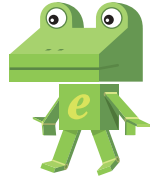
Perfect hanger unit for hand holding.

Auto quick chuck change hanger (Neodymium specification)

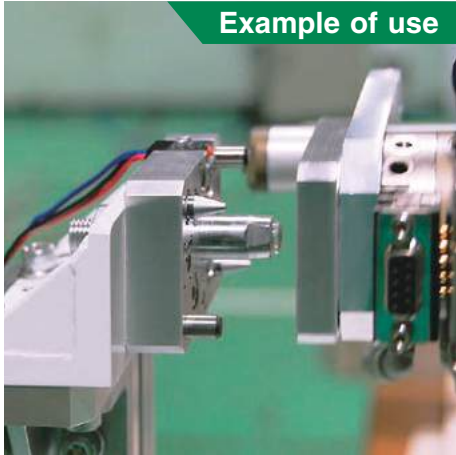


You can see moving images of products by using QR code reader of your smartphone.

Magnet chuck hanger doesn't use electricity or air, and holds the hand with neodymium magnet.



## Example of use



## Chuck open

- Using the detachment mechanism of the tool changer, push the tool to the magnetic chuck hanger (fixed side), hold the chuck with the neodymium magnet.

## Chuck connection

- With the clamp operation of tool changer, pull the chuck from magnet hanger.

### ▶ Station side

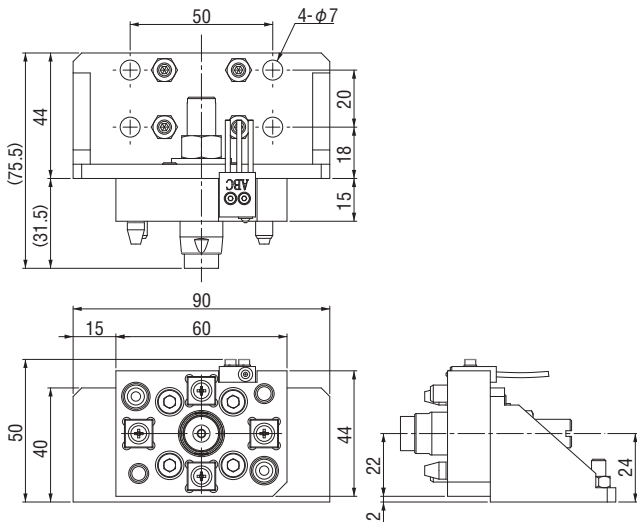


#### Magnet chuck hanger (fixed side)

Order code No. **072732**

TYPE **HNE-48**

- Weight: 540g
- Weight capacity: ~ 1kg (9.8N)
- The chuck has a residual sensor (030317 D2JW-011-MD)
- Wiring: black (COM) blue (NO) red (NC)



### ▶ Tool side

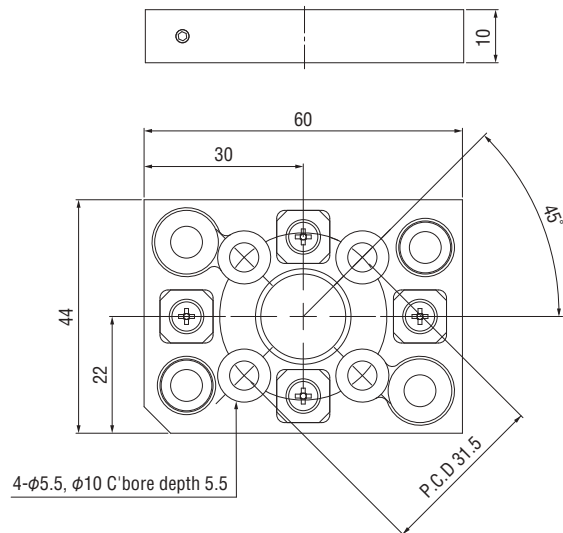


#### Magnet chuck hanger (tool side)

Order code No. **196636**

TYPE **TNE-48I**

- Weight: 70g
- Weight capacity: ~ 1kg (9.8N)



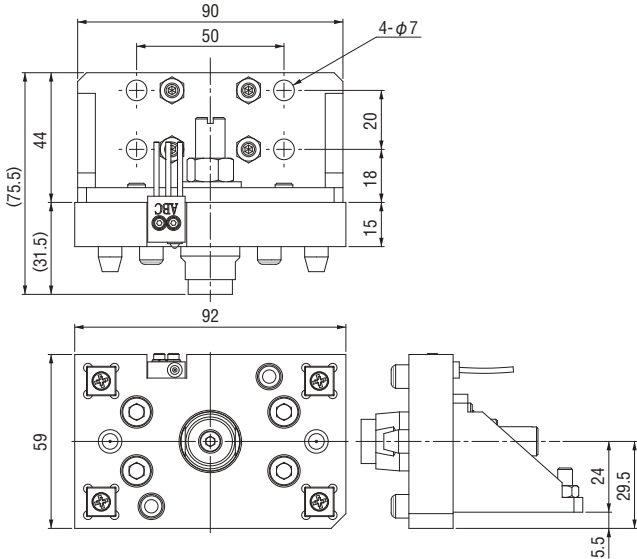
▶ Station side



**Magnet chuck hanger (fix side)**

Order code No.	<b>072733</b>
TYPE	<b>HNE-S</b>

- Weight: 680g ● Weight capacity: ~ 1kg (9.8N)
- The chuck has a risidual sensor (030317 D2JW-011-MD)
- Wiring: black (COM) blue (NO) red (NC)



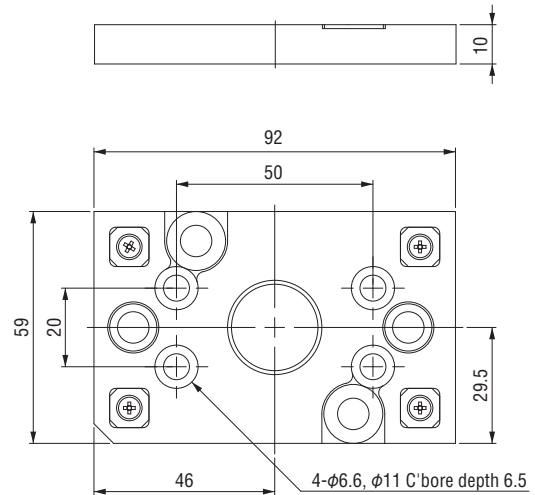
▶ Tool side



**Magnet chuck hanger (tool side)**

Order code No.	<b>196637</b>
TYPE	<b>TNE-SI</b>

- Weight: 140g ● Weight capacity: ~ 1kg (9.8N)



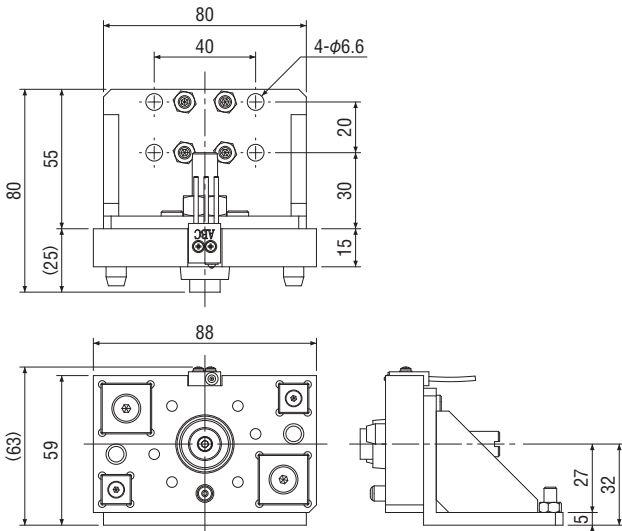
▶ Station side



**Magnet chuck hanger (fix side)**

Order code No.	<b>072811</b>
TYPE	<b>HNE-SL</b>

- Weight: 632g ● Weight capacity: ~ 1kg (9.8N)
- The chuck has a risidual sensor (030317 D2JW-011-MD)
- Wiring: black (COM) blue (NO) red (NC)



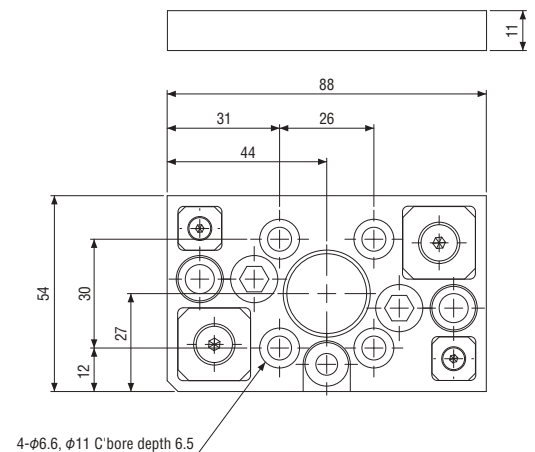
▶ Tool side



**Magnet chuck hanger (tool side)**

Order code No.	<b>196727</b>
TYPE	<b>TNE-SLI</b>

- Weight: 115g ● Weight capacity: ~ 1kg (9.8N)



**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

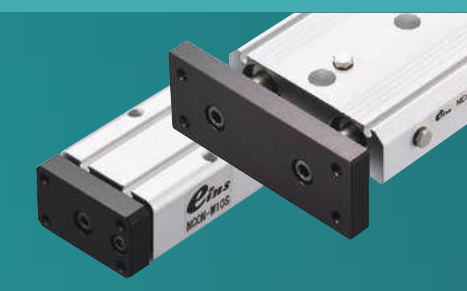
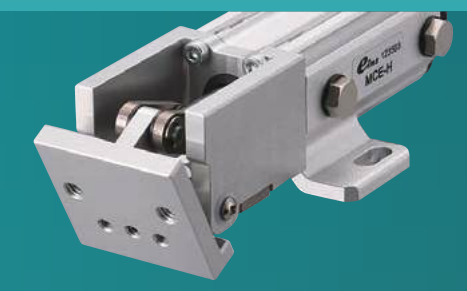
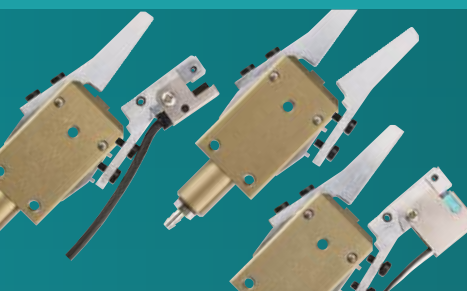
Various Products Information

# MEMO

A series of horizontal dashed lines for writing, spanning most of the page width.



# Grip



## Mini Cylinder ..... 2-2

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- ▶ Mini Cylinder (MCDP / MCE) ..... 2-5
- ▶ Mini Cylinder H / Mini Cylinder Option Parts ..... 2-6
- ▶ Cylinder for Pipe Attachment (MCP1) / Suction Combination Cylinder (VMCP) ..... 2-7



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- ▶ Claws / Nut Plates ..... 2-13
- ▶ Chuck Spacers : Plastic / Aluminum ..... 2-14
- ▶ Extension Shafts / Pillow Blocks / Slide Plates ..... 2-15
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- ▶ Mini Container Cylinder (Single Action / Double Action) ... 2-19
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- ▶ Pads / Extension Plates / Nut Plates ..... 2-25



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- ▶ Runner Chuck E1 Series (Steel L Claw Type) ..... 2-36
- ▶ Runner Chuck E1 Series (Detachable / Attachable Claw) ... 2-37
- ▶ Runner Module / Runner Chuck Plate ..... 2-39
- ▶ Runner Chuck Buffer Unit/Tunnel Gate Runner Chuck ... 2-40
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### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Beams

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Beam Cylinder / Pads / Beam Members

### By Industry

Logistics / Palleting  
Steel Metal Clamping  
Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



Please refer to the web site for performance table.

- ▶ Small and lightweight. Attach to plate or jungle gym.
- ▶ Non-rotate structure for cylinder rod (except for mini cylinder H)

## ■ Specification

Product name	Order code No.	TYPE	Structure	Used air pressure (Mpa)	Cylinder diameter (mm)	Output (N)		Stroke (mm)	Weight (g)	Page of details
Micro Mini Cylinder • UMCD	200122	UMCD-5	Single action type	0.3 ~ 0.5	φ 10	Push 28	Pull 6	5	16	2-4
	200123	UMCD-10				Push 24	Pull 9	10	22	
	200260	UMCD-5T	Single action type	0.3 ~ 0.5	φ 10	Push 6	Pull 18	5	18	
	200261	UMCD-10T				Push 9	Pull 14	10	21	
	200124	UMCD-5P	Single action type	0.3 ~ 0.5	φ 10	Push 28	Pull 6	5	14	
	200125	UMCD-10P				Push 24	Pull 9	10	20	
Mini Cylinder • MCD1	123219	MCD1-10	Single action type	0.3 ~ 0.5	φ 18	Push 98	Pull 19	10	65	2-4
	123220	MCD1-20						20	80	
Resin Cylinder • MCDR	123691	MCDR-10	Single action type	0.3 ~ 0.5	φ 18	Push 98	Pull 19	10	40	2-4
	123692	MCDR-20						20	48	
Mini Cylinder • Slim • MCDP	123929	MCDP-10	Single action type	0.3 ~ 0.5	φ 18	Push 98	Pull 19	10	73	2-5
	123930	MCDP-20	Single action type					20	90	
	123931	MCDP-AJBKT	—	—	—	—	—	—	28	2-6
Mini Cylinder • MCE	123504	MCE-10S	Single action type	0.3 ~ 0.5	Equivalent to φ 19	Push 110	Pull 20	10	58	2-5
	123505	MCE-10T								
	123508	MCE-10W	Double action type						Push 130	

\* Use conditions: Clean air, [Operation temperature] 5°C - 40°C  
 \* The output (N) is the value when used air pressure is 0.5 MPa.



Please refer to the web site for performance table.

Product name	Order code No.	TYPE	Structure	Used air pressure (Mpa)	Cylinder diameter (mm)	Output (N)	Stroke (mm)	Weight (g)	Page of details	
Mini Cylinder • MCE	 <b>123506</b>	MCE-20S	Single action type	0.3 ~ 0.5	Equivalent to $\phi 19$	Push 105	Pull 22	20	69	2-5
	 <b>123507</b>	MCE-20T				Push 22	Pull 82			
	 <b>123509</b>	MCE-20W	Double action type			Push 130	Pull 108	71		
Mini Cylinder H (with rubber pad)	 <b>120003</b>	MCY-HS	Single action type	0.3 ~ 0.5	$\phi 15$	Push 78	Pull 10	20度	45	2-6
Replacement Rubber • w/ screw • for MCY-HS	 <b>370877</b>	For MCY-HS	—	—	—	Push —	Pull —	—	1	2-6
Cylinder for Pipe Attachment • MCP1	 <b>123699</b>	MCP1-1210	Single action type	0.3 ~ 0.5	$\phi 10$	Push 30	Pull 5	10	12	2-7
	 <b>123700</b>	MCP1-1220				Push 31	Pull 3	20	14	
	 <b>123701</b>	MCP1-2010			$\phi 16$	Push 85	Pull 7	10	40	
	 <b>123702</b>	MCP1-2020				Push 84	Pull 8	20	46	
	 <b>123703</b>	MCP1-2030				Push 83	Pull 9	30	50	
	 <b>211133</b>	VMCP-10				Single action type	0.3 ~ 0.5	$\phi 16$	Push 54	
 <b>211134</b>	VMCP-20	Push 62	Pull 20	20	60					
 <b>211135</b>	VMCP-30	Push 60	Pull 21	30	78					
 <b>211137</b>	VMCP-10-C	Push 54	Pull 20	10	69					
 <b>211138</b>	VMCP-20-C	Push 62	Pull 20	20	78					
 <b>211139</b>	VMCP-30-C	Push 60	Pull 21	30	96					

\* Use conditions: Clean air, [Operation temperature] 5°C - 40°C

**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

**Mini Cylinder**

Accessories for Mini Cylinder

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Suction Cups

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Pad in Pad

Vacuum Gripper

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Let's Joint

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Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

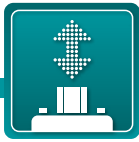
Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

Various Products Information



# Micro Mini Cylinder (UMCD) / Mini Cylinder (MCD) / Resin Cylinder (MCDR)

Mini cylinder series with lightweight body.

▶ High performance for chucking small molded parts.



### Micro Mini Cylinder

Order code No.	200122
TYPE	UMCD-5

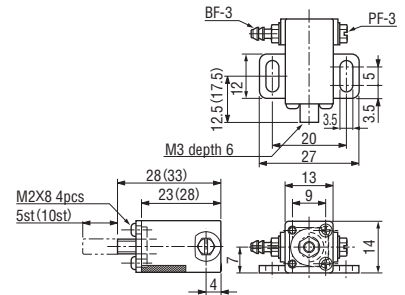
- Stroke: 5mm
- Weight: 16g
- Joint pipe fitting BF-3 included



### Micro Mini Cylinder

Order code No.	200123
TYPE	UMCD-10

- Stroke: 10mm
- Weight: 22g
- Joint pipe fitting BF-3 included



\* Size in ( ) shows size of UMCD-10.

▶ Pull type of small body.



NEW

### Micro Mini Cylinder (pull)

Order code No.	200260
TYPE	UMCD-5T

- Stroke: 5mm
- Weight: 17.9g
- Joint pipe fitting BF-3 included

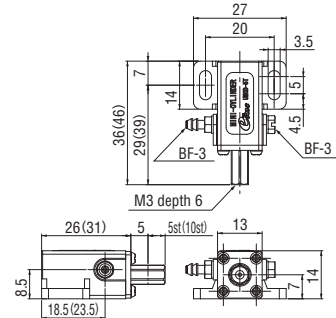


NEW

### Micro Mini Cylinder (pull)

Order code No.	200261
TYPE	UMCD-10T

- Stroke: 10mm
- Weight: 20.5g
- Joint pipe fitting BF-3 included



\* Size in ( ) shows size of UMCD-10T.

▶ Can be mounted side by side.



### Micro Mini Cylinder slim type

Order code No.	200124
TYPE	UMCD-5P

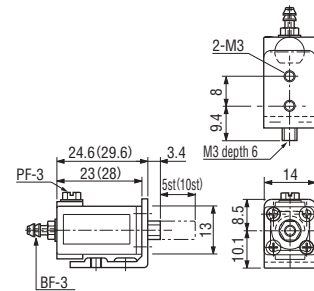
- Stroke: 5mm
- Weight: 14g
- Joint pipe fitting BF-3 included



### Micro Mini Cylinder slim type

Order code No.	200125
TYPE	UMCD-10P

- Stroke: 10mm
- Weight: 20g
- Joint pipe fitting BF-3 included



\* Size in ( ) shows size of UMCD-10P.

▶ Mini cylinder series with lightweight body.



### Mini Cylinder MCD1

Order code No.	123219
TYPE	MCD1-10

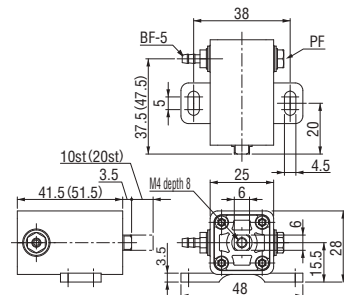
- Stroke: 10mm
- Weight: 65g
- Joint pipe fitting BF-5 included



### Mini Cylinder MCD1

Order code No.	123220
TYPE	MCD1-20

- Stroke: 20mm
- Weight: 80g
- Joint pipe fitting BF-5 included



\* Size in ( ) shows size of MCD1-20.

▶ Weight saving achieved by using plastic for the body.



### Resin Cylinder MCDR

Order code No.	123691
TYPE	MCDR-10

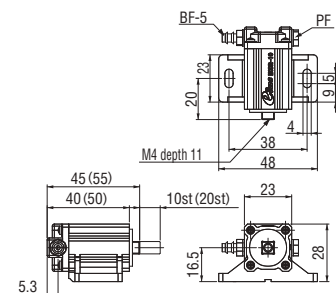
- Stroke: 10mm
- Weight: 40g
- Joint pipe fitting BF-5 included
- Include mounting washers.



### Resin Cylinder MCDR

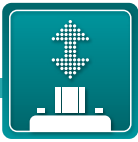
Order code No.	123692
TYPE	MCDR-20

- Stroke: 20mm
- Weight: 48g
- Joint pipe fitting BF-5 included
- Include mounting washers.



\* Size in ( ) shows size of MCDR-20.





# Mini Cylinder (MCDP / MCE)

Mini cylinder series with lightweight body.

▶ Can be mounted side by side.



**NEW**

## Mini Cylinder • Slim

Order code No.	<b>123929</b>
TYPE	<b>MCDP-10</b>

- Stroke: 10mm
- Weight: 73g
- Joint pipe fitting BF-5 included
- Angle adjustment bracket (OP) → [2-6](#)
- Please use M4 nut for cylinder installation.

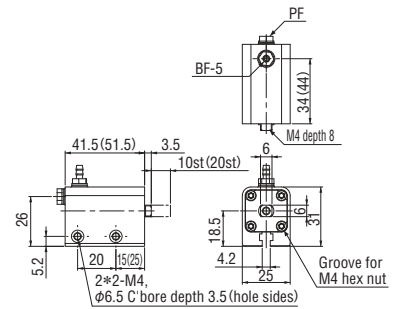


**NEW**

## Mini Cylinder • Slim

Order code No.	<b>123930</b>
TYPE	<b>MCDP-20</b>

- Stroke: 20mm
- Weight: 96g
- Joint pipe fitting BF-5 included
- Angle adjustment bracket (OP) → [2-6](#)
- Please use M4 nut for cylinder installation.



\* Size in ( ) shows size of MCDP-20

▶ Extrusion cylinder with auto switch for operation and return limit capabilities.



## Mini Cylinder • MCE10st (push)

Order code No.	<b>123504</b>
TYPE	<b>MCE-10S</b>

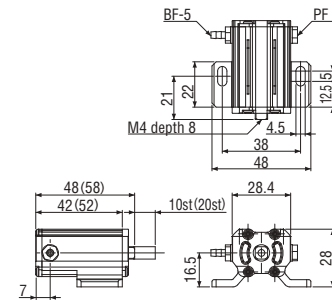
- Stroke: 10mm
- Weight: 58g
- Joint pipe fitting BF-5 included



## Mini Cylinder • MCE20st (push)

Order code No.	<b>123506</b>
TYPE	<b>MCE-20S</b>

- Stroke: 20mm
- Weight: 69g
- Joint pipe fitting BF-5 included



\* Size in ( ) shows size of MCE-20S.

▶ Pull-type cylinder with auto switch for operation and return limit capabilities.



## Mini Cylinder • MCE10st (pull)

Order code No.	<b>123505</b>
TYPE	<b>MCE-10T</b>

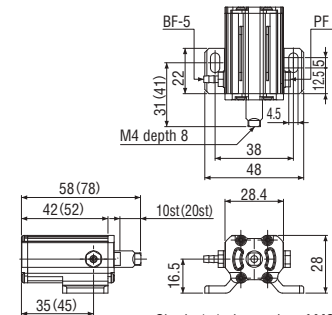
- Stroke: 10mm
- Weight: 58g
- Joint pipe fitting BF-5 included



## Mini Cylinder • MCE20st (pull)

Order code No.	<b>123507</b>
TYPE	<b>MCE-20T</b>

- Stroke: 20mm
- Weight: 69g
- Joint pipe fitting BF-5 included



\* Size in ( ) shows size of MCE-20T.

▶ Double-acting cylinder with auto switch for operation and return limit capabilities.



## Mini Cylinder • MCE10st (double action)

Order code No.	<b>123508</b>
TYPE	<b>MCE-10W</b>

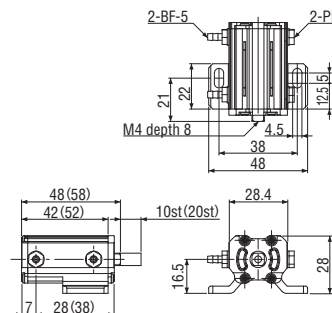
- Stroke: 10mm
- Weight: 62g
- Joint pipe fitting BF-5 included



## Mini Cylinder • MCE20st (double action)

Order code No.	<b>123509</b>
TYPE	<b>MCE-20W</b>

- Stroke: 20mm
- Weight: 71g
- Joint pipe fitting BF-5 included



\* Size in ( ) shows size of MCE-20W.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

#### Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Mini Cylinder H / Mini Cylinder Option Parts

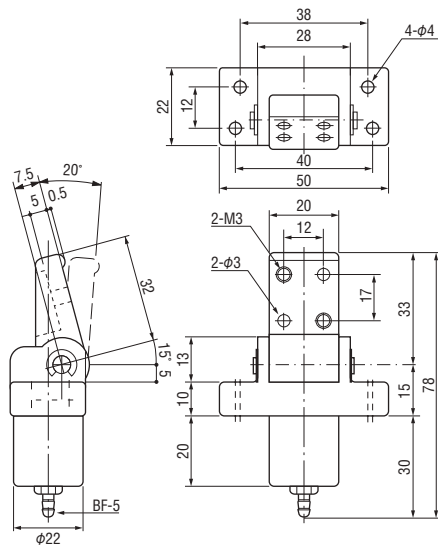
Hinge cylinder with compact body.



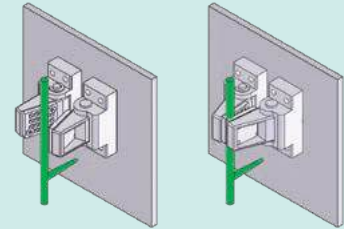
## Mini Cylinder H (with rubber pad)

Order code No.	<b>120003</b>
TYPE	<b>MCY-HS</b>

- Body material: PBT polybutylene terephthalate
- Operating angle: 0-20 degrees
- Weight: 45g
- Joint pipe fitting BF-5 included



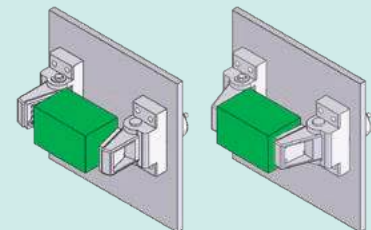
## Example of use (runner grip)



Example of use (product grip) Chuck close state

\* Direct attachment to jungle gym is impossible.

## Example of use (product grip)



Example of use (product grip) Chuck close state

Grip ● Mini Cylinder

## Mini Cylinder Option Parts

▶ Mini cylinder · slim for MCDP series

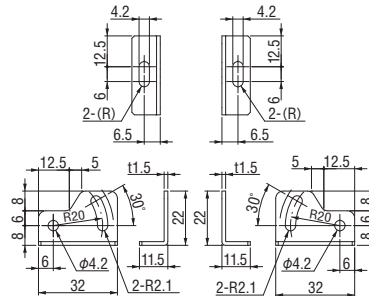
NEW



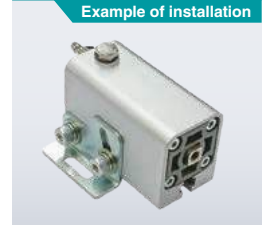
## Angle adjustment bracket · for MCDP

Order code No.	<b>123931</b>
TYPE	<b>MCDP-AJBKT</b>

- Weight: 28g
- L · R is sold in sets.
- Bolt x 4 (SW, fat W) included



## Example of installation

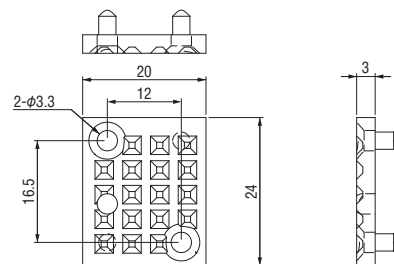


▶ For mini cylinder H (MCY-HS)

## Replacement Rubber · w/ screw · for MCY-HS

Order code No.	<b>370877</b>
TYPE	<b>For MCY-HS</b>

- Weight: 1g
- Rubber pad material: natural rubber (NR) + Styrene-butadiene rubber (SBR)



▶ Mini Cylinder · for MCE (MCE series)

## Auto Switch (reed SW)

Order code No.	<b>030282</b>
TYPE	<b>D-A93</b>

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Lead wire: 0.5M OUT (+) brown OUT (-) blue
- Indicator light
- Wiring → See (6-20)
- Length: 0.5m

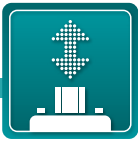


## Auto Switch (contactless)

Order code No.	<b>030425</b>
TYPE	<b>D-M9N</b>

- Weight: 8g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: -40mA or lower
- Lead wire: 0.5M +V(brown), Load(black), 0V(blue)
- Indicator light
- Wiring → See (6-20)
- Length: 0.5m





# Cylinder for Pipe Attachment (MCP1) / Suction Combination Cylinder (VMCP)

Lightweight, high rigidity, and long operating life with superduralumin.

▶ Direct connection to jungle gym series parts (ø12) is possible.



## Cylinder for Pipe Attachment

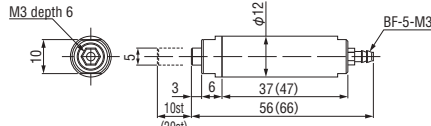
Order code No.	<b>123699</b>
TYPE	<b>MCP1-1210</b>

- Stroke: 10mm
- Weight: 12g
- Joint pipe fitting BF-5 included-M3 for piping

## Cylinder for Pipe Attachment

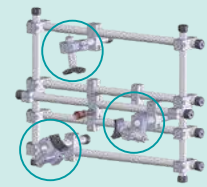
Order code No.	<b>123700</b>
TYPE	<b>MCP1-1220</b>

- Stroke: 20mm
- Weight: 14g
- Joint pipe fitting BF-5 included-M3 for piping



\* Size in ( ) shows size of MCP-1220.

### Example of use



▶ Direct connection to jungle gym series parts (ø20) is possible.



## Cylinder for Pipe Attachment

Order code No.	<b>123701</b>
TYPE	<b>MCP1-2010</b>

- Stroke: 10mm
- Weight: 40g
- Joint pipe fitting BF-5 included

## Cylinder for Pipe Attachment

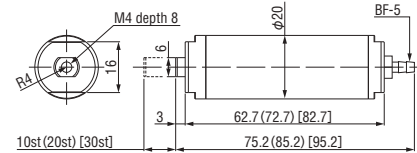
Order code No.	<b>123702</b>
TYPE	<b>MCP1-2020</b>

- Stroke: 20mm
- Weight: 46g
- Joint pipe fitting BF-5 included

## Cylinder for Pipe Attachment

Order code No.	<b>123703</b>
TYPE	<b>MCP1-2030</b>

- Stroke: 30mm
- Weight: 50g
- Joint pipe fitting BF-5 included



\* Size in ( ) shows size of MCP-2020.  
\* Size in [ ] shows size of MCP-2030.

▶ Cylinder rod is machined through to allow for vacuum flow. Rod end to accept M5 vacuum accessories.



## Suction Combination Cylinder (w/o sensor)

Order code No.	<b>211133</b>
TYPE	<b>VMCP-10</b>

- Stroke: 10mm
- Weight: 51g
- Joint pipe fitting BF-5 included

## Suction Combination Cylinder (w/o sensor)

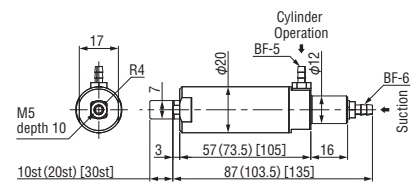
Order code No.	<b>211134</b>
TYPE	<b>VMCP-20</b>

- Stroke: 20mm
- Weight: 60g
- Joint pipe fitting BF-5 included

## Suction Combination Cylinder (w/o sensor)

Order code No.	<b>211135</b>
TYPE	<b>VMCP-30</b>

- Stroke: 30mm
- Weight: 78g
- Joint pipe fitting BF-5 included



\* Size in ( ) shows size of VMCP-20.  
\* Size in [ ] shows size of VMCP-30.

## Suction Combination Cylinder (w/ sensor)

Order code No.	<b>211137</b>
TYPE	<b>VMCP-10-C</b>

- Stroke: 10mm
- Weight: 69g
- Joint pipe fitting BF-5 included
- Sensor: D-M9N (030425)

## Suction Combination Cylinder (w/ sensor)

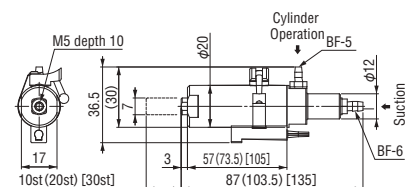
Order code No.	<b>211138</b>
TYPE	<b>VMCP-20-C</b>

- Stroke: 20mm
- Weight: 78g
- Joint pipe fitting BF-5 included
- Sensor: D-M9N (030425)

## Suction Combination Cylinder (w/ sensor)

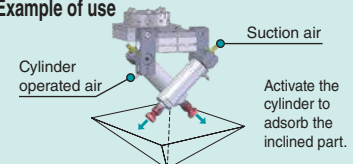
Order code No.	<b>211139</b>
TYPE	<b>VMCP-30-C</b>

- Stroke: 30mm
- Weight: 96g
- Joint pipe fitting BF-5 included
- Sensor: D-M9N (030425)



\* Size in ( ) shows size of VMCP-20-C.  
\* Size in [ ] shows size of VMCP-30-C.

### Example of use



● Attach suction attach head (131208 or 131209) → **3-33** to cylinder rod head.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



## Pads



For micro mini cylinder and mini cylinder.

## Claws



The best way for gripping sprues.

## Nut Plates



For fixing mini cylinders.

## Chuck Spacers (Plastic)



Spacer to install chuck plate and cylinder.

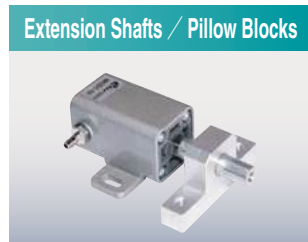
## Specification

Product name	Order code No.	TYPE	Weight (g)	Material	Page of details	
Pad • rectangle • black • for micro mini cylinder	<b>022797</b>	CPUM-01	5	Nitrile rubber	2-10	
Pad • rectangle • black • micro • for pull <b>NEW</b>	<b>023357</b>	CPUM-10	4.5	Chloroprene rubber		
Pad • round • black $\phi 25$ • for mini cylinder	<b>370071</b>	CP-015	13	Nitrile rubber		
Pad • round • black $\phi 50$ • for mini cylinder	<b>370070</b>	CP-016	53			
Pad • rectangle • black 2 holes • for mini cylinder	<b>023336</b>	CPL-060	22	Chloroprene rubber		
Pad • curved • black • for mini cylinder	<b>023359</b>	CPL-018	19			
Pad • rectangle • black • for pull	<b>023219</b>	CP-077	39			
Pad • rectangle • w/black SW • micro mini cylinder	<b>110568</b>	L1131-100	23	Nitrile rubber		2-11
Pad • rectangle • w/ black SW • for mini cylinder	<b>101832</b>	KRCR-5000	62			
Pad • rectangle • white • for micro mini cylinder	<b>023113</b>	CPUM-01 (SR)	5	Silicone		2-10
Pad • rectangle • white • micro • for pull <b>NEW</b>	<b>023358</b>	CPUM-11	4.5			
Pad • round • white $\phi 25$ • for mini cylinder	<b>022664</b>	CP-074	13			
Pad • round • white $\phi 50$ • for mini cylinder	<b>370107</b>	CP-071	53			
Pad • rectangle • white 2 holes • for mini cylinder	<b>023337</b>	CPL-061	22			
Pad • curved • white • for mini cylinder	<b>023360</b>	CPL-072	19			
Pad • rectangle • white • for pull	<b>023220</b>	CP-078	39		2-11	
Pad • rectangle • w/ white SW • for micro mini cylinder	<b>110654</b>	L1131-200	23			
Pad • rectangle • w/ white SW • for mini cylinder	<b>101833</b>	KRCWR-5000	62			
Steel Pad	<b>023211</b>	CP-06F	37		Steel	2-12
Pad • rectangle • w/steer SW • mini cylinder	<b>101834</b>	KFCR-5000	76			
Pad • rectangle • w/SW • mini cylinder	<b>101835</b>	KPCR-5000	52			

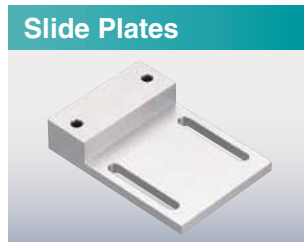




Used to change the mounting height of the mini cylinder.



Extension of mini cylinder rod, used with pillow block for stability.



Easy mini cylinder position adjustment. This makes possible to use the same chuck plate for several molds.

### Specification

Product name		Order code No.	TYPE	Weight (g)	Material	Page of details
Pads	Pad with SW • Black replacement Plate	 <b>101836</b>	KPB-5000	31	Nitrile rubber	2-12
	Pad with SW • White replacement Plate	 <b>101837</b>	KPW-5000	31	Silicone	
	Pad with SW • steer replacement Plate	 <b>101838</b>	KPF-5000	44	Steel	
	Pad with SW replacement Plate	 <b>101839</b>	KP-5000	25		
	Micro limit switch • for KRC / KRCW	 <b>030317</b>	D2JW-011-MD (0.1A,30VDC)	8	—	
Claws	Claw • L shape • for micro mini cylinder	 <b>022798</b>	CPUM-02	3.6	Steel	2-13
	Claw • round shape $\phi 25$ • for mini cylinder	 <b>370072</b>	CP-013	11.4		
	Claw • L shape • for mini cylinder	 <b>370073</b>	CP-014	28.4		
Nut plates	Nut plate • for micro mini cylinder	 <b>022801</b>	CPUM-05	5.0	Steel	2-13
	Nut plate • for mini cylinder	 <b>050033</b>	CP-009	8.2		
	Nut plate • for H cylinder (M3)	 <b>050034</b>	CP-010	5.2		
Chuck spacer	Chuck spacer • for micro mini cylinder	 <b>041646</b>	ECPUM-03	1.7	PP material	2-14
	Chuck spacer • for mini cylinder	 <b>041647</b>	ECP-011	8.6		
Spacer	Spacer • aluminum • 50H		<b>230060</b>	XL0002-050	73	Aluminum
	Spacer • aluminum • 80H		<b>230061</b>	XL0002-080	93	
	Spacer • aluminum • 100H		<b>230062</b>	XL0002-100	106	
	Spacer • aluminum • 120H		<b>230063</b>	XL0002-120	119	
Mini cylinder extension shaft	 <b>370342</b>	CP-033 (30mm)	11	Steel	2-15	
	 <b>370711</b>	CP-034 (45mm)	16			
Mini cylinder pillow block	 <b>370341</b>	CP-007 (10mm)	20	Aluminum		
	 <b>370712</b>	CP-008 (20mm)	40			
Mini cylinder slide plate	 <b>370793</b>	CP-030 (10H)	53	Aluminum		
	 <b>370722</b>	CP-030 (15H)	64			

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

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### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Pads

Use the product by mounting to the tip of cylinder rod.



## Pad · rectangle · black · for micro mini cylinder

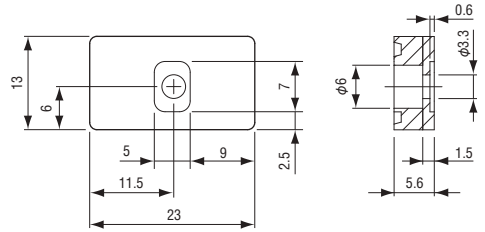
Order code No.	<b>022797</b>
TYPE	<b>CPUM-01</b>

- Material: nitrile rubber
- Weight: 5g
- Cylinder: UMCD, MCP1-12 series

## Pad · rectangle · white · for micro mini cylinder

Order code No.	<b>023113</b>
TYPE	<b>CPUM-01 (SR)</b>

- Material: silicone
- Weight: 5g
- Cylinder: UMCD, MCP1-12 series



## Pad · rectangle · black · for pull

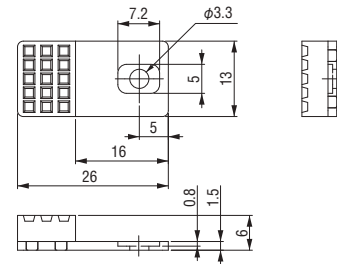
Order code No.	<b>023357</b>
TYPE	<b>CPUM-10</b>

- Material: chloroprene rubber
- Weight: 4.5g
- Cylinder: UMCD-5T,10T (pull type)

## Pad · rectangle · white · for pull

Order code No.	<b>023358</b>
TYPE	<b>CPUM-11</b>

- Material: silicone
- Weight: 4.5g
- Cylinder: UMCD-5T,10T (pull type)



## Pad · round · black $\phi 25$ · for mini cylinder

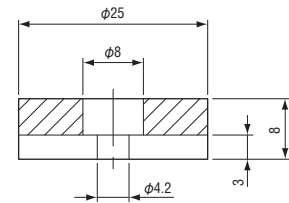
Order code No.	<b>370071</b>
TYPE	<b>CP-015</b>

- Material: nitrile rubber
- Weight: 13g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series

## Pad round white $\phi 25$ · for mini cylinder

Order code No.	<b>022664</b>
TYPE	<b>CP-074</b>

- Material: silicone
- Weight: 13g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series



## Pad · round · black $\phi 50$ · for mini cylinder

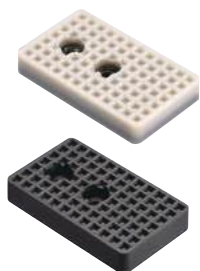
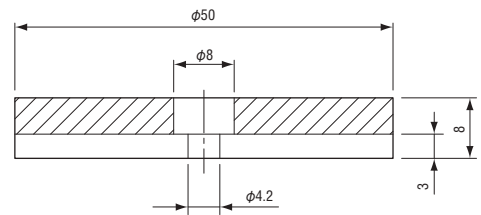
Order code No.	<b>370070</b>
TYPE	<b>CP-016</b>

- Material: nitrile rubber
- Weight: 53g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series

## Pad · round · white $\phi 50$ · for mini cylinder

Order code No.	<b>370107</b>
TYPE	<b>CP-071</b>

- Material: silicone
- Weight: 53g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series



## Pad · rectangle · black 2 holes · for mini cylinder

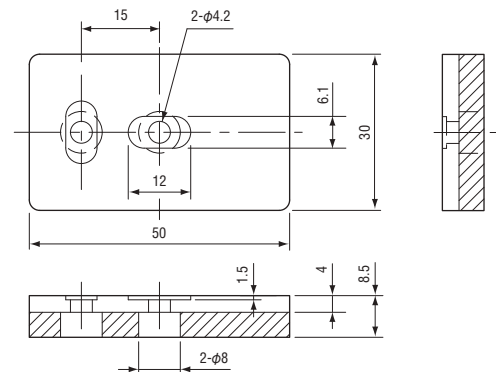
Order code No.	<b>023336</b>
TYPE	<b>CPL-060</b>

- Material: chloroprene rubber
- Weight: 22g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series

## Pad · rectangle · white 2 holes · for mini cylinder

Order code No.	<b>023337</b>
TYPE	<b>CPL-061</b>

- Material: silicone
- Weight: 22g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series



▶ Used when the parts has a curved surface.



**Pad • curved • black • for mini cylinder**

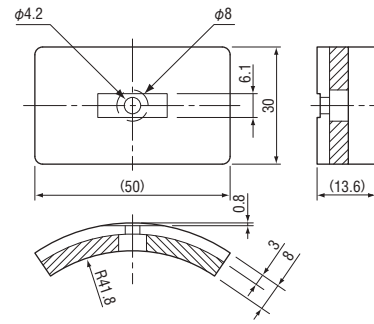
Order code No.	<b>023359</b>
TYPE	<b>CPL-018</b>

- Material: chloroprene rubber
- Weight: 19g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series

**Pad • curved • white • for mini cylinder**

Order code No.	<b>023360</b>
TYPE	<b>CPL-072</b>

- Material: silicone
- Weight: 19g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series



**Pad • rectangle • black • for pull**

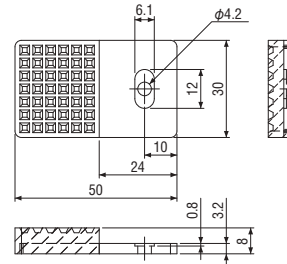
Order code No.	<b>023219</b>
TYPE	<b>CP-077</b>

- Material: chloroprene rubber
- Weight: 39g
- Cylinder: MCE series

**Pad • rectangle • white • for pull**

Order code No.	<b>023220</b>
TYPE	<b>CP-078</b>

- Material: silicone
- Weight: 39g
- Cylinder: MCE series



▶ Supplied with SW, sensor for product confirmation is not necessary.



**Pad • rectangle • w/ black SW • for micro mini cylinder**

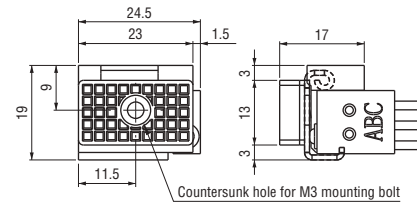
Order code No.	<b>110568</b>
TYPE	<b>L1131-100</b>

- Material: nitrile rubber
- Weight: 23g
- Cylinder: UMCD, MCP\*-12 series
- Sensor : D2JW-011-MD ▶ See (2-12)

**Pad • rectangle • w/ white SW • for micro mini cylinder**

Order code No.	<b>110654</b>
TYPE	<b>L1131-200</b>

- Material: silicone
- Weight: 23g
- Cylinder: UMCD, MCP\*-12 series



\* Unable to attach to UMCD-5P/10P.  
\* Wiring: black (COM) blue (NO) red (NC)

A contact specification: black (COM) blue (NO)  
B contact specification: black (COM) red (NC)

▶ Supplied with SW, sensor for product confirmation is not necessary.



**Pad • rectangle • w/ black SW • mini cylinder**

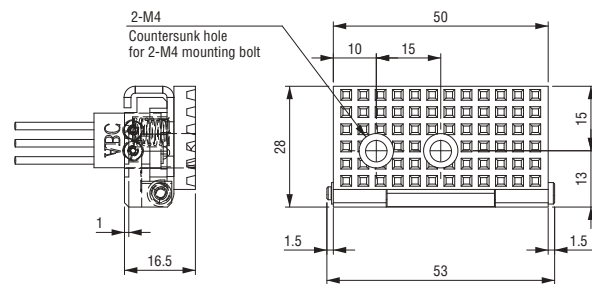
Order code No.	<b>101832</b>
TYPE	<b>KRCR-5000</b>

- Material: nitrile rubber
- Weight: 62g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series

**Pad • rectangle • w/ white SW • mini cylinder**

Order code No.	<b>101833</b>
TYPE	<b>KRCWR-5000</b>

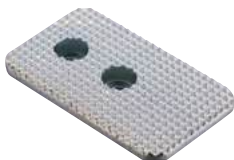
- Material: silicone
- Weight: 62g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series



● Sensor : D2JW-011-MD ▶ See (2-12)  
\* Wiring: black (COM) blue (NO) red (NC)

A contact specification: black (COM) blue (NO)  
B contact specification: black (COM) red (NC)

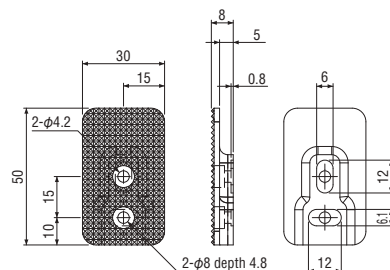
▶ Best suited for sprue slide prevention by using knurling process.



**Steel pad**

Order code No.	<b>023211</b>
TYPE	<b>CP-06F</b>

- Weight: 37g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series



**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

**Grip**

- Mini Cylinder
- Accessories for Mini Cylinder

- Container Cylinders
- Accessories for Container Cylinder

- Grippers
- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems
- Pad in Pad

- Vacuum Gripper

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

- Jungle Gym
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

**Pneumatic Components / Sensors**

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

**Lightweight Parts Series**

- Frame / Section / Resin Cylinders (Pads) / Resin Manifolds

**By Industry**

- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

- Tool / Jig

**Information**

- Various Products Information

# Pads

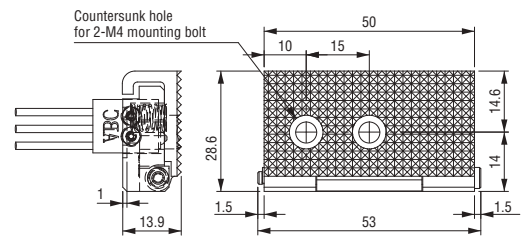
▶ Add knurling to the plate with switch.



## Pad • rectangle • w/ steer SW • mini cylinder

Order code No.	101834
TYPE	KFCR-5000

- Material: Steel ● Weight: 76g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series
- Sensor : D2JW-011-MD → See [\(2-12\)](#)



- \* Wiring: black (COM) blue (NO) red (NC)  
 A contact specification: black (COM) blue (NO)  
 B contact specification: black (COM) red (NC)

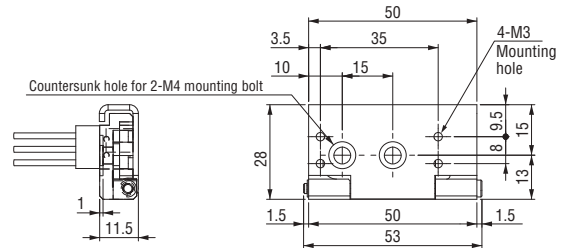
▶ Add M3 tap hole to the pad with switch.



## Pad • rectangle • w/ SW • mini cylinder

Order code No.	101835
TYPE	KPCR-5000

- Material: Steel ● Weight: 52g
- Cylinder: MCD\*, MCDR, MCDP, MCE, MCP\*-20 series
- Sensor : D2JW-011-MD → See [\(2-12\)](#)



- \* Wiring: black (COM) blue (NO) red (NC)  
 A contact specification: black (COM) blue (NO)  
 B contact specification: black (COM) red (NC)

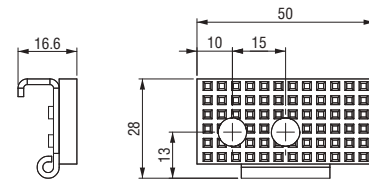
▶ Pad with SW replacement Accessories



## Pad with SW • Black replacement Plate

Order code No.	101836
TYPE	KPB-5000

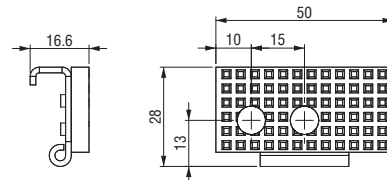
- Weight: 31g
- E-ring attached
- KRCR-5000 (101832) for exchange



## Pad with SW • White replacement Plate

Order code No.	101837
TYPE	KPW-5000

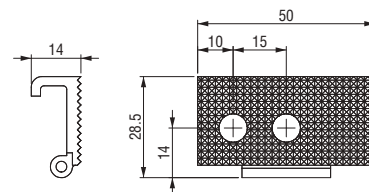
- Weight: 31g
- E-ring attached
- KRCWR-5000 (101833) for exchange



## Pad with SW • steer replacement Plate

Order code No.	101838
TYPE	KPF-5000

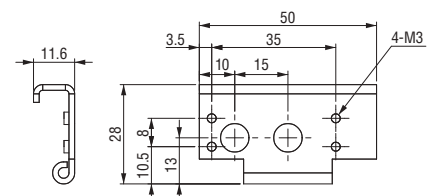
- Weight: 44g
- E-ring attached
- KFCR-5000 (101834) for exchange



## Pad with SW replacement Plate

Order code No.	101839
TYPE	KP-5000

- Weight: 25g
- E-ring attached
- KPCR-5000 (101835) for exchange



## Micro limit switch • for KRC / KRCW

Order code No.	030317
TYPE	D2JW-011-MD (0.1A,30VDC)

- Weight: 8g
- Wiring: black (COM) blue (NO) red (NC)
- Pads : KRCR, KRCWR, KFCR, KPCR, L1131
- Length : 0.3m





# Claws / Nut Plates

Claw is used for chucking sprue. and nut plate is used for fixing mini cylinder.

## ▶ Claws



**Claw • L shape • for micro mini cylinder**

Order code No.	<b>022798</b>
TYPE	<b>CPUM-02</b>

- Weight: 3.6g
- Cylinder: UMCD, MCP\*-12 series



**Claw • round shape  $\phi 25$  • for mini cylinder**

Order code No.	<b>370072</b>
TYPE	<b>CP-013</b>

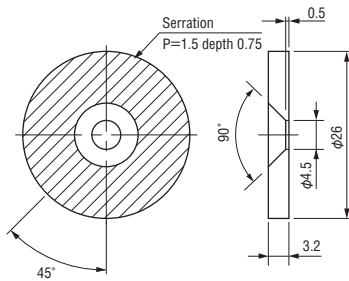
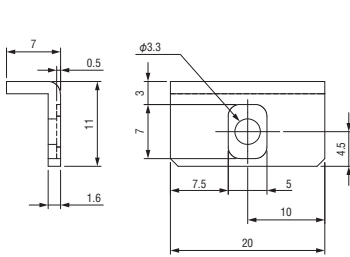
- Weight: 11.4g
- Cylinder: MCD\*, MCDR, MCE, MCDP, MCP\*-20 series



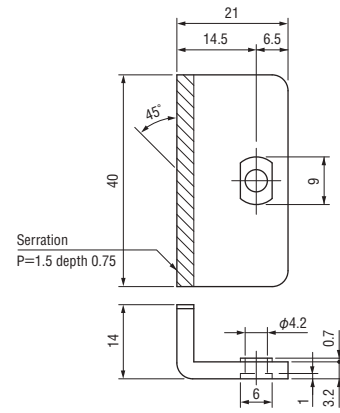
**Claw • L shape • for mini cylinder**

Order code No.	<b>370073</b>
TYPE	<b>CP-014</b>

- Weight: 28.4g
- Cylinder: MCD\*, MCDR, MCE, MCDP, MCP\*-20 series



\* Clamp force is conveyed with serration processing. This product is engaged in less deep than CP-014.



## ▶ Nut Plates (micro mini cylinder, mini cylinder, H cylinder)



**Nut plate • for micro mini cylinder**

Order code No.	<b>022801</b>
TYPE	<b>CPUM-05</b>

- Weight: 5.0g
- Cylinder: UMCD series



**Nut plate • for mini cylinder**

Order code No.	<b>050033</b>
TYPE	<b>CP-009</b>

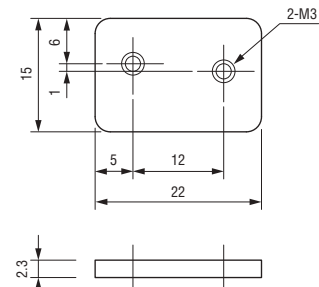
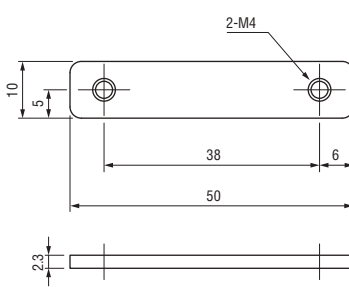
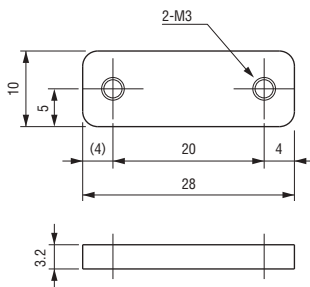
- Weight: 8.2g
- Cylinder: MCD\*, MCDR, MCE series



**Nut plate • for H cylinder (M3)**

Order code No.	<b>050034</b>
TYPE	<b>CP-010</b>

- Weight: 5.2g
- Cylinder: MCY-HS



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders (Pads) / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Chuck Spacers : Plastic / Aluminum

Spacer for height adjustment.

## Chuck spacer • for micro mini cylinder



Order code No.	<b>041646</b>
TYPE	<b>ECPUM-03</b>

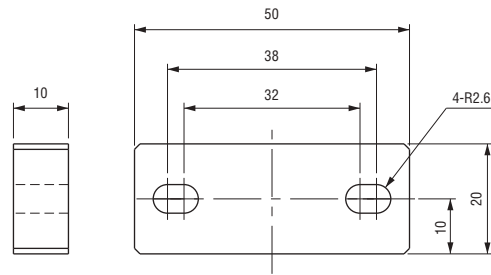
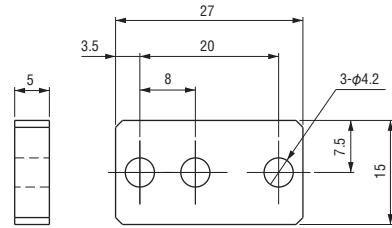
- Weight: 1.7g
- Material: Polypropylene

## Chuck spacer • for mini cylinder



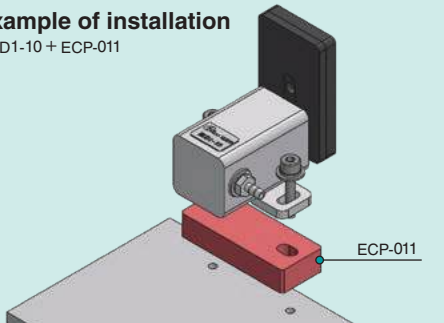
Order code No.	<b>041647</b>
TYPE	<b>ECP-011</b>

- Weight: 8.6g
- Material: Polypropylene



### Example of installation

MCD1-10 + ECP-011



Grip • Accessories for Mini Cylinder

## ▶ Spacer for mini cylinder

### Spacer • aluminum • 50H



Order code No.	<b>230060</b>
TYPE	<b>XL0002-050</b>

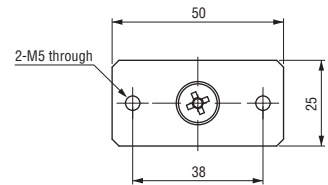
- Weight: 73g
- Size A: 50mm

### Spacer • aluminum • 80H



Order code No.	<b>230061</b>
TYPE	<b>XL0002-080</b>

- Weight: 93g
- Size A: 80mm



### Spacer • aluminum • 100H



Order code No.	<b>230062</b>
TYPE	<b>XL0002-100</b>

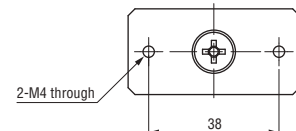
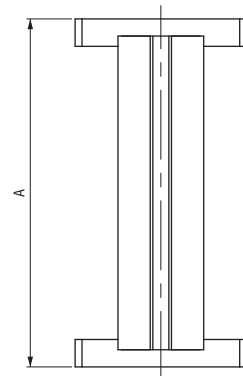
- Weight: 106g
- Size A: 100mm

### Spacer • aluminum • 120H



Order code No.	<b>230063</b>
TYPE	<b>XL0002-120</b>

- Weight: 119g
- Size A: 120mm





# Extension Shafts / Pillow Blocks / Slide Plate

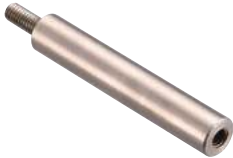
Extension of mini cylinder rod, used with pillow block for stability.  
Easy to make the Mini cylinder move.



## Mini cylinder • extension shaft

Order code No.	<b>370342</b>
TYPE	<b>CP-033 (30mm)</b>

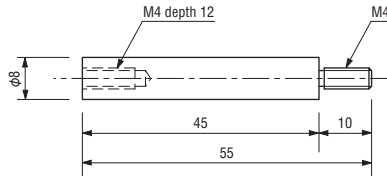
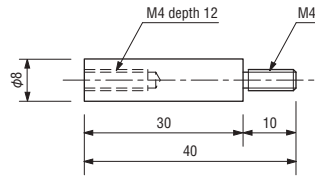
● Weight: 11g



## Mini cylinder • extension shaft

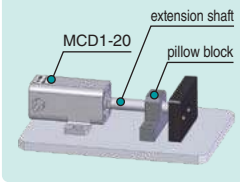
Order code No.	<b>370711</b>
TYPE	<b>CP-034 (45mm)</b>

● Weight: 16g



● Cylinder: MCD1 series

### Example of use



## Mini cylinder • pillow block

Order code No.	<b>370341</b>
TYPE	<b>CP-007 (10mm)</b>

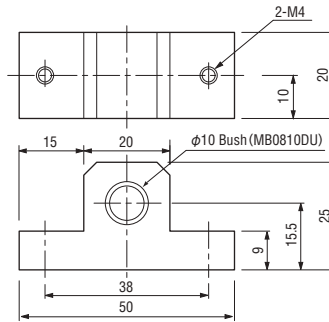
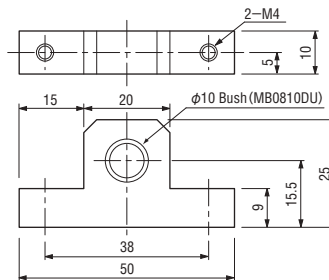
● Weight: 20g



## Mini cylinder • pillow block

Order code No.	<b>370712</b>
TYPE	<b>CP-008 (20mm)</b>

● Weight: 40g



● Cylinder: MCD\* series



## Mini cylinder • slide plate

Order code No.	<b>370793</b>
TYPE	<b>CP-030 (10H)</b>

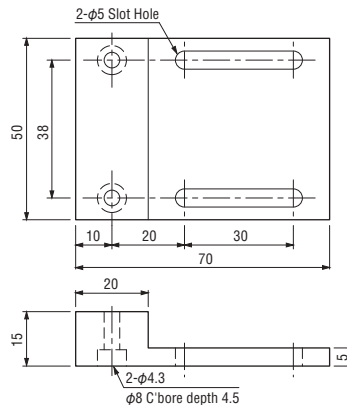
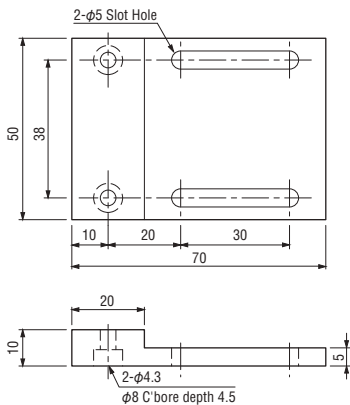
● Weight: 53g  
● Use nut plate to attach mini cylinder.  
→ See (2-13)



## Mini cylinder • slide plate

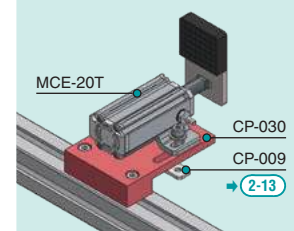
Order code No.	<b>370722</b>
TYPE	<b>CP-030 (15H)</b>

● Weight: 64g  
● Use nut plate to attach mini cylinder.  
→ See (2-13)



### Example of installation

MCE-20T + CP-030 + CP-009



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information



# Micro Mini Cylinder / Mini Cylinder ↔ Pads Selection Table

Grip ● Accessories for Mini Cylinder

Cylinder		Micro mini cylinder (UMCD)						mini cylinder (MCD*)		Resin cylinder (MCDR)		Mini cylinder (MCDP)		Mini cylinder (MCE)						Pipe cylinder (MCP1)				
Pads Claw		200122	200123	200260	200261	200124	200125	123219	123220	123691	123692	123929	123930	123504	123506	123505	123507	123508	123509	123699	123700	123701	123702	123703
	022797 CPUM-01 (Black)	○	○	-	-	○※2	○※2	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-
	023113 CPUM-01 (SR) (White)	○	○	-	-	○※2	○※2	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-
	023357 CPUM-10 (Black)	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	023358 CPUM-11 (White)	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	370071 CP-015 (Black)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	022664 CP-074 (White)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	370070 CP-016 (Black)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	370107 CP-071 (White)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	023336 CPL-060 (Black)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	023337 CPL-061 (White)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	023359 CPL-018 (Black)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	023360 CPL-072 (White)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	023219 CP-077 (Black)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-
	023220 CP-078 (White)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	-	-	-	-	-
	101832 KRCR-5000 (Black)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	101833 KRCWR-5000 (White)	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	101834 KFCR-5000	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	101835 KPCR-5000	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	110568 L1131-100 (Black)	○※1	○※1	-	-	○※2	○※2	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-
	110654 L1131-200 (White)	○※1	○※1	-	-	○※2	○※2	-	-	-	-	-	-	-	-	-	-	-	-	○	○	-	-	-
	023211 CP-06F	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	022798 CPUM-02	○	○	-	-	○※2	○※2	-	-	-	-	○	○	-	-	-	-	-	-	○	○	-	-	-
	370072 CP-013	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○
	370073 CP-014	-	-	-	-	-	-	○	○	○	○	○	○	○	○	-	-	○	○	-	-	○	○	○

※1 The chuck spacer (ECPUM-03 → [2-14](#)) is required when mounting the pads.  
 ※2 The long side is the longitudinal direction when mounting the pads.



# MEMO

A series of horizontal dashed lines for writing.



## Specification

Product name	Order code No.	TYPE	Structure	Used air pressure <sup>*2</sup> (Mpa)	Cylinder diameter (mm)	Output <sup>*1</sup> (N)	Stroke (mm)	Weight (g)	Page of Details		
Mini container cylinder	<b>131014</b>	NCON-M10S	Single action type	0.4~0.5 (4~5kgf/cm <sup>2</sup> )	φ 20	Push 114	Pull 30	10	135	2-19	
	<b>131015</b>	NCON-M15S				Push 115	Pull 29	15	145		
	<b>131016</b>	NCON-M20S				Push 125	Pull 20	20	155		
	<b>130709</b>	NCON-M10W	Double action type		φ 20	Push 154	Pull 129	10	135		
	<b>130710</b>	NCON-M15W						15	145		
	<b>130711</b>	NCON-M20W						20	155		
	<b>130712</b>	NCON-M25W			25			165			
	<b>130713</b>	NCON-M30W			30			175			
Container cylinder	<b>130707</b>	NCON-20W	Double action type	0.4~0.5 (4~5kgf/cm <sup>2</sup> )	φ 20 × 2	Push 314	Pull 234	20	340	2-20	
	<b>130708</b>	NCON-40W						40	415		
	<b>130829</b>	NCON-80W						80	557		

Product name	Order code No.	TYPE	Structure	Used air pressure <sup>*2</sup> (Mpa)	Cylinder diameter (mm)	Output <sup>*3</sup> (N)	Stroke (mm)	Weight (g)	Page of Details	
Container cylinder reinforced	<b>130869</b>	NCON-40WK	Double action type	0.4 ~ 0.6	φ 20 × 2	Push 314	Pull 200	40	688	2-20
Container cylinder w/ guided	<b>060496</b>	GCYL20*20	Double action type	0.4 ~ 0.6	φ 20	Push 157	Pull 117	20	526	2-21
	<b>060497</b>	GCYL20*40						40	670	
	<b>060498</b>	GCYL20*50						50	746	
	<b>060499</b>	GCYL20*75						75	1,000	
	<b>060500</b>	GCYL20*100						100	1,192	
	<b>060501</b>	GCYL20*150						150	1,576	
<b>NEW</b> Container cylinder w/ guided(Double action type)	<b>131686</b>	NGCYL20*20	Double action type	0.4 ~ 0.6	φ 16 × 2	Push 200	Pull 150	20	270	2-22
	<b>131687</b>	NGCYL20*40						40	370	
	<b>131688</b>	NGCYL20*50						50	410	
	<b>131689</b>	NGCYL20*75						75	520	
	<b>131690</b>	NGCYL20*100						100	640	

Auto switch (reed SW)	<b>030282</b>	D-A93	—	—	—	—	—	6	2-19,21
Auto switch (contactless)	<b>030425</b>	D-M9N	—	—	—	—	—	8	2-19,21

\*1 : Used air pressure (0.49Mpa) \*2 : Fluid to be used/Clean air, Ambient temperature/5 °C - 40°C \*3 : Used air pressure (0.5Mpa)

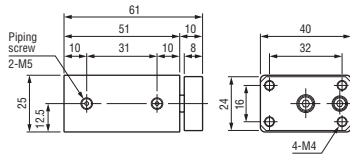


# Mini Container Cylinder (Single Action / Double Action)

Smooth operation with fit drive guide.

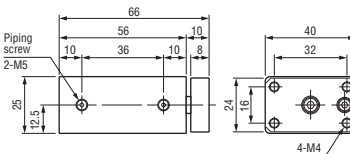
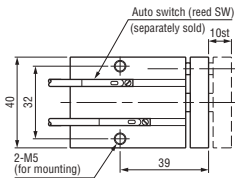
## Single Action Type

Installation of auto switch for act/return limit is possible.



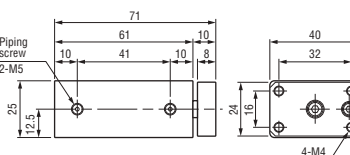
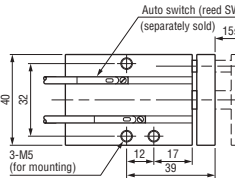
Order code No. **131014**  
**TYPE** NCON-M10S

- Stroke: 10mm
- Weight: 135g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



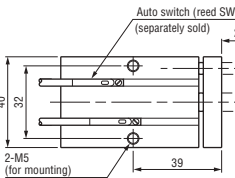
Order code No. **131015**  
**TYPE** NCON-M15S

- Stroke: 15mm
- Weight: 145g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



Order code No. **131016**  
**TYPE** NCON-M20S

- Stroke: 20mm
- Weight: 155g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



### Auto switch (reed SW)

Order code No. **030282**  
**TYPE** D-A93

- Weight: 6g
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Wiring: 0.5M OUT brown OUT (+) blue (-)
- With indicator lamp
- Terminal process is not made.
- Wiring: ➔ See (6-20)
- Length: 0.5m



### Auto switch (contactless)

Order code No. **030425**  
**TYPE** D-M9N

- Weight: 8g
- Load voltage: 24VDC
- Load current range: -40mA or lower
- Wiring: 0.5M +V (brown), Load (black), OV(blue)
- With indicator lamp
- Terminal process is not made.
- Wiring: ➔ See (6-20)
- Length: 0.5m

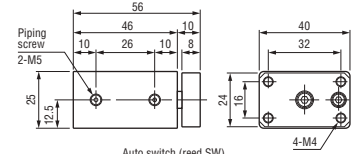
### Example of mounting



NCON-M10S

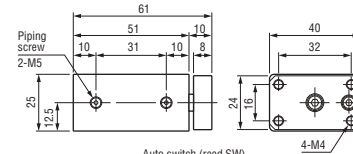
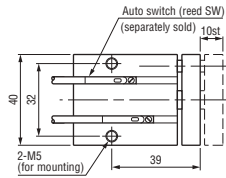
## Double Action Type

Installation of auto switch for act/return limit is possible.



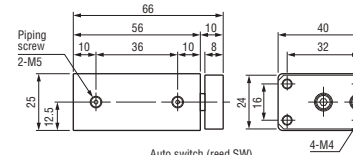
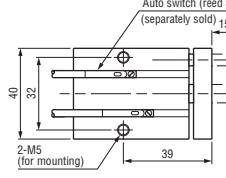
Order code No. **130709**  
**TYPE** NCON-M10W

- Stroke: 10mm
- Weight: 135g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



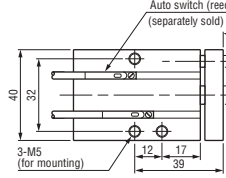
Order code No. **130710**  
**TYPE** NCON-M15W

- Stroke: 15mm
- Weight: 145g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



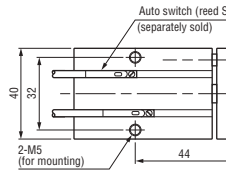
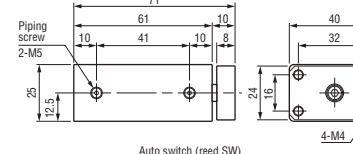
Order code No. **130711**  
**TYPE** NCON-M20W

- Stroke: 20mm
- Weight: 155g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



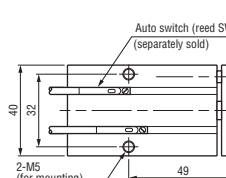
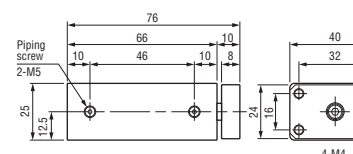
Order code No. **130712**  
**TYPE** NCON-M25W

- Stroke: 25mm
- Weight: 165g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



Order code No. **130713**  
**TYPE** NCON-M30W

- Stroke: 30mm
- Weight: 175g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

### Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Container Cylinder (Double Action / Reinforced)

Smooth operation with double rods.

Installation of auto switch for act/return limit is possible.



Order code No.	<b>130707</b>
TYPE	<b>NCON-20W</b>

- Stroke: 20mm
  - Weight: 340g
  - Pipe joint is sold separately.
- See (6-5,6,7)



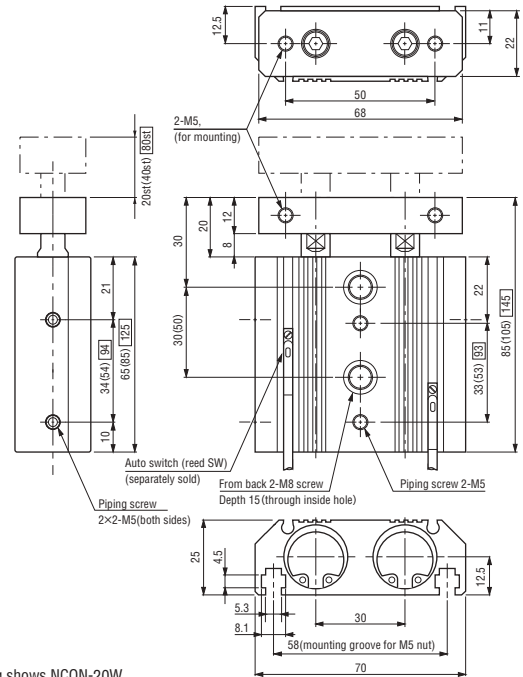
Order code No.	<b>130708</b>
TYPE	<b>NCON-40W</b>

- Stroke: 40mm
  - Weight: 415g
  - Pipe joint is sold separately.
- See (6-5,6,7)



Order code No.	<b>130829</b>
TYPE	<b>NCON-80W</b>

- Stroke: 80mm
  - Weight: 557g
  - Pipe joint is sold separately.
- See (6-5,6,7)



- \* Base drawing shows NCON-20W.
- \* Size in ( ) shows size of NCON-40W.
- \* Size in □ shows size of NCON-80W.

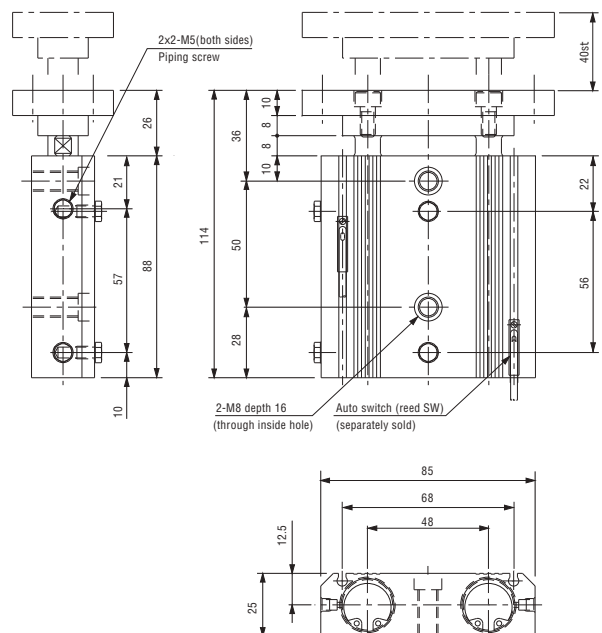
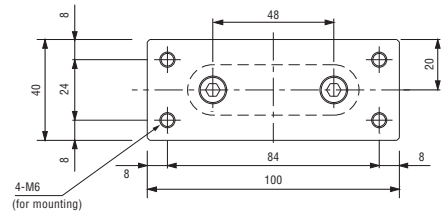
► High durability and long operation life with widemouthed cylinder and reinforcement of piston structure.



## Container cylinder • reinforced (double)

Order code No.	<b>130869</b>
TYPE	<b>NCON-40WK</b>

- Stroke: 40mm
  - Weight: 688g
  - Pipe joint is sold separately.
- See (6-5,6,7)







# Container Cylinder w/ Guided (Double Action) GCYLseries

Improved durability with integral-type aluminum body.

Installation of auto switch for act/return limit is possible.



Order code No.	<b>060496</b>
TYPE	<b>GCYL20*20</b>

- Stroke: 20mm
- Weight: 526g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



Order code No.	<b>060497</b>
TYPE	<b>GCYL20*40</b>

- Stroke: 40mm
- Weight: 670g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



Order code No.	<b>060498</b>
TYPE	<b>GCYL20*50</b>

- Stroke: 50mm
- Weight: 746g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



Order code No.	<b>060499</b>
TYPE	<b>GCYL20*75</b>

- Stroke: 75mm
- Weight: 1,000g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



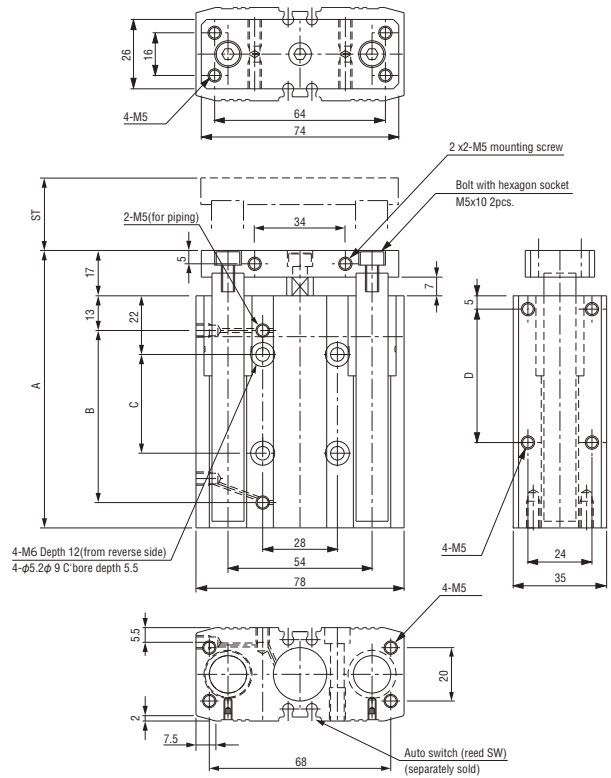
Order code No.	<b>060500</b>
TYPE	<b>GCYL20*100</b>

- Stroke: 100mm
- Weight: 1,192g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



Order code No.	<b>060501</b>
TYPE	<b>GCYL20*150</b>

- Stroke: 150mm
- Weight: 1,576g
- Pipe joint is sold separately.
- ➔ See (6-5,6,7)



## Dimensions

(mm)

TYPE	GCYL20*20	GCYL20*40	GCYL20*50	GCYL20*75	GCYL20*100	GCYL20*150
ST	20	40	50	75	100	150
A	74	94	104	136.5	171.5	231.5
B	34.5	54.5	64.5	89.5	114.5	164.5
C	17	37	37	60	60	120
D	30	50	50	85	85	135

## Auto switch (reed SW)

Order code No.	<b>030282</b>
TYPE	<b>D-A93</b>

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Wiring: 0.5M OUT brown OUT (+) blue (-)
- Indicator light
- Wiring: ➔ See (6-20)
- Length: 0.5m



## Auto switch (contactless)

Order code No.	<b>030425</b>
TYPE	<b>D-M9N</b>

- Weight: 8g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: -40mA or lower
- Wiring: 0.5M + V (brown), Load (black), 0V (blue)
- Indicator light
- Wiring: ➔ See (6-20)
- Length: 0.5m



## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

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Assembling Tools

Tool / Jig

Information

Various Products Information



# Container Cylinder w/ Guided (Double Action) NGCYLseries

New container cylinder with miniaturization and Lightweight.

- ▶ The proportions became more compact when compared to traditional container cylinders (GCYL series).
- ▶ The cylinder is lighter and thrust increased.

TYPE	Weight <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Lightweight</span>	Body size <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Compact</span>	Output <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Enhance thrust</span>	
<b>NEW</b>  NGCYL20*20	270g	Height : 25mm Length : 63.5mm Width : 85	<b>Push</b> 200N	<b>Pull</b> 150N
 GCYL20*20	526g	Height : 35mm Length : 74mm Width : 78mm	<b>Push</b> 157N	<b>Pull</b> 117N

Installation of auto switch for act/return limit is possible.



**Order code No.** 131686  
**TYPE** NGCYL20\*20

- Stroke: 20mm
  - Weight: 270g
  - Pipe joint is sold separately.
- See (6-5,6,7)



**Order code No.** 131687  
**TYPE** NGCYL20\*40

- Stroke: 40mm
  - Weight: 370g
  - Pipe joint is sold separately.
- See (6-5,6,7)



**Order code No.** 131688  
**TYPE** NGCYL20\*50

- Stroke: 50mm
  - Weight: 410g
  - Pipe joint is sold separately.
- See (6-5,6,7)



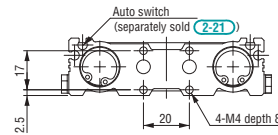
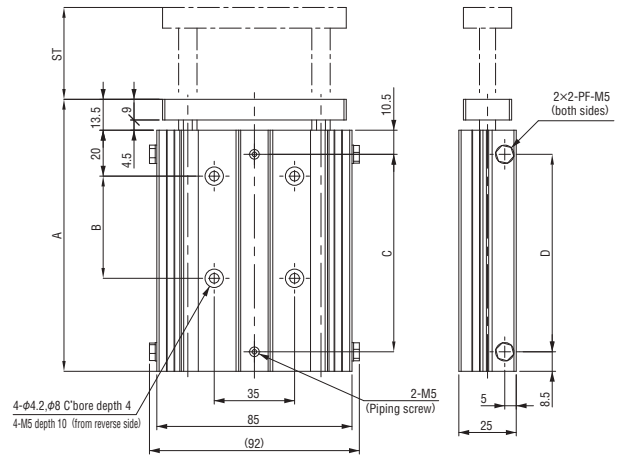
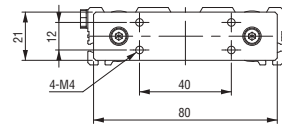
**Order code No.** 131689  
**TYPE** NGCYL20\*75

- Stroke: 75mm
  - Weight: 520g
  - Pipe joint is sold separately.
- See (6-5,6,7)



**Order code No.** 131690  
**TYPE** NGCYL20\*100

- Stroke: 100mm
  - Weight: 1,192g
  - Pipe joint is sold separately.
- See (6-5,6,7)



## Dimensions (mm)

TYPE	NGCYL20*20	NGCYL20*40	NGCYL20*50	NGCYL20*75	NGCYL20*100
ST	20	40	50	75	100
A	63.5	83.5	93.5	118.5	143.5
B	17	27	32	44.5	57
C	31	51	61	86	111
D	31	51	61	86	111

# MEMO

A series of horizontal dashed lines for writing.



## Pads



Used for work grip or positioning.

## Nut Plates

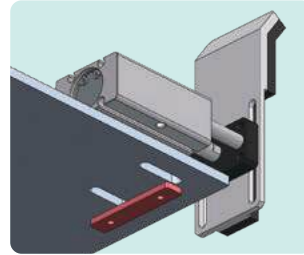


For fixing container cylinders.

## Extension Plate



Setting position can be changed according to the work shape.



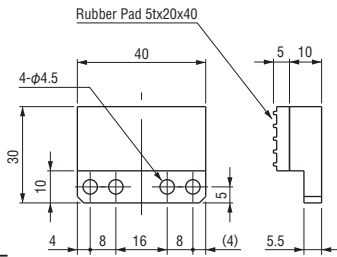
## Specification

Product name	Order code No.	TYPE	Weight (g)	Material	Page of details
Pad · for mini container cylinder	 <b>131256</b>	NCON-CP-01	34	Nitrile rubber	<b>2-25</b>
	 <b>131257</b>	NCON-CP-02	38		
	 <b>131258</b>	NCON-CP-03	38	Steel	
	 <b>131259</b>	NCON-CP-04	71	Nitrile rubber	
	 <b>131260</b>	NCON-CP-05	71		
	 <b>131677</b>	NCON-CP-06A	98		
Extended plate (for wear plate)	 <b>230071</b>	XL0006-104	31	Aluminum	
Nut plate · for container cylinder	 <b>023196</b>	CP-075	10	Steel	



# Pads / Extension Plates / Nut Plates

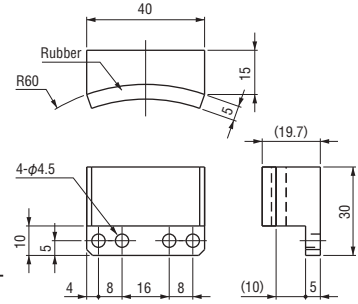
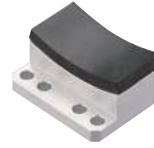
Pads for mini container cylinder.



**Pad • for mini container cylinder**

Order code No.	<b>131256</b>
TYPE	<b>NCON-CP-01</b>

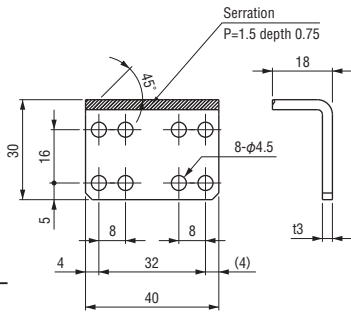
- Material: nitrile rubber
- Weight: 34g



**Pad • for mini container cylinder**

Order code No.	<b>131257</b>
TYPE	<b>NCON-CP-02</b>

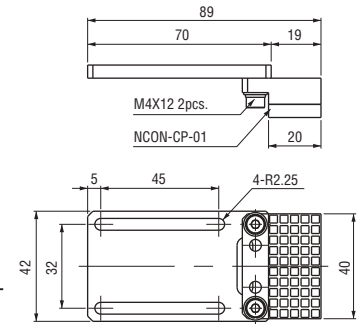
- Material: nitrile rubber
- Weight: 38g



**Claw • for mini container cylinder**

Order code No.	<b>131258</b>
TYPE	<b>NCON-CP-03</b>

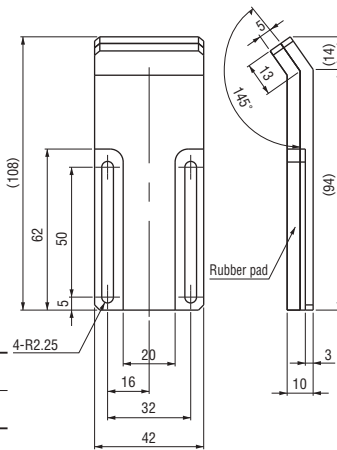
- Weight: 38g



**Pad • for mini container cylinder**

Order code No.	<b>131259</b>
TYPE	<b>NCON-CP-04</b>

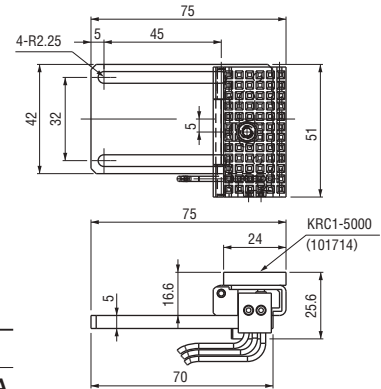
- Material: nitrile rubber
- Weight: 71g



**Pad • for mini container cylinder**

Order code No.	<b>131260</b>
TYPE	<b>NCON-CP-05</b>

- Material: nitrile rubber
- Weight: 71g

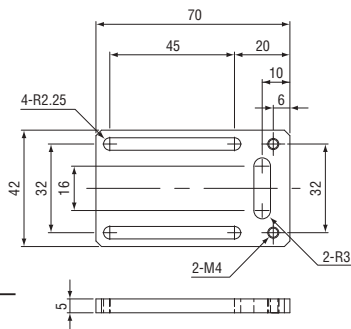


**Pad • for mini container cylinder**

Order code No.	<b>131677</b>
TYPE	<b>NCON-CP-06A</b>

- Material: nitrile rubber
- Weight: 98g
- Length: 0.3m

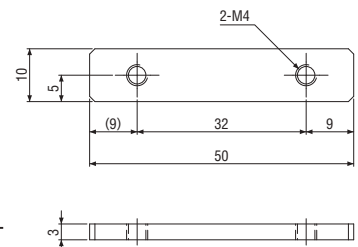
\* Wiring: black (COM) blue (NO) red (NC)  
A contact specification: black (COM) blue (NO)  
B contact specification: black (COM) red (NC)



**Extended plate (for wear plate)**

Order code No.	<b>230071</b>
TYPE	<b>XL0006-104</b>

- Weight: 31g



**Nut plate • for container cylinder**

Order code No.	<b>023196</b>
TYPE	<b>CP-075</b>

- Weight: 10g

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders (Pads) / Resin Manifolds

By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



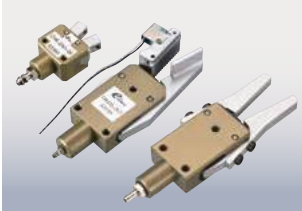


## Runner Chuck E Series (Claw Superduralumin)



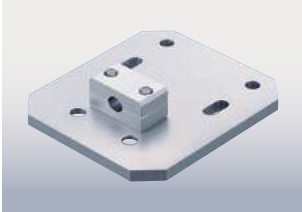
Lightweight, high rigidity, and long operating life with superduralumin. Mounting selection for Tap type and Eins Parts (jungle-gym series) is possible. Two types of check limits can be selected.

## Runner Chuck E1 Series (Steel Type)



Using superduralumin body and steel claw allows a wide range of uses. Two types of check limits can be selected.

## Runner Module



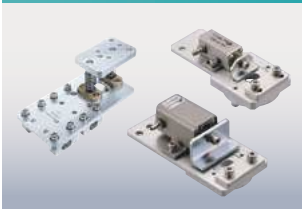
Module kit for runner extraction. Use the runner chuck after fixing it.

## Runner Chuck Plate



Extracts runners with MCD1-10 mini cylinder which is directly attached to the robot arm.

## Runner Chuck Buffer Unit / Tunnel Gate Runner Chuck



Jumping tunnel gate is caught with tapered section.

## Pipe Combination Chuck / Pipe Combination Chuck • Grip



Special cylinder of hinge structure which operates 90 degrees. Used with jungle gym series parts. There's also a type with a holding bracket.

## Hinge Chuck Clamp Unit (Double Action)



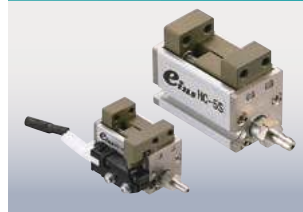
Best Clamp Unit for Hinge Chuck for taking out auto parts of large-scale bumper and Instrument panel, etc.

## Magnet Chuck



Neodymium magnet is embedded in the piston section. Using with magnet to transfer steel parts.

## Parallel Chucks (Single Action / Double Action)



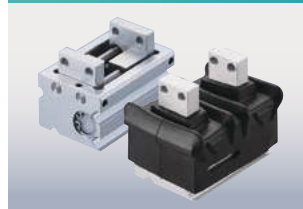
Compact design with low profile and small space.

## Three Claws Chuck (Double Action Type)



Perfect for gripping the work piece of cylindrical shape. Grip at the cylinder center with 3 claws.

## Parallel Hand 15st (Double Action)



Durable bush guide embedded. Also available with rubber for clean rooms.

## Needle Gripper



Embedded needle allows holding fiber workpiece with high air permeability.



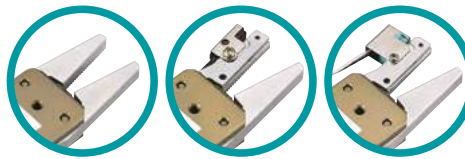
Please refer to the web site for performance table.

### Runner Chuck E series (manual, super duralumin)



w/o sensor (straight claw type)    With proximity sensor (straight claw type)    With Limit SW (straight claw type)

### Runner Chuck E1 series (Steel claw type)



w/o sensor (straight claw type)    With proximity sensor (straight claw type)    With Limit SW (straight claw type)

### Runner Chuck EMR



Claw rubber cap (straight claw type)

## Specification

Product name		Order code No.	TYPE	Weight (g)	Used air pressure (Mpa)	Grip (N)	Remarks	Page of Details	
E series (Super duralumin • straight claw type)	Runner chuck ES (w/o sensor)	<b>022879</b>	CHK-ES-08	18	0.3 } 0.5	5	w/o sensor	2-32	
	Runner chuck ES (With proximity sensor)	<b>022883</b>	CHK-ES-08-C	32			Proximity Sensor		
	<b>NEW</b> Runner chuck (With Limit SW)	<b>023456</b>	CHK-ES-08-C1	25			Limit switch		
	Runner chuck EM (w/o sensor)	<b>022878</b>	CHK-EM-12	46		28	W/o sensor		
	Runner chuck EM (With proximity sensor)	<b>022882</b>	CHK-EM-12-C	56			Proximity Sensor		
	<b>NEW</b> Runner chuck EM (With Limit SW)	<b>023457</b>	CHK-EM-12-C1	53			Limit switch		
	Runner chuck EL (w/o sensor)	<b>022877</b>	CHK-EL-12	94		45	W/o sensor		
	Runner chuck EL (With proximity sensor)	<b>022881</b>	CHK-EL-12-C	104			Proximity Sensor		
	<b>NEW</b> Runner chuck EL (With Limit SW)	<b>023458</b>	CHK-EL-12-C1	102			Limit switch		
	Runner chuck EX (w/o sensor)	<b>022876</b>	CHK-EX-20	180		80	W/o sensor		
	Runner chuck EX (With proximity sensor)	<b>022880</b>	CHK-EX-20-C	190			Proximity Sensor		
	<b>NEW</b> Runner chuck EX (With Limit SW)	<b>023459</b>	CHK-EX-20-C1	191			Limit switch		
	<b>NEW</b> Runner chuck EMR (w/o sensor)	<b>023440</b>	CHK-EMR-12	44		28	W/o sensor		2-33
	<b>NEW</b> Claw Cap	<b>023443</b>	CHK-EMR-CPE	0.6		—	—		
	E1 series (Steel • straight claw type)	Runner chuck EN (w/o sensor)	<b>022991</b>	CHK-EN1-06		10	0.3 } 0.5		2
Runner chuck ES (w/o sensor)		<b>022992</b>	CHK-ES1-08	22	5	W/o sensor			
Runner chuck ES (With proximity sensor)		<b>022998</b>	CHK-ES1-08-C	38		Proximity Sensor			
Runner chuck ES (With Limit SW)		<b>023004</b>	CHK-ES1-08-C1	33		Limit switch			
Runner chuck EM (w/o sensor)		<b>022993</b>	CHK-EM1-12	67	28	W/o sensor			
Runner chuck EM (With proximity sensor)		<b>022999</b>	CHK-EM1-12-C	79		Proximity Sensor			
Runner chuck EM (With Limit SW)		<b>023005</b>	CHK-EM1-12-C1	73		Limit switch			
Runner chuck EL (w/o sensor)		<b>022994</b>	CHK-EL1-12	143	45	W/o sensor			
Runner chuck EL (With proximity sensor)		<b>023000</b>	CHK-EL1-12-C	155		Proximity Sensor			
Runner chuck EL (With Limit SW)		<b>023006</b>	CHK-EL1-12-C1	145		Limit switch			
Runner chuck EX (w/o sensor)		<b>022995</b>	CHK-EX1-20	280	80	W/o sensor			
Runner chuck EX (With proximity sensor)		<b>023001</b>	CHK-EX1-20-C	283		Proximity Sensor			
Runner chuck EX (With Limit SW)		<b>023007</b>	CHK-EX1-20-C1	272		Limit switch			

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

#### Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

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Please refer to the web site for performance table.

## Runner Chuck E1 series (Steel claw type)



W/o sensor  
(steel L claw type)



With proximity sensor  
(steel L claw type)



With Limit SW  
(steel L claw type)



Runner chuck EM  
(Attachment/detachment claw)



Runner chuck EM  
(Proximity sensor-attachment/  
detachment claw)



Runner chuck EM  
(Limit SW-attachment/  
detachment claw)

### Specification

Product name		Order code No.	TYPE	Weight (g)	Used air pressure (Mpa)	Grip (N)	Remarks	Page of Details
E1 series (steel L claw type)	Runner chuck EL (w/o sensor)	<a href="#">022996</a>	CHK-EL1L-12	170	0.3 } 0.5	45	W/o sensor	2-36
	Runner chuck EL (With proximity sensor)	<a href="#">023160</a>	CHK-EL2L-12-C	196			Proximity sensor	
	Runner chuck EL (With Limit SW)	<a href="#">023161</a>	CHK-EL2L-12-C1	186			Limit switch	
	Runner chuck EX (w/o sensor)	<a href="#">022997</a>	CHK-EX1L-20	305	80	W/o sensor		
	Runner chuck EX (With proximity sensor)	<a href="#">023158</a>	CHK-EX2L-20-C	335		Proximity sensor		
	Runner chuck EX (With Limit SW)	<a href="#">023159</a>	CHK-EX2L-20-C1	325		Limit switch		
E1 series (Steel-attachable and detachable type claw)	Runner chuck EM (Detachable/attachable claw)	<a href="#">023284</a>	CHK-EMBF-12	70	0.3 } 0.5	28	W/o sensor	2-37
	Runner chuck EM (Proximity sensor·detachable/attachable claw)	<a href="#">023286</a>	CHK-EMBF-12-C	85			Proximity sensor	
	Runner chuck EM (Limit SW·detachable/attachable claw)	<a href="#">023288</a>	CHK-EMBF-12-C1	77			Limit switch	
	Runner chuck EM (Attachment/detachment claw)	<a href="#">023285</a>	CHK-EMF-12	12	—	—	W/o sensor	
	Runner chuck EM (Proximity sensor·detachable/attachable claw)	<a href="#">023287</a>	CHK-EMF-12-C	27	—	—	Proximity sensor	
	Runner chuck EM (Limit SW·detachable/attachable claw)	<a href="#">023289</a>	CHK-EMF-12-C1	20	—	—	Limit switch	
	Runner chuck EX (Detachable/attachable claw)	<a href="#">023290</a>	CHK-EXBF-20	272	0.3 } 0.5	80	W/o sensor	
Runner chuck EX (Proximity sensor·detachable/attachable claw)	<a href="#">023292</a>	CHK-EXBF-20-C	287	Proximity sensor				
Runner chuck EX (Limit SW·detachable/attachable claw)	<a href="#">023294</a>	CHK-EXBF-20-C1	278	Limit switch				
E1 series (Steel-attachable and detachable type claw)	Runner chuck EX (Attachment/detachment claw)	<a href="#">023291</a>	CHK-EXF-20	40	—	—	W/o sensor	2-38
	Runner chuck EX (Proximity sensor·attachment/detachment claw)	<a href="#">023293</a>	CHK-EXF-20-C	54	—	—	Proximity sensor	
	Runner chuck EX (Limit SW·attachment/detachment claw)	<a href="#">023295</a>	CHK-EXF-20-C1	40	—	—	Limit switch	



Please refer to the web site for performance table.

Product name		Order code No.	TYPE	Weight (g)	Used air pressure (Mpa)	Grip (N)	Remarks	Page of Details		
Sensor switch for exchange	Proximity sensor Ass'y (E series)	023086	CHK-ESE	10	-	-	For ES	2-33		
		023087	CHK-EMLXE				For EM,EL,EX			
	Proximity sensor Ass'y (E1 series)	023014	CHK-E1SME	15			-	-	For ES1,EM1	2-35
		023015	CHK-E1LXE						For EL1,EX1,EL2L,EX2L	
	Limit switch Ass'y (E1 series)	023016	CHK-E1SW	7			-	-	For ES,EM,EL,EX,ES1,EM1,EL1,EX1,EL2L,EX2L	2-33, 35

Product name		Order code No.	TYPE	Weight (g)	Used air pressure (Mpa)	Torque (Nm)	Remarks	Page of Details
Runner module (w/o chuck)		171227	RM-08	111	0.3 } 0.5	-	For CHK-ES,ES1	2-39
		171228	RM-12	116			For CHK-EM,EM1,EL,EL2,EL2L	
		171229	RM-20	131			For CHK-EX,EX1,EX2L	
Runner chuck plate		022892	CHK-MCD01	396		19	MCD1-10/CP-014	
<b>NEW</b> Runner chuck buffer unit		023439	CHK-BU	294.3		-	For CHK-EM,EL	2-40
Tunnel gate runner chuck		090140	J25411-100	76	0.3 } 0.5	24	UMCD-10/CPUM-02	2-41
		090141	J25411-000	185			MCD1-10/CP-014	
Pipe combination chuck E • φ12 • 90 deg		090204	J25410-40A	29	0.3 } 0.5	0.03	BF-5 (Joint) attached	2-41
Pipe combination chuck D • φ20 • 90 deg		090264	J25410-30B	78				
90 degree flat A		131218	N01871-101	4.4	0.3 } 0.5	-	J25410-40A	2-41, 42
90 degree flat B		131479	N01871-102	10.4			J25410-30B MCE-HA	
<b>NEW</b> Pipe combination chuck • grip φ12		090262	J25410G-40	52	0.3 } 0.5	0.03	BF-5 (Joint) attached	2-41
<b>NEW</b> Pipe combination chuck • grip φ20		090263	J25410G-30	102				
Hinge cylinder		123711	MCE-HA	125		0.08	Double action type, speed control valve included.	2-42
Hinge chuck clamp unit Double action type		110688	L11540-000B	913		-	0 ~ 11.5(degree)	2-43
Hinge chuck suction stem		110567	L11540-109	7		-	-	

**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

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Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

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**Assembling Tools**








Tool / Jig

**Information**

Various Products Information












Please refer to the web site for performance table.

Product name		Order code No.	TYPE	Weight (g)	Used air pressure (Mpa)	Remarks	Page of Details	
Magnet chuck		<b>123218</b>	MGC-20	95	0.3 } 0.5	Double-act-type Cylinder		
Magnet chuck end rubber		<b>123571</b>	MGC-C	3		For MGC-20 end rubber		
Magnet chuck		<b>185352</b>	SSGM 40G1/4-IG	240	0.35 } 0.6	W/o sensor	<b>2-44</b>	
		<b>185358</b>	SSGM-S-40-G1/4-IG-NPN	260		W/ NPN output sensor		
		<b>185355</b>	SSGM-S-40-G1/4-IG-PNP			W/ PNP output sensor		
		<b>185353</b>	SSGM 50G1/4-IG	440		W/o sensor		
		<b>185359</b>	SSGM-S-50-G1/4-IG-NPN	460		W/ NPN output sensor		
		<b>185356</b>	SSGM-S-50-G1/4-IG-PNP			W/ PNP output sensor		
		<b>185354</b>	SSGM 70G1/4-IG	715		W/o sensor		
		<b>185360</b>	SSGM-S-70-G1/4-IG-NPN	735		W/ NPN output sensor		
		<b>185357</b>	SSGM-S-70-G1/4-IG-PNP			W/ PNP output sensor		
	Parallel chuck 5st (single)		<b>072172</b>	HC-5S		32		0.3 } 0.6
Parallel chuck 10st (single)	<b>072171</b>		HC-10S	70	10mm (stroke)			
Parallel chuck 10st (double)	<b>072170</b>		HC-10		20mm (stroke)			
<b>NEW</b> Parallel chuck 20st (single)	<b>073319</b>		HC-20S	288	20mm (stroke)			
<b>NEW</b> Parallel chuck 20st (double)	<b>073318</b>		HC-20	284				
With two-wire-type limit switch	Parallel chuck 5st (single)		<b>072702</b>	HC1-5S-C1	50	0.4 } 0.6	5mm (stroke)	
	Parallel chuck 10st (single)	<b>072703</b>	HC1-10S-C1	95	10mm (stroke)			
	Parallel chuck 10st (double)	<b>072705</b>	HC1-10-C1					
	Parallel chuck 20st (single)	<b>072704</b>	HC1-20S-C1	305	20mm (stroke)			
	Parallel chuck 20st (double)	<b>072706</b>	HC1-20-C1	300				
Claws	Claw · for parallel chuck		<b>023215</b>	CP-HC10N	9	-	For HC1-10, 10S	<b>2-47</b>
		<b>023216</b>	CP-HC20N	26	For HC1-20, 20S			





Please refer to the web site for performance table.

Product name		Order code No.	TYPE	Weight (g)	Used air pressure (Mpa)	Remarks	Page of Details		
Spacer	Spacer • for parallel chuck	 <b>023217</b>	CP-HC10S	1	-	For HC1-10, 10S	2-47		
		<b>023218</b>	CP-HC20S	2		For HC1-20, 20S			
Auto switch (reed SW)		 <b>030282</b>	D-A93	6	-	Reed Sw	2-42, 45, 46, 48		
Auto switch (contactless)		 <b>030425</b>	D-M9N	8		Contactless			
Limit switch Ass'y		 <b>072708</b>	HC1-SW1	10	-	For HC1-5S/10/10S Mounting bolt nut attached	2-46		
		<b>072709</b>	HC1-SW2			For HC1-20/20S Mounting bolt nut attached			
Parallel chuck 40st (double) * 2		 <b>282205</b>	2HC1-80	650	0.4 ~ 0.6	40mm x 2 (stroke)	2-48		
NEW Three claws chuck			<b>197258</b>	TCC-16	60	0.2 ~ 0.7	4mm (stroke)	2-45	
			<b>197259</b>	TCC-25	140		6mm (stroke)		
			<b>197260</b>	TCC-32	250		8mm (stroke)		
Parallel chuck (Single action type)	Standard type		<b>123401</b>	MHZ2-10S	55	-	4mm (stroke)	2-49	
	Narrow type		<b>122451</b>	MHZ2-10SN					
Parallel hand 15st (double)			<b>071996</b>	HLA-12AS	152	0.3 } 0.7	15mm (stroke)	2-50	
Parallel hand 20st (double)			<b>070986</b>	HLA-15AS	276		20mm (stroke)		
Parallel hand 25st (double)			<b>071997</b>	HLA-20AS	504		25mm (stroke)		
Parallel hand 15st w/ rubber cover			<b>071999</b>	HLAG-12AS	157		15mm (stroke)		
Parallel hand 20st w/ rubber cover		 <b>072000</b>	HLAG-15AS	281	20mm (stroke)				
Auto switch (contactless)		 <b>010633</b>	E16-M1	18	-	Contactless			
Needle gripper			<b>186255</b>	SNG-M-4-0.8	80	0.3 } 0.6	Diameter: 0.8mm	2-51	
			<b>186256</b>	SNG-AP-10-0.8-V-10	225		-		Diameter: 1.2mm
			<b>186257</b>	SNG-AP-10-1.2-V-10					
Needle piston set for exchange (4 pcs)		 <b>041925</b>	ERS-SET-SNG-M-0.8	12	-	For SNG-M-4-0.8			
Needle holder set for exchange (2 pcs)			<b>041926</b>	ERS-SET-SNG-AP/AE-0.8-10		6	For SNG-AP-10-0.8-V-10		
			<b>041927</b>	ERS-SET-SNG-AP/AE-1.2-10			For SNG-AP-10-1.2-V-10		

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

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Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

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Assembling Tools

Tool / Jig

Information

Various Products Information



# Runner Chuck E Series (Claw Superduralumin)

Lightweight, high rigidity, and long operating life with superduralumin.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym ø8 series).



CHK-ES-08-C

## Runner chuck ES w/o sensor

Order code No.	022879
TYPE	CHK-ES-08

- Weight: 18g ● Grip: 5N
- Joint pipe fitting BF-3 included

## Runner chuck ES With proximity sensor

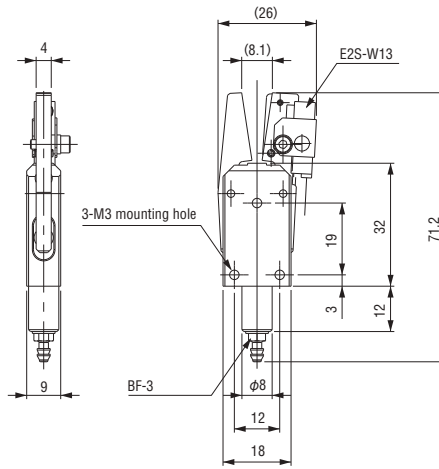
Order code No.	022883
TYPE	CHK-ES-08-C

- Weight: 32g ● Grip: 5N
- Joint pipe fitting BF-3 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

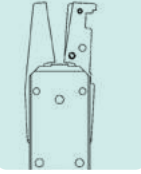
## Runner chuck ES With Limit SW

Order code No.	023456
TYPE	CHK-ES-08-C1

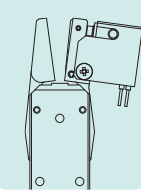
- Weight: 25g ● Grip: 5N
- Joint pipe fitting BF-3 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



W/o sensor



With Limit SW



▶ Attach with tapped hole or Eins connector parts (Jungle Gym ø12 series).



CHK-EM-12-C

## Runner chuck EM w/o sensor

Order code No.	022878
TYPE	CHK-EM-12

- Weight: 46g ● Grip: 28N
- Joint pipe fitting BF-5 included

## Runner chuck EM With proximity sensor

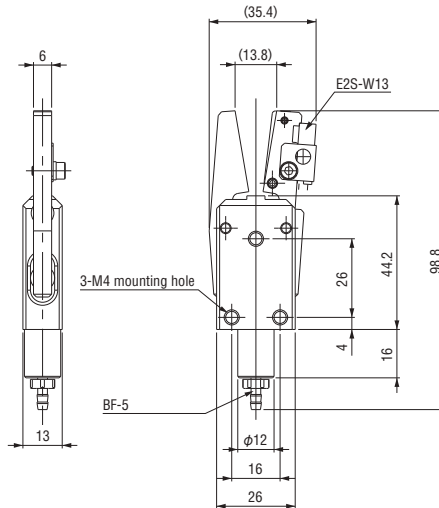
Order code No.	022882
TYPE	CHK-EM-12-C

- Weight: 56g ● Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

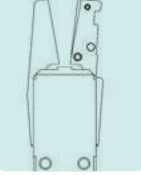
## Runner chuck EM With Limit SW

Order code No.	023457
TYPE	CHK-EM-12-C1

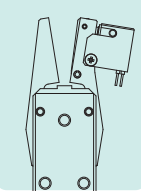
- Weight: 53g ● Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



W/o sensor



With Limit SW



▶ Attach with tapped hole or Eins connector parts (Jungle Gym ø12 series).



CHK-EL-12-C

## Runner chuck EL w/o sensor

Order code No.	022877
TYPE	CHK-EL-12

- Weight: 94g ● Grip: 45N
- Joint pipe fitting BF-5 included

## Runner chuck EL With proximity sensor

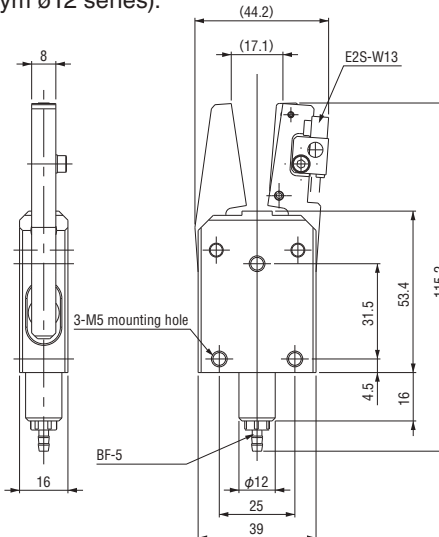
Order code No.	022881
TYPE	CHK-EL-12-C

- Weight: 104g ● Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

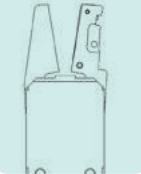
## Runner chuck EL With Limit SW

Order code No.	023458
TYPE	CHK-EL-12-C1

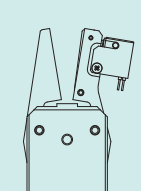
- Weight: 102g ● Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



W/o sensor



With Limit SW



▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  20 series).



### Runner chuck EX w/o sensor

Order code No.	<b>022876</b>
TYPE	<b>CHK-EX-20</b>

- Weight: 180g
- Grip: 80N
- Joint pipe fitting BF-6 included

### Runner chuck EX With proximity sensor

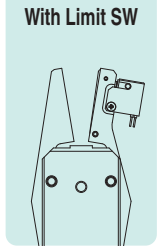
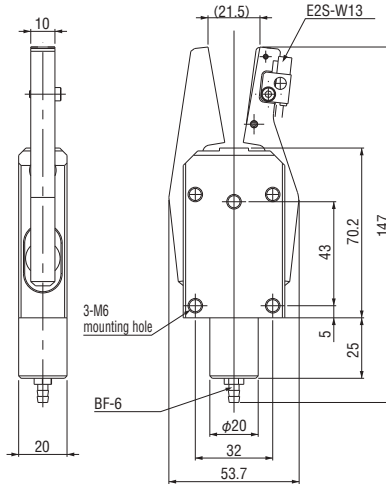
Order code No.	<b>022880</b>
TYPE	<b>CHK-EX-20-C</b>

- Weight: 190g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

### Runner chuck With Limit SW

Order code No.	<b>023459</b>
TYPE	<b>CHK-EX-20-C1</b>

- Weight: 191g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



### Proximity sensor Ass'y

Order code No.	<b>023086</b>
TYPE	<b>CHK-ESE</b>

- Weight: 10g
- NPN Output
- For: for ES (Installation to E1 series is impossible).
- Set Includes: proximity sensor, mounting bracket, spring, mounting bolts
- Terminal process is not made.
- Harness length: 1,000mm



### Specifications of sensor section

TYPE	E2S-W13
Power supply voltage	DC12 - 24V
Current consumption	13mA or less
Control output	NPN
Lead wire	1M brown (+V) black (output) blue (0V)
Others	Indicator light

### Proximity sensor Ass'y

Order code No.	<b>023087</b>
TYPE	<b>CHK-EMLXE</b>

- Weight: 10g
- NPN Output
- For: for EM/EL/EX (Installation to E1 series is impossible).
- Set Includes: proximity sensor, mounting bracket, spring, mounting bolts
- Terminal process is not made.
- Harness length: 1,000mm



### Limit switch ass'y

Order code No.	<b>023016</b>
TYPE	<b>CHK-E1SW</b>

- Weight: 7g
- For: E1 series (ES1/EM1/EL1/EX1/EL2L/EX2L) E series (ES/EM/EL/EX)
- Set Includes: proximity sensor, mounting bracket, mounting bolts
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



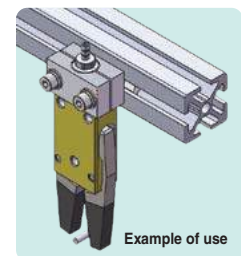
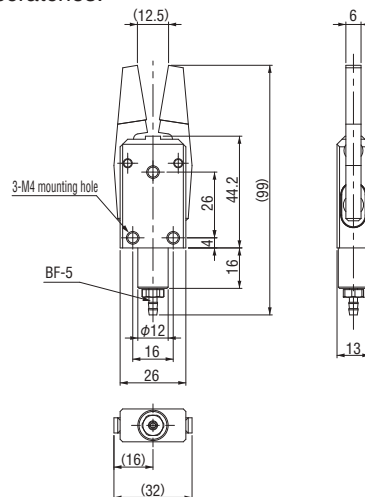
▶ A rubber cap is affixed to the head of the runner chuck. This feature serves to prevent both the runner and the product from slipping, as well as to protect the product from scratches.



### Runner chuck EMR (w/o sensor)

Order code No.	<b>023440</b>
TYPE	<b>CHK-EMR-12</b>

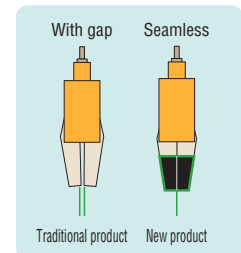
- Weight: 44g
- Grip: 28N
- Joint pipe fitting BF-5 included
- The sensor cannot be installed.



### Claw Cap

Order code No.	<b>023443</b>
TYPE	<b>CHK-EMR-CPE</b>

- Weight: 0.6g
- Material: Ethylene Propylene Rubber (EPDM)
- For CHK-EMR-12



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

#### Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information



# Runner Chuck E1 Series (Steel Type)

Higher wear resistance steel claws.

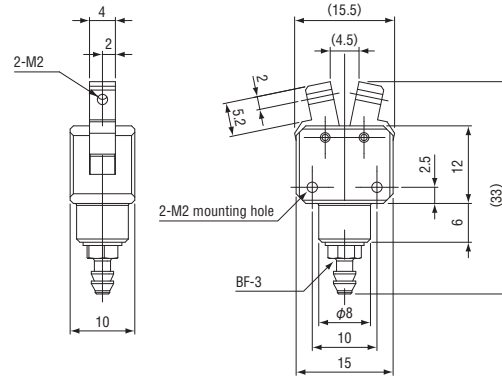
▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  8 series).

## Runner chuck EN w/o sensor



Order code No.	<b>022991</b>
TYPE	<b>CHK-EN1-06</b>

- Weight: 10g
- Grip: 2N
- Joint pipe fitting BF-3 included
- Sensor cannot be retrofitted.



▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  8 series).

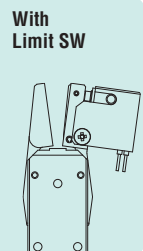
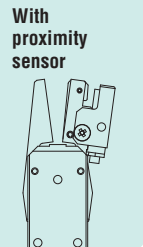
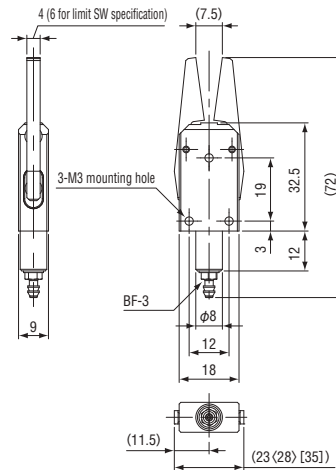
## Runner chuck ES w/o sensor



CHK-ES1-08

Order code No.	<b>022992</b>
TYPE	<b>CHK-ES1-08</b>

- Weight: 22g
- Grip: 5N
- Joint pipe fitting BF-3 included
- Sensor cannot be retrofitted.



## Runner chuck ES With proximity sensor

Order code No.	<b>022998</b>
TYPE	<b>CHK-ES1-08-C</b>

- Weight: 38g
- Grip: 5N
- Joint pipe fitting BF-3 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

## Runner chuck ES With Limit SW

Order code No.	<b>023004</b>
TYPE	<b>CHK-ES1-08-C1</b>

- Weight: 33g
- Grip: 5N
- Joint pipe fitting BF-3 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm

\* Base drawing: CHK-ES1-08  
 \* Dimension < >: CHK-ES1-08-C The dimension includes the size of the proximity switch.  
 \* Dimension [ ]: CHK-ES1-08-C1 The dimension includes the size of the proximity switch.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  12 series).

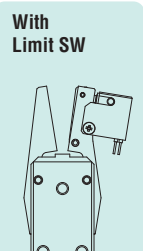
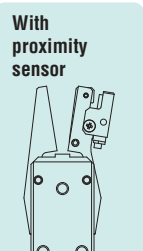
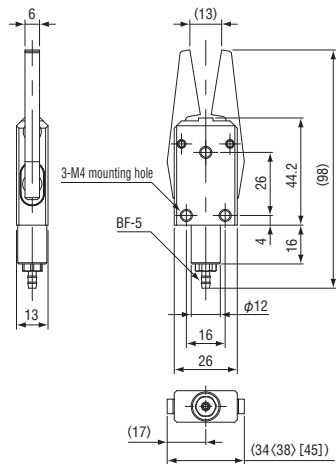
## Runner chuck EM w/o sensor



CHK-EM1-12

Order code No.	<b>022993</b>
TYPE	<b>CHK-EM1-12</b>

- Weight: 67g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.



## Runner chuck EM With proximity sensor

Order code No.	<b>022999</b>
TYPE	<b>CHK-EM1-12-C</b>

- Weight: 79g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

## Runner chuck EM With Limit SW

Order code No.	<b>023005</b>
TYPE	<b>CHK-EM1-12-C1</b>

- Weight: 73g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm

\* Base drawing: CHK-EM1-12  
 \* Dimension < >: CHK-EM1-12-C The dimension includes the size of the proximity switch.  
 \* Dimension [ ]: CHK-EM1-12-C1 The dimension includes the size of the proximity switch.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  12 series).



CHK-EL1-12

### Runner chuck EL w/o sensor

Order code No.	<b>022994</b>
TYPE	<b>CHK-EL1-12</b>

- Weight: 143g ● Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

### Runner chuck EL With proximity sensor

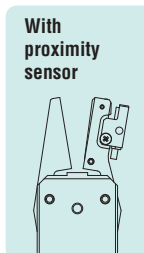
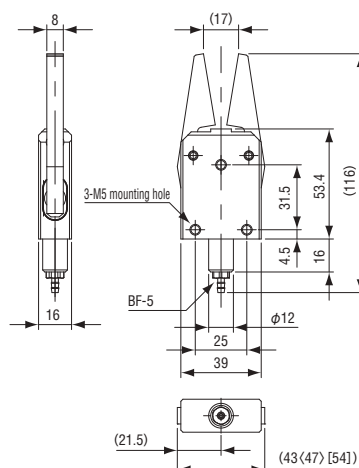
Order code No.	<b>023000</b>
TYPE	<b>CHK-EL1-12-C</b>

- Weight: 155g ● Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

### Runner chuck EL With Limit SW

Order code No.	<b>023006</b>
TYPE	<b>CHK-EL1-12-C1</b>

- Weight: 145g ● Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



\* Base drawing: CHK-EL1-12  
 \* Dimension < >: CHK-EL1-12-C The dimension includes the size of the proximity switch.  
 \* Dimension [ ]: CHK-EL1-12-C1 The dimension includes the size of the proximity switch.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  20 series).



CHK-EX1-20

### Runner chuck EX w/o sensor

Order code No.	<b>022995</b>
TYPE	<b>CHK-EX1-20</b>

- Weight: 280g ● Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor cannot be retrofitted.

### Runner chuck EX With proximity sensor

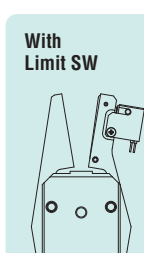
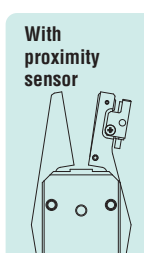
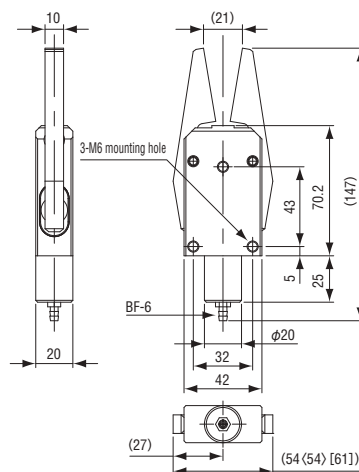
Order code No.	<b>023001</b>
TYPE	<b>CHK-EX1-20-C</b>

- Weight: 283g ● Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

### Runner chuck EX With Limit SW

Order code No.	<b>023007</b>
TYPE	<b>CHK-EX1-20-C1</b>

- Weight: 272g ● Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



\* Base drawing: CHK-EX1-20  
 \* Dimension < >: CHK-EX1-20-C The dimension includes the size of the proximity switch.  
 \* Dimension [ ]: CHK-EX1-20-C1 The dimension includes the size of the proximity switch.



### Proximity sensor Ass'y

Order code No.	<b>023014</b>
TYPE	<b>CHK-E1SME</b>

- Weight: 15g ● NPN output
- For: ES1/EM1 (Installation to E series is impossible).
- Set Includes: proximity sensor, mounting bracket, mounting bolts
- Terminal process is not made.
- Harness length: 1,000mm



### Proximity sensor Ass'y

Order code No.	<b>023015</b>
TYPE	<b>CHK-E1LXE</b>

- Weight: 15g ● NPN output
- For: EL1/EX1/EL2L/EX2L (Installation to E series is impossible).
- Set Includes: proximity sensor, mounting bracket, mounting bolts
- Terminal process is not made.
- Harness length: 1,000mm



### Limit switch Ass'y

Order code No.	<b>023016</b>
TYPE	<b>CHK-E1SW</b>

- Weight: 7g
- For: E1 series (ES1/EM1/EL1/EX1/EL2L/EX2L) E series (ES/EM/EL/EX)
- Set Includes: proximity sensor, mounting bracket, mounting bolts
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm

#### Quick Chuck Change

Quick Chuck  
Change Manual

Quick Chuck  
Change Manual  
(OM Type)

Tool  
Changer

Automated  
Hand Exchange  
System

#### Grip

Mini  
Cylinder

Accessories  
for Mini  
Cylinder

Container  
Cylinders

Accessories  
for Container  
Cylinder

#### Grippers

Rubber  
Material /  
Grip Pad

#### Section

Suction  
Cups

Suction  
Stems

Pad in Pad

Vacuum  
Gripper

Air Ejector /  
Filter /  
Check Valve

Ultra  
Small Part  
Take Out

Vacuum  
Generator  
Unit

#### Cut

Air Nipper  
(Small-Medium)

Air Nipper  
(Large)

#### Frame / Module

Jungle  
Gym

Let's Joint

Rectangular  
Tube

Base  
Aluminum  
Material

Sliding  
Chuck

#### Pneumatic Components / Sensors

Pneumatic  
Components

Sensors /  
Multi AND  
Board

PCIO  
Communication  
Unit

#### Lightweight Parts Series

Frame / Section /  
Resin Cylinders / Pads /  
Resin Manifolds

#### By Industry

Logistics - Palletizing/  
Sheet Metal - Stamping-  
Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products  
Information





# Runner Chuck E1 Series (Steel L Claw Type)

Higher wear resistance steel claws.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  12 series).



CHK-EL1L-12

## Runner chuck EL w/o sensor

Order code No.	<b>022996</b>
TYPE	<b>CHK-EL1L-12</b>

- Weight: 170g
- Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

## Runner chuck EL With proximity sensor

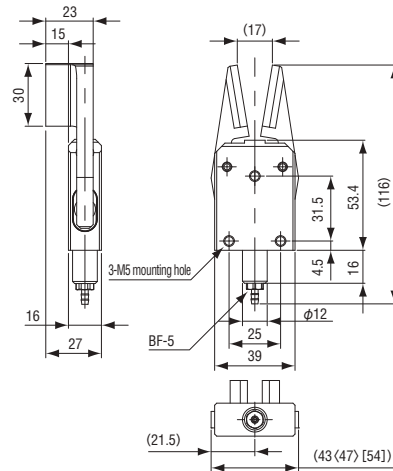
Order code No.	<b>023160</b>
TYPE	<b>CHK-EL2L-12-C</b>

- Weight: 196g
- Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

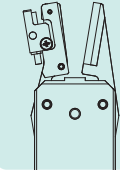
## Runner chuck EL With Limit SW

Order code No.	<b>023161</b>
TYPE	<b>CHK-EL2L-12-C1</b>

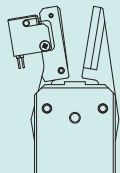
- Weight: 186g
- Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor: direct current, two-wire system.
- Sensor mounting position was changed.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



With proximity sensor



With Limit SW



\* Base drawing: CHK-EL1L-12

\* Dimension < >: CHK-EL2L-12-C The dimension includes the size of the proximity switch.

\* Dimension [ ]: CHK-EL2L-12-C1 The dimension includes the size of the proximity switch.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  20 series).



CHK-EX1L-20

## Runner chuck EX w/o sensor

Order code No.	<b>022997</b>
TYPE	<b>CHK-EX1L-20</b>

- Weight: 305g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor cannot be retrofitted.

## Runner chuck EX With proximity sensor

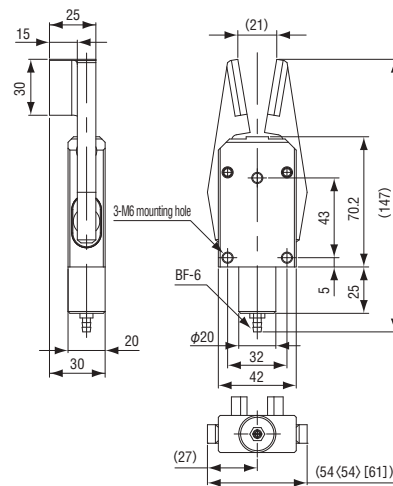
Order code No.	<b>023158</b>
TYPE	<b>CHK-EX2L-20-C</b>

- Weight: 335g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

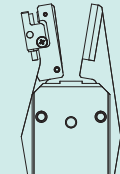
## Runner chuck EX With Limit SW

Order code No.	<b>023159</b>
TYPE	<b>CHK-EX2L-20-C1</b>

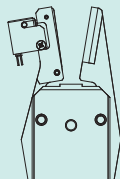
- Weight: 325g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, two-wire system.
- Sensor mounting position was changed.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



With proximity sensor



With Limit SW



\* Base drawing: CHK-EX1L-20

\* Dimension < >: CHK-EX2L-20-C The dimension includes the size of the proximity switch.

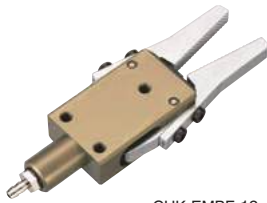
\* Dimension [ ]: CHK-EX2L-20-C1 The dimension includes the size of the proximity switch.



# Runner Chuck E1 Series (Detachable / Attachable Claw)

Chuck claw exchange type newly added to product lineup.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  12 series).



CHK-EMBF-12

## Runner chuck EM (Detachable/attachable claw)

Order code No.	<b>023284</b>
TYPE	<b>CHK-EMBF-12</b>

- Weight: 70g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

## Runner chuck EM (Proximity sensor·detachable/ attachable claw)

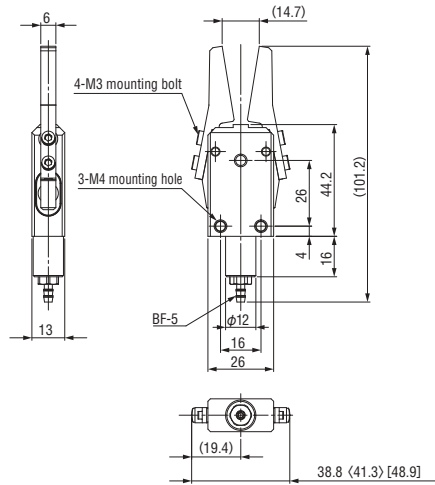
Order code No.	<b>023286</b>
TYPE	<b>CHK-EMBF-12-C</b>

- Weight: 85g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

## Runner chuck EM (Limit SW·detachable/ attachable claw)

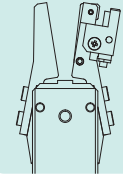
Order code No.	<b>023288</b>
TYPE	<b>CHK-EMBF-12-C1</b>

- Weight: 77g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm

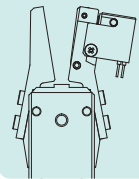


\* Base drawing: CHK-EMBF-12  
 \* Dimension < >: CHK-EMBF-12-C The dimension includes the size of the proximity switch.  
 \* Dimension [ ]: CHK-EMBF-12-C1 The dimension includes the size of the proximity switch.

With  
proximity  
sensor



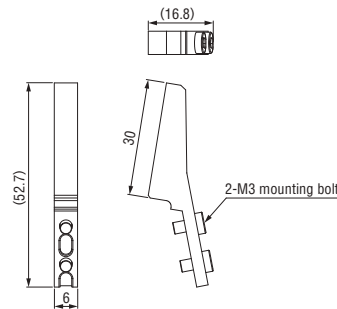
With  
Limit SW



## Runner chuck EM (Attachment/ detachment claw)

Order code No.	<b>023285</b>
TYPE	<b>CHK-EMF-12</b>

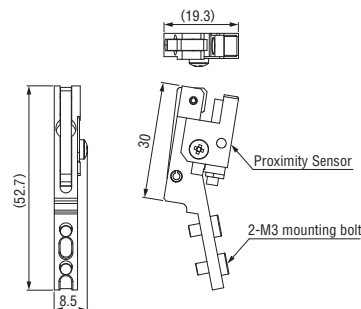
- Weight: 12g
- Sensor cannot be retrofitted.



## Runner chuck EM (Proximity sensor·attachment/ detachment claw)

Order code No.	<b>023287</b>
TYPE	<b>CHK-EMF-12-C</b>

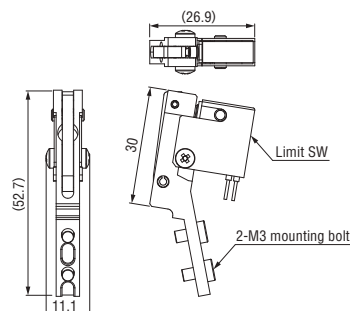
- Weight: 27g
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm
- Sensor Ass'y → See (2-35)
- (Sensor: CHK-E1SME)



## Runner chuck EM (Limit SW·attachment/ detachment claw)

Order code No.	<b>023289</b>
TYPE	<b>CHK-EMF-12-C1</b>

- Weight: 20g
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm
- Sensor Ass'y → See (2-35)
- (Sensor: CHK-E1SW)



### Quick Chuck Change

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

### Grip

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder

### Grippers

- Rubber Material / Grip Pad

### Suction

- Suction Cups
- Suction Stems
- Pad in Pad

- Vacuum Gripper

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

### Cut

- Air Nipper (Small-Medium)
- Air Nipper (Large)

### Frame / Module

- Jungle Gym
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

### Pneumatic Components / Sensors

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

### Lightweight Parts Series

- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

- Logistics - Palletizing
- Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

- Tool / Jig

### Information

- Various Products Information

# Runner Chuck E1 Series (Detachable / Attachable Claw)

▶ Attach with tapped hole or Eins connector parts (Jungle Gym  $\phi$  20 series).



CHK-EXBF-20

## Runner chuck EX (Detachable/attachable claw)

Order code No.	023290
TYPE	CHK-EXBF-20

- Weight: 272g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor cannot be retrofitted.

## Runner chuck EX (Proximity sensor·detachable/ attachable claw)

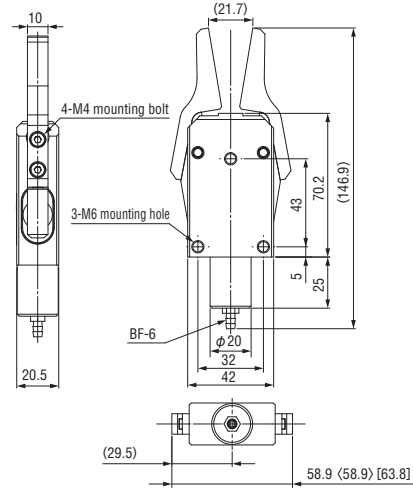
Order code No.	023292
TYPE	CHK-EXBF-20-C

- Weight: 287g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

## Runner chuck EX (Limit SW·detachable/ attachable claw)

Order code No.	023294
TYPE	CHK-EXBF-20-C1

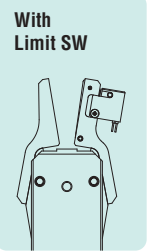
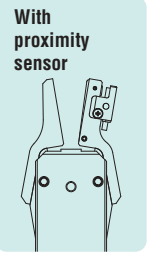
- Weight: 278g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm



\* Base drawing: CHK-EXBF-20

\* Dimension < >: CHK-EXBF-20-C The dimension includes the size of the proximity switch.

\* Dimension [ ]: CHK-EXBF-20-C1 The dimension includes the size of the proximity switch.



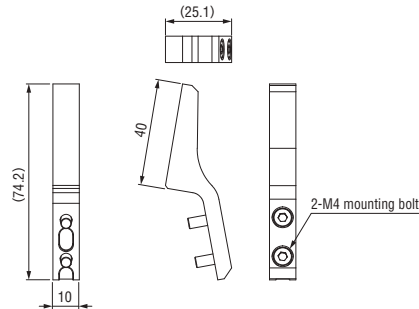
▶ Claw Ass'y with attachable and detachable claw.



## Runner chuck EX (Attachment/ detachment claw)

Order code No.	023291
TYPE	CHK-EXF-20

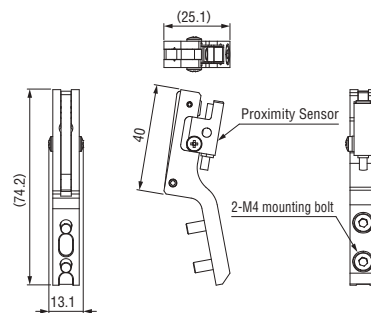
- Weight: 40g
- Sensor cannot be retrofitted.



## Runner chuck EX (Proximity sensor·attachment/ detachment claw)

Order code No.	023293
TYPE	CHK-EXF-20-C

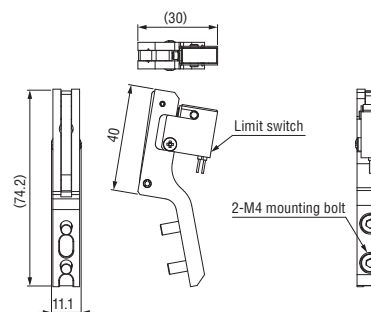
- Weight: 54g
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm
- Sensor Ass'y → See (2-35)
- (sensor : CHK-E1LXE)



## Runner chuck EX (Limit SW·attachment/ detachment claw)

Order code No.	023295
TYPE	CHK-EXF-20-C1

- Weight: 40g
- Sensor: direct current, two-wire system.
- Rated current: 1mA 5VAC to 100mA 30VDC
- Terminal process is not made.
- Harness length: 300mm
- Sensor Ass'y → See (2-35)
- (sensor : CHK-E1SW)





# Runner Module / Runner Chuck Plate

Runner chuck unit directly detachable to the robot arm.

▶ Module unit with runner chuck.



## Runner module w/o chuck

Order code No.	171227
TYPE	RM-08

- Runner chuck is sold separately.
- Runner chuck mounting bracket: Slide bracket Wφ8
- Weight: 111g

Applicable chuck	CHK-ES/ES1 Type
------------------	-----------------



## Runner module w/o chuck

Order code No.	171228
TYPE	RM-12

- Runner chuck is sold separately.
- Runner chuck mounting bracket: Slide bracket Wφ12
- Weight: 116g

Applicable chuck	CHK-EM/EM1/EL/EL1/EL2L/EMBF Type
------------------	----------------------------------



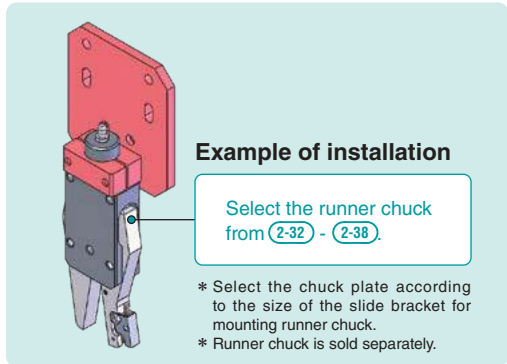
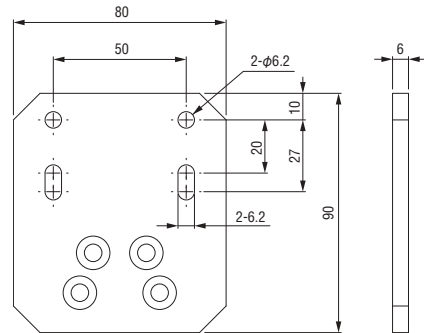
## Runner module w/o chuck

Order code No.	171229
TYPE	RM-20

- Runner chuck is sold separately.
- Runner chuck mounting bracket: Slide bracket Wφ20
- Weight: 131g

Applicable chuck	CHK-EX/EX1/EX2L/EXBF Type
------------------	---------------------------

## Three-point common plate



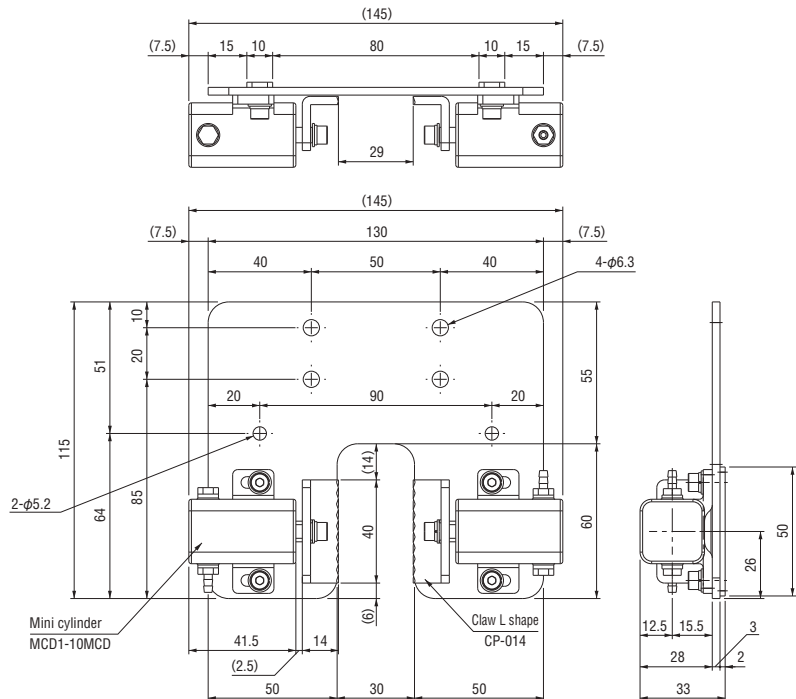
▶ Runner chuck which grips runners with mini cylinders.



## Runner chuck plate

Order code No.	022892
TYPE	CHK-MCD01

- Weight: 396g
- Joint pipe fitting BF-5 included



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Runner Chuck Buffer Unit / Tunnel Gate Runner Chuck

Perfect for gripping the runner of tunnel gate type.

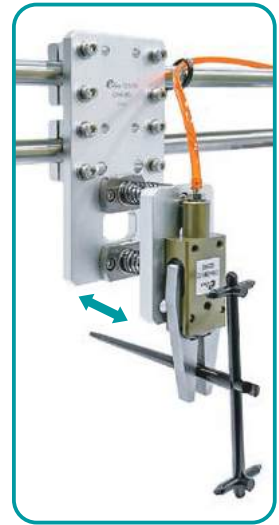
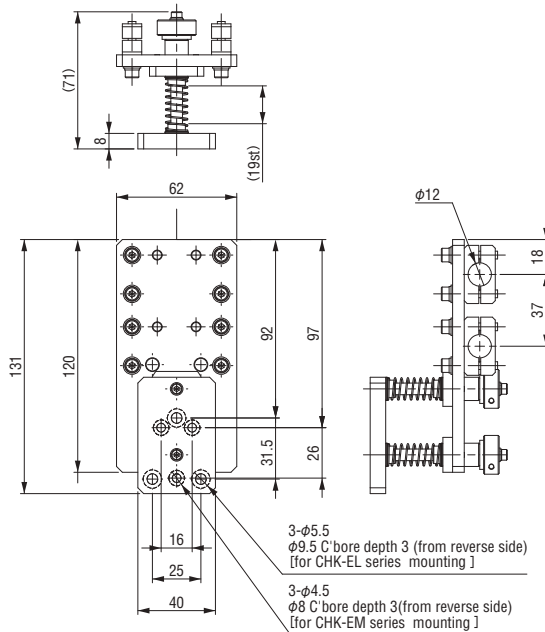
▶ The specific protruding ejector of tunnel gate is absorbed by buffer.



## Runner chuck buffer unit

Order code No.	<b>023439</b>
TYPE	<b>CHK-BU</b>

- Weight: 294.3g
- Runner chuck is sold separately. For CHK-EM or ELType.
- Buffer stroke: 19st (MAX)
- For Jungle Gym  $\phi 12$
- When using the runner chuck EL type, please replace the mounting plate.



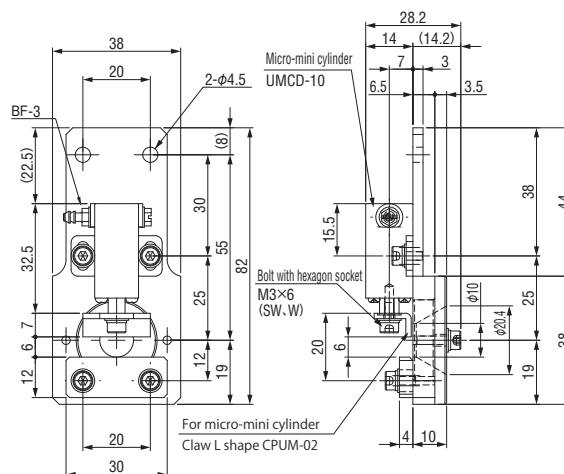
▶ Jumping tunnel gate is caught with tapered section.



## Tunnel gate runner chuck

Order code No.	<b>090140</b>
TYPE	<b>J25411-100</b>

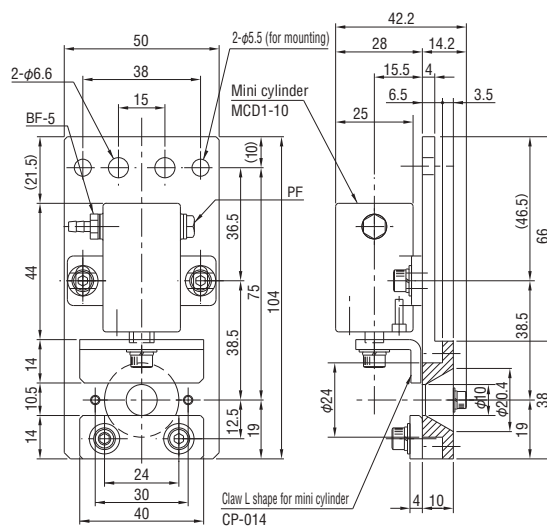
- Weight: 76g
- Use Micro-mini cylinder



## Tunnel gate runner chuck

Order code No.	<b>090141</b>
TYPE	<b>J25411-000</b>

- Weight: 185g
- Use mini cylinder







# Pipe Combination Chuck / Pipe Combination Chuck · Grip

Special cylinder of hinge structure which operates 90 degrees. Connection to jungle gym is possible.

► High-strength specification of link section

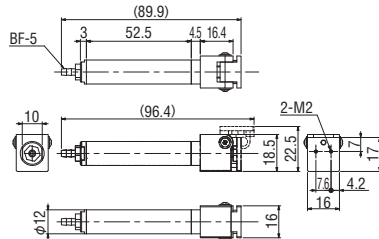
► Option



## Pipe combination chuck E- φ12 · 90 deg

Order code No.	<b>090204</b>
TYPE	<b>J25410-40A</b>

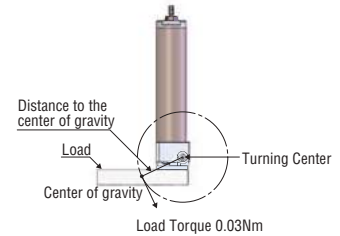
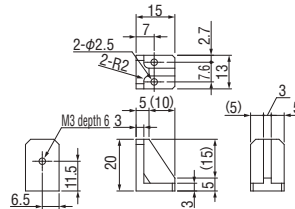
- Weight: 29g
- Joint pipe fitting BF-5 included
- Torque: 0.03Nm
- Structure : Single Action Type



## 90 degree flat A

Order code No.	<b>131218</b>
TYPE	<b>N01871-101</b>

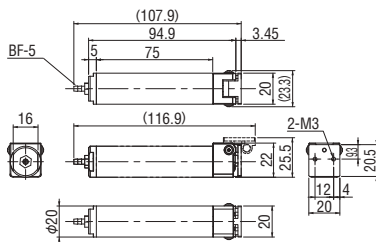
- Weight: 4.4g



## Pipe combination chuck D- φ20 · 90 deg

Order code No.	<b>090264</b>
TYPE	<b>J25410-30B</b>

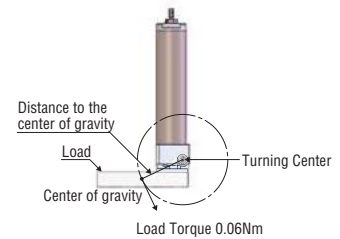
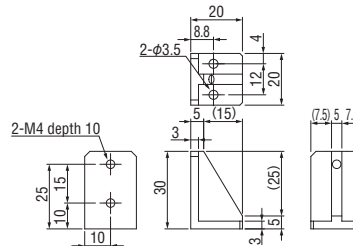
- Weight: 78g
- Joint pipe fitting BF-5 included
- Torque: 0.06Nm
- Structure : Single Action Type



## 90 degree flat B

Order code No.	<b>131479</b>
TYPE	<b>N01871-102</b>

- Weight: 10.4g



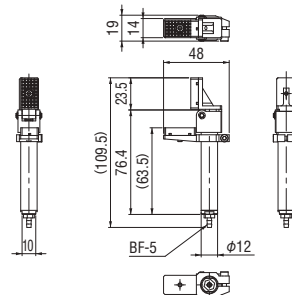
► The pipe combination chuck and holding bracket enable gripping of the product by hinge action.



## Pipe combination chuck · grip φ12

Order code No.	<b>090262</b>
TYPE	<b>J25410G-40</b>

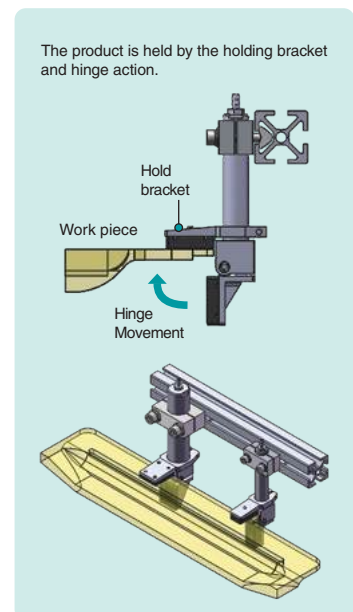
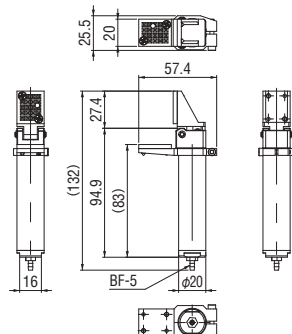
- Structure : Single Action Type
- Weight: 52g
- Gripping force: 0.03Nm
- Joint pipe fitting BF-5 included
- Position of holding bracket is adjustable



## Pipe combination chuck · grip φ20

Order code No.	<b>090263</b>
TYPE	<b>J25410G-30</b>

- Structure : Single Action Type
- Weight: 102g
- Gripping force: 0.06Nm
- Joint pipe fitting BF-5 included
- Position of holding bracket is adjustable



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Hinge Cylinder

Special cylinder of hinge structure which operates 90 degrees.

Hinge cylinder



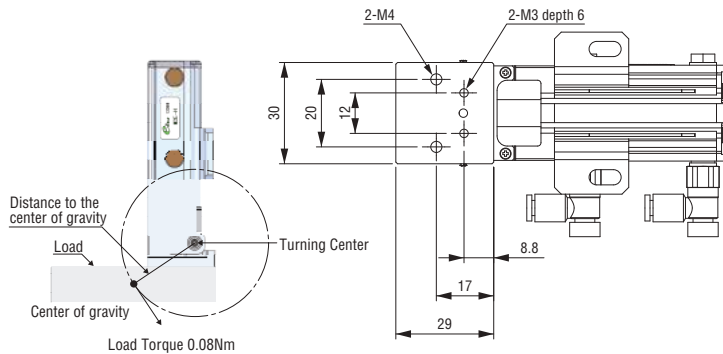
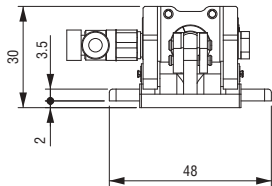
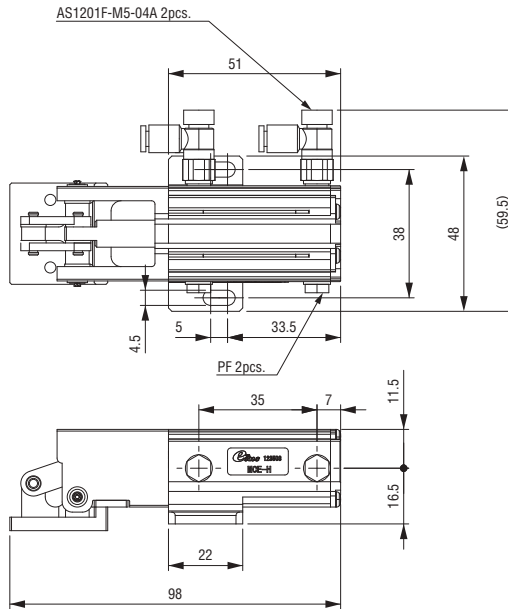
You can see moving images of products by using QR code reader of your smartphone.



## ▶ Double action type

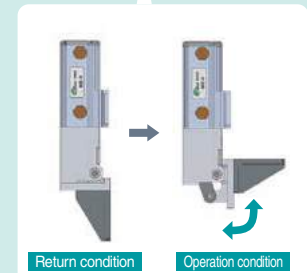
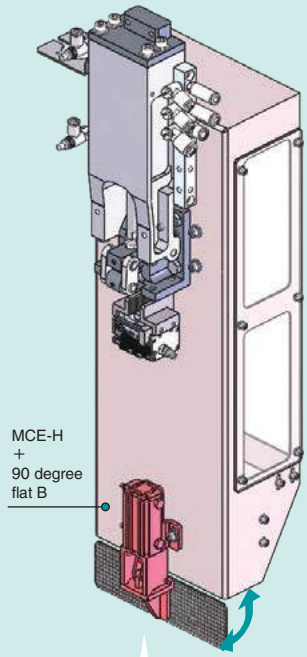
Order code No.	<b>123711</b>
TYPE	<b>MCE-HA</b>

- Weight: 125g
- With Flow controller (AS1201F-M5-04A)
- Torque: 0.08Nm
- Auto switch can be attached



## Example of use

[Used to open/close the bottom plate of BOX chuck.]



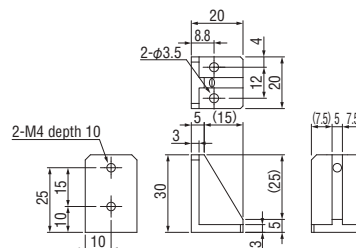
Grip ● Grippers



## 90 degree flat B

Order code No.	<b>131479</b>
TYPE	<b>N01871-102</b>

- Weight: 10.4g



## Auto switch (reed SW)

Order code No.	<b>030282</b>
TYPE	<b>D-A93</b>

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Lead wire: 0.5M OUT (+) brown OUT (-) blue
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m



## Auto switch (contactless)

Order code No.	<b>030425</b>
TYPE	<b>D-M9N</b>

- Weight: 8g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: -40mA or lower
- Lead wire: 0.5m brown (+) blue (-)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m





# Hinge Chuck Clamp Unit (Double Action)

Best for extracting large parts.

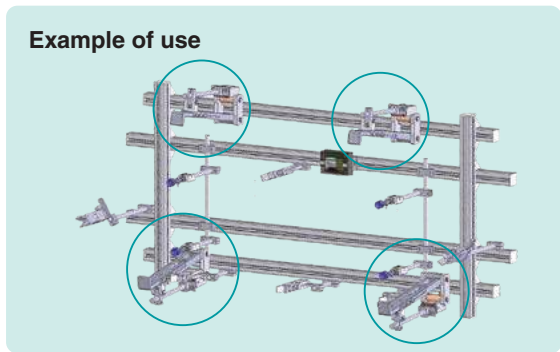
- ▶ Double action type hinge chuck consist with mini container cylinder.
- ▶ Best solution for large parts extraction like automobile bumper or instrument panel, etc.



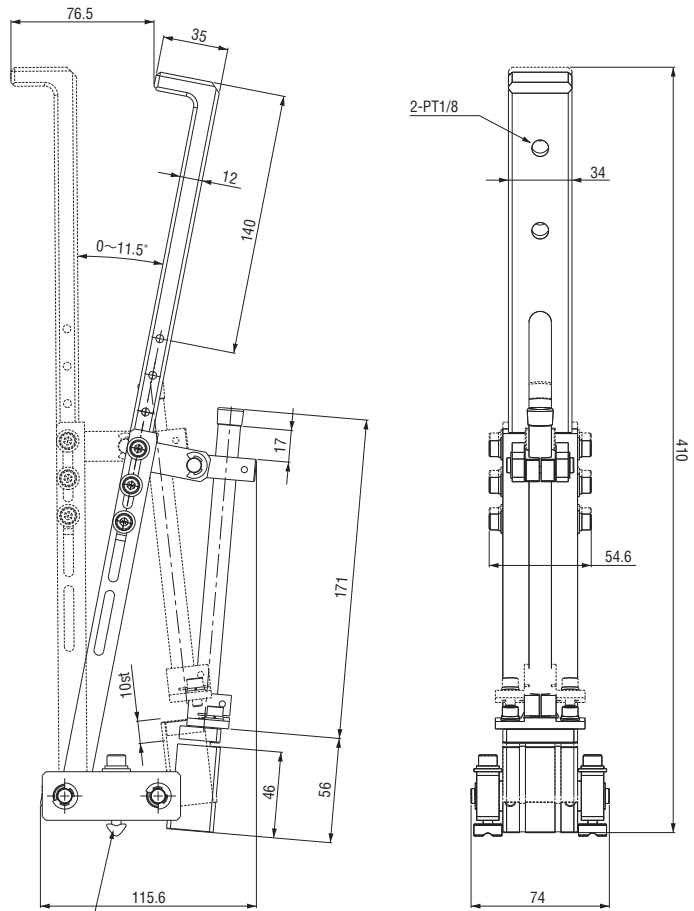
## Hinge chuck • clamp unit

Order code No.	<b>110688</b>
TYPE	<b>L11540-000B</b>

- Weight: 913g
- Pipe joint is sold separately. → See [6-5,6,7](#)



Example of use



2-M6 mounting nut  
(Example of assembly, the bolt and nut aren't included)

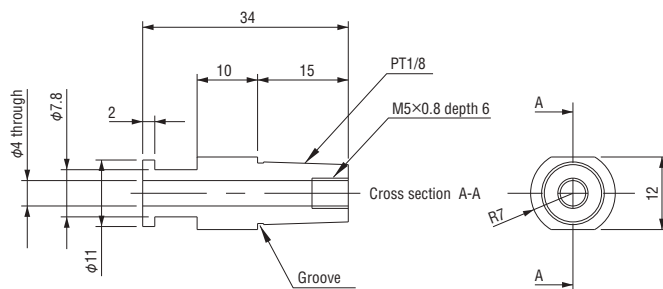
- ▶ Suction cup small series can be mounted.



## Hinge chuck • suction stem

Order code No.	<b>110567</b>
TYPE	<b>L11540-109</b>

- Weight: 7g



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

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Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

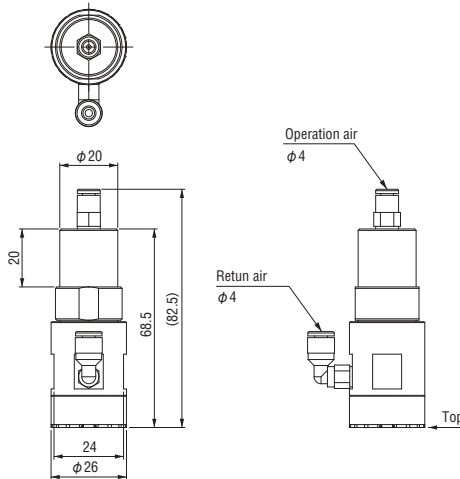
Various Products Information



# Magnet Chucks

Neodymium magnet is embedded in the chuck parts.

- ▶ Powerful holding force with the magnet.
- ▶ Lightweight with compact design
- ▶ Jungle gym with  $\phi 20$  series
- ▶ Using with magnet to transfer steel parts.



Magnet chucks



You can see moving images of products by using QR code reader of your smartphone.



Example of use for a steel plate transport chuck

## Magnet chuck

Order code No.	123218
TYPE	MGC-20

- Double-act-type cylinder
- Weight: 95g
- Joint pipe fitting KQ2L04-M5N included

## Magnet chuck end rubber



Order code No.	123571
TYPE	MGC-C

- Weight: 3g
- Material: urethane rubber

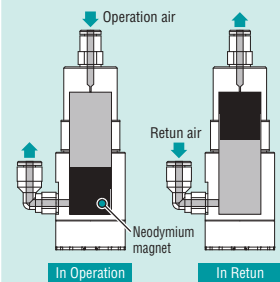


## Specification

TYPE	MGC-20
Mechanism	Double Action Type
Air pressure	0.39 ~ 0.49Mpa
Holding force	25N
Residual magnet*	0.01N Max.

\* Indicates the residual magnet at the top in return operation.

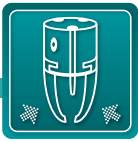
## Operation image



- ▶ Strong holding of uneven / perforated steel plate with permanent magnet!
- Product with sensor to detect magnet position is also available.

Holding force	100N	180N	290N
Magnet chuck			
Drawing			
W/o sensor	Order code No.	185352	185353
	TYPE	SSGM 40G 1/4-IG	SSGM 50G 1/4-IG
	Weight	240g	440g
W/NPN output sensor	Order code No.	185358	185359
	TYPE	SSGM-S-40-G1/4-IG-NPN	SSGM-S-50-G1/4-IG-NPN
	Weight	260g	460g
W/PNP output sensor	Order code No.	185355	185356
	TYPE	SSGM-S-40-G1/4-IG-PNP	SSGM-S-50-G1/4-IG-PNP
	Weight	260g	460g
W/290N	Order code No.	185354	185360
	TYPE	SSGM 70G 1/4-IG	SSGM-S-70-G1/4-IG-NPN
	Weight	715g	735g
W/290N	Order code No.	185355	185357
	TYPE	SSGM-S-40-G1/4-IG-PNP	SSGM-S-70-G1/4-IG-PNP
	Weight	260g	735g

● Material of non-slip ring : Polyurethane PU ● Pipe joint is sold separately. → See 6-5,6,7



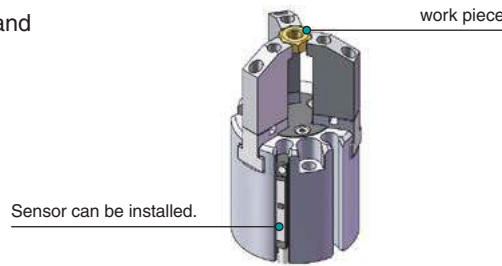
# Three Claws Chuck (Double Action Type)

Perfect for gripping the work piece of cylindrical shape.

- ▶ It balances well at cylinder center, and grips the work piece accurately.

Accuracy of movement

±0.01mm



TCC-16 / TCC-25 / TCC-32



Use in gantry chuck

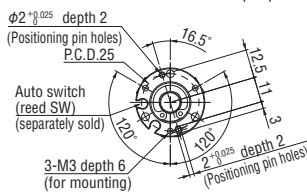
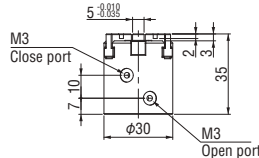
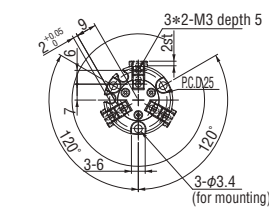
NEW



## Three Claws Chuck

Order code No.	197258
TYPE	TCC-16

- Stroke: 4mm
- Weight: 60g
- Structure: Double Action Type
- Pipe joint is sold separately. → See (6-5,6,7)
- Auto switch can be attached



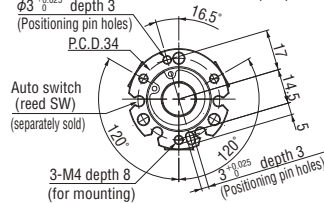
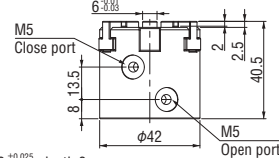
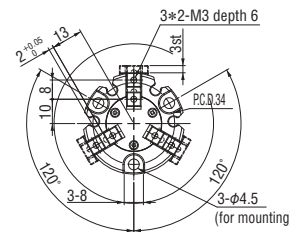
NEW



## Three Claws Chuck

Order code No.	197259
TYPE	TCC-25

- Stroke: 6mm
- Weight: 140g
- Structure: Double Action Type
- Pipe joint is sold separately. → See (6-5,6,7)
- Auto switch can be attached



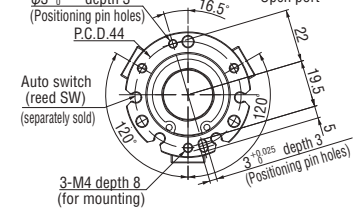
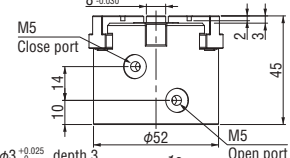
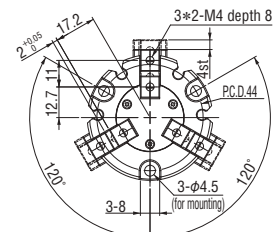
NEW



## Three Claws Chuck

Order code No.	197260
TYPE	TCC-32

- Stroke: 8mm
- Weight: 250g
- Structure: Double Action Type
- Pipe joint is sold separately. → See (6-5,6,7)
- Auto switch can be attached



## Specification

Product name	TYPE	Used air pressure (MPa)	Motion stroke (mm)	Cylinder diameter (mm)	Gripping force of outside diameter (<0.5MPa) (N)	Gripping force of inner diameter (<0.5MPa) (N)
Three claws chuck	TCC-16	0.2 ~ 0.7	4	16	14	16
	TCC-25		6	25	42	47
	TCC-32		8	32	74	82

### Auto switch (reed SW)



Order code No.	030282
TYPE	D-A93

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Lead wire: 0.5M OUT brown OUT (+) blue (-)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m

### Auto switch (contactless)



Order code No.	030425
TYPE	D-M9N

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 40mA or lower
- Lead wire: 0.5M+V (brown), Load (black), OV(blue)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m

### Auto switch (contactless)



Order code No.	030500
TYPE	D-F8N

- Weight: 7g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 40mA or lower
- Lead wire: 0.5M+V (brown), Load (black), OV(blue)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

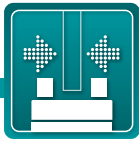
Assembling Tools

Tool / Jig

Information

Various Products Information





# Parallel Chucks (Single Action / Double Action)

Compact design with low profile and small space.



## Parallel chuck 5st (single)

Order code No.	<b>072172</b>
TYPE	<b>HC-5S</b>

- Stroke: 5mm ● Weight: 32g
- With joint BF-5-M3 for piping
- Auto switch for action/return end can be mounted (middle check is impossible).

## Parallel chuck 10st (single)

Order code No.	<b>072171</b>
TYPE	<b>HC-10S</b>

- Stroke: 10mm ● Weight: 70g
- With joint BF-5 for piping
- Auto switch for action/return end can be mounted (middle check is impossible).

## Parallel chuck 10st (double)

Order code No.	<b>072170</b>
TYPE	<b>HC-10</b>

- Stroke: 10mm ● Weight: 70g
- With joint BF-5\*2 for piping
- Auto switch for action/return end can be mounted (middle check is impossible).

## Parallel chuck • 20st (single)

Order code No.	<b>073319</b>
TYPE	<b>HC-20S</b>

- Stroke: 20mm ● Weight: 288g
- With joint BF-6 for piping

## Parallel chuck • 20st (double)

Order code No.	<b>073318</b>
TYPE	<b>HC-20</b>

- Stroke: 20mm ● Weight: 284g
- With joint BF-6 for piping



\* Rated current: 100mA 30VDC

## Parallel chuck • single • 5st (With limit switch)

Order code No.	<b>072702</b>
TYPE	<b>HC1-5S-C1</b>

- Stroke: 5mm ● Weight: 50g
- With joint BF-5-M3 for piping
- Harness length: 500mm

## Parallel chuck • single • 10st (With limit switch)

Order code No.	<b>072703</b>
TYPE	<b>HC1-10S-C1</b>

- Stroke: 10mm ● Weight: 95g
- With joint BF-5 for piping
- Harness length: 500mm

## Parallel chuck • double • 10st (With limit switch)

Order code No.	<b>072705</b>
TYPE	<b>HC1-10-C1</b>

- Stroke: 10mm ● Weight: 95g
- With joint BF-5\*2 for piping
- Harness length: 500mm

## Parallel chuck • single • 20st (With limit switch)

Order code No.	<b>072704</b>
TYPE	<b>HC1-20S-C1</b>

- Stroke: 20mm ● Weight: 305g
- With joint BF-6 for piping
- Harness length: 500mm

## Parallel chuck • double • 20st (With limit switch)

Order code No.	<b>072706</b>
TYPE	<b>HC1-20-C1</b>

- Stroke: 20mm ● Weight: 300g
- With joint BF-6\*2 for piping
- Harness length: 500mm

## HC/HC1 series specification

TYPE	Mechanism	Used air pressure (MPa)	Ambient temperature (°C)	Motion stroke (mm)	Cylinder diameter (mm)	Grip power (<0.4Mpa)		
						Close(N)	Open(N)	
HC-5S	Single Action Type	0.3 ~ 0.6	5 ~ 60	5	φ 7	6	—	
HC-10S				10	φ 10	14	—	
HC-10				Double Action Type	15	—	15	—
HC-20S					17	—	—	—
HC-20	28	28	—	—	—			
HC1-5S-C1	Single Action Type	0.4 ~ 0.6	5 ~ 60	5	φ 7	5	—	
HC1-10S-C1				10	φ 10	14	—	
HC1-10-C1				Double Action Type	15	—	15	—
HC1-20S-C1					17	—	—	—
HC1-20-C1	28	28	—	—	—			



## Auto switch (reed SW)

Order code No.	<b>030282</b>
TYPE	<b>D-A93</b>

- Weight: 6g ● Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Lead wire: 0.5M OUT (+) brown OUT (-) blue
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20) ● Length: 0.5m



## Auto switch (contactless)

Order code No.	<b>030425</b>
TYPE	<b>D-M9N</b>

- Weight: 8g ● Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 40mA or lower
- Lead wire: 0.5M+V (brown), Load (black), 0V(blue)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20) ● Length: 0.5m



## Limit switch Ass'y

Order code No.	<b>072708</b>
TYPE	<b>HC1-SW1</b>

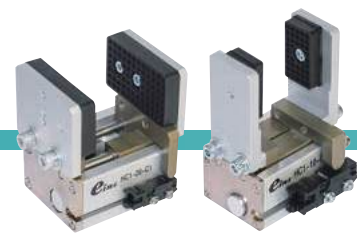
- Weight: 10g ● For HC1-5S/10(S)
- Mounting bolt and nut attached
- Rated current: 100mA 30VDC
- Terminal process is not made.
- Harness length: 500mm



## Limit switch Ass'y

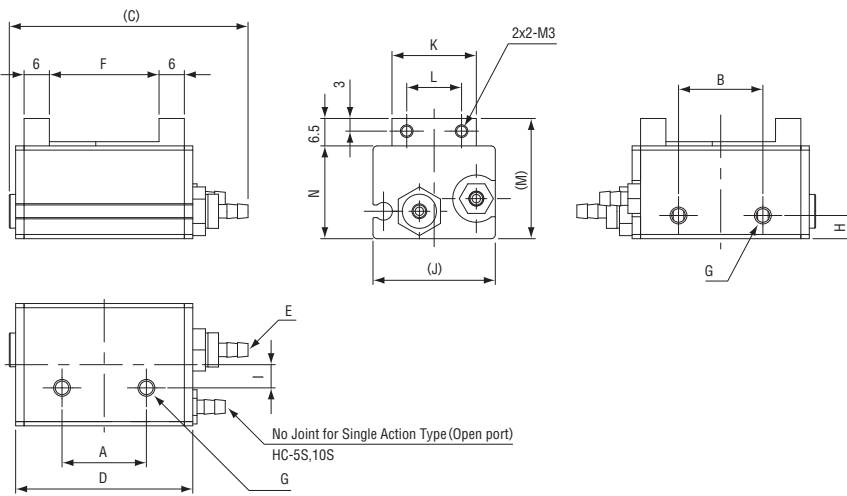
Order code No.	<b>072709</b>
TYPE	<b>HC1-SW2</b>

- Weight: 10g ● For HC1-20(S)
- Mounting bolt and nut attached
- Rated current: 100mA 30VDC
- Terminal process is not made.
- Harness length: 500mm



Example combination

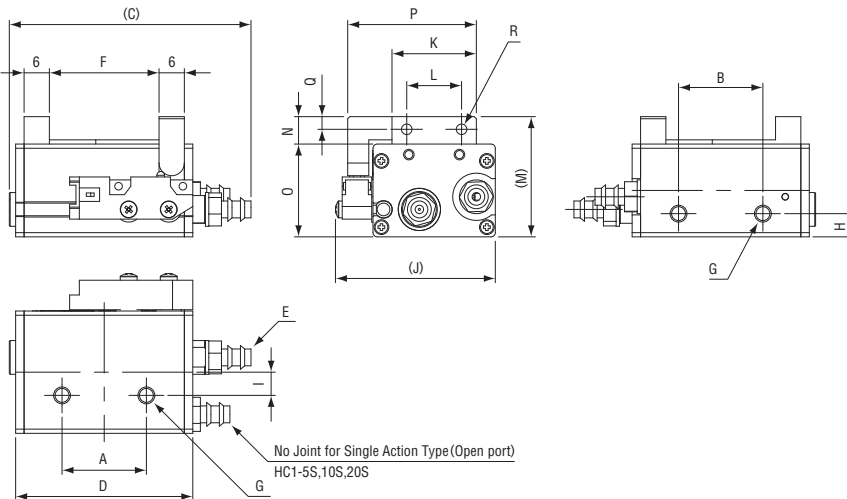
### ► Outside dimension of HC series



### ■ Dimensions (mm)

TYPE	HC-5S	HC-10S	HC-10	HC-20S	HC-20
A	17	20		32	
B	10	20		32	
C	45	56.6		75	
D	32	42		60	
E	BF-5-M3	BF-5		BF-6	
F	max16/min11	max26/min16		max40/min20	
G	2-M3 depth 4	2-M4 depth 5		2-M5 depth 10	
H	5	5.5		8	
I	6	5.5		6	
J	18	29		48	
K	13	20		32	
L	8	13		20	
M	25.5	28.5		44	
N	19	22		31.5	

### ► Outside dimension of HC1 series



### ■ Dimensions (mm)

TYPE	HC1-5S-C1	HC1-10(S)-C1	HC1-20(S)-C1
A	17	20	32
B	10	20	32
C	45	57	73
D	32	42	60
E	BF-5-M3	BF-5	BF-6
F	max16/min11	max26/min16	max40/min20
G	2-M3 depth 4	2-M4 depth 5	2-M5 depth 10
H	5	5.5	8
I	6	5.5	6
J	28	39	58
K	13	20	32
L	8	13	20
M	25.5	28.5	44
N	6.5	6.5	12.5
O	19	22	31.5
P	21.5	30.5	46
Q	3		5
R	2x2-M3		2x2-M5

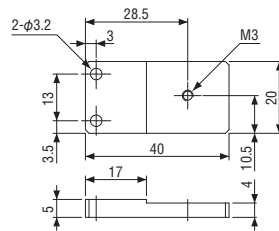


### Claw • for parallel chuck

Order code No. **023215**

TYPE **CP-HC10N**

- Weight: 9g ● For HC,HC1-10, 10S
- Installation of CPUM-01 → (2-10) to product positioning side is possible.

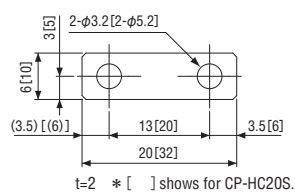
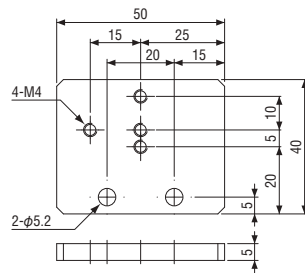


### Claw • for parallel chuck

Order code No. **023216**

TYPE **CP-HC20N**

- Weight: 26g ● For HC1-20, 20S
- Installation of CPL-060, 061 → (2-10) to product positioning side is possible.



### Spacer • for parallel chuck

Order code No. **023217**

TYPE **CP-HC10S**

- Weight: 1g ● For HC,HC1-10, 10S

Order code No. **023218**

TYPE **CP-HC20S**

- Weight: 2g ● For HC1-20, 20S

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

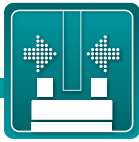
Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

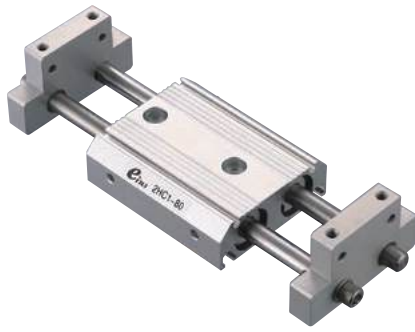
### Information

Various Products Information



# Parallel Chucks (Double Action)

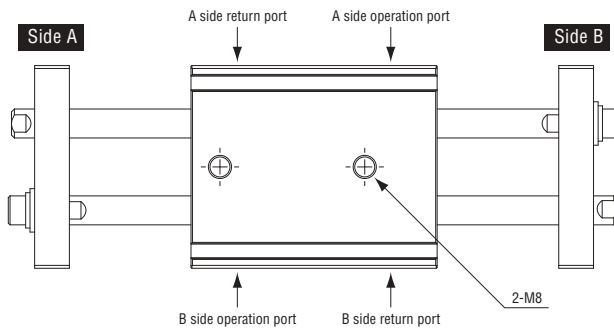
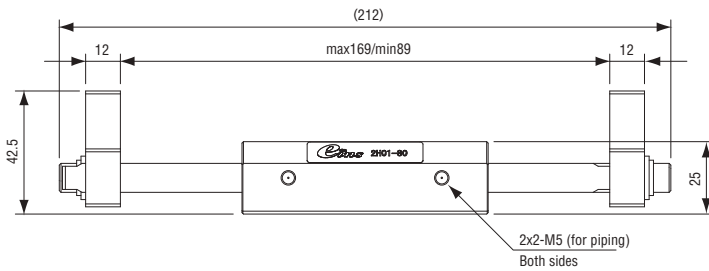
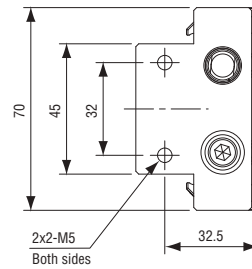
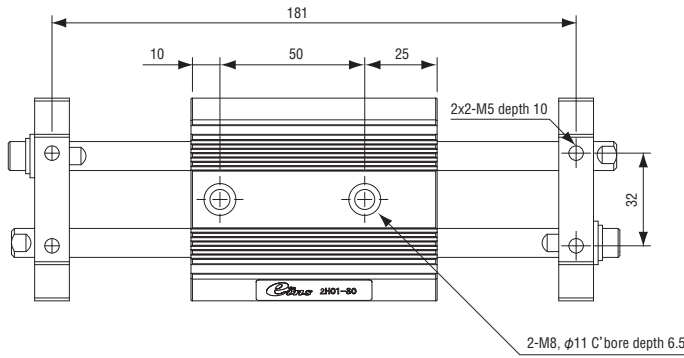
Single open/close of the claws of both sides is possible with the built-in two cylinders.



## Parallel chuck 40st (double) \* 2

Order code No.	282205
TYPE	2HC1-80

- Stroke: 40mm×2
- Weight: 650g
- Installation of auto switch for act / return limit is possible.
- Pipe joint is sold separately. → See [6-5,6,7](#)



## Auto switch (reed SW)

Order code No.	030282
TYPE	D-A93

- Weight: 6g
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Lead wire: 0.5M OUT (+) brown OUT (-) blue
- Indicator light
- Terminal process is not made.
- Wiring → See [6-20](#)
- Length: 0.5m



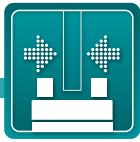
## Auto switch (contactless)

Order code No.	030425
TYPE	D-M9N

- Weight: 8g
- Load voltage: 24VDC
- Load current range: -40mA or lower
- Lead wire: 0.5M+V (brown), Load (black), 0V(blue)
- Indicator light
- Terminal process is not made.
- Wiring → See [6-20](#)
- Length: 0.5m

## Specification

Product name	TYPE	Mechanism	Used air pressure (Mpa)	Ambient temperature (°C)	Motion stroke (mm)	Cylinder diameter (mm)	Grip power (0.4Mpa)	
							Close(N)	Open(N)
Parallel chuck	2HC1-80	Double action type	0.4 ~ 0.6	5 ~ 60	40 × 2	φ20 × 2	100	100



# Parallel Chucks (Single Action)

High precision with linear guide!

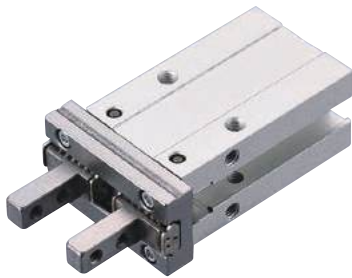


## Standard type (single) Parallel chuck

Order code No. **123401**

TYPE **MHZ2-10S**

- Stroke: 4mm
- Weight: 55g
- Auto switch can be attached as optional\*
- Pipe joint is sold separately → See [6-5,6,7](#)



## Narrow type (single) Parallel chuck

Order code No. **122451**

TYPE **MHZ2-10SN**

- Stroke: 4mm
- Weight: 55g
- Auto switch can be attached as optional\*
- Pipe joint is sold separately. → See [6-5,6,7](#)



## Auto switch (contactless)

Order code No. **030425**

TYPE **D-M9N**

- Weight: 8g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: -40A or lower
- Lead wire: 0.5M + V (brown), Load (black), 0V (blue)
- Indicator light
- Terminal process is not made.
- Special metal bracket (BMG2-012) is required to attach auto switch.
- Wiring → See [6-20](#)
- Length: 0.5m

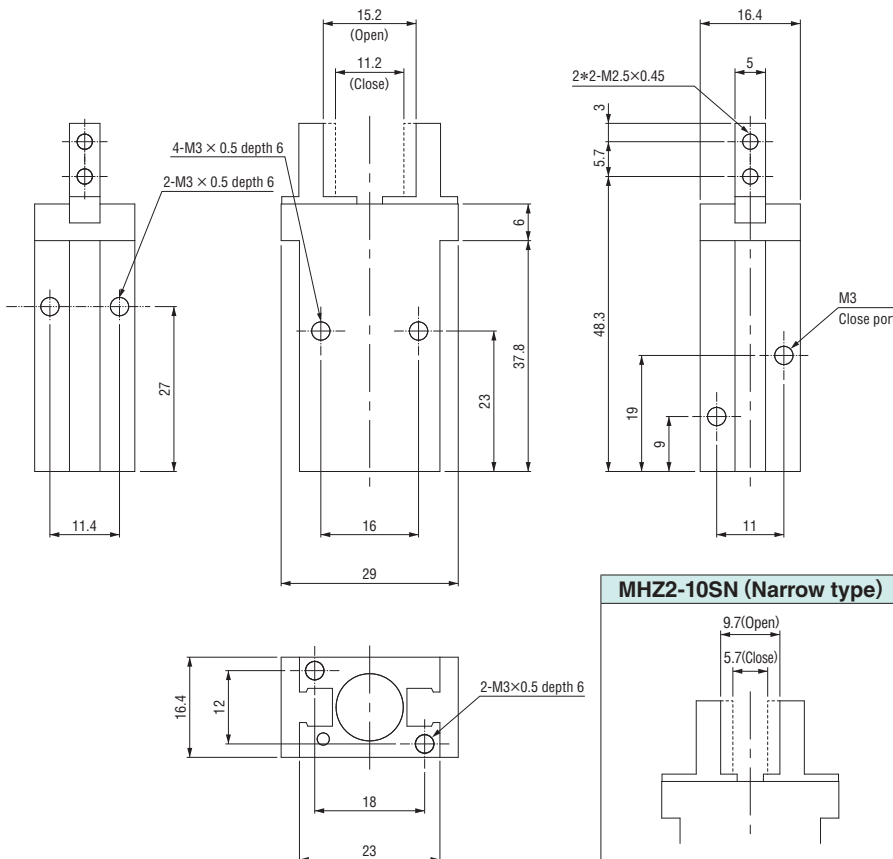


## Auto switch mounting bracket

Order code No. **010634**

TYPE **BMG2-012**

- Weight: 2g



## Specification

Product name	TYPE	Used air pressure (Mpa)	Ambient temperature (°C)	Motion stroke (mm)	Cylinder diameter (mm)	Gripping force (<0.5MPa) (N)	Accuracy of movement (mm)
Parallel chuck	MHZ2-10S MHZ2-10SN	0.35 ~ 0.7	-10 ~ 60	4	φ 10	7.1	± 0.01

\* Special metal bracket (BMG2-012) is required to attach auto switch (D-M9N). \* Auto switch (D-A93) cannot be used.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

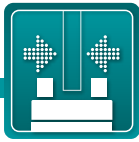
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

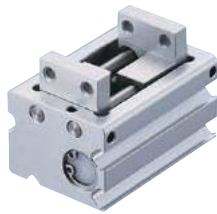
Information

Various Products Information



# Parallel Hand (Double Action)

Durable bush guide embedded.



## ▶ Double action type Parallel hand • 15st

Order code No.	<b>071996</b>
TYPE	<b>HLA-12AS</b>

- Stroke: 15mm
- Weight: 152g
- Auto switch can be attached(E-16-M1)
- Pipe joint is sold separately.
- See (6-5,6,7)

## ▶ Double action type Parallel hand • 20st

Order code No.	<b>070986</b>
TYPE	<b>HLA-15AS</b>

- Stroke: 20mm
- Weight: 276g
- Auto switch can be attached(E-16-M1)
- Pipe joint is sold separately.
- See (6-5,6,7)

## ▶ Double action type Parallel hand • 25st

Order code No.	<b>071997</b>
TYPE	<b>HLA-20AS</b>

- Stroke: 25mm
- Weight: 504g
- Auto switch can be attached(E-16-M1)
- Pipe joint is sold separately.
- See (6-5,6,7)



## ▶ Double action type Parallel hand • 15st • w/ rubber cover

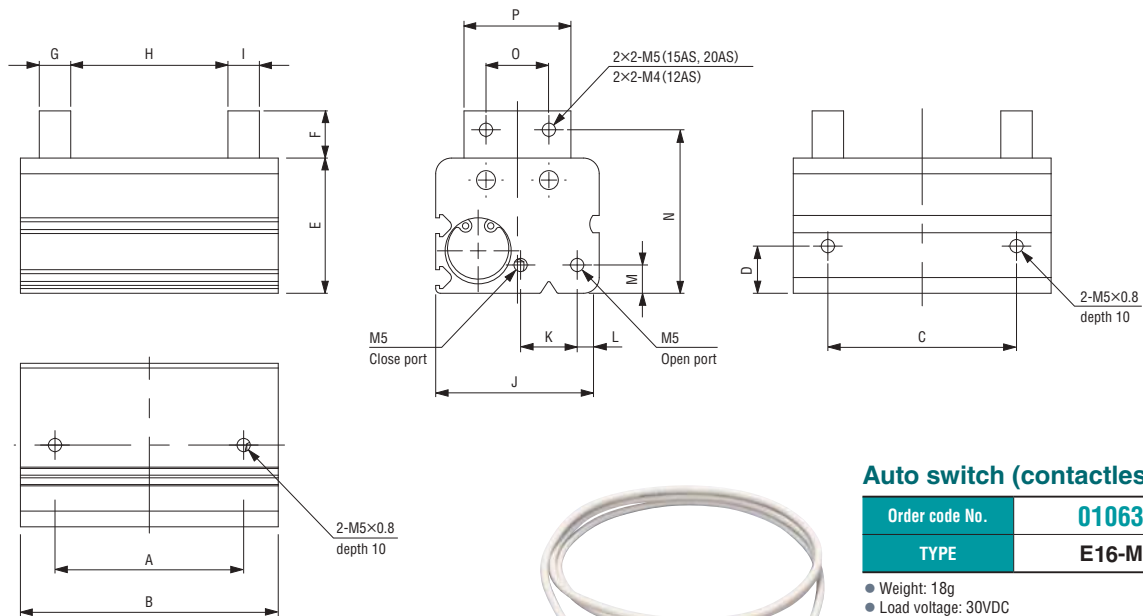
Order code No.	<b>071999</b>
TYPE	<b>HLAG-12AS</b>

- Stroke: 15mm
- Weight: 157g
- Auto switch can be attached(E-16-M1)
- Pipe joint is sold separately.
- See (6-5,6,7)

## ▶ Double action type Parallel hand • 20st • w/ rubber cover

Order code No.	<b>072000</b>
TYPE	<b>HLAG-15AS</b>

- Stroke: 20mm
- Weight: 281g
- Auto switch can be attached(E-16-M1)
- Pipe joint is sold separately.
- See (6-5,6,7)



## Auto switch (contactless)

Order code No.	<b>010633</b>
TYPE	<b>E16-M1</b>

- Weight: 18g
- Load voltage: 30VDC
- Load current range: -50mA or lower
- Lead wire: 1m + (brown), load (black), - (blue)
- Indicator light
- Terminal process is not made.
- Length: 1m
- For HLA, HLAG

## ■ Dimensions

(mm)

TYPE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
<b>HLA-12AS</b>	30	54	30	12	29	10	6	max30/min15	6	37	13.5	4	8	35	14	22
<b>HLA-15AS</b>	40	70	40	13.5	34	12	10	max40/min20	10	43	14	5.5	9	41	18	30
<b>HLA-20AS</b>	60	82	60	15	43	15	10	max50/min25	10	52	18	7	9	52	20	34
<b>HLAG-12AS</b>	30	61	—	—	40	10	8	max30/min15	8	46.8	13.5	4	8	46	10	17
<b>HLAG-15AS</b>	40	81.1	—	—	46.5	12	10	max40/min20	10	57	14	5.5	9	53.5	14	24

Product name	TYPE	Used air pressure (MPa)	Ambient temperature (°C)	Motion stroke (mm)	Cylinder diameter (mm)	Inner capacity (round trip)	Accuracy of movement (mm)	Lubrication
Parallel hand	<b>HLA,HLAG-12AS</b>	0.3 ~ 0.7	5 ~ 60	15	φ 12	1.69cc/times	± 0.03	No lubrication or turbine oil class 1 [ISOVG32]
	<b>HLA,HLAG-15AS</b>			20	φ 15	3.53cc/times		
	<b>HLA-20AS</b>			25	φ 20	7.85cc/times		





# Needle Gripper

Embedded needle allows holding fiber workpiece with high air permeability.



## Needle gripper (diameter 0.8mm)

Order code No.	<b>186255</b>
TYPE	<b>SNG-M-4-0.8</b>

- Weight: 80g
- Air single action type
- Needle will be output with action.
- Pipe joint is sold separately.

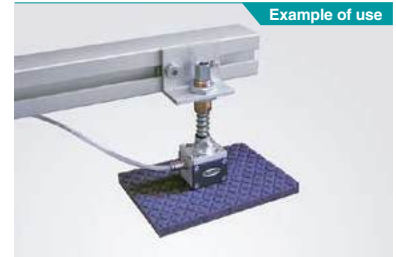
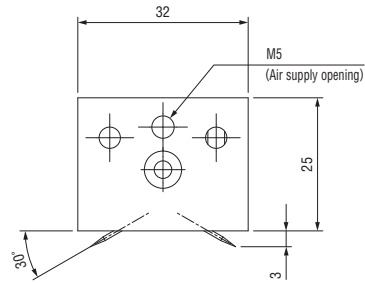
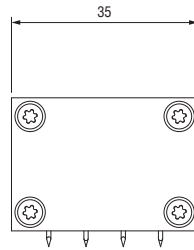
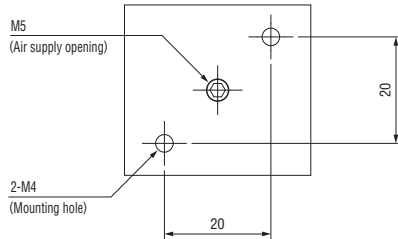
→ See (6-5,6,7)



## Needle piston set for exchange (4pcs)

Order code No.	<b>041925</b>
TYPE	<b>ERS-SET-SNG-M-0.8</b>

- Weight: 12g
- 4pcs
- For SNG-M-4-0.8



Example of use



## Needle gripper (diameter 0.8mm)

Order code No.	<b>186256</b>
TYPE	<b>SNG-AP-10-0.8-V-10</b>

- Weight: 225g
- Air double action type
- Needle will be output with action.
- Pipe joint is sold separately.

→ See (6-5,6,7)



## Needle holder set for exchange (2pcs)

Order code No.	<b>041926</b>
TYPE	<b>ERS-SET-SNG-AP/AE-0.8-10</b>

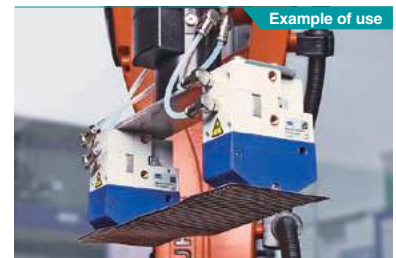
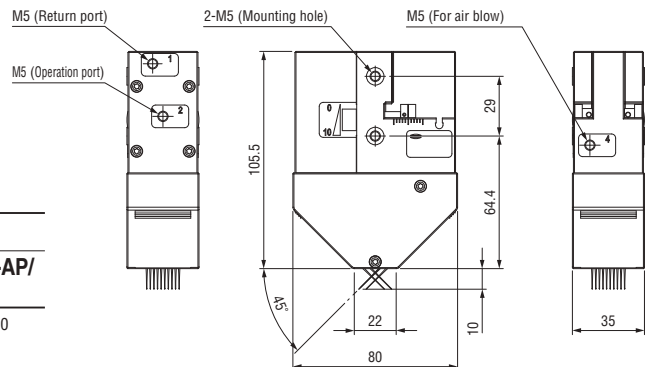
- Weight: 6g
- For SNG-AP-10-0.8-V-10

## Needle gripper (diameter 1.2mm)

Order code No.	<b>186257</b>
TYPE	<b>SNG-AP-10-1.2-V-10</b>

- Weight: 225g
- Air double action type
- Needle will be output with action.
- Pipe joint is sold separately.

→ See (6-5,6,7)



Example of use

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

### Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

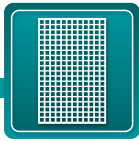
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

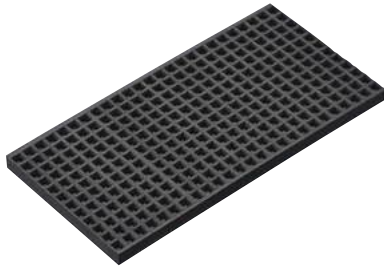
### Information

Various Products Information



# Rubber Pad / EP Sponge / Pad (Silicone Sponge)

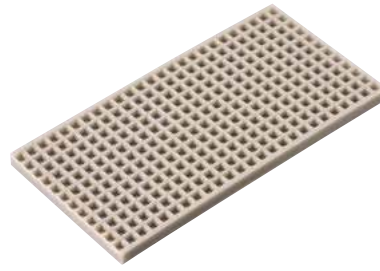
Cut sheets to prevent scratches on products.



## Rubber Pad (Nitrile)

Order code No.	<b>370078</b>
TYPE	<b>5T*50*100</b>

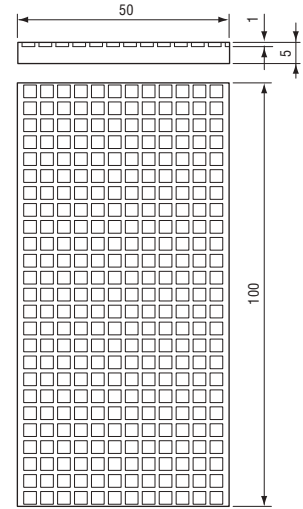
● Weight: 27.6g ● Material: nitrile rubber



## Rubber Pad (Silicone)

Order code No.	<b>310536</b>
TYPE	<b>5T*50*100</b>

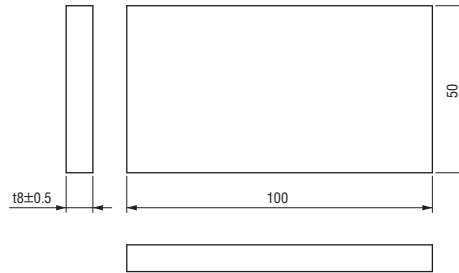
● Weight: 27.6g ● Material: silicon



## (SD sheet, EP sponge)

Order code No.	<b>340923</b>
TYPE	<b>8*50*100-EPSP</b>

● Weight: 5g ● Material: EPDM ● The finished dimensions may be different from those of the drawing as sponge material is used.



### Cautions for pasting (SD sheet, EP sponge)

- Please use within 1 month after purchase. Adhesive strength is remarkably reduced after left for a long period of time. It is recommended to jointly use silicon series adhesive (371759 Bath Bond).
- Wipe the surface clean with ethanol before you stick it on the cup. Do not touch the surface with your hands.
- Hold the adhesive surface with sufficient adhesion to the surface for about 24 hours.
- Use silicon adhesive (371759 Bath Bond), if the adhesive strength is low.
- Double-sided tape is weak when the oblique tension force is added. Use the tape for the vertical direction force.



## Pad (silicone sponge)

Order code No.	<b>293463</b>
TYPE	<b>3T*250*250</b>

● Weight: 102g ● Material: silicon sponge  
● 250×250mm · T3mm



## Adhesive (Sponge Pads)

Order code No.	<b>371759</b>
TYPE	<b>Adhesive Q 50G Clear #4888</b>

- NET: 50ml
- Silicon bond
- Use for adhesion to silicon rubber.



## Adhesive Cemedine 20ML

Order code No.	<b>371765</b>
TYPE	<b>AX-038 (SUPER X · 20TM)</b>

- NET: 50ml
- Use for adhesion to rubber plate.



## Adhesive Cemedine 135ML

Order code No.	<b>002481</b>
TYPE	<b>AX-250 (SUPER X8008 · 135ML)</b>

- NET: 135ml
- If you need a Material Safety Data Sheet (SDS), please purchase it.
- Use for adhesion to rubber plate.

TYPE	Standard	Heat resistance *	Hardness	Color
Nitrile rubber	5T*50*100	-10 ~ +100	shore A70 ± 10	Black
Silicone	5T*50*100	-60 ~ +250	shore A70 ± 10	White
Pad (silicone sponge)	3T*250*250	-60 ~ +200	Aska C23	Orange
EPDM	8*50*100-EPSP	-30 ~ +100	-	Black
Chloroprene rubber	CP-060	-35 ~ +100	shore A70 ± 10	Black

\* General characteristics numerical value (reference value)

# Suction



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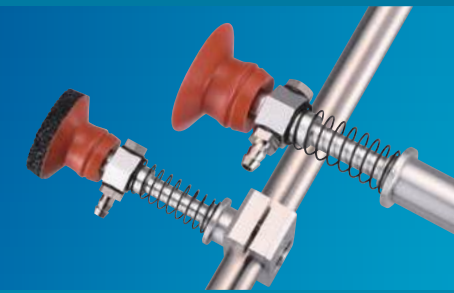
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### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Mini Cylinder / Pads / Push Handles

### By Industry

Legends - Pickling Steel Metal Stamp Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



Please check the performance table on the web site.

### Suction Cups (Standard / Screw Mount Type)



The most suitable one can be selected from wide range of products.

3-4

### Suction Cups (Bellows / TR / TRN)



Use bellows cups for medium-sized angled parts. Fluorine type is also available. The most suitable one can be selected from wide range of products.

3-6

### Suction Cups w/ Sponge



Use with parts with uneven suction surfaces. (For work piece with small unevenness)

3-7

### Suction Cups (Flat Face/Bellows/w/ EP Sponge)



- Use for parts that are not easily released or require additional support. Also good with IML applications.
- Used for Angled parts
- Use with parts with uneven suction surfaces. (For work piece with big unevenness)

3-8

### Suction Stems Covers (Mini / Small)



Used as a cap when suction cup is not used.

3-8

### Accessories for Suction Cups



Stick it to the end of the suction cup according to its use.

3-9

### Suction Cups(Fluorine Bellows/for Steel Sheet)



- Used for Angled parts
- for sheet metal conveyance.

3-10

### Suction Cups(Vacuum/Multistage Bellows)



Supports work with high cushioning and unevenness.

3-11

### Suction Cups (Pouches/Non-Contact Suction Pad)



Perfect for soft or bag shape workpiece.

3-13

### Suction Cups(Flat /Bellows )



Flat basic type. Silicone type and a mark-free type are provided.

3-15

### Oval Cups



Oval type. There are silicone and mark-less types.

3-19

### Sheet Metal Suction Cups



Strong holding power in the horizontal direction and excellent balance of stability. Excellent follow-up ability to a curved surface. Excellent durability with original material.

3-20

### Pad in Pad



Perfect for the parts that have holes. The pad within the assembly can effectively seal the central opening of the workpiece. It can be positioned to cover the hole located at the center of the component.

3-40

### Vacuum Gripper



A single gripper could use for different shape of work piece.

3-44

### Cup for Air Ejectors



Please use with air ejectors.

3-47

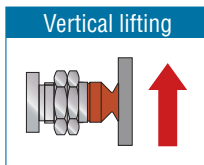
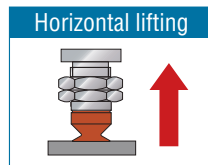




Please check the performance table on the web site.

## Theoretical suction power of suction cups

The theoretical suction power can be obtained with the area of cup and the degree of vacuum caused by using the cup.



● kPa, N display

$$W = \frac{C \times P}{101} \times 10.13 \times f$$

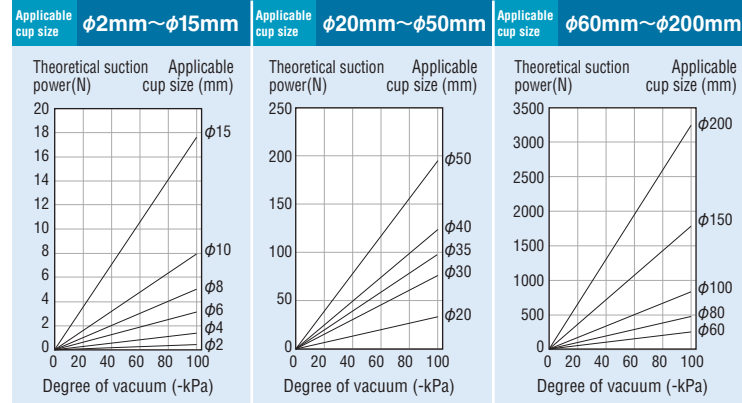
● mmHg, Kg display

$$W = \frac{C \times P}{760} \times 1.0332 \times f$$

W : Theoretical suction power (N) · (Kg) C : Area of cup (cm<sup>2</sup>)  
P : Degree of vacuum (-kPa) · (-mmHg) f : Safety factor

Since the theoretical suction power is a value under static conditions, use the safety factor of 1/4 for horizontal lifting and 1/8 for vertical lifting in practical use. Also for movement, take acceleration caused by the movement into consideration.

### ● General type cup (rubber cup) \*Safety factor is not considered.



## Pad Shape and Uses

Pad shape	Uses
<b>Flat type</b>	If the surface of the part is flat and has no deformation.
<b>Flat type (with rib)</b>	<ul style="list-style-type: none"> <li>● Part is easy to deform.</li> <li>● Good for releasing the Part.</li> </ul>
<b>Groove</b>	<ul style="list-style-type: none"> <li>● Used for when the part has an oil film and is slippery.</li> <li>● Used for parts that are curved.</li> </ul>
<b>Oval</b>	Used for parts that have little suction surface and/or are long and unstable.

Pad shape	Uses
<b>Bellows</b>	<ul style="list-style-type: none"> <li>● Used when there is no space for installing buffer.</li> <li>● Suction surface is slanted.</li> <li>● The surface is curved.</li> </ul>
<b>w/ Sponge</b>	Parts with uneven suction surface.
<b>Pouches</b>	Film packaging and soft parts.
<b>Non contact</b>	For when printed circuit board and acrylic board, etc. cannot be absorbed and transported.

## Properties of rubber used in our suction cups

○ : suitable    △ : Can be used according to the condition (specification).    × : Not suitable

Characteristics	Material	Silicone (brown)	Silicone (transparent white, white)	Urethane (milk white)	Fluorine (black)	Nitrile (green)	Mark-free (blue)
Heat-resistance (°C)		-60~250		-20~75	-10~230	-30~150	-10~140
Shore hardness (HS)		54~80		55	65	50	60
No mark of cup left		×		×	○	○	○
Food		×/○		×	×	×	×
Food packaging		○		○	○	○	○
Oil resistance		×		○	○	○	○
Weight		△		○	△	○	△
Antistatic agent		△		×	△	×	×
Rough surface (stone or wood)		×		○	×	×	×
Glass		×		○	○	×	○
Alcohol resistance		○		△	△	○	○
Acid resistance		△		×	○	△	×

● Above shows the general characteristics of rubber, only. Check the shape of suction cup and operating conditions.

\* Silicon pad (whitish transparent) conforms to the U.S. food and drug administration (FDA) and BfR (German Federal Institute for Risk Assessment) standard.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

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Air Nipper (Large)

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Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

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Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information







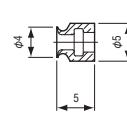
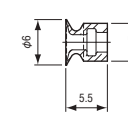
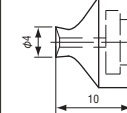
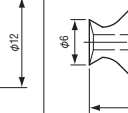
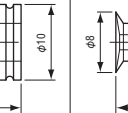
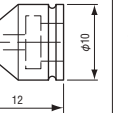







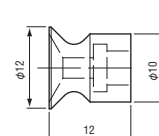
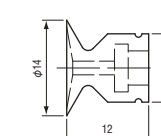
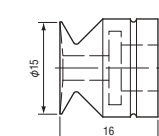
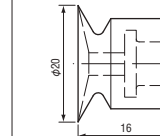
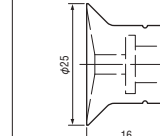


# Suction Cups (Standard/Screw Mount Type)

Utilize it as per your requirements from a range of products.

- Reinforced silicone** Excellent in durability and heat resistance (250°C).
- Urethane** Excellent in durability, oil resistance, chemical resistance, and flexible.
- Fluorine** The material exhibits outstanding durability, resistance to heat and chemicals, and is not prone to leaving suction marks, ensuring a prolonged service life.
- Nitrile** Excellent durability, heat resistant and chemical resistance, mostly resistant to suction marks and has long service life.

Applicable cup size	φ 4mm	φ 6mm	φ 4mm	φ 6mm	φ 8mm	φ 10mm	
Suction Cups (standard)							
	* Micro	* Micro					
Drawing							
Reinforced silicone (brown)	Order code No.	<b>210789</b>	<b>210790</b>	<b>210700</b>	<b>210255</b>	<b>210191</b>	<b>210615</b>
	TYPE	<b>VAPH-4M</b>	<b>VAPH-6M</b>	<b>VAPH-4C</b>	<b>VAPH-6C</b>	<b>VAPH-8C</b>	<b>VAPH-10C</b>
	Weight	0.2g	0.3g	0.4g	0.5g	0.6g	0.7g
Urethane (milk white)	Order code No.	—	—	<b>210701</b>	<b>210395</b>	<b>210396</b>	<b>210703</b>
	TYPE	—	—	<b>VAPU-4C</b>	<b>VAPU-6C</b>	<b>VAPU-8C</b>	<b>VAPU-10C</b>
	Weight	—	—	0.4g	0.6g	0.7g	0.7g
Fluorine (black)	Order code No.	—	—	<b>210702</b>	<b>210402</b>	<b>210403</b>	<b>210704</b>
	TYPE	—	—	<b>VAPF-4C</b>	<b>VAPF-6C</b>	<b>VAPF-8C</b>	<b>VAPF-10C</b>
	Weight	—	—	0.9g	0.9g	1.0g	1.0g
Nitrile (green)	Order code No.	—	—	<b>210791</b>	<b>210792</b>	<b>210793</b>	<b>210794</b>
	TYPE	—	—	<b>VAPN-4C</b>	<b>VAPN-6C</b>	<b>VAPN-8C</b>	<b>VAPN-10C</b>
	Weight	—	—	0.7g	0.7g	0.6g	0.6g
Applicable stems	Micro : VFILB-M, MSH → <a href="#">3-23,30</a>			Mini : VFILB-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>			

Applicable cup size	φ 12mm	φ 14mm	φ 15mm	φ 20mm	φ 25mm	
Suction Cups (standard)						
						
Reinforced silicone (brown)	Order code No.	<b>210192</b>	<b>210616</b>	<b>210193</b>	<b>210194</b>	<b>210617</b>
	TYPE	<b>VAPH-12C</b>	<b>VAPH-14C</b>	<b>VAPH-15C</b>	<b>VAPH-20C</b>	<b>VAPH-25C</b>
	Weight	0.8g	1.0g	2.2g	2.6g	3.3g
Urethane (milk white)	Order code No.	<b>210397</b>	<b>210705</b>	<b>210398</b>	<b>210399</b>	—
	TYPE	<b>VAPU-12C</b>	<b>VAPU-14C</b>	<b>VAPU-15C</b>	<b>VAPU-20C</b>	—
	Weight	0.8g	0.8g	2.4g	2.8g	—
Fluorine (black)	Order code No.	<b>210404</b>	<b>210706</b>	<b>210405</b>	<b>210406</b>	—
	TYPE	<b>VAPF-12C</b>	<b>VAPF-14C</b>	<b>VAPF-15C</b>	<b>VAPF-20C</b>	—
	Weight	1.2g	1.2g	3.5g	3.8g	—
Nitrile (green)	Order code No.	<b>210795</b>	<b>210796</b>	<b>210797</b>	<b>210798</b>	—
	TYPE	<b>VAPN-12C</b>	<b>VAPN-14C</b>	<b>VAPN-15C</b>	<b>VAPN-20C</b>	—
	Weight	1.0g	1.0g	3.1g	3.3g	—
Applicable stems	Mini : VFIL-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>			Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>		

**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

**Grip**

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

- Jungle Gym
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

**Pneumatic Components / Sensors**

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

**Lightweight Parts Series**

- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

**By Industry**





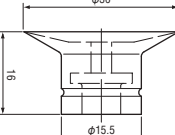
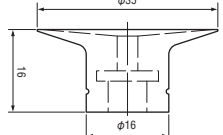
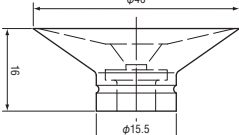
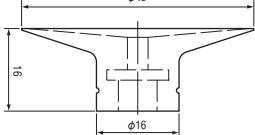
- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication





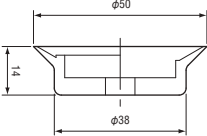
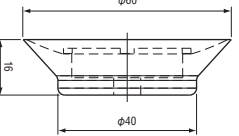
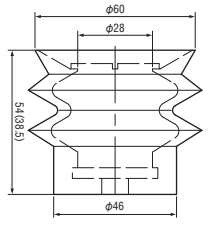
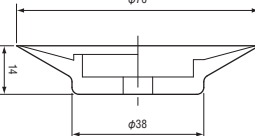
**Assembling Tools**

- Tool / Jig

**Information**

- Various Products Information

Applicable cup size	φ 30mm	φ 35mm	φ 40mm	φ 45mm
<b>Suction Cups (standard)</b>				
<b>Drawing</b>				
<b>Reinforced silicone (brown)</b>	Order code No.	<b>210195</b>	<b>210618</b>	<b>210196</b>
	TYPE	<b>VAPH-30C</b>	<b>VAPH-35C</b>	<b>VAPH-40C</b>
	Weight	3.6g	4.0g	5.7g
<b>Urethane (milk white)</b>	Order code No.	<b>210400</b>	—	<b>210401</b>
	TYPE	<b>VAPU-30C</b>	—	<b>VAPU-40C</b>
	Weight	3.6g	—	6.0g
<b>Fluorine (black)</b>	Order code No.	<b>210407</b>	—	<b>210408</b>
	TYPE	<b>VAPF-30C</b>	—	<b>VAPF-40C</b>
	Weight	5.5g	—	8.8g
<b>Nitrile (green)</b>	Order code No.	<b>210799</b>	—	<b>210800</b>
	TYPE	<b>VAPN-30C</b>	—	<b>VAPN-40C</b>
	Weight	4.6g	—	7.6g
<b>Applicable stems</b>	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>			

Applicable cup size	φ 50mm	φ 60mm	φ 60mm	φ 70mm
<b>Suction cups (screw mount type)</b>				
<b>Drawing</b>				
<b>Reinforced silicone (brown)</b>	Order code No.	<b>210619</b>	<b>210311</b>	<b>210044</b>
	TYPE	<b>VAPH-50F</b>	<b>VAPH-60F</b>	<b>VAPH-60F-2</b>
	Weight	11.0g	17.0g	73.0g
<b>Fluorine (black)</b>	Order code No.	—	<b>210417</b>	—
	TYPE	—	<b>VAPF-60F</b>	—
	Weight	—	28.0g	—
<b>Nitrile (green)</b>	Order code No.	—	<b>210801</b>	—
	TYPE	—	<b>VAPN-60F</b>	—
	Weight	—	23.8g	—
<b>Applicable stems</b>	Large : VFI-L, or VFIL-H → <a href="#">3-29,31</a>			






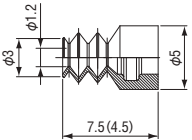
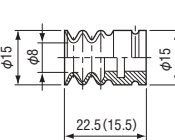
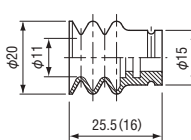
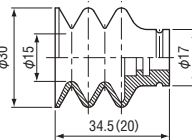
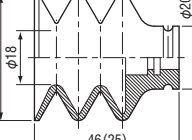


# Suction Cups (Bellows/TR/TRN)





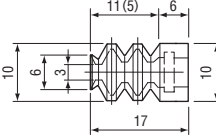
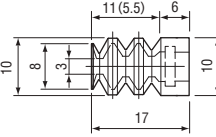
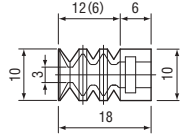
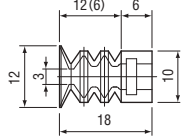
Utilize it as per your requirements from a range of products.





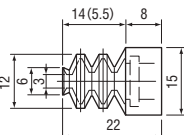
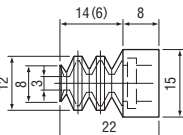
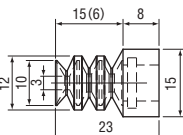
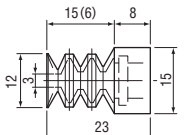
**Reinforced silicone** Excellent in durability and heat resistance (250°C). **Nitrile** Excellent durability, heat resistant and chemical resistance, mostly resistant to suction marks and has long service life.

► Used for parts with curved surfaces and angles. Bring parts closer with the bellows distance.

Applicable cup size	φ 3mm	φ 15mm	φ 20mm	φ 30mm	φ 40mm
Suction cups (Bellows)					
Drawing					
Reinforced silicone (brown)	Order code No.	<b>210897</b>	<b>210697</b>	<b>210661</b>	<b>210662</b>
	TYPE	<b>VAPH-3C-3</b>	<b>VAPH-15C-3</b>	<b>VAPH-20C-3</b>	<b>VAPH-30C-3</b>
	Weight	1.0g	2.7g	2.9g	7.0g
Applicable stems	Micro : VFILB-M,MSH → <a href="#">3-23,30</a>		Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>		

► Use for parts with curved surfaces and angles. Demonstrates the ability to follow the part's angle.

Applicable cup size	φ 6mm	φ 8mm	φ 10mm	φ 12mm
Suction cups (TR/TRN)				
Drawing				
Reinforced silicone (brown)	Order code No.	<b>196327</b>	<b>196342</b>	<b>196406</b>
	TYPE	<b>TR-1062-1M</b>	<b>TR-1062-2M</b>	<b>TR-1062-3M</b>
	Weight	1.0g	1.0g	1.0g
Nitrile (green)	Order code No.	<b>196403</b>	<b>196401</b>	<b>196399</b>
	TYPE	<b>TRN-1062-1M</b>	<b>TRN-1062-2M</b>	<b>TRN-1062-3M</b>
	Weight	1.4g	1.4g	1.4g
Applicable stems	Mini : VFIL-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>			






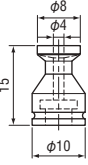
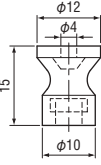
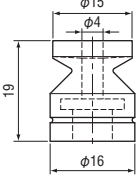
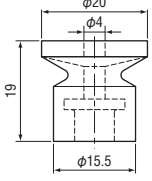
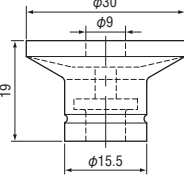
Applicable cup size	φ 6mm	φ 8mm	φ 10mm	φ 12mm
Suction cups (TR/TRN)				
Drawing				
Reinforced silicone (brown)	Order code No.	<b>193511</b>	<b>193512</b>	<b>196135</b>
	TYPE	<b>TR-1062-1</b>	<b>TR-1062-2</b>	<b>TR-1062-3</b>
	Weight	1.0g	1.0g	1.0g
Nitrile (green)	Order code No.	<b>196404</b>	<b>196402</b>	<b>196398</b>
	TYPE	<b>TRN-1062-1</b>	<b>TRN-1062-2</b>	<b>TRN-1062-3</b>
	Weight	1.4g	1.4g	1.4g
Applicable stems	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>			



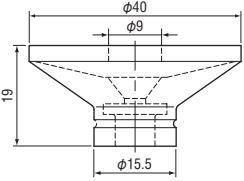
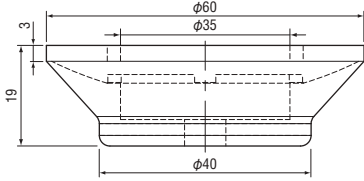





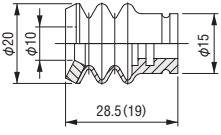
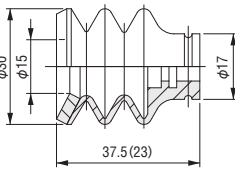
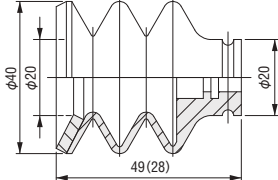
# Suction Cups w/ Sponge

Used for work pieces with uneven suction surfaces. (For work piece with small unevenness)

- Please inquire for more information on cups with sponges of other sizes.
- Sponge material: closed-cell foam silicone
- Heat resistance (continuously used for a long time): 150°C

Applicable cup size	φ8mm	φ12mm	φ15mm	φ20mm	φ30mm	
Suction Cups (w/ sponge)						
Drawing						
Reinforced silicone (brown)	Order code No.	<b>210664</b>	<b>210665</b>	<b>210534</b>	<b>210535</b>	<b>210536</b>
	TYPE	<b>VAPH-8C-SP</b>	<b>VAPH-12C-SP</b>	<b>VAPH-15C-SP</b>	<b>VAPH-20C-SP</b>	<b>VAPH-30C-SP</b>
	Weight	0.7g	0.9g	2.6g	2.9g	4.8g
	Heat-resistance	200°C			200°C	
Applicable stems	Mini : VFIL-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>			Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>		

Applicable cup size	φ40mm	φ60mm	
Suction Cups (w/ sponge)		 ※ Screw Mount Type	
Drawing			
Reinforced silicone (brown)	Order code No.	<b>210537</b>	<b>210538</b>
	TYPE	<b>VAPH-40C-SP</b>	<b>VAPH-60F-SP</b>
	Weight	8.3g	22.0g
	Heat-resistance	200°C	
Applicable stems	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>	Large : VFI-L, or VFIL-H → <a href="#">3-29,31</a>	

Applicable cup size	φ20mm	φ30mm	φ40mm	
Suction Cups (w/ sponge)				
Drawing				
Reinforced silicone (brown)	Order code No.	<b>210914</b>	<b>210915</b>	<b>210916</b>
	TYPE	<b>VAPH-20C-10-3-SP</b>	<b>VAPH-30C-15-3-SP</b>	<b>VAPH-40C-20-3-SP</b>
	Weight	3.0g	8.0g	19.0g
	Heat-resistance	200°C		
Applicable stems	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>			

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

### Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

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Air Nipper (Large)

## Frame / Module

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Rectangular Tube

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Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Suction Cups (Flat Face/Free/EP sponge) / Suction Stems Covers (Mini/Small)

Utilize it as per your requirements from a range of products.

► Used for work pieces that are not released easily from suction cup.

Applicable cup size	φ 15mm	φ 20mm	
Suction Cups (flat face)			
Drawing			
Reinforced silicone (brown)	Order code No.	<b>210389</b>	<b>210390</b>
	TYPE	<b>VAPH-15C-1</b>	<b>VAPH-20C-1</b>
	Weight	2.0g	2.4g
Applicable stems	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>		

► Used to be attached to the end of suction stem.

Applicable cup size	φ 10mm	φ 16mm	
Suction stems cover			
Drawing			
Reinforced silicone (brown)	Order code No.	<b>211024</b>	<b>211023</b>
	TYPE	<b>VAPH-SSC</b>	<b>VAPH-SC</b>
	Weight	0.35g	1.70g
Applicable stems	Mini : VFIL-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>	

► Use bellows cups for medium-sized angled parts.

Applicable cup size	φ 12mm	φ 20mm	
Bellows cups (Free)			
Drawing			
Reinforced silicone (brown)	Order code No.	<b>210280</b>	<b>210310</b>
	TYPE	<b>VAPH-12C-2</b>	<b>VAPH-20C-2</b>
Urethane (milk white)	Order code No.	<b>210409</b>	<b>210410</b>
	TYPE	<b>VAPU-12C-2</b>	<b>VAPU-20C-2</b>
Fluorine (black)	Order code No.	<b>210411</b>	<b>210412</b>
	TYPE	<b>VAPF-12C-2</b>	<b>VAPF-20C-2</b>
Nitrile (green)	Order code No.	<b>210802</b>	<b>210803</b>
	TYPE	<b>VAPN-12C-2</b>	<b>VAPN-20C-2</b>
Applicable stems	Mini : VFIL-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>	Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>	

\* The value in ( ) indicates the dimension with suction.  
\* The value in [ ] indicates the dimension for reinforced silicone.

► Used for work pieces with uneven suction surfaces. (For work pieces with uneven suction surfaces.)

Applicable cup size	φ 14mm	φ 20mm	φ 30mm	φ 40mm	
Suction Cups (EP sponge)					
Drawing					
Reinforced silicone (brown)	Order code No.	<b>210859</b>	<b>210860</b>	<b>210861</b>	<b>210862</b>
	TYPE	<b>VAPH-14C-EPSP</b>	<b>VAPH-20C-EPSP</b>	<b>VAPH-30C-EPSP</b>	<b>VAPH-40C-EPSP</b>
	Weight	1.1g	2.8g	4.0g	6.4g
	Heat-resistance	80°C		80°C	
Applicable stems	Mini : VFIL-SS, or VFILB-SSH → <a href="#">3-23,24,25,30</a>		Small : VFIL-S, or VFILB-SH → <a href="#">3-26,27,28,30</a>		

Applicable cup size	φ 50mm	φ 60mm	
Suction Cups (EP sponge)			
Drawing			
Reinforced silicone (brown)	Order code No.	<b>210863</b>	<b>210864</b>
	TYPE	<b>VAPH-50F-EPSP</b>	<b>VAPH-60F-EPSP</b>
	Weight	11.5g	18.2g
	Heat-resistance	80°C	
Applicable stems	Large : VFI-L, or VFI-H → <a href="#">3-29,31</a>		

### Precautions for Suction Cup

- Double-stick tape is used for adhesion to EP sponge. Use silicon adhesive if the adhesive strength is low.
- Double-sided tape is weak when the oblique tension force is added. Use the tape for the vertical direction force.
- Your diagram may have a slightly different layout as the component is made of sponge.





# Accessories for Suction Cups

Use as your situation.

▶ Static elimination sheet for suction cups surface.

Applicable cup size	φ 12mm	φ 15mm	φ 20mm	φ 30mm	φ 40mm
Pad diameter SD sheet					
Drawing					
Order code No.	<b>271682</b>	<b>271683</b>	<b>282552</b>	<b>297701</b>	<b>300485</b>
TYPE	<b>12C-SD</b>	<b>15C-SD</b>	<b>20C-SD</b>	<b>30C-SD</b>	<b>40C-SD</b>
Weight	1.0g	1.0g	1.0g	1.0g	1.0g
Heat-resistance	80°C				

\* The introduction of leakage results in a 40% decrease in vacuum force once the SD sheet is applied. \* With double-stick-tape processing.

▶ EP sponge sheet to be attached at the tip of the suction cup. Perfect for parts with uneven suction surfaces.

Applicable cup size	φ 14mm	φ 20mm	φ 30mm	φ 40mm	φ 50mm	φ 60mm
EP sponge (black)						
Drawing						
Order code No.	<b>271559</b>	<b>282010</b>	<b>294889</b>	<b>300386</b>	<b>310589</b>	<b>322949</b>
TYPE	<b>14C-EPSP</b>	<b>20C-EPSP</b>	<b>30C-EPSP</b>	<b>40C-EPSP</b>	<b>50C-EPSP</b>	<b>60C-EPSP</b>
Weight	0.1g	0.2g	0.4g	0.7g	0.5g	1.2g
Heat-resistance	80°C					

\* Your diagram may have a slightly different layout as the component is made of sponge.  
\* Please use the code No. 286172 "cutter" for peeling sponge sheet film. (Please check the details on the website.)

▶ Sponge sheet to be attached at the tip of the Suction Cups (Bellow).

Applicable cup size	φ 40mm
Silicon sponge ring (Brown)	
Drawing	
Order code No.	<b>072746</b>
TYPE	<b>40C-SP</b>
Weight	1.0g
Heat-resistance	200°C

NEW



## TOP SHEET CUTTER

Order code No.	<b>286172</b>
TYPE	<b>209B</b>

- Ideal for removing EP sponge sheet coatings. The spring built into the main body keeps constant pressure on the blade allowing for stable cutting action.

## Adhesive (sponge Pads)

Order code No.	<b>371759</b>
TYPE	<b>Adhesive Q 50G Clear #4888</b>

- NET : 50ml
- Silicon bond
- Use for adhesion to rubber system.

NEW



## Aluminum LAMIZIP

Order code No.	<b>002407</b>
TYPE	<b>AL-22</b>

- Please use this for storing suction cups.

## Precautions for sticking (SD sheet, EP sponge)

- Use the purchases within one month after you buy them. Adhesive force of the double-sided tape will significantly reduce after stored for a long time. We recommend using with the silicone adhesive (371759 BATH BOND).
- Wipe the surface clean with ethanol before you stick it on the cup. Do not touch the surface with your hands.
- Hold the adhesive surface with sufficient adhesion to the surface for about 24 hours.
- If the adhesive strength is weak, please strengthen it with silicone adhesive (371759 bath bond).
- Double-sided tape is weak when the oblique tension force is added. Use the tape for the vertical direction force.

## Precautions for sticking Sponge sheet

- When apply the parts, please wipe the surface with ethanol and spread the silicone adhesive then attaches the parts without touching. (371759 Bath Bond)

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



# Suction Cups (Fluorine Bellows/Sheet Metal)

Use as your situation.

- Fluorine** The material exhibits outstanding durability, resistance to heat and chemicals, and is not prone to leaving suction marks, ensuring a prolonged service life.
- Nitrile** Excellent durability, heat resistant and chemical resistance, mostly resistant to suction marks and has long service life.

▶ Used for parts with angle. High temperature resistance and reduce suction cup markings.

Applicable cup size	φ3mm	φ15mm	φ20mm	φ30mm	φ40mm	
Suction Cups (Fluorine Bellows)						
Drawing						
* The value in ( ) indicates the dimension with suction.						
Fluorine (black)	Order code No.	<b>211101</b>	<b>042042</b>	<b>042043</b>	<b>042044</b>	<b>042045</b>
	TYPE	VAPF-3C-3	EPCG-15-F	EPCG-20-F	EPCG-30-F	EPCG-40-F
	Weight	0.1g	3g	4g	14g	32g
Applicable head	Names	Suction stems head • M5 • For EPCG15/20			Suction stems head • M5 • For EPCG30/40	
	Order code No.	<b>211102</b>			<b>211103</b>	
	TYPE	VFILK-AH01			VFILK-AH02	
Weight	3.0g			8.0g		
Drawing						
Applicable stems	Micro : VFILB-M,MSH → <a href="#">3-23,30</a>			VFILB2-SH system (used by replacing the head) → <a href="#">3-30</a>		

\* When using a fluorine pad φ 15 mm to φ 40 mm, a special suction head bracket is required.

▶ Use it for sheet metal conveyance. The grooves on the suction surface of the pad inhibit the lateral movement of the iron plate, which is coated with an oil film, while also accommodating the curved workpiece through a buffering effect.

Applicable cup size	φ30mm		φ60mm		
Suction Cups (Sheet Metal)					
Drawing					
* The value in ( ) indicates the dimension with suction.					
Fluorine (black)	Order code No.	<b>210918</b>	<b>210919</b>	<b>210920</b>	<b>210921</b>
	TYPE	VAPNP-30C-1-M	VAPNP-30C-1-F	VAPNP-60C-1-M	VAPNP-60C-1-F
	Weight	15.0g	12.0g	47.0g	45.0g
Characteristics of rubber	Heat resistance : 85°C / Shore hardness : 60		Heat resistance : 85°C / Shore hardness : 60		
Applicable stems	Large : VFI-L, or VFIL-H → <a href="#">3-29,31</a>		Large : VFI-L, or VFIL-H → <a href="#">3-29,31</a>		



# Suction Cups (Vacuum)

Utilize it as per your requirements from a range of products.

**Silicone** Excellent in durability and heat resistance (250°C).

**Fluorine** The material exhibits outstanding durability, resistance to heat and chemicals, and is not prone to leaving suction marks, ensuring a prolonged service life.

▶ The lip of bellows cup 2-stage is thin.

Applicable cup size	φ 2mm	φ 4mm	φ 6mm	φ 8mm	φ 10mm	φ 15mm	
<b>Suction Cups (Vacuum)</b>							
<b>Drawing</b>							
<b>Silicone (transparent white)</b>	<b>Order code No.</b>	<b>042095</b>	<b>042096</b>	<b>042038</b>	<b>042039</b>	<b>042040</b>	<b>042041</b>
	<b>TYPE</b>	<b>EPJG-2-S</b>	<b>EPJG-4-S</b>	<b>EPJG-6-S</b>	<b>EPJG-8-S</b>	<b>EPJG-10-S</b>	<b>EPJG-15-S</b>
	<b>Weight</b>	0.1g	0.1g	0.15g	0.25g	0.45g	1.0g
<b>Fluorine (black)</b>	<b>Order code No.</b>	<b>042097</b>	<b>042098</b>	<b>042099</b>	<b>042100</b>	—	—
	<b>TYPE</b>	<b>EPJG-2-F-RA</b>	<b>EPJG-4-F-RA</b>	<b>EPJG-6-F-RA</b>	<b>EPJG-8-F-RA</b>	—	—
	<b>Weight</b>	0.1g	0.1g	0.2g	0.3g	—	—
<b>Applicable head</b>							
<b>Drawing</b>							
<b>Order code No.</b>	<b>042111</b>		<b>042112</b>				
<b>TYPE</b>	<b>ETN-PS-2A-M5</b>		<b>ETN-PS-10-M5</b>				
<b>Weight</b>	0.5g		0.8g				
<b>Applicable stems</b>	VFILB2-SSH, SH series (remove the attach head and use) ▶ <a href="#">3-30</a>						

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools

Tool / Jig

## Information







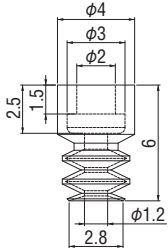
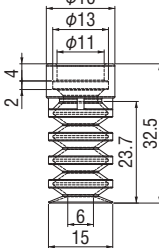
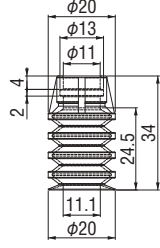
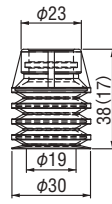
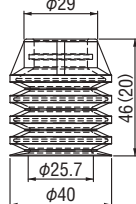
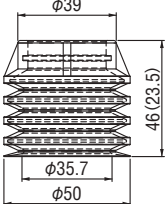




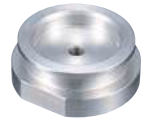
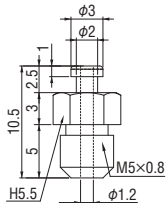
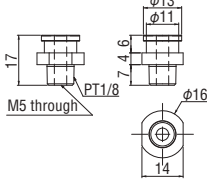
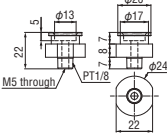
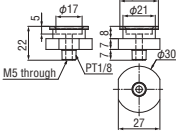
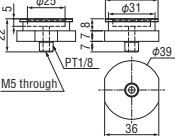
Various Products Information



# Suction Cups (Multistage Bellows)

Utilize it as per your requirements from a range of products.

► The cushion is of exceptional quality and is well-suited for workpieces with irregular surfaces.

Applicable cup size	φ 3mm	φ 15mm	φ 20mm	φ 30mm	φ 40mm	φ 50mm
Suction Cups (Multistage Bellows)						
Drawing						
Order code No.	<b>042101</b>	<b>042102</b>	<b>042103</b>	<b>042071</b>	<b>042072</b>	<b>042073</b>
TYPE	<b>EPCG-3-S</b>	<b>EPLG-15-S5</b>	<b>EPLG-20-S5</b>	<b>EPLG-30-S5</b>	<b>EPLG-40-S5</b>	<b>EPLG-50-S5</b>
Weight	0.1g	1.6g	20.8g	6.9g	15.7g	20.8g
Applicable head						
Drawing						
Order code No.	<b>042111</b>	<b>211114</b>	<b>211115</b>	<b>211116</b>	<b>211117</b>	
TYPE	<b>ETN-PS-2A-M5</b>	<b>VFILA-PHA-1/8</b>	<b>VFILA-PHB-1/8</b>	<b>VFILA-PHC-1/8</b>	<b>VFILA-PHD-1/8</b>	
Weight	0.5g	4.0g	13.0g	18.0g	34.0g	
Applicable stems	VFILB-SSH → <a href="#">3-30</a>	VFILB-1/8, VFI-L, VFIL-H → <a href="#">3-29,31</a>				



# Suction Cups (Pouches)

Use as your situation.

► The soft-bodied, bag-shaped workpiece is transported through the subsequent performance and gripping force.

## Star-shaped Type

Applicable cup size	φ24mm (equivalent to φ20mm)	φ40mm (equivalent to φ34mm)	φ56mm (equivalent to φ48mm)
Suction Cups (Pouches)			
Drawing			
Order code No.	<b>042108</b>	<b>042109</b>	<b>042110</b>
TYPE	<b>EPMG-24S-S4</b>	<b>EPMG-40S-S4</b>	<b>EPMG-56S-S4</b>
Weight	2.5g	5.6g	20.3g
Applicable stems	① VFILA-PHA-1/8	② VFILA-PHB-1/8	③ VFILA-PHC-1/8

\* The applicable suction head is necessary for using the suction cups.

## Star-shaped Bellows Type

Applicable cup size	φ24mm (equivalent to φ20mm)	φ40mm (equivalent to φ34mm)	φ56mm (equivalent to φ48mm)
Suction Cups (Pouches)			
Drawing			
Order code No.	<b>042074</b>	<b>042075</b>	<b>042107</b>
TYPE	<b>EPMG-24L-S4</b>	<b>EPMG-40L-S4</b>	<b>EPMG-56L-S4</b>
Weight	5.0g	10.0g	11.1g
Applicable stems	① VFILA-PHA-1/8	② VFILA-PHB-1/8	③ VFILA-PHC-1/8

\* The applicable suction head is necessary for using the suction cups.

## Round flat type

Applicable cup size	φ18mm	φ25mm	φ35mm
Suction Cups (Pouches)			
Drawing			
Order code No.	<b>042104</b>	<b>042105</b>	<b>042106</b>
TYPE	<b>EPNG-132B-S4</b>	<b>EPNG-133B-S4</b>	<b>EPNG-134B-S4</b>
Weight	0.5g	2.8g	3.3g
Applicable stems	① VFILA-PHA-1/8		

\* The applicable suction head is necessary for using the suction cups.

## Suction head for star-shaped and round pouch cups

Outside Stem	①	②	③
Drawing			
Order code No.	<b>211114</b>	<b>211115</b>	<b>211116</b>
TYPE	<b>VFILA-PHA-1/8</b>	<b>VFILA-PHB-1/8</b>	<b>VFILA-PHC-1/8</b>
Weight	4.0g	13.0g	18.0g
Applicable stems	VFILB-1/8, VFI-L, VFIL-H → <a href="#">3-29,31</a>		

Star-shaped lip shapes could freely follow the soft and bag-shaped work piece.



Special lip structure enables tight suction.



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

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### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

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Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information







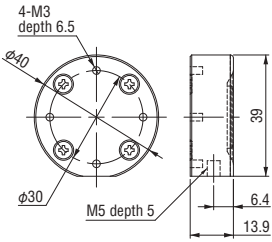
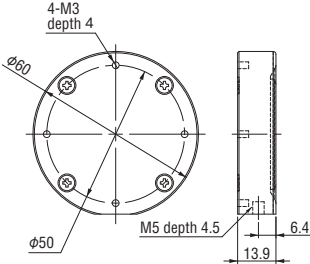
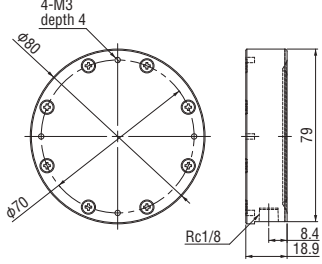




# Non-Contact Suction Pad

Please choose based on the 3 types of lifting forces.

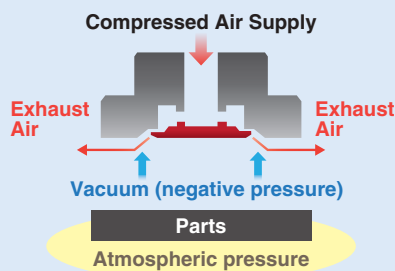
- ▶ It can transfer the work piece of different shapes with one gripper (wood, resin, cardboard, etc.).
- ▶ The absence of contact with the workpiece ensures that it is transported without any suction marks or damage

Applicable cup size	φ 40mm	φ 60mm	φ 80mm
Non-Contact Suction Pad	 	 	 
Drawing			
Order code No.	<b>042113</b>	<b>042114</b>	<b>042115</b>
TYPE	<b>ECOPS-40Y</b>	<b>ECOPS-60Y</b>	<b>ECOPS-80Y</b>
Weight	26g	66g	147g

## Specification

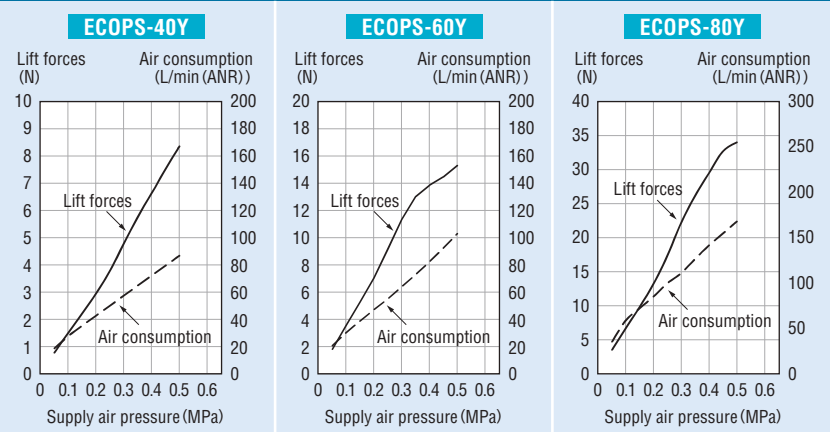
TYPE	Fluid used	Piping connection diameter	Pressure range (MPa)	Temperature range (°C)	Lift forces (N)	Air consumption (L/min (ANR))	Weight (g)
ECOPS-40Y	Air (Non corrosive and incombustible gas)	M5	0.15 ~ 0.5	0 ~ 45 (However, it doesn't freeze.)	8	88	26
ECOPS-60Y					15	105	66
ECOPS-80Y		Rc1/8			34	168	147

## Schematic diagram



The air is released and sucked, so the inside is clean and it's sanitary to be used even the inside isn't disassembled and cleared up.

## Performance graph





# Flat Suction Cups

Flat basic type. Silicone type and a mark-free type are provided.

**Silicone** Excellent in durability and heat resistance (250°C).

**Mark-free** It demonstrates exceptional durability and heat resistance up to 140°C, making it resistant to leaving suction marks.

• Can be used by removing suction attach head of the suction stem non-rotate (VFILB,VFILB2).

► It is appropriate for transmitting items that have a flat surface.

Applicable cup size	φ 1.2mm	φ 1.8mm	φ 2mm	φ 3.5mm	φ 5mm	φ 6mm	
Flat Suction Cups							
Drawing							
Silicone (transparent white)	Order code No.	<b>183823</b>	<b>183824</b>	<b>183825</b>	<b>183826</b>	<b>183827</b>	<b>183828</b>
	TYPE	<b>SNQ 1 SI-M3 M</b>	<b>SNQ 1.5 SI-M3 M</b>	<b>SNQ 2 SI-M3 M</b>	<b>SNQ 3.5 SI-M3 M</b>	<b>SNQ 5 SI-M5 M</b>	<b>SNQ 6 SI-M5 M</b>
	Weight	1.0g	1.0g	1.0g	1.0g	1.1g	1.1g
Mark-free (blue)	Order code No.	—	—	—	—	<b>183797</b>	<b>183798</b>
	TYPE	—	—	—	—	<b>SNQ 5 HT1-M5 M</b>	<b>SNQ 6 HT1-M5 M</b>
	Weight	—	—	—	—	1.1g	1.1g
Applicable stems	Micro : VFILB-M, MSH → <a href="#">3-23,30</a>				Non-rotate for mini / small or VFILB/VFILBR → <a href="#">3-30,31</a>		

Applicable cup size	φ 8mm	φ 10mm	φ 15mm	φ 20mm	
Flat Suction Cups					
Drawing					
Silicone (transparent white)	Order code No.	<b>183829</b>	<b>183830</b>	<b>183831</b>	<b>183832</b>
	TYPE	<b>SNQ 8 SI-M5 M</b>	<b>SNQ 10 SI-M5 M</b>	<b>SNQ 15 SI-M5 M</b>	<b>SNQ 20 SI-M5 M</b>
	Weight	1.2g	1.3g	4.5g	5.6g
Mark-free (blue)	Order code No.	<b>183799</b>	<b>183800</b>	<b>183801</b>	<b>183802</b>
	TYPE	<b>SNQ 8 HT1-M5 M</b>	<b>SNQ 10 HT1-M5 M</b>	<b>SNQ 15 HT1-M5 M</b>	<b>SNQ 20 HT1-M5 M</b>
	Weight	1.2g	1.3g	4.5g	5.6g
Applicable stems	Non-rotate for mini / small or VFILB/VFILBR → <a href="#">3-30,31</a>				

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

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Mini Cylinder

Accessories for Mini Cylinder

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Accessories for Container Cylinder

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Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Chuck

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication





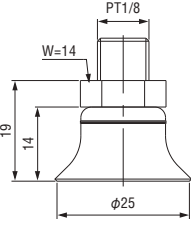
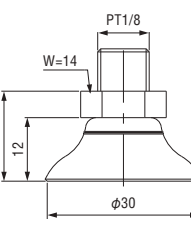
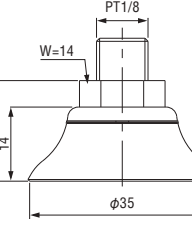
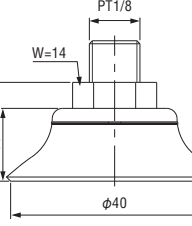
## Assembling Tools

Tool / Jig




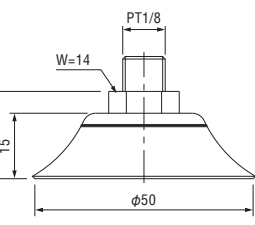
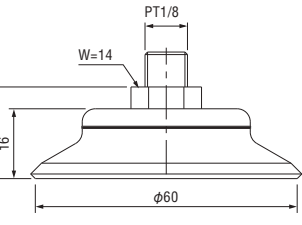
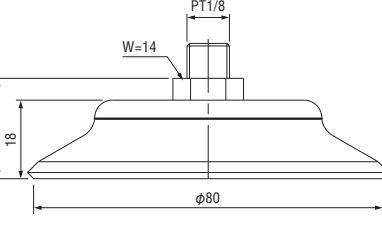
## Information

Various Products Information

# Flat Suction Cups

Applicable cup size	φ25mm	φ30mm	φ35mm	φ40mm	
Flat Suction Cups					
Drawing					
Silicone (transparent white)	Order code No.	<b>183833</b>	<b>183834</b>	<b>183835</b>	<b>183836</b>
	TYPE	<b>SQN 25 SI-PT1/8 M</b>	<b>SQN 30 SI-PT1/8 M</b>	<b>SQN 35 SI-PT1/8 M</b>	<b>SQN 40 SI-PT1/8 M</b>
	Weight	7.2g	7.9g	10.6g	12.2g
Mark-free (blue)	Order code No.	<b>183803</b>	<b>183804</b>	<b>183805</b>	<b>183806</b>
	TYPE	<b>SQN 25 HT1-PT1/8 M</b>	<b>SQN 30 HT1-PT1/8 M</b>	<b>SQN 35 HT1-PT1/8 M</b>	<b>SQN 40 HT1-PT1/8 M</b>
	Weight	7.2g	7.9g	10.6g	12.2g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>				

Applicable cup size	φ50mm	φ60mm	φ80mm	
Flat Suction Cups				
Drawing				
Silicone (transparent white)	Order code No.	<b>183837</b>	<b>183838</b>	<b>183839</b>
	TYPE	<b>SQN 50 SI-PT1/8 M</b>	<b>SQN 60 SI-PT1/8 M</b>	<b>SQN 80 SI-PT1/8 M</b>
	Weight	15.3g	34.2g	62.5g
Mark-free (blue)	Order code No.	<b>183807</b>	<b>183808</b>	<b>183809</b>
	TYPE	<b>SQN 50 HT1-PT1/8 M</b>	<b>SQN 60 HT1-PT1/8 M</b>	<b>SQN 80 HT1-PT1/8 M</b>
	Weight	15.3g	34.2g	62.5g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>			



# Bellows Type Suction Cups 1.5-stage

The bellows cups, characterized by their significant buffering effect, are ideally suited for transporting uneven workpieces.







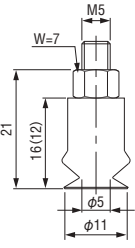
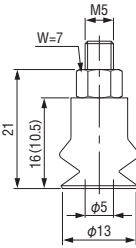
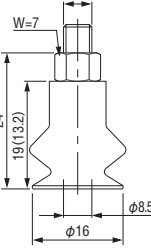
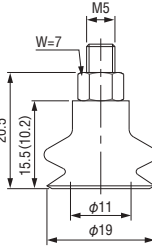
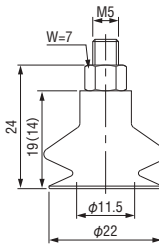
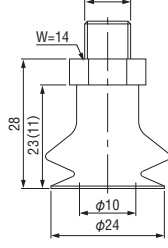
**Silicone**





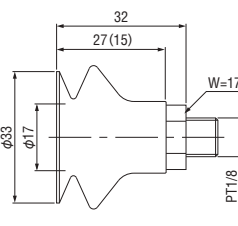
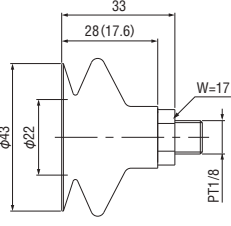
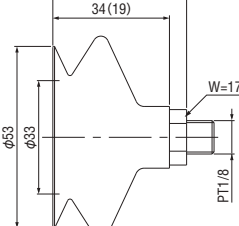
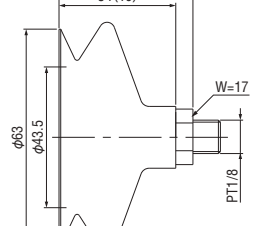
Excellent in durability and heat resistance (250°C).

**Mark-free**

It demonstrates exceptional durability and heat resistance up to 140°C, making it resistant to leaving suction marks.

- The suction attachment can be detached from the non-rotating suction stem (VFILB, VFILB2) for use.

Applicable cup size	φ 11mm	φ 13mm	φ 16mm	φ 19mm	φ 22mm	φ 24mm	
<b>Bellows type Suction Cups 1.5-stage</b>							
<b>Drawing</b>							
* The value in ( ) indicates the dimension with suction.							
<b>Silicone (transparent white)</b>	<b>Order code No.</b>	<b>183874</b>	<b>183875</b>	<b>183876</b>	<b>183877</b>	<b>183878</b>	<b>183994</b>
	<b>TYPE</b>	SFSGA 11 SI-M5 M	SFSGA 14 SI-M5 M	SFSGA 16 SI-M5 M	SFSGA 20 SI-M5 M	SFSGA 22 SI-M5 M	SFSGA 25 SI-PT1/8 M
	<b>Weight</b>	2.0g	2.1g	2.3g	2.7g	3.1g	6.4g
<b>Mark-free (blue)</b>	<b>Order code No.</b>	<b>183857</b>	<b>183858</b>	<b>183859</b>	<b>183860</b>	<b>183861</b>	<b>183993</b>
	<b>TYPE</b>	SFSGA 11 HT1-M5 M	SFSGA 14 HT1-M5 M	SFSGA 16 HT1-M5 M	SFSGA 20 HT1-M5 M	SFSGA 22 HT1-M5 M	SFSGA 25 HT1-PT1/8 M
	<b>Weight</b>	2.0g	2.1g	2.3g	2.7g	3.1g	6.4g
<b>Applicable stems</b>	Non-rotate for mini/small or VFILB/VFILBR → <a href="#">3-30,31</a>					Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>	

Applicable cup size	φ 33mm	φ 43mm	φ 53mm	φ 63mm	
<b>Bellows type Suction Cups 1.5-stage</b>					
<b>Drawing</b>					
* The value in ( ) indicates the dimension with suction.					
<b>Silicone (transparent white)</b>	<b>Order code No.</b>	<b>183879</b>	<b>183880</b>	<b>183881</b>	<b>183882</b>
	<b>TYPE</b>	SFSGA 33 SI-PT1/8 M	SFSGA 43 SI-PT1/8 M	SFSGA 53 SI-PT1/8 M	SFSGA 63 SI-PT1/8 M
	<b>Weight</b>	15.0g	18.0g	26.0g	33.0g
<b>Mark-free (blue)</b>	<b>Order code No.</b>	<b>183862</b>	<b>183863</b>	<b>183864</b>	—
	<b>TYPE</b>	SFSGA 33 HT1-PT1/8 M	SFSGA 43 HT1-PT1/8 M	SFSGA 53 HT1-PT1/8 M	—
	<b>Weight</b>	15.0g	18.0g	26.0g	—
<b>Applicable stems</b>	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>				

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

### Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Bellows Type Suction Cups 2.5-stage

Bellows cups, characterized by their significant buffering effect, are ideally suited for transporting workpieces that are angled or uneven.

**Silicone**

Excellent in durability and heat resistance (250°C).

**Mark-free**

It demonstrates exceptional durability and heat resistance up to 140°C, making it resistant to leaving suction marks.

• Can be used by removing suction attach head of the suction stem non-rotate (VFILB,VFILB2).

Applicable cup size	φ 5.5mm	φ 6.5mm	φ 9.3mm	φ 12.7mm	φ 15mm	φ 18.5mm	
<b>Bellows type Suction Cups 2.5-stage</b>							
<b>Drawing</b>							
<b>* The value in ( ) indicates the dimension with suction.</b>							
<b>Silicone (transparent white)</b>	<b>Order code No.</b>	<b>183909</b>	<b>183910</b>	<b>183911</b>	<b>183912</b>	<b>183913</b>	<b>183914</b>
	<b>TYPE</b>	<b>SFSG 5 SI-M5 M</b>	<b>SFSG 7 SI-M5 M</b>	<b>SFSG 9 SI-M5 M</b>	<b>SFSG 12 SI-M5 M</b>	<b>SFSG 14 SI-M5 M</b>	<b>SFSG 18 SI-M5 M</b>
	<b>Weight</b>	1.5g	1.6g	1.8g	2.2g	2.6g	2.9g
<b>Mark-free (blue)</b>	<b>Order code No.</b>	—	—	<b>183893</b>	<b>183894</b>	<b>183895</b>	<b>183896</b>
	<b>TYPE</b>	—	—	<b>SFSG 9 HT1-M5 M</b>	<b>SFSG 12 HT1-M5 M</b>	<b>SFSG 14 HT1-M5 M</b>	<b>SFSG 18 HT1-M5 M</b>
	<b>Weight</b>	—	—	1.8g	2.2g	2.6g	2.9g
<b>Applicable stems</b>	Non-rotate for mini/small or VFILB/VFILBR → <a href="#">3-30,31</a>						

Applicable cup size	φ 20mm	φ 24.7mm	φ 32.6mm	φ 43.5mm	φ 52.5mm	φ 62.2mm	
<b>Bellows type Suction Cups 2.5-stage</b>							
<b>Drawing</b>							
<b>* The value in ( ) indicates the dimension with suction.</b>							
<b>Silicone (transparent white)</b>	<b>Order code No.</b>	<b>183915</b>	<b>183916</b>	<b>183917</b>	<b>183918</b>	<b>183919</b>	<b>183920</b>
	<b>TYPE</b>	<b>SFSG 20 SI-M5 M</b>	<b>SFSG 25 SI-PT1/8 M</b>	<b>SFSG 32 SI-PT1/8 M</b>	<b>SFSG 42 SI-PT1/8 M</b>	<b>SFSG 52 SI-PT1/8 M</b>	<b>SFSG 62 SI-PT1/8 M</b>
	<b>Weight</b>	3.3g	8.0g	16.0g	26.0g	31.0g	59.0g
<b>Mark-free (blue)</b>	<b>Order code No.</b>	<b>183897</b>	<b>183898</b>	<b>183899</b>	<b>183900</b>	—	—
	<b>TYPE</b>	<b>SFSG 20 HT1-M5 M</b>	<b>SFSG 25 HT1-PT1/8 M</b>	<b>SFSG 32 HT1-PT1/8 M</b>	<b>SFSG 42 HT1-PT1/8 M</b>	—	—
	<b>Weight</b>	3.3g	8.0g	16.0g	26.0g	—	—
<b>Applicable stems</b>	Non-rotate for mini/small or VFILB, VFILBR → <a href="#">3-30,31</a>		Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>		Large, VFI-L, or VFIL-H → <a href="#">3-29,31</a>		





# Oval Cups

Oval Cups are ideal for transporting elongated and slender workpieces.

**Silicone**

Excellent in durability and heat resistance (250°C).

**Mark-free**

It demonstrates exceptional durability and heat resistance up to 140°C, making it resistant to leaving suction marks.

- Can be used by removing suction attach head of the suction stem non-rotate (VFILB,VFILB2).

Applicable cup size	2×4mm	3.5×7mm	5×15mm	6×18mm
Oval cups				
Drawing				
Silicone (transparent white)	Order code No.	<b>187222</b>	<b>187223</b>	—
	TYPE	SSGON-4 * 2-SI-65-M3-M	SSGON-7 * 3.5-SI-65-M3-M	—
	Weight	2.0g	2.0g	—
Mark-free (blue)	Order code No.	<b>183932</b>	<b>183933</b>	<b>183935</b>
	TYPE	SSGON 2 * 4 HT1-M3 M	SSGON 3.5 * 7 HT1-M3 M	SSGON 6 * 18 HT1-M5 M
	Weight	2.0g	2.0g	3.7g
Applicable stems	Micro or VFILB-M,MSH → <a href="#">3-23,30</a>		Non-rotate for mini/small or VFILB/VFILBR → <a href="#">3-30,31</a>	

Applicable cup size	8×24mm	10×30mm	15×45mm
Oval cups			
Drawing			
Silicone (transparent white)	Order code No.	—	<b>187225</b>
	TYPE	—	SSGON-30 * 10-SI-65-PT1/8-M
	Weight	—	6.8g
Mark-free (blue)	Order code No.	<b>183936</b>	<b>183937</b>
	TYPE	SSGON 8 * 24 HT1-PT1/8 M	SSGON 10 * 30 HT1-PT1/8 M
	Weight	6.7g	6.8g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>		

## Quick Chuck Change

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Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Sheet Metal Suction Cups

Best for high-speed conveyance of oil-filmed sheet metal.

► Strong holding power in the horizontal direction. Utilize the superior suction capability provided by the groove on the suction surface.

Applicable cup size	φ 33mm	φ 43mm	φ 53mm	φ 63mm
Suction Cups for sheet metal w/ screw				
Drawing				
Order code No.	<b>187562</b>	<b>187563</b>	<b>187564</b>	<b>187565</b>
TYPE	SSAXM-30-ED85-PT1/8AGJNT	SSAXM-40-ED85-PT1/8AGJNT	SSAXM-50-ED85-PT1/8AGJNT	SSAXM-60-ED85-PT1/8AGJNT
Holding force* <sup>1</sup>	39N	69N	109N	154N
Horizontal power (with oil)* <sup>2</sup>	41N	71N	110N	155N
Weight	23.2g	23.7g	36.3g	41.0g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>			

Applicable cup size	φ 83mm	φ 103mm	φ 118mm
Suction Cups for sheet metal w/ screw			
Drawing			
Order code No.	<b>187566</b>	<b>187567</b>	<b>187568</b>
TYPE	SSAXM-80-ED85-PT1/8AGJNT	SSAXM-100-ED85-PT1/8AGJNT	SSAXM-115-ED85-PT1/8AGJNT
Holding force* <sup>1</sup>	270N	412N	549N
Horizontal power (with oil)* <sup>2</sup>	269N	414N	584N
Weight	50.5g	89.8g	109.9g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29,31</a>		

\*1 Above holding force is calculated with dried workpiece with a smooth surface (vertical direction, vacuum pressure -60 kPa). Safety factor is not included.

\*2 Above horizontal force is calculated with dried/oil-filmed workpiece with a smooth surface (vacuum pressure -60 kPa). Actual values may vary depending on the state of the work piece surface. Safety factor is not included.

#### Upper connector

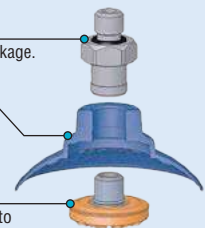
A seal ring is included to prevent air leakage.

#### Rubber part

Composed of Elastodur, this material exhibits outstanding flexibility and exceptional resistance to wear.

#### Underside connector with brake foot

Prevents products from being drawn into the pad or deforming.





# Suction Cups for Exchange

Suction Cups for exchange in 3-15 ~ 3-19.

## ► Suction Cups for Flat Suction Cups.

Page	Order code No.	TYPE	Material	Cup color
3-15	183840	SQ 1 SI	silicone	Cloudy transparent
	183841	SQ 1.5 SI	silicone	Cloudy transparent
	183842	SQ 2 SI	silicone	Cloudy transparent
	183843	SQ 3.5 SI	silicone	Cloudy transparent
	183844	SQ 5 SI	silicone	Cloudy transparent
	183845	SQ 6 SI	silicone	Cloudy transparent
	183846	SQ 8 SI	silicone	Cloudy transparent
	183847	SQ 10 SI	silicone	Cloudy transparent
	183848	SQ 15 SI	silicone	Cloudy transparent
183849	SQ 20 SI	silicone	Cloudy transparent	
3-16	183850	SQ 25 SI	silicone	Cloudy transparent
	183851	SQ 30 SI	silicone	Cloudy transparent
	183852	SQ 35 SI	silicone	Cloudy transparent
	183853	SQ 40 SI	silicone	Cloudy transparent
	183854	SQ 50 SI	silicone	Cloudy transparent
	183855	SQ 60 SI	silicone	Cloudy transparent
	183856	SQ 80 SI	silicone	Cloudy transparent
3-15	183810	SQ 5 HT1	Mark-free	Blue
	183811	SQ 6 HT1	Mark-free	Blue
	183812	SQ 8 HT1	Mark-free	Blue
	183813	SQ 10 HT1	Mark-free	Blue
	183814	SQ 15 HT1	Mark-free	Blue
3-16	183815	SQ 20 HT1	Mark-free	Blue
	183816	SQ 25 HT1	Mark-free	Blue
	183817	SQ 30 HT1	Mark-free	Blue
	183818	SQ 35 HT1	Mark-free	Blue
	183819	SQ 40 HT1	Mark-free	Blue
	183820	SQ 50 HT1	Mark-free	Blue
	183821	SQ 60 HT1	Mark-free	Blue
	183822	SQ 80 HT1	Mark-free	Blue

## ► Suction Cups for flat oval.

Page	Order code No.	TYPE	Material	Cup color
3-19	187227	SSGO-4*2-SI-65	silicone	White
	187228	SSGO-7*3.5-SI-65	silicone	White
	187229	SSGO-15*5-SI-65	silicone	White
	187230	SSGO-30*10-SI-65*	silicone	White
	187231	SSGO-45*15-SI-65*	silicone	White
3-19	183940	SSGO 2*4 HT1	Mark-free	Blue
	183941	SSGO 3.5*7 HT1	Mark-free	Blue
	183942	SSGO 5*15 HT1	Mark-free	Blue
	183943	SSGO 6*18 HT1*	Mark-free	Blue
	183944	SSGO 8*24 HT1*	Mark-free	Blue
	183945	SSGO 10*30 HT1*	Mark-free	Blue
	183946	SSGO 15*45 HT1*	Mark-free	Blue

\* Incorporate the stem for securing the cups.

## ► Bellows type Suction Cups 1.5-stage.

Page	Order code No.	TYPE	Material	Cup color	
3-17	183883	SFGA 11 SI	silicone	Cloudy transparent	
	183884	SFGA 14 SI	silicone	Cloudy transparent	
	183885	SFGA 16 SI	silicone	Cloudy transparent	
	183886	SFGA 20 SI	silicone	Cloudy transparent	
	183887	SFGA 22 SI	silicone	Cloudy transparent	
	183888	SFGA 25 SI	silicone	Cloudy transparent	
	183889	SFGA 33 SI	silicone	Cloudy transparent	
	183890	SFGA 43 SI	silicone	Cloudy transparent	
	183891	SFGA 53 SI	silicone	Cloudy transparent	
	183892	SFGA 63 SI	silicone	Cloudy transparent	
	3-17	183865	SFGA 11 HT 1	Mark-free	Blue
		183866	SFGA 14 HT1	Mark-free	Blue
183867		SFGA 16 HT1	Mark-free	Blue	
183868		SFGA 20 HT1	Mark-free	Blue	
183869		SFGA 22 HT1	Mark-free	Blue	
183870		SFGA 25 HT1	Mark-free	Blue	
183871		SFGA 33 HT1	Mark-free	Blue	
183872		SFGA 43 HT1	Mark-free	Blue	
183873		SFGA 53 HT1	Mark-free	Blue	

## ► Bellows type Suction Cups 2.5-stage.

Page	Order code No.	TYPE	Material	Cup color
3-18	183921	SFG 5 SI	silicone	Cloudy transparent
	183922	SFG 7 SI	silicone	Cloudy transparent
	183923	SFG 9 SI	silicone	Cloudy transparent
	183924	SFG 12 SI	silicone	Cloudy transparent
	183925	SFG 14 SI	silicone	Cloudy transparent
	184085	SFG 18 SI	silicone	Cloudy transparent
	183926	SFG 20 SI	silicone	Cloudy transparent
	183927	SFG 25 SI	silicone	Cloudy transparent
	183928	SFG 32 SI	silicone	Cloudy transparent
	183929	SFG 42 SI	silicone	Cloudy transparent
	183930	SFG 52 SI	silicone	Cloudy transparent
	183931	SFG 62 SI	silicone	Cloudy transparent
	3-18	183901	SFG 9 HT1	Mark-free
183902		SFG 12 HT1	Mark-free	Blue
183903		SFG 14 HT1	Mark-free	Blue
183904		SFG 18 HT1	Mark-free	Blue
183905		SFG 20 HT1	Mark-free	Blue
183906		SFG 25 HT1	Mark-free	Blue
183907		SFG 32 HT1	Mark-free	Blue
183908		SFG 42 HT1	Mark-free	Blue

### Quick Chuck Change

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### Suction

#### Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

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Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

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### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



Please check the performance table on the web site.

## Suction stems

Can be selected according to the type of suction cup and allows secure suction.



Micro

3-23



Mini

3-23



Small

3-26



Large

3-29



Mini

3-23



Small

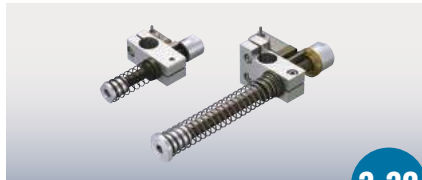
3-26

## Resin Suction stems

Weight saving achieved by using plastic for the body.

## Suction stems locking mechanism

Non-rotating suction stems. These feature a long stroke, holding unit in position at the stopper cylinder.



3-32

## Suction stems non-rotate

Exchangeable head for suction stem.



Micro

3-30



Mini

3-30



Small

3-30



1/8 For connection

3-31

## Suction stems non-rotate

Exchangeable head for suction stem.



Angle adjustment

3-31



Large

3-31

## Fixed

Please use with a pad on the tip.



3-36

## Suction Stems for Mini Cylinder

Used when suction cup is attached to the end of mini cylinder.



3-36

## Adjuster

Height of suction stem can be adjusted.



3-37

## Suction stems angle brackets

The angle can be adjusted by attaching a pad to the tip.



3-38

## Spring constant value of suction stem

No.	TYPE	Spring constant (N/mm)	spring constant of suction stem (N)	No.	TYPE	Spring constant (N/mm)	spring constant of suction stem (N)
1	VFILB-M/VFILB-M-P8	0.29	2.62	8	VFIL1-SS-30/VFIL2-SS-30-P8/ VFIL2-SS-30-P12	0.12	4.49
2	VFILB2-SSH/VFILB2-SSH-P12/ VFILB2-SH/VFILB2-SH-P12/ VFILB2-SH1/8/VFILB2-SH1/8-P12	0.65	7.76	9	VFIL-S-5A/VFIL1-S-5-P12/ VFIL1-S-5-P20	0.27	2.46
3	VFILB2-SSH-20/VFILB2-SSH-20-P12/ VFILB2-SH-20/VFILB2-SH-20-P12/ VFILB2-SH1/8-20/VFILB2-SH1/ 8-20-P12	0.50	12.10	10	VFIL-S-10A/VFIL1-S-10-P12/ VFIL1-S-10-P20	0.16	2.63
4	VFIL-H	0.80	16.87	11	VFIL-S-20A/VFIL1-S-20-P12/ VFIL1-S-20-P20	0.11	2.81
5	VFIL1-SS-5/VFIL2-SS-5-P8/ VFIL2-SS-5-P12	0.50	3.99	12	VFIL-S-30A/VFIL1-S-30-P12/ VFIL1-S-30-P20	0.08	2.91
6	VFIL1-SS-10/VFIL2-SS-10-P8/ VFIL2-SS-10-P12	0.25	3.99	13	VFI-L-20-M17/VFI-L-20-P20	1.11	28.96
7	VFIL1-SS-20/VFIL2-SS-20-P8/ VFIL2-SS-20-P12	0.17	4.16	14	VFI-L-50-M17/VFI-L-50-P20	0.67	37.43
				15	VFI-L-100-M22	0.19	19.81

\* Spring constant. The spring force during in compression is a reference value.



# Suction Stems (Micro/Mini)



Direct connection on jungle gym series parts is possible.

Can be selected according to the type of suction cup and allows secure suction.

- The suction cup is sold separately.
- Cup fixing system : embedded

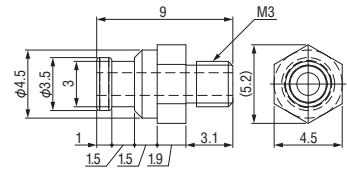
Suction stems (micro)		
Drawing		
Order code No.	<b>210785</b>	<b>210818</b>
TYPE	<b>VFILB-M</b>	<b>VFILB-M-P8</b>
Weight	5g	6g
Piping/Mounting	$\phi 4 / M6 P=0.75$	$\phi 4 / \phi 8$
Applicable cup size	VAPH-4 (6) M $\Rightarrow$ <b>3-4</b> / VAPH (F) -3C-3 $\Rightarrow$ <b>3-6,10</b> / $\phi 1.2 \sim 3.5 \Rightarrow$ <b>3-15</b>	



**Suction fitting attach head/M3, micro**

Order code No.	<b>131316</b>
TYPE	<b>N01891-201</b>

- Weight : 1g
- W/ gasket
- Target: suction stem (micro), suction stem non-rotate (micro)



Suction Stems (Mini)			
Drawing (5st)			
Order code No.	<b>211029</b>	<b>211030</b>	<b>211031</b>
TYPE	<b>VFIL1-SS-5</b>	<b>VFIL2-SS-5-P8</b>	<b>VFIL2-SS-5-P12</b>
Weight	14g	9g	13g
Piping/Mounting	$\phi 6 / M10 P=1.0$	$\phi 6 / \phi 8$	$\phi 6 / \phi 12$
Applicable cup size	$\phi 4 \sim 14 \Rightarrow$ <b>3-4,7,8</b> / TR-1062-1M $\sim 4M \Rightarrow$ <b>3-6</b> / $\phi 1.2 \sim 3.5 \Rightarrow$ <b>3-15</b>		

Resin Suction Stems (Mini)			
Drawing (5st)			
Order code No.	<b>211109</b>	<b>211105</b>	<b>211144</b>
TYPE	<b>VFILP-SS-5</b>	<b>VFILP-SS-5-P12</b>	<b>VFILPL-SS-5</b>
Weight	9g	4g	4.8g
Piping/Mounting	$\phi 6 / M10 P=1.0$	$\phi 6 / \phi 12$	$\phi 6 / M10 P=1.0$
Applicable cup size	$\phi 4 \sim 14 \Rightarrow$ <b>3-4,7,8</b> / TR-1062-1M $\sim 4M \Rightarrow$ <b>3-6</b>		

\*1 When fixing to the bracket, insert it all the way to the base.

\*2 Be careful not to tighten the nut too tightly. (Recommended tightening torque : 0.8 ~ 1.0N · m)

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders (Pads) / Resin Manifolds

## By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information





# Suction Stems (Mini)

Can be selected according to the type of suction cup and allows secure suction.

● The suction cup is sold separately. ● Cup fixing system : embedded

Suction Stems (Mini)			
Drawing (10st)			
Order code No.	<b>211032</b>	<b>211033</b>	<b>211034</b>
TYPE	<b>VFIL1-SS-10</b>	<b>VFIL2-SS-10-P8</b>	<b>VFIL2-SS-10-P12</b>
Weight	15g	9g	14g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ8	φ6 / φ12
Applicable cup size	φ4 ~ 14 → <a href="#">3-4,7,8</a> / TR-1062-1M ~ 4M → <a href="#">3-6</a> / φ1.2 ~ 3.5 → <a href="#">3-15</a>		

Resin Suction Stems (Mini)			
Drawing (10st)			
Order code No.	<b>211110</b>	<b>211106</b>	<b>211145</b>
TYPE	<b>VFILP-SS-10</b>	<b>VFILP-SS-10-P12</b>	<b>VFILPL-SS-10</b>
Weight	9g	4g	5.1g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12	φ6 / M10 P=1.0
Applicable cup size	φ4 ~ 14 → <a href="#">3-4,7,8</a> / TR-1062-1M ~ 4M → <a href="#">3-6</a>		




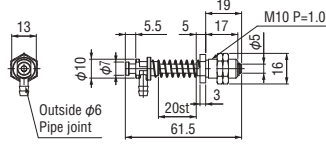
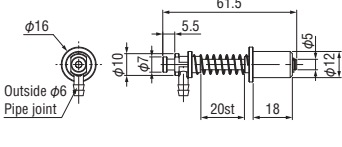
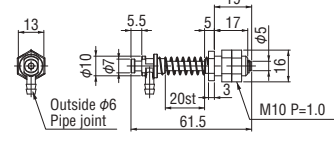
Suction Stems (Mini)			
Drawing (20st)			
Order code No.	<b>211035</b>	<b>211036</b>	<b>211037</b>
TYPE	<b>VFIL1-SS-20</b>	<b>VFIL2-SS-20-P8</b>	<b>VFIL2-SS-20-P12</b>
Weight	15g	10g	14g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ8	φ6 / φ12
Applicable cup size	φ4 ~ 14 → <a href="#">3-4,7,8</a> / TR-1062-1M ~ 4M → <a href="#">3-6</a> / φ1.2 ~ 3.5 → <a href="#">3-15</a>		




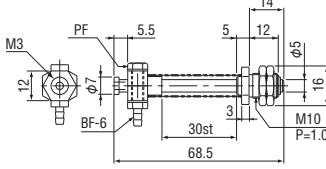
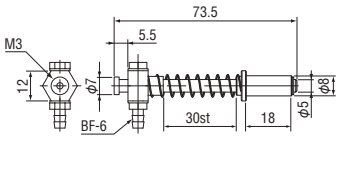
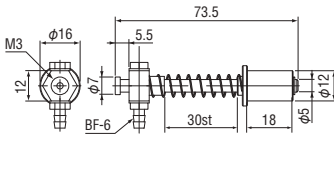
\*1 When fixing to the bracket, insert it all the way to the base.  
 \*2 Be careful not to tighten the nut too tightly. (Recommended tightening torque : 0.8 ~ 1.0N · m)




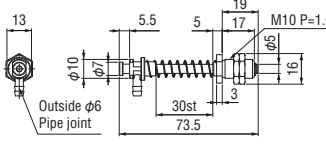
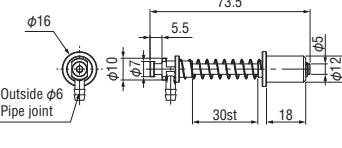
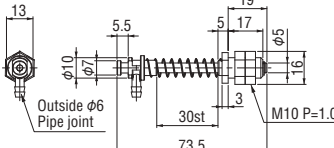


Direct connection on jungle gym series parts is possible.

● The suction cup is sold separately. ● Cup fixing system : embedded

<b>Resin Suction Stems (Mini)</b>			* 1 <b>NEW</b>		* 2
<b>Drawing (20st)</b>					
<b>Order code No.</b>	<b>211111</b>	<b>211107</b>		<b>211146</b>	
<b>TYPE</b>	<b>VFILP-SS-20</b>	<b>VFILP-SS-20-P12</b>		<b>VFILPL-SS-20</b>	
<b>Weight</b>	10g	6g		5.85g	
<b>Piping/Mounting</b>	φ6 / M10 P=1.0	φ6 / φ12		φ6 / M10 P=1.0	
<b>Applicable cup size</b>	φ4 ~ 14 ⇒ <a href="#">3-4.7.8</a> / TR-1062-1M ~ 4M ⇒ <a href="#">3-6</a>				

<b>Suction Stems (Mini)</b>			
<b>Drawing (30st)</b>			
<b>Order code No.</b>	<b>211038</b>	<b>211039</b>	<b>211040</b>
<b>TYPE</b>	<b>VFIL1-SS-30</b>	<b>VFIL2-SS-30-P8</b>	<b>VFIL2-SS-30-P12</b>
<b>Weight</b>	17g	11g	15g
<b>Piping/Mounting</b>	φ6 / M10 P=1.0	φ6 / φ8	φ6 / φ12
<b>Applicable cup size</b>	φ4 ~ 14 ⇒ <a href="#">3-4.7.8</a> / TR-1062-1M ~ 4M ⇒ <a href="#">3-6</a> / φ1.2 ~ 3.5 ⇒ <a href="#">3-15</a>		

<b>Resin Suction Stems (Mini)</b>			* 1 <b>NEW</b>		* 2
<b>Drawing (30st)</b>					
<b>Order code No.</b>	<b>211112</b>	<b>211108</b>		<b>211147</b>	
<b>TYPE</b>	<b>VFILP-SS-30</b>	<b>VFILP-SS-30-P12</b>		<b>VFILPL-SS-30</b>	
<b>Weight</b>	11g	7g		6.4g	
<b>Piping/Mounting</b>	φ6 / M10 P=1.0	φ6 / φ12		φ6 / M10 P=1.0	
<b>Applicable cup size</b>	φ4 ~ 14 ⇒ <a href="#">3-4.7.8</a> / TR-1062-1M ~ 4M ⇒ <a href="#">3-6</a>				

\*1 When fixing to the bracket, insert it all the way to the base.

\*2 Be careful not to tighten the nut too tightly. (Recommended tightening torque : 0.8 ~ 1.0N · m)

**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

**Suction Stems**

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

Various Products Information



# Suction Stems (Small)

Can be selected according to the type of suction cup and allows secure suction.

● The suction cup is sold separately. ● Cup fixing system : embedded

Suction stems (small)			
Drawing (5st)			
Order code No.	<b>210974</b>	<b>211006</b>	<b>211007</b>
TYPE	<b>VFIL-S-5A</b>	<b>VFIL1-S-5-P12</b>	<b>VFIL1-S-5-P20</b>
Weight	20g	15g	22g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$	$\phi 6 / \phi 20$
Applicable cup size	$\phi 15 \sim 45 \rightarrow$ <a href="#">3-4,5,6,7,8</a> / TR-1062-1 ~ 4 $\rightarrow$ <a href="#">3-6</a> / SQN type is $\phi 5 \sim 22 \rightarrow$ <a href="#">3-17,18</a>		

Resin Suction Stems (small)			
Drawing (5st)			
Order code No.	<b>211097</b>	<b>211092</b>	<b>211148</b>
TYPE	<b>VFILP-S-5</b>	<b>VFILP-S-5-P12</b>	<b>VFILPL-S-5</b>
Weight	16g	7g	8.35g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$	$\phi 6 / M12 P=1.0$
Applicable cup size	$\phi 15 \sim 45 \rightarrow$ <a href="#">3-4,5,6,7,8</a> / TR-1062-1 ~ 4 $\rightarrow$ <a href="#">3-6</a>		

Suction stems (small)			
Drawing (10st)			
Order code No.	<b>210975</b>	<b>211008</b>	<b>211009</b>
TYPE	<b>VFIL-S-10A</b>	<b>VFIL1-S-10-P12</b>	<b>VFIL1-S-10-P20</b>
Weight	21g	16g	29g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$	$\phi 6 / \phi 20$
Applicable cup size	$\phi 15 \sim 45 \rightarrow$ <a href="#">3-4,5,6,7,8</a> / TR-1062-1 ~ 4 $\rightarrow$ <a href="#">3-6</a> / SQN type is $\phi 5 \sim 22 \rightarrow$ <a href="#">3-17,18</a>		




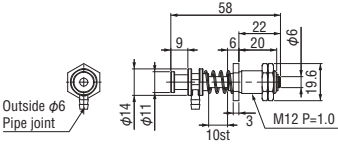
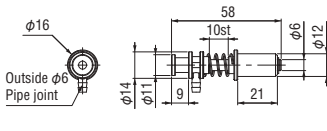
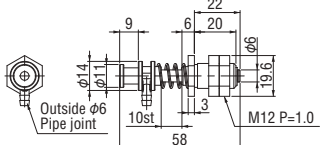
\*1 When fixing to the bracket, insert it all the way to the base.




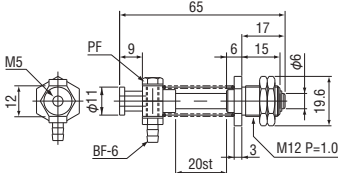
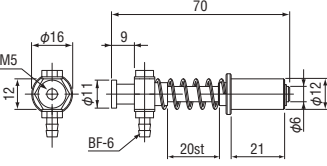
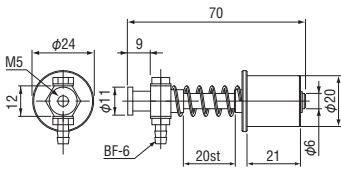
\*2 Be careful not to tighten the nut too tightly. (Recommended tightening torque : 0.8 ~ 1.0N · m)




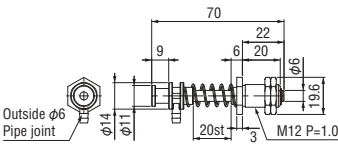
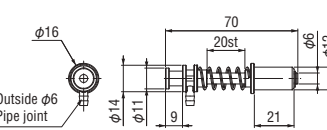
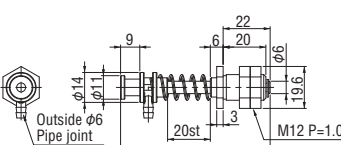


Direct connection on jungle gym series parts is possible.

● The suction cup is sold separately. ● Cup fixing system : embedded

Resin Suction Stems (small)			* 1 <b>NEW</b>		* 2
Drawing (10st)					
Order code No.	<b>211098</b>	<b>211093</b>		<b>211149</b>	
TYPE	<b>VFILP-S-10</b>	<b>VFILP-S-10-P12</b>		<b>VFILPL-S-10</b>	
Weight	16g	7g		8.85g	
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12		φ6 / M12 P=1.0	
Applicable cup size	φ15 ~ 45 → <b>3-4,5,6,7,8</b> / TR-1062-1 ~ 4 → <b>3-6</b>				

Suction stems (small)					
Drawing (20st)					
Order code No.	<b>210976</b>	<b>211010</b>		<b>211011</b>	
TYPE	<b>VFIL-S-20A</b>	<b>VFIL1-S-20-P12</b>		<b>VFIL1-S-20-P20</b>	
Weight	22g	18g		31g	
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12		φ6 / φ20	
Applicable cup size	φ15 ~ 45 → <b>3-4,5,6,7,8</b> / TR-1062-1 ~ 4 → <b>3-6</b> / SQN type is φ5 ~ 22 → <b>3-17,18</b>				

Resin Suction Stems (small)			* 1 <b>NEW</b>		* 2
Drawing (20st)					
Order code No.	<b>211099</b>	<b>211094</b>		<b>211150</b>	
TYPE	<b>VFILP-S-20</b>	<b>VFILP-S-20-P12</b>		<b>VFILPL-S-20</b>	
Weight	17g	8g		9.7g	
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12		φ6 / M12 P=1.0	
Applicable cup size	φ15 ~ 45 → <b>3-4,5,6,7,8</b> / TR-1062-1 ~ 4 → <b>3-6</b>				

\*1 When fixing to the bracket, insert it all the way to the base.  
\*2 Be careful not to tighten the nut too tightly. (Recommended tightening torque : 0.8 ~ 1.0N · m)

**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

**Suction Stems**

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

Various Products Information

# Suction Stems (Small)/Taper Washer



Direct connection on jungle gym series parts is possible.

● The suction cup is sold separately. ● Cup fixing system : embedded

Suction stems (small)			
Drawing (30st)			
Order code No.	<b>210977</b>	<b>211012</b>	<b>211013</b>
TYPE	<b>VFIL-S-30A</b>	<b>VFIL1-S-30-P12</b>	<b>VFIL1-S-30-P20</b>
Weight	24g	19g	32g
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12	φ6 / φ20
Applicable cup size	φ15 ~ 45 ⇒ 3-4.5.6.7.8 / TR-1062-1 ~ 4 ⇒ 3-6 / SQN type is φ5 ~ 22 ⇒ 3-17.18		

Resin Suction Stems (small)			
Drawing (30st)			
Order code No.	<b>211100</b>	<b>211095</b>	<b>211151</b>
TYPE	<b>VFILP-S-30</b>	<b>VFILP-S-30-P12</b>	<b>VFILPL-S-30</b>
Weight	18g	9g	10.5g
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12	φ6 / M12 P=1.0
Applicable cup size	φ15 ~ 45 ⇒ 3-4.5.6.7.8 / TR-1062-1 ~ 4 ⇒ 3-6		

\*1 When fixing to the bracket, insert it all the way to the base.

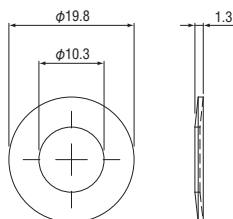
\*2 Be careful not to tighten the nut too tightly. (Recommended tightening torque : 0.8 ~ 1.0N · m)



## Taper washer (mini)

Order code No.	<b>371362</b>
TYPE	φ10 taper washer for VFIL-SS

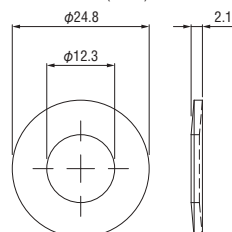
- Use when fixing a suction stems to the plate.
- Target: suction stems(mini), suction stems non-rotate(mini, small)



## Taper washer (small)

Order code No.	<b>370244</b>
TYPE	φ12 taper washer for VFIL-S

- Use when fixing a suction stems to the plate.
- Target: suction stems (small)







# Suction Stems (Large)



Direct connection on jungle gym series parts is possible.

Can be selected according to the type of suction cup and allows secure suction.

- The suction cup is sold separately. • Cup fixing system: embedded, screw mount
- The attach head of the suction metal fixture (large) is optionally available.

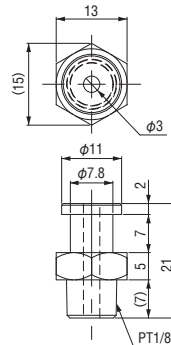
Suction stems (large)				
Drawing				
Order code No.	<b>210886</b>	<b>210887</b>	<b>210888</b>	<b>210889</b>
TYPE	<b>VFI-L-20-P20</b>	<b>VFI-L-50-P20</b>	<b>VFI-L-20-M17</b>	<b>VFI-L-50-M17</b>
Weight	45g	55g	50g	60g
Piping/Mounting	φ6 (RBF → 6-5 and BF-6 → 6-5) are necessary for piping) / φ20 φ6 (RBF → 6-5 and BF-6 → 6-5) are necessary for piping) / M17 P=1.0			
Applicable cup size	φ15 ~ 118 → 3-5,6,7,8,10,11,12,13,16,17,18,19,20			

Suction stems (large)	
	* Use within 100mm stroke.
Drawing	
Order code No.	<b>210917</b>
TYPE	<b>VFI-L-100-M22</b>
Weight	220g
Piping/Mounting	φ6 / M22 P=1.5
Applicable cup size	φ24 ~ 70

## Suction stems attachment head, embedded type, small

Order code No.	<b>230066</b>
TYPE	<b>XL0037-106</b>

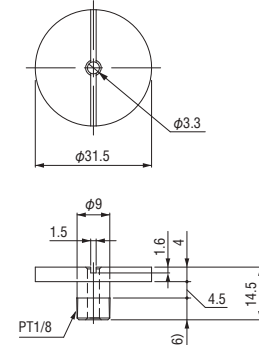
- Weight : 5g
- Target: suction stems (large), suction stems non-rotate (1/8 series), suction stems non-rotate (large)



## Suction stems attachment head, screw attach type

Order code No.	<b>230067</b>
TYPE	<b>XL0037-103</b>

- Weight : 10g
- Target: suction stems (large), suction stems non-rotate (1/8 series), suction stems non-rotate (large)



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Suction Stems Non-Rotate (Micro/Mini/Small)



Direct connection on jungle gym series parts is possible.

Exchangeable head for suction stem.

- Suction cup is sold separately.
- Suction attach head is removable.

Suction stems non-rotate (micro)		
Drawing		
Order code No.	<b>210823</b>	<b>210824</b>
TYPE	<b>VFILB-MSH</b>	<b>VFILB-MSH-P8</b>
Weight	5g	6g
Piping/Mounting	φ4 / M6 P=0.75	φ4 / φ8
Applicable cup size	VAPH-4 (6)M → <b>3-4</b> / VAPH (F)-3C-3 → <b>3-6</b> / φ1.2~3.5 → <b>3-15,19</b>	

\* See **3-23** for more details about suction stem accouchement head M3 micro.

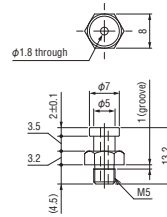
## Option of VFILB-SSH



Suction stems attachment head M5 mini

Order code No.	<b>131208</b>
TYPE	<b>N01892-201</b>
● Mounting screw M5 ● W/ gasket	

- Mounting screw M5
- W/ gasket



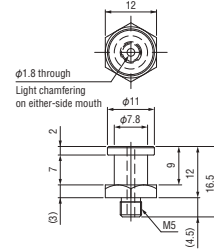
## Option of VFILB-SH



Suction stems attachment head M5 small

Order code No.	<b>131209</b>
TYPE	<b>N01892-301</b>
● Mounting screw M5 ● W/ gasket	

- Mounting screw M5
- W/ gasket



Suction stems non-rotate (mini)				
Drawing				
Order code No.	<b>211041</b>	<b>211042</b>	<b>211043</b>	<b>211044</b>
TYPE	<b>VFILB2-SSH</b>	<b>VFILB2-SSH-P12</b>	<b>VFILB2-SSH-20</b>	<b>VFILB2-SSH-20-P12</b>
Weight	28g	20g	31g	24g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ4 ~ 14 → <b>3-4,7,8</b> / TR-1062-1 ~ 4M → <b>3-6</b> / φ1.2 ~ 3.5 → <b>3-15</b>			

Suction stems non-rotate (small)				
Drawing				
Order code No.	<b>211045</b>	<b>211046</b>	<b>211047</b>	<b>211048</b>
TYPE	<b>VFILB2-SH</b>	<b>VFILB2-SH-P12</b>	<b>VFILB2-SH-20</b>	<b>VFILB2-SH-20-P12</b>
Weight	32g	25g	35g	27g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ5 ~ 45 → <b>3-4,5,6,7,8</b> / TR-1062-1 ~ 4 → <b>3-6</b> / SQN type is φ5 ~ 22 → <b>3-15,17,18</b>			

\* Please remove the suction attach head when using suction cup with mounting bracket.



# Suction Stems Non-Rotate (1/8 Connection / Angle / Large)



Direct connection on jungle gym series parts is possible.

Exchangeable head for suction stem.

● Suction cup is sold separately. Ensure that the suction attachment head and the suction pad with metal fittings are securely attached prior to use.

Suction stems non-rotate mini (1/8)				
Drawing				
Order code No.	<b>211049</b>	<b>211050</b>	<b>211051</b>	<b>211052</b>
TYPE	<b>VFILB2-SH 1/8</b>	<b>VFILB2-SH 1/8-P12</b>	<b>VFILB2-SH 1/8-20</b>	<b>VFILB2-SH 1/8-20-P12</b>
Weight	25g	19g	27g	22g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ15 ~ 118 → <a href="#">3-5,6,7,8,10,11,12,13,16,17,18,19,20</a>			

\* Mounting bracket of suction cup is not attached. Use suction attach head-embedded type for small [3-29](#)

Suction stems non-rotate (angle adjustment)				
Drawing				
Order code No.	<b>210991</b>	<b>210993</b>	<b>210992</b>	<b>210994</b>
TYPE	<b>VFILBR-H-10</b>	<b>VFILBR-H-10-P12</b>	<b>VFILBR-H-20</b>	<b>VFILBR-H-20-P12</b>
Weight	33g	27g	36g	30g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ5 ~ 45 → <a href="#">3-4,5,6,7,8</a> / TR-1062-1 ~ 4 → <a href="#">3-6</a> / SQN type is φ5 ~ 22 → <a href="#">3-15,16,17,18,19,20</a>			

\* Joint for air supply hole is not included. \* Mounting bracket of suction cup is not attached. Use suction attach head M5 mini/small [3-30](#)

Suction Stems Non-Rotate (Large)	
Drawing	
Order code No.	<b>210788</b>
TYPE	<b>VFIL-H</b>
Weight	102g
Piping/Mounting	φ6 (RBF → <a href="#">6-6</a> ) and BF-6 → <a href="#">6-5</a> are necessary for piping / φ20
Applicable cup size	φ15 ~ 118 → <a href="#">3-20</a>

\* Joint for air supply hole is not included.

\* Mounting bracket of suction cup is not attached.

Use suction attach head [3-29](#).

● Since the tip is PT1/8 female screw, fixture 1/8G of special cup is supported.

## Quick Chuck Change

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Quick Chuck Change Manual (OM Type)

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## Grip

Mini Cylinder

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Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Suction Stems with Locking Mechanism



Direct connection on jungle gym series parts is possible.

Non-rotating suction stems. These feature a long stroke, these feature a long stroke and the ability to lock the stems position.

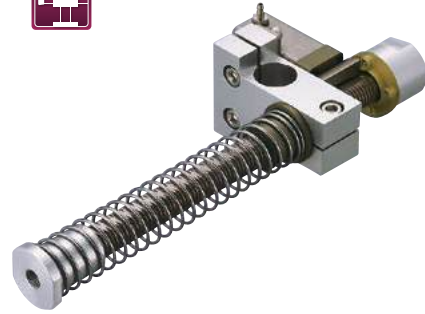
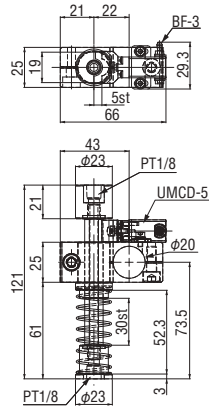


## Suction stems locking mechanism 50mm

Order code No.	<b>110556</b>
TYPE	<b>L10761-200</b>

- Weight : 200g
- Piping :  $\phi 6$  (RBF **6-6**) and BF-6 (**6-5**) are necessary for piping)
- Mounting :  $\phi 20$

\* Besides the piping for suction, it requires separated piping to the stopper cylinder.

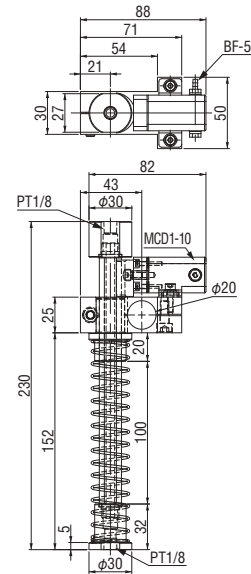


## Suction stems locking mechanism 100mm

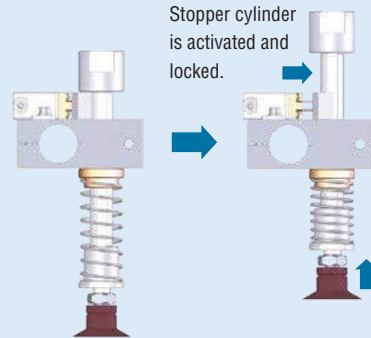
Order code No.	<b>110565</b>
TYPE	<b>L10761-100</b>

- Weight : 560g
- Piping :  $\phi 6$  (RBF **6-6**) and BF-6 (**6-5**) are necessary for piping)
- Mounting :  $\phi 20$

\* Besides the piping for suction, it requires separated piping to the stopper cylinder.



### Reference drawing



## Suction stems attachment head, embedded type, small

Order code No.	<b>230066</b>
TYPE	<b>XL0037-106</b>

- Weight : 5g
- Target: suction stem (large), suction stem non-rotate (1/8series), suction stem non-rotate (large)



## Suction stems attachment head, screw attach type

Order code No.	<b>230067</b>
TYPE	<b>XL0037-103</b>

- Weight : 10g
- Target: suction stem (large), suction stem non-rotate (1/8series), suction stem non-rotate (large)



# Suction Stems Attachment Head

Please use this on the suction cups.

	M3, micro	M5, mini	M5, small	PT1/8 · small	Screw attach type
<b>Suction Attachment head</b>					
<b>Drawing</b>					
<b>Order code No.</b>	<b>131316</b>	<b>131208</b>	<b>131209</b>	<b>230066</b>	<b>230067</b>
<b>TYPE</b>	<b>N01891-201</b>	<b>N01892-201</b>	<b>N01892-301</b>	<b>XL0037-106</b>	<b>XL0037-103</b>
<b>Weight</b>	1.0g	3.1g	7.8g	5.0g	10g
<b>Mounting</b>	M3	M5	M5	PT1/8	PT1/8
<b>Applicable cup size</b>	VAPH-4M,6M / VAPH-3C-3 / VAPF-3C-3	VAPH,VAPU,VAPF,VAPN φ4 ~ 14 / TR,TRN-1062-1M ~ 4M	VAPH,VAPU,VAPF,VAPN φ15 ~ 45 / TR,TRN-1062-1 ~ 4		VAPH,VAPU,VAPF,VAPN φ50 or higher

	M5 · For EPCG15/20	M5 · For EPCG30/40	M5(for vacuum cups)	M5(for vacuum cups)
<b>Suction Attachment head</b>				
<b>Drawing</b>				
<b>Order code No.</b>	<b>211102</b>	<b>211103</b>	<b>042111</b>	<b>042112</b>
<b>TYPE</b>	<b>VFILK-AH01</b>	<b>VFILK-AH02</b>	<b>ETN-PS-2A-M5</b>	<b>ETN-PS-10-M5</b>
<b>Weight</b>	3.0g	8.0g	0.5g	0.8g
<b>Mounting</b>	M5	M5	M5	M5
<b>Applicable cup size</b>	EPCG-15,20	EPCG-30,40	EPCG-3 / EPJG-2,4	EPJG-6,8,10,15

	For PT1/8 A (For Pouch, Multistage Cups)	For PT1/8 B (For Pouch, Multistage Cups)	For PT1/8 C (For Pouch, Multistage Cups)	For PT1/8 D (For Pouch, Multistage Cups)
<b>Suction Attachment head</b>				
<b>Drawing</b>				
<b>Order code No.</b>	<b>211114</b>	<b>211115</b>	<b>211116</b>	<b>211117</b>
<b>TYPE</b>	<b>VFILA-PHA-1/8</b>	<b>VFILA-PHB-1/8</b>	<b>VFILA-PHC-1/8</b>	<b>VFILA-PHD-1/8</b>
<b>Weight</b>	4.0g	13.0g	18.0g	34.0g
<b>Mounting</b>	M3	M5	M5	PT1/8
<b>Applicable cup size</b>	EPLG-15,20 / EPMG-24 / EPNG-132B,133B,134B	EPLG-30 / EPMG-40	EPLG-40 / EPMG-56	EPLG-50

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



















# Suction Stems ↔ Suction Cups Selection Table

Please choose the target products from pad size and suction stem.

	bracket	Suction stems				Suction stems non-rotate					
		Suction stems(micro) VFILB-M	Suction Stems(mini) VFIL-SS VFILP-SS	Suction stems(small) VFIL-S VFILP-S	Suction stems(large) VFI-L	Suction stems non-rotate(micro) VFILB-MSH	Suction stems non-rotate(mini) VFILB2-SSH	Suction stems non-rotate(small) VFILB2-SH	Suction stems non-rotate mini(1/8) VFILB2-SH	Suction stems non-rotate(adjustment) VFILBR-H	Suction Stems Non-Rotate(Large) VFIL-H
○ : can be mounted × : It can not be installed.	Applicable cup size										
<b>Suction Cups</b> 	φ 3mm	○	×	×	×	○	×	×	×	×	×
	φ 4mm (micro)	○	×	×	×	○	×	×	×	×	×
	φ 6mm (micro)	○	×	×	×	○	×	×	×	×	×
	φ 4mm	×	○	×	×	×	○	×	×	○ Select C.	×
	φ 6mm	×	○	×	×	×	○	×	×		×
	φ 8mm	×	○	×	×	×	○	×	×		×
	φ 10mm	×	○	×	×	×	○	×	×		×
	φ 12mm	×	○	×	×	×	○	×	×	×	×
	φ 14mm	×	○	×	×	×	○	×	×	×	×
	φ 15mm	×	×	○	○ Select A.	×	×	○	○ Select A.	○ Select D.	○ Select A.
	φ 20mm	×	×	○		×	×	○			
	φ 25mm	×	×	○		×	×	○			
	φ 30mm	×	×	○		×	×	○			
	φ 35mm	×	×	○	○ Select A.	×	×	○	○ Select A.	○ Select D.	○ Select A.
φ 40mm	×	×	○	×		×	○				
φ 45mm	×	×	○	×		×	○				
φ 50mm	×	×	×	○ Select B.		×	×	×			
φ 60mm	×	×	×	○ Select B.	×	×	×	○ Select B.	×	○ Select B.	
φ 70mm	×	×	×		×	×	×		×		×
<b>Suction Cups (mini)</b> 	φ 6mm	×	○	×	×	○	×	×	○ Select C.	×	
	φ 8mm	×	○	×	×	○	×	×		×	
	φ 10mm	×	○	×	×	○	×	×		×	
	φ 12mm	×	○	×	×	○	×	×		×	
<b>Suction Cups (small)</b> 	φ 6mm	×	×	○	○ Select A.	×	×	○	○ Select A.	○ Select D.	○ Select A.
	φ 8mm	×	×	○		×	×	○			
	φ 10mm	×	×	○		×	×	○			
	φ 12mm	×	×	○		×	×	○			
<b>Vacuum Caps</b> 	φ 2mm	×	×	○* 2 Select I.	×	×	×	×	○	×	
	φ 4mm	×	×	○* 2 Select I.	×	×	×	×	○	×	
	φ 6mm	×	×	○* 2 Select J.	×	×	×	×	○	×	
	φ 8mm	×	×		×	×	×	×	×	○	×
	φ 10mm	×	×		×	×	×	×	×	○	×
	φ 15mm	×	×		×	×	×	×	×	○	×
<b>Fluorine Bellows Cups</b> 	φ 3mm	○	×	×	×	×	×	×	○	×	
	φ 15mm	×	×	×	×	×	×	×	○	×	
	φ 20mm	×	×	×	×	×	×	×	○	×	
	φ 30mm	×	×	×	×	×	×	×	○	×	
	φ 40mm	×	×	×	×	×	×	×	○	×	
<b>Steel Sheet Cup</b> 	φ 30mm	×	×	×	○	×	×	×	○	×	
	φ 60mm	×	×	×	○	×	×	×	○	×	
<b>Bellows Cup (transparent white silicone)</b> 	φ 3mm	×	×	×	×	×	○* 1 Select I.	×	×	○ Select I.	×
<b>Multistage Bellows</b> 	φ 15mm	×	×	×	○ Select E.	×	×	×	○ Select E.	×	○ Select E.
	φ 20mm	×	×	×	○ Select F.	×	×	×	○ Select F.	×	○ Select F.
	φ 30mm	×	×	×	○ Select G.	×	×	×	○ Select G.	×	○ Select G.
	φ 40mm	×	×	×	○ Select H.	×	×	×	○ Select H.	×	○ Select H.
	φ 50mm	×	×	×	○ Select I.	×	×	×	○ Select I.	×	○ Select I.
<b>Pouch Cups (round)</b> 	φ 18mm	×	×	×	○ Select E.	×	×	×	○ Select E.	×	○ Select E.
	φ 25mm	×	×	×		×	×	×		×	
	φ 35mm	×	×	×		×	×	×		×	
<b>Pouch Cups (Star-Shaped)</b> 	φ 24mm	×	×	×	○ Select E.	×	×	×	○ Select E.	×	○ Select E.
	φ 40mm	×	×	×	○ Select F.	×	×	×	○ Select F.	×	○ Select F.
	φ 56mm	×	×	×	○ Select G.	×	×	×	○ Select G.	×	○ Select G.

\* The cups in bold frame require the "attach head" when mounting. Choose A ~ L from the bottom of the next page.

	Applicable cup size	Suction stems				Suction stems non-rotate					
		Suction stems(micro) VFILB-M	Suction Stems(mini) VFIL-SS VFILP-SS	Suction stems(small) VFIL-S VFILP-S	Suction stems(large) VFI-L	Suction stems non-rotate(micro) VFILB-MSH	Suction stems non-rotate(mini) VFILB2-SSH	Suction stems non-rotate(small) VFILB2-SH	Suction stems non-rotate mini(FR) VFILB2-SH	Suction stems non-rotate(single adjustment) VFILBR-H	Suction Stems Non-Rotate(Large) VFIL-H
Bellows type Suction Cups  	φ 1.2mm			×	×		×	×	×	×	×
	φ 1.8mm	○* 1	○* 2	×	×	○* 1	×	×	×	×	×
	φ 2mm			×	×		×	×	×	×	×
	φ 3.5mm			×	×		×	×	×	×	×
	φ 5mm	×	×		×	×			×	○	×
	φ 5.5mm	×	×		×	×			×	○	×
	φ 6mm	×	×		×	×			×	○	×
	φ 6.5mm	×	×		×	×			×	○	×
	φ 8mm	×	×		×	×			×	○	×
	φ 9.3mm	×	×		×	×			×	○	×
	φ 10mm	×	×		×	×			×	○	×
	φ 11mm	×	×		×	×			×	○	×
	φ 12.7mm	×	×	○* 2	×	×	○* 1	○* 1	×	○	×
	φ 13mm	×	×		×	×			×	○	×
	φ 15mm	×	×		×	×			×	○	×
	φ 16mm	×	×		×	×			×	○	×
	φ 18.5mm	×	×		×	×			×	○	×
	φ 19mm	×	×		×	×			×	○	×
	φ 20mm	×	×		×	×			×	○	×
	φ 22mm	×	×		×	×			×	○	×
	φ 24mm	×	×	×	○	×	×	×	○	×	○
	φ 24.7mm	×	×	×	○	×	×	×	○	×	○
	φ 25mm	×	×	×	○	×	×	×	○	×	○
	φ 30mm	×	×	×	○	×	×	×	○	×	○
	φ 32.6mm	×	×	×	○	×	×	×	○	×	○
	φ 33mm	×	×	×	○	×	×	×	○	×	○
	φ 35mm	×	×	×	○	×	×	×	○	×	○
	φ 40mm	×	×	×	○	×	×	×	○	×	○
φ 43mm	×	×	×	○	×	×	×	○	×	○	
φ 43.5mm	×	×	×	○	×	×	×	○	×	○	
φ 50mm	×	×	×	○	×	×	×	○	×	○	
φ 52.5mm	×	×	×	○	×	×	×	○	×	○	
φ 53mm	×	×	×	○	×	×	×	○	×	○	
φ 60mm	×	×	×	○	×	×	×	○	×	○	
φ 62.2mm	×	×	×	○	×	×	×	○	×	○	
φ 63mm	×	×	×	○	×	×	×	○	×	○	
φ 80mm	×	×	×	○	×	×	×	○	×	○	
φ 83mm	×	×	×	○	×	×	×	○	×	○	
φ 103mm	×	×	×	○	×	×	×	○	×	○	
φ 118mm	×	×	×	○	×	×	×	○	×	○	
Suction Cups (Oval with metal fittings)  	2×4mm	○* 1	○* 2	×	×	○* 1	×	×	×	×	
	3.5×7mm			×	×		×	×	×	×	
	5×15mm	×	×	○* 2	×	×	○* 1	○* 1	×	○	
	6×18mm	×	×		×	×			×	○	
	8×24mm	×	×	×	○	×	×	×	○	×	
* 3	10×30mm	×	×	×	○	×	×	○	×	○	
	15×45mm	×	×	×	○	×	×	○	×	○	

Attachment head to use											
A	B	C	D	E	F	G	H	I	J	K	L
Suction stems attachment head, embedded type, small	Suction stems attachment head, screw attach type	Suction stems attachment head M5 mini	Suction stems attachment head M5 small	Inner stems attachment head • For PT1/8 A	Inner stems attachment head • For PT1/8 B	Inner stems attachment head • For PT1/8 C	Inner stems attachment head • For PT1/8 D	Outer stems attachment head • 2A • M5	Outer stems attachment head • 10 • M5	Suction stems head • M5 • for EPCG 15/20	Suction stems head • M5 • for EPCG 30/40
											
PT1/8 mounting hole	PT1/8 mounting hole	M5 mounting hole	M5 mounting hole	PT1/8 mounting hole	PT1/8 mounting hole	PT1/8 mounting hole	PT1/8 mounting hole	M5 mounting hole	M5 mounting hole	M5 mounting hole	M5 mounting hole
<b>230066</b>	<b>230067</b>	<b>131208</b>	<b>131209</b>	<b>211114</b>	<b>211115</b>	<b>211116</b>	<b>211117</b>	<b>042111</b>	<b>042112</b>	<b>211102</b>	<b>211103</b>

- \* 1 Please remove the suction Stems attachment head at the tip before use.
- \* 2 Attach it to the head of the screw holes and use it. Can't be attached to the suction resin (VFILP).
- \* 3 The Photograph shows the silicon suction cups. It is applies for different materials (markless rubber).

### Quick Chuck Change

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

### Grip

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

### Suction

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

### Cut

- Air Nipper (Small-Medium)
- Air Nipper (Large)

### Frame / Module

- Jungle Gym
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

### Pneumatic Components / Sensors

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

### Lightweight Parts Series

- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

- Tool / Jig

### Information

- Various Products Information



# Suction Stems Fixed/for Mini Cylinder

Use as your situation.

● Suction cup and joint are optionally available.

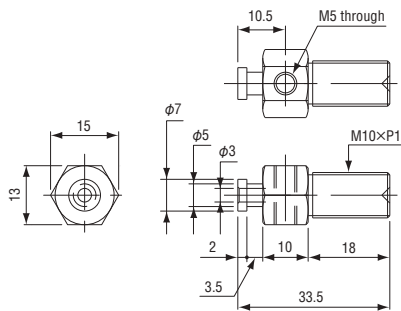
▶ Use by mounting a Bellows cups.



## Suction stems fixed mini

Order code No.	210699
TYPE	VFILK-SS-M10

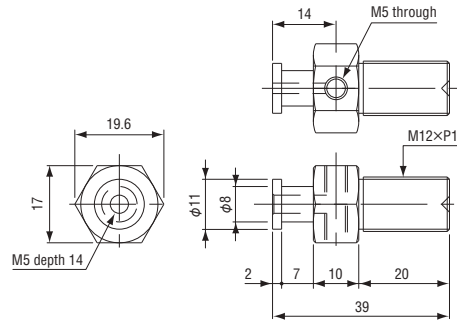
- Weight : 6g
- Applicable cup size :  $\phi 4 \sim 14$
- Cup fixing system: embedded
- Suction stem nut (3-37) is not attached.
- Mounting screw part : M10×P1



## Suction stems fixed for small

Order code No.	210698
TYPE	VFILK-S-M12

- Weight : 9g
- Applicable cup size :  $\phi 15 \sim 45$
- Cup fixing system: embedded
- Suction stem nut (3-37) is not attached.
- Mounting screw part : M12×P1



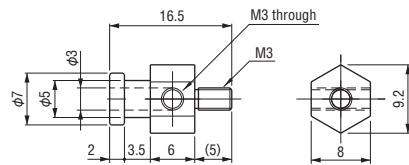
▶ Used when suction cups is attached to the end of mini cylinder.



## Suction stems mini for micro mini cylinder

Order code No.	230058
TYPE	XL0010-105

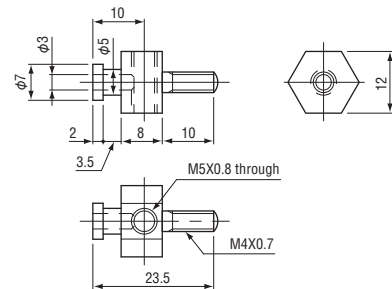
- Weight : 1g
- Mounting screw part : M3



## Suction stems mini for mini cylinder

Order code No.	020844
TYPE	CP-064

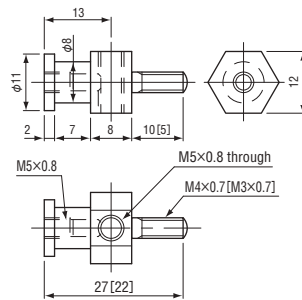
- Weight : 7g
- Mounting screw part : M4



## Suction stems small for micro mini cylinder

Order code No.	023128
TYPE	CP-063A

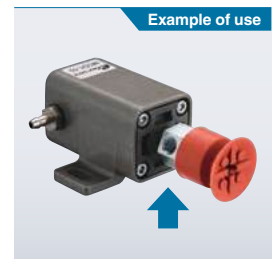
- Weight : 10g
- Mounting screw section M3



## Suction stems small for mini cylinder

Order code No.	023195
TYPE	CP-063B

- Weight : 11g
- Mounting screw section M4



\* Picture shows CP-063B assembled with MCD-10 and VAPH-20C-1.



# Adjuster

Height of suction stem can be adjusted.

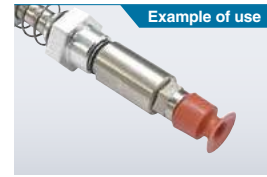
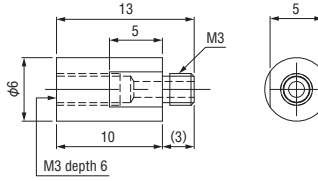
▶ Extension between suction cup and stem is possible.



### Suction stems bracket micro

Order code No.	<b>230072</b>
TYPE	<b>XL0061-100</b>

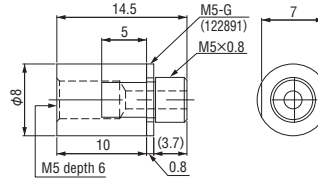
- 重量 : 2g
- Mounting screw part : M3



### Suction stems bracket mini

Order code No.	<b>230114</b>
TYPE	<b>XL0061-200</b>

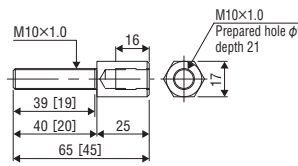
- 重量 : 3g
- Mounting screw part : M5



### Suction stems bracket • mini (For Suction stems 5st)

	20L	40L
Order code No.	<b>022544</b>	<b>022545</b>
TYPE	<b>CP-023AL (20L)</b>	<b>CP-024AL (40L)</b>

- Weight : 17g (20L) 21g (40L)
- Targetsuction stem : VFIL1-SS-5
- Suction stem nut is not attached.



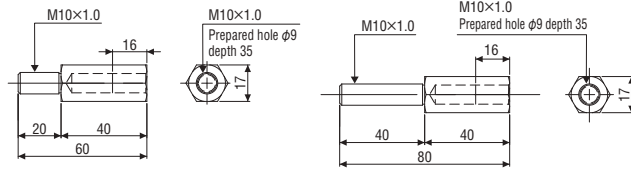
\* Size in [ ] shows size of 20L.



### Suction stems bracket • mini (For Suction stems 5/10/20st)

	20L	40L
Order code No.	<b>023338</b>	<b>023339</b>
TYPE	<b>CP-AJM20</b>	<b>CP-AJM40</b>

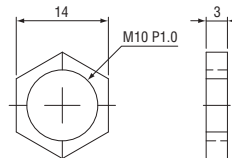
- Weight : 24g (20L) 28g (40L)
- Targetsuction stem : VFIL1-SS-5/10/20
- Suction stem nut is not attached.



### Suction stems nut • mini (trivalent white)

Order code No.	<b>120482</b>
TYPE	<b>VFIL-M10 (10*14*3 P1.0)</b>

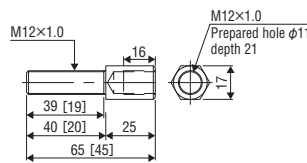
- Weight : 2g
- Screw diameter : M10



### Suction stems bracket • small (For Suction stems 5st)

	20L	40L
Order code No.	<b>022542</b>	<b>022543</b>
TYPE	<b>CP-021AL (20L)</b>	<b>CP-022AL (40L)</b>

- Weight : 17g (20L) 23g (40L)
- Targetsuction stem : VFIL-S-5
- Suction stem nut is not attached.



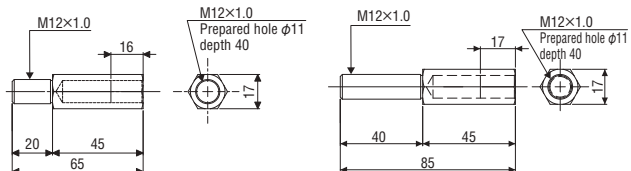
\* Size in [ ] shows size of 20L.



### Suction stems bracket • small (For Suction stems 5/10/20st)

	20L	40L
Order code No.	<b>023340</b>	<b>023341</b>
TYPE	<b>CP-AJS20</b>	<b>CP-AJS40</b>

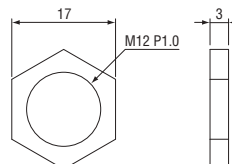
- Weight : 25g (20L) 31g (40L)
- Targetsuction stem : VFIL1-S-5/10/20
- Suction stem nut is not attached.



### Suction stems nut • small (trivalent white)

Order code No.	<b>120483</b>
TYPE	<b>VFIL-M12 (12*17*3 P1.0)</b>

- Weight : 3g
- Screw diameter : M12



#### Quick Chuck Change

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#### Grip

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- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

#### Suction

- Suction Cups
- Suction Stems
- Pad in Pad

- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

#### Cut

- Air Nipper (Small-Medium)
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#### Frame / Module

- Jungle Gym

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# Suction Stems Angle Brackets

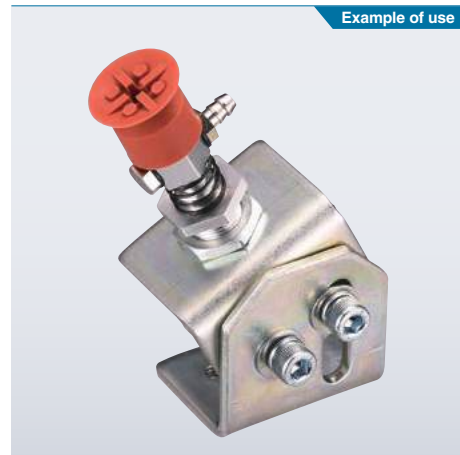
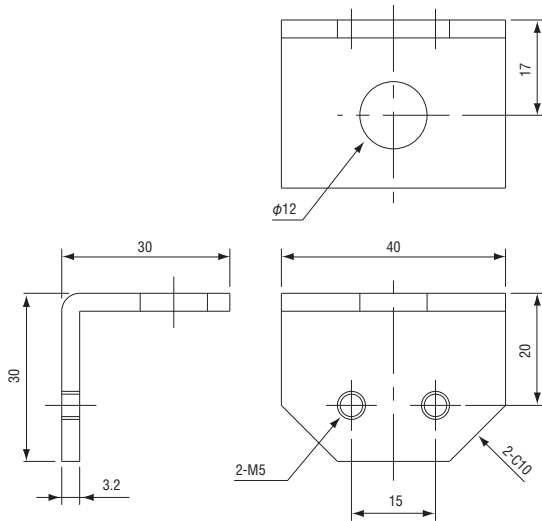
The angle can be adjusted according to the shape of workpiece.



## Suction stems angle bracket (upper)

Order code No.	370698
TYPE	CP-019

- Weight : 48g
- Fixing bolt M5x15 is available separately.
- Assembly of parts is not available in delivery for an order.
- Use with CP-019L or CP-019R.



Example of use

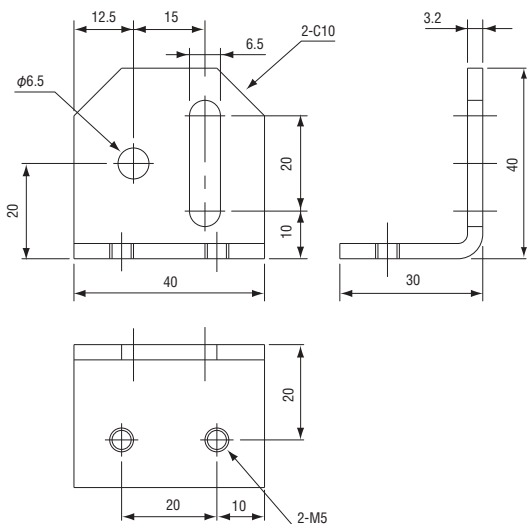
● Photo shows right-hand mount type (CP-019R).



## Suction stems angle bracket (L-lower)

Order code No.	370789
TYPE	CP-019L

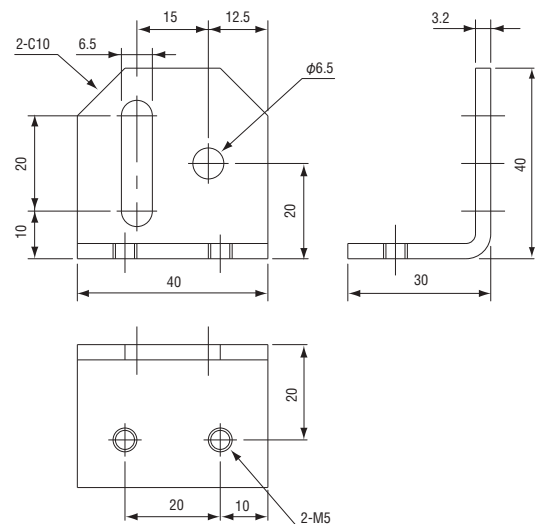
- Weight : 54g
- Fixing bolt M5x15 is available separately.
- Assembly of parts is not available in delivery for an order.
- Use with CP-019.



## Suction stems angle bracket (R-lower)

Order code No.	370790
TYPE	CP-019R

- Weight : 54g
- Fixing bolt M5x15 is available separately.
- Assembly of parts is not available in delivery for an order.
- Use with CP-019.





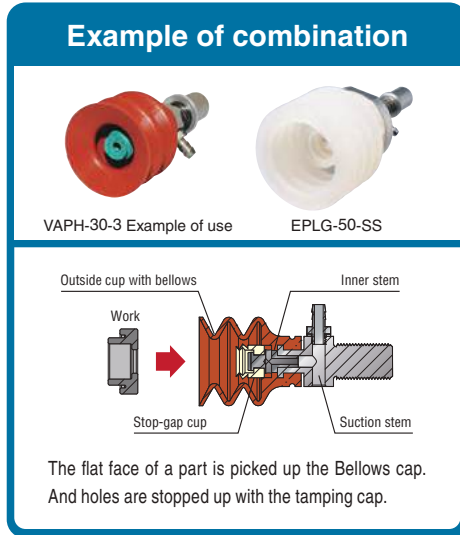
# MEMO

A series of horizontal dashed lines for writing.



# Pad in Pad

Do you have some problems with work piece with holes (food container, cap and inner stopper for cosmetic container, and small gear) which falls automatically? Pad in Pad can be used for molded parts with holes in them.



### Stems spacer

Stems spacer		
Drawing		
Order code No.	<b>210913</b>	<b>187128</b>
TYPE	<b>VFILK-P-S</b>	<b>SP-S5-6</b>
Weight	0.3g	2.0g
Applicable stem	-	

### Inner Stems

Inner stems						
Drawing						
Order code No.	<b>210911</b>	<b>210912</b>	<b>211118</b>	<b>211119</b>	<b>211120</b>	<b>211121</b>
TYPE	<b>VFILK-PS-M5</b>	<b>VFILK-PSS-M5</b>	<b>VFILK-PIA-M5</b>	<b>VFILK-PIB-M5</b>	<b>VFILK-PIC-M5</b>	<b>VFILK-PID-M5</b>
Weight	1.5g	1.0g	1.0g	2.0g	4.0g	5.0g
Applicable inner pad	EPJG-(6,8,10,15)-S	Reinforced silicone (brown)	EPJG-(6,8)-S	EPJG-(10,15)-S	EPJG-(20,25)-S	EPJG-30-S
Applicable stem	Suction stem small (also for some suction stem mini products)		VFILA-(B,C,D)-1/8		VFILA-(C,D)-1/8	VFILA-D-1/8

\* when ordering the inner stem, please purchase with gasket (122891). → **6-8**

### Outside Stems

Outside stems			
Drawing			
Order code No.	<b>211115</b>	<b>211116</b>	<b>211117</b>
TYPE	<b>VFILA-PHB-1/8</b>	<b>VFILA-PHC-1/8</b>	<b>VFILA-PHD-1/8</b>
Weight	13.0g	18.0g	34.0g
Applicable inner pad	EPLG-30-S5, EPLG-40L	EPLG-40-S5	EPLG-50-S5
Applicable stem	Suction stems large, non-rotate (1/8 large)		

The combination of pad in pad, please refer to the selection table **3-42**.



Please check the performance table on the web site.

Pad in Pad



You can see moving images of products by using QR code reader of your smartphone.

### ► Inner Cups

Material	Reinforced silicone (brown)			Silicone (transparent white)	
Applicable cup size	φ 3mm	φ 4mm	φ 6mm	φ 6mm	φ 8mm
Inner cup		* Micro	* Micro		
Drawing					
Order code No.	<b>210897</b>	<b>210789</b>	<b>210790</b>	<b>042038</b>	<b>042039</b>
TYPE	<b>VAPH-3C-3</b>	<b>VAPH-4M</b>	<b>VAPH-6M</b>	<b>EPJG-6-S</b>	<b>EPJG-8-S</b>
Weight	1.0g	0.2g	0.3g	0.15g	0.25g
Applicable stem	Micro, VFILK-PSS-M5			Mini, VFILK-PS-M5, VFILK-PIA-M5	

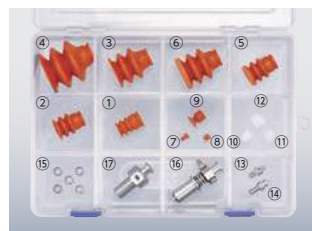
Material	Silicone (transparent white)				
Applicable cup size	φ 10mm	φ 15mm	φ 20mm	φ 25mm	φ 30mm
Inner cup					
Drawing					
Order code No.	<b>042040</b>	<b>042041</b>	<b>042068</b>	<b>042069</b>	<b>042070</b>
TYPE	<b>EPJG-10-S</b>	<b>EPJG-15-S</b>	<b>EPJG-20-S</b>	<b>EPJG-25-S</b>	<b>EPJG-30-S</b>
Weight	0.45g	1.0g	1.6g	2.7g	5.0g
Applicable stem	Mini, VFILK-PS-M5, VFILK-PIB-M5		VFILK-PIC-M5		VFILK-PID-M5

### ► Outside Cups

Material	Reinforced silicone (brown)				Silicone (transparent white)		
Applicable cup size	φ 15mm	φ 20mm	φ 30mm	φ 40mm	φ 30mm	φ 40mm	φ 50mm
Outside cup							
Drawing							
Order code No.	<b>210697</b>	<b>210661</b>	<b>210662</b>	<b>210663</b>	<b>042071</b>	<b>042072</b>	<b>042073</b>
TYPE	<b>VAPH-15C-3</b>	<b>VAPH-20C-3</b>	<b>VAPH-30C-3</b>	<b>VAPH-40C-3</b>	<b>EPLG-30-S5</b>	<b>EPLG-40-S5</b>	<b>EPLG-50-S5</b>
Weight	2.7g	2.9g	7.0g	18.4g	6.9g	15.7g	20.8g
Applicable inner pad	VAPH-4M/6M, VAPH-3C-3	EPJG-6-S/8-S	EPJG-6-S~EPJG10-S	EPJG-6-S~EPJG15-S	EPJG-(8,10)-S	EPJG-(8,15,20)-S	EPJG-(8~30)-S
Applicable stem	Small, VFIL-S, or VFILB-SH → <a href="#">(3-26,27,28,30)</a>				VFILA-PHB-1/8	VFILA-PHC-1/8	VFILA-PHD-1/8

## Pad in Pad test kit

Please try out Pad in Pad with our test kit!!



### Pad in Pad test kit (1)

Order code No.	<b>196688</b>
TYPE	<b>TEST KIT VERSION (1)</b>

### ■ Contents

Page	Product name	Order code No.	TYPE	Qty	Applicable cup size
Outside cup with bellows	① Bellow Suction Cups (silicon, brown)	210697	VAPH-15C-3	1	⑦⑧
	② Bellow Suction Cups (silicon, brown)	210661	VAPH-20C-3	1	⑦⑧⑩⑪
	③ Bellow Suction Cups (silicon, brown)	210662	VAPH-30C-3	1	⑦⑧⑩⑪⑫
	④ Bellow Suction Cups (silicon, brown)	210663	VAPH-40C-3	1	⑦~⑫
	⑤ Bellow Suction Cup w/ sponge (silicon, brown)	210914	VAPH-20C-10-3-SP	1	⑦⑧⑩⑪
	⑥ Bellow Suction Cup w/ sponge (silicon, brown)	210915	VAPH-30C-15-3-SP	1	⑦⑧⑩⑪⑫
Stop-gap cup	⑦ Bellow Suction Cups (silicon, brown)	210897	VAPH-3C-3	1	①~⑥
	⑧ Suction Cups (standard/micro/brown)	210790	VAPH-6M (silicon)	1	①~⑥
	⑨ Suction Cups (standard/silicon/brown)	210616	VAPH-14C	1	④
	⑩ Suction Cup · Silicon	042038	EPJG-6-S	1	②~⑥
	⑪ Suction Cup · Silicon	042039	EPJG-8-S	1	②~⑥
	⑫ Suction Cup · Silicon	042040	EPJG-10-S	1	③④⑥
Inner stem	⑬ Pad-in inner stem for micro	210912	VFILK-PSS-M5	1	—
	⑭ Pad-in inner stem for mini	210911	VFILK-PS-M5	1	—
	⑮ Pad-in inner stem (spacer)	210913	VFILK-P-S	5	—
Suction stem	⑯ Suction stem for small	211006	VFIL1-S-5-P12	1	—
	⑰ Suction stem fixed for small	210698	VFILK-S-M12	1	—

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

### Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

Tool / Jig

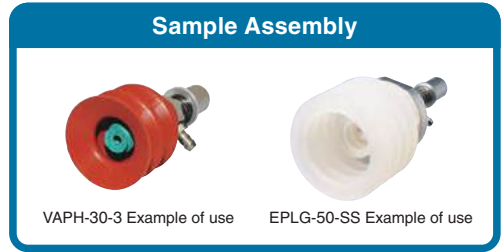
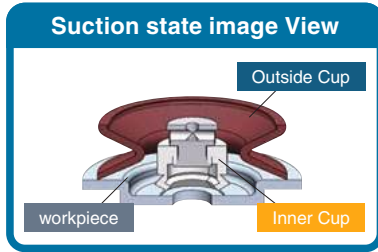
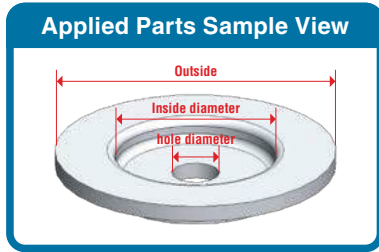
Information

Various Products Information



# Pad in Pad Selection List

Through the combination of parts selection, make it possible to take out even the parts with hole.



				Outside cup							
Order code No.	TYPE	Applicable cup size	Product outer diameter	210697	210661	210662	210663	042071	042072	042073	
				VAPH-15C-3	VAPH-20C-3	VAPH-30C-3	VAPH-40C-3	EPLG-30-S5	EPLG-40-S5	EPLG-50-S5	
				φ15	φ20	φ30	φ40	φ30	φ40	φ50	
				φ8	φ11	φ15	φ18	φ19	φ25.7	φ35.7	
Order code No.	TYPE	Applicable cup size	Product outer diameter	φ12 or larger	φ15 or larger	φ19 or larger	φ22 or larger	φ21 or larger	φ26 or larger	φ37 or larger	
				Product hole diameter							
Inner cup	210897	VAPH-3C-3	φ3	φ0.1 ~ φ1	A	A	A	A			
					1.2,3	1.2,3	1.2,3	1.2,3			
					4.0mm	3.5mm	-0.5mm	-5.5mm			
	210789	VAPH-4M	φ4	φ0.1 ~ φ1.5	A	A	A				
					1.2,3	1.2,3	1.2,3				
					4.0mm	±0mm	-4.0mm				
	210790	VAPH-6M	φ6	φ0.1 ~ φ3	A	A	A				
					1.2,3	1.2,3	1.2,3				
					4.5mm	0.5mm	-4.5mm				
	042038	EPJG-6-S	φ6	φ0.1 ~ φ3	B	B	B				
				1.2,3	1.2,3	1.2,3					
				2.8mm	-1.2mm	-6.2mm					
042039	EPJG-8-S	φ8	φ0.1 ~ φ4					B,C	B,C	B,C	
								G	H	I	
								1.2,3	1.2,3	4.5,6	
								-1.3mm	-6.3mm	-4.1mm	
								B,D	B,D	B,D	
042040	EPJG-10-S	φ10	φ0.1 ~ φ6								
								G	H	I	
								1.2,3	1.2,3	4.5,6	
								-0.3mm	-5.3mm	-4.1mm	
042041	EPJG-15-S	φ15	φ0.1 ~ φ10								
									D	D	
									H	I	
									4.5,6	4.5,6	
									-5.2mm	-6.2mm	
042068	EPJG-20-S	φ20	φ0.1 ~ φ16								
									E	E	
									H	I	
									4.5,6	4.5,6	
									-4.2mm	-5.2mm	
042069	EPJG-25-S	φ25	φ0.1 ~ φ20								
										E	
										I	
										4.5,6	
										-4.1mm	
042070	EPJG-30-S	φ30	φ0.1 ~ φ24								
										F	
										I	
										4.5,6	
										-0.8mm	

**A table view**

Parts are selected from the following parts list.

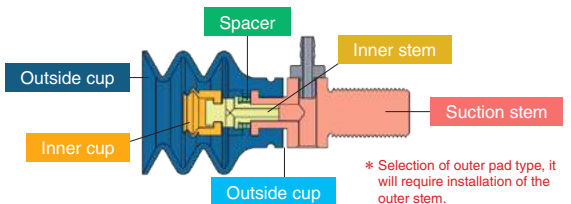
- Inner stem
- Outer cup
- Suction stem
- Height difference

\* Please use this setting table as a reference example of the combination.

## 部品リスト

Inner stem		
code	Order code No.	TYPE
A	210912	VFILK-PSS-M5
B	210911	VFILK-PS-M5
C	211118	VFILK-PIA-M5
D	211119	VFILK-PIB-M5
E	211120	VFILK-PIC-M5
F	211121	VFILK-PID-M5

Outer cup		
code	Order code No.	TYPE
G	211115	VFILA-PHB-1/8
H	211116	VFILA-PHC-1/8
I	211117	VFILA-PHD-1/8



\* Selection of outer pad type, it will require installation of the outer stem.

Suction stem		
code	Order code No.	TYPE
1		VFIL-S series
2		VFILB-2-SSH series
3		VFILB-SH series
4		VFIL-L series
5		VFILB2-SH1/8 series
6	210788	VFIL-H

Stem spacer		
code	Order code No.	TYPE
210913	1mm	VFILK-P-S
187128	6mm	SP-S5-6

**The height difference between outer pad and inner pad during suction ON.**

- + : The inner pad suction surface exceeds the outer pad suction surface.
- : The inner pad suction surface does not exceed the outer pad suction surface.

\* It can not be adjusted from + value to -value. Therefore, combinations with a large + value can only be used for concave products.



You can see moving images of products by using QR code reader of your smartphone.

## ► Selection method

**e.g.1 Products with through hole**    Outside :  $\phi 25$     Hole diameter :  $\phi 4$     Height difference : 0mm

- Inner cup**  
The hole diameter of the product is  $\phi 4$ , so please select the pad that its hole diameter is more than  $\phi 4$ .
- Outside cup**  
Since the outside diameter of the product is  $\phi 25$ , select a pad with an applicable-to-product outside diameter of  $\phi 25$  or less.
- Spacer**  
Choose the pad that the value of the green frame in the form is minus from the selected pad, and please add the spacer to make sure the difference of height turn to  $\pm 0$  when in suction.  
\* The tolerance of air leak:  $\pm 0.5$  mm height difference.  
\* If you have more options, please snarrowdown the selection of parts as meet to the conditions of pirce and/ or size of components.

**e.g.2 Concave product**    Outside :  $\phi 25$     Inside diameter :  $\phi 18$     Hole diameter :  $\phi 4$     Height difference : 2mm

- Inner cup**  
The hole diameter of the product is  $\phi 4$ , so please select the pad that its hole diameter is more than  $\phi 4$ .
- Outside cup**  
Since the outside diameter of the product is  $\phi 25$  and the inside diameter of the product is  $\phi 18$ , select a pad with an applicable-to-product outside diameter of  $\phi 25$  or less and the outside diameter is  $\phi 18$  or more.
- Spacer**  
Add a spacer so that the numerical value in the green box in the pad selection box can be +2mm in length.  
\* Note with care that if the adjusted length is less than 2mm, air leak will occur.  
\* The tolerance of air leak:  $\pm 0.5$  mm height difference.  
\* If you have more options, please snarrowdown the selection of parts as meet to the conditions of pirce and/ or size of components.

## ► Introduction of production examples

**Example 1**

**Molded product cap**

Main components	Outside cup with Bellows	VAPH-20C-3
	Stop-gap cup	TPJG-8-S
	Suction stem	VFIL-S-5A
	Inner stem	VFILK-PS-M5

**Example 2**

**Outside cup with bellows**

Main components	Outside cup with Bellows	VAPH-20C-3
	Stop-gap cup	TPJG-8-S
	Suction stem	VFIL-S-5A
	Inner stem	VFILK-PS-M5

**Example 3**

**Molded product caster**

Main components	Outside cup with Bellows	EPLG-30-S5
	Stop-gap cup	EPJG-10-S
	Suction stem	VFILA-PHB-1/8
	Inner stem	VFILK-PIB-M5

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

### Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information

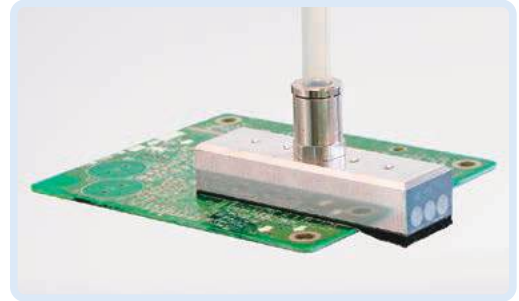




# Vacuum Gripper

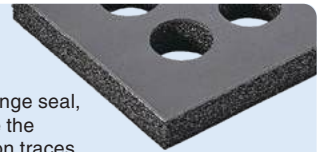
▶ A small vacuum gripper. Suitable for suction and transport of small workpieces.

Vacuum Gripper		
Drawing	<p>* Connect plastic ejector SSBP series (3-49) to <math>\phi 8</math> (ejector not attached).</p>	
Product name	Vacuum gripper 76×22·10mm	Sponge seal 76×22 w/o valve (for exchange)
Order code No.	<b>183977</b>	<b>183978</b>
TYPE	<b>SFM-76/22-SW-10-B</b>	<b>SFMSEAL76/22SW10BW/OV</b>
Weight	50.0g	1.5g



### About suction surface

It's coated with sponge seal, which could reduce the abrasion and suction traces.  
\* Sponge seal is replaceable.



## ■ Specification

TYPE	Vacuum Gripper	Valve	Holding power* <sup>1</sup> (N)	Required suction quantity** <sup>2</sup> (L/min)	Number of cells	Weight (g)
<b>SFM-76/22-SW-10-B</b>	External type	Throttle valve	40	40	26	60

\* 1 -60 kPa. If the entire gripper is covered by hard work piece.  
\* 2 The amount of suction when the vacuum gripper is connected to -60 kPa.

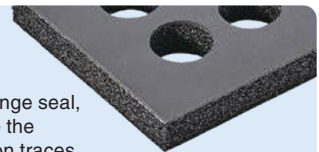
▶ It can transfer the work piece of different shapes with one gripper (wood, resin, cardboard, etc.).

Vacuum Gripper		
Drawing		
Product name	Vacuum gripper 120×60·10mm	Sponge seal 120×60 w/o valve (for exchange)
Order code No.	<b>183979</b>	<b>183980</b>
TYPE	<b>SFX-120/60-SW-1.5-10-B</b>	<b>SFXFMSEAL120/60SW10BW/OV</b>
Weight	500.0g	6.5g



### About suction surface

It's coated with sponge seal, which could reduce the abrasion and suction traces.  
\* Sponge seal is replaceable.



## ■ Specification

TYPE	Load tolerance* <sup>3</sup> (N)	Holding power* <sup>4</sup> (N)	Max suction discharge* <sup>5</sup> (L/min)	Max vacuum (%)	Air consumption (L/min)	Number of cells	Noise level (dB (A))	Supply pressure (MPa)	Allowable temperature (°C)	Weight (g)
<b>SFX-120/60-SW-1.5-10-B</b>	92	98	69	80	117	10	65	0.3 ~ 0.5	+5 ~ +50	500

\* 3 When transporting horizontally.  
\* 4 The max holding power happen while the system air pressure is - 30 kPa When sucking on workpieces without ventilation. The safety rate is not included.  
\* 5 Supply air pressure 0.5 MPa.  
\* The max vacuum level, air consumption and noise level vary according to the external vacuum gripper.

# MEMO

A series of horizontal dashed lines for writing.



## Air Ejectors



- Perfect for transportation of heavy weight and cardboard.
- Small, lightweight, and long life.

3-47

## Plastic Ejector



Lightweight and high-performance low-price ejector.

3-49

## Small Air Filters



The product prevents water, oil, steel powder, and so on sucked from the vacuum side from entering the ejector.

3-48

## Small Check Valve for Suction Cup



Small check valves. Please attach the pad before use.

3-50

## Specification

Product name	Order code No.	TYPE	Weight (g)	Page of details	
Air ejectors	 	042116	ESVP10-A	146	3-47
	 	042129	ESVP10-A-20	169	
Air ejector w/ switch		042034	ECV-10HS	80	3-48
		042035	ECV-10HSCK	120	
Small air filters		042036	EVFL-44	20	3-49
		042037	EVFL-66		
Plastic ejector	Plastic ejector nozzle 1.0mm 	183988	SSBP-10-S2-SDA	22	3-49
	Plastic ejector nozzle 1.5mm 	183989	SSBP-15-S2-SDA		
	Plastic ejector nozzle 2.0mm 	183991	SSBP-20-S3-SDA	50	
Plastic ejector clip mount base		183990	SBEF-PL-110 * 45	—	
Small check valve for Suction Cup		184150	SSVK-M5	3	3-50
		184151	SSVK-G1/8	11	



# Air Ejectors

Perfect for transportation of heavy weight and cardboard.

**NEW** ▶ Air Ejectors



## Air Ejectors (shaft $\phi$ 12)

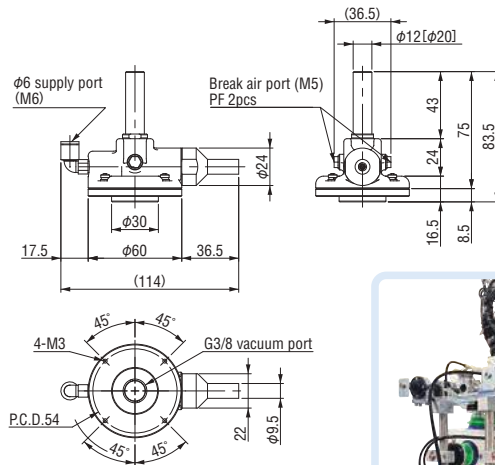
Order code No.	<b>042116</b>
TYPE	<b>ESVP10-A</b>

● Weight : 146g

## Air Ejectors (shaft $\phi$ 20)

Order code No.	<b>042129</b>
TYPE	<b>ESVP10-A-20</b>





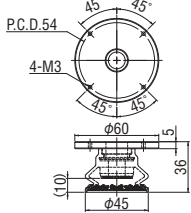
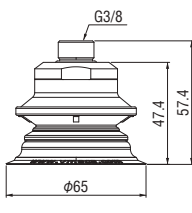
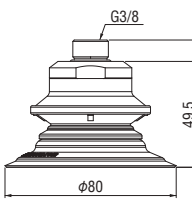
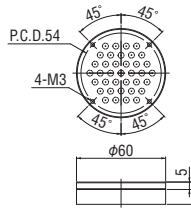
● Weight : 169g



## Specification

TYPE	Max vacuum (-kPa)	Max suction discharge (NL/min)	Air supply pressure (MPa)	Air consumption (L/min)	Noise level (dBA)
<b>ESVP10-A</b>	-79.5	85	0.5	57	65 ~ 70

**NEW** ▶ Carrier Cup (for Ejector only)

Applicable cup size	$\phi$ 45mm	$\phi$ 65mm	$\phi$ 80mm	$\phi$ 60mm
Carrier cup	 for Holder plate			 for Holder plate
Drawing				
Order code No.	<b>042117</b>	<b>010749</b>	<b>010750</b>	<b>042118</b>
TYPE	<b>ESVP-A-PA</b>	<b>B1.5/60-MU65-N6-G-F2-38M</b>	<b>B1.5/60-MU80-N6-G-F2-38M</b>	<b>ESVP-A-SA</b>
Weight	56.4g	82g	88g	40.6g

**NEW** ▶ Maintenance Parts

**Filter**

Order code No.	<b>042119</b>
TYPE	<b>ESVP-FILT</b>

● Weight : 1.5g

**Seal ring**

Order code No.	<b>042132</b>
TYPE	<b>ESVP10-SEAL</b>

● Weight : 0.1g

**Bracket joint  $\phi$  12**

Order code No.	<b>042130</b>
TYPE	<b>ESVP10-BKTJT12</b>

● Weight : 16g

**Nozzle unit**

Order code No.	<b>042133</b>
TYPE	<b>ESVP10-NOZL-UT</b>

● Weight : 20g

**Joint (Elbow)**

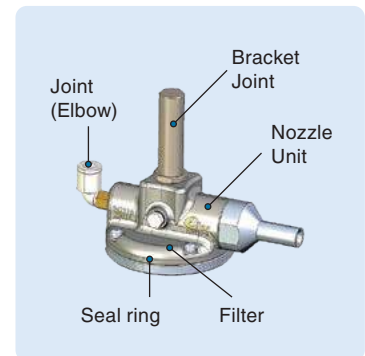
Order code No.	<b>102051</b>
TYPE	<b>K02L06-M6A</b>

● Weight : 4.3g

**Bracket joint  $\phi$  20**

Order code No.	<b>042131</b>
TYPE	<b>ESVP10-BKTJT20</b>

● Weight : 38g



### Quick Chuck Change

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

### Grip

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

### Suction

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

- Cut
- Air Nipper (Small-Medium)
- Air Nipper (Large)

- Frame / Module
- Jungle Gym
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

- Pneumatic Components / Sensors
- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

- Lightweight Parts Series
- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds
- By Industry
- Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication
- Assembling Tools
- Tool / Jig

- Information
- Various Products Information



# Air Ejectors / Small Air Filters

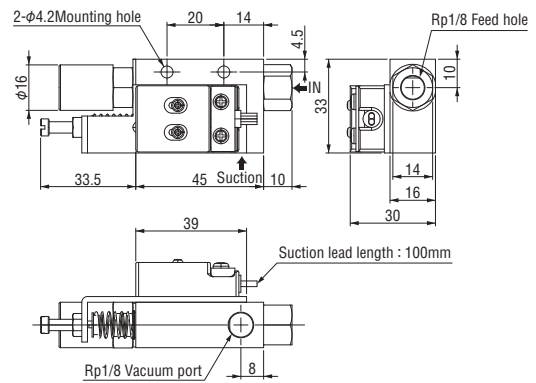
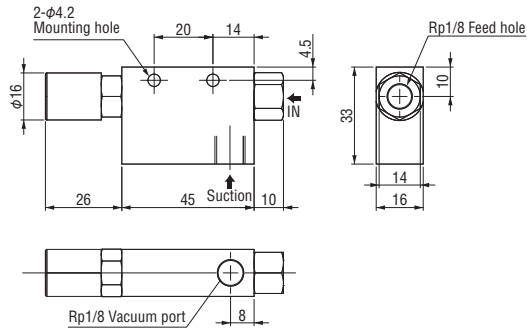
▶ With vacuum switch



Order code No.	<b>042034</b>
TYPE	<b>ECV-10HS</b>
● Weight : 78g	



Order code No.	<b>042035</b>
TYPE	<b>ECV-10HSCK</b>
● Weight : 120g	



## ■ Specification

Product name	TYPE	Nozzle diameter (mm)	Quantity of suction (L/min)	Vacuum pressure (kPa)	Air consumption (L/min)	Supply air (MPa)
Air Ejectors	<b>ECV-10HS</b>	φ 1.0	27 (ANR)	- 92	44 (ANR)	0.5
	<b>ECV-10HSCK</b>					

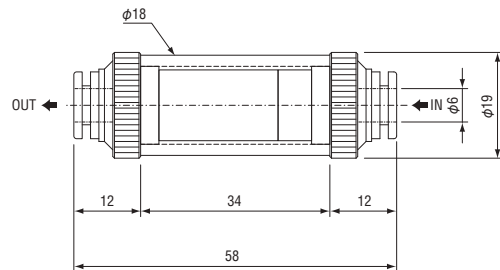
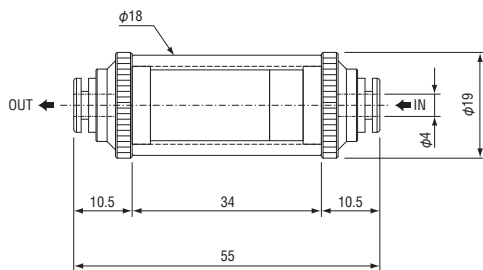
▶ Small Air Filters



Order code No.	<b>042036</b>
TYPE	<b>EVFL-44</b>
● Weight : 20g ● Directional	



Order code No.	<b>042037</b>
TYPE	<b>EVFL-66</b>
● Weight : 20g ● Directional	



## ■ Specification

Product name	TYPE	Tube size (mm)	Pressure resistance (MPa)	Pressure (kPa)	Nominal filtration rating (μm)
Small Air Filters	<b>EVFL-44</b>	φ 4	0.5	- 95.9~0	15
	<b>EVFL-66</b>	φ 6			

\* Vacuum filter





# Plastic Ejector Nozzles

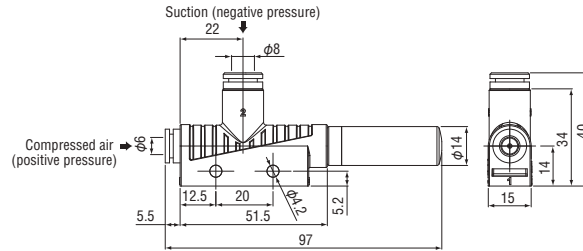
Lightweight and high-performance low-price ejector.



## Plastic Ejector Nozzle 1.0mm

Order code No.	<b>183988</b>
TYPE	<b>SSBP-10-S2-SDA</b>

- Weight : 22g
- Recommended inner diameter of compressed air supply hose: 4mm (2m length)
- Recommended inner diameter of vacuum hose: 6mm (2m length)



## Plastic Ejector Nozzle 1.5mm

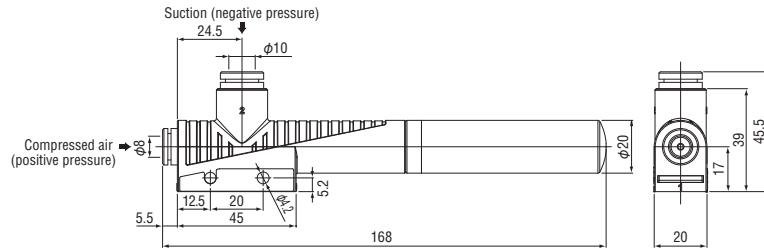
Order code No.	<b>183989</b>
TYPE	<b>SSBP-15-S2-SDA</b>

- Weight : 22g
- Recommended inner diameter of compressed air supply hose: 4mm (2m length)
- Recommended inner diameter of vacuum hose: 6mm (2m length)

## Plastic Ejector Nozzle 2.0mm

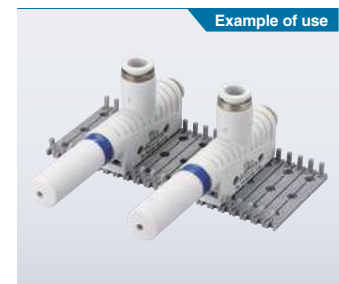
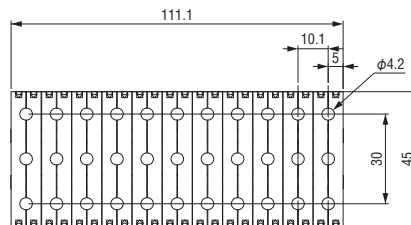
Order code No.	<b>183991</b>
TYPE	<b>SSBP-20-S3-SDA</b>

- Weight : 50g
- Recommended inner diameter of compressed air supply hose: 6mm (2m length)
- Recommended inner diameter of vacuum hose: 7mm (2m length)



## Plastic Ejector Clip Mount Base

Order code No.	<b>183990</b>
TYPE	<b>SBEF-PL-110 * 45</b>



## Specification

Product name	TYPE	Nozzle diameter (mm)	Max. vacuum pressure (kPa)	Quantity of suction (L/min)	Working pressure (MPa)	Air consumption (L/min) *	Noise level (db (A))	
							W/o suction	W/ suction
Plastic Ejector	SSBP-10-S2-SDA	φ 1.0	-85	37.7	0.45	48	65	59
	SSBP-15-S2-SDA	φ 1.5	-85	71.0	0.45	105	72	65
	SSBP-20-S3-SDA	φ 2.0	-85	127.0	0.45	197	77	68

\* When working pressure is 0.45 MPa.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Small Check Valve for Suction Cup



Small check valves. Please attach the pad before use.

- Remove the head of suction stem before installation.
- Used to attach to the position between suction stem head and main body to use the bracket for VFILB.

Use of check valves eliminates the need for repositioning vacuum cups when lifting workpieces of different sizes simultaneously.

The check valve cuts off the airflow to the vacuum cup when there is no contact between the cup and the workpiece.



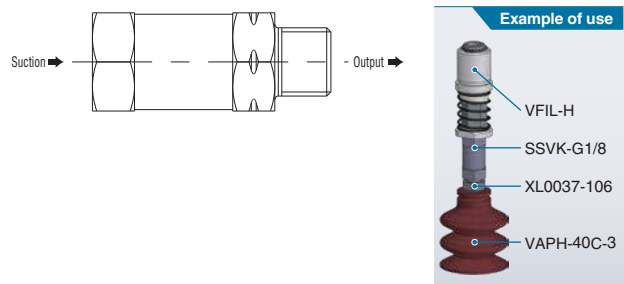
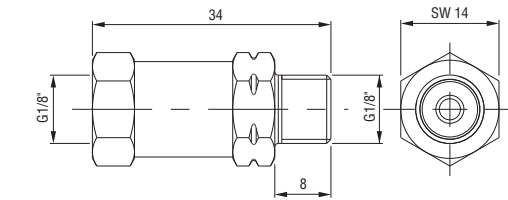
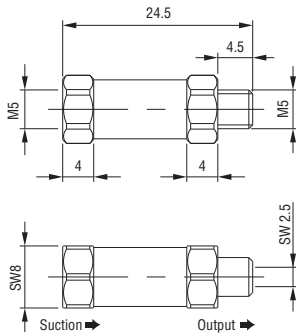
Order code No.	<b>184150</b>
TYPE	<b>SSVK-M5</b>

• Weight : 3g



Order code No.	<b>184151</b>
TYPE	<b>SSVK-G1/8</b>

• Weight : 11g



## Operation of check valve



The condition in which a vacuum cup is pressed against the work surface without permeability. The ball in the valve is in the open position under vacuum.



When the work does not cover a vacuum pad completely or a pad is separated during handling. A ball is pushed up in the direction of the sheet with airflow. And vacuum pressure in the system is maintained.



The condition in which the workpiece is released. The cross-sectional area of the valve is widened when the ball is pushed back. Much air is discharged. And the workpiece is released reliably and quickly.

<Reference value>

- Suction cup** VAPH-15C
- Check Valve** SSVK-M5
- supply pressure** 0.5MPa

Quantity of suction No. of uses	(Unit : kPa)				
	0 position	1 position	2 position	3 position	4 position
Check valve: 0	-20.5	-20.5	-20.5	-20.5	-66.5
Check valve: 1	-21.0	-21.0	-21.0	-61.0	-65.4
Check valve: 2	-22.0	-22.0	-55.2	-61.9	-65.3
Check valve: 3	-25.0	-47.6	-54.1	-59.2	-64.4

\*Above list: with maximum degree of vacuum of -66.5 kPa.

# MEMO

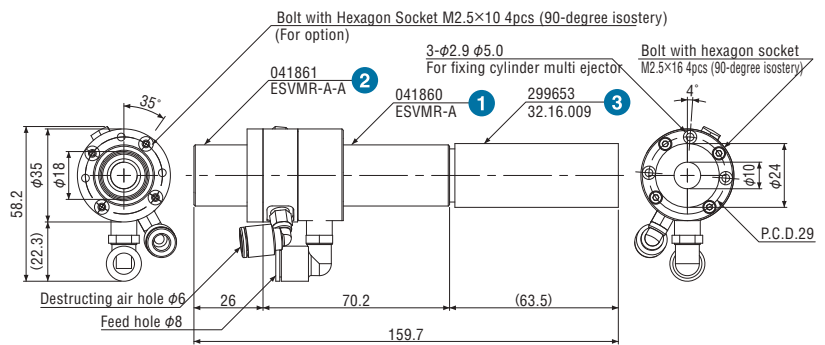
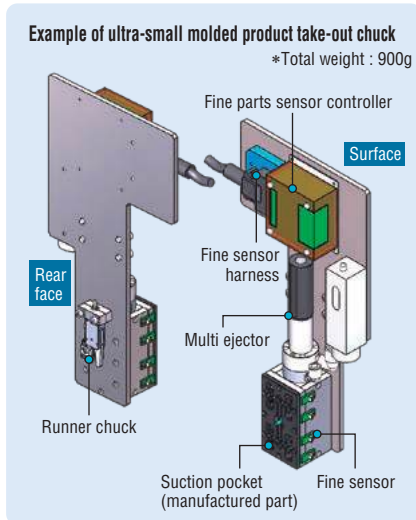
A series of horizontal dashed lines for writing.



# Ultra Small Part Take Out

Please submit technical information beforehand for our effective design/manufacturing.

- ▶ Small molding machine It is effective for taking out ultra-small molded products of 20 tons or less.
- ▶ Compact and high-function multi ejector is used.
- ▶ Cylindrical multi ejector can be attached to jungle gym SUS pipe.
- ▶ Fine sensor unit best suited to check the micro workpieces.



1



### Multi Ejector

Order code No.	<b>041860</b>
TYPE	<b>ESVMR-A</b>

- Weight : 104g
- Air consumption : 280 [L/min]
- Suction flow rate : 700 [L/min]
- Noise : 91.2 [dB]
- Attachments: sealing ring packing

2



### Option parts A

Order code No.	<b>041861</b>
TYPE	<b>ESVMR-A-A</b>

- Weight : 19g
- Attachments: mounting bolt (M2.5 x 10) x 4
- Joint for hose connection

3



### Silencer

Order code No.	<b>299653</b>
TYPE	<b>32.16.009</b>

- Weight : 13g
- Silence, Amount of suction fluid flow: 400 [L/min]

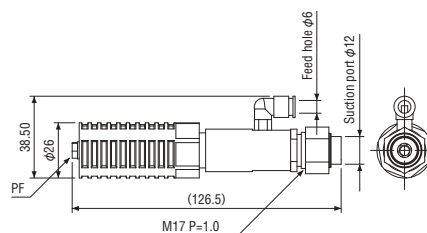
Suction ● Ultra Small Part Take Out



### In-line Cylinder Multi Ejector

Order code No.	<b>041836</b>
TYPE	<b>ESVMR1-10-3</b>

- Weight : 64g
- Air consumption : 210 [L/min]
- Suction flow rate : 260 [L/min]
- Noise : 85 [dB]



### Silencer

Order code No.	<b>110663</b>
TYPE	<b>L18382-106</b>

- Weight : 22g



You can see moving images of products by using QR code reader of your smartphone.



### Micro Parts Sensor Controller

Order code No.	<b>010521</b>
TYPE	<b>B-CONT-UNIT</b>

● Weight : 145g

- ▶ Product detection level mode: automatic or manual
- ▶ Switching between AND output and OR (/OR) output is possible.
- ▶ Input and output for NPN / PNP.
- ▶ Up to 32 points can be detected (extension unit is used).
- ▶ The input condition of the sensor can be confirmed with the monitor LED.
- ▶ Method of product detection can be selected from level (product condition) and latch (product pass hold).
- ▶ Light ON / Dark ON can be selected.

\* The parts are subject to changes without notice.

**About "AND", "/OR", and "OR"**

Input side

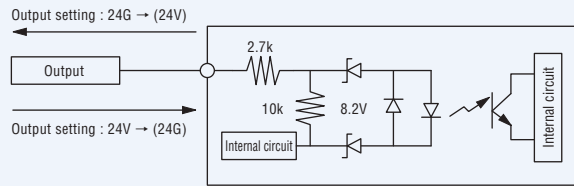
① ② ③

**AND, /OR, OR**

Output S

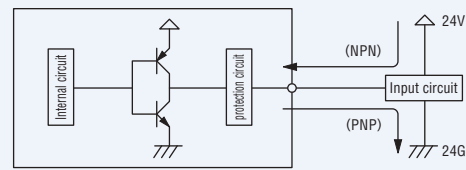
AND	/OR	OR
Output S is turned on when all the inputs (①②③) are ON.	Output S is turned on when all the inputs (①②③) are OFF.	Output S is turned on when either of input (①②③) is ON.

### Sensing input, OR switching input circuit configuration



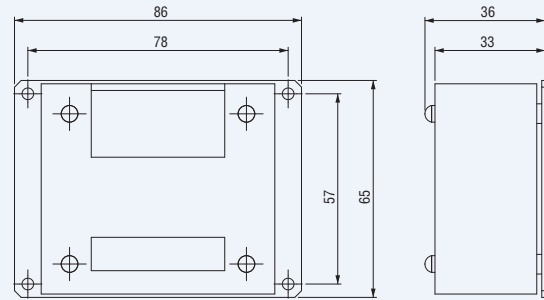
\* Sensing input switching: change the input setting with the switch according to the output circuit specification of the customer (as shown in the drawing).

### Configuration of output circuit



\* Select NPN/PNP as illustrated above according to the input circuit specification of the customer.

### Outside Dimension / Mounting Dimension



\* Mounting hole : 4-φ3.5

### Specification

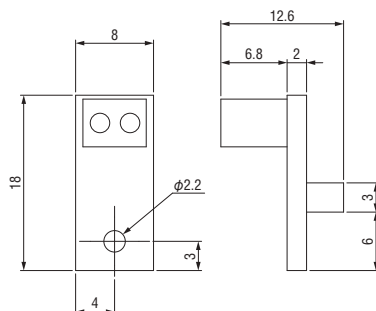
Power supply voltage (V)	Internal consumption current (mA)	Input current (mA)	Output current (mA)	Operating ambient humidity (%)	Ambient temperature (°C)	Operation condition
DC24 (±10%)	120 max. (DC24V)	10 or less / one point	100 (MAX)	35 ~ 80 (non-condensing)	0 ~ 40	There is no particulate and corrosive gas.



### Fine sensor unit

Order code No.	<b>010519</b>
TYPE	<b>B-SENS-UNIT</b>

● Weight : 1g



### Fine sensor harness

Order code No.	<b>010522</b>
TYPE	<b>B-SENS-H</b>

- Weight : 150g
- Length : 1m
- Harness connect the fine sensor unit and fine controller unit.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

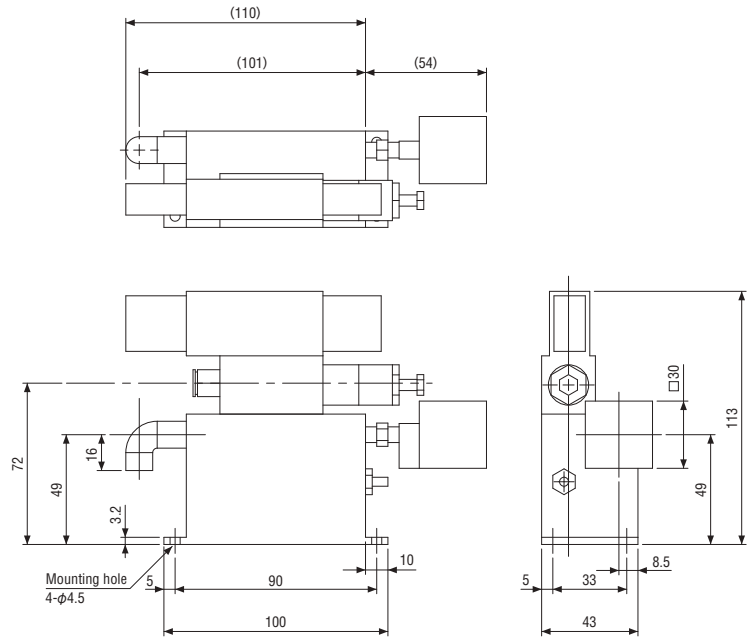
### Information

Various Products Information





Supplying dry air allows easy generation of vacuum pressure.



Order code No.	<b>210804</b>
TYPE	<b>V51-100-8283</b>

- Weight : 800g
- The pressure sensor facilitates the verification of the achieved vacuum pressure.
- Vacuum pressure is adjustable.

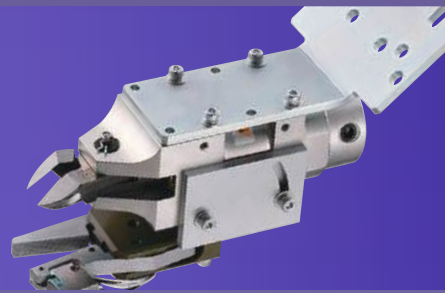
## ■ Specification

Fluid to be used	Pressure air regulated by air regulator with 74 μ or less of filter.
Pressure	0.35 ~ 0.5MPa
Reaching vacuum pressure	-0.079MPa or more (supply pressure 0.5MPa)
Quantity of suction	18 ± 1.5dm <sup>3</sup> /min ANR (Supply pressure 0.4MPa)
Air consumption (L/min)	30 ~ 40dm <sup>3</sup> /min ANR (Supply pressure 0.4MPa)
Weight	Approx. 10kg
2-port magnet valve	2-port magnet valve
solenoid	double solenoid
Response time	0.05sec Max
Standard voltage	DC24V
Power consumption	1.8W
Allowable voltage volatility	± 10%
Type of insulation	B type

## ■ Vacuum pressure sensor with display

TYPE	PG-30-102R-N (Copal Electronics)
Power supply voltage	DC10.8~30V Ripple included
Protection grade	IP65 (connector not included)
Output	NPN open collector, 30 VDC max. (100 mA max.)
Residual voltage	1.2 VDC max. (load voltage 100 mA)
Output setting pressure	-53.3 ± 5kPa (power supply voltage DC24V, ambient temperature 25 ± 5°C)
Output hysteresis setting	13.3kPa
Operation Mode	Output transistor ON, red LED lighted when negative pressure exceeds the preset pressure. (Display screen is lighted with negative pressure).
Output	Linear output (1-5VDC)

# Cut



## Air Nipper (Small · Medium) ..... 4-2

- ▶ How To Select Nipper ..... 4-2
- ▶ NW Series ..... 4-4
- ▶ HNW Series ..... 4-10
- ▶ Air Nipper ↔ Replacement Blades Selection Table ... 4-16
- ▶ Replacement Blades ..... 4-17
- ▶ Air Nipper ↔ Accessories Selection Table ..... 4-18
- ▶ Accessories ..... 4-19
- ▶ Nipper Mounting Brackets ..... 4-20
- ▶ NW One Touch Clip / Nipper Adjustment Bracket ... 4-21



## Air Nipper (Large) ..... 4-22

- ▶ NT Series ..... 4-23
- ▶ NS Series / NR Series / Booster Unit ..... 4-24
- ▶ Nipper Holders / Brackets / Rotation BRT ..... 4-25
- ▶ NB Series ..... 4-26
- ▶ Sprue Cut Unit / Timing Controller ..... 4-27
- ▶ Replacement Blades / Accessories ..... 4-28
- ▶ Heat Air Nipper (NTH Series / NKH Series) ..... 4-30

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

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Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Beam Cylinder / Pads / Bush Manifolds

### By Industry

Logistics · Palletizing · Steel Metal · Stamping · Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Air Nipper (Small·Medium)

## ▶ How to select nipper

The air nipper is selected by material and cut diameter (cut area: mm<sup>2</sup>) of gate.

### 1. Check the material of cut gate and sprue.

#### soft resin

PVC (Poly vinyl chloride), PEs(polyester), PE (polyethylene), PS (polystyrene), etc

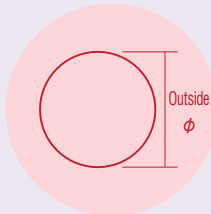
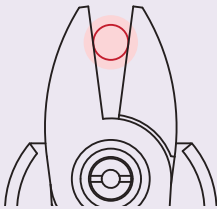
#### Hard resin

PP (polypropylene), PMMA (acrylic), PC (polycarbonate), ABS, Nylon, POM (polyacetal), glass fiber resin, etc

\* Cannot be used with copper/iron wire.

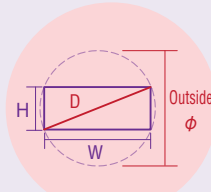
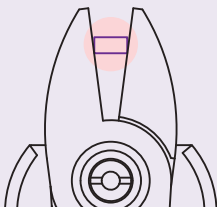
### 2. Check cut diameter (cut area).

#### ■ To cut round gate



Select the nipper referring to the specification table (right):  
**Approximate cutting section diameter ( $\phi$ ) > outside diameter of gate.**

#### ■ To cut square gate

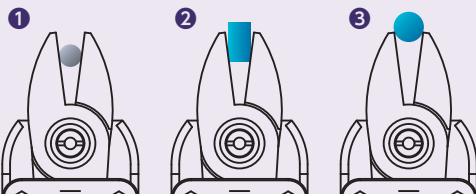


Select the nipper referring to the specification table (right):  
**Approximate cutting section diameter ( $\phi$ ) > Gate maximum width (D).**

\* Cutting guide: (mm<sup>2</sup>) > H × W

\* Diagonal line (D) = outside diameter ( $\phi$ )

#### ■ Gate cutting is impossible when:



- ① Gate is not made of resin.
- ② Gate (H) is longer than blade.
- ③ Gate (H) is greater than blade opening.

### When gate made of hard resin is cut:

- Cutting capacity will decrease by 35%.
- Select the blade with brazed cemented carbide tip.

● Product temperature when the product is cut may influence the finishing state. ● Cutting guide value is for reference.



Please refer to the website for performance table.

- ▶ Pull push operation (a blade slides to a work surface to ensure the beautiful cut surface).
- ▶ Compatible with a variety of cuts to suit a variety of different applications.



Standard blade



Thin blade



Reverse blade



Standard long blade



Reversed long blade



Clip Type Blade

## 仕 様

Product name	Shape of blade	Order code No.	TYPE	Operation	*Used air pressure (Mpa)	Withstand pressure (Mpa)	Cutting capacity		blade section Max opening width of blade(mm)	Weight (g)	Page		
							Soft resin (mm)	Hard resin (mm)					
Air Nipper NW Series	Standard blade	<b>131626</b>	<b>NW3-10</b>	Pull (Max.2mm)	0.4 (4kgf/cm <sup>2</sup> ) } 0.5 (5kgf/cm <sup>2</sup> )	0.7 (7kgf/cm <sup>2</sup> )	φ 1.7 (2.26mm <sup>2</sup> )	φ 1.1 (0.95mm <sup>2</sup> )	3	110	4-4		
	Thin blade	<b>131627</b>	<b>NW3-101</b>										
	Reverse blade	<b>131628</b>	<b>NW3-10R</b>										
	Standard blade	<b>131629</b>	<b>NW3-20</b>	Pull (Max.3mm)			φ 2.8 (6.15mm <sup>2</sup> )	φ 1.8 (2.54mm <sup>2</sup> )	6	6	222	224	4-5
	<b>NEW</b> Standard blade	<b>131724</b>	<b>NW3-20-BAST</b> (W/ blade open adjust mechanism)										
	Thin blade	<b>131630</b>	<b>NW3-201</b>										
	Reverse blade	<b>131631</b>	<b>NW3-20R</b>										
	<b>NEW</b> Reverse blade	<b>131725</b>	<b>NW3-20R-BAST</b> (W/ blade open adjust mechanism)										
	Standard long blade	<b>131632</b>	<b>NW3-20-V001S</b>										
	Reversed long blade	<b>131633</b>	<b>NW3-20R-V001S</b>	Push (Max.3mm)			φ 2.0 (3.14mm <sup>2</sup> )	φ 1.3 (1.32mm <sup>2</sup> )	6.5	235	236	4-6	
	Clip Type Blade	<b>131634</b>	<b>NW3-20-01C</b>										
	Standard blade	<b>131643</b>	<b>NW3-35</b>										
	<b>NEW</b> Standard blade	<b>131722</b>	<b>NW3-35-BAST</b> (W/ blade open adjust mechanism)	Push (Max.3mm)			φ 3.5 (9.61mm <sup>2</sup> )	φ 2.2 (3.80mm <sup>2</sup> )	9	9	305	306	4-7
	Reverse blade	<b>131644</b>	<b>NW3-35R</b>										
	<b>NEW</b> Reverse blade	<b>131723</b>	<b>NW3-35R-BAST</b> (W/ blade open adjust mechanism)										
	Standard long blade	<b>131645</b>	<b>NW3-35-V001S</b>										
	Reversed long blade	<b>131646</b>	<b>NW3-35R-V001S</b>	Pull (Max.3mm)			φ 3.0 (7.06mm <sup>2</sup> )	φ 1.9 (2.83mm <sup>2</sup> )	10	8	322	325	4-8
	Clip Type Blade	<b>131647</b>	<b>NW3-35-01C</b>										
Standard blade	<b>131771</b>	<b>NW1-50</b>	Pull (Max.5mm)	φ 5.0 (19.62mm <sup>2</sup> )	φ 3.2 (8.03mm <sup>2</sup> )	15	743	745	745	4-8			
Reverse blade	<b>131772</b>	<b>NW1-50R</b>											

\*Reference value Changed according to the use conditions.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Air Nipper(Small · Medium) NW Series

Attaching an air nipper to the robot on the chuck plate will be very efficient and will save on labor cost.



## Standard blade

Order code No.	<b>131626</b>
TYPE	<b>NW3-10</b>

- Weight : 110g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  1.7
- : Hard resin  $\phi$  1.1



## Thin blade

Order code No.	<b>131627</b>
TYPE	<b>NW3-101</b>

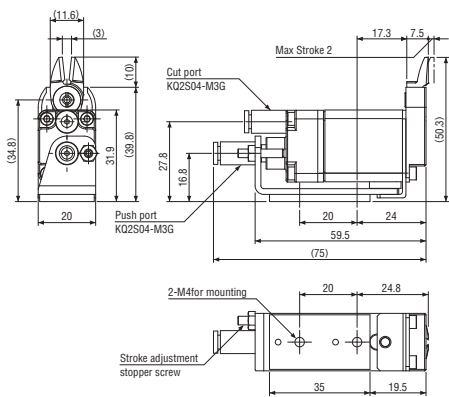
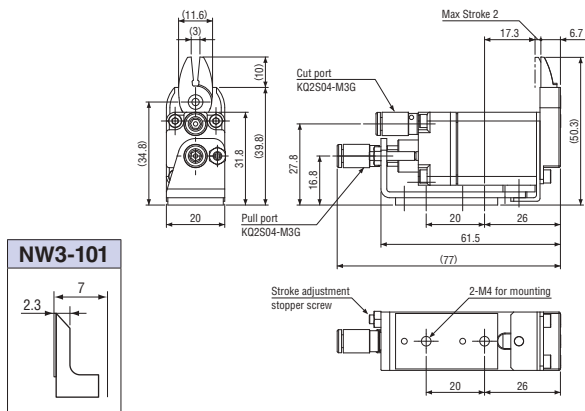
- Weight : 110g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  1.7
- : Hard resin  $\phi$  1.1



## Reverse blade

Order code No.	<b>131628</b>
TYPE	<b>NW3-10R</b>

- Weight : 110g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$  1.7
- : Hard resin  $\phi$  1.1



## Standard blade

Order code No.	<b>131629</b>
TYPE	<b>NW3-20</b>

- Weight : 222g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  2.8
- : Hard resin  $\phi$  1.8



## Thin blade

Order code No.	<b>131630</b>
TYPE	<b>NW3-201</b>

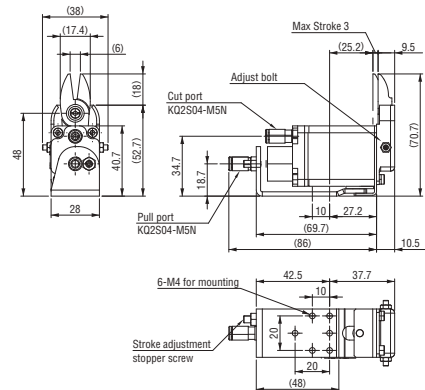
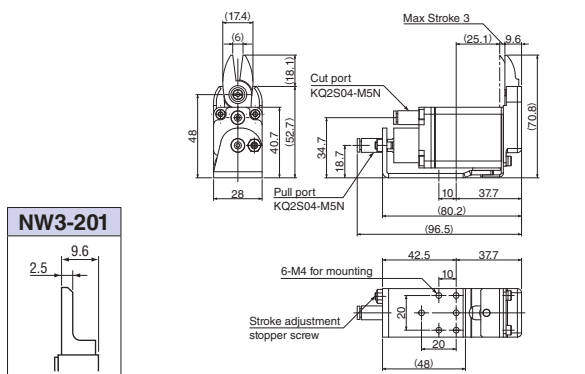
- Weight : 221g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  2.8
- : Hard resin  $\phi$  1.8



## Standard blade (W/blade open adjust mechanism)

Order code No.	<b>131724</b>
TYPE	<b>NW3-20-BAST</b>

- Weight : 224g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  2.8
- : Hard resin  $\phi$  1.8



Cut ● Air Nipper (Small · Medium)

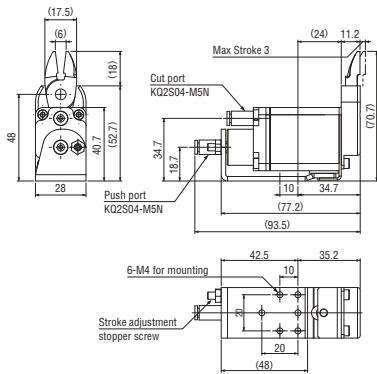




### Reverse blade

Order code No.	<b>131631</b>
TYPE	<b>NW3-20R</b>

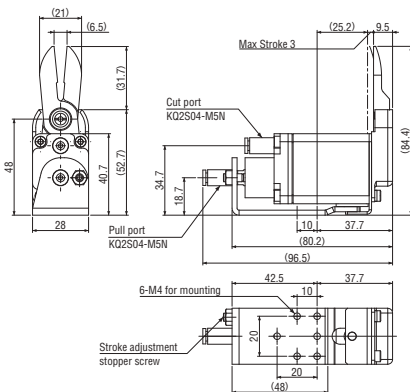
- Weight : 222g
- Operation : Push
- Cutting capacity : Soft resin  $\phi 2.8$
- Hard resin  $\phi 1.8$



### Standard long blade

Order code No.	<b>131632</b>
TYPE	<b>NW3-20-V001S</b>

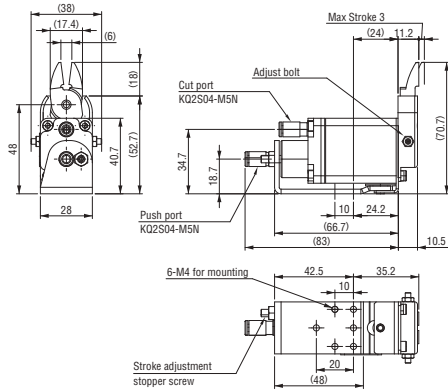
- Weight : 235g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi 2.0$
- Hard resin  $\phi 1.3$



### Reverse blade (W/blade open adjust mechanism)

Order code No.	<b>131725</b>
TYPE	<b>NW3-20R-BAST</b>

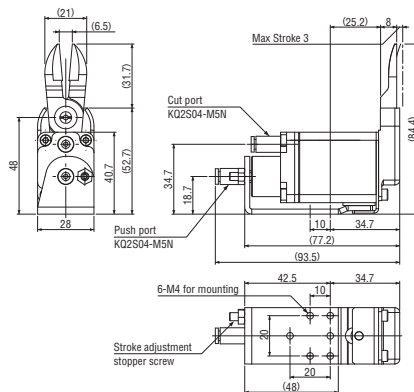
- Weight : 224g
- Operation : Push
- Cutting capacity : Soft resin  $\phi 2.8$
- Hard resin  $\phi 1.8$



### Reversed long blade

Order code No.	<b>131633</b>
TYPE	<b>NW3-20R-V001S</b>

- Weight : 236g
- Operation : Push
- Cutting capacity : Soft resin  $\phi 2.0$
- Hard resin  $\phi 1.3$



#### Quick Chuck Change

Quick Chuck Change Manual
Quick Chuck Change Manual (OM Type)
Tool Changer
Automated Hand Exchange System

#### Grip

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessories for Container Cylinder

#### Grippers

Rubber Material / Grip Pad
----------------------------

#### Suction

Suction Cups
Suction Stems

#### Pad in Pad

Vacuum Gripper
----------------

Air Ejector / Filter / Check Valve
------------------------------------

Ultra Small Part Take Out
---------------------------

Vacuum Generator Unit
-----------------------

#### Cut

Air Nipper (Small-Medium)
---------------------------

Air Nipper (Large)
--------------------

#### Frame / Module

Jungle Gym
------------

#### Let's Joint

Rectangular Tube
------------------

Base Aluminum Material
------------------------

Sliding Chuck
---------------

#### Pneumatic Components / Sensors

Pneumatic Components
----------------------

Sensors / Multi AND Board
---------------------------

PCIO Communication Unit
-------------------------

#### Lightweight Parts Series

Frame / Suction / Resin Cylinders (Pads) / Resin Manifolds
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#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication
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#### Assembling Tools

Tool / Jig
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#### Information

Various Products Information
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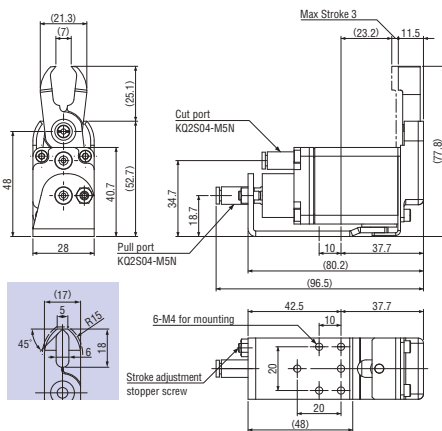
# Air Nipper (Small • Medium) NW Series



## Clip Type Blade

Order code No.	<b>131634</b>
TYPE	<b>NW3-20-01C</b>

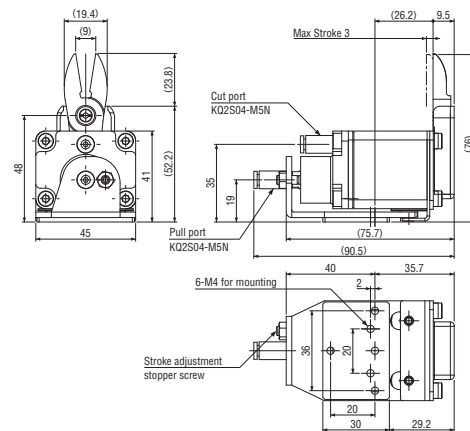
- Weight : 237g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  2.0
- : Hard resin  $\phi$  1.3



## Standard blade

Order code No.	<b>131643</b>
TYPE	<b>NW3-35</b>

- Weight : 305g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  3.5
- : Hard resin  $\phi$  2.2



Cut • Air Nipper (Small • Medium)

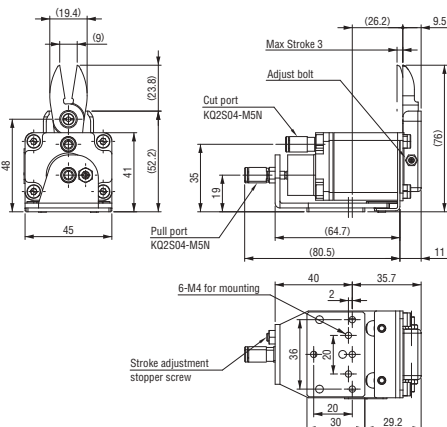
**NEW**



## Standard blade (W/ blade open adjust mechanism)

Order code No.	<b>131722</b>
TYPE	<b>NW3-35-BAST</b>

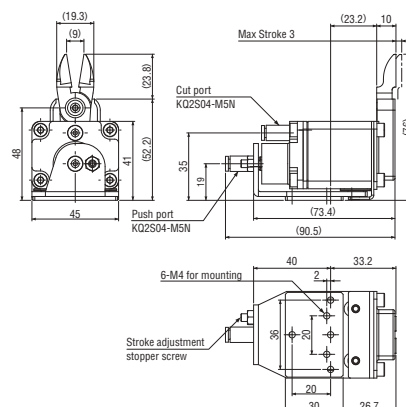
- Weight : 306g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  3.5
- : Hard resin  $\phi$  2.2



## Reverse blade

Order code No.	<b>131644</b>
TYPE	<b>NW3-35R</b>

- Weight : 305g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$  3.5
- : Hard resin  $\phi$  2.2



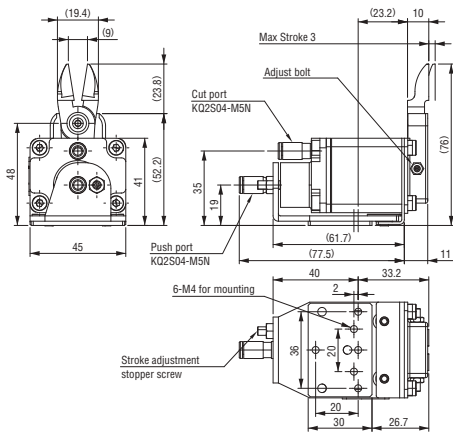
**NEW**



**Reverse blade (W/ blade open adjust mechanism)**

Order code No.	<b>131723</b>
TYPE	<b>NW3-35R-BAST</b>

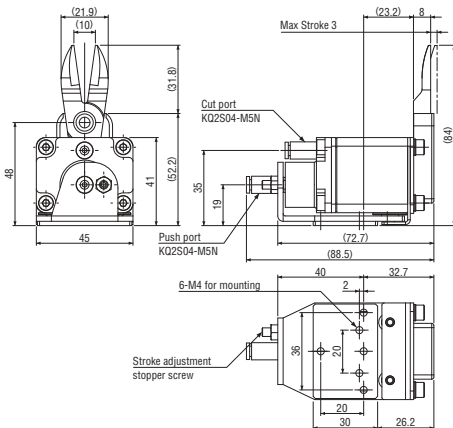
- Weight : 309g
- Operation : Pulsh
- Cutting capacity : Soft resin  $\phi$  3.5  
: Hard resin  $\phi$  2.2



**Reversed long blade**

Order code No.	<b>131646</b>
TYPE	<b>NW3-35R-V001S</b>

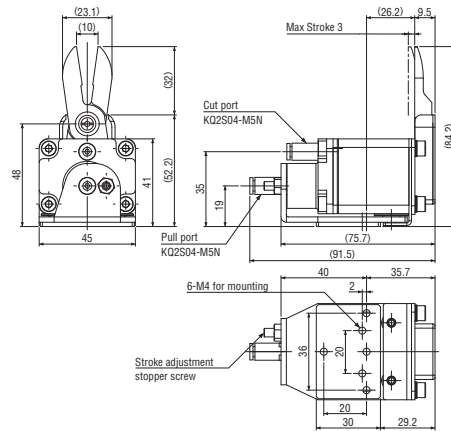
- Weight : 322g
- Operation : Pulsh
- Cutting capacity : Soft resin  $\phi$  3.0  
: Hard resin  $\phi$  1.9



**Standard long blade**

Order code No.	<b>131645</b>
TYPE	<b>NW3-35-V001S</b>

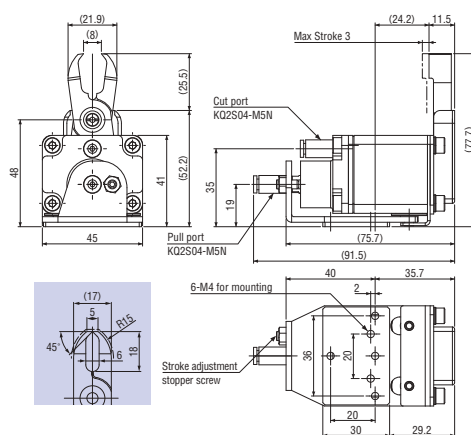
- Weight : 322g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  3.0  
: Hard resin  $\phi$  1.9



**Clip Type Blade**

Order code No.	<b>131647</b>
TYPE	<b>NW3-35-01C</b>

- Weight : 325g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  3.0  
: Hard resin  $\phi$  1.9



**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

**Grip**

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder

**Grippers**

- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems

**Pad in Pad**

**Vacuum Gripper**

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out

**Vacuum Generator Unit**

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

- Jungle Gym

**Let's Joint**

**Rectangular Tube**

- Base Aluminum Material
- Sliding Chuck

**Pneumatic Components / Sensors**

- Pneumatic Components
- Sensors / Multi AND Board

**PCIO Communication Unit**

**Lightweight Parts Series**

- Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

- Tool / Jig

**Information**

- Various Products Information

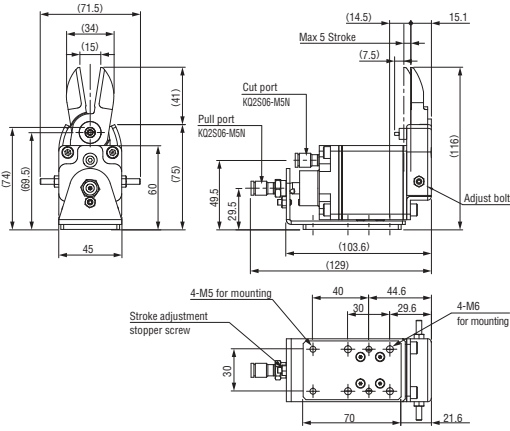
# Air Nipper (Small • Medium) NW Series



## Standard blade

Order code No.	<b>131771</b>
TYPE	<b>NW1-50</b>

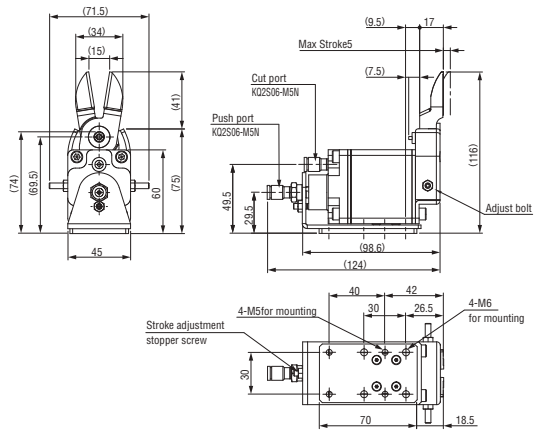
- W/ blade open adjust mechanism
- Weight : 743g ● Operation : Pull
- Cutting capacity : Soft resin  $\phi$  5.0
- : Hard resin  $\phi$  3.2



## Reverse blade

Order code No.	<b>131772</b>
TYPE	<b>NW1-50R</b>

- W/ blade open adjust mechanism
- Weight : 745g ● Operation : Push
- Cutting capacity : Soft resin  $\phi$  5.0
- : Hard resin  $\phi$  3.2



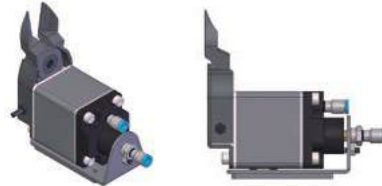
Cut • Air Nipper (Small • Medium)

The conventional products NW-50 and the NW-50R, are on sale until the stock is gone. Also, the fixing method of the blade as the subsequent product is changed to the nut type, and bolt protrudes, so please notice the interference with workpiece. (See following chart)

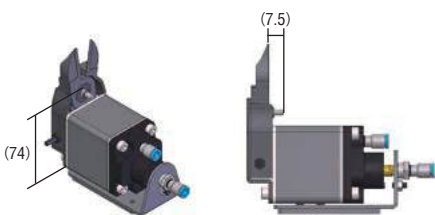
### Conventional product NW-50



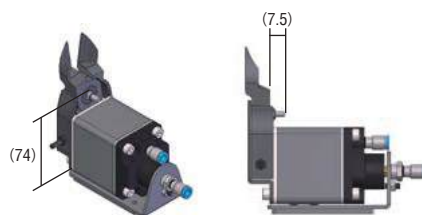
### Conventional product NW-50R



### Subsequent product NW1-50



### Subsequent product NW1-50R



# MEMO

A series of horizontal dashed lines for writing.





# Air Nipper(Small • Medium) HNW Series



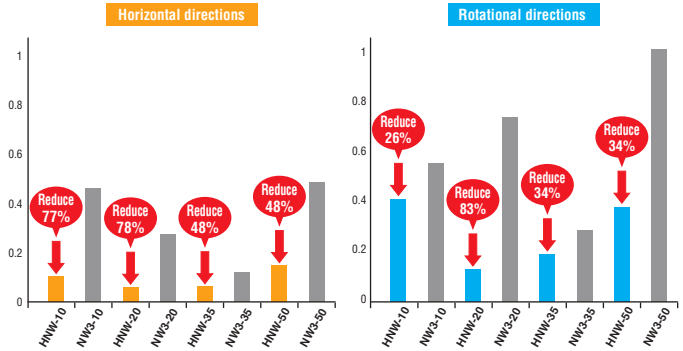
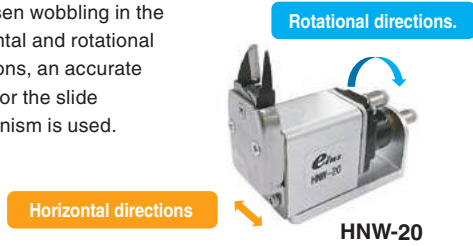
Please refer to the website for performance table.

The achievement of high precision in gate cutting is attributed to minimal vibration during the sliding process and consistent load application.

► Lineup as well as the NW3 series. Mounting size is similar to the NW3 series.

## New product features

To lessen wobbling in the horizontal and rotational directions, an accurate guide for the slide mechanism is used.



## Specification

Product name	Shape of blade	Order code No.	TYPE	Operation	Used air pressure (Mpa)	Withstand pressure (Mpa)	Cutting capacity		blade section Max opening width of blade (mm)	Weight (g)	Page of details
							Soft resin (mm)	Hard resin (mm)			
Air Nipper(Small•Medium) HNW Series		<b>073301</b>	<b>HNW-10</b>	Pull (Max.2mm)	0.4 (4kgf/cm <sup>2</sup> ) } 0.5 (5kgf/cm <sup>2</sup> )	0.7 (7kgf/cm <sup>2</sup> )	φ 1.7 (2.26mm <sup>2</sup> )	φ 1.1 (0.95mm <sup>2</sup> )	3	80	<b>4-11</b>
		<b>073302</b>	<b>HNW-101</b>								
		<b>073303</b>	<b>HNW-10R</b>								
		<b>073304</b>	<b>HNW-20</b>	Pull (Max.3mm)			φ 2.8 (6.15mm <sup>2</sup> )	φ 1.8 (2.54mm <sup>2</sup> )	6	195	
		<b>073305</b>	<b>HNW-201</b>								
		<b>073308</b>	<b>HNW-20R</b>	Push (Max.3mm)			200	<b>4-12</b>			
		<b>073306</b>	<b>HNW-20-V001S</b>	Pull (Max.3mm)			6.5		214		
		<b>073309</b>	<b>HNW-20R-V001S</b>	Push (Max.3mm)					219		
		<b>073307</b>	<b>HNW-20-01C</b>	Pull (Max.3mm)			7	214	<b>4-13</b>		
		<b>073310</b>	<b>HNW-35</b>								
		<b>073313</b>	<b>HNW-35R</b>	Push (Max.3mm)			9	212			
		<b>073311</b>	<b>HNW-35-V001S</b>	Pull (Max.3mm)			10	229	<b>4-14</b>		
		<b>073314</b>	<b>HNW-35R-V001S</b>	Push (Max.3mm)							
		<b>073312</b>	<b>HNW-35-01C</b>	Pull (Max.3mm)				8		234	
		<b>073355</b>	<b>HNW1-50</b>	Pull (Max.5mm)			15	687	<b>4-15</b>		
		<b>073356</b>	<b>HNW1-50R</b>	Push (Max.5mm)						685	

\*Reference value Changed according to the use conditions.

NEW



### Standard blade

Order code No.	<b>073301</b>
TYPE	<b>HNW-10</b>

- Weight : 80g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$ 1.7  
: Hard resin  $\phi$ 1.1

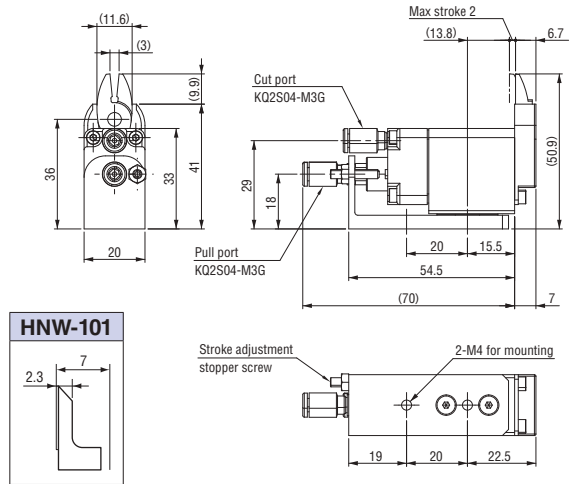
NEW



### Thin blade

Order code No.	<b>073302</b>
TYPE	<b>HNW-101</b>

- Weight : 80g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$ 1.7  
: Hard resin  $\phi$ 1.1



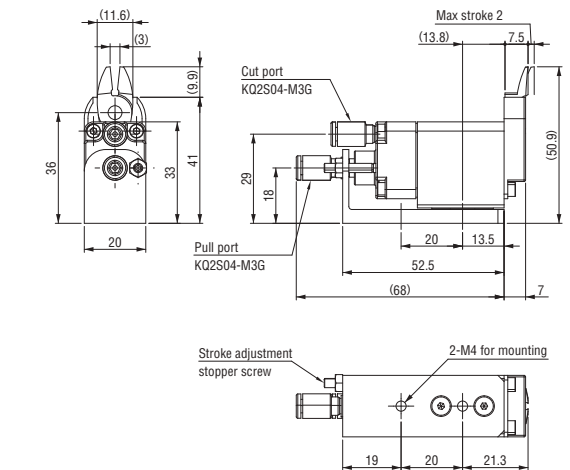
NEW



### Reverse blade

Order code No.	<b>073303</b>
TYPE	<b>HNW-10R</b>

- Weight : 85g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$ 1.7  
: Hard resin  $\phi$ 1.1



NEW



### Standard blade

Order code No.	<b>073304</b>
TYPE	<b>HNW-20</b>

- Weight : 195g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$ 2.8  
: Hard resin  $\phi$ 1.8

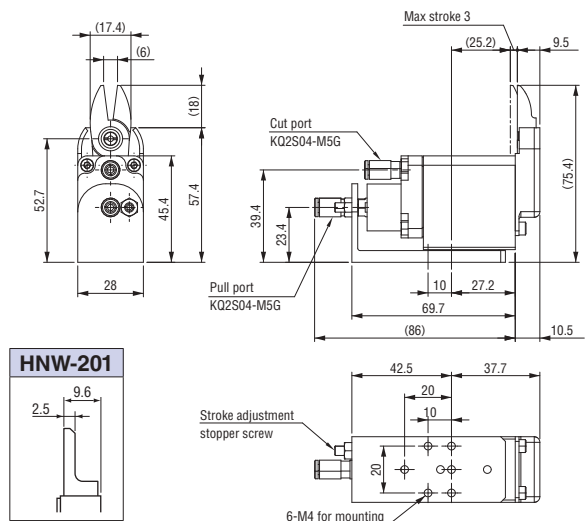
NEW



### Thin blade

Order code No.	<b>073305</b>
TYPE	<b>HNW-201</b>

- Weight : 195g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$ 2.8  
: Hard resin  $\phi$ 1.8



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Chuck

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information

# Air Nipper (Small • Medium) HNW Series

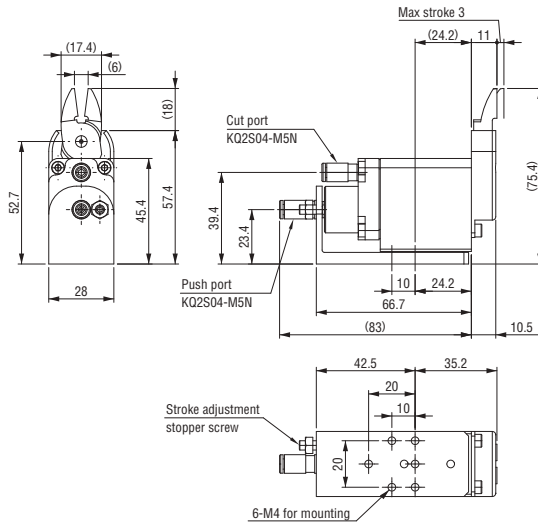
NEW



## Reverse blade

Order code No.	<b>073308</b>
TYPE	<b>HNW-20R</b>

- Weight : 200g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$  2.8  
: Hard resin  $\phi$  1.8



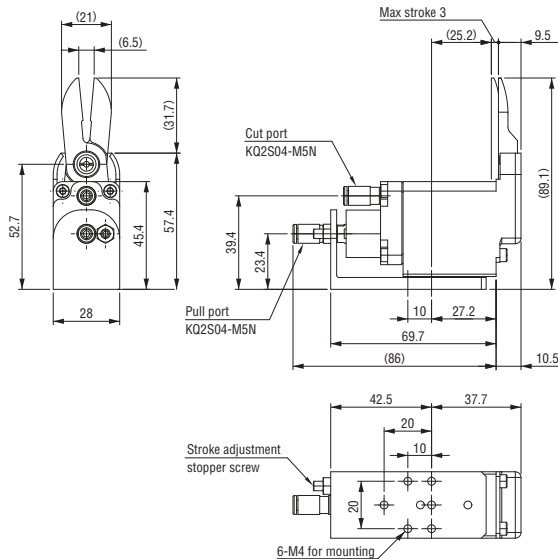
NEW



## Standard long blade

Order code No.	<b>073306</b>
TYPE	<b>HNW-20-V001S</b>

- Weight : 214g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  2.0  
: Hard resin  $\phi$  1.3



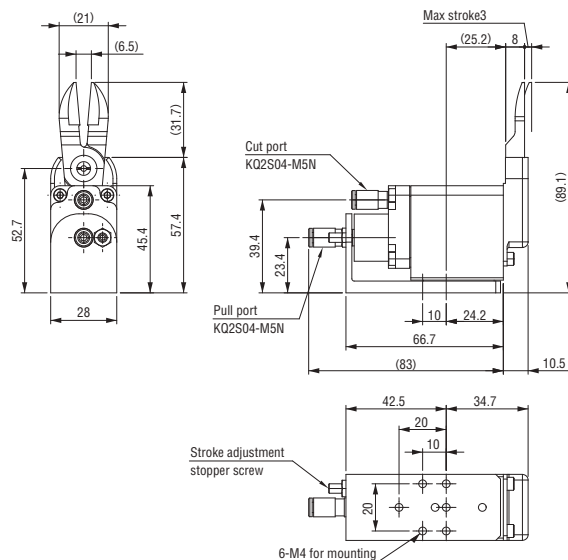
NEW



## Reversed long blade

Order code No.	<b>073309</b>
TYPE	<b>HNW-20R-V001S</b>

- Weight : 219g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$  2.0  
: Hard resin  $\phi$  1.3



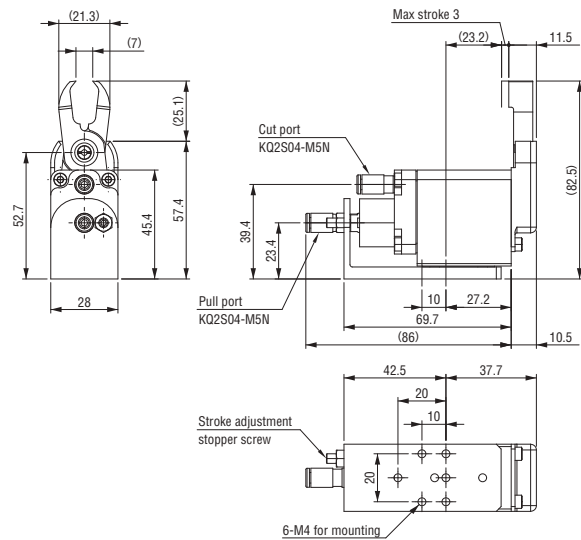
**NEW**



### Clip Type Blade

Order code No.	<b>073307</b>
TYPE	<b>HNW-20-01C</b>

- Weight : 214g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$ 2.0  
: Hard resin  $\phi$ 1.3



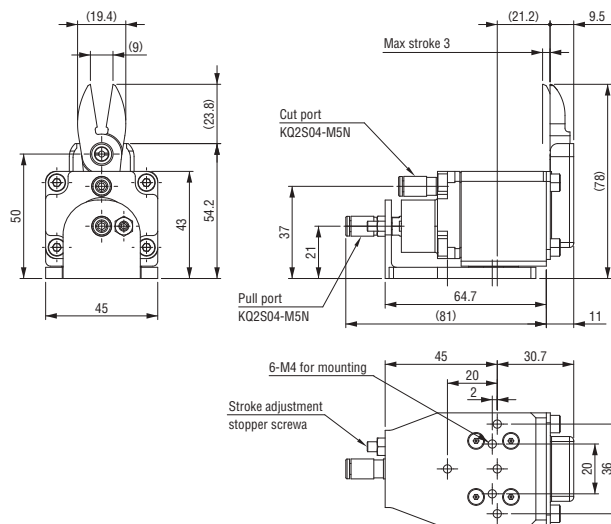
**NEW**



### Standard blade

Order code No.	<b>073310</b>
TYPE	<b>HNW-35</b>

- Weight : 212g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$ 3.5  
: Hard resin  $\phi$ 2.2



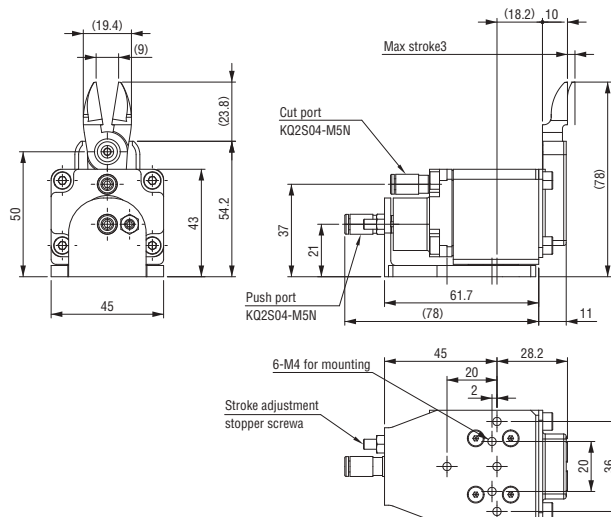
**NEW**



### Reverse blade

Order code No.	<b>073313</b>
TYPE	<b>HNW-35R</b>

- Weight : 212g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$ 3.5  
: Hard resin  $\phi$ 2.2



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information

# Air Nipper (Small • Medium) HNW Series

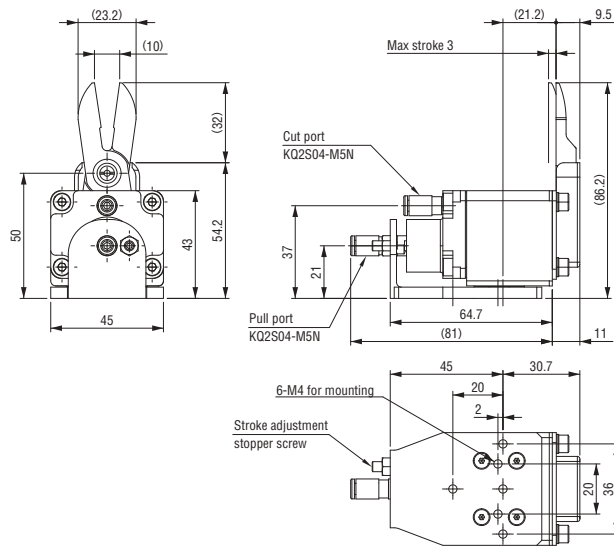
NEW



## Standard long blade

Order code No.	<b>073311</b>
TYPE	<b>HNW-35-V001S</b>

- Weight : 229g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  3.0  
: Hard resin  $\phi$  1.9



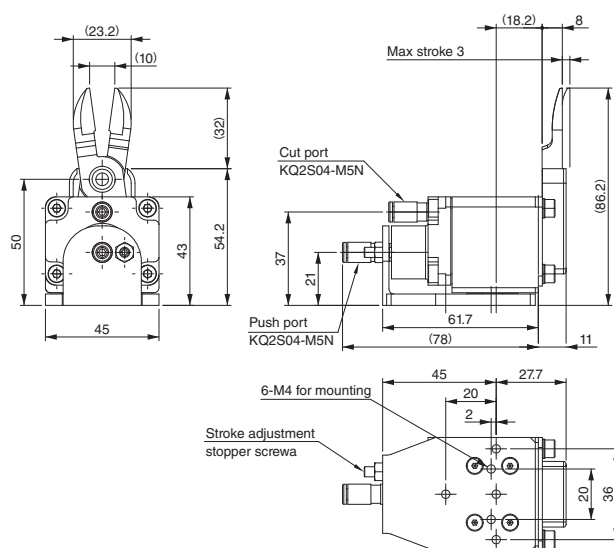
NEW



## Reverse long blade

Order code No.	<b>073314</b>
TYPE	<b>HNW-35R-V001S</b>

- Weight : 229g
- Operation : Push
- Cutting capacity : Soft resin  $\phi$  3.0  
: Hard resin  $\phi$  1.9



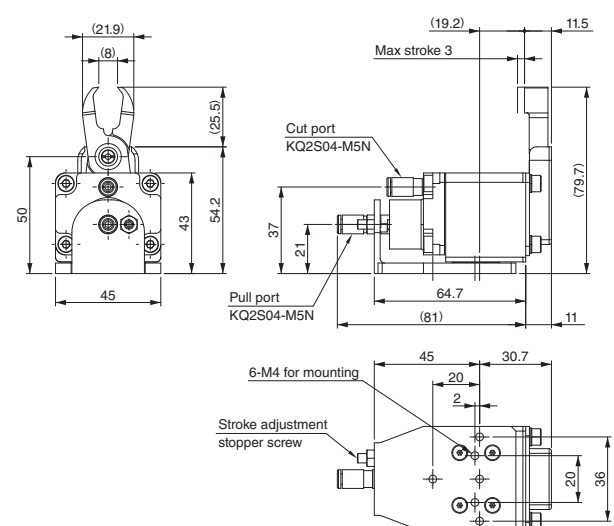
NEW



## Clip Type Blade

Order code No.	<b>073312</b>
TYPE	<b>HNW-35-01C</b>

- Weight : 234g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi$  3.0  
: Hard resin  $\phi$  1.9



Cut • Air Nipper (Small • Medium)



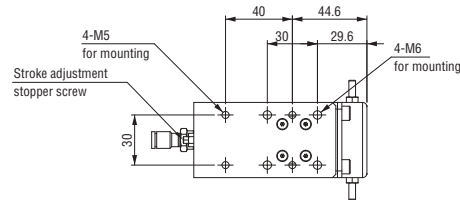
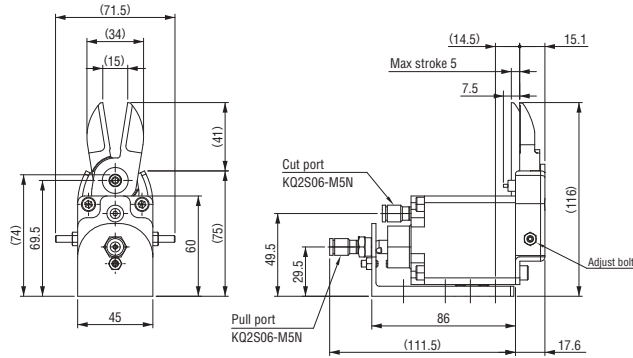
▶ The  $\phi 5$  (soft resin) product can be cut. The slide includes the new mechanism.



### Standard blade

Order code No.	<b>073355</b>
TYPE	<b>HNW1-50</b>

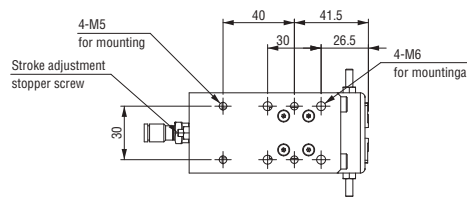
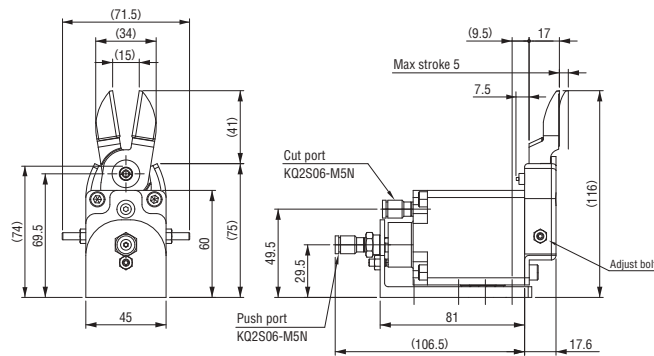
- W/ blade open adjust mechanism
- Weight : 687g
- Operation : Pull
- Cutting capacity : Soft resin  $\phi 5.0$   
: Hard resin  $\phi 3.2$



### Reverse blade

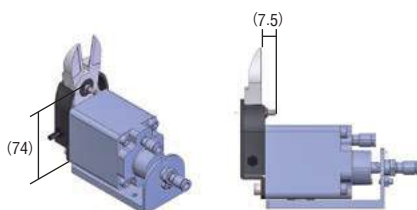
Order code No.	<b>073356</b>
TYPE	<b>HNW1-50R</b>

- W/ blade open adjust mechanism
- Weight : 685g
- Operation : Push
- Cutting capacity : Soft resin  $\phi 5.0$   
: Hard resin  $\phi 3.2$

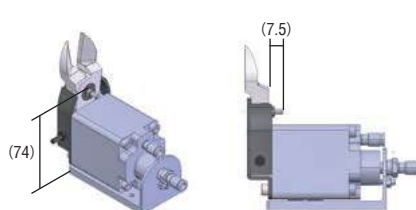


The conventional products HNW-50 and the HNW-50R, are on sale until the stock is gone. Also, the fixing method of the blade as the subsequent product is changed to the nut type, and bolt protrudes, so please notice the interference with workpiece. (See following chart)

#### HNW1-50



#### HNW1-50R



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



# Air Nipper (Small • Medium) ↔ Replacement Blades Selection Table

Air Nipper (Small • Medium)	Air nipper (10Series)					Air nipper (20Series)					Air nipper (35Series)					Air nipper (50Series)																				
Replacement Blades	131626	073301	131627	073302	131628	073303	131629	131724	073304	131630	073305	131631	131725	073308	131632	073306	131633	073309	131634	073307	131643	131722	073310	131644	131723	073313	131645	073311	131646	073314	131647	073312	131771	073355	131772	073356
	NW*-10	HNW*-10	NW*-101	HNW*-101	NW*-10R	HNW*-10R	NW*-20	NW*-20-BAST	HNW*-20	NW*-201	HNW*-201	NW*-20R	NW*-20R-BAST	HNW*-20R	NW*-20-V001S	HNW*-20-V001S	NW*-20R-V001S	HNW*-20R-V001S	NW*-20-01C	HNW*-20-01C	NW*-35	NW*-35-BAST	HNW*-35	NW*-35R	NW*-35R-BAST	HNW*-35R	NW*-35-V001S	HNW*-35-V001S	NW*-35R-V001S	HNW*-35R-V001S	NW*-35-01C	HNW*-35-01C	NW*-50	HNW*-50	NW*-50R	HNW*-50R
041050 EG-NW10 (Standard blade)	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041051 EG-NW101 (Thin blade)	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041758 EG-NW10R (Reverse blade)	-	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041871 EG1-NW20 (Standard blade)	-	-	-	-	○	○	-	-	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041872 EG1-NW201 (Thin blade)	-	-	-	-	○	○	-	○	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041064 EG-NW20-V001S (Standard blade • Standard long blade)	-	-	-	-	○	○	-	○	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041066 EG-NW20-01C (Clip Type Blade)	-	-	-	-	○	○	-	○	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041876 EG1-NW20 (Standard blade • Carbide blade)	-	-	-	-	○	○	-	○	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041873 EG1-NW20-AST (Standard blade • Adjustable opening)	-	-	-	-	○	○	-	○	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041874 EG1-NW201-AST (Thin blade • Adjustable opening)	-	-	-	-	○	○	-	○	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041916 EG1-NW20R (Reverse blade)	-	-	-	-	-	-	○	-	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041361 EG-NW20R-V001S (Reverse blade • Standard long blade)	-	-	-	-	-	-	○	-	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041923 EG1-NW20R (Reverse blade • Carbide blade)	-	-	-	-	-	-	○	-	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041924 EG1-NW20R-AST (Reverse blade • Adjustable opening)	-	-	-	-	-	-	○	-	○	-	-	○	-	○	-	-	○	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
041851 EG1-NW35 (Standard blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-
041065 EG-NW35-V001S (Standard blade • Standard long blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-
041067 EG-NW35-01C (Clip Type Blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-
041866 EG1-NW35 (Standard blade • Carbide blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-
041853 EG1-NW35 (Standard blade • Adjustable opening)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-
041852 EG1-NW35R (Reverse blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-	-
041310 EG-NW35R-V001S (Reverse blade • Standard long blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-	-
041867 EG1-NW35R (Reverse blade • Carbide blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-	-
041854 EG1-NW35R-AST (Reverse blade • Adjustable opening)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	○	-	○	-	○	-	○	-	-	-	-	-	-
042134 EG1-NW50 (Standard blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	-	-	
042135 EG1-NW50R (Reverse blade)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	-	

Cut • Air Nipper (Small • Medium)



# Air Nipper (Small·Medium) Replacement Blades



Please refer to the website for performance table.

Please use the replacement blade of the air nipper (small and medium type).

## Spare Blade

	<b>Order code No.</b>	<b>041050</b>	<b>041051</b>	<b>041758</b>	<b>041871</b>
	<b>TYPE</b>	<b>EG-NW10</b>	<b>EG-NW101</b>	<b>EG-NW10R</b>	<b>EG1-NW20</b>
	<b>Weight</b>	20g	20g	22g	61g
	<b>Supported nipper</b>	NW*-10, HNW-10 (Standard blade)	NW*-101, HNW-101 (thin blade)	NW*-10R, HNW-10R (Reverse blade)	NW*-20, HNW-20 (Standard blade)
	<b>Order code No.</b>	<b>041872</b>	<b>041916</b>	<b>041851</b>	<b>041852</b>
	<b>TYPE</b>	<b>EG1-NW201</b>	<b>EG1-NW20R</b>	<b>EG1-NW35</b>	<b>EG1-NW35R</b>
<b>Weight</b>	61g	62g	68g	68g	
<b>Supported nipper</b>	NW*-201, HNW-201 (thin blade)	NW*-20R, HNW-20R (Reverse blade)	NW*-35, HNW-35 (Standard blade)	NW*-35R, HNW-35R (Reverse blade)	

## Standard long blade

	<b>Order code No.</b>	<b>041064</b>	<b>041361</b>	<b>041065</b>	<b>041310</b>
	<b>TYPE</b>	<b>EG-NW20-V001S</b>	<b>EG-NW20R-V001S</b>	<b>EG-NW35-V001S</b>	<b>EG-NW35R-V001S</b>
	<b>Weight</b>	80g	80g	85g	85g
<b>Supported nipper</b>	NW*-20, HNW-20 (Standard blade)	NW*-20R, HNW-20R (Reverse blade)	NW*-35, HNW-35 (Standard blade)	NW*-35R, HNW-35R (Reverse blade)	

## Carbide blade

	<b>Order code No.</b>	<b>041876</b>	<b>041923</b>	<b>041866</b>	<b>041867</b>
	<b>TYPE</b>	<b>EG1-NW20 (Carbide blade)</b>	<b>EG1-NW20R (Carbide blade)</b>	<b>EG1-NW35 (Carbide blade)</b>	<b>EG1-NW35R (Carbide blade)</b>
	<b>Weight</b>	61g	70g	68g	68g
<b>Supported nipper</b>	NW*-20, HNW-20 (Standard blade)	NW*-20R, HNW-20R (Reverse blade)	NW*-35, HNW-35 (Standard blade)	NW*-35R, HNW-35R (Reverse blade)	

## Clip Type Blade

	<b>Order code No.</b>	<b>041066</b>	<b>041067</b>
	<b>TYPE</b>	<b>EG-NW20-01C</b>	<b>EG-NW35-01C</b>
	<b>Weight</b>	80g	90g
<b>Supported nipper</b>	NW*-20, NW*-20R, HNW-20, HNW-20R	NW*-35, NW*-35R, HNW-35, HNW-35R	

## Adjustable opening \* Setscrew with hexagon socket and hexagon nut are included.

<p>Blade opening can be adjusted by two screws.</p>	<b>Order code No.</b>	<b>041873</b>	<b>041874</b>	<b>041924</b>
	<b>TYPE</b>	<b>EG1-NW20-AST</b>	<b>EG1-NW201-AST</b>	<b>EG1-NW20R-AST</b>
	<b>Weight</b>	63g	61g	63g
	<b>Supported nipper</b>	NW*-20, HNW-20 (Standard blade)	NW*-201, HNW-201 (thin blade)	NW*-20R, HNW-20R (Reverse blade)
	<b>Order code No.</b>	<b>041853</b>	<b>041854</b>	
	<b>TYPE</b>	<b>EG1-NW35-AST</b>	<b>EG1-NW35R-AST</b>	
<b>Weight</b>	69g	72g		
<b>Supported nipper</b>	NW*-35, HNW-35 (Standard blade)	NW*-35R, HNW-35R (Reverse blade)		

● If you would like another blade, please contact us.

## For NW-50, 50R

### Spare blade (w/blade opening adjusting)

	<b>Order code No.</b>	<b>042134</b>	<b>042135</b>
	<b>TYPE</b>	<b>EG1-NW50</b>	<b>EG1-NW50R</b>
	<b>Weight</b>	265g	270g
<b>Supported nipper</b>	NW*-50, HNW*-50 (Standard blade)	NW*-50R, HNW*-50R (Reverse blade)	

## About Blade Exchange

**Notice : Don't remove this bolt.**

Remove the four bolts in four corners of the blade holder and replace it.



## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Air Nipper (Small • Medium) ↔ Accessories Selection Table

Cut • Air Nipper (Small • Medium)

Air Nipper (Small • Medium)		Air nipper (10Series)			Air nipper (20Series)						Air nipper (35Series)					Air nipper (50Series)																									
Accessories		131626	073301	131627	073302	131628	073303	131629	131724	073304	131630	073305	131631	131725	073308	131632	073306	131633	073309	131634	073307	131643	131722	073310	131644	131723	073313	131645	073311	131646	073314	131647	073312	131771	073355	131772	073356				
		NW*-10	HNW*-10	NW*-101	HNW*-101	NW*-10R	HNW*-10R	NW*-20	NW*-20-BAST	HNW*-20	NW*-201	HNW*-201	NW*-20R	NW*-20R-BAST	HNW*-20R	NW*-20-V001S	HNW*-20R-V001S	NW*-20R-V001S	HNW*-20R-V001S	NW*-20-01C	HNW*-20-01C	NW*-35	NW*-35-BAST	HNW*-35	NW*-35R	NW*-35R-BAST	HNW*-35R	NW*-35-V001S	HNW*-35-V001S	NW*-35R-V001S	HNW*-35R-V001S	NW*-35-01C	HNW*-35-01C	NW*-50	HNW*-50	NW*-50R	HNW*-50R				
Blade Springs	<b>130744</b> For NW-10	○	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	<b>131536</b> For NW2-20.35	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	<b>131618</b> NW-50.50R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	
Piston	<b>130767</b> For NW/NC-10	○	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>130768</b> For NW/NC-20.20	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>130769</b> For NW/NC-35.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>131654</b> For NW-50.50R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	
Piston packing	<b>131614</b> NW1-10.10R (LX0125-001-0)	○	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>131615</b> NW2-20.20R (LX0145-003-0)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>131487</b> NW1-35.35R (LX0107-001-0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>131616</b> NW-50.50R (LX0153-110)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	
Piston spring	<b>130766</b> For NC/NW-10 (J09420-014-3)	○	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>130770</b> NC/NW-20.20R (J07930-013-1)	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>130771</b> For NW-35.35R (NC-3506N-1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>131617</b> NW-50.50R (LX0153-111)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	
Slide spring	<b>130257</b> For NC/NW-10 (J09420-016-1)	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>131679</b> For NW-10R	-	-	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>130251</b> NC/NW-20.35 (J07930-015-0)	-	-	-	-	○	○	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	<b>131255</b> NW-20R.35R (J0793R-004-0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>200254</b> UM8-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>200255</b> UM13-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	○			



# Accessories

Please use for maintenance of the air nipper (small and medium type).

## Blade Springs

	<b>Order code No.</b>	<b>130744</b>	<b>131536</b>	<b>131618</b>
	<b>TYPE</b>	<b>For NW-10</b>	<b>For NW2-20.35</b>	<b>NW-50.50R</b>
	<b>Weight</b>	0.1g	0.2g	1g
	<b>Supported nipper</b>	NW*-10, 10R Series HNW-10, 10R	NW*-20, 20R, 35, 35R Series HNW-20, 20R, 35, 35R	NW*-50, 50R Series HNW*-50, 50R

## Piston

	<b>Order code No.</b>	<b>130767</b>	<b>130768</b>	<b>130769</b>	<b>131654</b>
	<b>TYPE</b>	<b>For NW/NC-10</b>	<b>For NW/NC-20.20R</b>	<b>For NW/NC-35.35R</b>	<b>For NW-50.50R</b>
	<b>Weight</b>	3g	9g	11g	25g
	<b>Supported nipper</b>	NC/NW*-10, 10R Series HNW-10, 10R	NC/NW*-20, 20R Series HNW-20, 20R	NC/NW*-35, 35R Series HNW-35, 35R	NW*-50, 50R Series HNW*-50, 50R

## Piston packing

	<b>Order code No.</b>	<b>131614</b>	<b>131615</b>	<b>131487</b>	<b>131616</b>
	<b>TYPE</b>	<b>NW1-10.10R (LX0125-001-0)</b>	<b>NW2-20.20R (LX0145-003-0)</b>	<b>NW1-35.35R (LX0107-001-0)</b>	<b>NW-50.50R (LX0153-110)</b>
	<b>Weight</b>	0.3g	0.5g	1.2g	1g
	<b>Supported nipper</b>	NC/NW*-10, 10R Series HNW-10, 10R	NC/NW*-20, 20R Series HNW-20, 20R	NW*-35, 35R Series HNW-35, 35R	NW*-50, 50R Series HNW*-50, 50R

## Piston spring

	<b>Order code No.</b>	<b>130766</b>	<b>130770</b>
	<b>TYPE</b>	<b>For NC/NW-10 (J09420-014-3)</b>	<b>For NC/NW-20.20R (J07930-013-1)</b>
	<b>Weight</b>	0.2g	0.5g
	<b>Supported nipper</b>	NC/NW*-10, 10R Series HNW-10, 10R	NC/NW*-20, 20R Series HNW-20, 20R

• Two pieces are used for a nipper

	<b>Order code No.</b>	<b>130771</b>	<b>131617</b>
	<b>TYPE</b>	<b>For NW-35.35R (NC-3506N-1)</b>	<b>NW-50.50R (LX0153-111)</b>
	<b>Weight</b>	5.6g	13g
	<b>Supported nipper</b>	NW*-35, 35R Series HNW-35, 35R	NW*-50, 50R Series HNW*-50, 50R

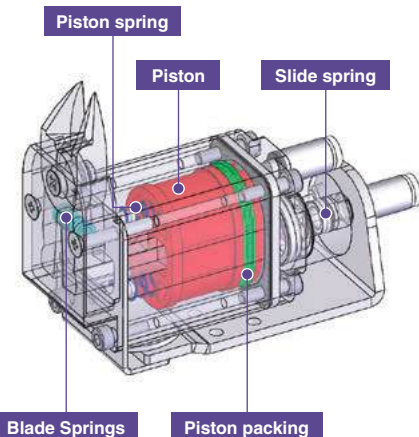
• One piece be used for a nipper

## Slide spring

	<b>Order code No.</b>	<b>130257</b>	<b>131679</b>
	<b>TYPE</b>	<b>For NC/NW-10 (J09420-016-1)</b>	<b>For NW-10R</b>
	<b>Weight</b>	0.1g	0.1g
	<b>Supported nipper</b>	NW*-10 Series HNW-10	NW*-10R Series HNW-10R

	<b>Order code No.</b>	<b>130251</b>	<b>131255</b>
	<b>TYPE</b>	<b>NC/NW-20.35 (J07930-015-0)</b>	<b>NW-20R.35R (J0793R-004-0)</b>
	<b>Weight</b>	0.4g	1g
	<b>Supported nipper</b>	NW*-20, 35 Series HNW-20, 35	NW*-20R, 35R Series HNW-20R, 35R

	<b>Order code No.</b>	<b>200254</b>	<b>200255</b>
	<b>TYPE</b>	<b>UM8-25</b>	<b>UM13-25</b>
	<b>Weight</b>	1g	3g
	<b>Supported nipper</b>	NW*-50 Series HNW*-50	NW*-50R Series HNW*-50R



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information





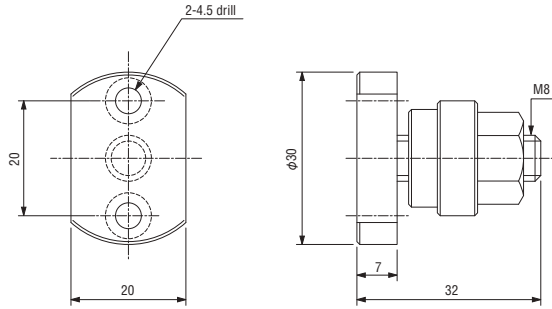
# Nipper Mounting Brackets

Metal fixture to fix an air nipper to a NT gate cut unit.



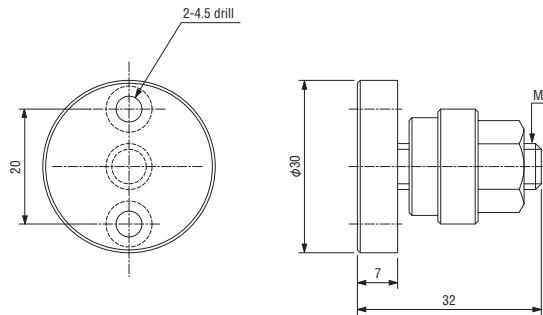
Order code No.	<b>130216</b>
TYPE	<b>For NC/NW-10</b>

- Weight : 61g
- Also can be used for NW\*-20, NW\*-35, HNW-20, HNW-35 series.
- Accessories : taper washer 1 pc  
screw (M4) 2 pc



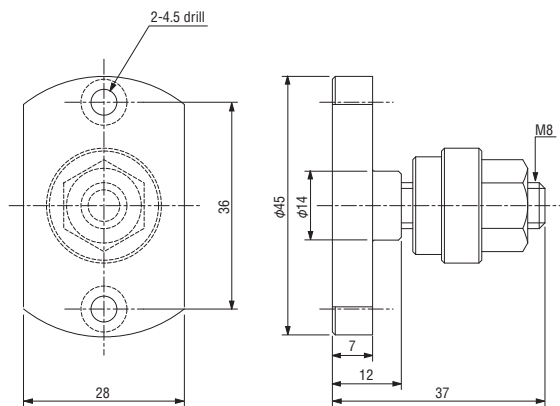
Order code No.	<b>130162</b>
TYPE	<b>For NC/NW-20</b>

- Weight : 70g
- Also can be used for NW\*-35, HNW-35 series.
- Accessories : taper washer 1 pc  
screw (M4) 2 pc



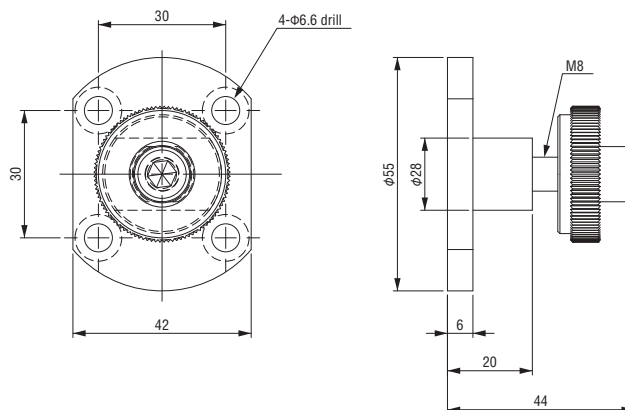
Order code No.	<b>130163</b>
TYPE	<b>For NC/NW-35</b>

- Weight : 99g
- Cannot be used for NW\*-20, HNW-20 series.
- Accessories : taper washer 1 pc  
screw (M4) 2 pc



Order code No.	<b>131621</b>
TYPE	<b>For NW-50</b>

- Weight : 184g
- Only for NW\*-50, HNW\*-50 Series.
- Accessories : M6  $\times$  10 4 piece



Cut ● Air Nipper (Small • Medium)



# NW One Touch Clip / Nipper Adjustment Bracket

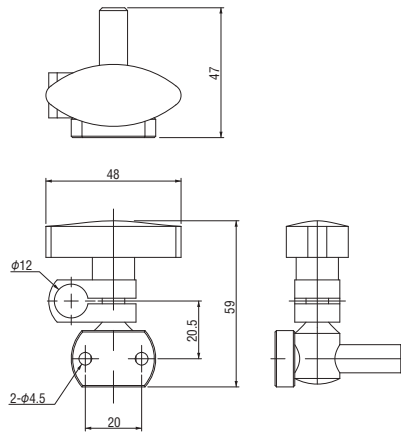
The mounting angle can be free adjusted without using the tool.

## NW One Touch Clip



Order code No.	<b>110558</b>
TYPE	<b>L10160-CL</b>

- Weight : 80g ● Include nipper mounting bracket.
- Accessories : Mounting bolt (M4)\*2piece
- Can be used for NW\*-10, NW\*-20, NW\*-35, HNW-10, HNW-20, HNW-35 Series.
- When using the HNW series, please use a taper washer(123940).



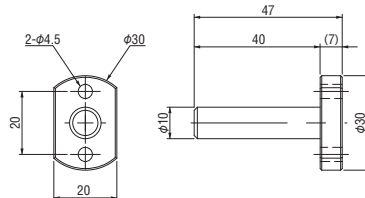
Example of mounting  
Air Nipper (Small · Medium) is mounted and attached to φ12 SS Jungle Gym



## Nipper mounting brackets

Order code No.	<b>110622</b>
TYPE	<b>L10160-000</b>

- Weight : 20g ● Accessories : Mounting bolt (M4)\*2piece
- Can be used for NW\*-10, NW\*-20, NW\*-35, HNW-10, HNW-20, HNW-35 Series.
- When using the HNW series, please use a taper washer(123940).



## Taper washer

Order code No.	<b>123940</b>
TYPE	<b>M4</b>

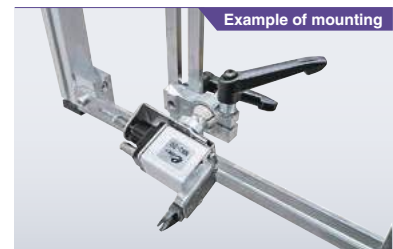
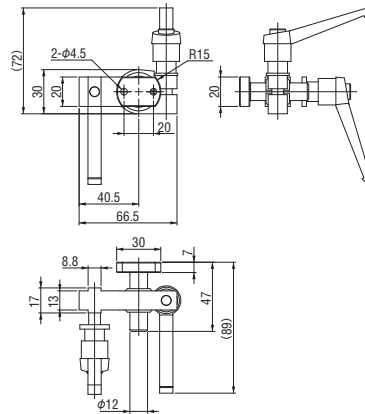
- Weight : 0.15g ● Thickness : 0.5mm

## NEW Nipper Adjustment Bracket



Order code No.	<b>131732</b>
TYPE	<b>NW-ADJBKT</b>

- Weight : 200g ● Include nipper mounting bracket 12.
- Accessories : Mounting bolt (M4)\*2piece
- Can be used for NW\*-10, NW\*-20, NW\*-35, HNW-10, HNW-20, HNW-35 Series.
- When using the HNW series, please use a taper washer(123940).



Example of mounting  
Install onto the frame of NT gate cut unit.

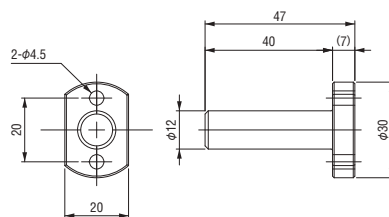
NEW



## Nipper mounting brackets 12

Order code No.	<b>131770</b>
TYPE	<b>NW-MOUNT12-20</b>

- Weight : 22.5g
- Accessories : Mounting bolt (M4)\*2piece
- Can be used for NW\*-10, NW\*-20, NW\*-35, HNW-10, HNW-20, HNW-35 Series.
- When using the HNW series, please use a taper washer(123940).



## Taper washer

Order code No.	<b>123940</b>
TYPE	<b>M4</b>

- Weight : 0.15g ● Thickness : 0.5mm

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

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### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



## Specifications

Product name	Order code No.	TYPE	Operation	Used air pressure (Mpa)	Applied pressure (N)	Cutting capacity [soft resin] round bar (mm)	Slide amount (mm)	Weight (g)	Page of details		
Air Nipper	Slide vertical w/o blade	060207	GT-NT03	Pull	0.4~0.5	147	φ 1.5	MAX3	178	4-23	
		060208	GT-NT05	Pull		196	φ 2.5		325		
		060225	GT-NT05R	Push		441	φ 3.5		515		
		060209	GT-NT10	Pull							
		060226	GT-NT10R	Push							
		060227	GT-NT20	Pull							
	Square type w/o blade	-	060240	GT-NS10L	-	0.5~0.6	588	Different according to the spare blade.	230	4-24	
			060241	GT-NS20			1,372		390		
			060242	GT-NS30			2,744		705		
			Round type w/o blade	060083			GT-NR10L		588		160
				060084			GT-NR20		1,372		280
	060085	GT-NR30	2,744	510							
	Booster unit	150793	P-20	-	~0.5	-	-	-	215	4-25	
150786		P-30	-	-		-	-	330			
Nipper holder	370336	CP-035 (For GT-NR10L)	-	-	-	-	-	68	4-25		
	370337	CP-036 (For GT-NR20)	-	-	-	-	-	87			
	370338	CP-037 (For GT-NR30)	-	-	-	-	-	105			
Nipper bracket	110656	LX0090-100 (L.R)	-	-	-	-	-	128	4-25		
Rotation BRT	NEW 131712	For NP-RTB-NR10	-	-	-	-	-	66	4-26		
	NEW 131713	For NP-RTB-NR20	-	-	-	-	-	76			
	NEW 131714	For NP-RTB-NR30	-	-	-	-	-	109			
Air Nipper	Slide bracket w/o blade	130229	GT-NB20 5-HIKU	Pull	0.5~0.6	1,372	Different according to the spare blade.	MAX5	710	4-26	
		130230	GT-NB20 5-OSHI	Push							
		130231	GT-NB20 10-HIKU	Pull							
		130235	GT-NB30 10-HIKU	Pull		2,744		MAX10	1,400		
		060477	GT-NB20LW-10TM	Pull		1,372			785		
		060478	GT-NB30LW-10TM	Pull		2,744			1,315		
Sprue cut unit	131565	NS20U	-	-	-	-	-	1,078	4-27		
	NEW 131717	NS20UR	-	-	-	-	-	1,200			
Timing controller	060321	GT-TC-02	-	-	-	-	-	275			

Product name	Order code No.	TYPE	Operation	Used air pressure(Mpa)	Cutting capacity [soft resin] round bar (mm)	Slide amount (mm)	Weight (g)	Page of details	
Heat air nipper	Slide vertical w/ blade	060353	GT-NTH05	Pull	0.4~0.5	φ 2.5	MAX3.5	325	4-30
		060354	GT-NTH10	Pull	0.5~0.6	φ 3.5	MAX4.5	515	
	Flow controller type	060355	GT-NKH10	-		Thickness:1.5, Width:7	MAX12	715	
	Heat air nipper air hydro	131709	NKH20XL-25	-		Thickness:1.5, Width:10	MAX10	690	
	Desktop temperature controller for heat nipper	030492	DTC-001	-	-	-	-	900	



# Air Nipper (Large) NT Series

Used for cutting large gate diameter products of direct gate or side gate.

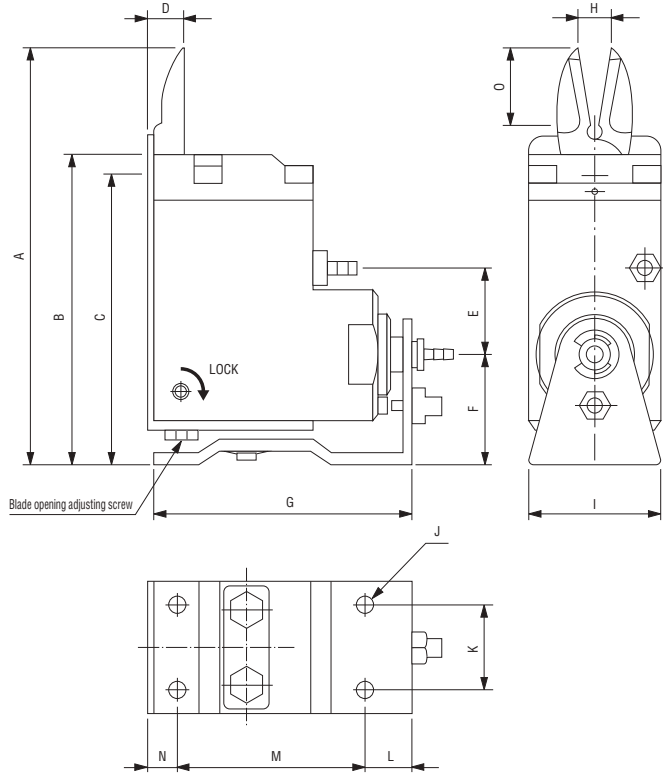
- Spare blades are sold separately. • The photo shows an example of assembled.

## Air nipper slide vertical

- ▶ Blade opening can be adjusted.
- ▶ Slide stroke can be adjusted.
- ▶ A workpiece can be cut by close contact.



**Blade**  
Blade not included



Order code No.	<b>060207</b>
TYPE	<b>GT-NT03</b>

• Weight : 178g

Uses Standard blade	Operation <b>Pull</b>	Blade <b>Option</b>
---------------------	-----------------------	---------------------

Order code No.	<b>060208</b>
TYPE	<b>GT-NT05</b>

• Weight : 325g

Uses Standard blade	Operation <b>Pull</b>	Blade <b>Option</b>
---------------------	-----------------------	---------------------

Order code No.	<b>060225</b>
TYPE	<b>GT-NT05R</b>

• Weight : 325g

Uses Reverse blade	Operation <b>Push</b>	Blade <b>Option</b>
--------------------	-----------------------	---------------------

Order code No.	<b>060209</b>
TYPE	<b>GT-NT10</b>

• Weight : 515g

Uses Standard blade	Operation <b>Pull</b>	Blade <b>Option</b>
---------------------	-----------------------	---------------------

Order code No.	<b>060226</b>
TYPE	<b>GT-NT10R</b>

• Weight : 515g

Uses Reverse blade	Operation <b>Push</b>	Blade <b>Option</b>
--------------------	-----------------------	---------------------

Order code No.	<b>060227</b>
TYPE	<b>GT-NT20</b>

• Weight : 930g

Uses Standard blade	Operation <b>Pull</b>	Blade <b>Option</b>
---------------------	-----------------------	---------------------

Order code No.	<b>060228</b>
TYPE	<b>GT-NT20R</b>

• Weight : 930g

Uses Reverse blade	Operation <b>Push</b>	Blade <b>Option</b>
--------------------	-----------------------	---------------------

## Blade for GT-NT

Spare blade for GT-NT \*The standard and reverse directions of spare blade can be changed.

Order code No.	<b>130403</b>	<b>130310</b>	<b>130311</b>	<b>130404</b>
TYPE	<b>NT03AJ</b>	<b>NE5AJ</b>	<b>NE10AJ</b>	<b>NT20AJ</b>
Supported nipper	GT-NT03(R)	GT-NT05(R)	GT-NT10(R)	GT-NT20(R)

## Dimensions

(mm)

TYPE	GT-NT03	GT-NT05	GT-NT10	GT-NT20
A	87.1	90.1	110.1	136.1
B	68.1	71.1	88.1	102.1
C	63.1	66.1	83.1	96.1
D	9	9	11	14
E	15	20	21	21.9
F	23.1	25.1	29.1	33.1
G	62	64	73	103
H	MAX3	MAX6	MAX7	MAX9
I	19	32	38	44
J	M3	M4	M4	M5
K	14	20	24	28
L	12	12	12	13
M	43	45	53	80
N	7	7	8	10
O	12	13	14	21.5

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Air Nipper (Large) NS/NR Series / Pressure Boosting Unit

Used for cutting large gate diameter products of direct gate or side gate.

● Spare blade and spring are sold separately. ● The photo shows an example of assembled.

## Air nipper square type

Blade  
Blade not  
included

→ 4-28.29



Order code No.	<b>060240</b>
TYPE	<b>GT-NS10L</b>

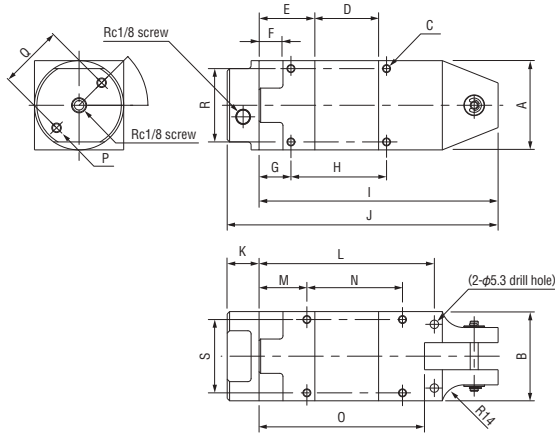
● Weight : 230g

Order code No.	<b>060241</b>
TYPE	<b>GT-NS20</b>

● Weight : 390g

Order code No.	<b>060242</b>
TYPE	<b>GT-NS30</b>

● Weight : 705g



## Dimensions

(mm)

TYPE	GT-NS10L	GT-NS20	GT-NS30
A	36	45	56
B	36	45	56
C	16-M4×0.7 screw depth 5.5	16-M4×0.7 screw depth 7	16-M5×0.8 screw depth 10
D	17	25	40
E	27	29	35
F	14	14	15
G	18	19	20
H	30	40	60
I	93	109	150
J	113	129	170
K	20	20	20
L	65	81	110
M	23	24	30
N	30	40	60
O	59.8	76.8	103.8
P	2-M4 screw depth 10	2-M5 screw depth 12	2-M6 screw depth 12
Q	24	30	40
R	28	36	46
S	28	36	46

## Air nipper round type

Blade  
Blade not  
included

→ 4-28.29



Order code No.	<b>060083</b>
TYPE	<b>GT-NR10L</b>

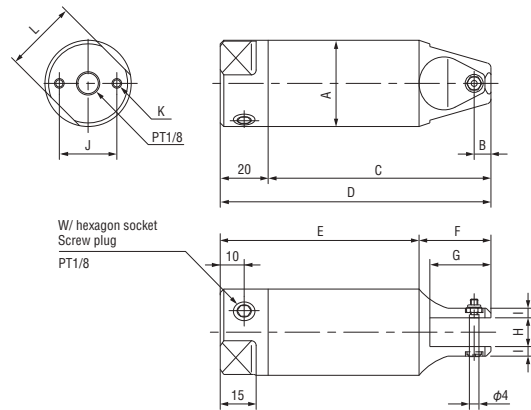
● Weight : 160g

Order code No.	<b>060084</b>
TYPE	<b>GT-NR20</b>

● Weight : 280g

Order code No.	<b>060085</b>
TYPE	<b>GT-NR30</b>

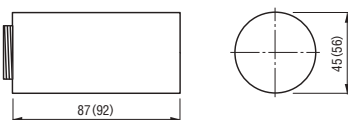
● Weight : 510g



## Dimensions

(mm)

TYPE	GT-NR10L	GT-NR20	GT-NR30
A	φ 36	φ 45	φ 56
B	7	6	10
C	93	109	145
D	113	129	165
E	83	100	127
F	30	29	38
G	22.5	19	28.5
H	12	12	17
I	4	5.5	6.5
J	24	30	40
K	2-M4 screw depth 10	2-M5 screw depth 12	2-M6 screw depth 12
L	30	36	46



\* ( ) inside indicates the dimension of P-30.

► When original welding pressure cannot be created with limitations of space and air pressure.

## Booster unit

Order code No.	<b>150793</b>
TYPE	<b>P-20</b>

- Weight : 215g
- Air consumption : 508cm<sup>3</sup>
- Air pressure power : ~0.5MPa
- Applicable : NS20, NR20

## Booster unit

Order code No.	<b>150786</b>
TYPE	<b>P-30</b>

- Weight : 330g
- Air consumption : 956cm<sup>3</sup>
- Air pressure power : ~0.5MPa
- Applicable : NS30, NR30





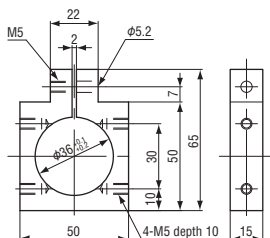
# Air Nipper (Large) Holder / Bracket / Rotation BRT

Use the product by mounting to round nipper "GT-NR series."

## Nipper Holder

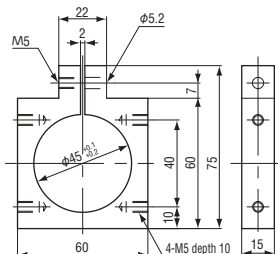
Order code No.	<b>370336</b>
TYPE	CP-035 (For GT-NR10L)

● Weight : 68g



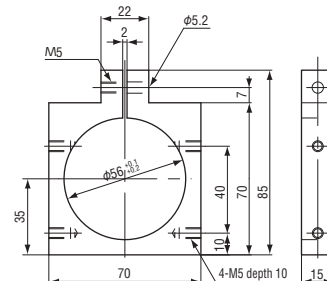
Order code No.	<b>370337</b>
TYPE	CP-036 (For GT-NR20)

● Weight : 87g



Order code No.	<b>370338</b>
TYPE	CP-037 (For GT-NR30)

● Weight : 105g

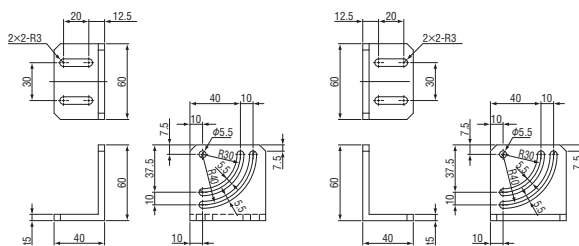


## Nipper Bracket



Order code No.	<b>110656</b>
TYPE	LX0090-100 (L,R)

- Weight : 128g (Set Weight)
- Include L and R brackets



● The photo shows an example of assembled GT-NR20, CP-036, and LX0090-100.

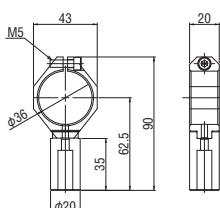
## Rotation BRT (for NR Nipper )

**NEW**



Order code No.	<b>131712</b>
TYPE	For NP-RTB-NR10

● Weight : 66g

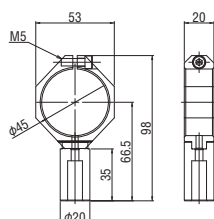


**NEW**



Order code No.	<b>131713</b>
TYPE	For NP-RTB-NR20

● Weight : 76g

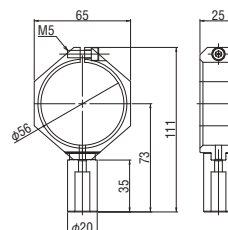


**NEW**



Order code No.	<b>131714</b>
TYPE	For NP-RTB-NR30

● Weight : 109g



● Please use in combination with Jungle Gym Series φ20.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

### Information

Various Products Information



# Air Nipper (Large) NB Series

Used for cutting large gate diameter products of direct gate or side gate.

- Spare blade and spring are sold separately. (The photo is an example of assembly.)
- Can not be sold separate. • The spare blade is compatible with GT-NR.

## Slide air nipper

- ▶ Can be used for gate cut devices with slide air nipper bracket type.
- ▶ Applicable with cutting of large sized molded parts.

Blade  
Blade not  
included

4-28.29



Order code No. **130229**  
TYPE **GT-NB20 5-HIKU**

- Weight : 710g • Slide amount : 5mm

Operation **Pull** Blade **Option**

Order code No. **130230**  
TYPE **GT-NB20 5-OSHI**

- Weight : 710g • Slide amount : 5mm

Operation **Push** Blade **Option**

Order code No. **130231**  
TYPE **GT-NB20 10-HIKU**

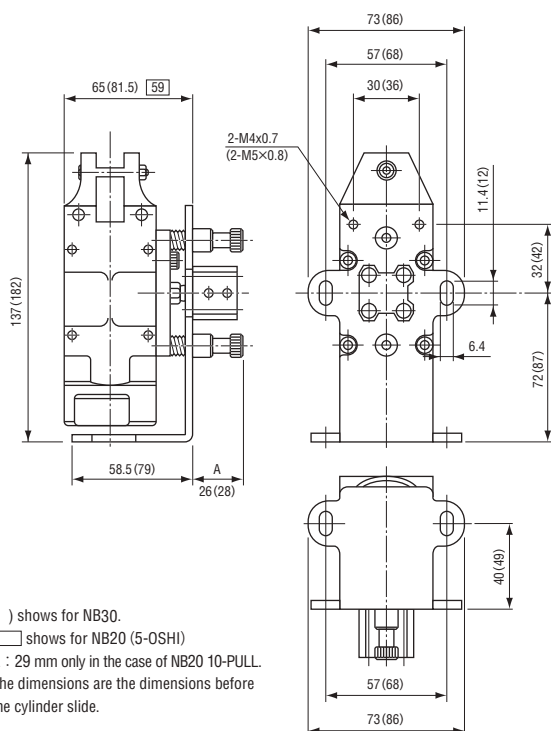
- Weight : 720g • Slide amount : 10mm

Operation **Pull** Blade **Option**

Order code No. **130235**  
TYPE **GT-NB30 10-HIKU**

- Weight : 1,400g • Slide amount : 10mm

Operation **Pull** Blade **Option**



- \* ( ) shows for NB30.
- shows for NB20 (5-OSHI)
- \* A : 29 mm only in the case of NB20 10-PULL.
- \* The dimensions are the dimensions before the cylinder slide.

- ▶ W/ slide mechanism with high precision.

Blade  
Blade not  
included

4-28.29



Order code No. **060477**  
TYPE **GT-NB20LW-10TM**

- Weight : 785g • Slide amount : 10mm

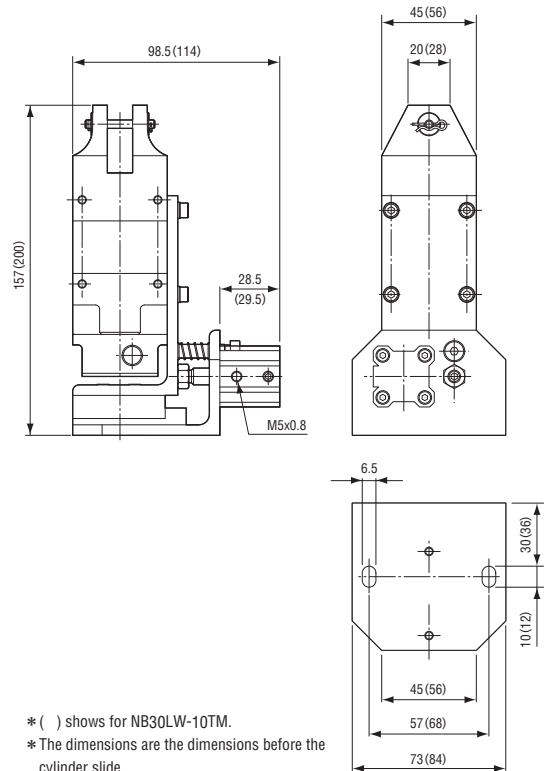
Operation **Pull** Blade **Option**

Order code No. **060478**  
TYPE **GT-NB30LW-10TM**

- Weight : 1,315g • Slide amount : 10mm

Operation **Pull** Blade **Option**

High-precision slide mechanism



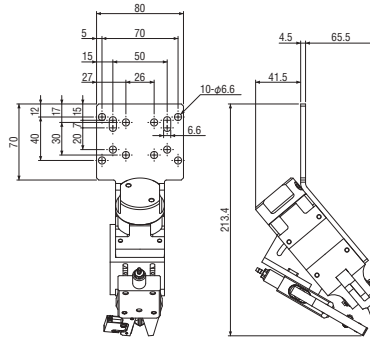
- \* ( ) shows for NB30LW-10TM.
- \* The dimensions are the dimensions before the cylinder slide.



# Sprue Cut Unit / Timing Controller

Cutting with sprue chucking is possible.

► Most suitable for plastic direct gate.

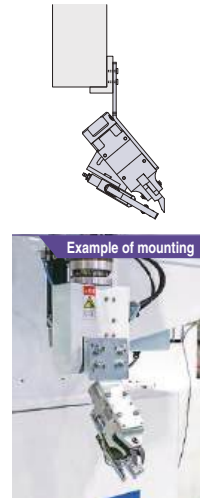


## Sprue Cut Unit

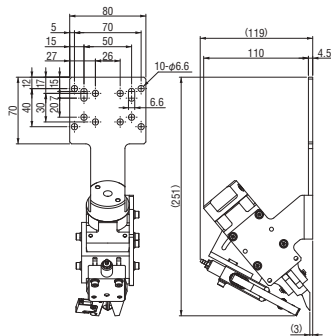
Order code No.	<b>131565</b>
TYPE	<b>NS20U</b>

- Weight : 1,078g
- Sold as a set.
- Runner chuck: Limit SW type

Product name	Order code No.	TYPE	Qty	Page of details
Runner chuck EL (Limit SW)	<b>023006</b>	CHK-EL1-12-C1	1	<b>2-35</b>
Air nipper square type (w/o blade)	<b>060241</b>	GT-NS20	1	<b>4-24</b>
Blade for GT-20L flat	<b>130726</b>	N20PF	1	<b>4-28</b>
Sprue cut unit (parts)	-	-	1	-



**NEW**

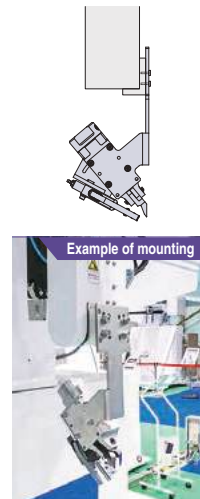


## Sprue Cut Unit

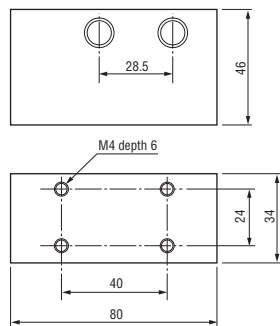
Order code No.	<b>131717</b>
TYPE	<b>NS20UR</b>

- Weight : 1,200g
- Sold as a set.
- Runner chuck: Limit SW type

Product name	Order code No.	TYPE	Qty	Page of details
Runner chuck EL (Limit SW)	<b>023006</b>	CHK-EL1-12-C1	1	<b>2-35</b>
Air nipper square type (w/o blade)	<b>060241</b>	GT-NS20	1	<b>4-24</b>
Blade for GT-20L flat	<b>130726</b>	N20PF	1	<b>4-28</b>
Sprue cut unit (parts)	-	-	1	-



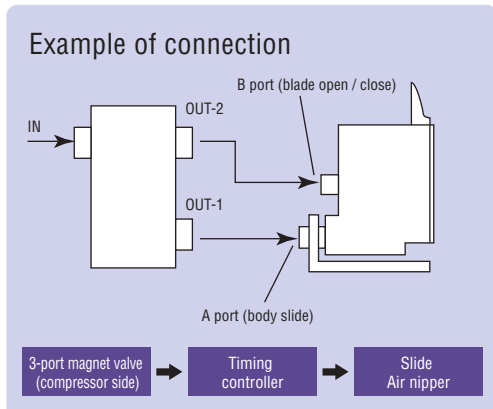
► Setting in tubing allows adjustment of slide conditions for slide nippers and cutting timing.  
(About 0.5-1.5 seconds)



## Timing controller

Order code No.	<b>060321</b>
TYPE	<b>GT-TC-02</b>

- Weight : 275g
- Air pressure power : 0.6MPa
- With tube joint : inner diameter  $\phi$ 4mm, outside-diameter  $\phi$ 6mm



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Air Nipper (Large) Replacement Blades / Accessories



Please refer to the website for performance table.

Spare blades for GT-NS/GT-NR/GT-NB.

● The cutting capacity depends on the material.

## ▶ Supported nipper : GT-NS10L/GT-NR10L

Dimensions	Specifications	
	Order code No.	<b>130218</b>
	TYPE	<b>N10L1S</b>
	Weight	165g
	Order code No.	<b>130219</b>
	TYPE	<b>N10L2S</b>
	Weight	170g
	Opened blade-to blade distance	10mm
	Cutting capacity (soft resin)	φ 3.5
	Order code No.	<b>130219</b>
	TYPE	<b>N10L2S</b>
	Weight	170g
	Opened blade-to blade distance	10mm
Cutting capacity (soft resin)	φ 3.5	

Dimensions	Specifications	
	Order code No.	<b>130724</b>
	TYPE	<b>N10LAP</b>
	Weight	132g
	Order code No.	<b>130725</b>
	TYPE	<b>N10LPS</b>
	Weight	136g
	Opened blade-to blade distance	5mm
	Cutting capacity (soft resin)	φ 4
	Order code No.	<b>130725</b>
	TYPE	<b>N10LPS</b>
	Weight	136g
	Opened blade-to blade distance	5mm
Cutting capacity (soft resin)	φ 4	

## ▶ Supported nipper : GT-NS20/GT-NR20/GT-NB20

Dimensions	Specifications	
	Order code No.	<b>130222</b>
	TYPE	<b>N203S</b>
	Weight	185g
	Order code No.	<b>130220</b>
	TYPE	<b>N201S</b>
	Weight	200g
	Order code No.	<b>130221</b>
	TYPE	<b>N202S</b>
	Weight	175g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>130221</b>
	TYPE	<b>N201S</b>
	Weight	200g
	Opened blade-to blade distance	16mm
Cutting capacity (soft resin)	φ 6	
	Order code No.	<b>130221</b>
	TYPE	<b>N202S</b>
	Weight	175g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>130221</b>
	TYPE	<b>N201S</b>
	Weight	200g
	Opened blade-to blade distance	16mm
Cutting capacity (soft resin)	φ 6	
	Order code No.	<b>130726</b>
	TYPE	<b>N20PF</b>
	Weight	130g
	Order code No.	<b>130727</b>
	TYPE	<b>N20AE</b>
	Weight	145g
	Opened blade-to blade distance	11mm
	Cutting capacity (soft resin)	φ 7
	Order code No.	<b>130726</b>
	TYPE	<b>N20AE</b>
	Weight	145g
	Opened blade-to blade distance	8mm
Cutting capacity (soft resin)	φ 7	
	Order code No.	<b>130265</b>
	TYPE	<b>N206S</b>
	Weight	170g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>130265</b>
	TYPE	<b>N206S</b>
	Weight	170g
	Opened blade-to blade distance	14mm
Cutting capacity (soft resin)	φ 6	
	Order code No.	<b>131602</b>
	TYPE	<b>N207SA</b>
	Weight	190g
	Opened blade-to blade distance	13mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>131602</b>
	TYPE	<b>N207SA</b>
	Weight	190g
	Opened blade-to blade distance	13mm
Cutting capacity (soft resin)	φ 6	
	Order code No.	<b>130697</b>
	TYPE	<b>N20AJ</b>
	Weight	125g
	Opened blade-to blade distance	11mm
	Cutting capacity (soft resin)	φ 7
	Order code No.	<b>130697</b>
	TYPE	<b>N20AJ</b>
	Weight	125g
	Opened blade-to blade distance	11mm
Cutting capacity (soft resin)	φ 7	

Dimensions	Specifications	
	Order code No.	<b>130680</b>
	TYPE	<b>N20AP</b>
	Weight	130g
	Order code No.	<b>130727</b>
	TYPE	<b>N20AE</b>
	Weight	145g
	Opened blade-to blade distance	11mm
	Cutting capacity (soft resin)	φ 7
	Order code No.	<b>130727</b>
	TYPE	<b>N20AE</b>
	Weight	145g
	Opened blade-to blade distance	8mm
Cutting capacity (soft resin)	φ 7	
	Order code No.	<b>130265</b>
	TYPE	<b>N206S</b>
	Weight	170g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>130265</b>
	TYPE	<b>N206S</b>
	Weight	170g
	Opened blade-to blade distance	14mm
Cutting capacity (soft resin)	φ 6	
	Order code No.	<b>131602</b>
	TYPE	<b>N207SA</b>
	Weight	190g
	Opened blade-to blade distance	13mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>131602</b>
	TYPE	<b>N207SA</b>
	Weight	190g
	Opened blade-to blade distance	13mm
Cutting capacity (soft resin)	φ 6	
	Order code No.	<b>130655</b>
	TYPE	<b>N20AJL</b>
	Weight	230g
	Opened blade-to blade distance	16mm
	Cutting capacity (soft resin)	φ 6
	Order code No.	<b>130655</b>
	TYPE	<b>N20AJL</b>
	Weight	230g
	Opened blade-to blade distance	16mm
Cutting capacity (soft resin)	φ 6	

Cut ● Air Nipper (Large)



N201S



N301S



N30AE

► Supported nipper : **GT-NS20/GT-NR20/GT-NB20**

Dimensions	Specifications	
	Order code No.	<b>131466</b>
	TYPE	<b>N20AML1498</b>
	Weight	270g
	Opened blade-to blade distance	9.5mm
	Order code No.	<b>131467</b>
	TYPE	<b>N20AH</b>
	Weight	240g
	Opened blade-to blade distance	16mm
	Weight	240g
	Cutting capacity (soft resin)	φ6

Dimensions	Specifications	
	Order code No.	<b>131468</b>
	TYPE	<b>N20AMR1499</b>
	Weight	270g
	Opened blade-to blade distance	9.5mm
	Order code No.	<b>131469</b>
	TYPE	<b>N20AK249</b>
	Weight	240g
	Opened blade-to blade distance	14mm
	Weight	240g
	Cutting capacity (soft resin)	φ5.5

► Supported nipper : **GT-NS30/GT-NR30/GT-NB30**

Dimensions	Specifications		
	Order code No.	<b>130225</b>	
	TYPE	<b>N301S</b>	
	Weight	390g	
	Opened blade-to blade distance	20mm	
	Order code No.	<b>130329</b>	
	TYPE	<b>N30AP</b>	
	Weight	380g	
	Opened blade-to blade distance	16mm	
	Order code No.	<b>131601</b>	
	TYPE	<b>N303SA</b>	
	Weight	390g	
	Opened blade-to blade distance	16mm	
	Weight	390g	
	Cutting capacity (soft resin)	φ8	
		Order code No.	<b>131470</b>
		TYPE	<b>N30AJL</b>
Weight		470g	
Opened blade-to blade distance		19mm	
	Weight	470g	
	Cutting capacity (soft resin)	φ8	

Dimensions	Specifications		
	Order code No.	<b>130730</b>	
	TYPE	<b>N30PF</b>	
	Weight	415g	
	Opened blade-to blade distance	15mm	
	Order code No.	<b>130729</b>	
	TYPE	<b>N30AE</b>	
	Weight	440g	
	Opened blade-to blade distance	12mm	
	Weight	440g	
	Cutting capacity (soft resin)	φ10	
		Order code No.	<b>130795</b>
		TYPE	<b>N30AJ</b>
Weight		370g	
Opened blade-to blade distance		14mm	
	Weight	370g	
	Cutting capacity (soft resin)	φ10	

► Blade Springs

	Order code No.	<b>060100</b>
	TYPE	<b>GT-NR10L.20 (N10L.N20 Spare Blade)</b>
	Supported nipper	NS/NR 10L、NS/NR/NB 20

	Order code No.	<b>060101</b>
	TYPE	<b>GT-NR30 (N30 Spare Blade)</b>
	Supported nipper	NS/NR/NB 30

Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information





# Heat Air Nipper (NTH Series / NKH Series)

Used for cutting large gate diameter products of direct gate or side gate.

- ▶ Gate cut transparent products such as acrylic without whitening or cracking!

\* Attachments: blade, temperature sensor harness, thermocouple harness



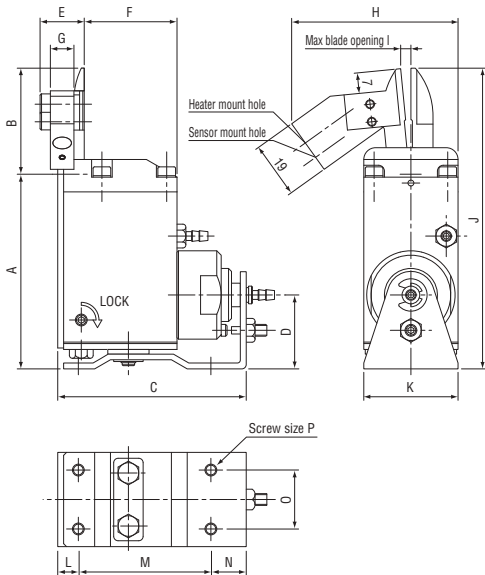
Heat air nipper slide vertical

Order code No.	<b>060353</b>
TYPE	<b>GT-NTH05</b>

- Weight : 325g

Order code No.	<b>060354</b>
TYPE	<b>GT-NTH10</b>

- Weight : 515g
- Heater specification : 80W/120V Length 300mm
- Sensor specifications : K thermocouple Length 1000mm



- ▶ It is ideal for gate cutting of glass fibers and hard resins.

- ▶ There are few cracks in the workpiece, and the finished surface is clean.

\* Attachments: blade, temperature sensor harness, thermocouple harness



## Flow Controller Type

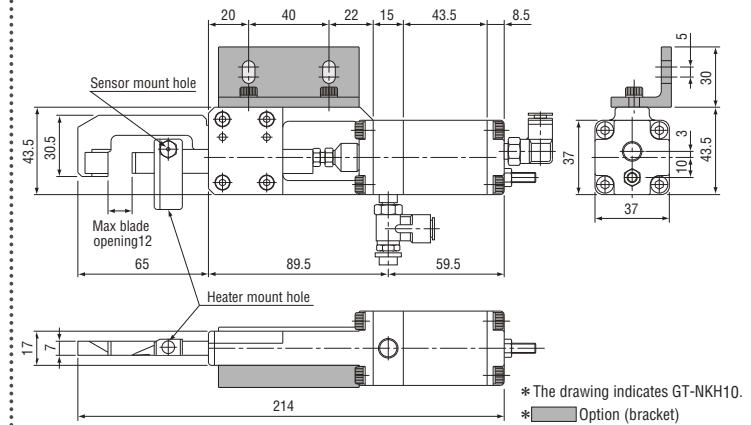
Order code No.	<b>060355</b>
TYPE	<b>GT-NKH10</b>

- Weight : 715g
- Opened blade-to blade distance : 10mm
- Heater specification : 80W/120V Length 300mm
- Sensor specifications : K thermocouple Length 1000mm

## Air Hydro Type

Order code No.	<b>131709</b>
TYPE	<b>NKH20XL-25</b>

- Weight : 690g
- Opened blade-to blade distance : 20mm
- Heater specification : 80W/100V Length 300mm
- Sensor specifications : K thermocouple Length 300mm
- Two Hydro converters are required. Hydro converter (Recommended product) : KOGANEI CO.,LTD. Type : AHC 32 × 50



Cut ● Air Nipper (Large)

## Dimensions

(mm)

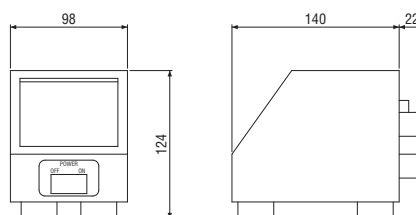
TYPE	GT-NTH05	GT-NTH10
A	66.1	83
B	36	47
C	64	73
D	25.1	29
E	15	16.2
F	31.5	37.5
G	8	8
H	56.5	63
I	3.5	4.5
J	102.1	130
K	32	38
L	7	8
M	45	53
N	12	12
O	20	24
P	M4	M4

- ▶ Desktop temperature controller for heat nipper

## Desktop temperature controller for heat nipper

Order code No.	<b>030492</b>
TYPE	<b>DTC-001</b>

- Weight : 900g
- Power supply voltage : AC100-240V
- Power consumption: about 3W or 5VA (no-load condition)
- Output capacity: 12A MAX (~1.2kw) resistance load
- Ambient operating temperature: 0-40°C RH35-85% (non-condensing)
- The power supply voltage is output to the heater as it is, so check the heater voltage.
- When using the 200V power supply, change the heater line to 200V specification.



# Frame / Module



## Jungle Gym ..... 5-2

- ▶ List of Jungle Gym ..... 5-3
- ▶ Jungle Gym SUS • CFRP Pipe / Resin Fixture ..... 5-8
- ▶ Pipe End Cap / SUS Pipe Cutter / Clip ..... 5-9
- ▶ Jangle Gym Series Parts (Connector) ..... 5-10
- ▶ Jangle Gym Series Parts (Bracket) ..... 5-13
- ▶ Jangle Gym Series Parts (Rotation) ..... 5-19
- ▶ Jangle Gym Series Parts (Slide) ..... 5-21
- ▶ Jangle Gym Series Parts (Washer) ..... 5-24
- ▶ Jangle Gym Series Parts (Nut / Bushing) ..... 5-25
- ▶ Base Frame Module ..... 5-26
- ▶ Examples of Robot Chuck Production ..... 5-29
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## Let's Joint ..... 5-34

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## Rectangular Tube ..... 5-42

- ▶ Rectangular Tube / Pipe End Cap ..... 5-43
- ▶ Rectangular Tube Series Parts ..... 5-44



## Base Aluminum Material ..... 5-46



## Sliding Chuck ..... 5-48

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### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Pipe Cylinder / Pads / Piston Manifolds

### By Industry

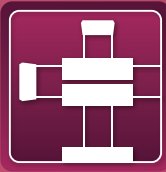
Logistics / Palletizing / Steel Metal Clamping / Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

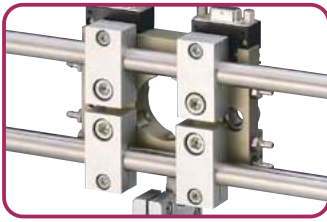
Various Products Information



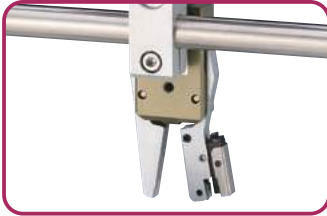
# Jungle Gym

- ▶ Super lightweight, adjustable and reusable frame.
- ▶ Features rigidity and weight reduction. Frame is made of thin-wall stainless. Connectors are made fro super Duralumin.
- ▶ It is simple to adjust the components loacation,which cuts down on working time.
- ▶ The combination of multifarious chuck parts will meet a variety needs.

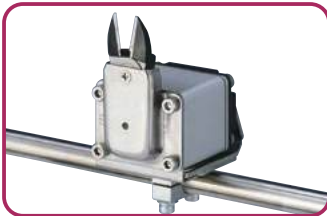
## Frame / Module



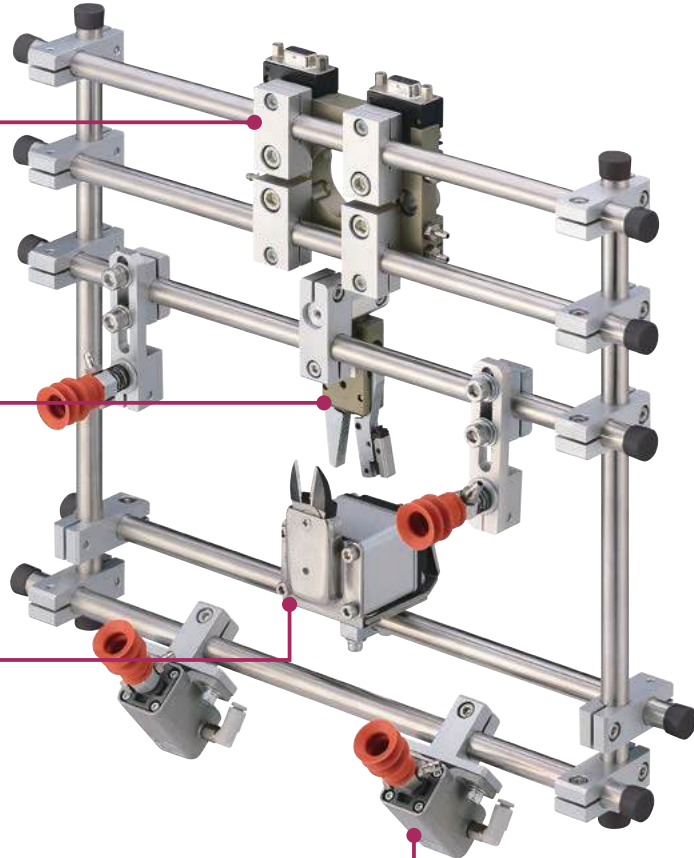
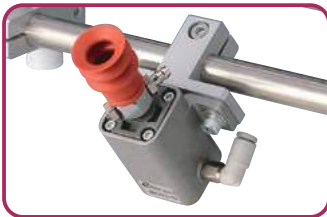
## Grip



## Cut



## Suction



Tubing **6-1**

Three kinds of SUS pipes ( $\phi 8$  /  $\phi 12$  /  $\phi 20$ ) are available for you to use as a base for your end of arm tool.  
Determine extract method first. And choose your favorite parts from the product list.

## Example of using other components parts

- ▶ Suction cups + Suction stems + Rotation bracket + Cross connector



Order code No.	<b>210193</b>
TYPE	<b>VAPH-15C</b>



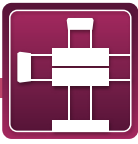
Order code No.	<b>131173</b>
TYPE	<b>N01864-306</b>



Order code No.	<b>210974</b>
TYPE	<b>VFIL-S-5A</b>



Order code No.	<b>131099</b>
TYPE	<b>N01861-202</b>



# List of Jungle Gym

Various parts can be attached to jungle gym SUS  $\phi 8$ ,  $\phi 12$ , and  $\phi 20$ .

Jungle gym



You can see moving images of products by using QR code reader of your smartphone.

## Specification

Product name	Order code No.	Page of details
Jungle gym SUS pipe $\phi 8$	340905	5-8
	8*0.6*500	
	340906	
	8*0.6*1000	
	340907	
Jungle gym SUS pipe $\phi 12$	271527	5-8
	12*0.6*500	
	271528	
	12*0.6*1000	
	271529	
Jungle gym SUS pipe $\phi 20$	281812	5-8
	20*0.8*500	
	281813	
	20*0.8*1000	
Jungle gym CFRP pipe $\phi 12$	023361	5-8
	CFRP 12 * 1.5 * 1500	
Jungle gym CFRP pipe $\phi 20$	023362	5-8
	CFRP 20 * 1.5 * 1500	
Resin Fixture $\phi 12$ (Cable Ties)	171210	5-9
	RCA12	
	171211	
	RCA20	
Resin Fixture $\phi 20$ (Cable Ties)	171212	5-9
	RCB12	
Resin Fixture $\phi 12$ (M4)	171213	5-9
	RCB20	
Pipe end cap $\phi 8$	171338	5-9
	R-CAP-8	
	171339	
Pipe end cap $\phi 12$	171339	5-9
	R-CAP-12	
Pipe end cap $\phi 20$	171340	5-9
	R-CAP-20	
SUS pipe cutter	101206	5-9
	K-203	
	101207	
Spare blade for pipe cutter	K-203-1	5-9

Product name	Order code No.	Page of details
Pipe reamer	197173	5-9
	TSR-2	
Clip	196559	5-9
	TMA-CL (20*20)	
	196560	
	TMA-CL (20*12)	
	196561	
	TMA-CL (12*12)	
Clip	196562	5-9
	TMA-CL (12*8)	
	196563	
	TMA-CL (8*8)	
Clip	196564	5-9
	TMA-CL (12*10)	
Connector	131102	5-10
	N01861-207	
	131098	
	N01861-201	
	131099	
	N01861-202	
	131100	
	N01861-204	
	131101	
	N01861-206	
Connector	131573	5-10
	N01861-206B	
Connector	131569	5-10
	N01861-202A	
Connector	131570	5-10
	N01861-206A	
Floating Cross Connector $\phi 12$	054346	5-10
	F-CROSS-12	
Floating Cross Connector $\phi 20$	054347	5-10
	F-CROSS-20	
T Connector # 1 $\phi 8 \phi 8$	131108	5-11
	N01861-306	
T Connector # 1 $\phi 8 \phi 12$	131105	5-11
	N01861-303	
T Connector # 1 $\phi 12 \phi 8$	131104	5-11
	N01861-302	

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

### Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# List of Jungle Gym

Product name	Order code No. TYPE	Page of details	
Connector	T Connector # 1 • $\phi 12 \phi 12$	<b>131103</b> N01861-301	5-11
	T Connector # 1 • $\phi 12 \phi 20$	<b>131109</b> N01861-307	
	T Connector # 1 • $\phi 20 \phi 12$	<b>131106</b> N01861-304	
	T Connector # 1 • $\phi 20 \phi 20$	<b>131107</b> N01861-305	
	T Connector # 2 • $\phi 8 \phi 8$	<b>131115</b> N01861-406	
	T Connector # 2 • $\phi 8 \phi 12$	<b>131112</b> N01861-403	
	T Connector # 2 • $\phi 12 \phi 8$	<b>131111</b> N01861-402	
	T Connector # 2 • $\phi 12 \phi 12$	<b>131110</b> N01861-401	
	T Connector # 2 • $\phi 12 \phi 20$	<b>131116</b> N01861-407	
	T Connector # 2 • $\phi 20 \phi 12$	<b>131113</b> N01861-404	5-12
	T Connector # 2 • $\phi 20 \phi 20$	<b>131114</b> N01861-405	
	Parallel connector • $\phi 8 \phi 8$	<b>131096</b> N01861-107	
	Parallel connector • $\phi 8 \phi 12$	<b>131092</b> N01861-101	
	Parallel connector • $\phi 12 \phi 12$	<b>131093</b> N01861-102	
	Parallel connector • $\phi 20 \phi 12$	<b>131094</b> N01861-104	
	Parallel connector • $\phi 20 \phi 20$	<b>131095</b> N01861-106	5-13
	Connector • for SSW	<b>131097</b> N01861-108	
	Floating Paraller Connector $\phi 12$	<b>054344</b> F-PARA-12	

Product name	Order code No. TYPE	Page of details	
Connector	Floating Paraller Connector $\phi 20$	<b>054345</b> F-PARA-20	5-13
	Straight connector • $\phi 8$	<b>131488</b> N01868-501	
	Straight connector • $\phi 12$	<b>131489</b> N01868-502	
	Straight connector • $\phi 20$	<b>131490</b> N01868-503	
	Access bracket • $\phi 12 \cdot M6$	<b>131125</b> N01862-210	
	Access bracket • $\phi 20 \cdot M6$	<b>131126</b> N01862-211	
	Attachment bracket • $\phi 8 \cdot M5$	<b>131306</b> N01862-208	
	Attachment bracket • $\phi 8 \cdot M6$	<b>131121</b> N01862-205	
	Attachment bracket • $\phi 12 \cdot M5$	<b>131305</b> N01862-204	
	Attachment bracket • $\phi 12 \cdot M6$	<b>131118</b> N01862-201	
Attachment bracket • $\phi 12 \cdot M8$	<b>131225</b> N01862-213		
Attachment bracket • $\phi 20 \cdot M6$	<b>131123</b> N01862-207		
Attachment bracket • $\phi 20 \cdot M8$	<b>131226</b> N01862-214		
Suction bracket • $\phi 8 \cdot M5$	<b>131122</b> N01862-206		
Suction bracket • $\phi 8 \cdot M6$	<b>131124</b> N01862-209		
Suction bracket • $\phi 12 \cdot M5$	<b>131119</b> N01862-202		
Suction bracket • $\phi 12 \cdot M6$	<b>131127</b> N01862-212		
Suction bracket • $\phi 12 \cdot PT1/8$	<b>131120</b> N01862-203		




















Product name		Order code No.	Page of details
Bracket	Cylinder bracket • $\phi 8$	131075	5-14
		N01915-113	
	Cylinder bracket • $\phi 12$	131074	5-15
		N01915-112	
	Cylinder bracket • $\phi 20$	131066	5-16
		N01915-103	
	Swing Bracket	131065	5-17
		N01915-102	
	Slide bracket • $\phi 8$	131151	5-18
		N01863-207	
	Slide bracket • $\phi 12$	131145	5-19
		N01863-201	
	Slide bracket • $\phi 20$	131149	5-20
		N01863-205	
	Slide bracket • W • $\phi 8$	131217	5-21
		N01863-113	
	Slide bracket • W • $\phi 12$	131128	5-22
		N01863-101	
	Slide bracket • W • $\phi 20$	131134	5-23
N01863-111			
Sensor bracket • $\phi 12$	131189	5-24	
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Sensor bracket	131077	5-25	
	N01915-201		
Chuck bracket • TH • $\phi 8$	131188	5-26	
	N01866-502		
Chuck bracket • TH • $\phi 12$	131187	5-27	
	N01866-501		
Chuck bracket • $\phi 12$	131067	5-28	
	N01915-105		
Nipper bracket • A	131078	5-29	
	N01915-301		
Nipper bracket • B	131216	5-30	
	N01915-302		
Nipper bracket • C	131080	5-31	
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Product name		Order code No.	Page of details
Bracket	Nipper bracket • D	131081	5-32
		N01915-304	
	Nipper bracket • E	131082	5-33
		N01915-305	
	Bracket • L • $\phi 8$ • for UMCD	131180	5-34
		N01866-202	
	Bracket • L • $\phi 12$ • for MCD	131179	5-35
		N01866-201	
	Bracket • T • $\phi 12$ • for MCD	131176	5-36
		N01866-101	
	Bracket • T • $\phi 20$ • for MCD	131554	5-37
		N01866-103A	
	Bracket • T • $\phi 8$ • for UMCD	131177	5-38
		N01866-102	
	Bracket • TH • $\phi 8$ • for UMCD	131182	5-39
		N01866-302	
	Bracket • TH • $\phi 12$ • for MCD	131181	5-40
		N01866-301	
	Bracket • TH • $\phi 20$ • for MCD	131183	5-41
N01866-303			
Bracket • TV • $\phi 8$ • for UMCD	131185	5-42	
	N01866-402		
Bracket • TV • $\phi 12$ • for MCD	131184	5-43	
	N01866-401		
Bracket • TV • $\phi 20$ • for MCD	131186	5-44	
	N01866-403		
Bracket • $\phi 8$	131073	5-45	
	N01915-111		
Bracket • $\phi 12$	131071	5-46	
	N01915-109		
Bracket • $\phi 20$	131072	5-47	
	N01915-110		
Bracket • W • $\phi 8$	131070	5-48	
	N01915-108		
Bracket • W • $\phi 12$	131068	5-49	
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**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System
- Grip**
- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad
- Suction**
- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit
- Cut**
- Air Nipper (Small-Medium)
- Air Nipper (Large)
- Frame / Module**
- Jungle Gym**
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck
- Pneumatic Components / Sensors**
- Pneumatic Components
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- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds
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- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication
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# List of Jungle Gym

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Rotation bracket • $\phi$ 20	 <b>131064</b> N01915-101	
Rotation bracket • M10 • 8A	 <b>131434</b> N01864-305	
Rotation bracket • M12 • 12A	 <b>131173</b> N01864-306	
Rotation bracket • M17 • 20A	 <b>131174</b> N01864-307	
Rotation bracket • PT1/8 • 8A	 <b>131175</b> N01864-401	
Rotation bracket • $\phi$ 8 • 8A	 <b>131170</b> N01864-303	
Rotation bracket • $\phi$ 8 • 8B	 <b>131606</b> N01864-103A	
Rotation bracket • $\phi$ 8 • M5A	 <b>131164</b> N01864-202	
Rotation bracket • $\phi$ 8 • M10A	 <b>131435</b> N01864-201	
Rotation bracket • $\phi$ 8 • M12A	 <b>131433</b> N01864-205	
Rotation bracket • $\phi$ 12 • PT1/8A	 <b>131166</b> N01864-204	
Rotation bracket • $\phi$ 12 • 8A	 <b>131169</b> N01864-302	
Rotation bracket • $\phi$ 12 • 8B	 <b>131600</b> N01864-101A	
Rotation bracket • $\phi$ 12 • 12A	 <b>131168</b> N01864-301	
Rotation BKT • $\phi$ 12 • 12AL	 <b>131567</b> N01864-301L	
Rotation bracket • $\phi$ 12 • 12B	 <b>131605</b> N01864-102A	

Product name	Order code No. TYPE	Page of details
Rotation BKT • $\phi$ 20 • 20AL	 <b>131568</b> N01864-304L	
Suction rotate # A • $\phi$ 8	 <b>131194</b> N01868-104	5-21
Suction rotate # A • $\phi$ 12	 <b>131191</b> N01868-101	
Suction rotate # B • M5 • $\phi$ 12	 <b>131192</b> N01868-102	
Slide bracket 40 • M3	 <b>131158</b> N01863-214	5-22
Slide bracket 40 • M5	 <b>131147</b> N01863-203	
Slide bracket 40 • M6	 <b>131156</b> N01863-212	
Slide bracket 40 • PT1/8	 <b>131154</b> N01863-210	
Slide bracket 40 • W • M10	 <b>131139</b> N01863-117	
Slide bracket 40 • W • M12	 <b>131140</b> N01863-118	
Slide bracket 40 • W • M17	 <b>131143</b> N01863-122	
Slide bracket 40 • $\phi$ 8	 <b>131152</b> N01863-208	
Slide bracket 40 • W • $\phi$ 8	 <b>131131</b> N01863-106	
Slide bracket 40 • W • $\phi$ 12	 <b>131132</b> N01863-107	
Slide bracket 40 • W • $\phi$ 20	 <b>131137</b> N01863-114	
Slide bracket 40 • T • W • $\phi$ 8	 <b>230051</b> XL0005-102	
Slide bracket 40 • T • $\phi$ 8	 <b>230056</b> XL0005-107	

Product name		Order code No.	Page of details
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		XL0005-103	
	Slide bracket 40 • T • $\phi$ 20	230054	5-22
		XL0005-105	
	Slide bracket 70 • M3	131159	5-23
		N01863-217	
	Slide bracket 70 • M5	131148	5-23
		N01863-204	
	Slide bracket 70 • M6	131157	5-23
		N01863-213	
	Slide bracket 70 • PT1/8	131155	5-23
		N01863-211	
	Slide bracket 70 • W • M10	131141	5-23
		N01863-120	
	Slide bracket 70 • W • M12	131142	5-23
		N01863-121	
	Slide bracket 70 • W • M17	131144	5-23
		N01863-124	
	Slide bracket 70 • $\phi$ 8	131153	5-24
		N01863-209	
Slide bracket 70 • W • $\phi$ 8	131133	5-24	
	N01863-110		
Slide bracket 70 • W • $\phi$ 12	131130	5-24	
	N01863-103		
Slide bracket 70 • W • $\phi$ 20	131138	5-24	
	N01863-115		
Slide bracket 70 • T • W • $\phi$ 8	230053	5-24	
	XL0005-104		
Slide bracket 70 • T • $\phi$ 8	230057	5-24	
	XL0005-108		
Slide bracket 70 • T • $\phi$ 12	230050	5-24	
	XL0005-101		
Slide bracket 70 • T • $\phi$ 20	230055	5-24	
	XL0005-106		
Washer	Slide washer • $\phi$ 8 / $\phi$ 12	131146	5-24
		N01863-202	

Product name		Order code No.	Page of details
Washer	Slide washer • W • $\phi$ 8 / $\phi$ 12	131129	5-24
		N01863-102	
		131150	
Washer	Slide washer • $\phi$ 20	N01863-206	5-24
		131135	
Washer	Slide washer • W • $\phi$ 20	N01863-112	5-24
		131135	
Nut plate	Nut plate for slide bracket	023197	5-24
		CP-076	
Nut	Bushing nut • $\phi$ 8 • M5	131200	5-25
		N01868-401	
	Bushing nut • $\phi$ 8 • M6	131206	5-25
		N01868-410	
	Bushing nut • $\phi$ 12 • M5	131202	5-25
		N01868-403	
	Bushing nut • $\phi$ 12 • M10	131201	5-25
		N01868-402	
	Bushing nut • $\phi$ 12 • PT1/8	131207	5-25
		N01868-411	
Bushing nut • $\phi$ 20 • M12	131205	5-25	
	N01868-409		
Bushing nut • $\phi$ 20 • PT1/8	131199	5-25	
	N01868-305		
Bushing nut • M5-M3	131204	5-25	
	N01868-407		
Bushing	Bushing • $\phi$ 12 $\phi$ 8	131196	5-25
		N01868-301	
	Bushing • $\phi$ 20 $\phi$ 8	131197	
		N01868-302	
Bushing • $\phi$ 20 $\phi$ 12	131198	5-25	
	N01868-303		

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

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#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

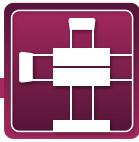
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information



# Jungle Gym SUS • CFRP Pipe / Resin Fixture

Using thin-walled stainless steel pipes allows weight reduction and structural rigidity.



**Jungle gym SUS pipe φ 8**

Order code No.	<b>340905</b>
TYPE	<b>8*0.6*500</b>

● Weight : 56g

Order code No.	<b>340906</b>
TYPE	<b>8*0.6*1000</b>

● Weight : 112g

Order code No.	<b>340907</b>
TYPE	<b>8*0.6*1500</b>

● Weight : 144g



**Jungle gym SUS pipe φ 12**

Order code No.	<b>271527</b>
TYPE	<b>12*0.6*500</b>

● Weight : 88g

Order code No.	<b>271528</b>
TYPE	<b>12*0.6*1000</b>

● Weight : 169g

Order code No.	<b>271529</b>
TYPE	<b>12*0.6*1500</b>

● Weight : 250g



**Jungle gym SUS pipe φ 20**

Order code No.	<b>281812</b>
TYPE	<b>20*0.8*500</b>

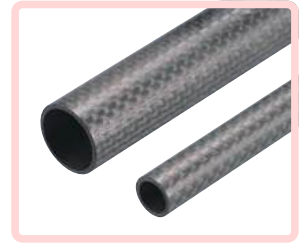
● Weight : 172g

Order code No.	<b>281813</b>
TYPE	<b>20*0.8*1000</b>

● Weight : 352g

Order code No.	<b>281814</b>
TYPE	<b>20*0.8*1500</b>

● Weight : 543g



**Jungle gym CFRP pipe φ 12**

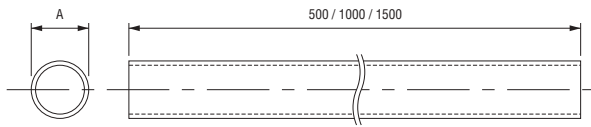
Order code No.	<b>023361</b>
TYPE	<b>CFRP 12*1.5*1500</b>

● Weight : 121g

**Jungle gym CFRP pipe φ 20**

Order code No.	<b>023362</b>
TYPE	<b>CFRP 20*1.5*1500</b>

● Weight : 200g



## Specification

Product name	A	Thickness	Material	Outside diameter tolerance
Jungle gym SUS pipe φ 8	φ 8	0.6mm	SUS304	0 ~ -0.06
Jungle gym SUS pipe φ 12	φ 12			
Jungle gym SUS pipe φ 20	φ 20	0.8mm	CFRP	-0.05 ~ -0.15
Jungle gym CFRP pipe φ 12	φ 12	1.5mm		
Jungle gym CFRP pipe φ 20	φ 20			

\*The tolerance of outside diameter is a rough standard.  
\*When cutting pipes, burrs may occur on the cut surface.

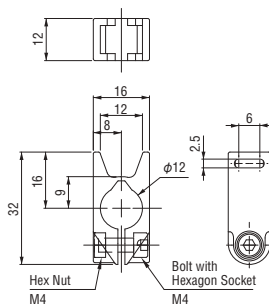
Frame / Module • Jungle Gym



**Resin Fixture φ 12 (Cable ties)**

Order code No.	<b>171210</b>
TYPE	<b>RCA12</b>

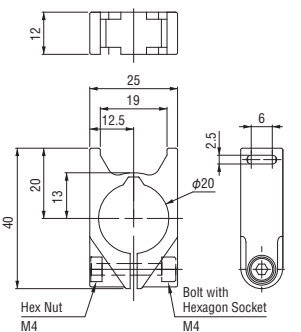
● Weight : 5g



**Resin Fixture φ 20 (Cable ties)**

Order code No.	<b>171211</b>
TYPE	<b>RCA20</b>

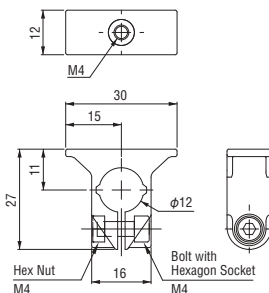
● Weight : 7g



**Resin Fixture φ 12 (M4)**

Order code No.	<b>171212</b>
TYPE	<b>RCB12</b>

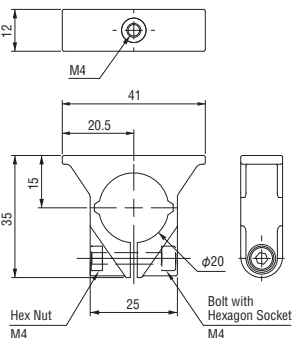
● Weight : 6g

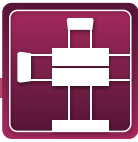


**Resin Fixture φ 20 (M4)**

Order code No.	<b>171213</b>
TYPE	<b>RCB20</b>

● Weight : 9g





# Pipe End Cap / SUS Pipe Cutter / Clip

Caps, pipe cutters, and clips compatible with SUS / CFRP pipes.

● Use Semedine Super X Series to fix the pipe end cap to jungle gym SUS pipe.



## Pipe end cap $\phi 8$

Order code No.	<b>171338</b>
TYPE	<b>R-CAP-8</b>

● Weight : 0.2g

## Pipe end cap $\phi 12$

Order code No.	<b>171339</b>
TYPE	<b>R-CAP-12</b>

● Weight : 0.4g

## Pipe end cap $\phi 20$

Order code No.	<b>171340</b>
TYPE	<b>R-CAP-20</b>

● Weight : 3.0g



## SUS pipe cutter

Order code No.	<b>101206</b>
TYPE	<b>K-203</b>

● Weight : 205g  
● Coping with stainless steel pipe, copper tubes

## SUS pipe cutter blade

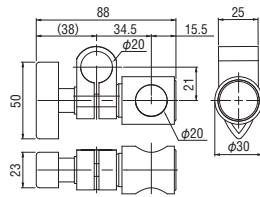
Order code No.	<b>101207</b>
TYPE	<b>K-203-1</b>

● Weight : 3g  
● Pipe cutter (K-203) spare blade

## Clip • TMA • $\phi 20 * \phi 20$

Order code No.	<b>196559</b>
TYPE	<b>TMA-CL (20*20)</b>

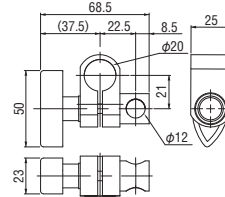
● Weight : 270g



## Clip • TMA • $\phi 20 * \phi 12$

Order code No.	<b>196560</b>
TYPE	<b>TMA-CL (20*12)</b>

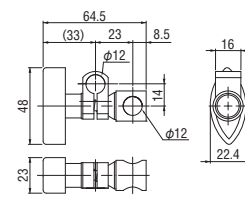
● Weight : 160g



## Clip • TMA • $\phi 12 * \phi 12$

Order code No.	<b>196561</b>
TYPE	<b>TMA-CL (12*12)</b>

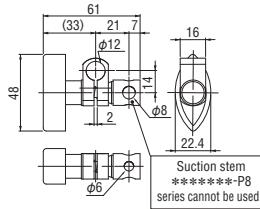
● Weight : 75g



## Clip • TMA • $\phi 12 * \phi 8$

Order code No.	<b>196562</b>
TYPE	<b>TMA-CL (12*8)</b>

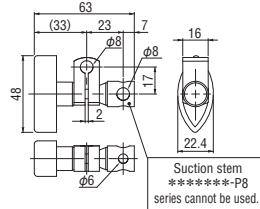
● Weight : 85g



## Clip • TMA • $\phi 8 * \phi 8$

Order code No.	<b>196563</b>
TYPE	<b>TMA-CL (8*8)</b>

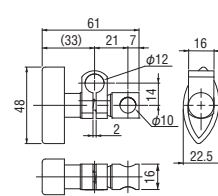
● Weight : 55g



## Clip • TMA • $\phi 12 * \phi 10$

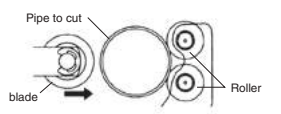
Order code No.	<b>196564</b>
TYPE	<b>TMA-CL (12*10)</b>

● Weight : 62g



### How to use

1 When you turn the handle clockwise, the blade moves forward, when you turn the handle counterclockwise, the blade moves backward. Put the pipe onto the two rollers parallel as shown. Turn the handle to the point where the blade contacts with the pipe. Turn the handle to the point where the blade contacts with the pipe.



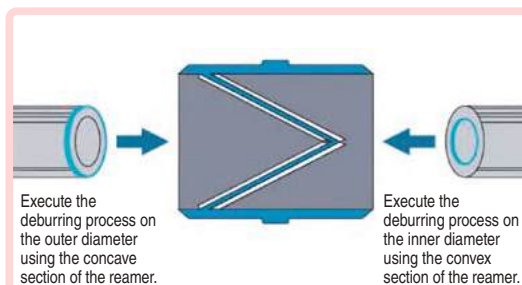
2 Take the pipe as center and rotate the pipe cutter in the direction of the arrow in the figure. Turn the handle clockwise a little by one rotation, and move the blade forward. Repeat the operation, the pipe will be cut off.



## Pipe Reamer (Copper / Stainless Tube)

Order code No.	<b>197173</b>
TYPE	<b>TSR-2</b>

● Weight : 200g  
● Suitable for pipe :  $\phi 8 \sim 35\text{mm}$



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

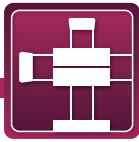
Assembling Tools

Tool / Jig

Information

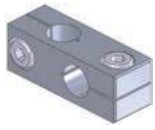
Various Products Information





# Jungle Gym Series Parts

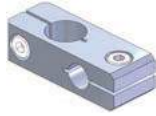
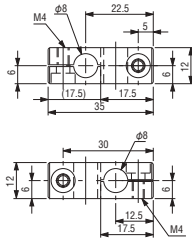
Various parts can be attached to jungle gym SUS  $\phi 8$ ,  $\phi 12$ , and  $\phi 20$ .



**Cross connector •  $\phi 8 \phi 8$**

Order code No.	<b>131102</b>
TYPE	<b>N01861-207</b>

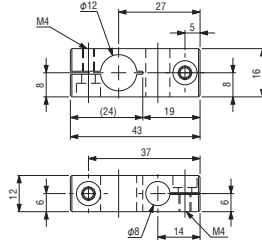
● Weight : 9.0g



**Cross connector •  $\phi 12 \phi 8$**

Order code No.	<b>131098</b>
TYPE	<b>N01861-201</b>

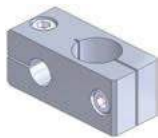
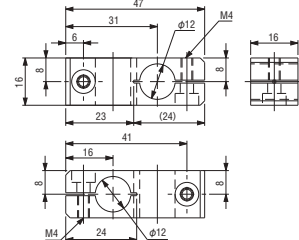
● Weight : 16.8g



**Cross connector •  $\phi 12 \phi 12$**

Order code No.	<b>131099</b>
TYPE	<b>N01861-202</b>

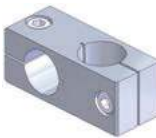
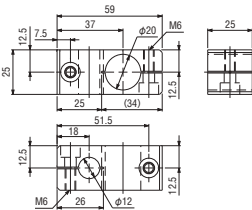
● Weight : 20.5g



**Cross connector •  $\phi 20 \phi 12$**

Order code No.	<b>131100</b>
TYPE	<b>N01861-204</b>

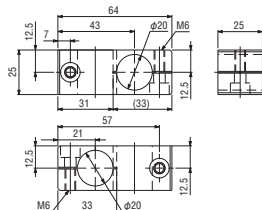
● Weight : 72.0g



**Cross connector •  $\phi 20 \phi 20$**

Order code No.	<b>131101</b>
TYPE	<b>N01861-206</b>

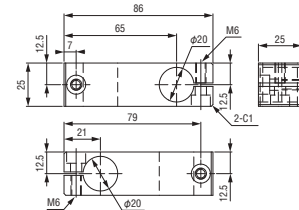
● Weight : 50.3g



**Cross connector • long •  $\phi 20 \phi 20$**

Order code No.	<b>131573</b>
TYPE	<b>N01861-206B</b>

● Weight : 109.0g



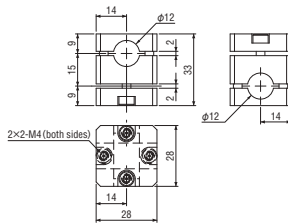
► Convenient for addition of components after assembly.



**Cross connector •  $\phi 12 \phi 12$  (rear entrance)**

Order code No.	<b>131569</b>
TYPE	<b>N01861-202A</b>

● Weight : 51.3g



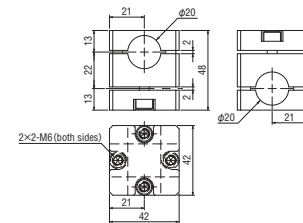
► Convenient for addition of components after assembly.



**Cross connector •  $\phi 20 \phi 20$  (rear entrance)**

Order code No.	<b>131570</b>
TYPE	<b>N01861-206A</b>

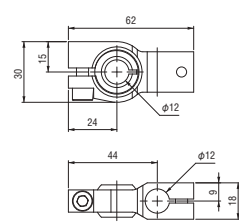
● Weight : 160.0g



**Floating Cross Connector  $\phi 12$**

Order code No.	<b>054346</b>
TYPE	<b>F-CROSS-12</b>

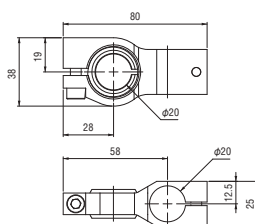
● Weight : 45.0g



**Floating Cross Connector  $\phi 20$**

Order code No.	<b>054347</b>
TYPE	<b>F-CROSS-20</b>

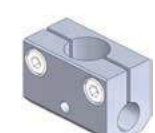
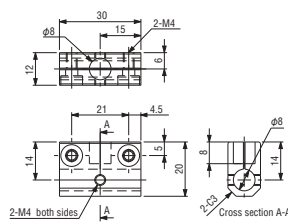
● Weight : 72.0g



**T Connector#1 •  $\phi 8 \phi 8$**

Order code No.	<b>131108</b>
TYPE	<b>N01861-306</b>

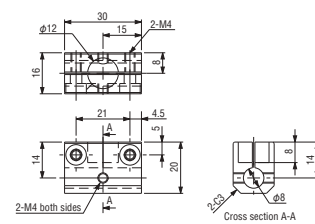
● Weight : 12.5g



**T Connector#1 •  $\phi 8 \phi 12$**

Order code No.	<b>131105</b>
TYPE	<b>N01861-303</b>

● Weight : 22.6g



**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Section / Resin Cylinders (Pads) / Resin Manifolds

**By Industry**

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

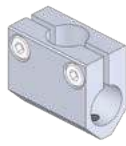
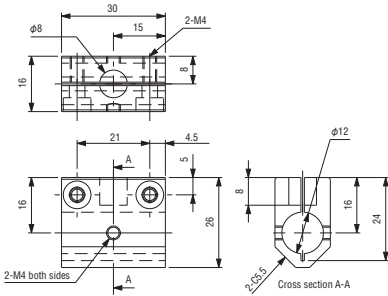
Various Products Information



**T Connector # 1 • phi 12 phi 8**

Order code No. **131104**  
TYPE **N01861-302**

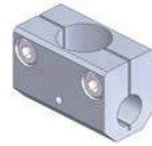
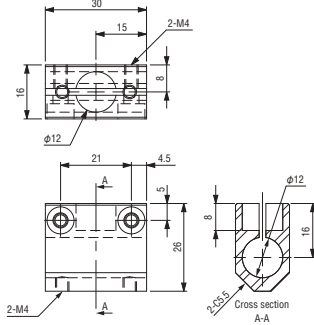
● Weight : 18.7g



**T Connector # 1 • phi 12 phi 12**

Order code No. **131103**  
TYPE **N01861-301**

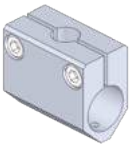
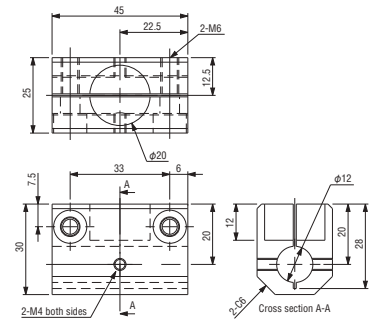
● Weight : 17.5g



**T Connector # 1 • phi 12 phi 20**

Order code No. **131109**  
TYPE **N01861-307**

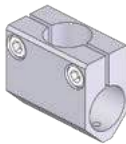
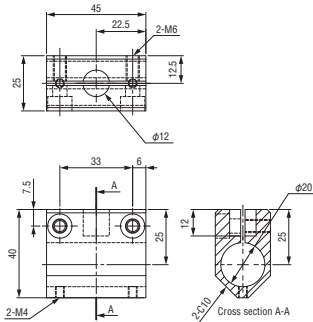
● Weight : 57.8g



**T Connector # 1 • phi 20 phi 12**

Order code No. **131106**  
TYPE **N01861-304**

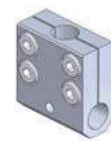
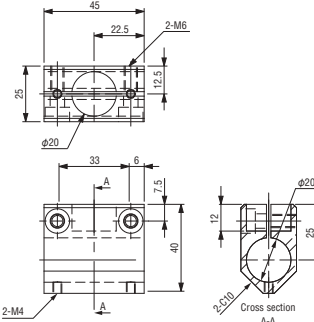
● Weight : 62.4g



**T Connector # 1 • phi 20 phi 20**

Order code No. **131107**  
TYPE **N01861-305**

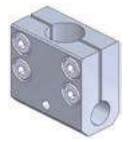
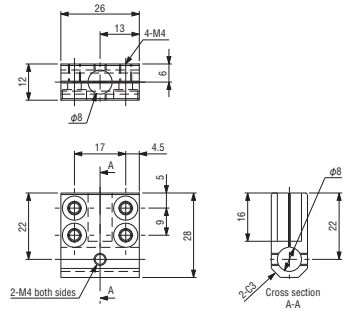
● Weight : 55.9g



**T Connector # 2 • phi 8 phi 8**

Order code No. **131115**  
TYPE **N01861-406**

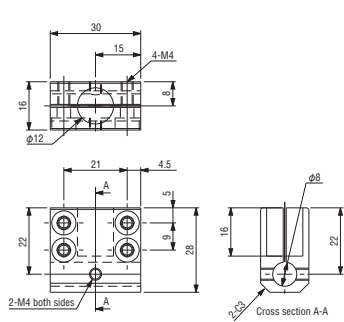
● Weight : 14.6g



**T Connector # 2 • phi 8 phi 12**

Order code No. **131112**  
TYPE **N01861-403**

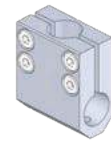
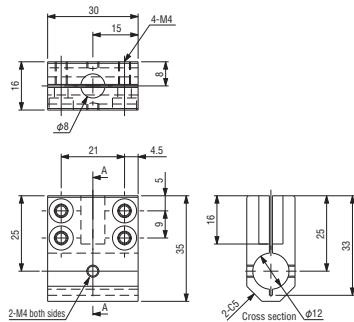
● Weight : 30.8g



**T Connector # 2 • phi 12 phi 8**

Order code No. **131111**  
TYPE **N01861-402**

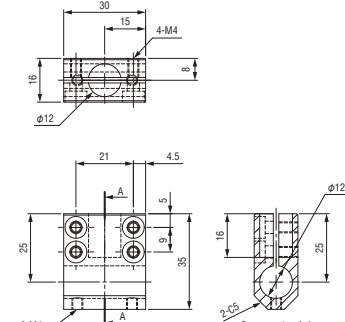
● Weight : 28.3g



**T Connector # 2 • phi 12 phi 12**

Order code No. **131110**  
TYPE **N01861-401**

● Weight : 25.7g



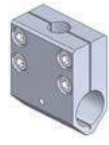
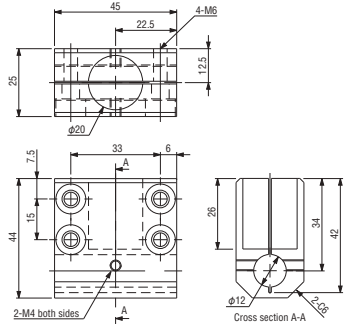
# Jungle Gym Series Parts



**T Connector # 2 •  
φ 12 φ 20**

Order code No.	<b>131116</b>
TYPE	<b>N01861-407</b>

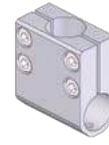
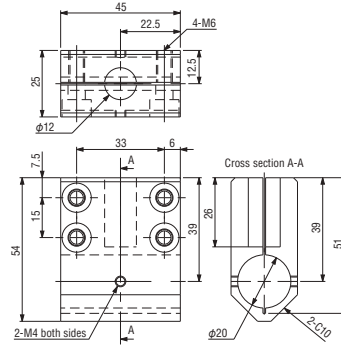
● Weight : 87.2g



**T Connector # 2 •  
φ 20 φ 12**

Order code No.	<b>131113</b>
TYPE	<b>N01861-404</b>

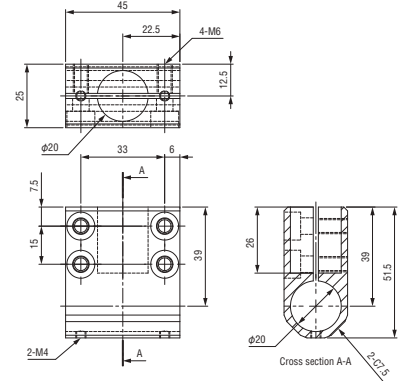
● Weight : 107.4g



**T Connector # 2 •  
φ 20 φ 20**

Order code No.	<b>131114</b>
TYPE	<b>N01861-405</b>

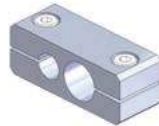
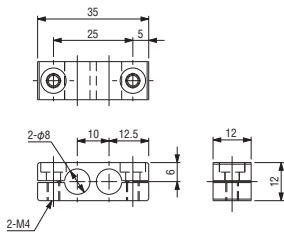
● Weight : 77.3g



**Parallel connector •  
φ 8 φ 8**

Order code No.	<b>131096</b>
TYPE	<b>N01861-107</b>

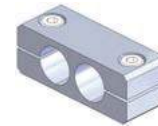
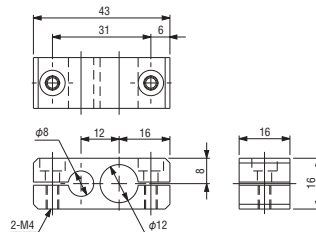
● Weight : 9.1g



**Parallel connector •  
φ 8 φ 12**

Order code No.	<b>131092</b>
TYPE	<b>N01861-101</b>

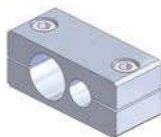
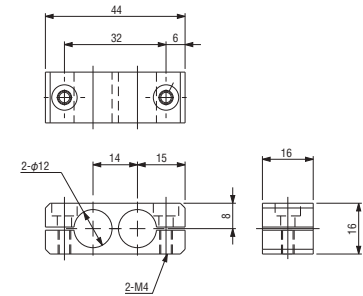
● Weight : 20.6g



**Parallel connector •  
φ 12 φ 12**

Order code No.	<b>131093</b>
TYPE	<b>N01861-102</b>

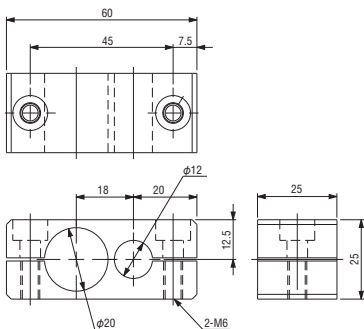
● Weight : 18.6g



**Parallel connector •  
φ 20 φ 12**

Order code No.	<b>131094</b>
TYPE	<b>N01861-104</b>

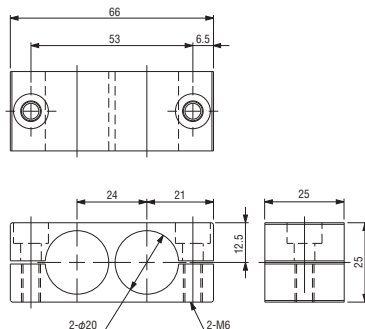
● Weight : 67.2g

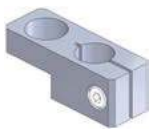


**Parallel connector •  
φ 20 φ 20**

Order code No.	<b>131095</b>
TYPE	<b>N01861-106</b>

● Weight : 60.7g

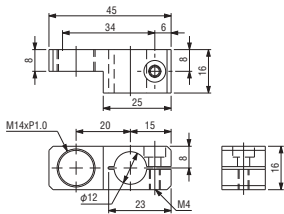




### Connector • for SSW

Order code No.	<b>131097</b>
TYPE	<b>N01861-108</b>

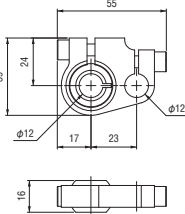
● Weight : 15.5g



### Floating Paraller Connector φ12

Order code No.	<b>054344</b>
TYPE	<b>F-PARA-12</b>

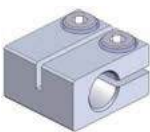
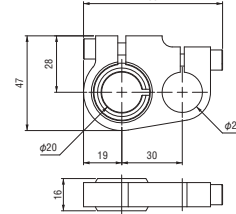
● Weight : 40.0g



### Floating Paraller Connector φ20

Order code No.	<b>054345</b>
TYPE	<b>F-PARA-20</b>

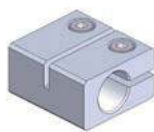
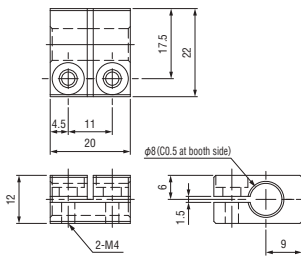
● Weight : 56.0g



### Straight connector • φ8

Order code No.	<b>131488</b>
TYPE	<b>N01868-501</b>

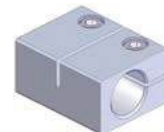
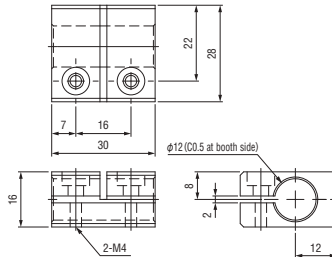
● Weight : 12.2g



### Straight connector • φ12

Order code No.	<b>131489</b>
TYPE	<b>N01868-502</b>

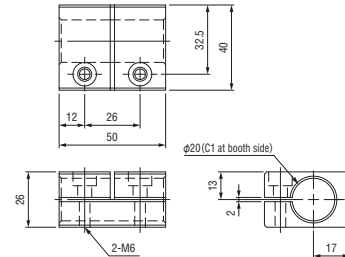
● Weight : 26.8g



### Straight connector • φ20

Order code No.	<b>131490</b>
TYPE	<b>N01868-503</b>

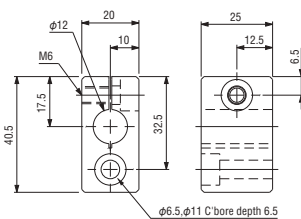
● Weight : 102.1g



### Access bracket • φ12 • M6

Order code No.	<b>131125</b>
TYPE	<b>N01862-210</b>

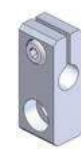
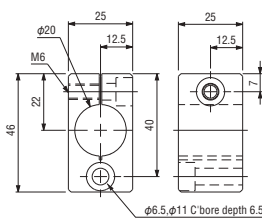
● Weight : 41.5g



### Access bracket • φ20 • M6

Order code No.	<b>131126</b>
TYPE	<b>N01862-211</b>

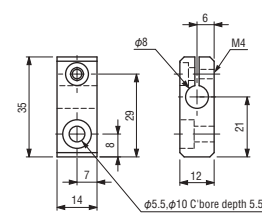
● Weight : 50.8g



### Attachment bracket • φ8 • M5

Order code No.	<b>131306</b>
TYPE	<b>N01862-208</b>

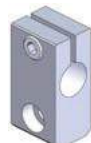
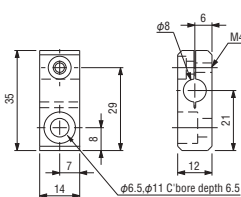
● Weight : 15.0g



### Attachment bracket • φ8 • M6

Order code No.	<b>131121</b>
TYPE	<b>N01862-205</b>

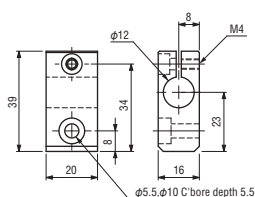
● Weight : 11.1g



### Attachment bracket • φ12 • M5

Order code No.	<b>131305</b>
TYPE	<b>N01862-204</b>

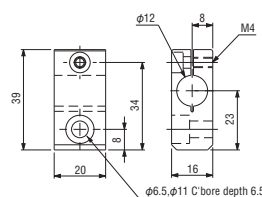
● Weight : 30.0g



### Attachment bracket • φ12 • M6

Order code No.	<b>131118</b>
TYPE	<b>N01862-201</b>

● Weight : 24.1g



#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

#### Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information

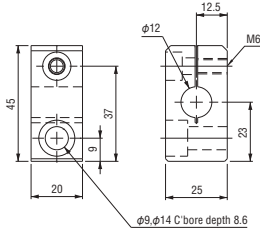
# Jungle Gym Series Parts



**Attachment bracket •  
φ 12 • M8**

Order code No.	<b>131225</b>
TYPE	<b>N01862-213</b>

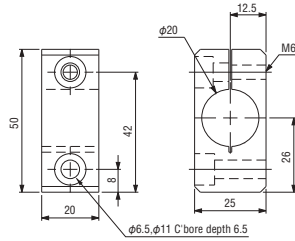
● Weight : 41.5g



**Attachment bracket •  
φ 20 • M6**

Order code No.	<b>131123</b>
TYPE	<b>N01862-207</b>

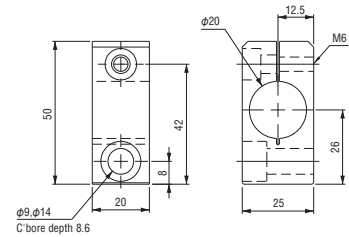
● Weight : 44.7g



**Attachment bracket •  
φ 20 • M8**

Order code No.	<b>131226</b>
TYPE	<b>N01862-214</b>

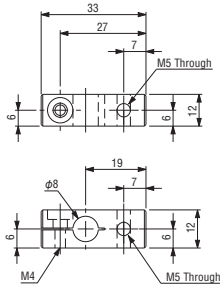
● Weight : 50.7g



**Suction bracket •  
φ 8 • M5**

Order code No.	<b>131122</b>
TYPE	<b>N01862-206</b>

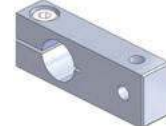
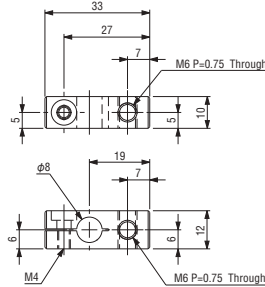
● Weight : 8.1g



**Suction bracket •  
φ 8 • M6**

Order code No.	<b>131124</b>
TYPE	<b>N01862-209</b>

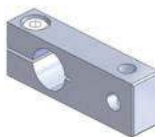
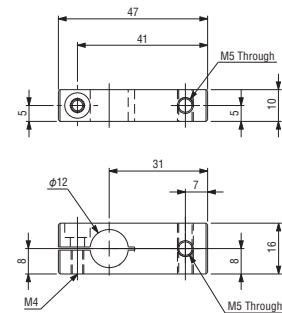
● Weight : 7.8g ● M6 (fine)



**Suction bracket •  
φ 12 • M5**

Order code No.	<b>131119</b>
TYPE	<b>N01862-202</b>

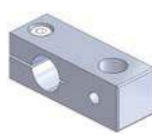
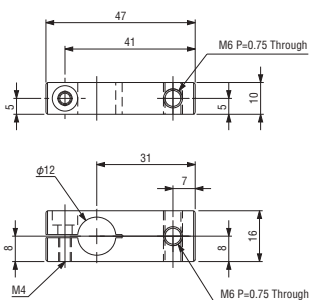
● Weight : 15.7g



**Suction bracket •  
φ 12 • M6**

Order code No.	<b>131127</b>
TYPE	<b>N01862-212</b>

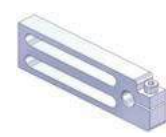
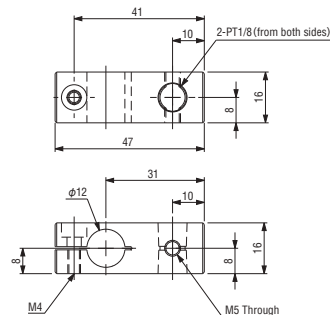
● Weight : 15.4g ● M6 (fine)



**Suction bracket •  
φ 12 • PT1/8**

Order code No.	<b>131120</b>
TYPE	<b>N01862-203</b>

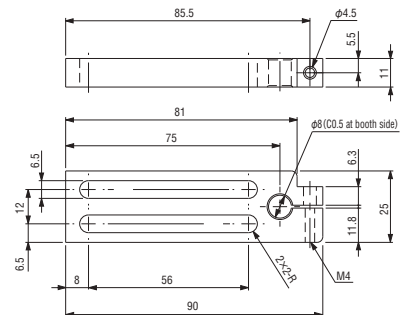
● Weight : 24.1g



**Cylinder bracket •  
φ 8**

Order code No.	<b>131075</b>
TYPE	<b>N01915-113</b>

● Weight : 44g



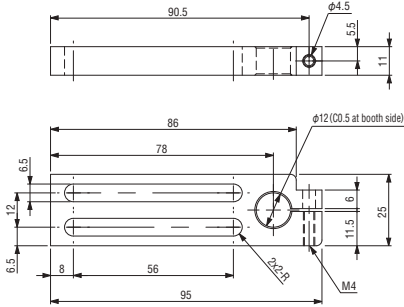




### Cylinder bracket • $\phi 12$

Order code No.	<b>131074</b>
TYPE	<b>N01915-112</b>

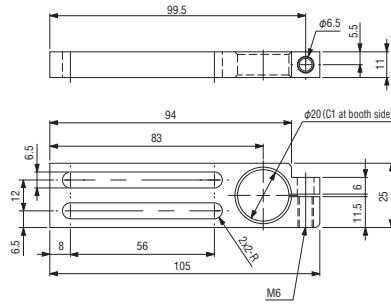
● Weight : 45g



### Cylinder bracket • $\phi 20$

Order code No.	<b>131066</b>
TYPE	<b>N01915-103</b>

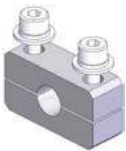
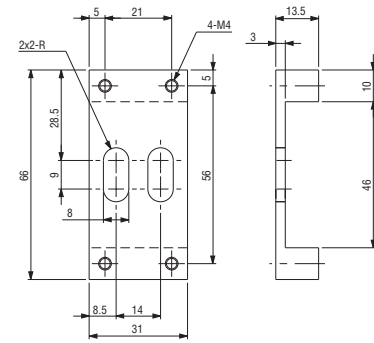
● Weight : 49g



### Swing Bracket

Order code No.	<b>131065</b>
TYPE	<b>N01915-102</b>

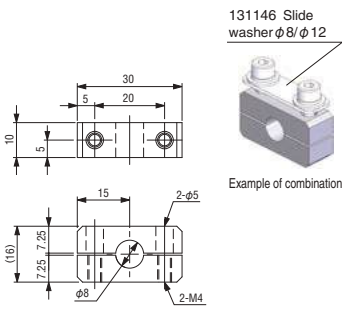
● Weight : 32.1g



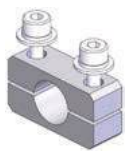
### Slide bracket • $\phi 8$

Order code No.	<b>131151</b>
TYPE	<b>N01863-207</b>

● Weight : 10.4g



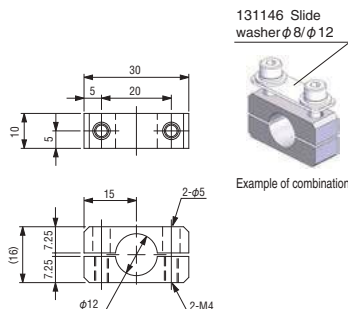
Example of combination



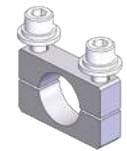
### Slide bracket • $\phi 12$

Order code No.	<b>131145</b>
TYPE	<b>N01863-201</b>

● Weight : 8.5g



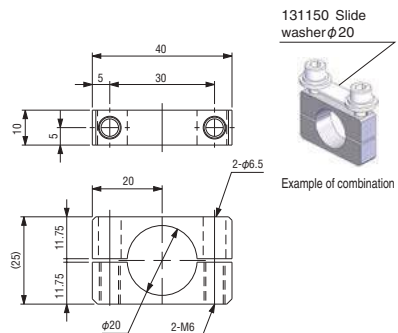
Example of combination



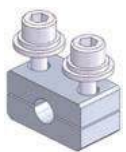
### Slide bracket • $\phi 20$

Order code No.	<b>131149</b>
TYPE	<b>N01863-205</b>

● Weight : 15.0g



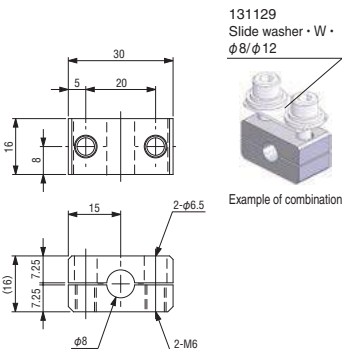
Example of combination



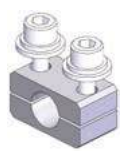
### Slide bracket • W • $\phi 8$

Order code No.	<b>131217</b>
TYPE	<b>N01863-113</b>

● Weight : 12.0g



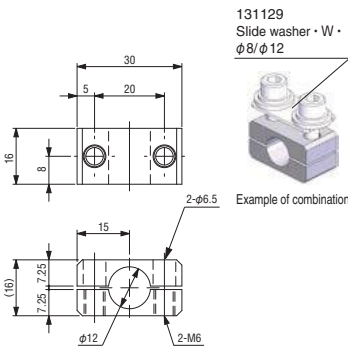
Example of combination



### Slide bracket • W • $\phi 12$

Order code No.	<b>131128</b>
TYPE	<b>N01863-101</b>

● Weight : 13.3g



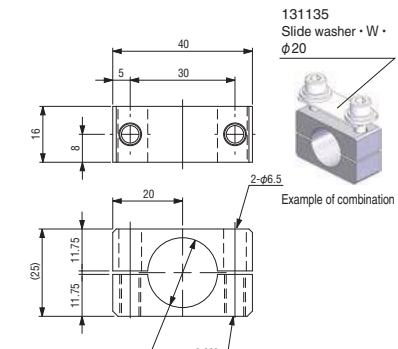
Example of combination



### Slide bracket • W • $\phi 20$

Order code No.	<b>131134</b>
TYPE	<b>N01863-111</b>

● Weight : 26.2g



Example of combination

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

### Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/ Sheet Metal-Stamping- Metal Fabrication

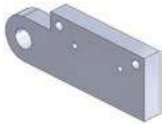
### Assembling Tools

Tool / Jig

### Information

Various Products Information

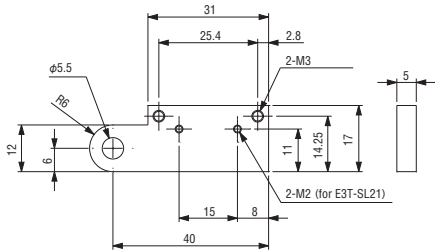
# Jungle Gym Series Parts



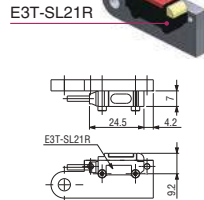
## Sensor bracket • $\phi 12$

Order code No.	<b>131189</b>
TYPE	<b>N01867-101</b>

- Weight : 9.2g
- Limit switch  $\rightarrow$  **6-18** ,
- Photo sensor  $\rightarrow$  **6-22** could be installed.



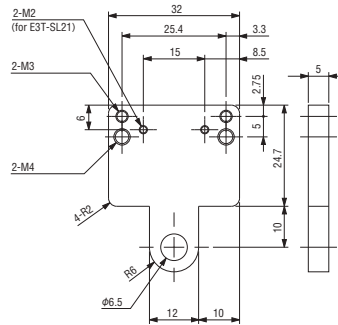
## Sensor Mounting Example



## Sensor bracket

Order code No.	<b>131077</b>
TYPE	<b>N01915-201</b>

- Weight : 12.6g
- Limit switch  $\rightarrow$  **6-18** ,
- Photo sensor  $\rightarrow$  **6-22** could be installed.



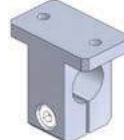
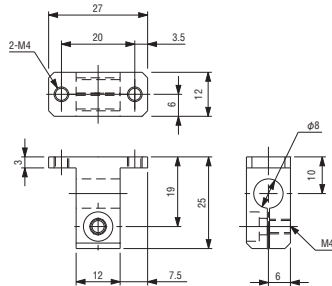
## Sensor Mounting Example



## Chuck bracket • TH • $\phi 8$

Order code No.	<b>131188</b>
TYPE	<b>N01866-502</b>

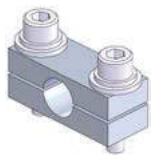
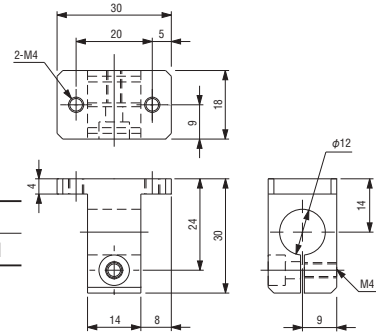
- Weight : 8.6g
- If base frame  $\phi 8$  is used, this product may be loosened and rotated.
- Check the length of mounting bolt



## Chuck bracket • TH • $\phi 12$

Order code No.	<b>131187</b>
TYPE	<b>N01866-501</b>

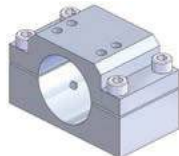
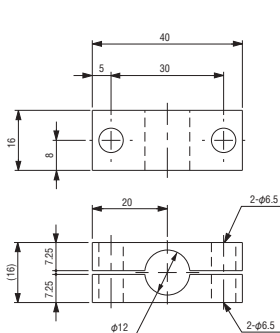
- Weight : 18.3g
- Check the length of mounting bolt



## Chuck bracket • $\phi 12$

Order code No.	<b>131067</b>
TYPE	<b>N01915-105</b>

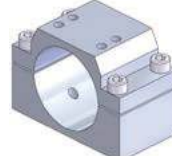
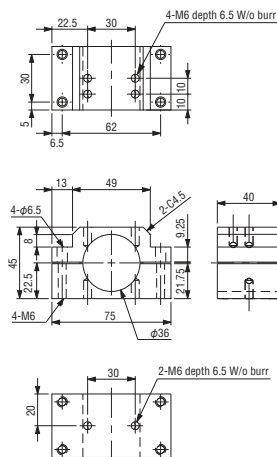
- Weight : 19.6g



## Nipper bracket • A

Order code No.	<b>131078</b>
TYPE	<b>N01915-301</b>

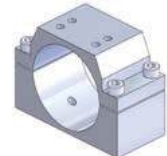
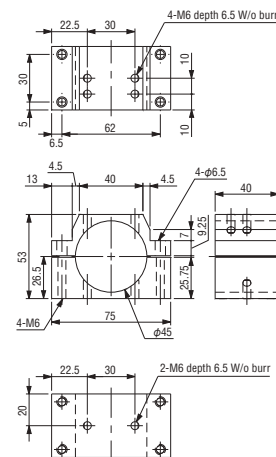
- Weight : 208.8g



## Nipper bracket • B

Order code No.	<b>131216</b>
TYPE	<b>N01915-302</b>

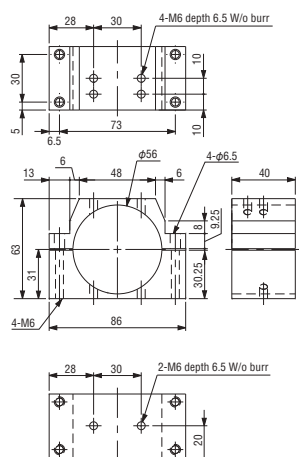
- Weight : 198.4g



## Nipper bracket • C

Order code No.	<b>131080</b>
TYPE	<b>N01915-303</b>

- Weight : 241.3g

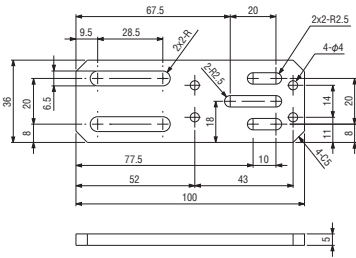




### Nipper bracket • D

Order code No.	<b>131081</b>
TYPE	<b>N01915-304</b>

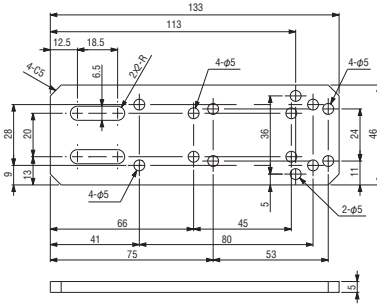
- Weight : 109.4g
- for NW-10, NW-20, GT-NT3



### Nipper bracket • E

Order code No.	<b>131082</b>
TYPE	<b>N01915-305</b>

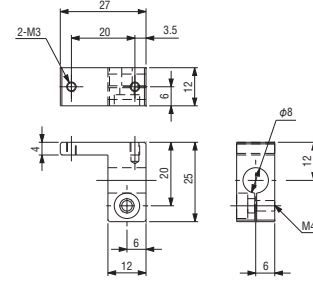
- Weight : 214.0g
- for NW-35, GT-NT05, GT-NT10, GT-NT20



### Bracket • L • φ 8 • for UMCD

Order code No.	<b>131180</b>
TYPE	<b>N01866-202</b>

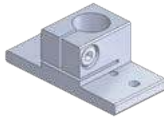
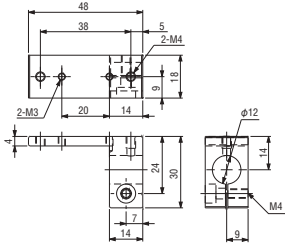
- Weight : 9.3g
- If base frame φ8 is used, this product may be loosened and rotated.
- Check the length of mounting bolt



### Bracket • L • φ 12 • for MCD

Order code No.	<b>131179</b>
TYPE	<b>N01866-201</b>

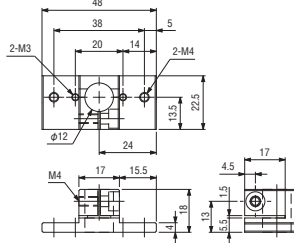
- Weight : 21.8g
- Check bolt length.



### Bracket • T • φ 12 • for MCD

Order code No.	<b>131176</b>
TYPE	<b>N01866-101</b>

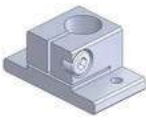
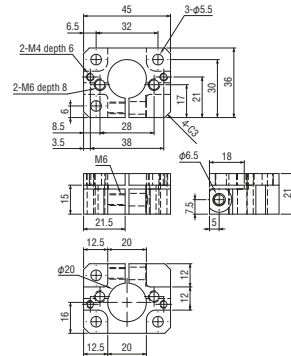
- Weight : 19.3g



### Bracket • T • φ 20 • for MCD

Order code No.	<b>131554</b>
TYPE	<b>N01866-103A</b>

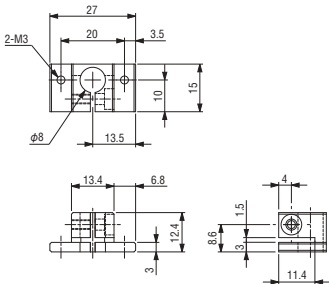
- Weight : 49.0g



### Bracket • T • φ 8 • for UMCD

Order code No.	<b>131177</b>
TYPE	<b>N01866-102</b>

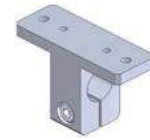
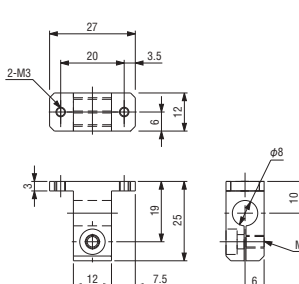
- Weight : 6.1g
- If base frame φ8 is used, this product may be loosened and rotated.



### Bracket • TH • φ 8 • for UMCD

Order code No.	<b>131182</b>
TYPE	<b>N01866-302</b>

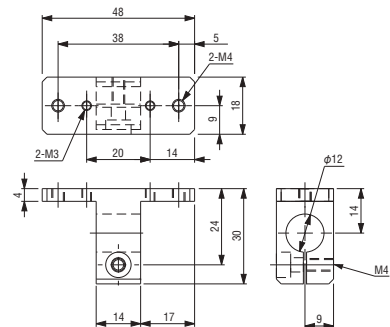
- Weight : 8.2g
- If base frame φ8 is used, this product may be loosened and rotated.
- Check the length of mounting bolt



### Bracket • TH • φ 12 • for MCD

Order code No.	<b>131181</b>
TYPE	<b>N01866-301</b>

- Weight : 21.8g
- Check the length of mounting bolt



#### Quick Chuck Change

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

#### Grip

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

#### Suction

- Suction Cups
- Suction Stems
- Pad in Pad

#### Vacuum Gripper

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

#### Cut

- Air Nipper (Small-Medium)
- Air Nipper (Large)

#### Frame / Module

#### Jungle Gym

#### Let's Joint

#### Rectangular Tube

#### Base Aluminum Material

#### Sliding Chuck

#### Pneumatic Components / Sensors

#### Pneumatic Components

#### Sensors / Multi AND Board

#### PCIO Communication Unit

#### Lightweight Parts Series

#### Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

#### Logistics-Palletizing / Sheet Metal-Stamping / Metal Fabrication

#### Assembling Tools

#### Tool / Jig

#### Information

#### Various Products Information

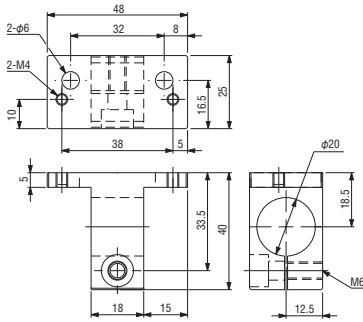
# Jungle Gym Series Parts



**Bracket • TH • φ20 • for MCD**

Order code No.	<b>131183</b>
TYPE	<b>N01866-303</b>

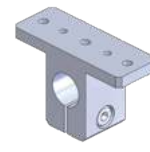
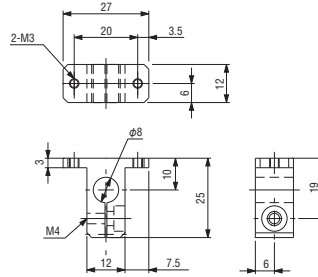
- Weight : 40.6g
- Check the length of mounting bolt for mini cylinder.
- There may be interference between pipe and bolt when you attach mini container cylinder.



**Bracket • TV • φ8 • for UMCD**

Order code No.	<b>131185</b>
TYPE	<b>N01866-402</b>

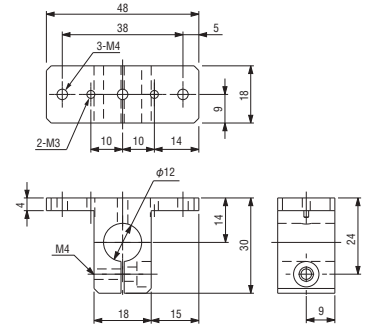
- Weight : 8.7g
- If base frame φ8 is used, this product may be loosened and rotated.



**Bracket • TV • φ12 • for MCD**

Order code No.	<b>131184</b>
TYPE	<b>N01866-401</b>

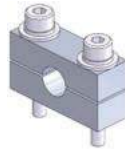
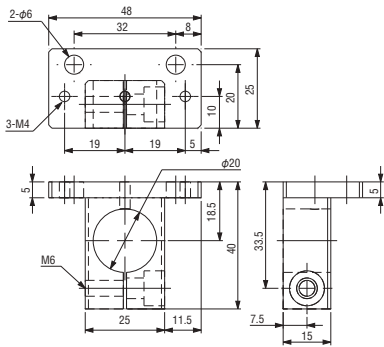
- Weight : 25.6g



**Bracket • TV • φ20 • for MCD**

Order code No.	<b>131186</b>
TYPE	<b>N01866-403</b>

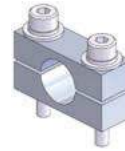
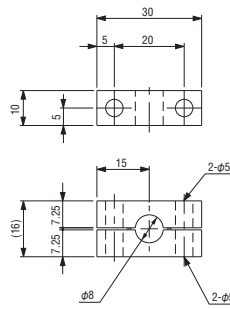
- Weight : 35.9g



**Bracket • φ8**

Order code No.	<b>131073</b>
TYPE	<b>N01915-111</b>

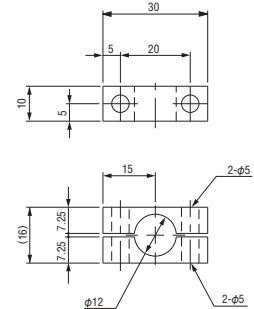
- Weight : 10.0g



**Bracket • φ12**

Order code No.	<b>131071</b>
TYPE	<b>N01915-109</b>

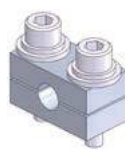
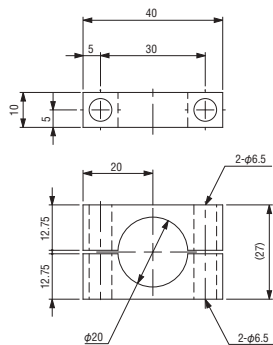
- Weight : 8.2g



**Bracket • φ20**

Order code No.	<b>131072</b>
TYPE	<b>N01915-110</b>

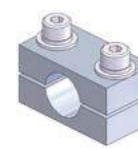
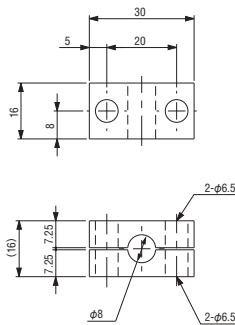
- Weight : 16.1g



**Bracket • W • φ8**

Order code No.	<b>131070</b>
TYPE	<b>N01915-108</b>

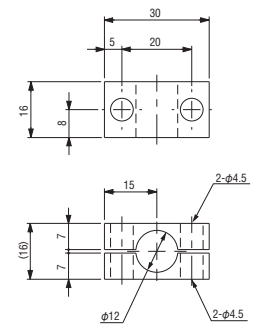
- Weight : 15.8g

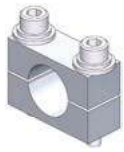


**Bracket • W • φ12**

Order code No.	<b>131068</b>
TYPE	<b>N01915-106</b>

- Weight : 12.9g

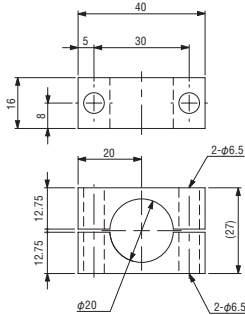




**Bracket • W •  $\phi 20$**

Order code No.	<b>131069</b>
TYPE	<b>N01915-107</b>

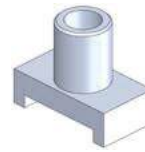
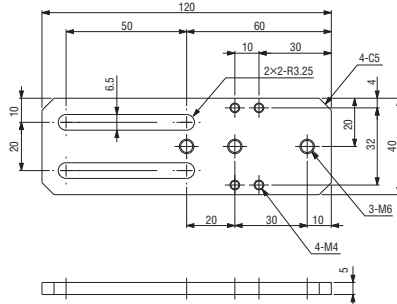
● Weight : 28.6g



**Bracket • NCON**

Order code No.	<b>131083</b>
TYPE	<b>N01915-401</b>

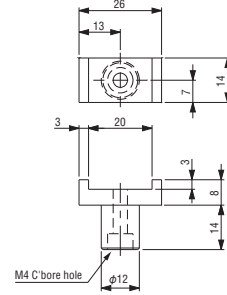
● Weight : 153.7g  
● for NCON-20W, 40W, 80W



**Rotation bracket •  $\phi 20$**

Order code No.	<b>131064</b>
TYPE	<b>N01915-101</b>

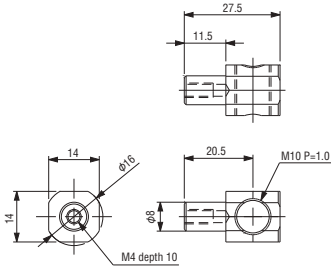
● Weight : 8.9g



**Rotation bracket • M10 • 8A**

Order code No.	<b>131434</b>
TYPE	<b>N01864-305</b>

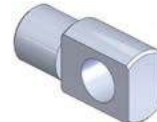
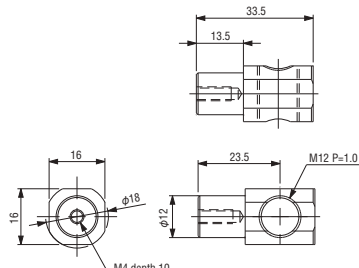
● Weight : 7.0g



**Rotation bracket • M12 • 12A**

Order code No.	<b>131173</b>
TYPE	<b>N01864-306</b>

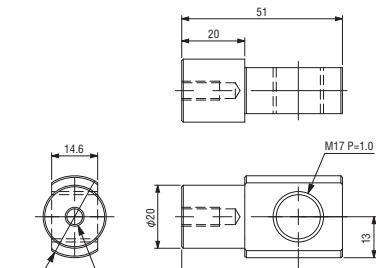
● Weight : 12.9g



**Rotation bracket • M17 • 20A**

Order code No.	<b>131174</b>
TYPE	<b>N01864-307</b>

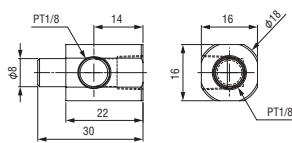
● Weight : 59.3g



**Rotation bracket • PT1/8 • 8A**

Order code No.	<b>131175</b>
TYPE	<b>N01864-401</b>

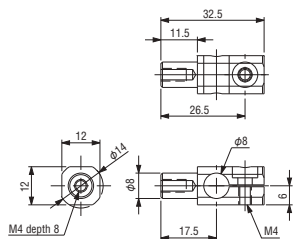
● Weight : 11.8g



**Rotation bracket •  $\phi 8$  • 8A**

Order code No.	<b>131170</b>
TYPE	<b>N01864-303</b>

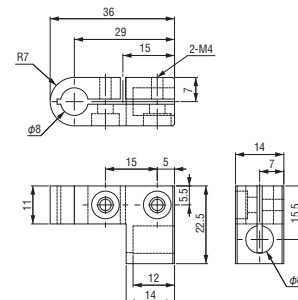
● Weight : 6.6g



**Rotation bracket •  $\phi 8$  • 8B**

Order code No.	<b>131606</b>
TYPE	<b>N01864-103A</b>

● Weight : 18.0g



**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

**Grip**

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems
- Pad in Pad

**Vacuum Gripper**

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

**Jungle Gym**

- Let's Joint

**Rectangular Tube**

**Base Aluminum Material**

**Sliding Chuck**

**Pneumatic Components / Sensors**

**Pneumatic Components**

**Sensors / Multi AND Board**

**PCIO Communication Unit**

**Lightweight Parts Series**

**Frame / Suction / Resin Cylinders / Pads / Resin Manifolds**

**By Industry**

**Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication**

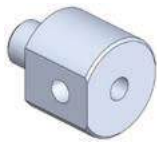
**Assembling Tools**

**Information**

**Various Products Information**



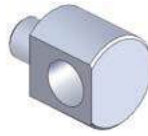
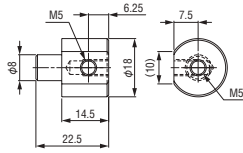
# Jungle Gym Series Parts



**Rotation bracket •  
φ 8 • M5A**

Order code No.	<b>131164</b>
TYPE	<b>N01864-202</b>

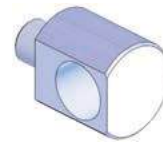
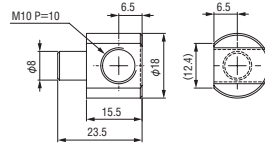
● Weight : 10.0g



**Rotation bracket •  
φ 8 • M10A**

Order code No.	<b>131435</b>
TYPE	<b>N01864-201</b>

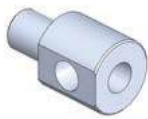
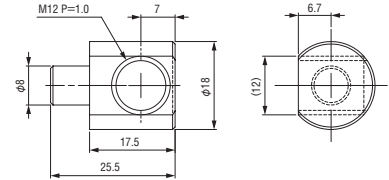
● Weight : 8.0g



**Rotation bracket •  
φ 8 • M12A**

Order code No.	<b>131433</b>
TYPE	<b>N01864-205</b>

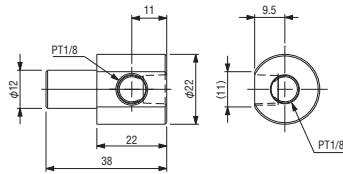
● Weight : 7.6g



**Rotation bracket •  
φ 12 • PT1/8A**

Order code No.	<b>131166</b>
TYPE	<b>N01864-204</b>

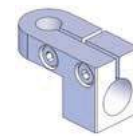
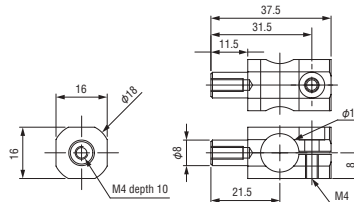
● Weight : 24.6g



**Rotation bracket •  
φ 12 • 8A**

Order code No.	<b>131169</b>
TYPE	<b>N01864-302</b>

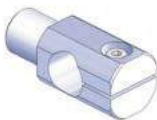
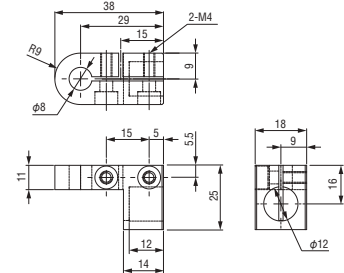
● Weight : 11.9g



**Rotation bracket •  
φ 12 • 8B**

Order code No.	<b>131600</b>
TYPE	<b>N01864-101A</b>

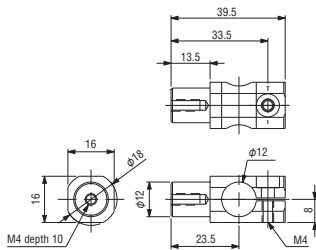
● Weight : 24.0g



**Rotation bracket •  
φ 12 • 12A**

Order code No.	<b>131168</b>
TYPE	<b>N01864-301</b>

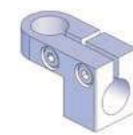
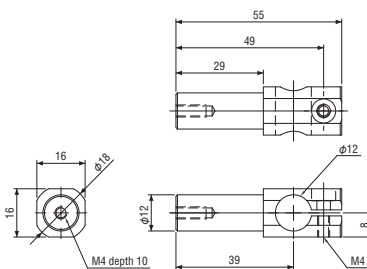
● Weight : 14.6g



**Rotation bracket •  
φ 12 • 12AL**

Order code No.	<b>131567</b>
TYPE	<b>N01864-301L</b>

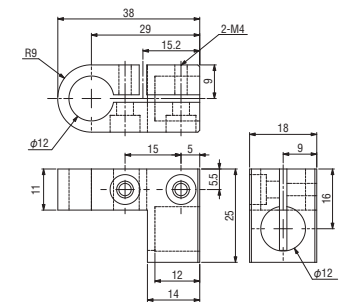
● Weight : 15.0g



**Rotation bracket •  
φ 12 • 12B**

Order code No.	<b>131605</b>
TYPE	<b>N01864-102A</b>

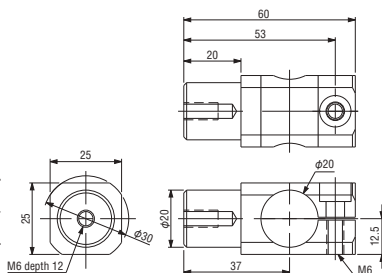
● Weight : 22.0g



**Rotation bracket •  
φ 20 • 20A**

Order code No.	<b>131171</b>
TYPE	<b>N01864-304</b>

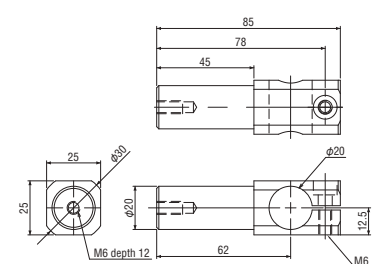
● Weight : 50.7g

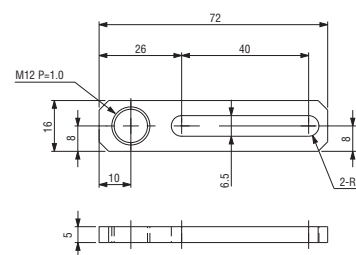
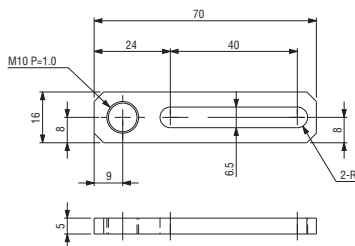
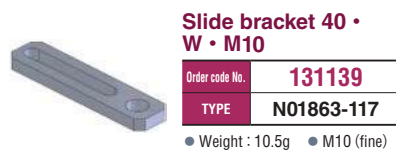
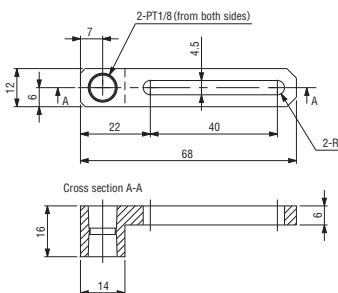
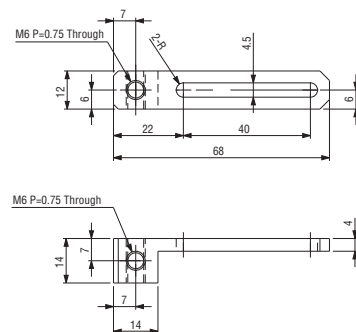
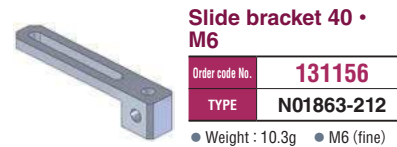
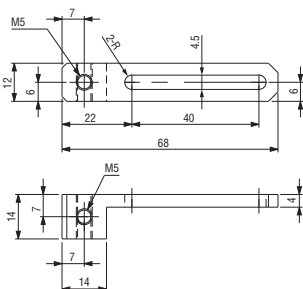
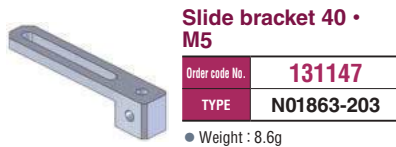
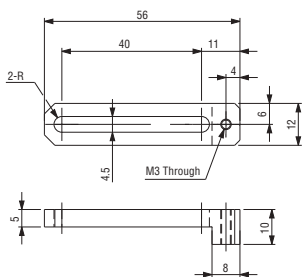
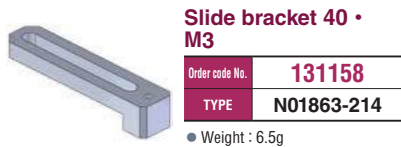
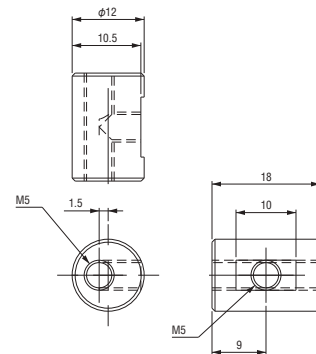
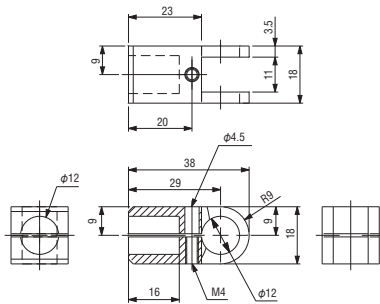
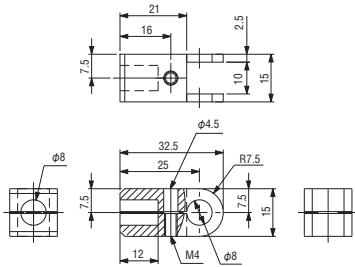
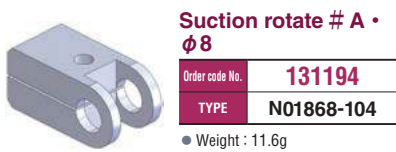


**Rotation bracket •  
φ 20 • 20AL**

Order code No.	<b>131568</b>
TYPE	<b>N01864-304L</b>

● Weight : 80.0g





**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

**Grip**

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

**Jungle Gym**

- Let's Joint

**Rectangular Tube**

**Base Aluminum Material**

**Sliding Chuck**

**Pneumatic Components / Sensors**

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

**Lightweight Parts Series**

- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

- Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication


**Assembling Tools**

- Tool / Jig

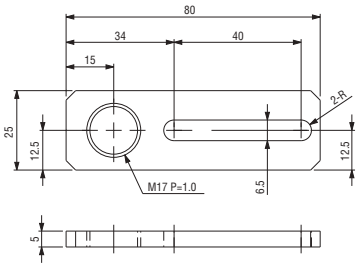

**Information**

- Various Products Information

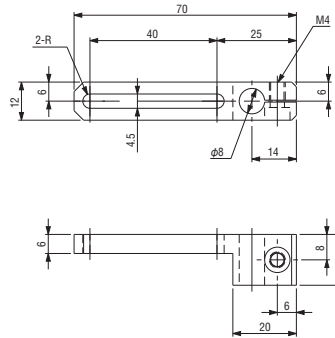

# Jungle Gym Series Parts



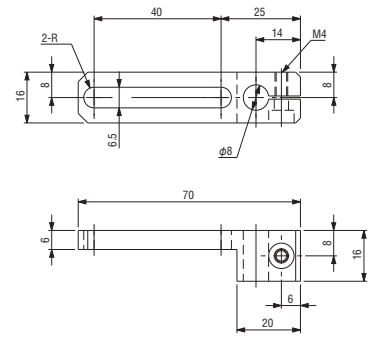

**Slide bracket 40 • W • M17**  
 Order code No. **131143**  
 TYPE **N01863-122**  
 ● Weight : 21.2g ● M17 (fine)

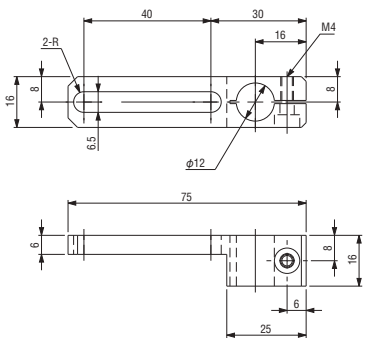
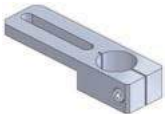
**Slide bracket 40 • W •  $\phi 8$**   
 Order code No. **131152**  
 TYPE **N01863-208**  
 ● Weight : 16.7g

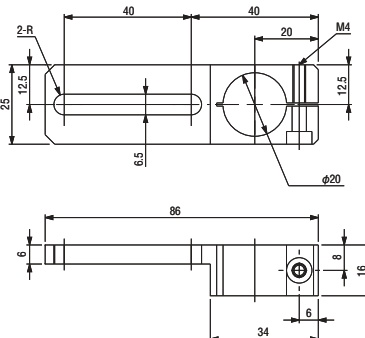

**Slide bracket 40 • W •  $\phi 8$**   
 Order code No. **131131**  
 TYPE **N01863-106**  
 ● Weight : 22.7g

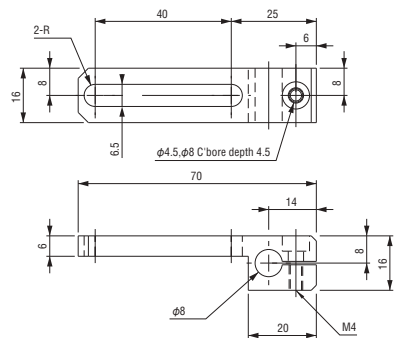

**Slide bracket 40 • W •  $\phi 12$**   
 Order code No. **131132**  
 TYPE **N01863-107**  
 ● Weight : 20.0g

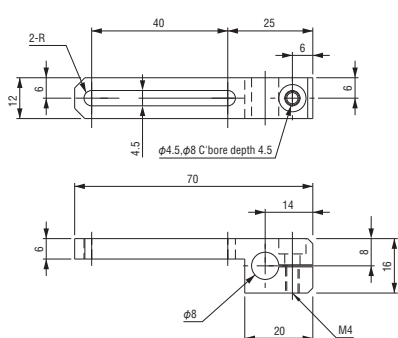

**Slide bracket 40 • W •  $\phi 20$**   
 Order code No. **131137**  
 TYPE **N01863-114**  
 ● Weight : 40.0g

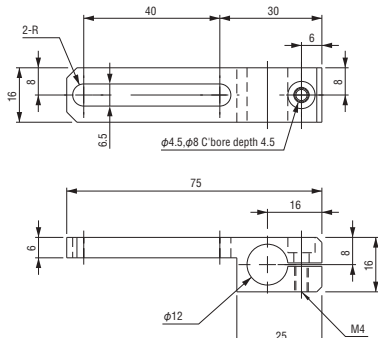

**Slide bracket 40 • T • W •  $\phi 8$**   
 Order code No. **230051**  
 TYPE **XL0005-102**  
 ● Weight : 20.7g

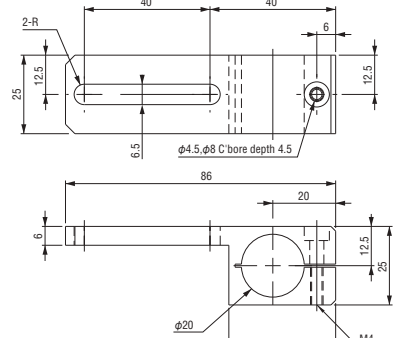
**Slide bracket 40 • T •  $\phi 8$**   
 Order code No. **230056**  
 TYPE **XL0005-107**  
 ● Weight : 16.2g

**Slide bracket 40 • T •  $\phi 12$**   
 Order code No. **230052**  
 TYPE **XL0005-103**  
 ● Weight : 21.4g

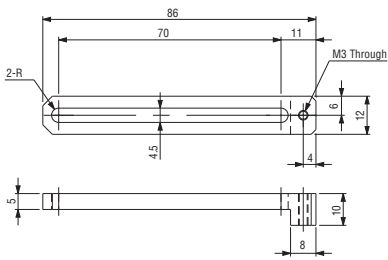
**Slide bracket 40 • T •  $\phi 20$**   
 Order code No. **230054**  
 TYPE **XL0005-105**  
 ● Weight : 54.4g



**Slide bracket 70 • M3**

Order code No.	<b>131159</b>
TYPE	<b>N01863-217</b>

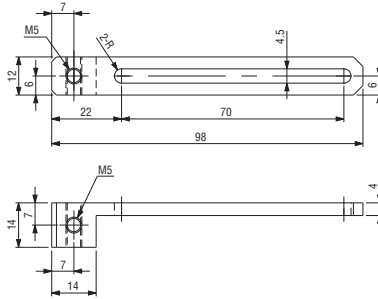
● Weight : 9.6g



**Slide bracket 70 • M5**

Order code No.	<b>131148</b>
TYPE	<b>N01863-204</b>

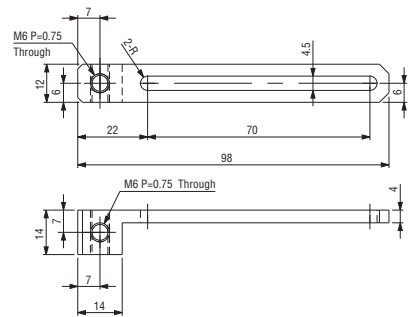
● Weight : 13.2g



**Slide bracket 70 • M6**

Order code No.	<b>131157</b>
TYPE	<b>N01863-213</b>

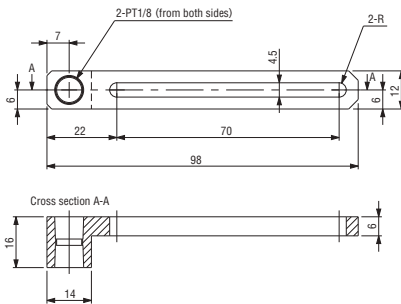
● Weight : 12.8g ● M6 (fine)



**Slide bracket 70 • PT1/8**

Order code No.	<b>131155</b>
TYPE	<b>N01863-211</b>

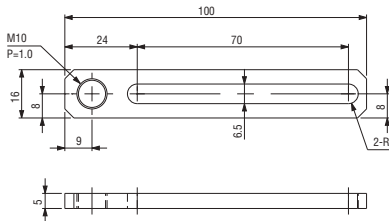
● Weight : 15.8g



**Slide bracket 70 • W • M10**

Order code No.	<b>131141</b>
TYPE	<b>N01863-120</b>

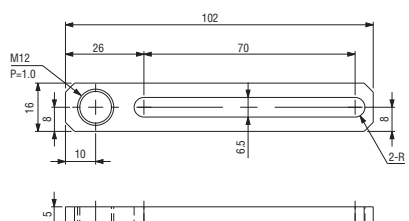
● Weight : 14.5g ● M10 (fine)



**Slide bracket 70 • W • M12**

Order code No.	<b>131142</b>
TYPE	<b>N01863-121</b>

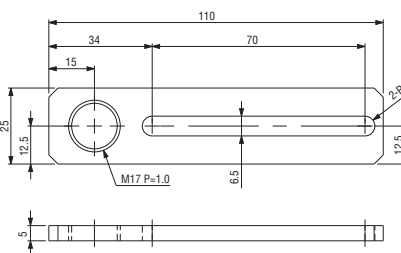
● Weight : 14.6g ● M12 (fine)



**Slide bracket 70 • W • M17**

Order code No.	<b>131144</b>
TYPE	<b>N01863-124</b>

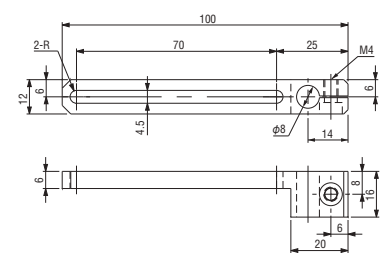
● Weight : 29.0g ● M17 (fine)



**Slide bracket 70 • φ8**

Order code No.	<b>131153</b>
TYPE	<b>N01863-209</b>

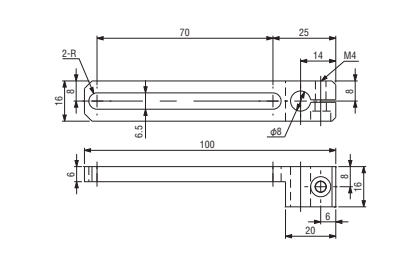
● Weight : 20.5g



**Slide bracket 70 • W • φ8**

Order code No.	<b>131133</b>
TYPE	<b>N01863-110</b>

● Weight : 27.4g



**Quick Chuck Change**

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

**Grip**

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

**Suction**

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

**Cut**

- Air Nipper (Small-Medium)
- Air Nipper (Large)

**Frame / Module**

- Jungle Gym
- Let's Joint
- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

**Pneumatic Components / Sensors**

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

**Lightweight Parts Series**

- Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

- Logistics - Palletizing/Sheet Metal-Stamping-Metal Fabrication


**Assembling Tools**

- Tool / Jig

**Information**

- Various Products Information

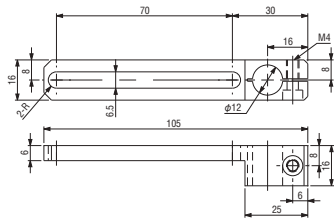

# Jungle Gym Series Parts



**Slide bracket 70 •  
W • φ 12**

Order code No.	<b>131130</b>
TYPE	<b>N01863-103</b>

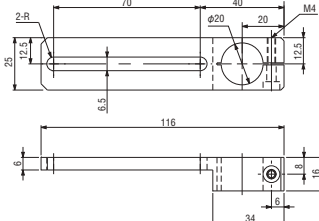

● Weight : 24.7g

**Slide bracket 70 •  
W • φ 20**

Order code No.	<b>131138</b>
TYPE	<b>N01863-115</b>

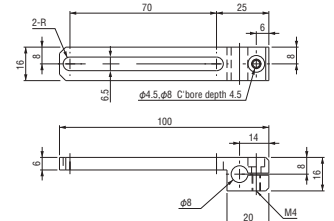

● Weight : 48.3g

**Slide bracket 70 •  
T • W • φ 8**

Order code No.	<b>230053</b>
TYPE	<b>XL0005-104</b>

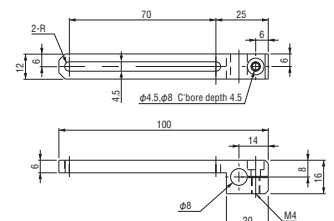

● Weight : 25.4g

**Slide bracket 70 •  
T • φ 8**

Order code No.	<b>230057</b>
TYPE	<b>XL0005-108</b>

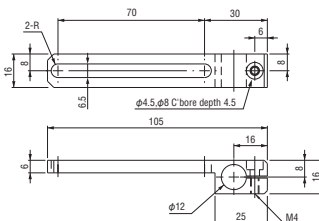

● Weight : 20.0g

**Slide bracket 70 •  
T • φ 12**

Order code No.	<b>230050</b>
TYPE	<b>XL0005-101</b>

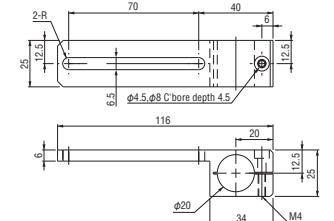
● Weight : 26.2g

**Slide bracket 70 •  
T • φ 20**

Order code No.	<b>230055</b>
TYPE	<b>XL0005-106</b>

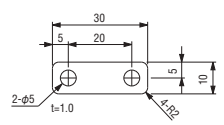
● Weight : 63.7g



**Slide washer •  
φ 8 / φ 12**

Order code No.	<b>131146</b>
TYPE	<b>N01863-202</b>

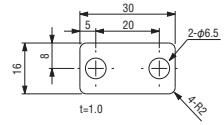
● Weight : 1.0g



**Slide washer •  
W • φ 8 / φ 12**

Order code No.	<b>131129</b>
TYPE	<b>N01863-102</b>

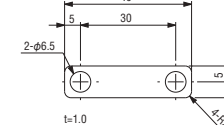
● Weight : 1.7g



**Slide washer •  
φ 20**

Order code No.	<b>131150</b>
TYPE	<b>N01863-206</b>

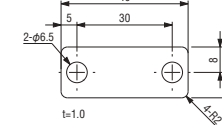
● Weight : 1.4g



**Slide washer •  
W • φ 20**

Order code No.	<b>131135</b>
TYPE	<b>N01863-112</b>

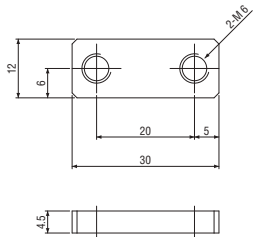
● Weight : 2.3g



**Nut plate  
for slide bracket**

Order code No.	<b>023197</b>
TYPE	<b>CP-076</b>

● Weight : 15.0g



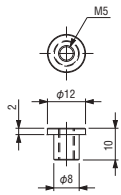




Bushing nut •  $\phi 8 \cdot M5$

Order code No.	131200
TYPE	N01868-401

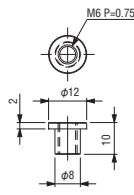
● Weight : 1.4g



Bushing nut •  $\phi 8 \cdot M6$

Order code No.	131206
TYPE	N01868-410

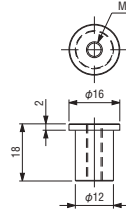
● Weight : 1.3g ● M6 (fine)



Bushing nut •  $\phi 12 \cdot M5$

Order code No.	131202
TYPE	N01868-403

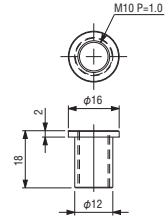
● Weight : 5.5g



Bushing nut •  $\phi 12 \cdot M10$

Order code No.	131201
TYPE	N01868-402

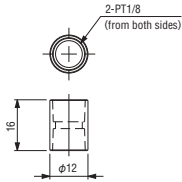
● Weight : 3.0g ● M10 (fine)



Bushing nut •  $\phi 12 \cdot PT1/8$

Order code No.	131207
TYPE	N01868-411

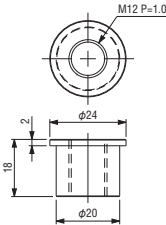
● Weight : 1.7g



Bushing nut •  $\phi 20 \cdot M12$

Order code No.	131205
TYPE	N01868-409

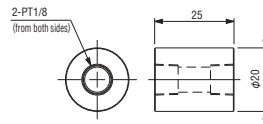
● Weight : 12.3g ● M12 (fine)



Bushing nut •  $\phi 20 \cdot PT1/8$

Order code No.	131199
TYPE	N01868-305

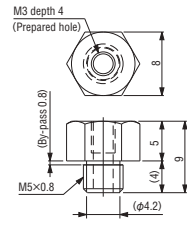
● Weight : 40.0g



Bushing nut • M5-M3

Order code No.	131204
TYPE	N01868-407

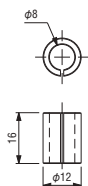
● Weight : 2.6g



Bushing •  $\phi 12 \phi 8$

Order code No.	131196
TYPE	N01868-301

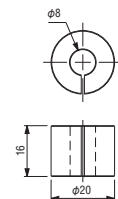
● Weight : 2.8g



Bushing •  $\phi 20 \phi 8$

Order code No.	131197
TYPE	N01868-302

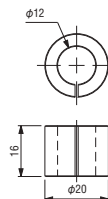
● Weight : 11.6g



Bushing •  $\phi 20 \phi 12$

Order code No.	131198
TYPE	N01868-303

● Weight : 8.9g



Quick Chuck Change

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

Grip

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

Suction

- Suction Cups
- Suction Stems
- Pad in Pad

Vacuum Gripper

- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

Cut

- Air Nipper (Small-Medium)
- Air Nipper (Large)

Frame / Module

Jungle Gym

- Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

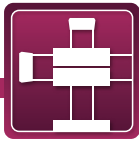
Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

Tool / Jig

Information

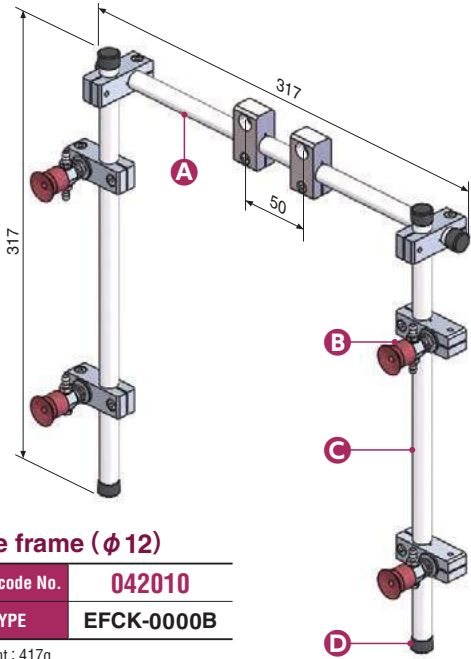
Various Products Information



# Base Frame Module

Modularized Robot hand parts for jungle gym

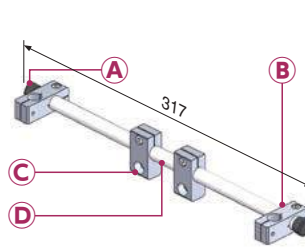
● Pipe lengths of SUS pipes specified in each configuration module and components are different from that of base frame.



## Base frame (φ 12)

Order code No.	<b>042010</b>
TYPE	<b>EFCK-0000B</b>

● Weight : 417g

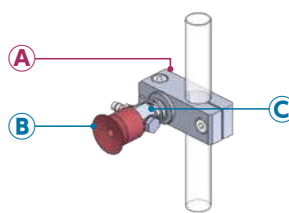


components of EFCK-0000B...**A**

Order code No.	<b>042011</b>
TYPE	<b>EFCK-0001B</b>

● Weight : 148g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Pipe end cap · φ 12	R-CAP-12	<b>171339</b>	2	5-9
<b>B</b> Cross connector · φ 12 φ 12	N01861-202	<b>131099</b>	2	5-10
<b>C</b> Attachment bracket · φ 12 · M6	N01862-201	<b>131118</b>	2	5-13
<b>D</b> Jungle gym SUS pipe φ 12	12*0.6*500	<b>271527</b>	1	5-8



components of EFCK-0000B...**B**

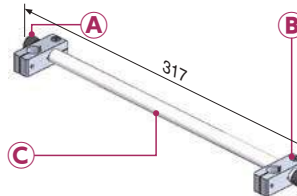
Order code No.	<b>090158</b>
TYPE	<b>JSM-004</b>

● Weight : 39g

Configuration module	TYPE	Order code No.	No. of uses	Details
<b>A</b> Base frame for jungle gym	EFCK-0001B	<b>042011</b>	1	5-26
<b>B</b> Suction module for jungle gym (φ 12)	JSM-004	<b>090158</b>	4	5-26
<b>C</b> Jungle gym SUS pipe φ 12	12*0.6*1000	<b>271528</b>	1	5-8
<b>D</b> Pipe end cap · φ 12	R-CAP-12	<b>171339</b>	4	5-9

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ 12 φ 12	N01861-202	<b>131099</b>	1	5-10
<b>B</b> Suction cups (standard/silicon/brown)	VAPH-20C	<b>210194</b>	1	3-4
<b>C</b> Suction stem for small	VFIL1-S-5-P12	<b>211006</b>	1	3-26

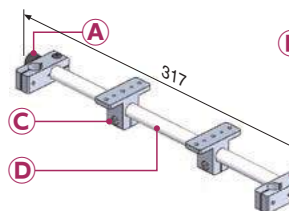
## Base frame for jungle gym



Order code No.	<b>042012</b>
TYPE	<b>EFCK-0002B</b>

● Weight : 96g

## Base frame for jungle gym



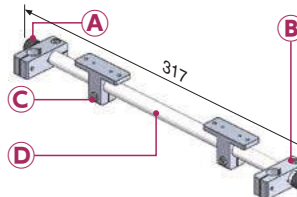
Order code No.	<b>042013</b>
TYPE	<b>EFCK-0003B</b>

● Weight : 151g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Pipe end cap · φ 12	R-CAP-12	<b>171339</b>	2	5-9
<b>B</b> Cross connector · φ 12 φ 12	N01861-202	<b>131099</b>	2	5-10
<b>C</b> Jungle gym SUS pipe φ 12	12*0.6*500	<b>271527</b>	1	5-8

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Pipe end cap · φ 12	R-CAP-12	<b>171339</b>	2	5-9
<b>B</b> Cross connector · φ 12 φ 12	N01861-202	<b>131099</b>	2	5-10
<b>C</b> Bracket · TV · φ 12 · for MCD	N01866-401	<b>131184</b>	2	5-18
<b>D</b> Jungle gym SUS pipe φ 12	12*0.6*500	<b>271527</b>	1	5-8

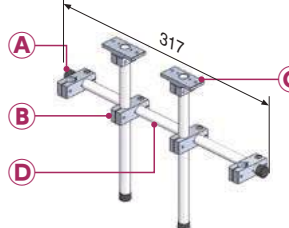
## Base frame for jungle gym



Order code No.	<b>042014</b>
TYPE	<b>EFCK-0004B</b>

● Weight : 144g

## Base frame for jungle gym

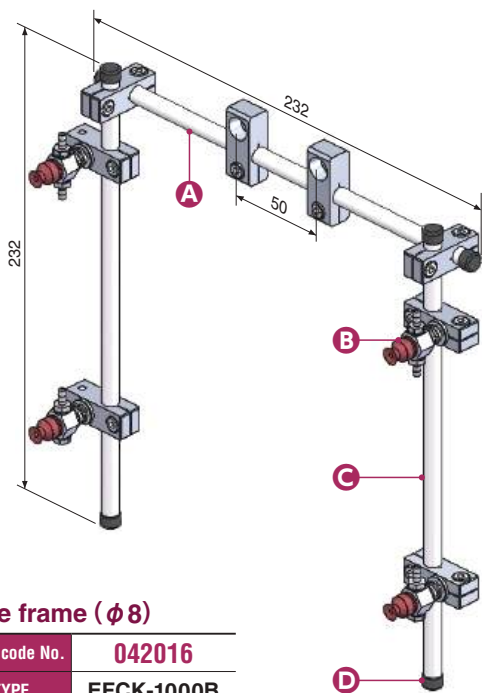


Order code No.	<b>042015</b>
TYPE	<b>EFCK-0005B</b>

● Weight : 247g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Pipe end cap · φ 12	R-CAP-12	<b>171339</b>	2	5-9
<b>B</b> Cross connector · φ 12 φ 12	N01861-202	<b>131099</b>	2	5-10
<b>C</b> Bracket · TH · φ 12 · for MCD	N01866-301	<b>131181</b>	2	5-17
<b>D</b> Jungle gym SUS pipe φ 12	12*0.6*500	<b>271527</b>	1	5-8

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Pipe end cap · φ 12	R-CAP-12	<b>171339</b>	4	5-9
<b>B</b> Cross connector · φ 12 φ 12	N01861-202	<b>131099</b>	4	5-10
<b>C</b> Bracket · T · φ 12 · for MCD	N01866-101	<b>131176</b>	2	5-17
<b>D</b> Jungle gym SUS pipe φ 12	12*0.6*1000	<b>271528</b>	1	5-8

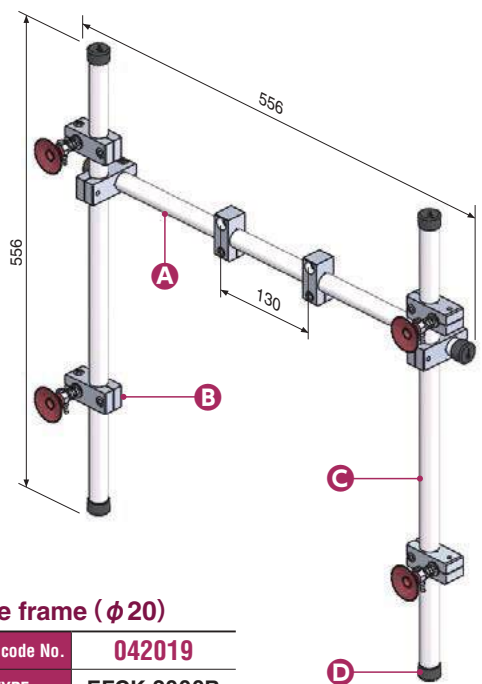


### Base frame (φ8)

Order code No.	<b>042016</b>
TYPE	<b>EFCK-1000B</b>

● Weight : 202g

Configuration module	TYPE	Order code No.	No. of uses	Details
<b>A</b> Base frame for jungle gym	EFCK-1001B	042017	1	5-27
<b>B</b> Suction module for jungle gym (φ8)	JSM-001	090155	4	5-27
<b>C</b> Jungle gym SUS pipe φ8	8*0.6*500	340905	1	5-8
<b>D</b> Pipe end cap · φ8	R-CAP-8	171338	4	5-9

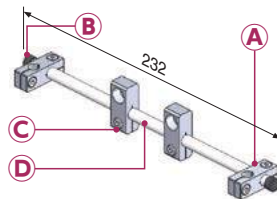


### Base frame (φ20)

Order code No.	<b>042019</b>
TYPE	<b>EFCK-2000B</b>

● Weight : 1,293g

Configuration module	TYPE	Order code No.	No. of uses	Details
<b>A</b> Base frame for jungle gym	EFCK-2001B	042020	1	5-27
<b>B</b> Suction module for jungle gym (φ20)	JSM-008	090162	4	5-27
<b>C</b> Jungle gym SUS pipe φ20	20*0.8*1500	281814	1	5-8
<b>D</b> Pipe end cap · φ20	R-CAP-20	171340	4	5-9

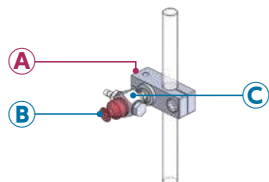


### components of EFCK-1000B···**A**

Order code No.	<b>042017</b>
TYPE	<b>EFCK-1001B</b>

● Weight : 72g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ8φ8	N01861-207	131102	2	5-10
<b>B</b> Pipe end cap · φ8	R-CAP-8	171338	2	5-9
<b>C</b> Attachment bracket · φ8 · M6	N01862-205	131121	2	5-13
<b>D</b> Jungle gym SUS pipe φ8	8*0.6*500	340905	1	5-8

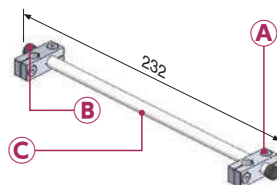


### components of EFCK-1000B···**B**

Order code No.	<b>090155</b>
TYPE	<b>JSM-001</b>

● Weight : 21g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ8φ8	N01861-207	131102	1	5-10
<b>B</b> Suction cups (standard/silicon/brown)	VAPH-8C	210191	1	3-4
<b>C</b> Suction stem for mini	VFIL2-SS-5-P8	211030	1	3-23

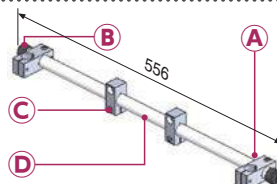


### Base frame for jungle gym

Order code No.	<b>042018</b>
TYPE	<b>EFCK-1002B</b>

● Weight : 47g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ8φ8	N01861-207	131102	2	5-10
<b>B</b> Pipe end cap · φ8	R-CAP-8	171338	2	5-9
<b>C</b> Jungle gym SUS pipe φ8	8*0.6*500	340905	1	5-8

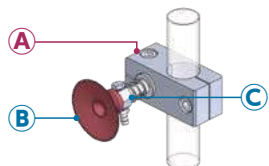


### components of EFCK-2000B···**A**

Order code No.	<b>042020</b>
TYPE	<b>EFCK-2001B</b>

● Weight : 452g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ20φ20	N01861-206	131101	2	5-10
<b>B</b> Pipe end cap · φ20	R-CAP-20	171340	2	5-9
<b>C</b> Attachment bracket · φ20 · M8	N01862-214	131226	2	5-14
<b>D</b> Jungle gym SUS pipe φ8	20*0.8*1000	281813	1	5-8

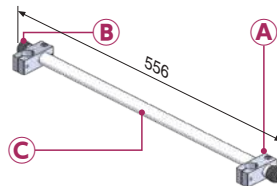


### components of EFCK-2000B···**B**

Order code No.	<b>090162</b>
TYPE	<b>JSM-008</b>

● Weight : 102g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ20φ12	N01861-204	131100	1	5-10
<b>B</b> Suction cups (standard/silicon/brown)	VAPH-40C	210196	1	3-5
<b>C</b> Suction stem for small	VFIL1-S-5-P12	211006	1	3-26



### Base frame for jungle gym

Order code No.	<b>042021</b>
TYPE	<b>EFCK-2002B</b>

● Weight : 358g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · φ20φ20	N01861-206	131101	2	5-10
<b>B</b> Pipe end cap · φ20	R-CAP-20	171340	2	5-9
<b>C</b> Jungle gym SUS pipe φ20	20*0.8*1000	281813	1	5-8

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

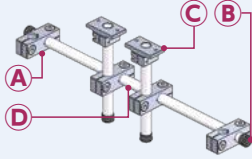
Tool / Jig

### Information

Various Products Information

# Change Method of Sales (Change to Single Sale)

## ▶ Base frame module (φ 8)

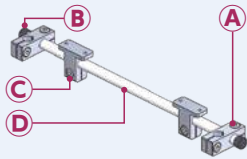


### Base frame for jungle gym

Order code No.	<b>041664</b>
TYPE	<b>EFCK-1005</b>

● Weight : 101g

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ 8 φ 8	N01861-207	131102	4	5-10
B : Pipe end cap · φ 8	R-CAP-8	171338	4	5-9
C : Bracket · T · φ 8 · for UMCD	N01866-102	131177	2	5-17
D : Jungle gym SUS pipe φ 8	8*0.6*500	340905	1	5-8

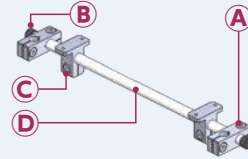


### Base frame for jungle gym

Order code No.	<b>041663</b>
TYPE	<b>EFCK-1004</b>

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ 8 φ 8	N01861-207	131102	2	5-10
B : Pipe end cap · φ 8	R-CAP-8	171338	2	5-9
C : Bracket · TH · φ 8 · for UMCD	N01866-302	131182	2	5-17
D : Jungle gym SUS pipe φ 8	8*0.6*500	340905	1	5-8

\* Pipe length is 500mm if only SUS pipe φ 8 is ordered.



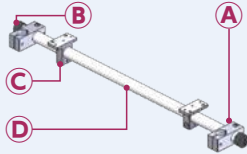
### Base frame for jungle gym

Order code No.	<b>041662</b>
TYPE	<b>EFCK-1003</b>

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ 8 φ 8	N01861-207	131102	2	5-10
B : Pipe end cap · φ 8	R-CAP-8	171338	2	5-9
C : Bracket · TV · φ 8 · for UMCD	N01866-402	131185	2	5-18
D : Jungle gym SUS pipe φ 8	8*0.6*500	340905	1	5-8

\* Pipe length is 500mm if only SUS pipe φ 8 is ordered.

## ▶ Base frame module (φ 20)

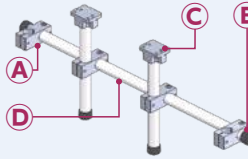


### Base frame for jungle gym

Order code No.	<b>041668</b>
TYPE	<b>EFCK-2003</b>

● Weight : 379g

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ 20 φ 20	N01861-206	131101	2	5-10
B : Pipe end cap · φ 20	R-CAP-20	171340	2	5-9
C : Bracket · TV · φ 20 · for UMCD	N01866-403	131186	2	5-18
D : Jungle gym SUS pipe φ 20	20*0.8*1000	281813	1	5-8



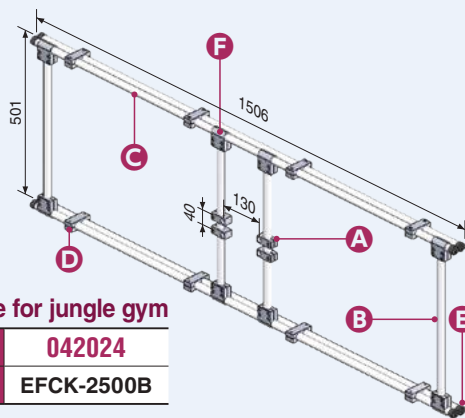
### Base frame for jungle gym

Order code No.	<b>041670</b>
TYPE	<b>EFCK-2005</b>

● Weight : 767g

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ 20 φ 20	N01861-206	131101	4	5-10
B : Pipe end cap · φ 20	R-CAP-20	171340	4	5-9
C : Bracket · T · φ 20 · for UMCD	N01866-103A	131554	2	5-17
D : Jungle gym SUS pipe φ 20	20*0.8*1000	281813	1	5-8

## ▶ Base frame (φ 20)

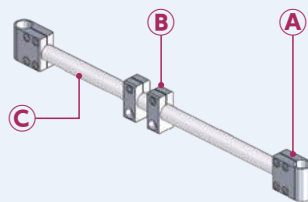


### Base frame for jungle gym

Order code No.	<b>042024</b>
TYPE	<b>EFCK-2500B</b>

● Weight : 4,282g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Attachment bracket · φ 20 · M8	N01862-214	131226	4	5-14
B : Jungle gym SUS pipe φ 20	20*0.8*500	281812	4	5-8
C : Jungle gym SUS pipe φ 20	20*0.8*1500	281814	4	5-8
D : Parallel connector · φ 20 φ 20	N01861-106	131095	8	5-12
E : Pipe end cap · φ 20	R-CAP-20	171340	8	5-9
F : T Connector# 2 · φ 20 φ 20	N01861-405	131114	4	5-12

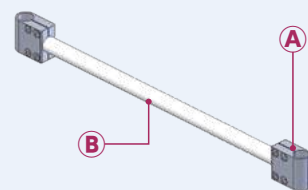


components of EFCK-2500B

Order code No.	<b>041672</b>
TYPE	<b>EFCK-2501</b>

● Weight : 457g

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : T Connector# 2 · φ 20 φ 20	N01861-405	131114	2	5-12
B : Attachment bracket · φ 20 · M8	N01862-214	131226	2	5-14
C : Jungle gym SUS pipe φ 20	20*0.8*500	281812	1	5-8

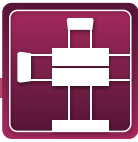


components of EFCK-2500B

Order code No.	<b>041673</b>
TYPE	<b>EFCK-2502</b>

● Weight : 363g

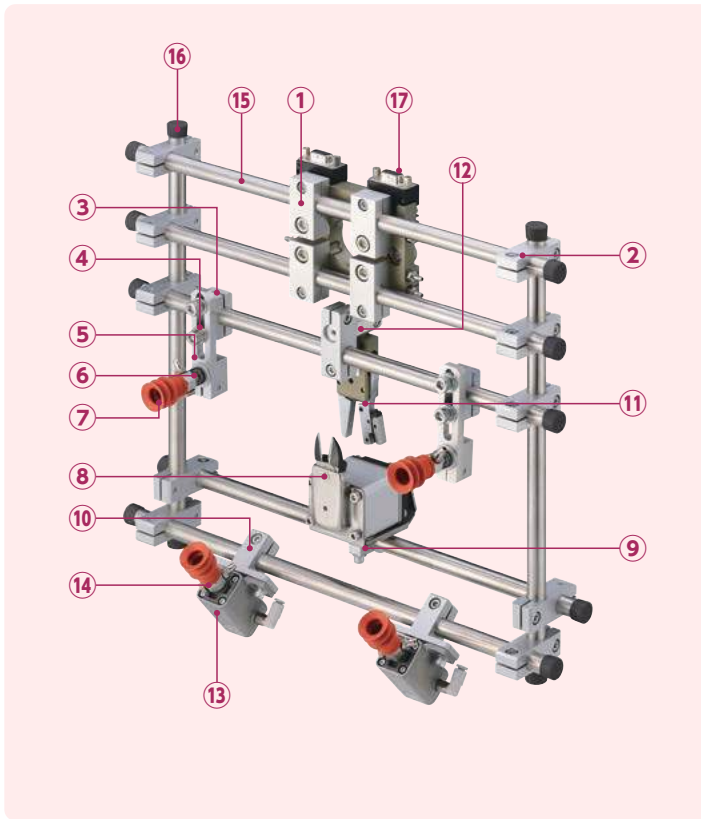
Configuration parts	TYPE	Order code No.	No. of uses	Details
A : T Connector# 2 · φ 20 φ 20	N01861-405	131114	2	5-12
B : Jungle gym SUS pipe φ 20	20*0.8*500	281812	1	5-8



# Examples of Robot Chuck Production

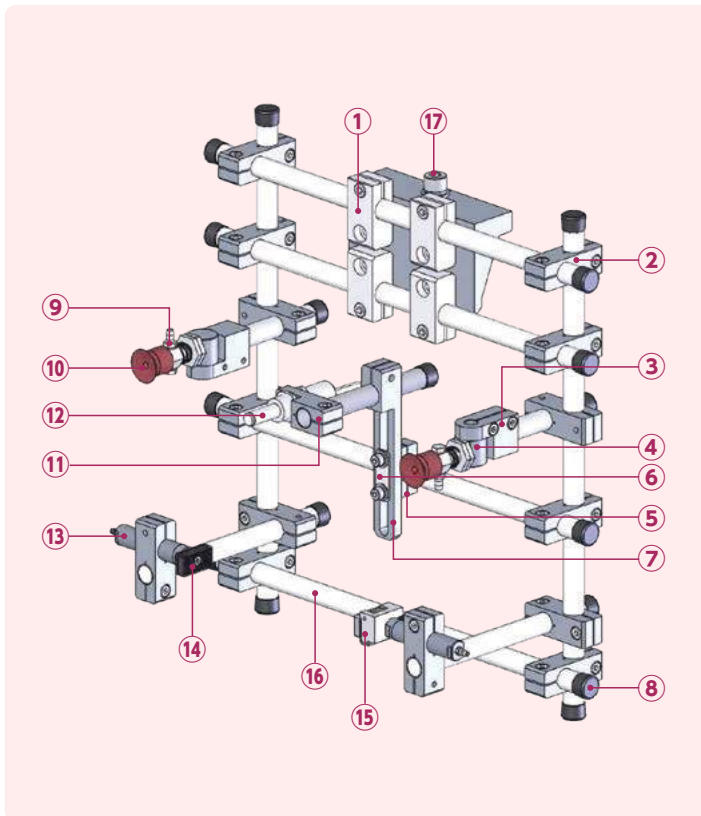
Chuck products based on jungle gym parts.

## Examples of Chuck products ①



Configuration parts	TYPE	Order code No.	No. of uses
① Attachment bracket · $\phi 12 \cdot M6$	N01862-201	131118	4
② Cross connector · $\phi 12 \phi 12$	N01861-202	131099	11
③ Slide bracket · W · $\phi 12$	N01863-101	131128	2
④ Slide washer · W · $\phi 8 / \phi 12$	N01863-102	131129	2
⑤ Slide bracket 40 · W · $\phi 12$	N01863-107	131132	2
⑥ Suction stem for small	VFIL1-S-5-P12	211006	2
⑦ Suction cups	VAPH-20C-3	210661	4
⑧ Mini air nipper · Body · Reverse blade	NW3-35R	131644	1
⑨ Bracket · W · $\phi 12$	N01915-106	131068	1
⑩ Bracket · TH · $\phi 12$ · for MCD	N01866-301	131181	2
⑪ Runner chuck EM (with sensor)	CHE-EM1-12-C	022999	1
⑫ Rotation bracket · $\phi 12 \cdot 12A$	N01864-301	131168	1
⑬ Mini cylinder · MCD	MCD1-10	123219	2
⑭ Suction stem for small · mini cylinder	CP-063B	023195	2
⑮ Jungle gym SUS pipe $\phi 12$	12 * 0.5 * 500	271527	7
⑯ Pipe end cap (black) · $\phi 12$	R-CAP-12	171339	14
⑰ Tool Changer · tool side	OX-SBI	140182	1

## Examples of Chuck products ②



Configuration parts	TYPE	Order code No.	No. of uses
① Attachment bracket · $\phi 12 \cdot M6$	N01862-201	131118	4
② Cross connector · $\phi 12 \phi 12$	N01861-202	131099	14
③ Rotation bracket · $\phi 12 \cdot 8B$	N01864-101A	131600	2
④ Rotation bracket · $\phi 8 \cdot M12A$	N01864-205-2	131433	2
⑤ Slide bracket · W · $\phi 12$	N01863-101	131128	1
⑥ Slide washer · W · $\phi 8 / \phi 12$	N01863-102	131129	1
⑦ Slide bracket 70 · W · $\phi 12$	N01863-103	131130	1
⑧ Pipe end cap (black) · $\phi 12$	R-CAP-12	171339	17
⑨ Suction stem for small	VFIL-S-5A	210974	2
⑩ Suction cups	VAPH-20C	210194	2
⑪ Connector · for SSW	N01861-108	131097	1
⑫ Star sensor	SSW-15	181139	1
⑬ Cylinder for pipe attachment	MCP1-1210	123699	2
⑭ Pad rectangle black for micro mini cylinder	CPUM-01	022797	1
⑮ Pad rectangle SW for micro mini cylinder	L1131-100	110568	1
⑯ Jungle gym SUS pipe $\phi 12$	12 * 0.5 * 500	271527	7
⑰ Quick Chuck Change · Manual · tool side	OA1-SAI	140257	1

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

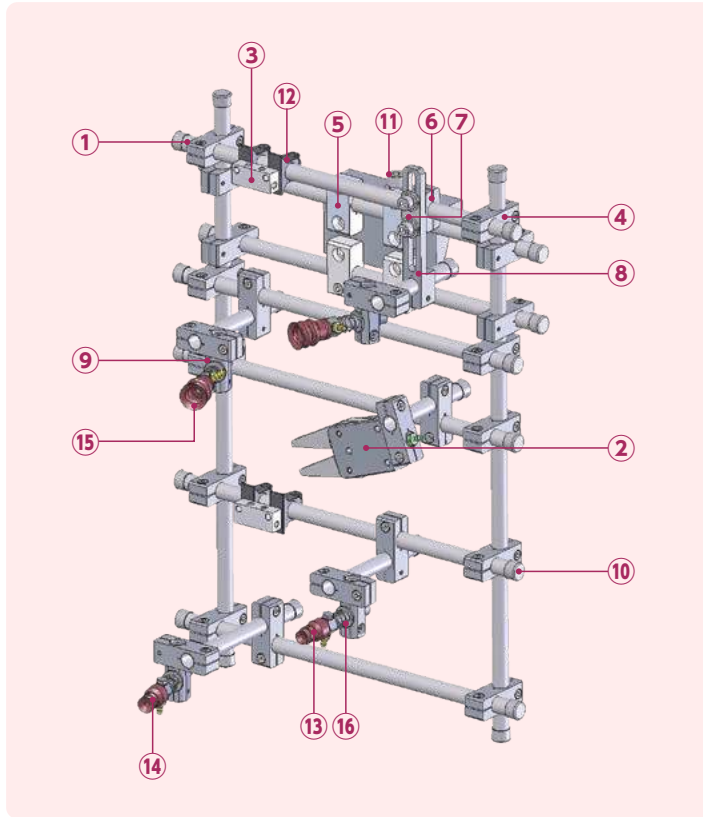
### Information

Various Products Information



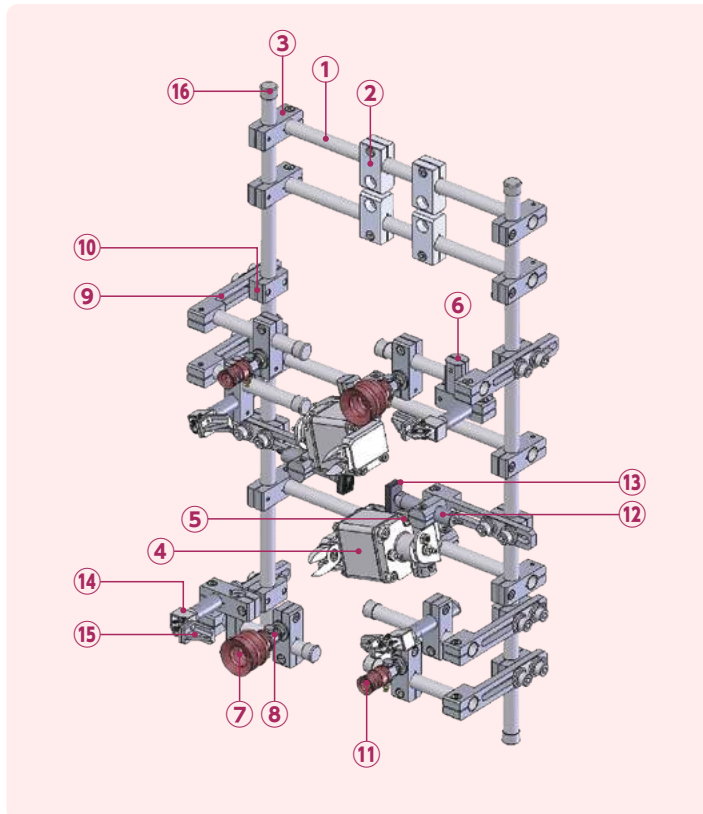
# Examples of Robot Chuck Production

## Examples of Chuck products ③



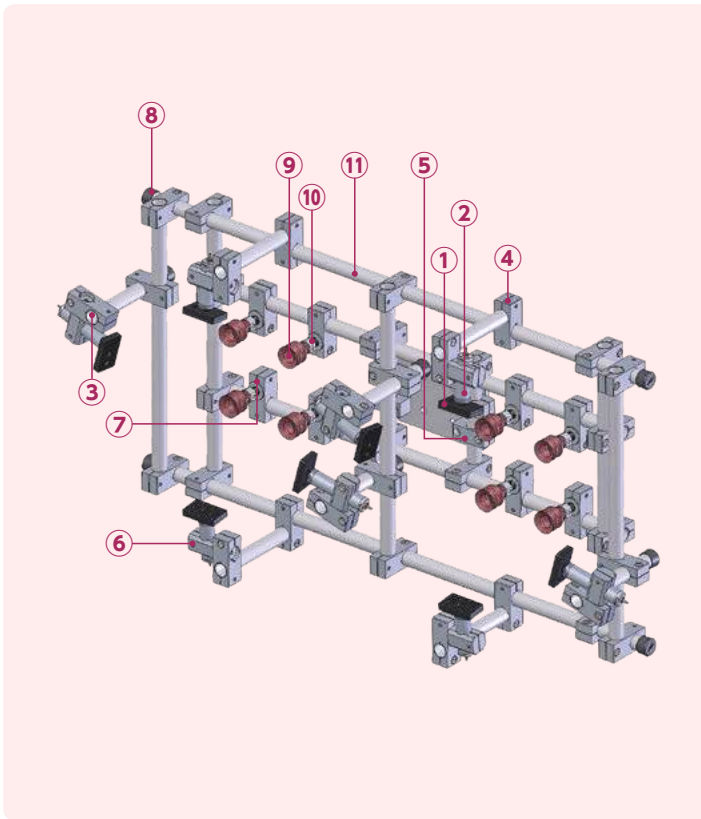
Configuration parts	TYPE	Order code No.	No. of uses
① Jungle gym SUS pipe $\phi$ 12	12 * 0.6 * 500	271527	12
② Runner chuck EL (w/o sensor)	CHK-EL1-12	022994	1
③ Manifold	MM-6P	122034	2
④ $\phi$ 12 $\phi$ 12 Cross connector	N01861-202	131099	23
⑤ Attachment bracket $\cdot \phi$ 12 $\cdot$ M6	N01862-201	131118	4
⑥ Attachment bracket $\cdot$ W $\cdot \phi$ 12	N01863-101	131128	1
⑦ Slide bracket $\cdot$ W $\cdot \phi$ 8/ $\phi$ 12	N01863-102	131129	1
⑧ Slide bracket 70 $\cdot$ W $\cdot \phi$ 12	N01863-103	131130	1
⑨ Rotation bracket $\cdot \phi$ 12 $\cdot$ 12A	N01864-301	131168	4
⑩ Pipe end cap (black) $\cdot \phi$ 12	R-CAP-12	171339	23
⑪ Quick Chuck Change $\cdot$ Manual $\cdot$ tool side	OA1-SAI	140257	1
⑫ Plastic Fixture (M4)	RCB12	171212	4
⑬ Suction cups	TR-1062-3	196135	1
⑭ Suction cups	TR-1062-4	196136	1
⑮ Bellows cup	VAPH-20C-3	210661	2
⑯ Suction stem for small	VFIL1-S-10-P12	211008	4

## Examples of Chuck products ④



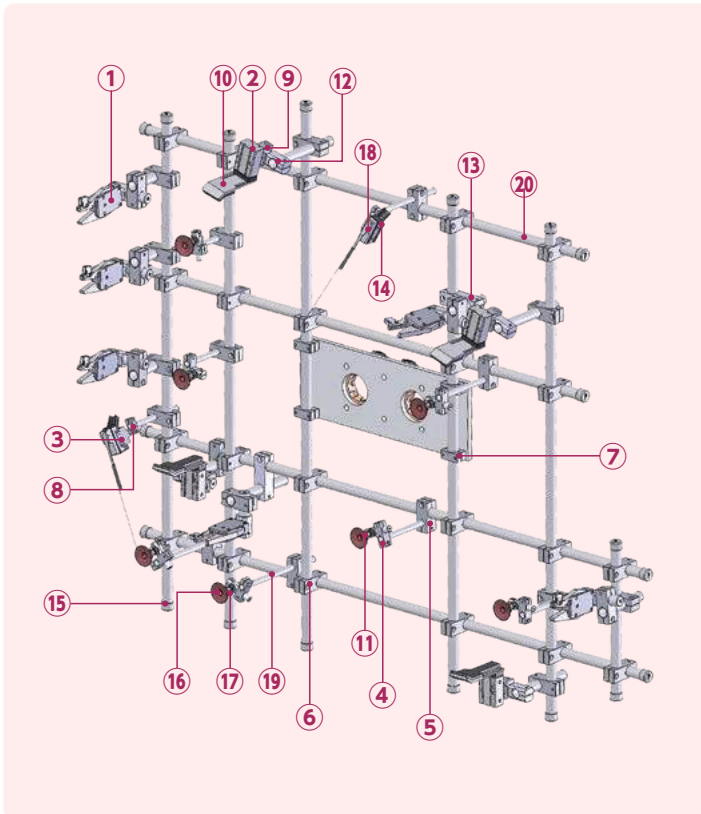
Configuration parts	TYPE	Order code No.	No. of uses
① Jungle gym SUS pipe $\phi$ 12	12 * 0.6 * 500	271527	7
② Attachment bracket $\cdot \phi$ 12 $\cdot$ M6	N01862-201	131118	4
③ Cross connector $\cdot \phi$ 12 $\phi$ 12	N01861-202	131099	16
④ Mini air nipper $\cdot$ Body $\cdot$ Reverse blade	NW3-35	131643	2
⑤ Bracket $\cdot$ W $\cdot \phi$ 12	N01915-106	131068	2
⑥ Rotation bracket $\cdot \phi$ 12 $\cdot$ 12A	N01864-301	131168	8
⑦ Bellows cup	VAPH-30C-3	210662	2
⑧ Suction stem for small	VFIL1-S-5-P12	211006	4
⑨ Slide bracket 70 $\cdot$ W $\cdot \phi$ 12	N01863-103	131130	8
⑩ Slide bracket $\cdot$ W $\cdot \phi$ 12	N01863-101	131128	8
⑪ Bellows cup	VAPH-15C-3	210697	2
⑫ Cylinder for pipe attachment	MCP1-1220	123700	2
⑬ Pad rectangle for micro mini cylinder	CPUM-01	022797	2
⑭ Pipe combination chuck E $\phi$ 12 $\cdot$ 90°	J25410-40A	090204	4
⑮ 90 degree flat A	N01871-101	131218	4
⑯ Pipe end cap $\cdot \phi$ 12	N01902-002	131211	10

## Examples of Chuck products ⑤



Configuration parts	TYPE	Order code No.	No. of uses
① Pad rectangle black 2 holes for mini cylinder	CPL-060	023336	8
② Cylinder for pipe attachment	MCP1-2010	123701	4
③ Cylinder for pipe attachment	MCP1-2030	123703	4
④ Cross connector · φ20 · φ20	N01861-206	131101	42
⑤ Attachment bracket · φ20 · M6	N01862-207	131123	4
⑥ Rotation bracket · φ20 · 20A	N01864-304	131171	8
⑦ φ20 Bushing nut M12	N01868-409	131205	8
⑧ Pipe end cap (black) · φ20	R-CAP-20	171340	8
⑨ Bellows cup	VAPH-30C-3	210662	8
⑩ Suction stem · fixed	VFILK-S-M12	210698	8
⑪ Jungle gym SUS pipe	20*0.8*1000	281813	8

## Examples of Chuck products ⑥



Configuration parts	TYPE	Order code No.	No. of uses
① Runner chuck EX (with Limit SW)	CHK-EX1-20-C1	023007	6
② Mini Container Cylinder	NCON-M20W	130711	4
③ Sensor bracket	N01915-201	131077	2
④ Cross connector · φ12 · φ12	N01861-202	131099	7
⑤ Cross connector · φ20 · φ12	N01861-204	131100	9
⑥ Cross connector · φ20 · φ20	N01861-206	131101	36
⑦ Slide bracket · W · φ20	N01863-111	131134	4
⑧ Slide bracket · φ12	N01863-201	131145	2
⑨ bracket · T · φ20 · for MCD	N01866-303	131183	4
⑩ Pad · for mini container cylinder	NCON-CP-05	131260	4
⑪ Rotation bracket · φ12 · 12AL	N01864-301L	131567	7
⑫ Rotation bracket · φ20 · 20AL	N01864-304L	131568	10
⑬ Cross connector long · φ20 · φ20	N01861-206B	131573	2
⑭ Limit switch micro case	OM-1	140039	2
⑮ Pipe end cap · φ20	R-CAP-20	171340	20
⑯ Suction Cups (Standard)	VAPH-40C	210196	7
⑰ Suction stem for small	VFIL1-S-5-P12	211006	7
⑱ Limit switch hinge lever	Z-15GW55-B	250017	2
⑲ Jungle gym SUS pipe φ12	12*0.6*1500	271529	1
⑳ Jungle gym SUS pipe φ20	20*0.8*1000	281813	4

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

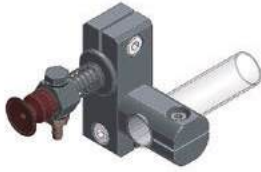
Tool / Jig

### Information

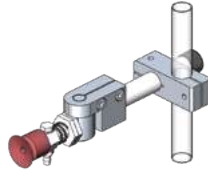
Various Products Information

# Use Cases of Parts

## Suction Cups Mounting Example

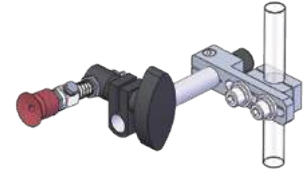


Configuration parts	TYPE	Order code No.
Suction stem mini	VFIL2-SS-10-P12	211034
Suction cups (standard/silicon/brown)	VAPH-14C	210616
Cross connector · φ 12 φ 12	N01861-202	131099
Rotation bracket · φ 12 · 12A	N01864-301	131168



Configuration parts	TYPE	Order code No.
Cross connector · φ 12 φ 12	N01861-202	131099
Rotation bracket · φ 12 · 8B	N01864-101A	131600
Rotation bracket · φ 8 · M12A	N01864-205	131433
Suction stem for small (M5)	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Pipe end cap (black) · φ 12	R-CAP-12	171339
Jungle gym SUS pipe φ 12 *	12*0.6*500	271527

\* Please cut it at 80mm before use.

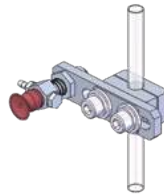


Configuration parts	TYPE	Order code No.
Slide bracket · W · φ 12	N01863-101	131128
Slide bracket 40 · W · φ 12	N01863-107	131132
Pipe end cap (black) · φ 12	R-CAP-12	171339
Slide washer · W · φ 8 / φ 12	N01863-102	131129
Suction Stem Non-Rotate for small	VFILB2-SH	211045
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Clip · TMA · φ 12 * φ 10	TMA-CL (12*10)	196564
Jungle gym SUS pipe φ 12 *	12*0.6*500	271527

\* Please cut it at 100mm before use.



Configuration parts	TYPE	Order code No.
Suction stem mini	VFIL2-SS-10-P12	211034
Suction cups (standard/silicon/brown)	VAPH-14C	210616
Slide bracket · W · φ 12	N01863-101	131128
Slide bracket 40 · W · φ 12	N01863-107	131132
Slide washer · W · φ 8 φ 12	N01863-102	131129



Configuration parts	TYPE	Order code No.
Slide bracket · W · φ 8	N01863-113	131217
Slide washer · W · φ 8 / φ 12	N01863-102	131129
Slide bracket 40 · W · M10	N01863-117	131139
Suction stem for mini	VFIL1-SS-5	211029
Suction cups (standard/silicon/brown)	VAPH-14C	210616



Configuration parts	TYPE	Order code No.
Suction cups (standard/silicon/brown)	VAPH-14C	210616
Suction stem attachment head for mini	N01392-201	131208
Suction rotate # B · M5 · φ 12	N01868-102	131192
Suction rotate # A · φ 12	N01868-101	131191

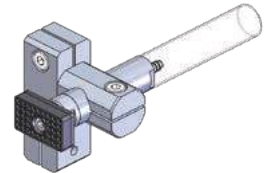
## Air Cylinder Mounting Example



Configuration parts	TYPE	Order code No.
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Mini cylinder · for MCD	MCD1-10	123219
Bracket · T · φ 12 · for MCD	N01866-101	131176

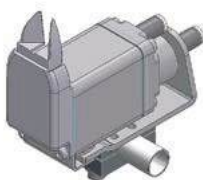


Configuration parts	TYPE	Order code No.
Pad rectangle black SW for mini cylinder	KRCR-5000	101832
Mini cylinder · for MCD	MCD1-10	123219
Bracket · TH · φ 12 · for MCD	N01866-301	131181



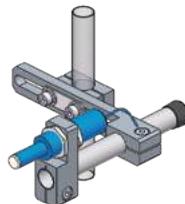
Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1210	123699
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Cross connector · φ 12 φ 12	N01861-202	131099
Rotation bracket · φ 12 · 12A	N01864-301	131168
Bolt with hexagon socket (trivalent chrome white)	M3*6	123231

## Air Nipper Mounting Example



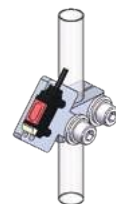
Configuration parts	TYPE	Order code No.
Bracket · W · φ 12	N01915-106	131068
Mini air nipper · Body · Standard blade	NW3-20	131629

## Sensor Mounting Example



Configuration parts	TYPE	Order code No.
Slide bracket · W · φ 12	N01863-101	131128
Slide washer · W · φ 8 / φ 12	N01863-102	131129
Slide bracket 70 · W · φ 12	N01863-103	131130
Connector · for SSW	N01861-108	131097
Star sensor	SSW-15	181139
Pipe end cap (black) · φ 12	R-CAP-12	171339
Jungle gym SUS pipe φ 12 *	12*0.6*500	271527

\* Please cut it at 100mm before use.



Configuration parts	TYPE	Order code No.
Slide bracket · W · φ 12	N01863-101	131128
Sensor bracket	N01915-201	131077
Photo sensor	E3T-SL21R (NPN)	041412

# MEMO

A series of horizontal dashed lines for writing.



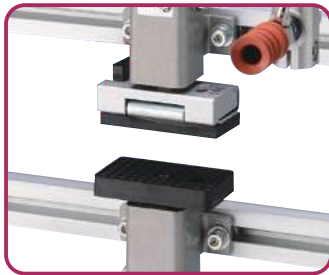
# Let's Joint

- ▶ Combination of various parts makes it easy to create the robot hand suitable for the shapes of work piece.
- ▶ Light weight and easy fabrication.

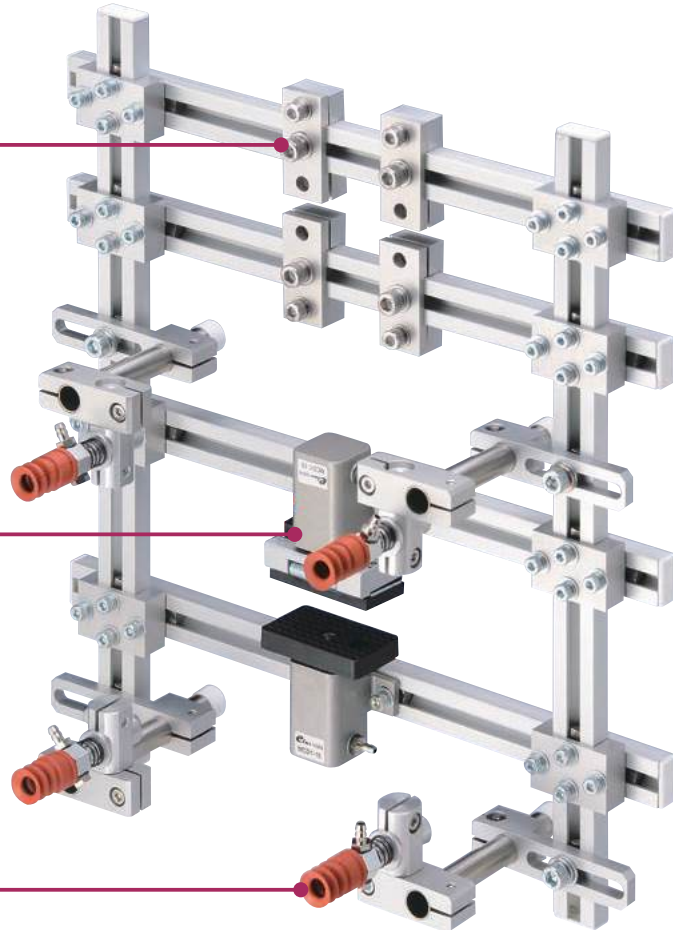
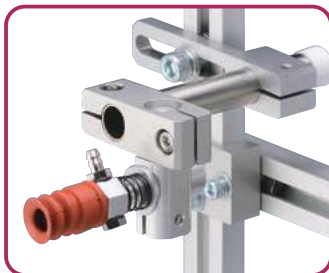
## Frame / Module



## Grip



## Suction



Tubing **6-1**

Let's Joint series parts based on three different size of aluminum profile extrusions to build the robot hand. Determine extract method first. And choose your favorite parts from the product list

### Example of using other components parts

- ▶ Let's Joint + Connector + Bracket + Nut



Order code No.	<b>271520</b>
TYPE	<b>10*20*500</b>

Order code No.	<b>131130</b>
TYPE	<b>N01863-103</b>

Order code No.	<b>131222</b>
TYPE	<b>N01911-204-205SET</b>

Order code No.	<b>131056</b>
TYPE	<b>N01914-103</b>





# List of Let's Joint

Various parts can be attached to let's joint frame.



You can see moving images of products by using QR code reader of your smartphone

You can check more details such as drawing by eins online shop.

## Specification

Product name	Order code No.	TYPE
Frame Let's joint profile		271520 10*20*500
		271521 10*20*1000
		271515 10*20*1500
		281807 25*25*500
		281809 25*25*1000
		281753 25*25*1500
		281808 25*50*500
		281810 25*50*1000
		281754 25*50*1500
		131213 25*50*1500
		131214 25*50*1500
		131215 25*50*1500
		131221 N01911-201-203SET
		131222 N01911-204-205SET
		131223 N01911-208-106-201SET
131224 N01911-101-102SET		
131028 N01911-206		
131019 N01911-103		
131033 N01911-401		

Product name	Order code No.	TYPE	
Connector	Cross connector • 50	131032 N01911-301	
	Connector 20 • F	131029 N01911-207	
	Connector 20 • G	131031 N01911-209	
	Cylinder connector 25 • A	131020 N01911-104	
	Cylinder connector 25 • B	131021 N01911-105	
	Block	Connector block 50 • B	131040 N01912-203
Connector block • for GCYL		131039 N01912-202	
Connector block • light		131038 N01912-106	
Connector block 25/50 • A		131041 N01912-301	
Connector block 25 • C		131035 N01912-103	
Connector block 25 • D		131036 N01912-104	
Bracket		Slide bracket 40 • M3	131158 N01863-214
		Slide bracket 40 • M5	131147 N01863-203
		Slide bracket 40 • M6	131156 N01863-212
		Slide bracket 40 • PT1/8	131154 N01863-210
	Slide bracket 40 • W • M10	131139 N01863-117	
	Slide bracket 40 • W • M12	131140 N01863-118	
	Slide bracket 40 • W • M17	131143 N01863-122	
	Slide bracket 40 • φ8	131152 N01863-208	

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

### Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools



















Tool / Jig




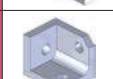




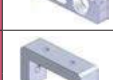









### Information

Various Products Information

# List of Let's Joint



















You can check more details such as drawing by eins online shop.




Product name	Order code No. TYPE
	<b>131132</b> N01863-107
	<b>131137</b> N01863-114
	<b>230051</b> XL0005-102
	<b>230056</b> XL0005-107
	<b>230052</b> XL0005-103
	<b>230054</b> XL0005-105
	<b>131159</b> N01863-217
	<b>131148</b> N01863-204
	<b>131157</b> N01863-213
	<b>131155</b> N01863-211
	<b>131141</b> N01863-120
	<b>131142</b> N01863-121
	<b>131144</b> N01863-124
	<b>131153</b> N01863-209
	<b>131133</b> N01863-110
	<b>131130</b> N01863-103
	<b>131138</b> N01863-115
	<b>230053</b> XL0005-104

Product name	Order code No. TYPE
	<b>230050</b> XL0005-101
	<b>230055</b> XL0005-106
	<b>131065</b> N01915-102
	<b>131037</b> N01912-105
	<b>131090</b> N01918-201
	<b>131075</b> N01915-113
	<b>131074</b> N01915-112
	<b>131066</b> N01915-103
	<b>131034</b> N01911-402
	<b>131067</b> N01915-105
	<b>131077</b> N01915-201
	<b>131081</b> N01915-304
	<b>131082</b> N01915-305
	<b>131083</b> N01915-401
	<b>131073</b> N01915-111
	<b>131071</b> N01915-109
	<b>131072</b> N01915-110
	<b>131070</b> N01915-108



You can see moving images of products by using QR code reader of your smartphone

Product name		Order code No.		
		TYPE		
Bracket	Bracket • W • $\phi$ 12		<b>131068</b> N01915-106	
	Bracket • W • $\phi$ 20		<b>131069</b> N01915-107	
	Rotation bracket • $\phi$ 20		<b>131064</b> N01915-101	
Plate	Connect plate 20 • A		<b>131413</b> N01913-201	
	Connect plate 25 • A		<b>131406</b> N01913-101	
	Connect plate 25 • B		<b>131407</b> N01913-102	
	Connect plate 25 • C		<b>131405</b> N01913-103	
	Connect plate 25 • D		<b>131408</b> N01913-104	
	Connect plate 25 • F		<b>131410</b> N01913-106	
	Connect plate 25 • G		<b>131411</b> N01913-107	
	Connect plate 25 • H		<b>131412</b> N01913-108	
	Connect plate 25/50 • A		<b>131416</b> N01913-401	
	Connect plate 50 • A		<b>131414</b> N01913-301	
	Connect plate 50 • B		<b>131415</b> N01913-302	
	Washer	Washer A • for let's joint		<b>131087</b> N01918-102
		Washer B • for let's joint		<b>131088</b> N01918-103
Nut	Nut • M4		<b>131061</b> N01914-108	
	Nut • M4 • 2P • 32, M5 • 2P • 28		<b>131063</b> N01914-202	
	Nut • M4 • 2P • 38, M3 • 2P • 20		<b>131062</b> N01914-201	

Product name		Order code No.	
		TYPE	
Nut	Nut • M6		<b>131056</b> N01914-103
	Nut • M6 • 2P • 12		<b>131055</b> N01914-102
	Nut • M6 • 2P • 15		<b>131054</b> N01914-101
	Nut • M6 • 2P • 20		<b>131058</b> N01914-105
	Nut • M6 • 2P • 25		<b>131059</b> N01914-106
	Nut • M6 • 3P • 15		<b>131057</b> N01914-104
Guide bar	Guide bar • 100		<b>131084</b> N01916-201
	Guide bar • 200		<b>131085</b> N01916-202
Spacer	Spacer 25 • T5 • P25		<b>131086</b> N01918-101
Plate	Attach plate • A		<b>131091</b> N01918-301

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

#### Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

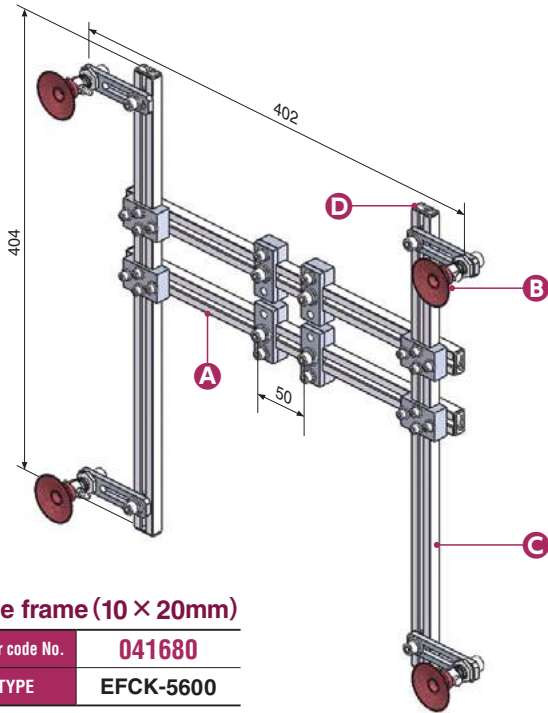
Various Products Information



# Base Frame Module

Modularized hand parts for let's joint.

You can check more details such as drawing by eins online shop.

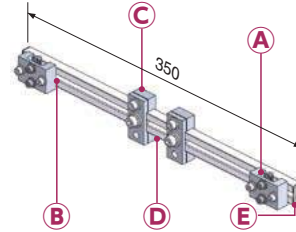


## Base frame (10 × 20mm)

Order code No.	<b>041680</b>
TYPE	<b>EFCK-5600</b>

● Weight : 775g

Configuration module	TYPE	Order code No.	No. of uses	Details
<b>A</b> Base frame for let's joint.	<b>EFCK-5601</b>	<b>041681</b>	2	5-38
<b>B</b> Suction module for let's joint.	<b>LSM-003</b>	<b>110571</b>	4	5-39
<b>C</b> Let's joint profile	<b>10*20*500</b>	<b>271520</b>	2	5-35
<b>D</b> Profile end cap · 10-20	<b>N01902-004</b>	<b>131213</b>	4	5-35



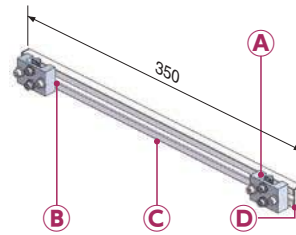
components of EFCK-5600...**A**

Order code No.	<b>041681</b>
TYPE	<b>EFCK-5601</b>

● Weight : 180g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Connector 20 · F	<b>N01911-207</b>	<b>131029</b>	2	5-35
<b>B</b> Nut · M4	<b>N01914-108</b>	<b>131061</b>	8	5-37
<b>C</b> Connector 20 · set C	<b>N01911-204-205set</b>	<b>131222</b>	2	5-35
<b>D</b> Let's joint profile	<b>10*20*500</b>	<b>271520</b>	1	5-35
<b>E</b> Profile end cap · 10-20	<b>N01902-004</b>	<b>131213</b>	2	5-35

## Base frame for let's joint.

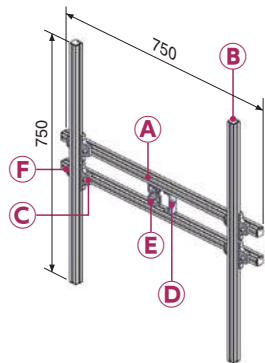


Order code No.	<b>041682</b>
TYPE	<b>EFCK-5602</b>

● Weight : 130g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Connector 20 · F	<b>N01911-207</b>	<b>131029</b>	2	5-35
<b>B</b> Nut · M4	<b>N01914-108</b>	<b>131061</b>	8	5-37
<b>C</b> Let's joint profile	<b>10*20*500</b>	<b>271520</b>	1	5-35
<b>D</b> Profile end cap · 10-20	<b>N01902-004</b>	<b>131213</b>	2	5-35

Frame / Module ● Let's Joint

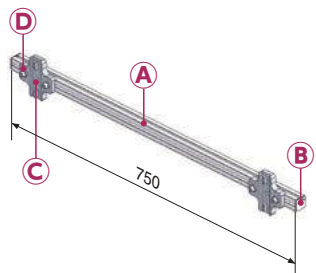


## Base frame (25 × 25mm)

Order code No.	<b>041683</b>
TYPE	<b>EFCK-7000</b>

● Weight : 3,114g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Let's joint · 25 * 25 * 1500	<b>25 * 25 * 1500</b>	<b>281753</b>	2	5-35
<b>B</b> Profile end cap · 25 · 25	<b>N01902-005</b>	<b>131214</b>	8	5-35
<b>C</b> Cross connector · 25	<b>N01911-103</b>	<b>131019</b>	4	5-35
<b>D</b> Connector block 25 · C	<b>N01912-103</b>	<b>131035</b>	4	5-35
<b>E</b> Nut · M6 · 2P · 15	<b>N01914-101</b>	<b>131054</b>	4	5-37
<b>F</b> Nut · M6	<b>N01914-103</b>	<b>131056</b>	16	5-37



## Base frame for let's joint.

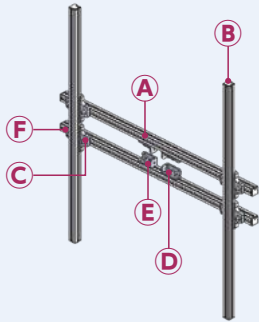
Order code No.	<b>041685</b>
TYPE	<b>EFCK-7002</b>

● Weight : 961g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Let's joint · 25 * 25 * 1000	<b>25 * 25 * 1000</b>	<b>281809</b>	1	5-35
<b>B</b> Profile end cap · 25 · 25	<b>N01902-005</b>	<b>131214</b>	2	5-35
<b>C</b> Cross connector · 25	<b>N01911-103</b>	<b>131019</b>	2	5-35
<b>D</b> Nut · M6	<b>N01914-103</b>	<b>131056</b>	8	5-37

# Switch to a single sale as the sales method.

## ► Change in sales method



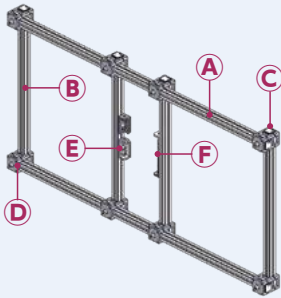
### Base frame

Order code No.	<b>041686</b>
TYPE	<b>EFCK-7500</b>

● Weight : 3,476g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Let's joint · 25 * 25 * 1500	<b>25 * 25 * 1500</b>	<b>281753</b>	2	<b>5-35</b>
<b>B</b> Profile end cap · 25 · 25	<b>N01902-005</b>	<b>131214</b>	8	<b>5-35</b>
<b>C</b> Cross connector · 25	<b>N01911-103</b>	<b>131019</b>	4	<b>5-35</b>
<b>D</b> Connector block 25 · D	<b>N01912-104</b>	<b>131036</b>	4	<b>5-35</b>
<b>E</b> Nut · M6 · 2P · 15	<b>N01914-101</b>	<b>131054</b>	4	<b>5-37</b>
<b>F</b> Nut · M6	<b>N01914-103</b>	<b>131056</b>	16	<b>5-37</b>

\* PROFILE length is 1,500mm if only PROFILE is ordered.



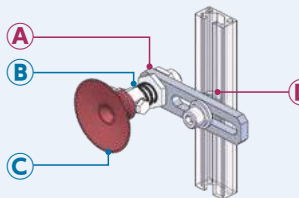
### Base frame

Order code No.	<b>041689</b>
TYPE	<b>EFCK-7600</b>

● Weight : 3,992g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Let's joint · 25 * 25 * 1000	<b>25 * 25 * 1000</b>	<b>281809</b>	2	<b>5-35</b>
<b>B</b> Let's joint · 25 * 25 * 500	<b>25 * 25 * 500</b>	<b>281807</b>	4	<b>5-35</b>
<b>C</b> Profile end cap · 25 · 25	<b>N01902-005</b>	<b>131214</b>	12	<b>5-35</b>
<b>D</b> Connector 25 · set A	<b>N01911-101-102SET</b>	<b>131224</b>	8	<b>5-35</b>
<b>E</b> Connector block 25 · D	<b>N01912-104</b>	<b>131036</b>	4	<b>5-35</b>
<b>F</b> Nut · M6 · 2P · 15	<b>N01914-101</b>	<b>131054</b>	4	<b>5-37</b>

\* PROFILE length is 1,000 and 500mm if only PROFILE is ordered.



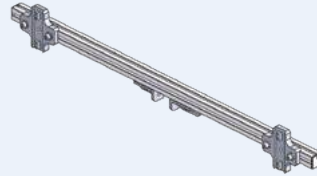
### Suction module for let's joint

Order code No.	<b>110571</b>
TYPE	<b>LSM-003</b>

● Weight : 50g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Slide bracket 40 · W · M12	<b>N01863-118</b>	<b>131140</b>	1	<b>5-35</b>
<b>B</b> Suction stem for small	<b>VFIL-S-5A</b>	<b>210974</b>	1	<b>3-26</b>
<b>C</b> Suction cups (standard/silicon/brown)	<b>VAPH-40C</b>	<b>210196</b>	1	<b>3-5</b>
<b>D</b> Nut · M6	<b>N01914-103</b>	<b>131056</b>	1	<b>5-37</b>

\* Components of EFCK-5600 ®



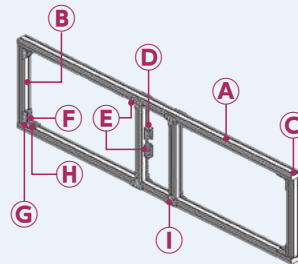
### Base frame for let's joint.

Order code No.	<b>041684</b>
TYPE	<b>EFCK-7001</b>

● Weight : 1,030g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Cross connector · 25	<b>N01911-103</b>	<b>131019</b>	2	<b>5-35</b>
<b>B</b> Connector block 25 · D	<b>N01912-104</b>	<b>131036</b>	2	<b>5-35</b>
<b>C</b> Nut · M6 · 2P · 15	<b>N01914-101</b>	<b>131054</b>	2	<b>5-37</b>
<b>D</b> Profile end cap · 25 · 25	<b>N01902-005</b>	<b>131214</b>	2	<b>5-35</b>
<b>E</b> PROFILE25 * 25	<b>25 * 25 * 500</b>	<b>281807</b>	1	<b>5-35</b>

\* PROFILE length is 500mm if only PROFILE is ordered.



### Base frame

Order code No.	<b>041692</b>
TYPE	<b>EFCK-8000</b>

● Weight : 7,612g

Configuration parts	TYPE	Order code No.	No. of uses	Details
<b>A</b> Let's joint · 25 * 50 * 1500	<b>25 * 50 * 1500</b>	<b>281754</b>	2	<b>5-35</b>
<b>B</b> Let's joint · 25 * 50 * 500	<b>25 * 50 * 500</b>	<b>281808</b>	4	<b>5-35</b>
<b>C</b> Profile end cap · 25 · 50	<b>N01902-006</b>	<b>131215</b>	4	<b>5-35</b>
<b>D</b> Connector block 25 · D	<b>N01912-104</b>	<b>131036</b>	4	<b>5-35</b>
<b>E</b> Nut · M6 · 2P · 15	<b>N01914-101</b>	<b>131054</b>	20	<b>5-37</b>
<b>F</b> Connector block 50 · B	<b>N01912-203</b>	<b>131040</b>	4	<b>5-35</b>
<b>G</b> Nut · M6 · 2P · 20	<b>N01914-105</b>	<b>131058</b>	8	<b>5-37</b>
<b>H</b> Nut · M6 · 2P · 25	<b>N01914-106</b>	<b>131059</b>	8	<b>5-37</b>
<b>I</b> Connector plate 25 · D	<b>N01913-104</b>	<b>131408</b>	8	<b>5-37</b>

\* PROFILE length is 1,500 and 500mm if only PROFILE is ordered.

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information

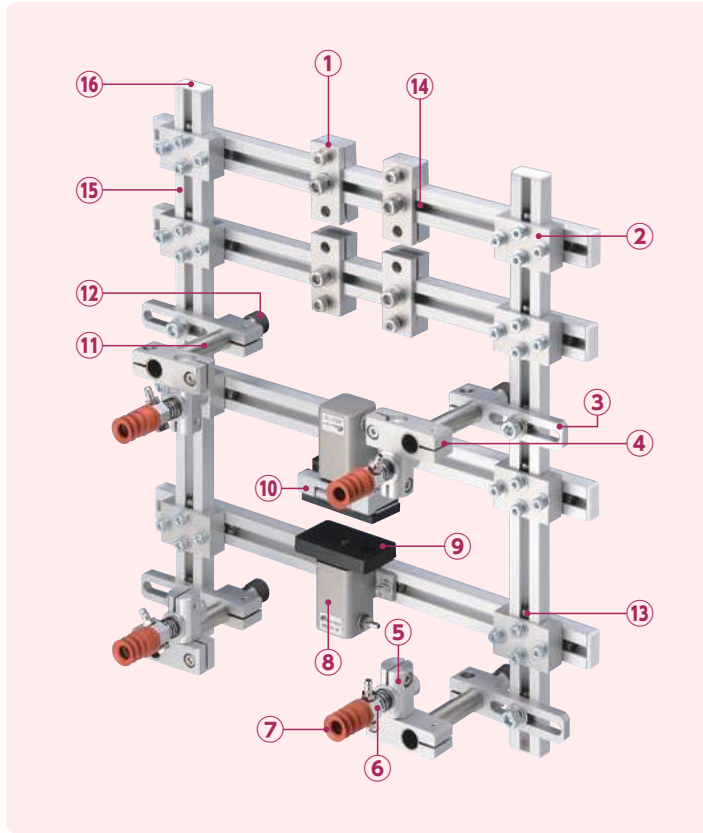




# Examples of Robot Chuck Production

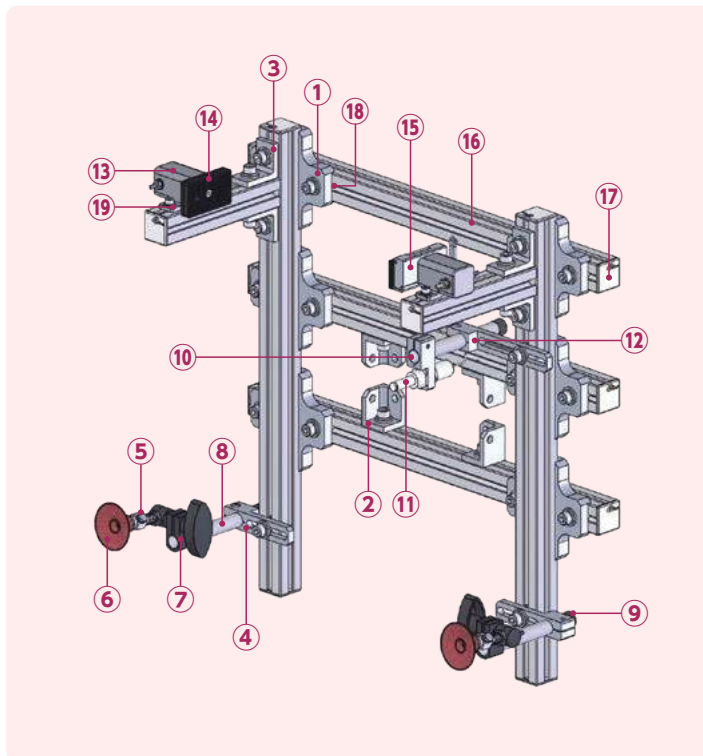
Chuck parts based on Let's joint parts.

## Examples of Chuck products ①



Configuration parts	TYPE	Order code No.	No. of uses
① Connector 20 · set C	N01911-201-203SET	<b>131222</b>	4
② Connector 20F	N01911-207	<b>131029</b>	8
③ Slide 40BKT · W · $\phi$ 12	N01863-107	<b>131132</b>	4
④ Cross connector · $\phi$ 12 $\phi$ 12	N01861-202	<b>131099</b>	4
⑤ Rotation bracket · $\phi$ 12 · 12A	N01864-301	<b>131600</b>	4
⑥ Suction stem for small	VFIL1-S-5-P12	<b>211006</b>	4
⑦ Suction cups	VAPH-20C-3	<b>210661</b>	4
⑧ Mini cylinder · MCD	MCD1-10	<b>123219</b>	2
⑨ Pad rectangle black 2 holes for mini cylinder	CPL-060	<b>023336</b>	1
⑩ Pad rectangle w/ SW for mini cylinder	KRCR-5000	<b>101832</b>	1
⑪ SUS pipe $\phi$ 12	12*0.5*500	<b>271527</b>	1
⑫ Pipe end cap (Black) · $\phi$ 12	R-CAP-12	<b>171339</b>	4
⑬ Nut · M4	N01914-108	<b>131061</b>	36
⑭ Nut · M6	N01914-103	<b>131056</b>	4
⑮ Frame (Let's joint)	10*20*1000	<b>271515</b>	3
⑯ Profile end cap · 10-20	N01902-004	<b>131213</b>	12

## Examples of Chuck Production ②



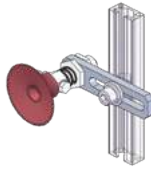
Configuration parts	TYPE	Order code No.	No. of uses
① Cross connector · 20	N01911-103	<b>131019</b>	6
② Connector block · 25 · D	N01912-104	<b>131036</b>	4
③ Connector block Light	N01912-106	<b>131038</b>	4
④ Slide 40BKT · W · $\phi$ 12	N01863-107	<b>131132</b>	2
⑤ Suction stem for small	VFIL1-S-5-P12	<b>211006</b>	2
⑥ Suction cups	VAPH-40C	<b>210196</b>	2
⑦ Clip · TMA · $\phi$ 12 * $\phi$ 12	TMA-CL (12*12)	<b>196562</b>	2
⑧ SUS pipe $\phi$ 12	12*0.5*500	<b>271527</b>	1
⑨ Pipe end cap (Black) · $\phi$ 12	R-CAP-12	<b>171339</b>	3
⑩ Connector · for SSW	N01861-108	<b>131097</b>	1
⑪ Star sensor	SSW-15	<b>181139</b>	1
⑫ Bracket · W · $\phi$ 12	N01915-106	<b>131068</b>	1
⑬ Mini cylinder · MCD	MCD1-10	<b>123219</b>	2
⑭ Pad rectangle black 2 holes for mini cylinder	CPL-060	<b>023336</b>	1
⑮ Pad rectangle w/ SW for mini cylinder	KRCR-5000	<b>101832</b>	1
⑯ Frame (Let's joint)	25 * 25 * 500	<b>281807</b>	6
⑰ Profile end cap · 25-25	N01902-005	<b>131214</b>	12
⑱ Nut · M6	N01914-103	<b>131056</b>	40
⑲ Nut · M4 2P32.M3 2P28	N01914-202	<b>131063</b>	2

# Use Cases of Parts

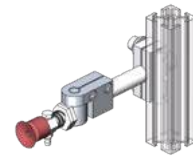
## Suction Cups Mounting Example



Configuration parts	TYPE	Order code No.
Bracket · φ 8	N01915-111	131073
Rotation bracket · φ 8 · M12A	N01864-205	131433
Suction stem for small	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Nut · M4	N01914-108	131061
Slide washer · φ 8 / φ 12	N01863-202	131146
Bolt with hexagon socket (trivalent chromate white)	M4*25	122798
for M4 SW, flat W	M4	122773, 122778



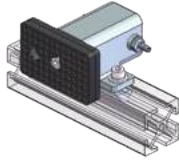
Configuration parts	TYPE	Order code No.
Slide bracket 40 · W · M12	N01863-118	131140
Suction stem for small	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-40C	210196
Nut · M6	N01914-103	131056
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M6*15 (E)	122821



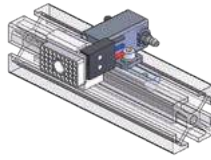
Configuration parts	TYPE	Order code No.
Nut · M6 · 3P · 15	N01914-104	131057
Chuck bracket · φ 12	N01915-105	131067
Rotation bracket · φ 12 · 8B	N01864-101A	131600
Rotation bracket · φ 8 · M12A	N01864-205	131433
Suction stem for small	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Pipe end cap (black) · φ 12	R-CAP-12	171339
Jungle gym SUS pipe φ 12 *	12*0.6*500	271527
Bolt with hexagon socket (trivalent chromate white)	M6*25	122969
for M6 SW, flat W	M6	122775, 122780

\* Please cut it at 80mm before use.

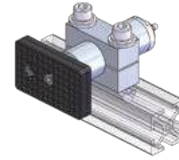
## Air Cylinder Mounting Example



Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-10	123219
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-5	190109
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4*12 (E)	122812
Bolt with hexagon socket (trivalent chromate white)	M4*10	122795



Configuration parts	TYPE	Order code No.
Micro mini cylinders	UMCD-10	200123
Pad rectangle w/ SW for micro mini cylinder	L1131-100	110568
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-3	010473
Bolt with hexagon socket (trivalent chromate white)	M3*10	122790
for M3 SW, flat W	M3	122772, 122777
Bolt with hexagon socket (trivalent chromate white)	M3*8	123232



Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Bracket · W · φ 20	N01915-107	131069
Nut · M6 · 3P · 15	N01914-104	131057
Bolt with hexagon socket (trivalent chromate white)	M6*35	122989
for M6 SW, flat W	M6	122775, 122780
Bolt with hexagon socket (trivalent chromate white)	M4*10	122795

## Air Nipper Mounting Example

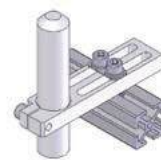


Configuration parts	TYPE	Order code No.
Pad · for mini container cylinder	NCON-CP-01	131256
Mini container cylinder	NCON-M15S	131015
Bracket · NCON	N01915-401	131083
Nut · M6 · 2P · 20	N01914-105	131058



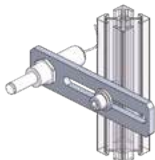
Configuration parts	TYPE	Order code No.
Mini air nipper · Body · Standard blade	NW3-20	131629
Nipper bracket · D	N01915-304	131081
Nut · M6 · 2P · 20	N01914-105	131058

## Guide bar Mounting Example

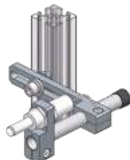


Configuration parts	TYPE	Order code No.
Guide bar · 100	N01916-201	131084
Cylinders bracket · φ 20	N01915-103	131066
Nut · M6 · 2P · 20	N01914-105	131058
Washer B for let's joint	N01918-103	131088

## Sensor Mounting Example

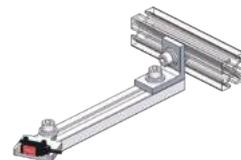


Configuration parts	TYPE	Order code No.
Slide bracket 70 · W · M17	N01863-124	131144
Star sensor	SSW-15	181139
Nut · M6	N01914-103	131056
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M6*15 (E)	122821



Configuration parts	TYPE	Order code No.
Slide bracket 70 · W · φ 12	N01863-103	131130
Connector · for SSW	N01861-108	131097
Star sensor	SSW-15	181139
Pipe end cap (Black) · φ 12	R-CAP-12	171339
Nut · M6	N01914-103	131056
Jungle gym SUS pipe φ 12 *	12*0.6*500	271527
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M6*15 (E)	122821

\* Please cut it at 100mm before use.



Configuration parts	TYPE	Order code No.
Connector block · light	N01912-106	131038
Sensor bracket	N01915-201	131077
Photo sensor	E3T-SL21R (NPN)	041412
Nut · M6	N01914-103	131056
Let's joint profile *	10*20*500	271520
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M6*15 (E)	122821

\* Please cut it at 150mm before use.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

Assembling Tools

Tool / Jig

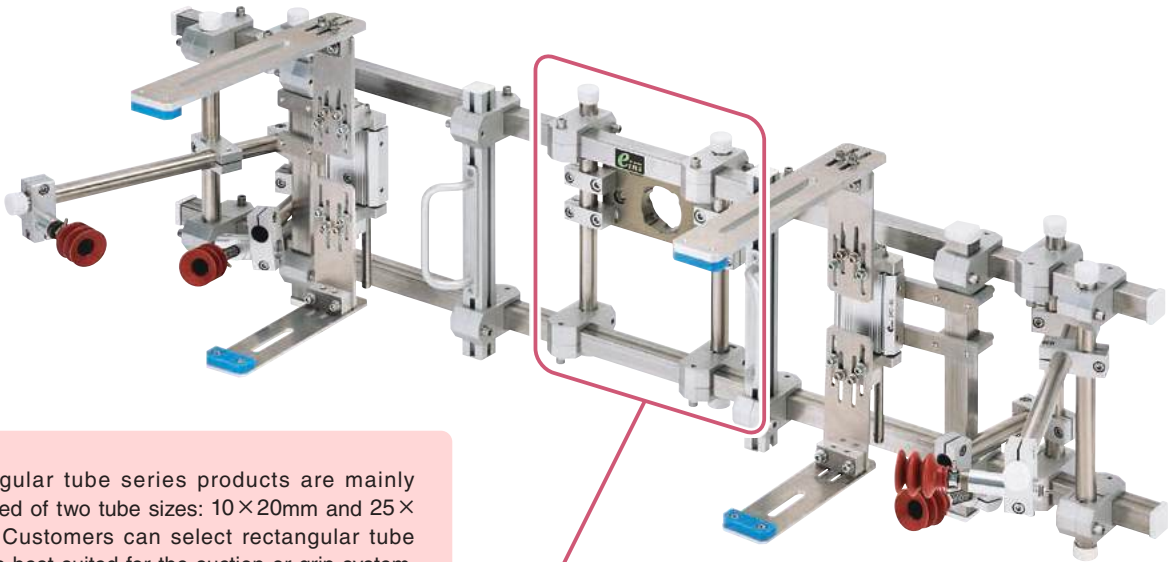
Information

Various Products Information



# Rectangular Tube

- ▶ Light weight, strong, and better rotate resistance.
- ▶ Combination of various parts makes it easy to create the robot hand suitable for the shapes of work piece.



Rectangular tube series products are mainly composed of two tube sizes: 10×20mm and 25×25mm. Customers can select rectangular tube products best suited for the suction or grip system. Using the transformation block allows combinations of jungle gym parts.

Frame / Module • Rectangular Tube

**Attachment bracket •  
φ20 • M8**



5-14

**Tubing 6-1**

**Rectangular tube**



5-8

**Jungle gym  
SUS pipe φ20**



5-45

**Cross connector •  
25-25**

**Conversion block • 25-φ20**



# Rectangular Tube / Pipe End Cap

Attaches various kinds of components based on the rectangular tube.



## Rectangular tube

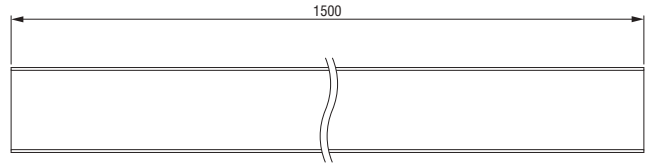
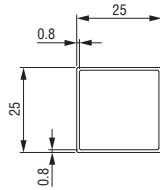
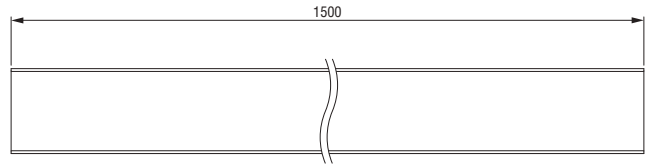
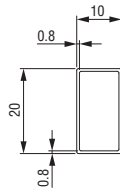
\* Diameter of a pipe may expand when you cut the pipe.

Order code No.	<b>185124</b>
TYPE	<b>S10*20*1500</b>

● Weight : 535g

Order code No.	<b>185125</b>
TYPE	<b>S25*25*1500</b>

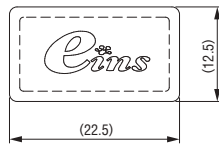
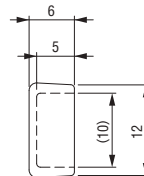
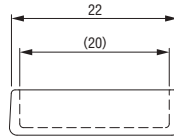
● Weight : 895g



## Pipe end cap • 10\*20

Order code No.	<b>185219</b>
TYPE	<b>S-CAP 10-20</b>

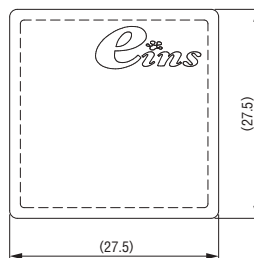
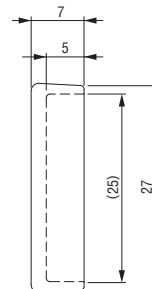
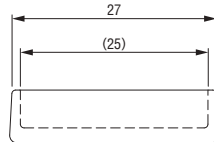
● Weight : 1g



## Pipe end cap • 25\*25

Order code No.	<b>185218</b>
TYPE	<b>S-CAP 25-25</b>

● Weight : 3g



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

### Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

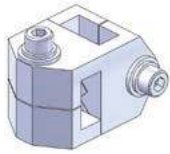
### Information

Various Products Information



# Rectangular Tube Series Parts

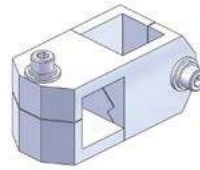
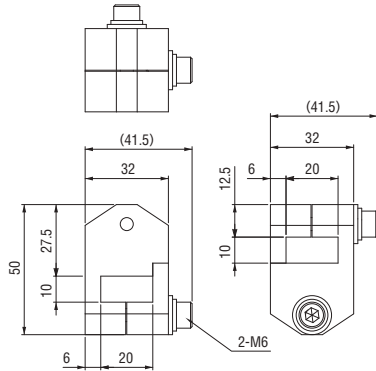
Securely fixes the Let's SUS square pipe by precision processing.



## Cross connector • 10-20

Order code No.	<b>185126</b>
TYPE	<b>S-CROSS 10-20</b>

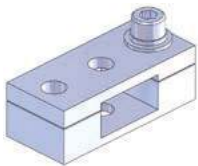
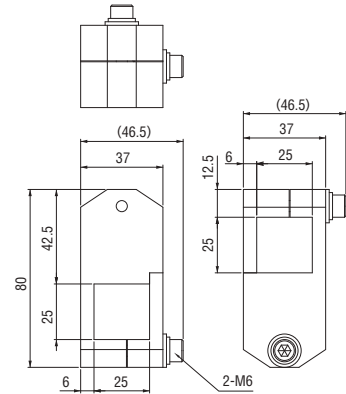
● Weight : 102g



## Cross connector • 25-25

Order code No.	<b>185127</b>
TYPE	<b>S-CROSS 25-25</b>

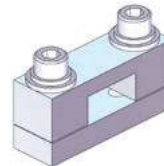
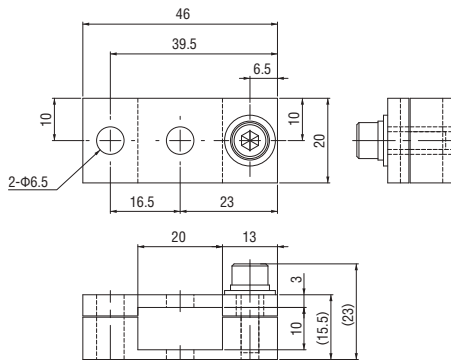
● Weight : 170g



## Attachment bracket • 10-20 • M6

Order code No.	<b>185128</b>
TYPE	<b>S-ATBR 10-20 • M6</b>

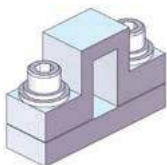
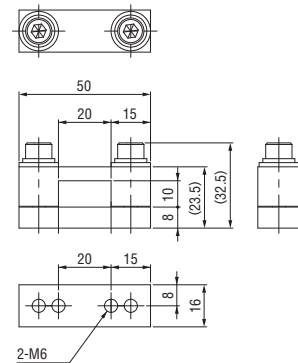
● Weight : 30g



## Slide bracket • 10-20

Order code No.	<b>185129</b>
TYPE	<b>S-SLBR 10-20</b>

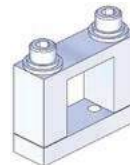
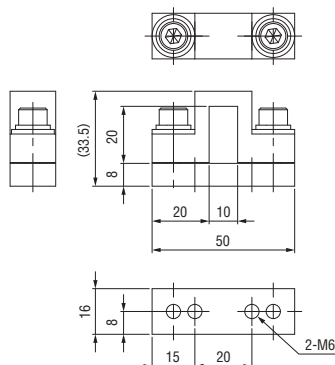
● Weight : 55g



## Slide bracket • 20-10

Order code No.	<b>185130</b>
TYPE	<b>S-SLBR 20-10</b>

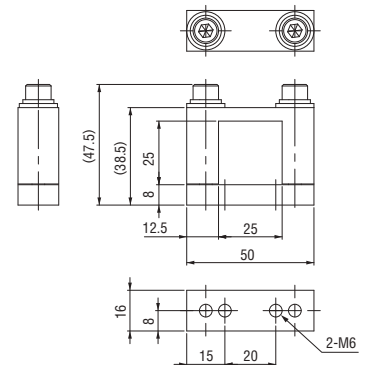
● Weight : 57g



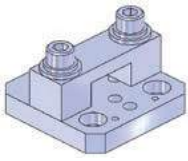
## Slide bracket • 25-25

Order code No.	<b>185131</b>
TYPE	<b>S-SLBR 25-25</b>

● Weight : 73g





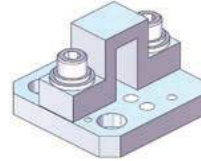
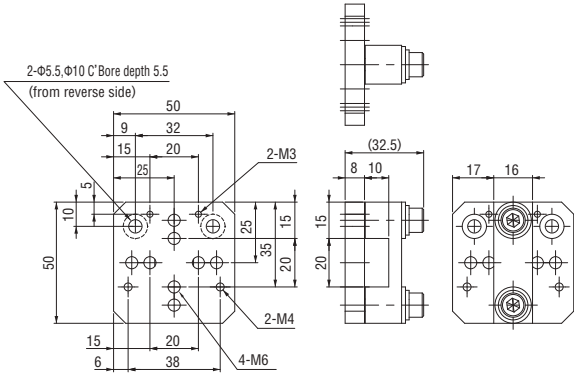


### Bracket • 10 • MCD

Order code No. **185132**

TYPE **S-BR10 MCD**

● Weight : 87g

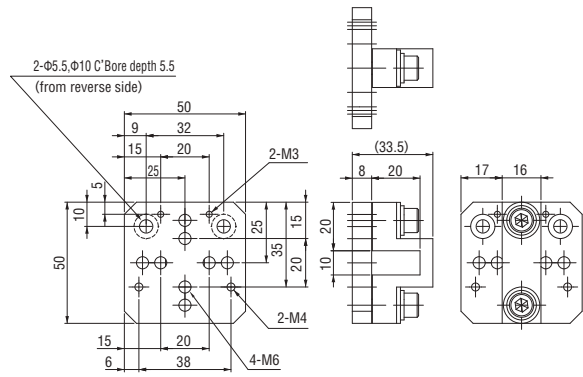


### Bracket • 20 • MCD

Order code No. **185133**

TYPE **S-BR20 MCD**

● Weight : 90g

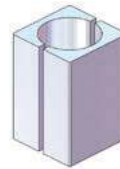
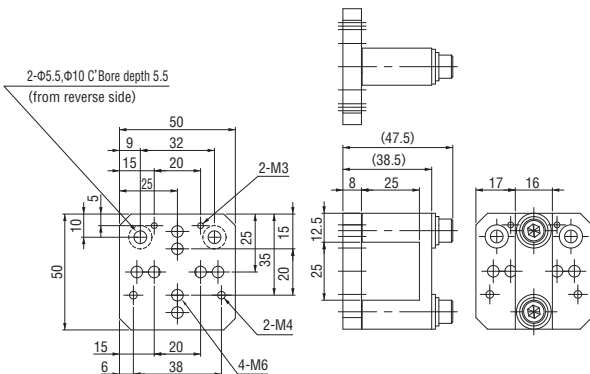


### Bracket • 25 • MCD

Order code No. **185134**

TYPE **S-BR25 MCD**

● Weight : 105g



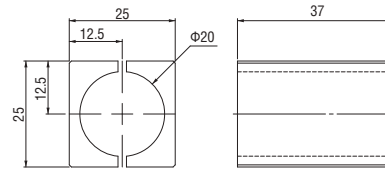
### Conversion block • 25- φ 20

Order code No. **185135**

TYPE **S-CBL25-D20**

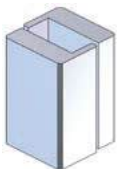
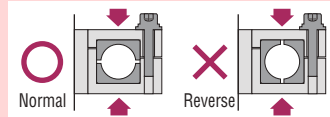
● Weight : 31g

Convert to rectangular tube 25x25 inner dimension to jungle gym φ 20.



#### Notes on use

Reverse attachment prevents fixing of conversion block.



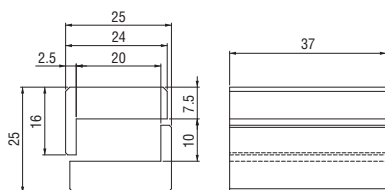
### Conversion block • 25-10-20

Order code No. **185136**

TYPE **S-CBL25-10-20**

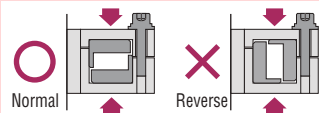
● Weight : 42g

Convert to rectangular tube 25x25 inner dimension to rectangular tube 10x20.



#### Notes on use

Reverse attachment prevents fixing of conversion block.



#### Leading connection

	Countermeasures	Page of details
Pitch 20-M3	Micro mini cylinders	<b>2-4</b>
Pitch 38-M4	Mini cylinder	<b>2-4</b>
Pitch 32-C'Bore	Mini container cylinder	<b>2-19</b>
Pitch 20-M6	Slide bracket φ 8, φ 12	<b>5-15</b>
	Slide bracket	<b>5-21,22,23,24</b>
	Nipper bracket	<b>5-36</b>
	Bracket • NCON	<b>5-36</b>

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

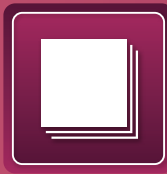
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

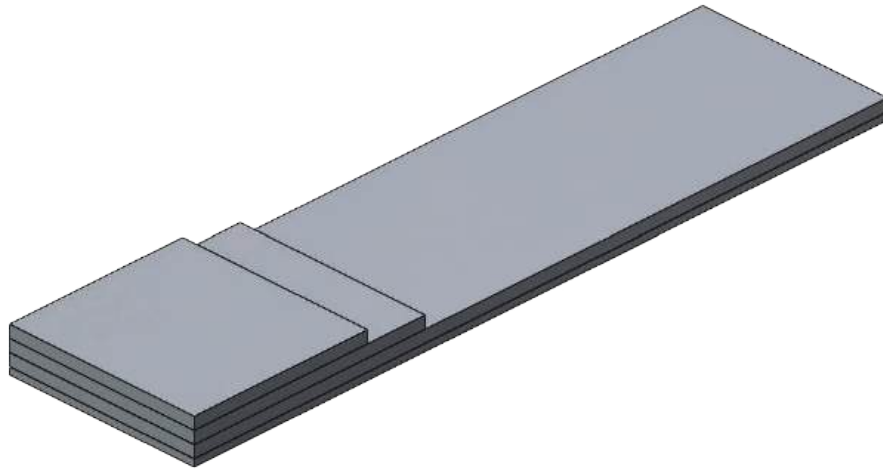
#### Information

Various Products Information

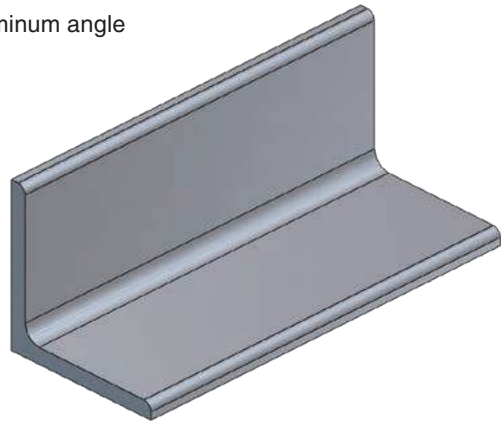


# Base Aluminum Material

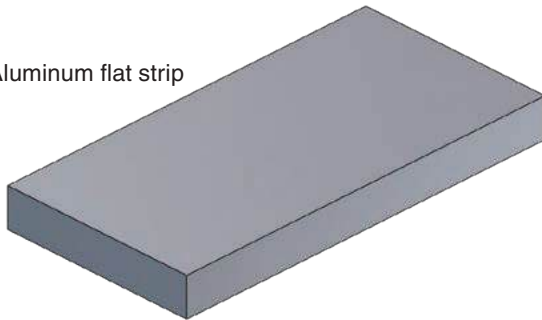
▶ Aluminum plate



▶ Aluminum angle



▶ Aluminum flat strip

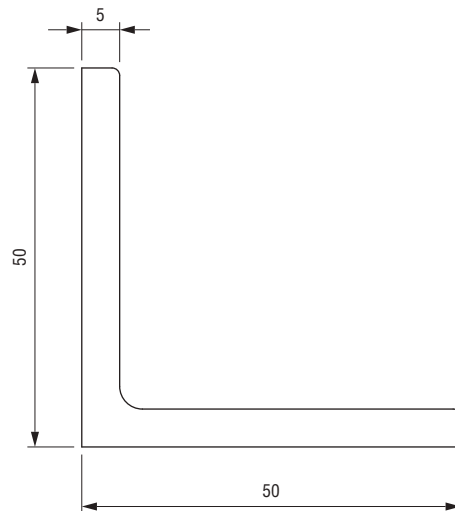
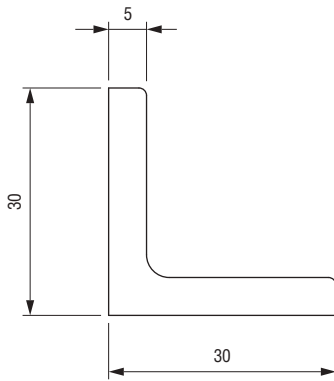
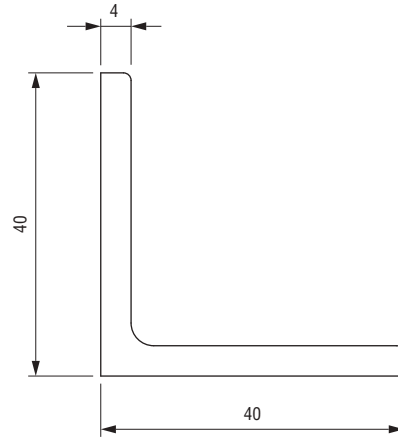
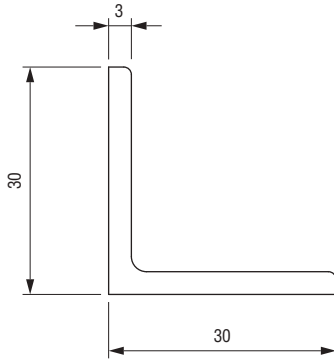


## ■ Specification

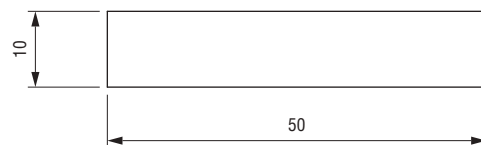
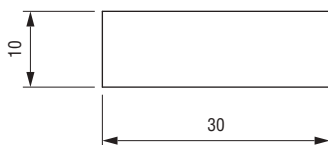
Product name	TYPE	Order code No.	Weight (g)	Remarks
Aluminum plate	3T*400*1200	<b>370029</b>	3,920	Material code : A5052
	5T*400*300	<b>370028</b>	1,630	Material code : A5052
	5T*400*400	<b>370027</b>	2,180	Material code : A5052
	5T*400*1200	<b>370026</b>	6,530	Material code : A5052
Aluminum angle	3T*30*30*2M	<b>370074</b>	900	Material code : A5052
	4T*40*40*2M	<b>370075</b>	1,670	Material code : A6063
	5T*30*30*2M	<b>370077</b>	1,400	Material code : A6063
	5T*50*50*2M	<b>370076</b>	2,440	Material code : A6063
Aluminum flat strip	10T*30*2M	<b>370373</b>	1,470	Material code : A6063
	10T*50*2M	<b>370374</b>	2,630	Material code : A6063

● The dimensional accuracy is +0.2mm.

► Aluminum angle



► Aluminum flat strip



**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

**Base Aluminum Material**

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

**Assembling Tools**

Tool / Jig

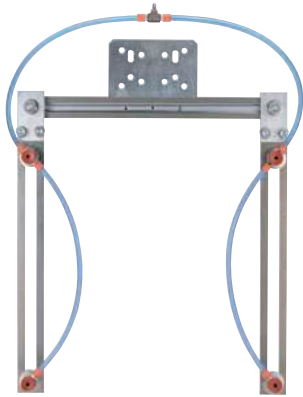
**Information**

Various Products Information



# Sliding Chuck

- ▶ Suction stem can be moved freely according to the shape of workpiece.
- ▶ The chuck mounting section is compatible with robots from other manufacturers.

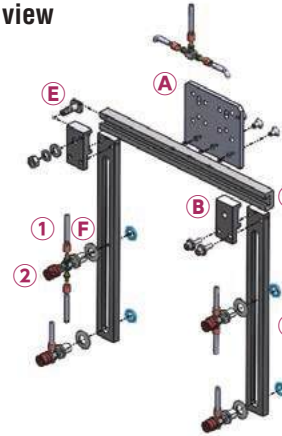


▶ Suction stems: for small  
**Sliding chuck**

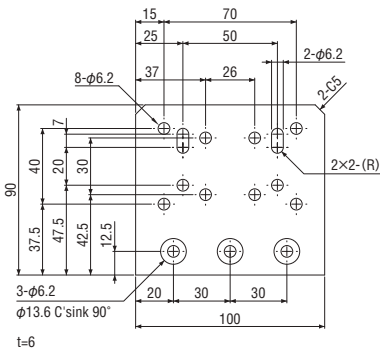
Order code No.	<b>054285</b>
TYPE	<b>FCK1-0000</b>

● Weight : 1,150g

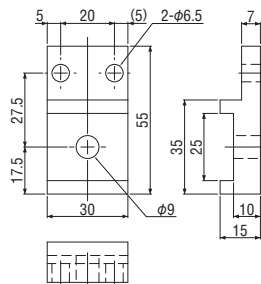
## Exploded view



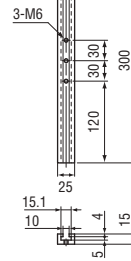
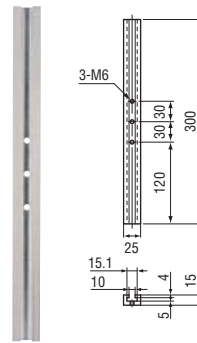
**A** Chuck mounting base



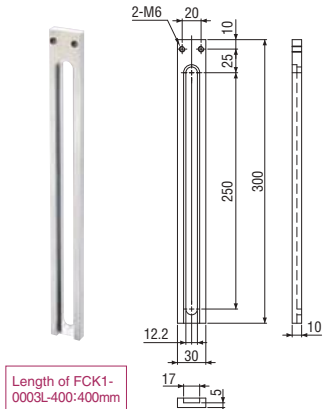
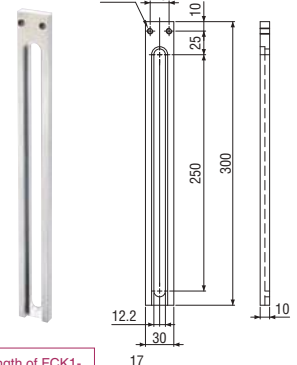
**B** Sliding holder



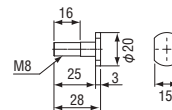
**C** Universal chuck slide base



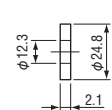
**D** Vertical bar (L)



**E** Sliding chuck fastening bolt



**F** Taper washer (small)

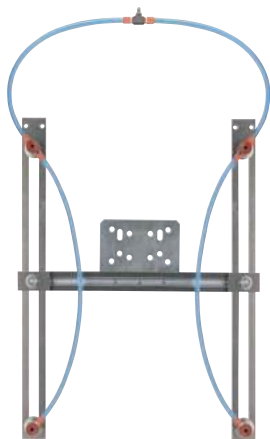


## ■ Specification

	Product name	TYPE	Order code No.	Weight (g)	Qty	
<b>A</b>	Chuck mounting base	FCK1-0001	<b>054287</b>	393	1	
<b>B</b>	Sliding holder	FCK1-0002S	<b>054288</b>	41	2	
<b>C</b>	Universal chuck slide base	FCK2-0004	<b>054325</b>	213	1	
<b>D</b>	Vertical bar (L)	300mm (standard)	FCK1-0003L	<b>054289</b>	139	2
		400mm	FCK1-0003L-400	<b>054290</b>	183	-
<b>E</b>	Sliding chuck fastening bolt	FCK1-0005	<b>054326</b>	11	2	
<b>1</b>	Suction stem for small (M5)	VFIL-S-5A	<b>210974</b>	20	4	
<b>2</b>	Suction cup (standard/silicon/brown)	VAPH-15C	<b>210193</b>	2.2	4	
<b>F</b>	Taper washer * for small	φ12 (for VFIL-S)	<b>370244</b>	4	4	

## ■ Information of used bolt

	Product name	TYPE	Order code No.	Qty
<b>A+C</b>	Flat head screw with hexagon socket	M6*10	<b>122786</b>	3
<b>B+C</b>	Nut class 1	M8	<b>122783</b>	2
	Spring washer	M8	<b>122776</b>	2
	Flat washer	M8	<b>122781</b>	2
<b>B+D</b>	Bolt with hexagon socket (SW+flat W)	M6*20	<b>122822</b>	4

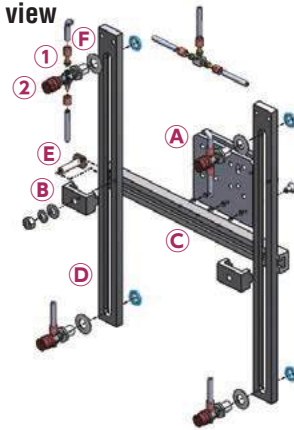


► Suction stems: for small  
**Universal chuck (H type)**

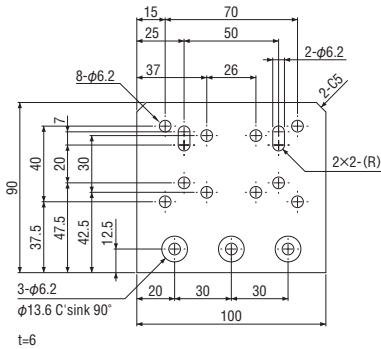
Order code No. **054286**  
TYPE **FCKH-0000**

● Weight : 1,185g

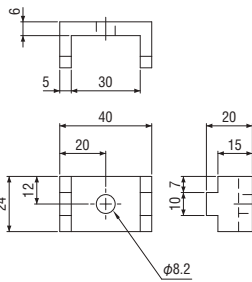
### Exploded view



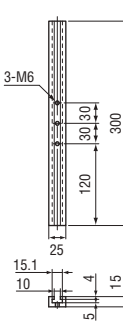
#### A Chuck mounting base



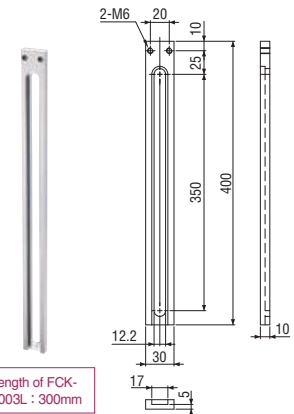
#### B Sliding holder H



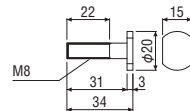
#### C Universal chuck slide base



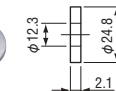
#### D Vertical bar (L)



#### E Sliding chuck fastening bolt H



#### F Taper washer (small)



### ■ Specification

	Product name	TYPE	Order code No.	Weight (g)	Qty	
A	Chuck mounting base	FCK1-0001	054287	393	1	
B	Sliding holder H	FCKH-0007	054291	21	2	
C	Universal chuck slide base	FCK2-0004	054325	213	1	
D	Vertical bar (L)	400mm (standard)	FCK1-0003L-400	054290	183	2
		300mm	FCK1-0003L	054289	139	—
E	Sliding chuck fastening bolt H	FCKH-0005L	054292	16	2	
1	Suction stem for small (M5)	VFIL-S-5A	210974	20	4	
2	Suction cup (standard/silicon/brown)	VAPH-15C	210193	2.2	4	
F	Taper washer • for small	φ12 (for VFIL-S)	370244	4	4	

### ■ Information of used bolt

	Product name	TYPE	Order code No.	Qty
A+C	Flat head screw with hexagon socket	M6*10	122786	3
		Nut class 1	M8	122783
B+C	Spring washer	M8	122776	2
		Flat washer	M8	122781

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

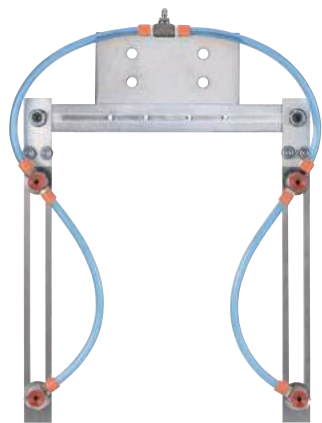
Tool / Jig

### Information

Various Products Information



# Sliding Chuck



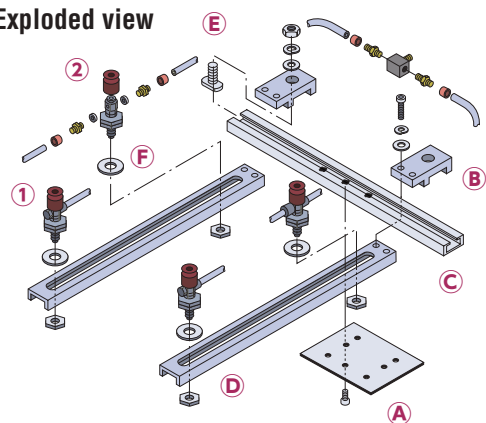
## ► Suction stem mini Sliding chuck (mini)

Order code No. **054324**

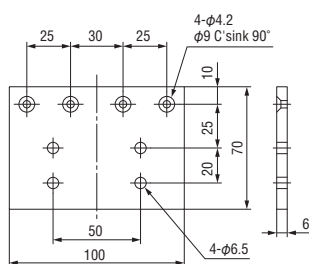
TYPE **FCK1-1000**

● Weight : 616g

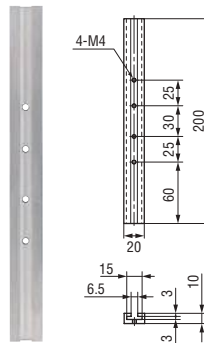
## Exploded view



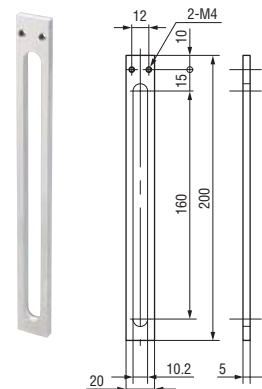
### A Chuck mounting base



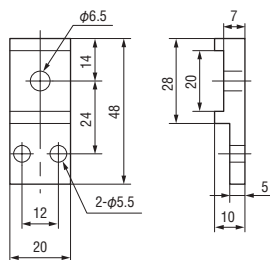
### C Universal chuck slide base



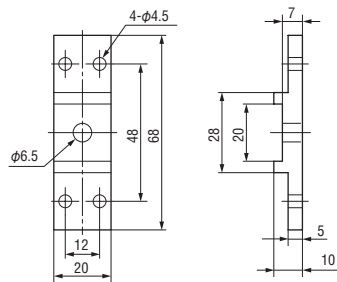
### D Vertical bar



### B Sliding holder

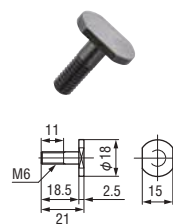


### ★ Sliding holder

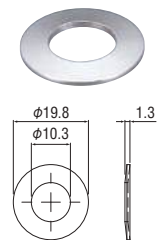


\* Used to change to H type.

### E Sliding chuck fastening bolt



### F Taper washer (mini)



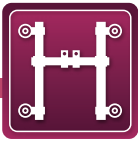
## ■ Specification

	Product name	TYPE	Order code No.	Weight (g)	Qty
A	Chuck mounting base	FCK1-1001	054340	313	1
B	Sliding holder	FCK1-1002	054321	16	2
C	Universal chuck slide base	FCK1-1004	370735	69	1
D	Vertical bar 200mm	FCK1-1003	054322	32	2
E	Sliding chuck fastening bolt	FCK1-1005	370736	8	2
1	Suction cups (standard/silicon/brown)	VAPH-12C	210192	0.8	4
2	Suction stem mini	VFIL1-SS-5	211029	14	4
F	Taper washer * for mini	φ10 (for VFIL-SS)	371362	1.9	4
★	Sliding holder	FCK1-1006	054323	18	—

\* Used to change to H type.

## ■ Information of used bolt

	Product name	TYPE	Order code No.	Qty
A+C	Flat head screw with hexagon socket	M4*8	122785	4
B+C	Nut class 1	M6	122782	2
	Spring washer	M6	122775	2
B+C	Flat washer	M6	122780	2
	Bolt with hexagon socket (SW+flat W)	M4*12	122812	4



# Robot Hand (for Articulated Robot)

Capable of handling a large number of workpieces in a short amount time.

Robot hand



You can see moving images of products by using QR code reader of your smartphone

- ▶ The suction stem could be easily moved to match the contours of the workpieces.
- ▶ The scale is marked on the SUS pipe.
- ▶ It can fulfill a variety of purposes when combined with chuck parts.



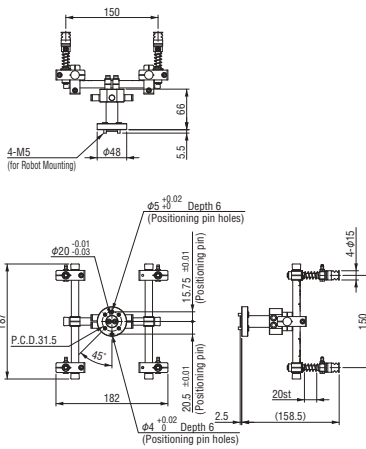
**NEW**



## Robot hand

Order code No.	<b>171372</b>
TYPE	<b>RHK10-150</b>

- Weight : 490g
- Suction cups : VAPH-15C-3 (4pcs)
- Air supply port : Rc 1/8
- Mounting pitch (mm) : P.C.D 31.5
- Mounting boss diameter (mm) : outer diameter  $\phi 20$ , height 2.5
- Positioning pin holes (mm) :  $\phi 4 \cdot \phi 5$
- Suction stem pitch (mm) : 50-150



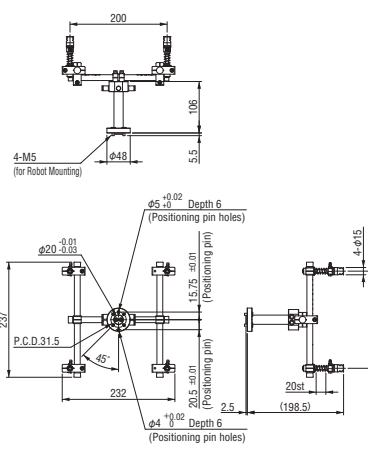
**NEW**



## Robot hand

Order code No.	<b>171373</b>
TYPE	<b>RHK10-200</b>

- Weight : 545g
- Suction cups : VAPH-15C-3 (4pcs)
- Air supply port : Rc 1/8
- Mounting pitch (mm) : P.C.D 31.5
- Mounting boss diameter (mm) : outer diameter  $\phi 20$ , height 2.5
- Positioning pin holes (mm) :  $\phi 4 \cdot \phi 5$
- Suction stem pitch (mm) : 100-200



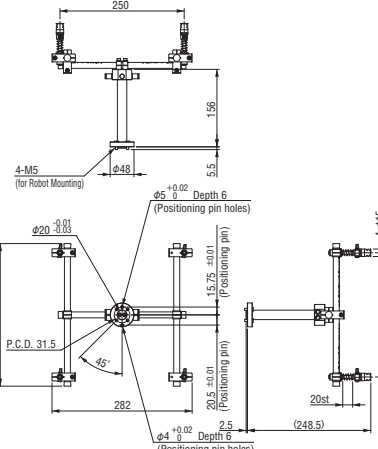
**NEW**



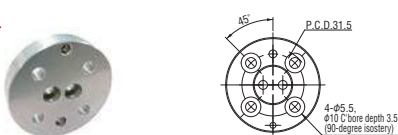
## Robot hand

Order code No.	<b>171374</b>
TYPE	<b>RHK10-250</b>

- Weight : 612g
- Suction cups : VAPH-15C-3 (4pcs)
- Air supply port : Rc 1/8
- Mounting pitch (mm) : P.C.D 31.5
- Mounting boss diameter (mm) : outer diameter  $\phi 20$ , height 2.5
- Positioning pin holes (mm) :  $\phi 4 \cdot \phi 5$
- Suction stem pitch (mm) : 150-250



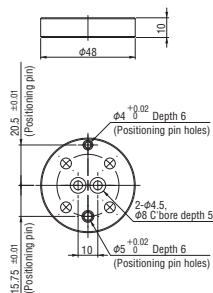
**NEW**



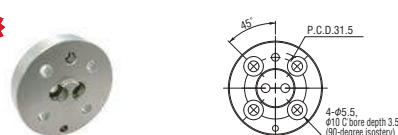
## Mounting flange

Order code No.	<b>171375</b>
TYPE	<b>RHK10-FA</b>

- Weight : 41.6g
- Mounting pitch (mm) : P.C.D 31.5
- Mounting boss diameter (mm) : no (Flat)
- Positioning pin holes (mm) :  $\phi 4 \cdot \phi 5$
- Mounting bolt : M5



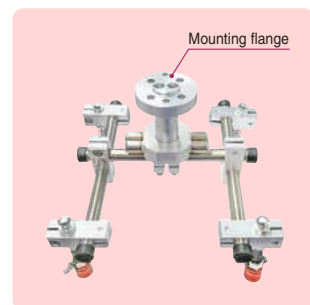
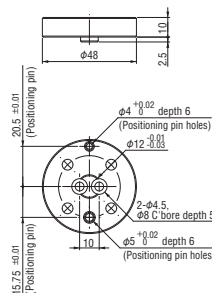
**NEW**



## Mounting flange

Order code No.	<b>171376</b>
TYPE	<b>RHK10-FB</b>

- Weight : 41.8g
- Mounting pitch (mm) : P.C.D 31.5
- Mounting boss diameter (mm) : outer diameter  $\phi 12$ , height 2.5
- Positioning pin holes (mm) :  $\phi 4 \cdot \phi 5$
- Mounting bolt : M5



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

### Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information

# MEMO

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# Pneumatic Components / Sensors



## Pneumatic Components ..... 6-2

- ▶ Manifold ..... 6-3
- ▶ Light Weight Plastic Manifold ..... 6-4
- ▶ Fitting ..... 6-5
- ▶ Gasket / Air Coupler / Micro Coupler ..... 6-8
- ▶ Tube / Sleeve ..... 6-9
- ▶ Cable Ties / Cable Tie Mount / Tube Cutter ..... 6-10
- ▶ Regulator / Manual Air Valve Push Button / Manual Air Valve Push Slide Button ..... 6-11
- ▶ Flow Controller ..... 6-12
- ▶ Valve Joint (Quick Exhaust Valve / Finger Valve) ... 6-13
- ▶ Mini Pressure Regulator ..... 6-14
- ▶ Bolt / Nut / Washer ..... 6-15



## Sensors / Multi AND Board ..... 6-16

- ▶ Star Sensor ..... 6-17
- ▶ Micro Switch / Limit Switch ..... 6-18
- ▶ Limit Switch Mounting Bracket ..... 6-19
- ▶ Auto Switch (Reed-Contactless) ..... 6-20
- ▶ High-Precision Cylinder Sensor ..... 6-21
- ▶ Photo Sensor ..... 6-22
- ▶ Photo Area Sensor ..... 6-24
- ▶ Fiber Units ..... 6-25
- ▶ Fiber Amplifier Unit ..... 6-26
- ▶ Proximity Sensor ..... 6-30
- ▶ Multi AND Board ..... 6-32



## PCIO Communication Unit ..... 6-34

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (QM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Bush Cylinder / Pads / Bush Manifolds

### By Industry

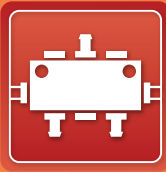
Logistics / Packaging / Steel Metal Clamping / Metal Fabrication

### Assembling Tools

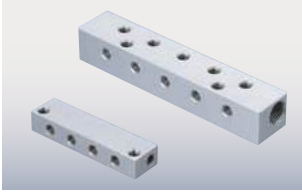
Tool / Jig

### Information

Various Products Information



## Manifold



Air circuit can be branched to two or more.

6-3

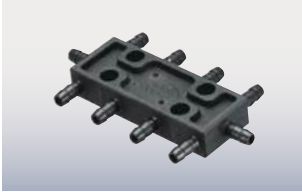
## Regulator/Manual Air Valve Push Button/Manual Air Valve Push slide Button



Used for air pressure regulations and switches.

6-11

## Light Weight Plastic Manifold



Air circuit can be branched to two or more.

6-4

## Flow Controller



Speed of air cylinder can be adjusted.

6-12

## Fitting



Used for connection of chuck device and air tube.

6-5

## Valve Joint (Quick Exhaust Valve/Finger Valve)



Used to control air flow.

6-13

## Gasket/Air Coupler/Micro Coupler



Used for pipe connection of chuck device.

6-8

## Mini Pressure Regulator



Grips work piece gently by decreasing gripping force.

6-14

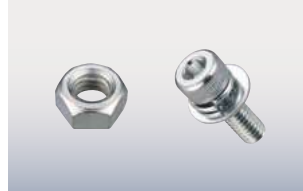
## Tube/Sleeve



Used for pipe connection of chuck device. The product is flexible and can follow hard action of robot.

6-9

## Bolt/Nut/Washer



Use for fixing parts.

6-15

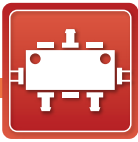
## Cable Ties/Cable Tie mount/Tube Cutter



Use to secure your tubing on plate or jungle gym.

6-10





# Manifold

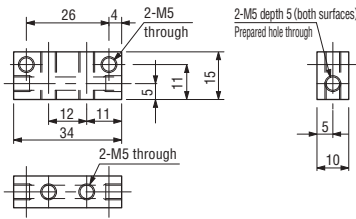
Air circuit is branched off in two or more directions.



## Manifold • mini

Order code No.	<b>122034</b>
TYPE	<b>MM-6P</b>

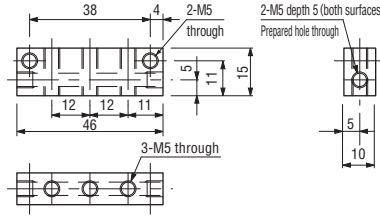
● Weight : 10g ● Mounting : M5/P26



## Manifold mini

Order code No.	<b>122035</b>
TYPE	<b>MM-8P</b>

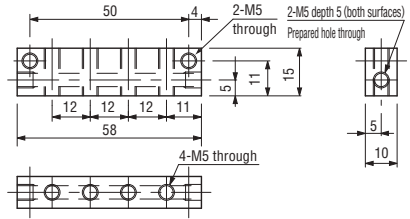
● Weight : 14g ● Mounting : M5/P38



## Manifold mini

Order code No.	<b>122036</b>
TYPE	<b>MM-10P</b>

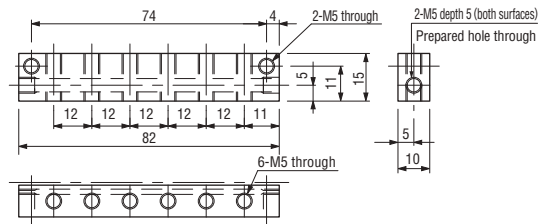
● Weight : 17g ● Mounting : M5/P50



## Manifold mini

Order code No.	<b>122037</b>
TYPE	<b>MM-14P</b>

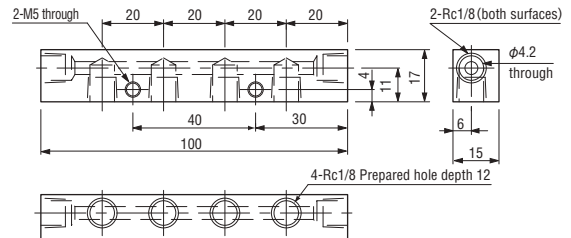
● Weight : 25g  
● Mounting : M5/P74



## Manifold small

Order code No.	<b>122040</b>
TYPE	<b>MS-6P (1/8)</b>

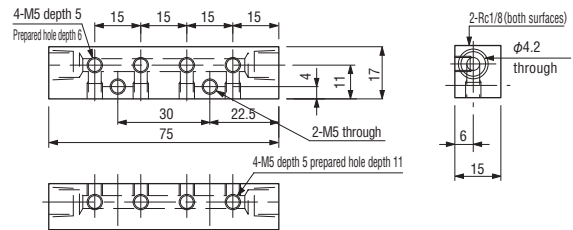
● Weight : 52g  
● Mounting : M5/P40



## Manifold small

Order code No.	<b>122038</b>
TYPE	<b>MS-10P</b>

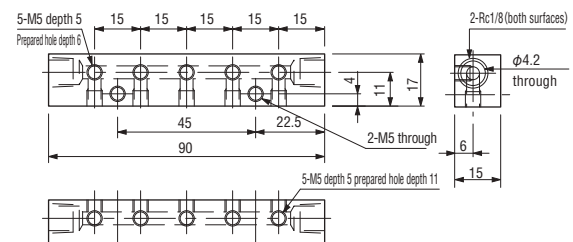
● Weight : 41g  
● Mounting : M5/P30



## Manifold small

Order code No.	<b>122039</b>
TYPE	<b>MS-12P</b>

● Weight : 50g  
● Mounting : M5/P45



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

By Industry

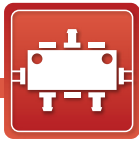
Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Light Weight Plastic Manifold

Air circuit is branched off in two or more directions.

● Close up unneeded ports with cap.



Light weight plastic manifold BF5

Order code No.	<b>123195</b>
TYPE	<b>MP-10P-BF5</b>

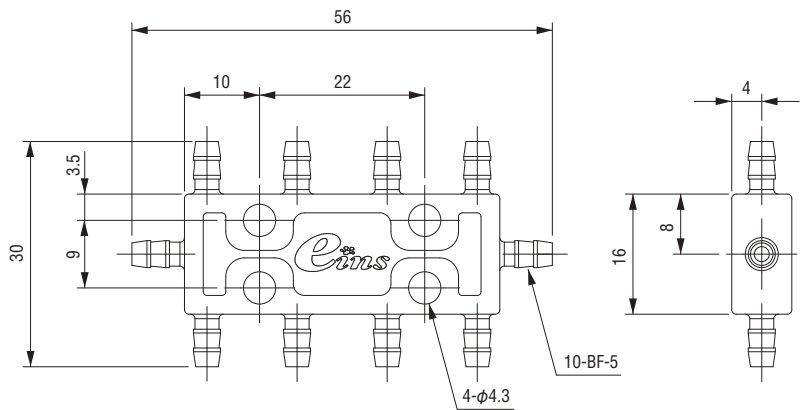
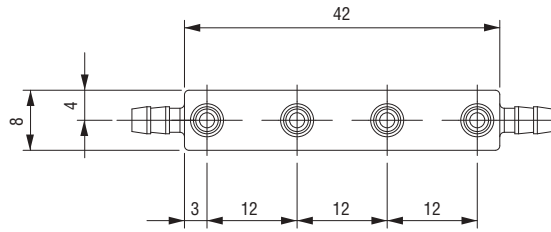
● Weight : 5g



Cap for resin manifold • BF5

Order code No.	<b>010585</b>
TYPE	<b>BF5-CAP</b>

● Weight : 1g



Light weight plastic manifold BF6

Order code No.	<b>123196</b>
TYPE	<b>MP-10P-BF6</b>

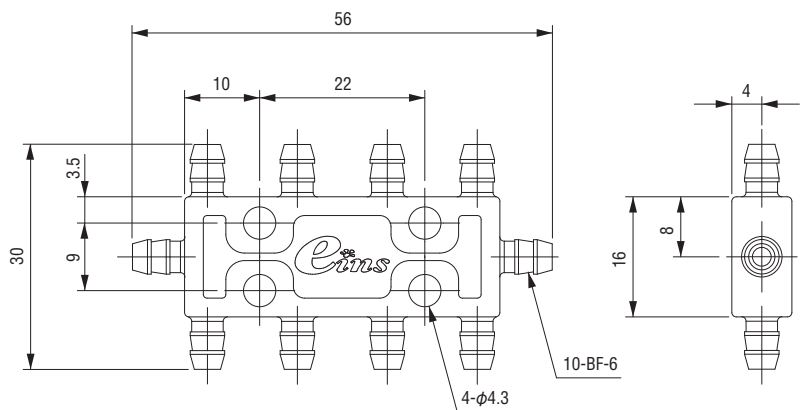
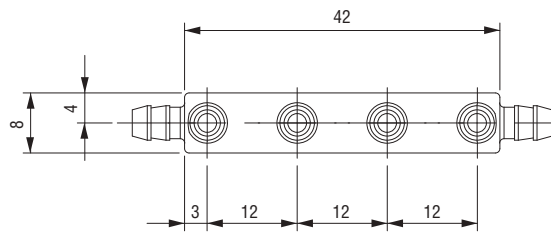
● Weight : 5g

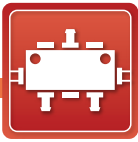


Cap for resin manifold • BF6

Order code No.	<b>010586</b>
TYPE	<b>BF6-CAP</b>

● Weight : 1g







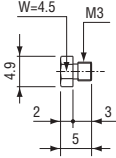
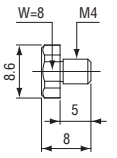
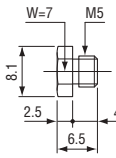
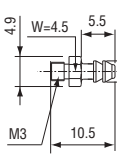
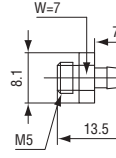
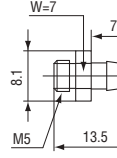








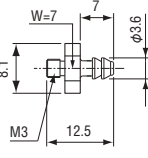
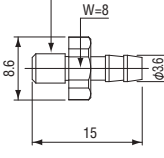
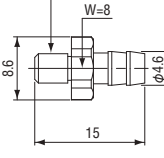
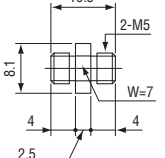
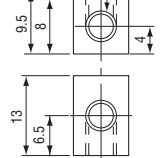
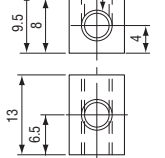







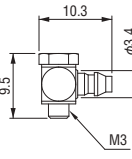
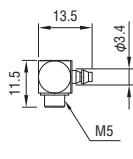
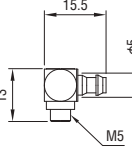
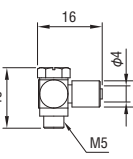
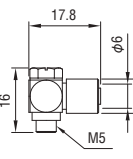
# Fitting

Used for connection of chuck device and air tube.

• Please select from (6-9) for the air tube to be connected.

Fitting	For micro-mini cylinder			For micro-mini cylinder		
						
Drawing						
Order code No.	<b>010474</b>	<b>151349</b>	<b>190106</b>	<b>010473</b>	<b>190109</b>	<b>190108</b>
TYPE	<b>PF-3</b>	<b>PF-M4</b>	<b>PF</b>	<b>BF-3</b>	<b>BF-5</b>	<b>BF-6</b>
Weight	0.5g	0.2g	1.2g	0.7g	1.4g	1.5g
Connection	M3	M4	M5	M3	M5	M5
Tube Size	—	—	—	φ4	φ4、φ4.5	φ6

Fitting	For micro-mini cylinder					
						
Drawing						
Order code No.	<b>010416</b>	<b>010482</b>	<b>010481</b>	<b>190107</b>	<b>190110</b>	<b>190111</b>
TYPE	<b>BF-5-M3</b>	<b>BF-5-M4</b>	<b>BF-6-M4</b>	<b>NF</b>	<b>EF</b>	<b>TF</b>
Weight	1.2g	0.2g	0.2g	1.4g	7.0g	6.6g
Connection	M3	M4	M4	M5	M5	M5
Tube Size	φ4、φ4.5	φ4、φ4.5	φ6	—	—	—

Fitting	Barb elbow for soft tubing			Hose Elbow	
	For micro-mini cylinder				
					
Drawing					
Order code No.	<b>120543</b>	<b>120692</b>	<b>122892</b>	<b>120500</b>	<b>122832</b>
TYPE	<b>M-3ALU-4</b>	<b>M-5ALU-4</b>	<b>M-5ALU-6</b>	<b>MS-5HLH-4</b>	<b>MS-5HLH-6</b>
Weight	0.7g	4.1g	4.5g	4.2g	6.2g
Connection	M3	M5	M5	M5	M5
Tube Size	φ4	φ4	φ6	φ4	φ6

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Section

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools


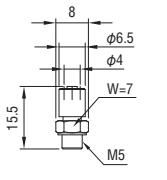
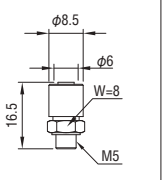
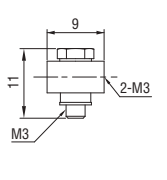
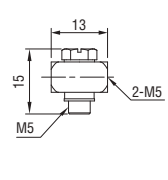
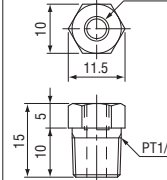
Tool / Jig


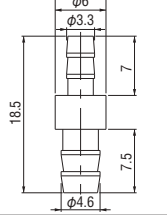
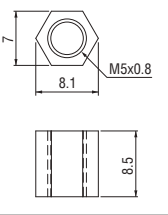
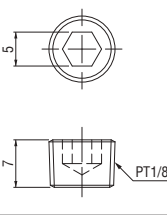
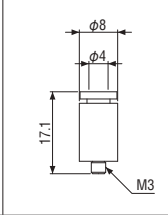
## Information


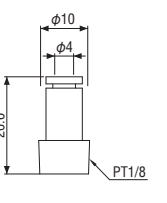
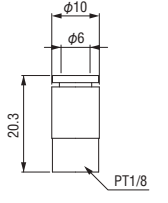
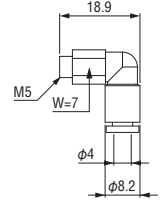
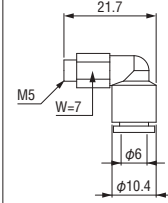
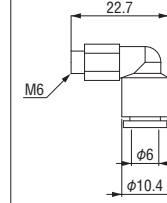
Various Products Information

# Fitting

● Please select from (6-9) for the air tube to be connected.

Fitting	Hose nipple		Universal tee		Bushing	
						
Order code No.	<b>122831</b>	<b>122049</b>	<b>123471</b>	<b>120607</b>	<b>190112</b>	<b>190113</b>
TYPE	<b>MS-5H-4</b>	<b>MS-5H-6</b>	<b>M-3UT</b>	<b>M-5UT</b>	<b>RBF</b>	<b>RBF-1</b>
Weight	2.5g	3.7g	1.4g	4.8g	7.1g	17.6g
Connection	M5	M5	M3	M5	PT1/8, M5	PT1/4, M5
Tube Size	φ4	φ6	—	—	—	—

Fitting	Reducer nipple	Joint	Socket plug (trivalent chromate white)	Half Union	
					
Order code No.	<b>300385</b>	<b>022667</b>	<b>271714</b>	<b>101749</b>	<b>101467</b>
TYPE	<b>4-S-6</b>	<b>CF</b>	<b>1/8</b>	<b>KQ2S04-M3G</b>	<b>KQ2S04-M5N</b>
Weight	1.2g	1.75g	2.5g	2.0g	3.0g
Connection	—	M5	1/8	M3	M5
Tube Size	φ4, φ4.5, φ6	—	—	φ4	φ4

Fitting	Half Union		Elbow Union			
						
Order code No.	<b>101746</b>	<b>101468</b>	<b>101462</b>	<b>101464</b>	<b>102051</b>	<b>101710</b>
TYPE	<b>KQ2S04-01NS</b>	<b>KQ2S06-01NS</b>	<b>KQ2L04-M5N</b>	<b>KQ2L06-M5N</b>	<b>KQ2L06-M6A</b>	<b>KQ2L04-01NS</b>
Weight	8.0g	6.5g	3.1g	3.2g	4.3g	4.8g
Connection	1/8	PT1/8	M5	M5	M6	PT1/8
Tube Size	φ4	φ6	φ4	φ6	φ6	φ4

**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

**Pneumatic Components**

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

**By Industry**







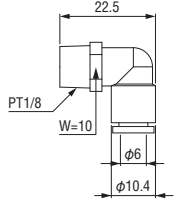
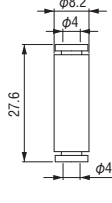
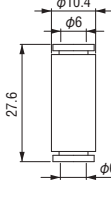
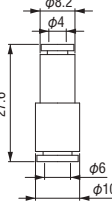
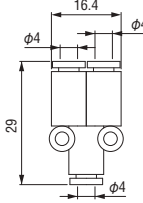
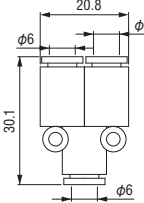
Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication




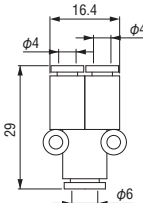
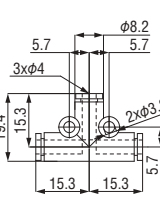
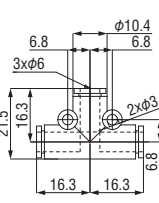
**Assembling Tools**



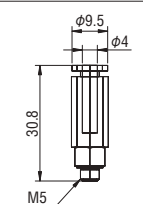
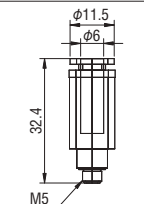
Tool / Jig

**Information**

Various Products Information

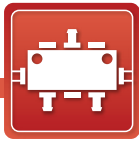
	Elbow Union	Straight Union		Straight Reducer Union	Union Y	
<b>Fitting</b>						
<b>Drawing</b>						
<b>Order code No.</b>	<b>101463</b>	<b>101469</b>	<b>101470</b>	<b>101471</b>	<b>101472</b>	<b>101465</b>
<b>TYPE</b>	<b>KQ2L06-01NS</b>	<b>KQ2H04-00A</b>	<b>KQ2H06-00A</b>	<b>KQ2H04-06A</b>	<b>KQ2U04-00A</b>	<b>KQ2U06-00A</b>
<b>Weight</b>	5.2g	1.6g	2.1g	2.0g	2.9g	4.1g
<b>Connection</b>	PT1/8	—	—	—	—	—
<b>Tube Size</b>	phi 6	phi 4	phi 6	phi 4、phi 6	phi 4	phi 6

	Reducer Union Y	Cheese:KQ2T	
<b>Fitting</b>			
<b>Drawing</b>			
<b>Order code No.</b>	<b>101473</b>	<b>101596</b>	<b>101597</b>
<b>TYPE</b>	<b>KQ2U04-06A</b>	<b>KQ2T04-00A</b>	<b>KQ2T06-00A</b>
<b>Weight</b>	3.3g	2.8g	3.8g
<b>Connection</b>	—	—	—
<b>Tube Size</b>	phi 4、phi 6	phi 4	phi 6

	Half Union KCH	
<b>Fitting</b>		
<b>Drawing</b>		
<b>Order code No.</b>	<b>100817</b>	<b>100818</b>
<b>TYPE</b>	<b>KCH04-M5</b>	<b>KCH06-M5</b>
<b>Weight</b>	8.0g	10.0g
<b>Connection</b>	M5	M5
<b>Tube Size</b>	phi 4	phi 6

\* When removing the tube, turn off the air. (No air leaks even when the tube is removed.)





# Gasket / Air Coupler / Micro Coupler

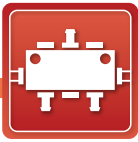
Use with pipe connections.

● Please select from (6-9) for the air tube to be connected.

Gasket			
Drawing			
Order code No.	<b>122889</b>	<b>122890</b>	<b>122891</b>
TYPE	<b>M3-G</b>	<b>M4-G</b>	<b>M5-G</b>
Weight	—	—	—
Connection	—	—	—
Tube Size	—	—	—

Air coupler		
Drawing		
Order code No.	<b>280018</b>	<b>322948</b>
TYPE	<b>20PF</b>	<b>60PC</b>
Weight	29.0g	24.0g
Connection	Rc1/4	—
Tube Size	—	φ6

Micro coupler					
Drawing					
Order code No.	<b>120170</b>	<b>120120</b>	<b>122893</b>	<b>122894</b>	<b>120121</b>
TYPE	<b>MC-04PH</b>	<b>MC-05PM</b>	<b>MC-04PC</b>	<b>MC-06PC</b>	<b>MC-05SM</b>
Weight	1.5g	2.0g	5.0g	3.0g	7.0g
Connection	—	M5	—	—	M5
Tube Size	φ6	—	φ4	φ6	—



# Tube / Sleeve

Use for connecting air powered devices, flexible to work with your robots movements.

Polyurethane tube (flexible)					
Order code No.	<b>196516</b>	<b>196277</b>	<b>193564</b>	<b>196513</b>	
TYPE	<b>TU0425W-20</b>	<b>TU0425B-20</b>	<b>TU0425BU-20</b>	<b>TU0425R-20</b>	
Tube Color	White	Black	Blue	Red	
Length	20m				
Outside × Inside diameter	φ4 × φ2.5				
Order code No.	<b>196514</b>	<b>196515</b>	<b>196520</b>	<b>196278</b>	
TYPE	<b>TU0425Y-20</b>	<b>TU0425G-20</b>	<b>TU0604W-20</b>	<b>TU0604B-20</b>	
Tube Color	Yellow	Green	White	Black	
Length	20m				
Outside × Inside diameter	φ4 × φ2.5		φ6 × φ4		
Order code No.	<b>193566</b>	<b>196517</b>	<b>196518</b>	<b>196519</b>	
TYPE	<b>TU0604BU-20</b>	<b>TU0604R-20</b>	<b>TU0604Y-20</b>	<b>TU0604G-20</b>	
Tube Color	Blue	Red	Yellow	Green	
Length	20m				
Outside × Inside diameter	φ6 × φ4				



Soft polyurethane tube (more flexible)			
Order code No.	<b>196530</b>	<b>196531</b>	
TYPE	<b>TUS0425W-20</b>	<b>TUS0604W-20</b>	
Tube Color	White		
Length	20m		
Outside × Inside diameter	φ4 × φ2.5	φ6 × φ4	



Urethane tube (flexible)					
Order code No.	<b>200039</b>	<b>200113</b>	<b>200040</b>	<b>200112</b>	
TYPE	<b>UF4.5 * 2.7 (5M)</b>	<b>UF4.5 * 2.7 (20M)</b>	<b>UF6 * 4 (5M)</b>	<b>UF6 * 4 (20M)</b>	
Tube Color	Light blue				
Length	5m	20m	5m	20m	
Outside × Inside diameter	φ4.5 × φ2.7		φ6 × φ4		



\* Please note that 200039 and 200113 can't be used for φ 4mm one touch fitting.

Silicone tube (super flexible)			
Order code No.	<b>300514</b>	<b>322194</b>	
TYPE	<b>4 * 2 (5M)</b>	<b>6 * 3 (5M)</b>	
Tube Color	Translucent		
Length	5m		
Outside × Inside diameter	φ4 × φ2	φ6 × φ3	



\* Can't be used for one touch fitting.

Sleeve		Order code No.	<b>300001</b>
		TYPE	<b>BS-06</b>
*For pullout prevention		Weight	0.2g

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

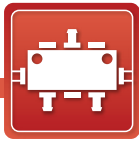
Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



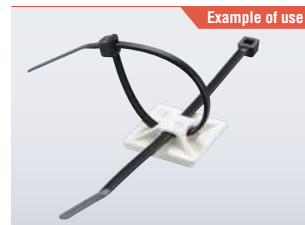
# Cable Ties / Cable Tie Mount / Tube Cutter

Keep your tooling tubes neat and tied up.

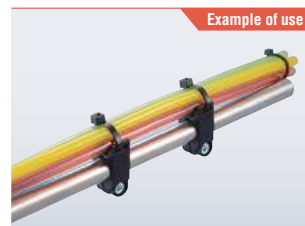
Cable Ties						
	Order code No.	<b>001920</b>	<b>001921</b>	<b>001922</b>	<b>001923</b>	<b>001924</b>
	TYPE	<b>AB100-W</b>	<b>AB150-W</b>	<b>AB200-W</b>	<b>AB300-W</b>	<b>AB350-W</b>
	Length	100mm	152mm	202mm	301mm	382mm
	Per bag	1,000pcs/bag	100pcs/bag			50pcs/bag

Cable Ties / tag		
	Order code No.	<b>152324</b>
	TYPE	<b>PLF1M-C</b>
	Length	109mm
	Per bag	100pcs/bag

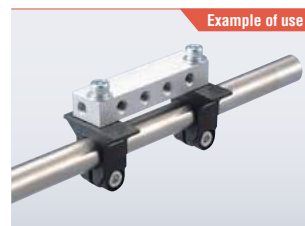
Cable tie mount			
	Order code No.	<b>183222</b>	<b>183223</b>
	TYPE	<b>SKM-20</b>	<b>SKM-30</b>
	Length	20×20×5.3	30×30×6
	Per bag	100pcs/bag	



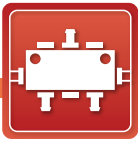
Resin Fixture (Cable Ties)			
	Order code No.	<b>171210</b>	<b>171211</b>
	TYPE	<b>RCA12</b>	<b>RCA20</b>
	Weight	0.2g	
	Per bag	φ 12	φ 20



Resin Fixture (M4)			
	Order code No.	<b>171212</b>	<b>171213</b>
	TYPE	<b>RCB12</b>	<b>RCB20</b>
	Weight	0.2g	
	Per bag	φ 12	φ 20



Tube cutter		* Do not use for cutting metal such as electric wire.	
	Order code No.	<b>190508</b>	
	TYPE	<b>TK-1</b>	
	Weight	154g	
	Applied tube material	Nylon, soft nylon, polyurethane, other non-rigid plastic tubes	
	Applied tube outside diameter	13mm or less	



# Regulator / Manual Air Valve Push Button / Manual Air Valve Push Slide Button

Used for air pressure regulations and switches.

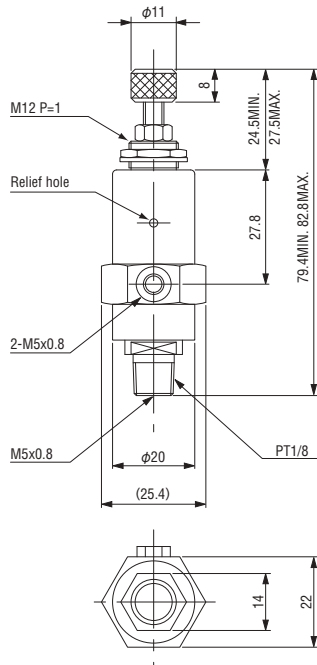
- ▶ Grip strength of components such as mini cylinder is adjusted by regulating pressure.



## Regulator

Order code No.	<b>190009</b>
TYPE	<b>RSR</b>

- Weight : 108g



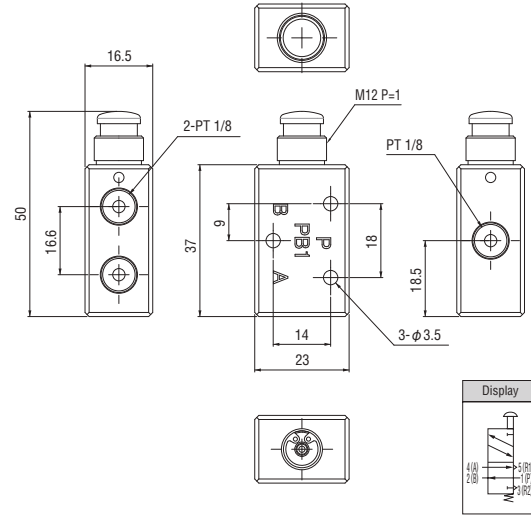
- ▶ Used to switch port of air (A/B).



## Manual air valve push button

Order code No.	<b>152308</b>
TYPE	<b>PB1-E</b>

- Weight : 65g
- Fixing bolt and nut are separately sold.
- Return type



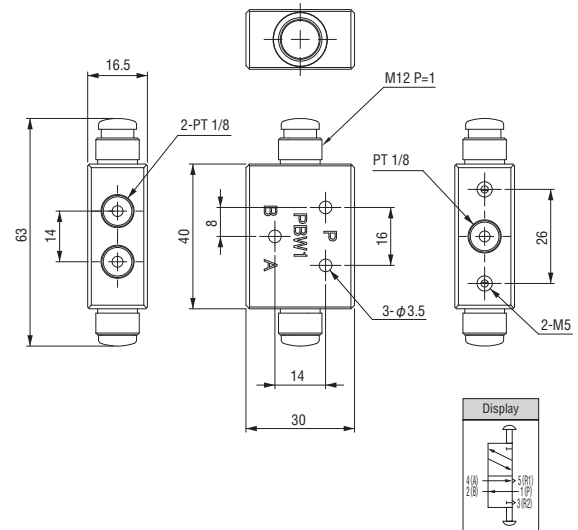
- ▶ Used to switch port of air (A/B).



## Manual air valve push slide button

Order code No.	<b>152306</b>
TYPE	<b>PBW1-E</b>

- Weight : 75g
- Fixing bolt and nut are separately sold.
- Retention type



Mountable on RSR, PB1-E, and PBE1-E.  
 [120483 + 3-37] is separately required for installation to PB1-E, PBW1-E.

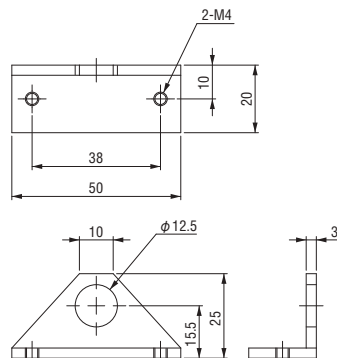
- ▶ Mounting bracket for push button and regulator.



## RSR 4P mount BKT

Order code No.	<b>020830</b>
TYPE	<b>CP-055</b>

- Weight : 2g



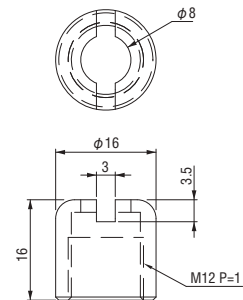
- ▶ Installation to PB1-E and PBW1-E is possible.



## Push button cap

Order code No.	<b>152307</b>
TYPE	<b>PB1-C</b>

- Weight : 5g
- With spring washer



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

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Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

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### Lightweight Parts Series

Frame / Section / Resin Cylinders (Pads) / Resin Manifolds

### By Industry

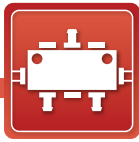
Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



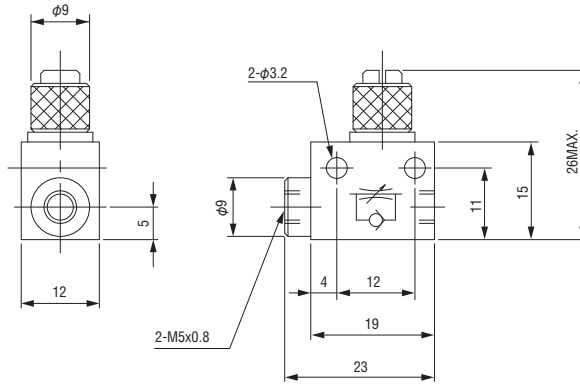
# Flow Controller

Speed of air cylinder can be adjusted.



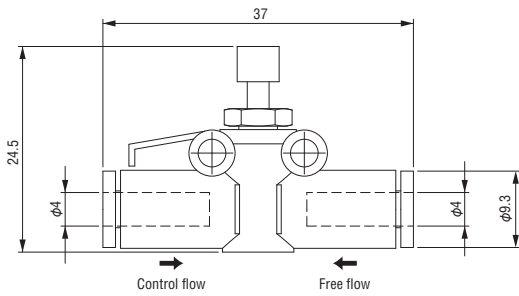
Order code No.	<b>190002</b>
TYPE	<b>SC0</b>

- Weight : 29g
- Directional



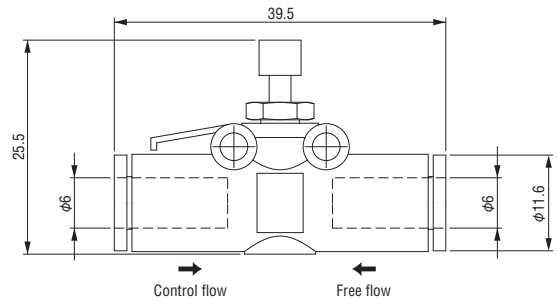
Order code No.	<b>002199</b>
TYPE	<b>AS1002F-04</b>

- Weight : 5.5g
- Directional



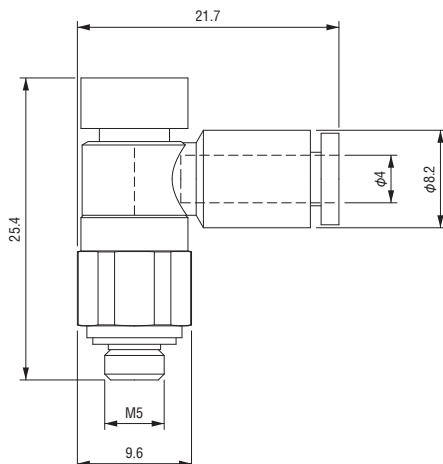
Order code No.	<b>002200</b>
TYPE	<b>AS1002F-06</b>

- Weight : 6.5g
- Directional



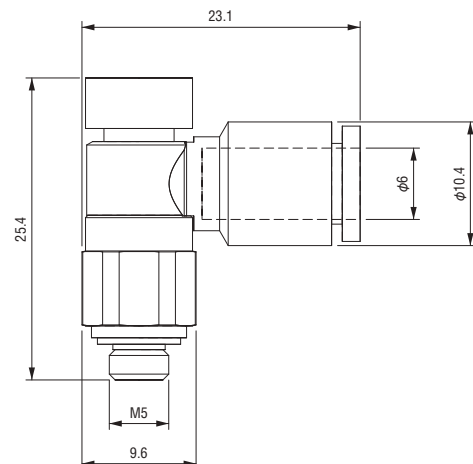
Order code No.	<b>002239</b>
TYPE	<b>AS1201F-M5-04A</b>

- Weight : 5g
- Meter out type

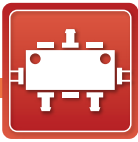


Order code No.	<b>002288</b>
TYPE	<b>AS1201F-M5-06A</b>

- Weight : 6g
- Meter out type







# Valve Joint (Quick Exhaust Valve / Finger Valve)

Used to control air flow.

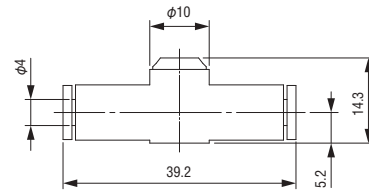
- ▶ Quick exhaust valve with one-touch pipe joint.
- ▶ The reaction time is shortened for the discharge of the air inside the cylinder.



## Quick Exhaust Valve

Order code No.	002216
TYPE	AQ240F-04-00

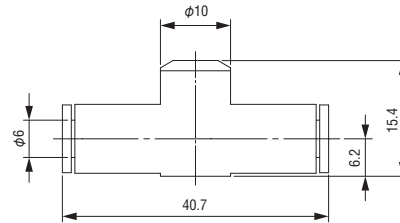
- Weight : 5g
- Silencer is included.
- Directional



## Quick Exhaust Valve

Order code No.	002217
TYPE	AQ240F-06-00

- Weight : 6g
- Silencer is included.
- Directional



- ▶ One-touch pipe joint which allows visual inspection of valve open/close with the orientation of the knob.
- ▶ A switching valve for manually controlling residual air pressure.



2-port valve

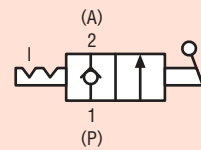
## Finger Valve

Order code No.	211152
TYPE	VHK2A-04F-04FL

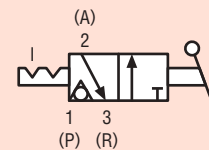
- Weight : 15g
- Applicable tube size :  $\phi 4$
- Directional

## Structural drawing

### 2-port valve



### 3-port valve



## Finger Valve

Order code No.	211153
TYPE	VHK2A-06F-06FL

- Weight : 16g
- Applicable tube size :  $\phi 6$
- Directional

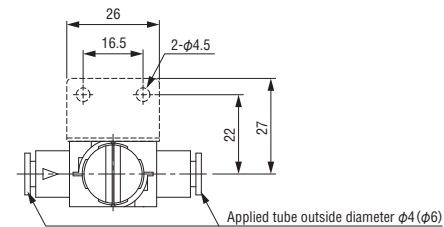


3-port valve

## Finger Valve

Order code No.	211154
TYPE	VHK3A-04F-04FL

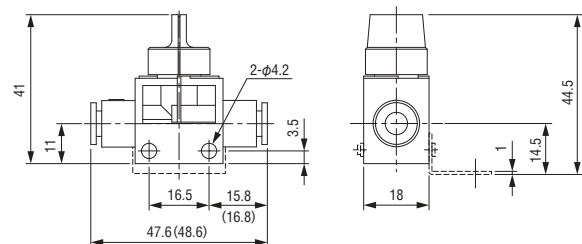
- Weight : 15g
- Applicable tube size :  $\phi 4$
- Directional



## Finger Valve

Order code No.	211155
TYPE	VHK3A-06F-06FL

- Weight : 16g
- Applicable tube size :  $\phi 6$
- Directional



\* Size in ( ) shows the size of the component for 06F.

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders (Pads) / Resin Manifolds

By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

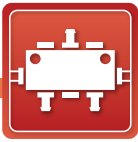
Assembling Tools

Tool / Jig

Information

Various Products Information



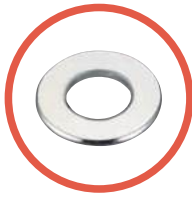


# Bolt / Nut / Washer

## Assembly Hardware



Nut class 1



Flat washer



Spring washer



Flat head screw with hexagon socket



Cross-recessed pan head screw



Bolt with hexagon socket (SW+ flat W) trivalent chromate white

	Product name	Order code No.	TYPE
1	Cross-recessed pan head screw (trivalent chromate white)	<b>123446</b>	<b>BKJ3-6 (M3 * 6)</b>
2	Cross-recessed pan head screw (trivalent chromate white)	<b>123447</b>	<b>BKJ3-10 (M3 * 10)</b>
3	Cross-recessed pan head screw (Stainless Steel)	<b>123448</b>	<b>NKJ2.6-5 (M2.6 * 5)</b>
4	Cross-recessed pan head screw (trivalent chromate white)	<b>123449</b>	<b>M3 * 16</b>
5	Bolt with hexagon socket (SW + flat W) trivalent chromate white	<b>122812</b>	<b>M4 * 12 (E)</b>
6	Bolt with hexagon socket (SW + flat W) trivalent chromate white	<b>122821</b>	<b>M6 * 15 (E)</b>
7	Bolt with hexagon socket (SW + flat W) trivalent chromate white	<b>122822</b>	<b>M6 * 20 (E)</b>
8	Bolt with hexagon socket (trivalent chromate white)	<b>123231</b>	<b>M3 * 6</b>
9	Bolt with hexagon socket (trivalent chromate white)	<b>123232</b>	<b>M3 * 8</b>
10	Bolt with hexagon socket (trivalent chromate white)	<b>122790</b>	<b>M3 * 10</b>
11	Bolt with hexagon socket (trivalent chromate white)	<b>122795</b>	<b>M4 * 10</b>
12	Bolt with hexagon socket (trivalent chromate white)	<b>122798</b>	<b>M4 * 25</b>
13	Bolt with hexagon socket (trivalent chromate white)	<b>122805</b>	<b>M6 * 15</b>
14	Bolt with hexagon socket (trivalent chromate white)	<b>122969</b>	<b>M6 * 25</b>
15	Bolt with hexagon socket (trivalent chromate white)	<b>122989</b>	<b>M6 * 35</b>
16	Flat head screw with cross recesses (trivalent chromate white)	<b>122787</b>	<b>M2.5 * 16</b>
17	Flat head screw with cross recesses (Stainless Steel)	<b>123515</b>	<b>M4 * 10</b>
18	Flat head screw with hexagon socket	<b>122785</b>	<b>M4 * 8</b>
19	Flat head screw with cross recesses	<b>371193</b>	<b>M4 * 12</b>
20	Flat head screw with hexagon socket	<b>122786</b>	<b>M6 * 10</b>
21	Spring washer (trivalent chromate white)	<b>122772</b>	<b>M3</b>
22	Spring washer (trivalent chromate white)	<b>122773</b>	<b>M4</b>
23	Spring washer (trivalent chromate white)	<b>122775</b>	<b>M6</b>
24	Spring washer (trivalent chromate white)	<b>122776</b>	<b>M8</b>
25	Flat Washer (Trivalent Chromate) JIS	<b>122777</b>	<b>M3</b>
26	Flat Washer (Trivalent Chromate) JIS	<b>122778</b>	<b>M4</b>
27	Flat Washer (Trivalent Chromate) JIS	<b>122780</b>	<b>M6</b>
28	Flat Washer (Trivalent Chromate) JIS	<b>122781</b>	<b>M8</b>
29	Hex Nut (Trivalent Chromate)	<b>123301</b>	<b>M3</b>
30	Hex Nut (Trivalent Chromate) JIS	<b>123302</b>	<b>M4</b>
31	Nut class 1 (trivalent chromate white)	<b>122782</b>	<b>M6</b>
32	Nut class 1 (trivalent chromate white)	<b>122783</b>	<b>M8</b>

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information



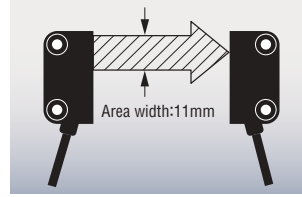
## Star Sensor



Use the lead switch inside to improve the durability. Use the two-line design for easy connection.

6-17

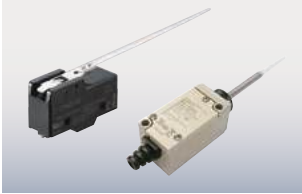
## Photo Area Sensor



Can be used for passing fine workpieces. Space-saving reflection type can be provided as a special-order product.

6-24

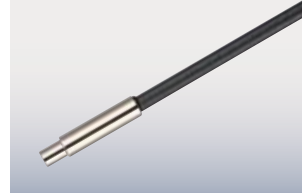
## Micro Switch / Limit Switch



Optimum for the product confirmation in the EOAT of small and large size parts. Convenient small limit switches.

6-18

## Fiber Units



Best suited for installation in a narrow area. Secure with a set screw.

6-25

## Limit Switch Mounting Bracket



Use to mount a limit switch, allowing a proper position for product confirmation to be secured.

6-19

## Fiber Amplifier Unit



Amplifier for optical fiber.

6-26

## Auto Switch (Reed · Contactless)



It can be used for container cylinders and mini cylinders.

6-20

## Proximity Sensor



Micro proximity sensor.

6-30

## High-Precision Cylinder Sensor



Detect even a tiny stroke with stability and certainty.

6-21

## Multi AND Board



Many sensor inputs are integrated in the board. And it is output from a point to the robot.

6-32

## Photo Sensor



No amplifier is required ! Special-purpose mounting brackets are also provided for jungle gym and let's joint.

6-22

## PCIO Communication Unit



Two power lines allows simple wiring between units for power supply and input/output communication

6-34



# Star Sensor

Internal reed switch to improve durability.

- ▶ Silicone rubber is adopted at the tip to prevent damage to the product.
- ▶ Lightweight (14g) and compact design.



## Star sensor

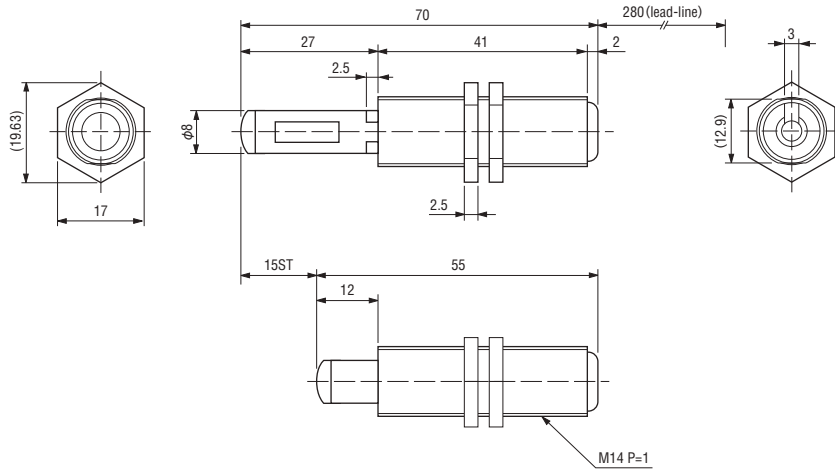
Order code No.	<b>181139</b>
TYPE	<b>SSW-15</b>

- Weight : 14g
- With 280mm lead line.
- Sensing-stroke range : 2.5mm-15mm

## Replacement rubber head for SSW-15

Order code No.	<b>270449</b>
TYPE	<b>14103301 (SSW-15)</b>

- (One set/5 pcs)



## Electrical specifications

TYPE		SSW-15
Contact point	Contact point type	1A
	Contact position	Off center gap
	Maximum contact capacity	20W
	Maximum open/close voltage	200VDC
	Maximum open/close electric current	0.5A
Electric Characteristic	Turn-on value*1	15-50A*1
	Detecting stroke	2.5mm ~ 15mm
	Open value*1	5A (min)
	Withstand voltage*2	250VDC
Others	Surrounding temperature	-25°C to 80°C
	Useful life	1 × 10 <sup>8</sup> times / DC10mV-10μA
		1 × 10 <sup>7</sup> times / DC10V-4mA
		250 × 10 <sup>4</sup> times / DC20V-0.5A
Connection method	Code drawing type (280mm)	
Spring force	0.5N	

\*1 Crossing in shipment : ±2A

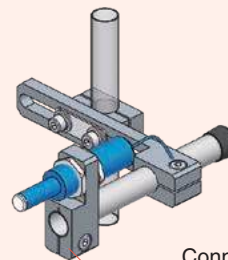
\*2 Voltage withstanding standard: turn-on value 25A or more

## Body specifications

TYPE		SSW-15
Weight		20g
Material	Main body	PA
	Shaft	PA
	Rubber head	Silicone
Accessories		Hexagon nut M14 × P1 (2 pcs)

\* Do not put a strong shock from the outside.

## Example of usage



Connector for SSW  
N01861-108  
**181139**

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

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Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

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## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

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Pneumatic Components

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## Information

Various Products Information





# Micro Switch / Limit Switch

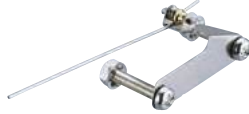
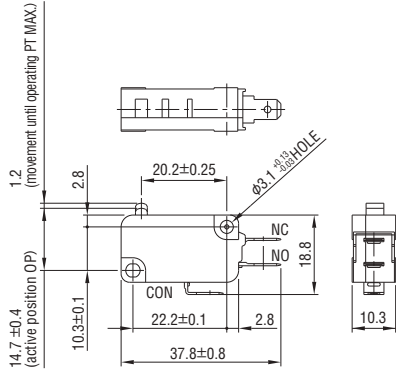
Easy-to-use small limit switches.



## Micro Switch

Order code No.	<b>210843</b>
TYPE	<b>VX-5-1A2</b>

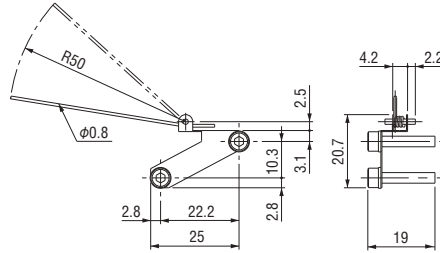
- Weight : 6g



## Limit switch hinge lever

Order code No.	<b>210414</b>
TYPE	<b>VAV-5</b>

- Weight : 5g
- Use it in combination with micro switch (no.210843).



## Connection terminal

Order code No.	<b>196749</b>
TYPE	<b>TMEDN480509-FA</b>

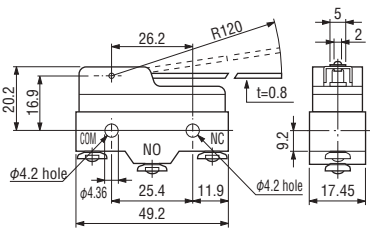
- Weight : 0.8g



## Limit Switch

Order code No.	<b>250012</b>
TYPE	<b>Z-15HW24-B</b>

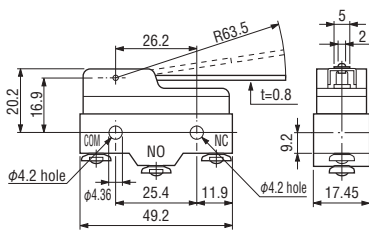
- Weight : 5g
- Stainless steel lever
- Can be attached to sensor bracket (NO1915-201) .



## Limit Switch (w/o Spring)

Order code No.	<b>250006</b>
TYPE	<b>Z-15GW55-B</b>

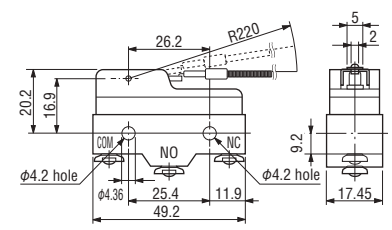
- Weight : 33.2g
- Can be attached to sensor bracket (NO1915-201) .



## Limit switch • hinge lever type

Order code No.	<b>250017</b>
TYPE	<b>Z-15GW55-B (NC W/SPRING)</b>

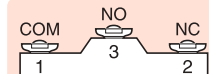
- Weight : 42g
- Can be attached to sensor bracket (NO1915-201) .



## Limit switch spring

Order code No.	<b>250018</b>
TYPE	<b>For Z-15GW55-B</b>

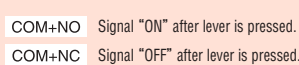
- Weight : 8g
- Exchange parts for Z-15GW55.



## Limit switch micro case

Order code No.	<b>140039</b>
TYPE	<b>OM-1</b>

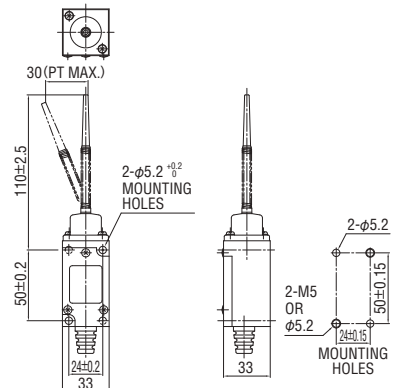
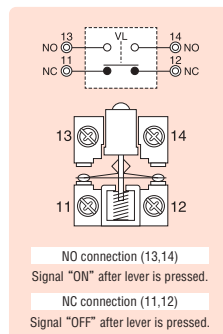
- Weight : 19g
- Mounting screws are not included.
- Protective parts for Z-15GW55



## Limit Switch

Order code No.	<b>073334</b>
TYPE	<b>HL-5300</b>

- Weight : 134g





# Limit Switch Mounting Bracket

Use to mount a limit switch, allowing a proper position for product confirmation to be secured.



Order code No.	<b>020837</b>
TYPE	<b>CP-059-A</b>

- Weight : 9g
- For Micro Switch (VX-5-1A5)

Order code No.	<b>020838</b>
TYPE	<b>CP-059-B</b>

- Weight : 10g
- For Micro Switch (VX-5-1A5)



Order code No.	<b>020839</b>
TYPE	<b>CP-059-C</b>

- Weight : 11g
- For Micro Switch (VX-5-1A5)

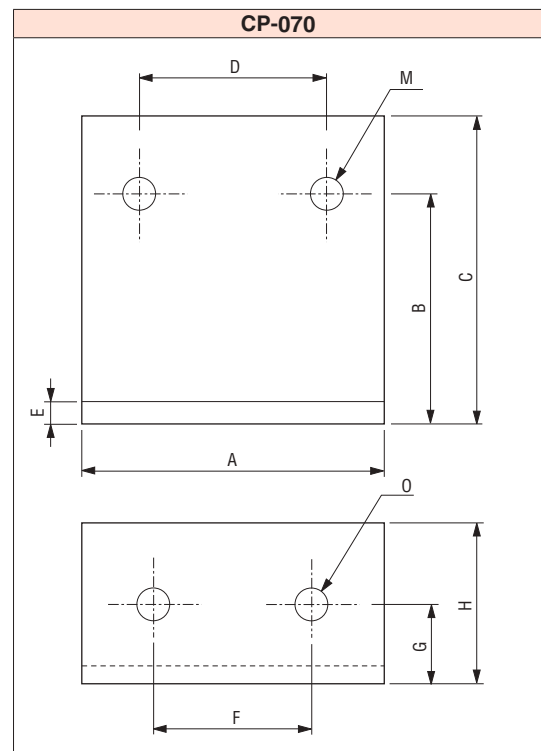
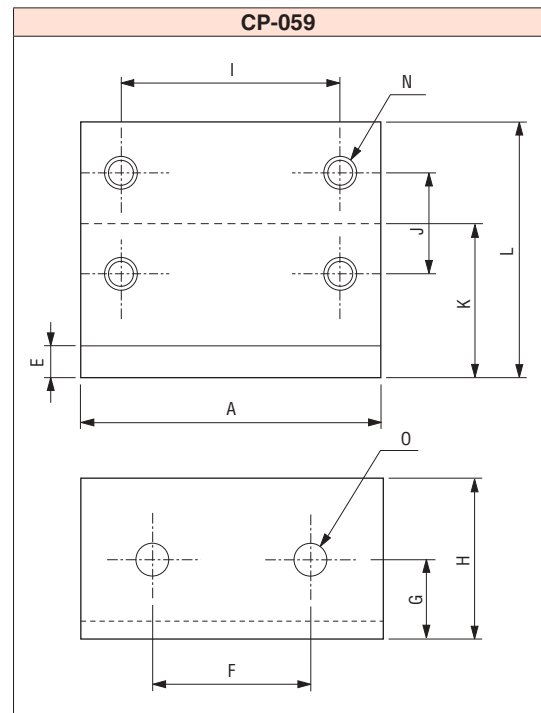
Order code No.	<b>021009</b>
TYPE	<b>CP-070</b>

- Weight : 17g
- For Limit Switch (Z-15HW)

## Dimensions

(mm)

TYPE	CP-059-A	CP-059-B	CP-059-C	CP-070
A		30		40
B		—		30
C		—		40
D		—		25.5
E		3		3
F		20		20
G		10		10
H		20		20
I		22		—
J		10		—
K	15	20	25	—
L	25	30	35	—
M		—		M4
N		M3		—
O		M4		M4
Remarks	For VX-5-1A2			For Z-15HW24-B For Z-15GW55-B



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

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Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

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Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

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### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

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### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Auto Switch (Reed·Contactless)

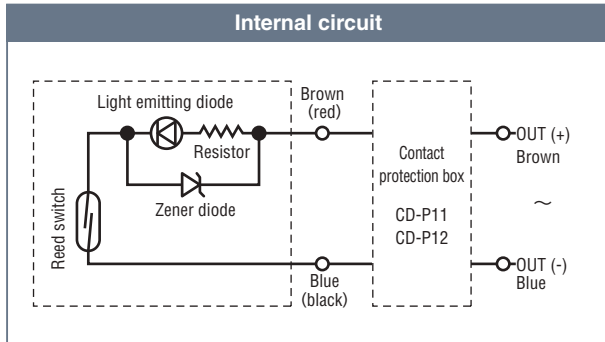
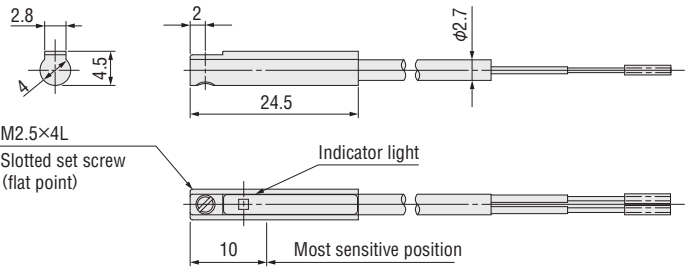
Can be attached to container cylinder and resin mini cylinder.



## Auto switch (Reed SW)

Order code No.	<b>030282</b>
TYPE	<b>D-A93</b>

- Weight : 6g
- Length : 0.5m
- Terminal process is not made.



## ■ Specification

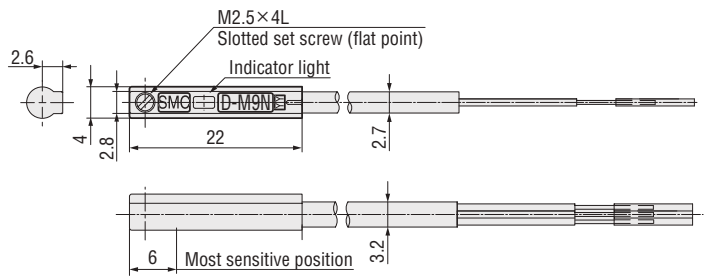
TYPE	D-A93 (With indicator light)
Applicable load	relay, PLC
Load voltage	24VDC
Load current range	5 ~ 40mA
Contact protection circuit	none
Internal voltage drop	2.4V or Less (~20mA) / 3V or Less (~40mA)
Indicator light	Red LED illuminates when turned ON
Standard	CE / UKCA marking
Lead wire	0.5M Load (brown), - (blue)



## Auto switch (contactless)

Order code No.	<b>030425</b>
TYPE	<b>D-M9N</b>

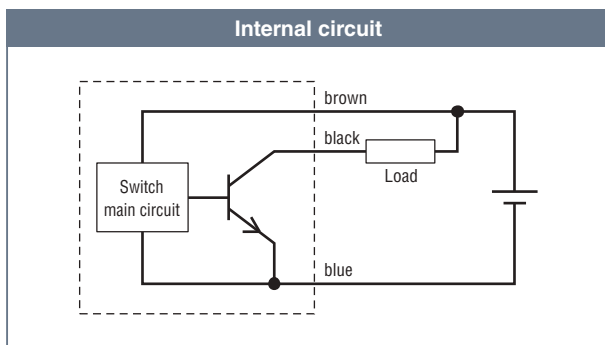
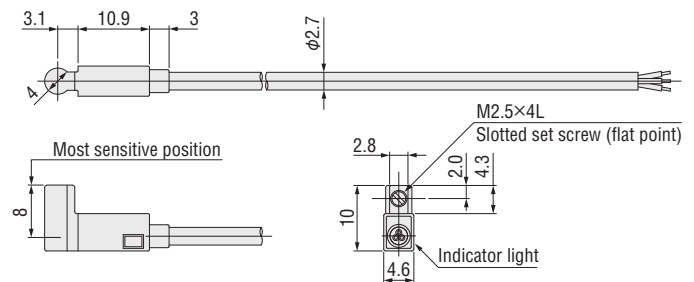
- Weight : 8g
- Length : 0.5m
- Terminal process is not made.



## Auto switch (contactless)

Order code No.	<b>030500</b>
TYPE	<b>D-F8N</b>

- Weight : 7g
- Length : 0.5m
- Terminal process is not made.



## ■ Specification

TYPE	D-F8N · D-M9N
Output Type	NPN type
Applicable load	IC circuit, DC24V relay, PLC
Power supply voltage	DC5 · 12 · 24V (DC4.5 ~ 28V)
Current consumption	10mA or less
Load voltage	28VDC or less
Load current	40mA or less
Internal voltage drop	0.8V or less at 10mA (2V or less at 40mA)
Leakage current	100 $\mu$ A or less at DC24V
Indicator light	Red LED illuminates when turned ON
Standard	CE marking, RoHS
Lead wire	0.5M + V (brown), Load (black), 0V (blue)



# High-Precision Cylinder Sensor

Suitable for mini cylinders (MEC) and container cylinders. Detect even a tiny stroke with stability and certainty.

NEW



## High-Precision Cylinder Sensor (N-pole)

Order code No.	002433
TYPE	ACH02LN

● Weight : 10.8g

## High-Precision Cylinder Sensor (S-pole)

Order code No.	002434
TYPE	ACH02LS

● Weight : 10.7g

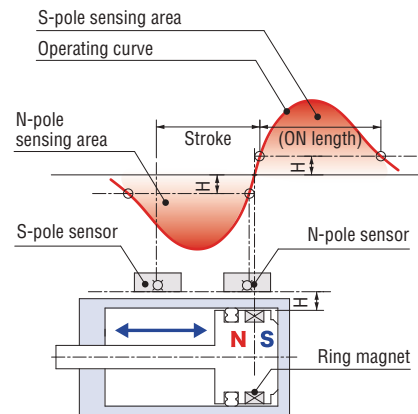
### ■ Features

- ▶ Stable functioning even with a 1mm stroke
- ▶ Stable operational points' dependability
- ▶ Superior performance in the harsh environments of vibration, heat etc.
- ▶ Fast response less than 5  $\mu$  s
- ▶ Usually combined with N pole and S pole.

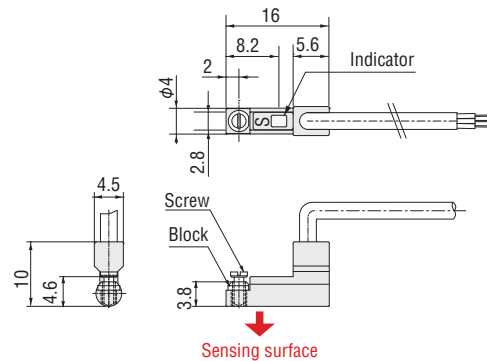
### ■ Specification

TYPE	ACH02LN	ACH02LS
Specification	3-wire L-shaped for trench $\phi 4$	
Power supply voltage	DC5 ~ 24V	
Detecting magnetic poles	N-pole	S-pole
Magnetic sensitivity	3 ~ 4mT	
Direction to detect	Downward	
Output specification	NPN open-collector (ON when in proximity)	
Output Current	20mA MAX	
Consumption current	8mA MAX	
Response time	16 $\mu$ sec max.	
Voltage Resistance	AC1000V (1 minute / packaged changing / between the case)	
Insulation Resistance	DC 250V (Over 20M $\Omega$ in megohms / between the case)	
Operation Temperature Range	- 20 $^{\circ}$ C ~ + 85 $^{\circ}$ C (without condensation)	
Operation Humidity Range	20 ~ 95% RH	
Cable length	1m	
Cable specification	Black (N pole)	Grey (S pole)
Case material	GF reinforced PBT (black)	
Mounting	Attachment screws 0.06N $\cdot$ m	
Indicator light	Red	
Protective structure	IP67	

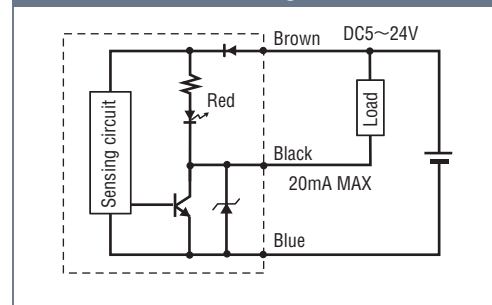
## Operation curve of our products



### ■ Outside dimension



### Circuit diagram



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

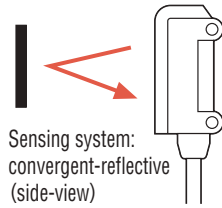
Various Products Information



# Photo Sensor

No amplifier is required ! Special-purpose mounting brackets are also provided for jungle gym and let's joint.

► Can be used with AND board.

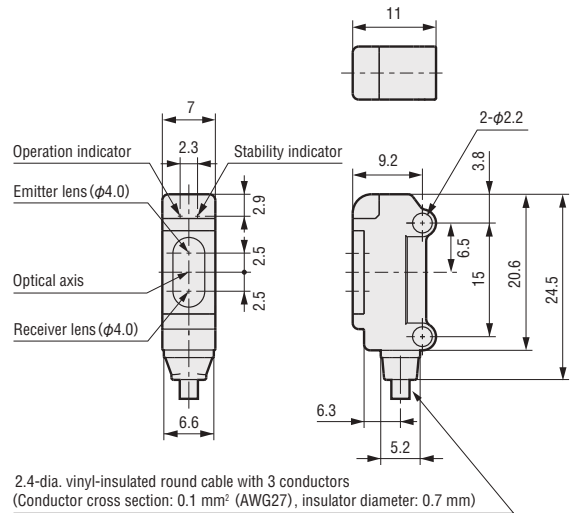


Order code No.	<b>041412</b>
TYPE	<b>E3T-SL21R (NPN)</b>

● Length : 2m

Order code No.	<b>041649</b>
TYPE	<b>E3T-SL23R (PNP)</b>

● Length : 2m



\* Wiring : brown (+V), black (load), blue (0V)

## Specification

TYPE	E3T-SL21R (NPN)	E3T-SL23R (PNP)
Sensing system	Convergent-reflective (side-view)	
Output system	NPN output	PNP output
Sensing distance	5 to 30mm (50×50mm white paper)	
Minimum detectable object	0.15-mm dia. (sensing distance of 10mm)	
Hysteresis (white paper)	6mm max.	
Light source (wavelength)	Red LED (650nm)	
Power supply voltage	12 to 24VDCI 10%, ripple (p-p) 10% max.	
Current consumption	20mA max.	
Control output (Light-ON)	Load power supply voltage 26.4VDC max.	
	Load current: 50mA max. (residual voltage : 2V max. for load current of 10 to 50mA, 1V max. for load current of less than 10mA)	
	Open-collector output	
Protection circuits	power supply and control output reverse polarity protection, output short-circuit protection, mutual interference prevention	
Response time	Operate or reset 1ms max.	
Ambient illumination	Incandescent lamp 5,000lx max., sunlight 10,000lx max.	
Ambient temperature range	Operating : -25 to 55 °C (with no icing or condensation), Storage : -40 to 70 °C (with no icing or condensation)	
Ambient humidity range	operating 35% to 85%, storage : 35% to 95% (with no condensation)	
Insulation resistance	20M Ω min. at 500 VDC	
Dielectric strength	1,000VAC、50/60Hz、1min	
Vibration resistance (Destruction)	10 to 2,000Hz, 1.5-mm double amplitude or 300m/s <sup>2</sup> for 0.5 hrs each in X, Y, and Z directions	
Shock resistance (Destruction)	1,000m/s <sup>2</sup> 3 times each in X, Y, and Z directions	
Degree of protection	IP67 (IEC60529)	
Connection method	Pre-wired (standard length : 2m)	
Weight	Approx 20g	
Material	case	PBT (polyethyleneterephthalate)
	Display window	denatured polyarylate
	Lens	denatured polyarylate
Accessories	Instruction manual, Set screws for mounting (M2×14), Nuts	

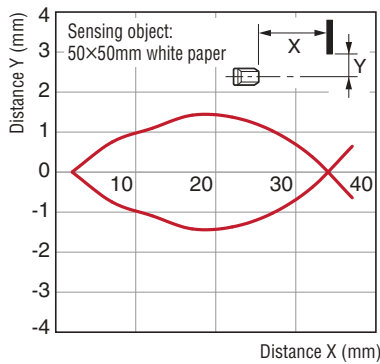


## Input/output stage circuit diagram

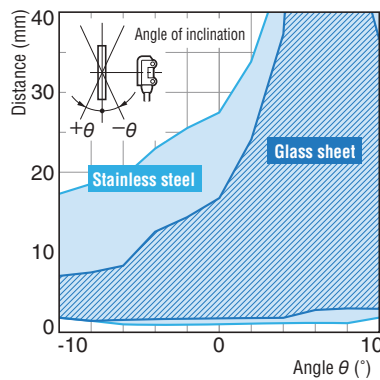
TYPE	Operation mode	Time chart	Output circuit
SE3T-SL21R (NPN output)	Light ON	Light incident Light interrupted	
		Operation indicator ON (orange) OFF Output transistor ON OFF Load Operate (e.g., relay) Reset (Between brown(1) and black(4) leads)	
SE3T-SL23R (PNP output)	Light ON	Light incident Light interrupted	
		Output transistor ON OFF Output transistor ON OFF Load Operate (e.g., relay) Reset (Between blue(3) and black(4) leads)	

## Technical characteristics

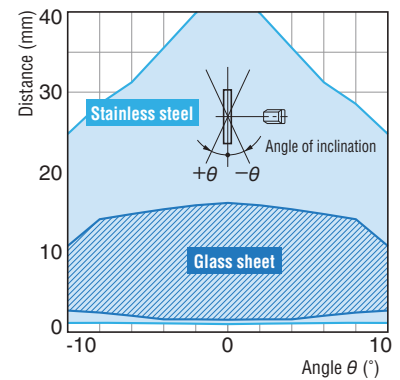
### Operation area characteristics



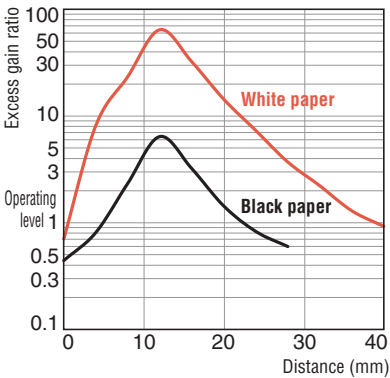
### Inclination detection area characteristics (Top to bottom)



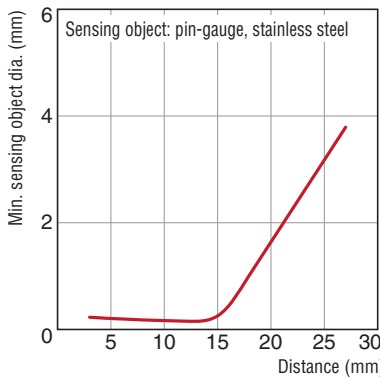
### Inclination detection area characteristics (Right to left)



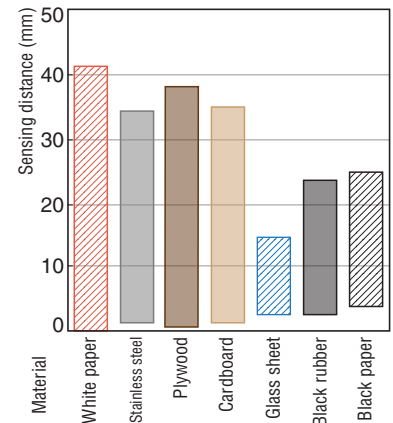
### Detected object size – Distance characteristics



### Light-receiving output – Distance characteristics



### Detection distance – Material characteristics



## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

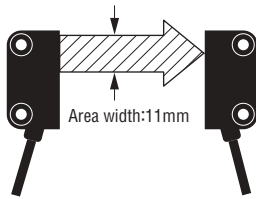
Various Products Information



# Photo Area Sensor

Can be used for passing fine workpieces.

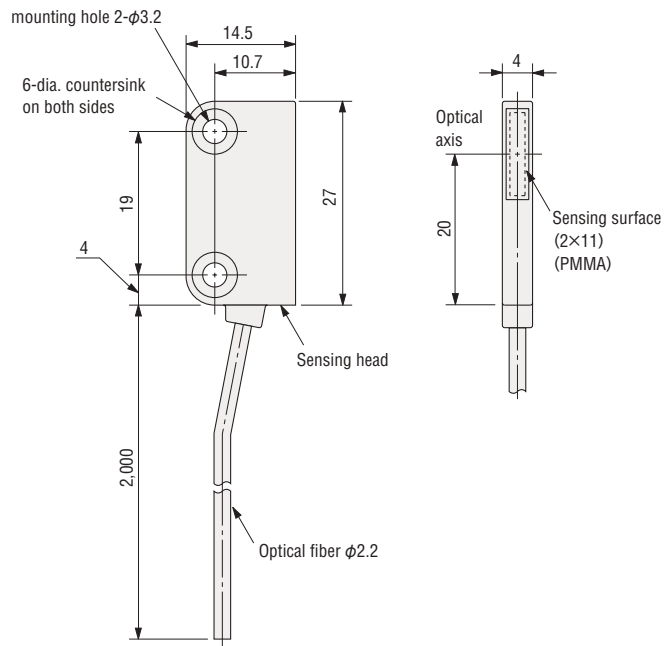
Space-saving reflection type can be provided as a special-order product.



## Photo area sensor

Order code No.	<b>041415</b>
TYPE	<b>E32-T16PR</b>

- Use the product with the optical amplifier sold separately.
- Length : 2m
- Material : heat-resistant ABS
- Provided with stickers with slits of width 0.5 and 1 mm(2 of each)



## Specification

Fiber unit	E32-T16PR			
Sensing system	area-sensing			
Sensing distance (mm) *1	1,100	840	560	220
Surrounding temperature *2	- 40°C to 70°C			
Surrounding humidity *2	35% to 85% RH			
Fiber material	Plastic (vinyl chloride coated)			
Degree of protection	IP50 (IEC)			

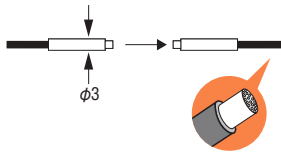
\*1 ■ High-resolution mode ■ Standard mode ■ High-speed mode ■ Super-highspeed mode (When used in combination with the E3X-DA-S Amplifier Unit (general-purpose).)

\*2 No freezing or no dew condensation shall occur under the operating surrounding temperature and humidity.



# Fiber Units

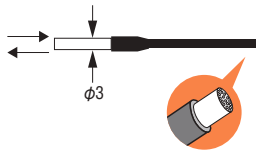
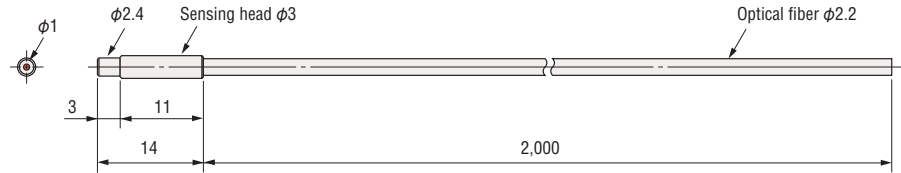
Best suited for installation in a narrow area. Secure with a set screw.



## Fiber unit • $\phi$ 3mm through beam

Order code No.	<b>041413</b>
TYPE	<b>E32-T12R</b>

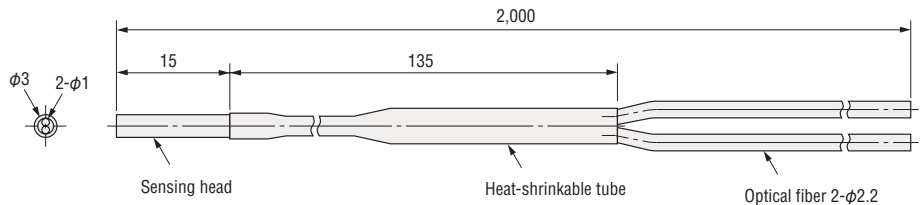
- Use the product with the optical amplifier sold separately.
- Length : 2m (including detection head section)
- Detection head quality : Brass nickel plating



## Fiber unit • $\phi$ 3mm reflect

Order code No.	<b>041414</b>
TYPE	<b>E32-D12R</b>

- Use the product with the optical amplifier sold separately.
- Length : 2m (including detection head section)
- Detection head quality : Stainless (SUS304)



## Specification

Fiber unit	E32-T12R	E32-D12R																
Sensing system	Through-beam fiber units	Fiber units with reflective sensors																
Sensing distance (mm) <sup>*1</sup>	<table border="1"> <tr> <td>High-resolution mode</td> <td>700</td> <td>Standard mode</td> <td>530</td> </tr> <tr> <td>High-speed mode</td> <td>350</td> <td>Super-highspeed mode</td> <td>140</td> </tr> </table>	High-resolution mode	700	Standard mode	530	High-speed mode	350	Super-highspeed mode	140	<table border="1"> <tr> <td>High-resolution mode</td> <td>300</td> <td>Standard mode</td> <td>170</td> </tr> <tr> <td>High-speed mode</td> <td>120</td> <td>Super-highspeed mode</td> <td>50</td> </tr> </table>	High-resolution mode	300	Standard mode	170	High-speed mode	120	Super-highspeed mode	50
High-resolution mode	700	Standard mode	530															
High-speed mode	350	Super-highspeed mode	140															
High-resolution mode	300	Standard mode	170															
High-speed mode	120	Super-highspeed mode	50															
Surrounding temperature <sup>*2</sup>	- 40°C to 70°C																	
Surrounding humidity <sup>*2</sup>	35% to 85% RH																	
Fiber material	Plastic (vinyl chloride coated)																	
Degree of protection	IP67 (IEC)																	

- \* 1 High-resolution mode Standard mode High-speed mode Super-highspeed mode (When used in combination with the E3X-DA-S Amplifier Unit (general-purpose).)  
 \* 2 No freezing or no dew condensation shall occur under the operating surrounding temperature and humidity.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing / Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Fiber Amplifier Unit

Amplifier for optical fiber.

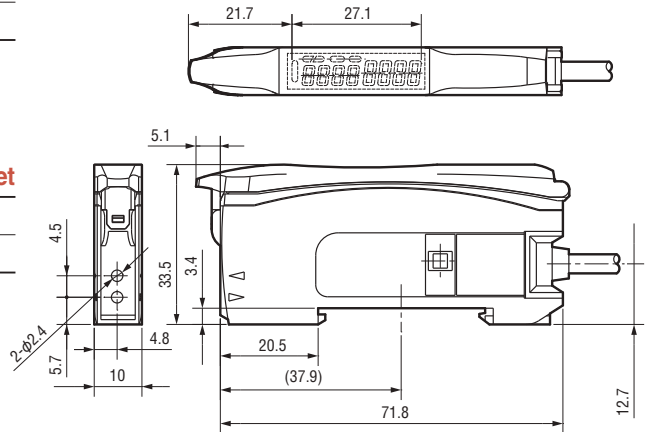


Order code No.	<b>041954</b>
TYPE	<b>E3X-HD11 2M</b>

- Function : AND/OR output
- Length : 2m
- NPN specification

### Fiber amplifier mounting bracket

Order code No.	<b>041697</b>
TYPE	<b>E39-L143</b>



## Input / output stage circuit diagram

TYPE	Operation mode	Time chart	Operation selector	Output circuit
E3X-HD11 (2M)	Light ON	Incident light: [Red bar] / No incident light: [Red bar] OUT indicator (orange): Lit / No lit: [Red bar] Output transistor: ON / OFF: [Red bar] Load (e.g., relay): Operation / Reset: [Red bar] (Between brown and black leads)	L·ON (LIGHT ON)	
	Dark ON	Incident light: [Red bar] / No incident light: [Red bar] OUT indicator (orange): Lit / No lit: [Red bar] Output transistor: ON / OFF: [Red bar] Load (e.g., relay): Operation / Reset: [Red bar] (Between brown and black leads)	D·ON (DARK ON)	

## Part names

### L/D Indicator

Indicates the setting status: Light-ON (L) or Dark-ON (D).

### OUT Indicator

Turns ON when the output is ON.

### DPC Indicator

Turns ON when Dynamic Power Control is effective.

### ST Indicator

Turns ON when Smart Tuning is in progress.

### △L/D Button

Use to switch between Light-ON (L) and Dark-ON (D).

### STUNE Button

Automatically sets the emitter power and set values.

Threshold Level Green digital display

Incident Level Red digital display

### MODE Button

Use to switch between Detection Mode and Setting Mode.

### +-UP/DOWN Button

Used to fine-tune the threshold or change set values.



## Specification

TYPE		E3X-HD11 2M
Light source (wavelength)		Red, 4-element LED (625 nm)
Power supply voltage		12 to 24 VDC $\pm$ 10%, ripple(p-p) 10% max
Power consumption		720 mW max. (Current consumption: 30 mA max. at 24 VDC, 60 mA max. at 12 VDC)
Control output	Load power supply voltage	26.4VDC max Open-collector output
	Load current	Groups of 1 to 3 Amplifier Units: 100mA max., Groups of 4 to 16 Amplifier Units: 20mA max
	Residual voltage	At load current of less than 10 mA: 1 V max., At load current of 10 to 100 mA: 2 V max.
	OFF current	0.1 mA max
Protection circuits		Power supply reverse polarity protection, output short-circuit protection and output reverse polarity protection
Response time	Super-highspeed mode*	NPN output : Operate or reset : 50 $\mu$ s
	High-speed mode	Operate or reset : return : 250 $\mu$ s (default setting)
	Standard mode	Operate or reset : 1 ms
	Giga power mode	Operate or reset : 16ms
Mutual interference prevention		Possible for up to 10 units (optical communications sync)*
Automatic power control		Always ON
Other functions		Power tuning, differential detection, DPC, timer (OFF-delay, ON-delay, or one-shot), zero reset, resetting settings, and Eco mode
Ambient illumination		Incandescent lamp: 20,000 lx max., Sunlight: 30,000 lx max.
Ambient temperature range		Operating : Groups of 1 to 2 Amplifiers: $-25$ to $55^{\circ}\text{C}$ , Groups of 3 to 10 Amplifiers: $-25$ to $50^{\circ}\text{C}$ , Groups of 11 to 16 Amplifiers: $-25$ to $45^{\circ}\text{C}$ , Storage : $-30$ to $70^{\circ}\text{C}$ (with no icing or condensation)
Ambient humidity range		Operating and storage : 35% to 85% (with no condensation)
Insulation resistance		20M $\Omega$ min. (at 500 VDC)
Dielectric strength		1,000 VAC at 50/60 Hz for 1 minute
Vibration resistance (Destruction)		10 to 55 Hz with a 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions
Shock resistance (Destruction)		500m/s <sup>2</sup> for 3 times each in X, Y, and Z directions
Degree of protection		IEC 60529 IP50 (with Protective Cover attached)
Weight (packed state/unit only)		About 105g/about 64g
Materials	Case	Polycarbonate (PC)
	Cover	Polycarbonate (PC)
	Cable	PVC
Accessories		Instruction manual

\* The communications function and mutual interference prevention function are disabled when the detection mode is set to Super-high-speed mode (SHS).  
When including E3X-DA-S with activated power tuning, mutual interference prevention is possible for up to 6 units. When including E3X-MDA with activated power tuning, mutual interference prevention is possible for up to 5 units.

## Safety Precautions

### Warning



This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.

### Notes on use

Do not use this product under ambient atmosphere and environment exceeding the rating.

● For design (operation at power on)


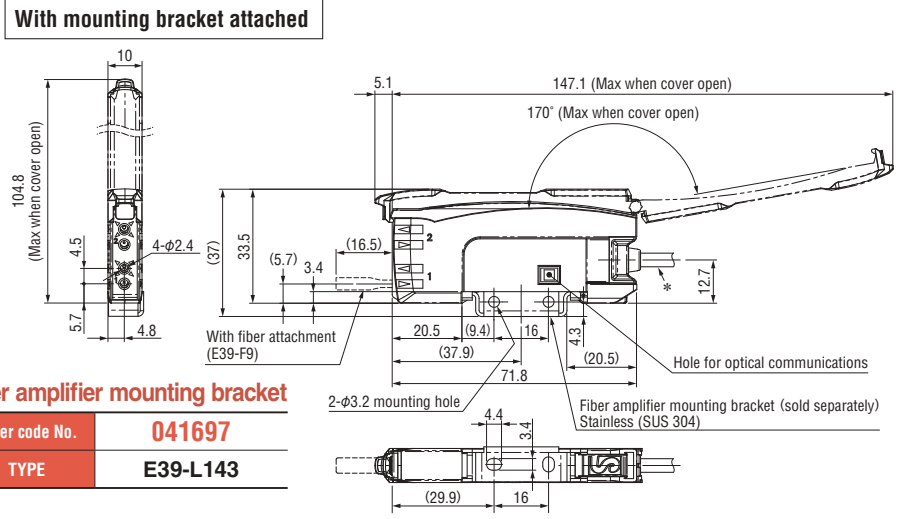
The sensor becomes detectable within 200 ms after the power is turned on. If the load and the sensor are connected to separate power supply units, be sure to turn on the sensor power supply first.



# Fiber Amplifier Unit

- ▶ Two optical fibers could be connected, the installation space become 1 / 2. Contribute to the miniaturization of equipment and control board in space saving.

**With mounting bracket attached**

**Fiber amplifier mounting bracket**

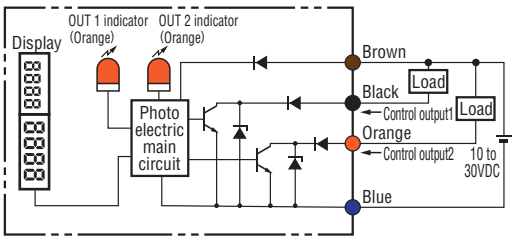
<b>Order code No.</b> 042093	<b>Order code No.</b> 041697
<b>TYPE</b> E3NX-MA11	<b>TYPE</b> E39-L143

- Function: AND/OR output    ● Two channel type
- Length : 2m    ● NPN specification


\* Cord specification

Type	Outer diameter	Number of wire cores	Others
E3NX-MA11	φ 4.0	4-core	Conductor cross section: 0.2mm <sup>2</sup> Insulator diameter: φ 0.9mm

## Input / output stage circuit diagram (NPN Output)

TYPE	Operation mode	Time chart	MODE Switching button	Output circuit
<b>E3NX-MA11 (NPN)</b>	Light-ON	Incident light    No incident light OUT indicator (orange)    Lit    No lit Output transistor    ON    OFF Load (e.g., relay)    Operation    Reset (Between brown and black leads)	L·ON (LIGHT ON)	
	Dark-ON	Incident light    No incident light OUT indicator (orange)    Lit    No lit Output transistor    ON    OFF Load (e.g., relay)    Operation    Reset (Between brown and black leads)	D·ON (DARK ON)	

## Part names



**L/D Indicator**  
Indicates the setting status: Light-ON (L) or Dark-ON (D).

**DPC Indicator**  
Turns ON when Dynamic Power Control is effective.

**△L/D Button**  
Use to switch between Light-ON (L) and Dark-ON (D).

**OUT 1 Indicator / OUT 2 Indicator**  
When OUT1 or OUT2 is ON.

**ST Indicator**  
Turns ON when Smart Tuning is in progress.

**STUNE Button**  
Automatically sets the emitter power and set values.

**Threshold Level Green digital display**  
**Incident Level Red digital display**

**MODE Button**  
Use to switch between Detection Mode and Setting Mode.

**OUT 1 Indicator**  
**OUT 2 Indicator**  
The indicator for the selected output channel is it.

**+ - UP/DOWN Button**  
Used to fine-tune the threshold or change set values.

## Specification

TYPE		E3NX-MA11 (NPN)
Light source (wavelength)		Red, 4-element LED (625 nm)
Power supply voltage		10 to 30 VDC, Including 10%, ripple (p-p)
Power consumption		960 mW max. (current consumption at 40mA max.)
Control output	Load power supply voltage	30VDC max, open-collector output*1
	Load current	100mA max.; residual voltage : 1V max.
Protection circuits		Power supply reverse polarity protection, output short-circuit protection and output reverse polarity protection
Response time	Super-highspeed mode*2	Operate or reset : 130 $\mu$ s*2*3
	High-speed mode	Operate or reset : 450 $\mu$ s
	Standard mode	Operate or reset : 1ms
	Giga power mode	Operate or reset : 16ms
Sensitivity setting		Teaching or manual method
Functions	Power tuning	Select from ON/OFF
	Timer	Select from OFF-delay, ON-delay, or one-shot timer.
	Automatic power control	Equipped (Always effective)
	Zero-reset	Negative values can be displayed. (Threshold value is shifted.)
	Initial reset	Settings can be returned to defaults as required.
Mutual interference prevention		Possible for up to 9 units (18 channels)*4
Indicators		Operation indicator 1ch (orange) ,Operation indicator 2ch (orange)
Digital display		Select from incident level for channel 1 + incident level for channel 2 or other 7 patterns
Display orientation		Switching between normal / reversed display is possible.
Ambient illumination		Incandescent lamp : 20,000 max. Sunlight : 30,000 max.
Ambient temperature range		Operating : Groups of 1 to 2 Amplifier Units : -25°C to 55°C , Groups of 3 to 10 Amplifier Units : -25°C to 50°C , Groups of 11 to 16 Amplifier Units : -25°C to 45°C Storage : -30 to 70°C (with no icing or condensation)
Ambient humidity range		Ambient humidity range : Operating and storage : 35% to 85% (with no condensation)
Insulation resistance		20M $\Omega$ min. (at 500 VDC)
Dielectric strength/Vibration resistance /Shock resistance		1,000 VAC at 50/60 Hz for 1 minute / Destruction: 10 to 55 Hz with a 1.5-mm double amplitude for 2 hrs each in X, Y and Z directions
Degree of protection		IEC 60529 IP50 (w / protective cover attached)
Connection method		Code drawing type (2m)
Weight (packed state)		About 190g
Material		Case : Polybutylene terephthalate (PBT) , Cover : Polycarbonate (PC)
Accessories		Instruction manual

\*1 Depends on the NPN/PNP output system.

\*2 Communications are disabled if the detection mode is selected during super-high-speed mode, and the communications functions for mutual interference prevention and the Mobile Console will not function.

\*3 When differential output is selected for the output setting, the second channel output is 200  $\mu$ s for operation and reset respectively.

\*4 Mutual interference prevention can be used for up to 5 units (10 channels) if power tuning is enabled.

## Safety Precautions

### Warning



This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.

### Notes on use

Do not use this product under ambient atmosphere and environment exceeding the rating.

#### ● For design (operation at power on)

The sensor becomes detectable within 200 ms after the power is turned on. If the load and the sensor are connected to separate power supply units, be sure to turn on the sensor power supply first.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Proximity Sensor

Micro proximity sensor.



Order code No.	<b>041417</b>
TYPE	<b>E2S-W13 (NPN)</b>

● Length : 1m



Order code No.	<b>041640</b>
TYPE	<b>E2S-W15 (PNP)</b>

● Length : 1m



Order code No.	<b>041773</b>
TYPE	<b>E2S-W13-R-S (NPN)</b>

● Length : 1m  
● Please utilize it as the sensor for the runner chuck (E, E1 Series) due to the improved vibration resistance standard.

## Specification

TYPE		E2S-W13 (NPN)	E2S-W15 (PNP)	E2S-W13-R-S (NPN)
Sensing surface		Top		
Sensing distance		1.6mm ± 15%		
Set distance		0 ~ 1.2mm		
Differential travel		10% max. of sensing distance		
Detectable object		Ferrous metal (The sensing distance decreases with non-ferrous metal.)		
Standard sensing object		Iron, 12 × 12 × 1mm		
Response frequency*1		1kHz (Average value)		
Power supply voltage (operating voltage range)		12 to 24 VDC (10 to 30 VDC), ripple (p-p) : 10% max.		
Current consumption		13mA max. at 24VDC (no-load)		
Control output	Load current	NPN open-collector output, 50mA max. (30VDC max.)	PNP open-collector output, 50mA max. (30VDC max.)	NPN open-collector output, 50mA max. (30VDC max.)
	Residual voltage	1.0V max. (load current of 50mA with cable length of 1m)		
Indicators		Operation indicator (orange)		
Operation mode (with sensing object approaching)		NO		
Protection circuits		Power supply reverse polarity protection, surge suppressor		
Ambient temperature range		Operating : -25 to 70°C (with no icing or condensation), Storage : -40 to 85°C (with no icing or condensation)		
Ambient humidity range		operating : 35% to 90% (with no condensation), storage : 35% to 95% (with no condensation)		
Temperature influence		± 15% max. of sensing distance at 23°C in the temperature range of -25 to 70°C		
Voltage influence		± 2.5% max. of sensing distance at rated voltage in rated voltage ± 10% range		
Insulation resistance		Between charged parts and the case : 50 MΩ min. (at 500 VDC)		
Dielectric strength		Between charged parts and the case : 1,000VAC 50/60 Hz for 1 min		
Vibration resistance (Destruction)		10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions		
Shock resistance (Destruction)		500m/s <sup>2</sup> 3 times each in X, Y, and Z directions		
Degree of protection		IEC 60529 IP67		
Connection method		Pre-wired models (1m)		
Weight		Approx 20g		Approx 30g
Material (case)		polyarylate		
Accessories		Mounting brackets*2		

\* 1 The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.

\* 2 Not for runner chuck. See page → [2-33.35](#) for runner chuck.

**Quick Chuck Change**

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

**Grip**

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

**Suction**

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

**Cut**

Air Nipper (Small-Medium)

Air Nipper (Large)

**Frame / Module**

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

**Pneumatic Components / Sensors**

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

**Lightweight Parts Series**

Frame / Section / Resin Cylinders (Pads) / Resin Manifolds

**By Industry**

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

**Assembling Tools**

Tool / Jig

**Information**

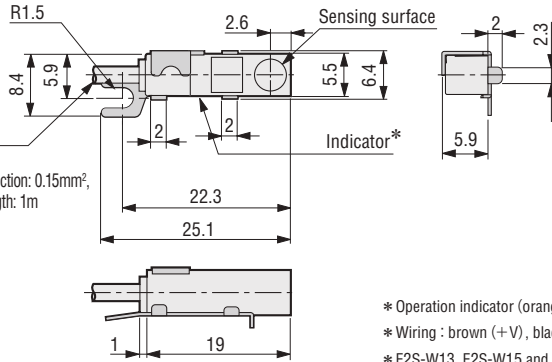
Various Products Information

**With mounting bracket attached**

Vinyl insulation round type cord  
 φ2.9. vinyl-insulated round cable  
 with 2 / 3 conductors (conductor cross section: 0.15mm<sup>2</sup>,  
 insulator diameter: 0.9 mm), standard length: 1m



Shape: Unshield



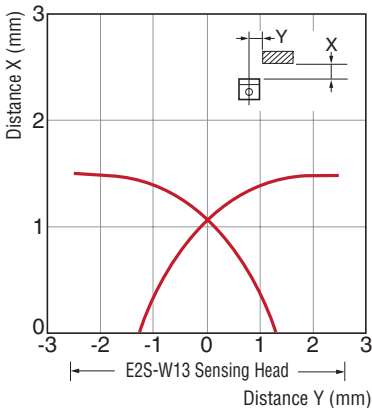
- \* Operation indicator (orange)
- \* Wiring : brown (+V), black (load), blue (0V)
- \* E2S-W13, E2S-W15 and E2S-W13-R-S have the same size.

**Input/output stage circuit diagram**

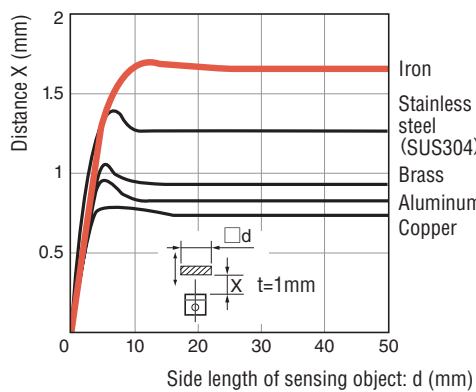
TYPE	Operation mode	Output system	Timing chart	Output circuit
E2S-W13 (NPN) E2S-W13-R-S (NPN)	NO	NPN	<p>Sensing object Present Not present</p> <p>Output transistor (Load) ON OFF</p> <p>Operation indicator (orange) ON OFF</p>	<p>*Load current: 50mA max.</p>
E2S-W15 (PNP)	NO	PNP	<p>Sensing object Present Not present</p> <p>Output transistor (Load) ON OFF</p> <p>Operation indicator (orange) ON OFF</p>	<p>*Load current: 50mA max.</p>

**Technical characteristics (typical example)**

**Sensing area**



**Influence of sensing object size and material**





# Multi AND Board

Combine multiple sensors to create one output to robot



## Eight-point specification

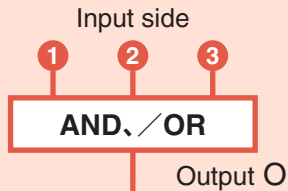
### Multi AND board

Order code No.	002161
TYPE	AND/OR-EU

● Weight : 115g

- ▶ Just connect a sensor. The easy design allows minimum wiring and space saving.
- ▶ Switching AND and /OR outputs is easy and quick. Just slide the select switch at the unit.
- ▶ The protective circuit prevents problems with overloads.

## About "AND" and "/OR"



### AND

Output O is turned on when all the inputs (1 2 3) are ON.

### /OR

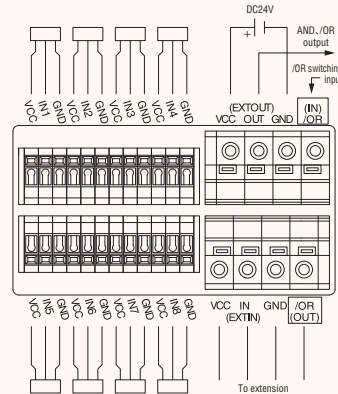
Output O is turned on when all the inputs (1 2 3) are OFF.

## Specification

Max. number of connection sensors	Power supply voltage (V)	Internal consumption current (mA)	Sensor input terminal (mA)
8	DC24 (± 10%)	100 or less (DC24V)	10 or less / one point
Surrounding humidity (%)	Surrounding temperature (°C)	Operation condition	
35-80 (non-condensing)	0-40	No particulate and corrosive gas	

\* Can be extended to 32 points.

## Wiring specification



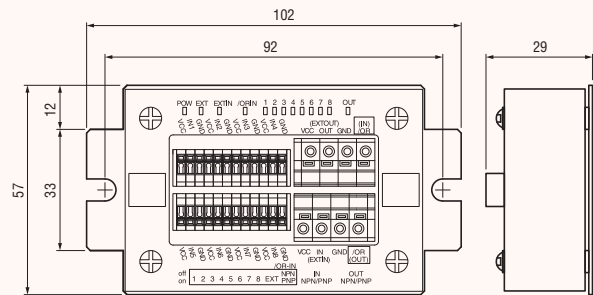
### Connection method

- 1 Push down the button with tools such as minus driver.
  - 2 Put the stripped electric wire into the wire insert hole of the terminal block.
  - 3 Release the button. And connection completed.
- \* Be sure to insert a wire into the hole.

### Diameter of electric wire

Sensor input terminal AWG28-AWG22  
Power supply input, signal output terminal / extension AWG26-AWG22  
\* Stripped wire length of each terminal is 10mm.

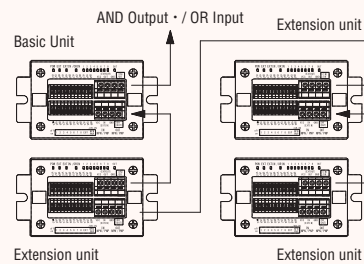
## Outside dimension / mounting dimension



VCC 24V(+) GND 24G(-) IN signal

- \* 2-φ6 (mounting hole) : M4-M5
- \* Use the mounting washer (φ10mm or less) for M5.

## Extension Configuration

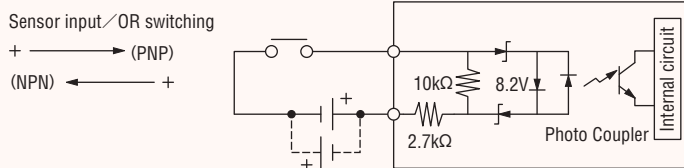


When the power supply voltage becomes less than 21V, the power indicator light will become dark, and please check the power supply to this unit.

- The extension unit could be extended up to 3 units to the basic unit.
- Please wire for AND Output / OR Input.
- The / or input of the extension unit will match the polarity of all units at / OR-IN the dip switch.
- The OUT of extension unit should be set to the NPN side.

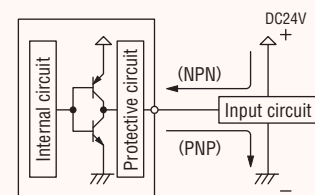
\* Please add the basic unit if extension unit is more than 3.

## Sensor input OR switching input circuit configuration (8-point, 4-point common)



- \* Select the input setting with the switch as illustrated according to the output circuit specification of the customer's sensor.
- \* Select the input with the DIP switch as illustrated according to the output circuit specification of the customer.

## Configuration of output circuit (8-point, 4-point common)



- \* Select NPN/PNP as illustrated above according to the input circuit specification of the customer.





You can see moving images of products by using QR code reader of your smartphone.



#### Four-point specification

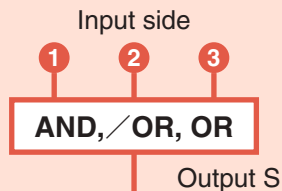
#### Multi AND board 4P

Order code No.	002237
TYPE	AND/OR-EU-4P

● Weight : 58g

- ▶ Just connect a sensor. The easy design allows minimum wiring and space saving.
- ▶ Product hold condition check and product release condition check can be switched by switching AND output, /OR output, and OR output. Product hold condition and product release condition can be checked by one unit.
- ▶ The protective circuit prevents problems with overloads.

#### About "AND", "/OR", and "OR"



#### AND

Output S is turned on when all the inputs (123) are ON.

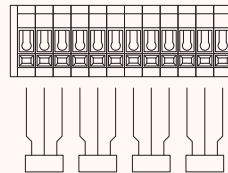
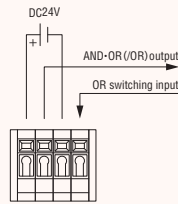
#### /OR

Output S is turned on when all the inputs (123) are OFF.

#### OR

Output S is turned on when either of input (123) is ON.

#### Wiring specification



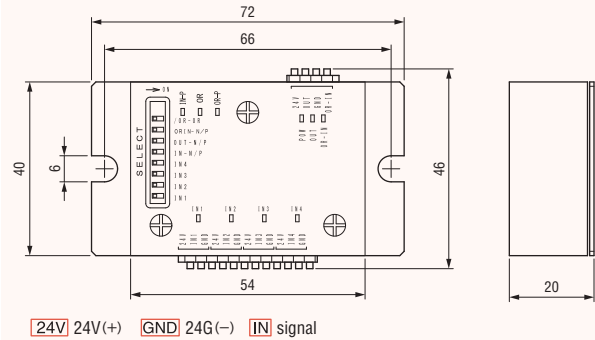
#### Connection method

- ① Push down the button with tools such as minus driver.
  - ② Put the stripped electric wire into the wire insert hole of the terminal block.
  - ③ Release the button. And connection completed.
- \* Be sure to insert a wire into the hole.

#### Diameter of electric wire

Sensor input terminal AWG28-AWG22  
Power supply input, signal output terminal / extension AWG26-AWG22  
\* Stripped wire length of each terminal is 10mm.

#### Outside dimension / mounting dimension



\* 2-φ6 (mounting hole) : M4-M5

\* Use the mounting washer (φ10mm or less) for M5.

#### Specification

Max. number of connection sensors	Power supply voltage (V)	Internal consumption current (mA)	Sensor input terminal (mA)	Surrounding humidity (%)	Surrounding temperature (°C)	Operation condition
4	DC24 (±10%)	50 or less (DC24V)	10 or less / one point	35-80 (non-condensing)	0-40	No particulate and corrosive gas

#### ▶ Connecting cable for Eins Multi AND Board



#### Eight-point specification

#### Connection harness • for multi AND boards

Order code No.	123106
TYPE	MAND-EH05 • 500MM

● Overall length : 500mm



#### Eight-point specification

#### Connection harness • for multi AND boards

Order code No.	123105
TYPE	MAND-EH02 • 200MM

● Overall length : 200mm



#### Eight-point specification

#### Connection harness • for multi AND boards

Order code No.	123107
TYPE	MAND-EH10 • 1000MM

● Overall length : 1,000mm



#### Triplex cable (5m)

Order code No.	171292
TYPE	RMCV-0 0.3SQ*3C 5M

● Overall length : 5,000mm

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information



# PCIO Communication Unit

Two power lines allows simple wiring between units for power supply and input/output communication

- ▶ Two power lines allows simple wiring between units for power supply and input communication.
- ▶ Input signal reception with sink/source specifications.
- ▶ Two types according to the number of input/output points : 16 points (eight/eight) and 32 points (16/16).

## Specification

	E-PCIO-UNIT16	E-PCIO-UNIT32
Power supply voltage	DC24V (± 10%)	
System consumption current	2A or less	
Internal consumption current	100mA or less (DC24V)	180mA or less (DC24V)
Output current	100mA (Max) / one point	50mA (Max) / one point
Input current	5mA or less / one point	
Surrounding humidity	35%~80% (non-condensing)	
Surrounding temperature	0-40°C	
Operation condition	No particulate and corrosive gas	



Power Communication I/O unit(16)

Order code No.	152312
TYPE	E-PCIO-UNIT 16

● Weight : 97g

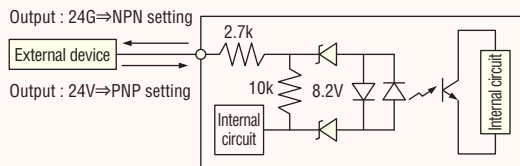
Power Communication I/O unit(32)

Order code No.	152313
TYPE	E-PCIO-UNIT 32

● Weight : 131g

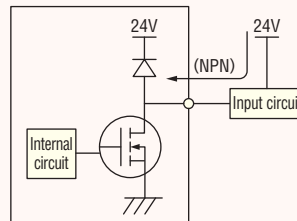
## Configuration of Input circuit

### Input switch



\* Please switch the switch according to the output specifications of the customer, referring to the above figure.

## Configuration of output circuit



\* Only NPN is used for the output specification of the unit.



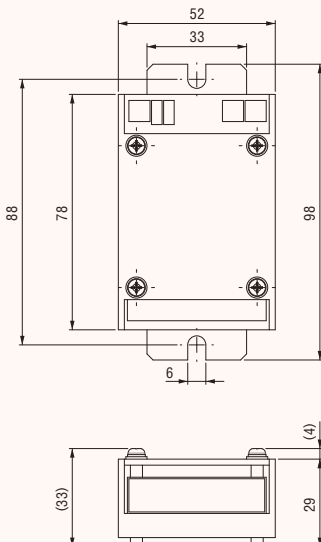
PCIO communication harness (03)

Order code No.	152314
TYPE	E-PCIO-HNS 03

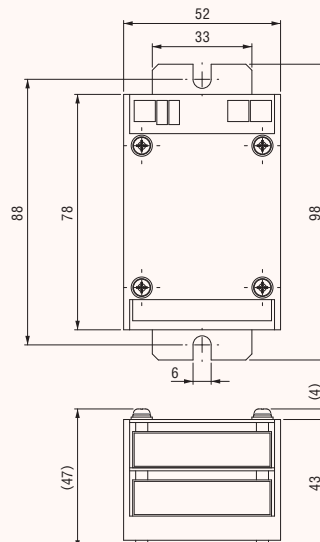
● Harness length : 300mm

## Outside dimension / mounting dimension

### E-PCIO-UNIT 16



### E-PCIO-UNIT 32



## PCIO marktube

Order code No.	041770
TYPE	E-PCIO-MKT SET

● 2 set

# Lightweight Parts Series



## Frame ..... 7-2

- ▶ CFRP Pipe ( $\phi$  12 /  $\phi$  20) ..... 7-2
- ▶ Pipe End Cap ..... 7-2
- ▶ Tie Wrap Base ..... 7-2



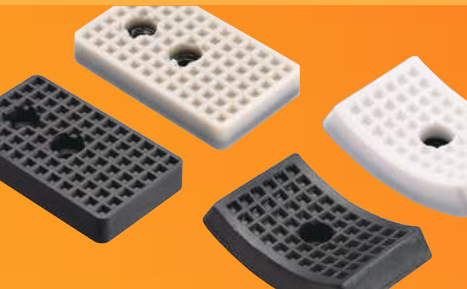
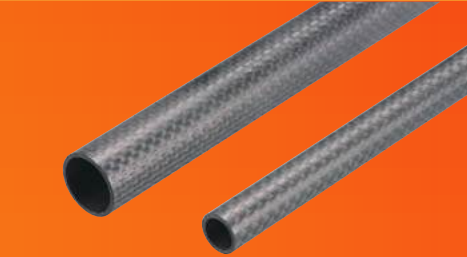
## Suction ..... 7-3

- ▶ Resin Suction Stem (Mini) ..... 7-3
- ▶ Resin Suction Stem (Small) ..... 7-4



## Resin Cylinders / Pads / Resin Manifolds ..... 7-5

- ▶ Resin Cylinders ..... 7-5
- ▶ Pads (Rectangle / Curved) ..... 7-5
- ▶ Resin Manifolds ..... 7-5



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (QM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics - Palletizing  
Steel Metal - Stamping  
Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Frame

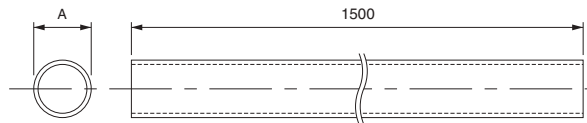
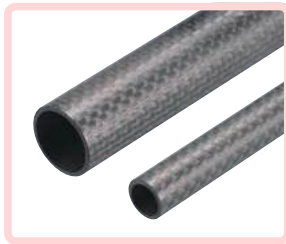
More lightweight parts line up. The combination of the lightweight parts series makes the EOAT lighter and reduces the load on the Robot.

Pipe	250g	➔	121g	51.6% DOWN
Bracket	16.3g	➔	7g	57.1% DOWN
Bracket	21g	➔	16g	23.8% DOWN
Cylinder	65g	➔	40g	38.5% DOWN
Pads	43g	➔	22g	48.8% DOWN

Total weight of hand **738g**

It is **32%** lighter when compared with the SUS pipe or aluminum products.

※ Resin attach bracket and resin cross connector are coming soon.



## Jungle gym CFRP pipe $\phi 12 \cdot \phi 20$

Order code No.	023361	023362
TYPE	CFRP 12*1.5*1500	CFRP 20*1.5*1500

● Weight :  $\phi 12/121g$ ,  $\phi 20/200g$

## Specification

Product name	A	Thickness	Material	Outside diameter tolerance
Jungle gym CFRP pipe $\phi 12$	$\phi 12$	1.5mm	CFRP	-0.05 ~
Jungle gym CFRP pipe $\phi 20$	$\phi 20$			-0.15

\*The tolerance of outside diameter is a rough standard.  
\*When cutting pipes, burrs may occur on the cut surface.

## Pipe end cap $\phi 12 \cdot \phi 20$

Order code No.	171339	171340
TYPE	R-CAP-12	R-CAP-20

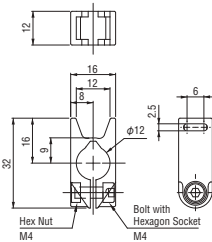
● Weight :  $\phi 12/0.4g$ ,  $\phi 20/3.0g$

Lightweight Parts Series

**Resin Fixture  $\phi 12$  (Cable ties)**

Order code No.	171210
TYPE	RCA12

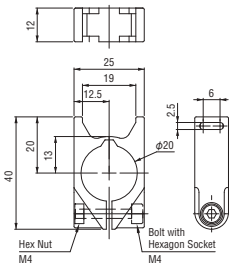
● Weight : 5g



**Resin Fixture  $\phi 20$  (Cable ties)**

Order code No.	171211
TYPE	RCA20

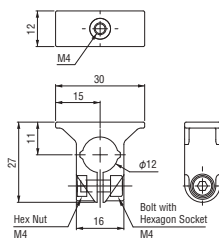
● Weight : 7g



**Resin Fixture  $\phi 12$  (M4)**

Order code No.	171212
TYPE	RCB12

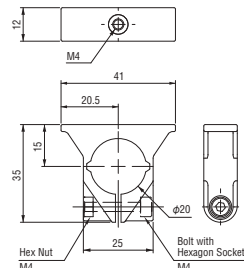
● Weight : 6g



**Resin Fixture  $\phi 20$  (M4)**

Order code No.	171213
TYPE	RCB20

● Weight : 9g









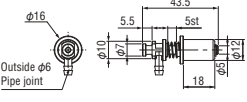
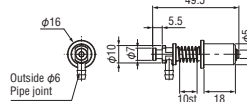
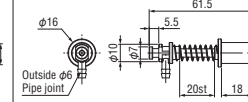
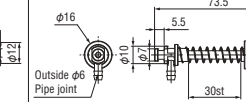
# Resin Suction Stem(Mini)





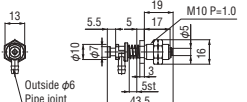
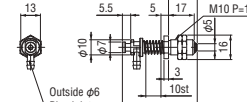
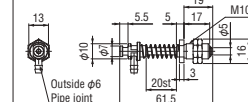
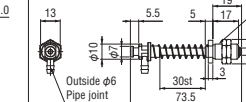
To achieve the lightweight products, the body is made of resin.





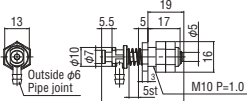
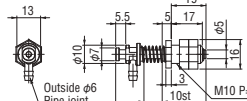
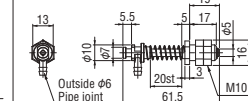
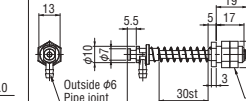


Direct connection on jungle gym series parts is possible.

● The suction cup is sold separately. ● Cup fixing system : embedded

Resin Suction Stems (Mini)	 * 1	 * 1	 * 1	 * 1
Resin Pipe Holder				
Drawing				
Order code No.	<b>211105</b>	<b>211106</b>	<b>211107</b>	<b>211108</b>
TYPE	<b>VFILP-SS-5-P12</b>	<b>VFILP-SS-10-P12</b>	<b>VFILP-SS-20-P12</b>	<b>VFILP-SS-30-P12</b>
Weight	4g	4g	6g	7g
Piping/Mounting	$\phi 6 / \phi 12$			
Applicable cup size	$\phi 4 \sim 14$			

Resin Suction Stems (Mini)				
Aluminum Nut				
Drawing				
Order code No.	<b>211109</b>	<b>211110</b>	<b>211111</b>	<b>211112</b>
TYPE	<b>VFILP-SS-5</b>	<b>VFILP-SS-10</b>	<b>VFILP-SS-20</b>	<b>VFILP-SS-30</b>
Weight	9g	9g	10g	11g
Piping/Mounting	$\phi 6 / M10 P=1.0$			
Applicable cup size	$\phi 4 \sim 14$			

Resin Suction Stems (Mini)	 * 2	 * 2	 * 2	 * 2
Resin Nut				
Drawing				
Order code No.	<b>211144</b>	<b>211145</b>	<b>211146</b>	<b>211147</b>
TYPE	<b>VFILPL-SS-5</b>	<b>VFILPL-SS-10</b>	<b>VFILPL-SS-20</b>	<b>VFILPL-SS-30</b>
Weight	4.8g	5.1g	5.85g	6.4g
Piping/Mounting	$\phi 6 / M10 P=1.0$			
Applicable cup size	$\phi 4 \sim 14$			

\*1 Please press through the bottom when fixing. OR When attaching, please be sure to push it all the way to the bottom.  
 \*2 Please do not overtighten. (Recommended torque: 0.8-1.0 N · m)

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing / Sheet Metal-Stamping- Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information









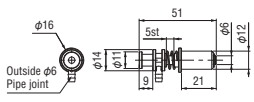
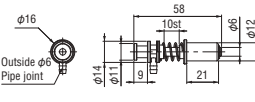
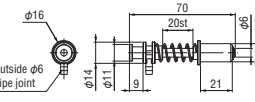
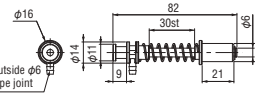
# Resin Suction Stem(Small)





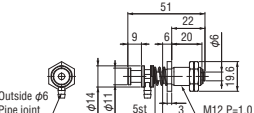
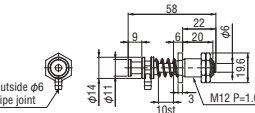
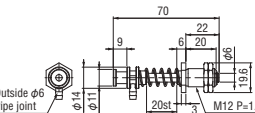
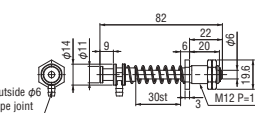






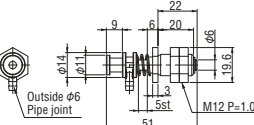
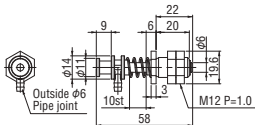
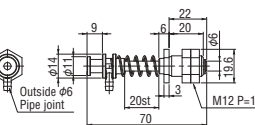
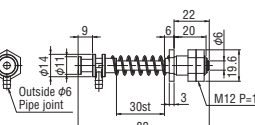
Direct connection on jungle gym series parts is possible.

To achieve the lightweight products, the body is made of resin.

● The Suction Cups Are Sold. ● Cup Fixing System

Resin Suction Stems (Mini)	 * 1	 * 1	 * 1	 * 1
Resin Pipe Holder				
Drawing				
Order code No.	<b>211092</b>	<b>211093</b>	<b>211094</b>	<b>211095</b>
TYPE	<b>VFILP-S-5-P12</b>	<b>VFILP-S-10-P12</b>	<b>VFILP-S-20-P12</b>	<b>VFILP-S-30-P12</b>
Weight	7g	7g	8g	9g
Piping/Mounting	φ6 / φ12			
Applicable cup size	φ15 ~ 45			

Resin Suction Stems (Mini)				
Aluminum Nut				
Drawing				
Order code No.	<b>211097</b>	<b>211098</b>	<b>211099</b>	<b>211100</b>
TYPE	<b>VFILP-S-5</b>	<b>VFILP-S-10</b>	<b>VFILP-S-20</b>	<b>VFILP-S-30</b>
Weight	16g	16g	17g	18g
Piping/Mounting	φ6 / M12 P=1.0			
Applicable cup size	φ15 ~ 45			

Resin Suction Stems (Mini)	 * 2	 * 2	 * 2	 * 2
Resin Nut				
Drawing				
Order code No.	<b>211148</b>	<b>211149</b>	<b>211150</b>	<b>211151</b>
TYPE	<b>VFILPL-S-5</b>	<b>VFILPL-S-10</b>	<b>VFILPL-S-20</b>	<b>VFILPL-S-30</b>
Weight	8.35g	8.85g	9.7g	10.5g
Piping/Mounting	φ6 / M12 P=1.0			
Applicable cup size	φ15 ~ 45			

\*1 Please press through the bottom when fixing. OR When attaching, please be sure to push it all the way to the bottom.  
 \*2 Please do not overtighten. (Recommended torque: 0.8-1.0 N · m)





# Resin Cylinders / Pads / Resin Manifolds

Achieved the further lightweight parts. Optimal item for make lightweight hand.

Product name	Resin Cylinder · MCDR	
Drawing		
Order code No.	<b>123691</b>	<b>123692</b>
TYPE	<b>MCDR-10</b>	<b>MCDR-20</b>
Weight	40g	48g

● Stroke: 10mm ● Joint pipe fitting BF-5 included ● Include mounting washers. ● Stroke: 20mm ● Joint pipe fitting BF-5 included ● Include mounting washers.

Product name	Pad · rectangle · black 2 holes · for mini cylinder	Pad · rectangle · white 2 holes · for mini cylinder	Pad · curved · black · for mini cylinder	Pad · curved · white · for mini cylinder
Drawing				
Order code No.	<b>023336</b>	<b>023337</b>	<b>023359</b>	<b>023360</b>
TYPE	<b>CPL-060</b>	<b>CPL-061</b>	<b>CPL-018</b>	<b>CPL-072</b>
Weight	22g	22g	19g	19g
Material	Chloroprene rubber	Silicone	Chloroprene rubber	Silicone
Cylinder	MCD1, MCDR, MCDP, MCE, MCP1-20 series			

Product name	Light weight plastic manifold BF5	Cap for resin manifold · BF5	Light weight plastic manifold BF6	Cap for resin manifold · BF6
Drawing				
Order code No.	<b>123195</b>	<b>010585</b>	<b>123196</b>	<b>010586</b>
TYPE	<b>MP-10P-BF5</b>	<b>BF5-CAP</b>	<b>MP-10P-BF6</b>	<b>BF6-CAP</b>
Weight	5g	1g	5g	1g

## Quick Chuck Change

- Quick Chuck Change Manual
- Quick Chuck Change Manual (OM Type)
- Tool Changer
- Automated Hand Exchange System

## Grip

- Mini Cylinder
- Accessories for Mini Cylinder
- Container Cylinders
- Accessories for Container Cylinder
- Grippers
- Rubber Material / Grip Pad

## Suction

- Suction Cups
- Suction Stems
- Pad in Pad
- Vacuum Gripper
- Air Ejector / Filter / Check Valve
- Ultra Small Part Take Out
- Vacuum Generator Unit

## Cut

- Air Nipper (Small-Medium)
- Air Nipper (Large)

## Frame / Module

- Jungle Gym
- Let's Joint

- Rectangular Tube
- Base Aluminum Material
- Sliding Chuck

## Pneumatic Components / Sensors

- Pneumatic Components
- Sensors / Multi AND Board
- PCIO Communication Unit

## Lightweight Parts Series

- Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

## By Industry

- Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

## Assembling Tools

- Tool / Jig

## Information

- Various Products Information

# MEMO

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# By Industry



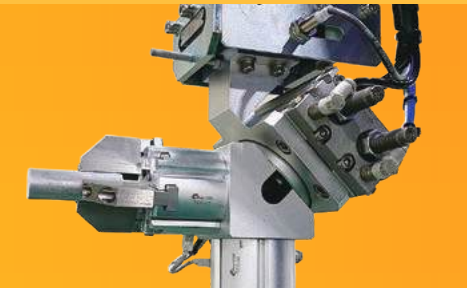
## Logistics • Palletizing ..... 8-2

- ▶ Air Ejectors / Pad ..... 8-2
- ▶ Vacuum Gripper..... 8-3



## Sheet Metal • Stamping • Metal Fabrication • • • 8-4

- ▶ Magnet Chucks ..... 8-4
- ▶ Three Claws Chuck..... 8-5
- ▶ Suction Cups ..... 8-6



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (QM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Beam Cylinder / Pads / Piston Manifolds

### By Industry

Logistics - Palletizing  
Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Logistics • Palletizing [Air Ejectors / Pad]

Perfect for transportation of heavy weight and cardboard.

**NEW** ▶ Air Ejectors



**Air Ejectors(shaft φ 12)**

Order code No.	<b>042116</b>
TYPE	<b>ESVP10-A</b>

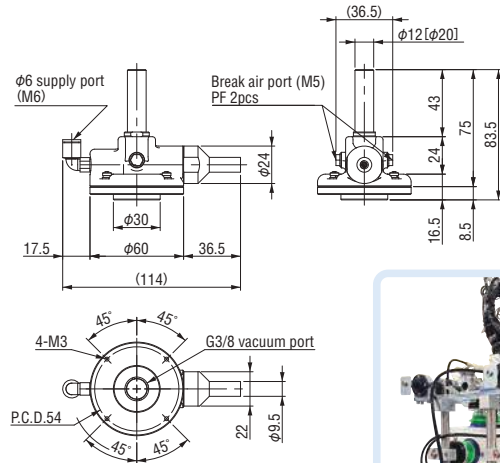
● Weight : 146g



**Air Ejectors(shaft φ 20)**

Order code No.	<b>042129</b>
TYPE	<b>ESVP10-A-20</b>





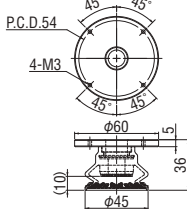
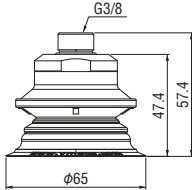
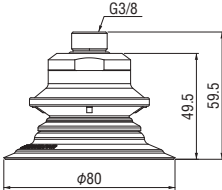
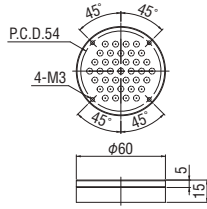
● Weight : 169g



**Specification**

TYPE	Max vacuum (-kPa)	Max suction discharge (NL/min)	Air supply pressure (MPa)	Air consumption (L/min)	Noise level (dBA)
<b>ESVP10-A</b>	-79.5	85	0.5	57	65 ~ 70

**NEW** ▶ Carrier Cup (for Ejector only)

Applicable cup size	φ 45mm	φ 65mm	φ 80mm	φ 60mm
Carrier cup	 for Holder plate			 for Holder plate
Drawing				
Order code No.	<b>042117</b>	<b>010749</b>	<b>010750</b>	<b>042118</b>
TYPE	<b>ESVP-A-PA</b>	<b>B1.5/60-MU65-N6-G-F2-38M</b>	<b>B1.5/60-MU80-N6-G-F2-38M</b>	<b>ESVP-A-SA</b>
Weight	56.4g	82g	88g	40.6g

**NEW** ▶ Maintenance Parts

**Filter**

Order code No.	<b>042119</b>
TYPE	<b>ESVP-FILT</b>

● Weight : 1.5g

**Nozzle unit**

Order code No.	<b>042133</b>
TYPE	<b>ESVP10-NOZL-UT</b>

● Weight : 20g

**Seal ring**

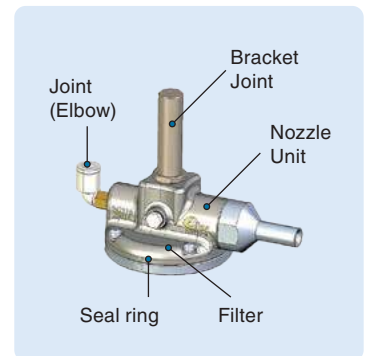
Order code No.	<b>042132</b>
TYPE	<b>ESVP10-SEAL</b>

● Weight : 0.1g

**Joint (Elbow)**

Order code No.	<b>102051</b>
TYPE	<b>K02L06-M6A</b>

● Weight : 4.3g



**Bracket joint φ 12**

Order code No.	<b>042130</b>
TYPE	<b>ESVP10-BKTJT12</b>

● Weight : 16g

**Bracket joint φ 20**

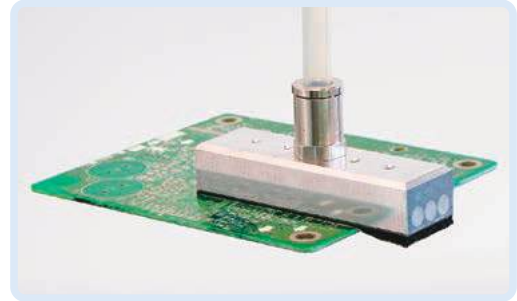
Order code No.	<b>042131</b>
TYPE	<b>ESVP10-BKTJT20</b>

● Weight : 38g



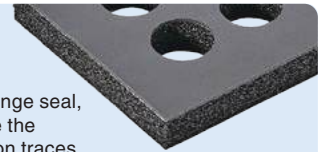
▶ A small vacuum gripper. Suitable for suction and transport of small workpieces.

Vacuum Gripper	<p>ejector not attached</p>	
Drawing		
Product name	Vacuum gripper 76×22・10mm	Sponge seal 76×22 w/o valve (for exchange)
Order code No.	<b>183977</b>	<b>183978</b>
TYPE	<b>SFM-76/22-SW-10-B</b>	<b>SFMSEAL76/22SW10BW/OV</b>
Weight	50.0g	1.5g



### About suction surface

It's coated with sponge seal, which could reduce the abrasion and suction traces.  
\* Sponge seal is replaceable.



## ■ Specification

TYPE	Vacuum Gripper	Valve	Holding power <sup>*1</sup> (N)	Required suction quantity <sup>*2</sup> (L/min)	Number of cells	Weight (g)
<b>SFM-76/22-SW-10-B</b>	External type	Throttle valve	40	40	26	60

\* 1 -60 kPa. If the entire gripper is covered by hard work piece.  
\* 2 The amount of suction when the vacuum gripper is connected to -60 kPa.

▶ It can transfer the work piece of different shapes with one gripper (wood, resin, cardboard, etc.).

Vacuum Gripper	<p>with ejector</p>	
Drawing		
Product name	Vacuum gripper 120×60・10mm	Sponge seal 120×60 w/o valve (for exchange)
Order code No.	<b>183979</b>	<b>183980</b>
TYPE	<b>SFX-120/60-SW-1.5-10-B</b>	<b>SFXFMSEAL120/60SW10BW/OV</b>
Weight	500.0g	6.5g

\* Sales ends when it's out of stock.

## ■ Specification

TYPE	Load tolerance <sup>*3</sup> (N)	Holding power <sup>*4</sup> (N)	Max suction discharge <sup>*5</sup> (L/min)	Max vacuum (%)	Air consumption (L/min)	Number of cells	Noise level (dB (A))	Supply pressure (MPa)	Allowable temperature (°C)	Weight (g)
<b>SFX-120/60-SW-1.5-10-B</b>	92	98	69	80	117	10	65	0.3 ~ 0.5	+5 ~ +50	500

\* 3 When transporting horizontally.  
\* 4 The max holding power happen while the system air pressure is -30 kPa When sucking on workpieces without ventilation. The safety rate is not included.  
\* 5 Supply air pressure 0.5 MPa.  
\* The max vacuum level, air consumption and noise level vary according to the external vacuum gripper.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

By Industry

Logistics - Palletizing  
Sheet Metal - Stamping - Metal Fabrication

Assembling Tools

Tool / Jig

Information

Various Products Information

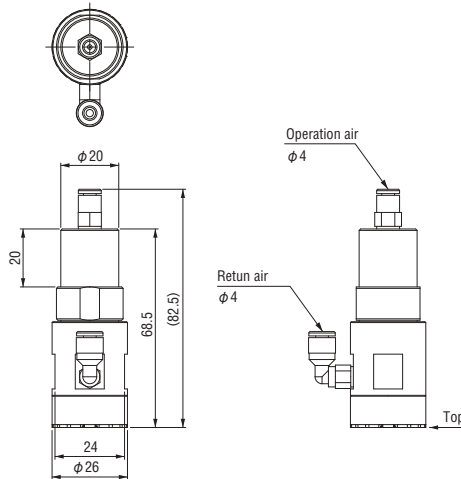




# Sheet Metal • Stamping • Metal Fabrication [Magnet Chucks]

Neodymium magnet is embedded in the chuck parts.

- ▶ Powerful holding force with the magnet.
- ▶ Lightweight with compact design
- ▶ Jungle gym with  $\phi 20$  series
- ▶ Using with magnet to transfer steel parts.



## Magnet chuck

Order code No.	123218
TYPE	MGC-20

- Double-act-type cylinder
- Weight: 95g
- Joint pipe fitting KQ2L04-M5N included

## Magnet chuck end rubber



Order code No.	123571
TYPE	MGC-C

- Weight: 3g
- Material: urethane rubber

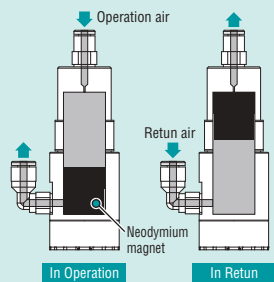


## Specification

TYPE	MGC-20
Mechanism	Double Action Type
Air pressure	0.39 ~ 0.49Mpa
Holding force	25N
Residual magnet*	0.01N Max.

\* Indicates the residual magnet at the top in return operation.

## Operation image



- ▶ Strong holding of uneven / perforated steel plate with permanent magnet!
- Product with sensor to detect magnet position is also available.

Holding force	100N	180N	290N
Magnet chuck			
Drawing			
W/o sensor	Order code No.	185352	185353
	TYPE	SSGM 40G 1/4-IG	SSGM 50G 1/4-IG
	Weight	240g	440g
W/NPN output sensor	Order code No.	185358	185359
	TYPE	SSGM-S-40-G1/4-IG-NPN	SSGM-S-50-G1/4-IG-NPN
	Weight	260g	460g
W/PNP output sensor	Order code No.	185355	185356
	TYPE	SSGM-S-40-G1/4-IG-PNP	SSGM-S-50-G1/4-IG-PNP
	Weight	260g	460g
W/290N	Order code No.	185354	185360
	TYPE	SSGM 70G 1/4-IG	SSGM-S-70-G1/4-IG-NPN
	Weight	715g	735g
W/290N	Order code No.	185355	185357
	TYPE	SSGM-S-70-G1/4-IG-PNP	SSGM-S-70-G1/4-IG-PNP
	Weight	735g	735g

● Material of non-slip ring : Polyurethane PU ● Pipe joint is sold separately. → See 6-5,6,7



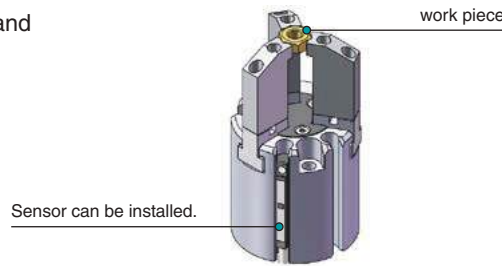
# Sheet Metal • Stamping • Metal Fabrication [Three Claws Chuck]

Perfect for gripping the work piece of cylindrical shape.

▶ It balances well at cylinder center, and grips the work piece accurately.

Accuracy of movement

±0.01mm



TCC-16 / TCC-25 / TCC-32



Use in gantry chuck

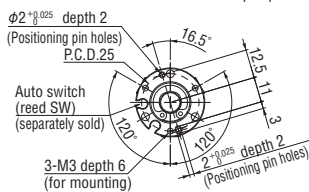
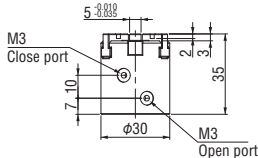
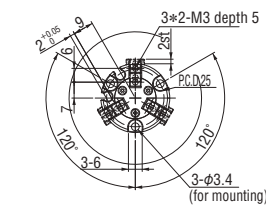
NEW



## Three Claws Chuck

Order code No.	197258
TYPE	TCC-16

- Stroke: 4mm
- Weight: 60g
- Structure: Double Action Type
- Pipe joint is sold separately. → See (6-5,6,7)
- Auto switch can be attached



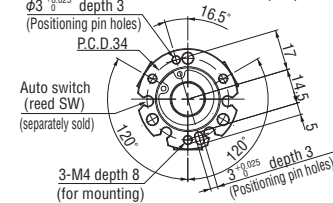
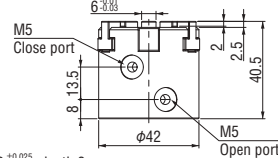
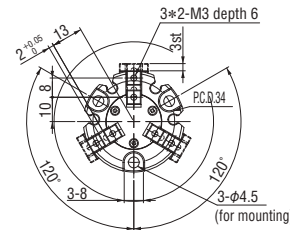
NEW



## Three Claws Chuck

Order code No.	197259
TYPE	TCC-25

- Stroke: 6mm
- Weight: 140g
- Structure: Double Action Type
- Pipe joint is sold separately. → See (6-5,6,7)
- Auto switch can be attached



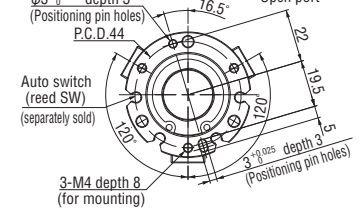
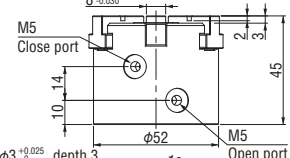
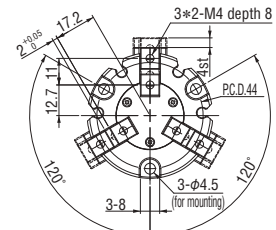
NEW



## Three Claws Chuck

Order code No.	197260
TYPE	TCC-32

- Stroke: 8mm
- Weight: 250g
- Structure: Double Action Type
- Pipe joint is sold separately. → See (6-5,6,7)
- Auto switch can be attached



## Specification

Product name	TYPE	Used air pressure (MPa)	Motion stroke (mm)	Cylinder diameter (mm)	Gripping force of outside diameter (<0.5MPa) (N)	Gripping force of inner diameter (<0.5MPa) (N)
Three claws chuck	TCC-16	0.2 ~ 0.7	4	16	14	16
	TCC-25		6	25	42	47
	TCC-32		8	32	74	82

### Auto switch (reed SW)



Order code No.	030282
TYPE	D-A93

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 5mA-40mA
- Lead wire: 0.5M OUT brown OUT (+) blue (-)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m

### Auto switch (contactless)



Order code No.	030425
TYPE	D-M9N

- Weight: 6g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 40mA or lower
- Lead wire: 0.5M+V (brown), Load (black), OV(blue)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m

### Auto switch (contactless)



Order code No.	030500
TYPE	D-F8N

- Weight: 7g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: 40mA or lower
- Lead wire: 0.5M+V (brown), Load (black), OV(blue)
- Indicator light
- Terminal process is not made.
- Wiring → See (6-20)
- Length: 0.5m

## Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

## Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

## Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

## Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

## Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

## Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

## Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

## By Industry

Logistics-Palletizing  
Sheet Metal Stamping  
Metal Fabrication

## Assembling Tools

Tool / Jig

## Information

Various Products Information



# Sheet Metal • Stamping • Metal Fabrication [Suction Cups]

Use as your situation.

- ▶ Use it for sheet metal conveyance. The grooves on the suction surface of the pad inhibit the lateral movement of the iron plate, which is coated with an oil film, while also accommodating the curved workpiece through a buffering effect.

Applicable cup size	φ30mm		φ60mm		
Suction Cups (Sheet Metal)					
Drawing					
* The value in ( ) indicates the dimension with suction.					
Fluorine (black)	Order code No.	<b>210918</b>	<b>210919</b>	<b>210920</b>	<b>210921</b>
	TYPE	<b>VAPNP-30C-1-M</b>	<b>VAPNP-30C-1-F</b>	<b>VAPNP-60C-1-M</b>	<b>VAPNP-60C-1-F</b>
	Weight	15.0g	12.0g	47.0g	45.0g
	Characteristics of rubber	Heat resistance : 85°C / Shore hardness : 60		Heat resistance : 85°C / Shore hardness : 60	
Applicable stems	Large : VFI-L, or VFIL-H → <a href="#">3-29.31</a>		—	Large : VFI-L, or VFIL-H → <a href="#">3-29.31</a>	

- ▶ Strong holding power in the horizontal direction. Utilize the superior suction capability provided by the groove on the suction surface.

Applicable cup size	φ33mm	φ43mm	φ53mm	φ63mm
Suction Cups for sheet metal w/ screw				
Drawing				
Order code No.	<b>187562</b>	<b>187563</b>	<b>187564</b>	<b>187565</b>
TYPE	<b>SSAXM-30-ED85-PT1/8AGJNT</b>	<b>SSAXM-40-ED85-PT1/8AGJNT</b>	<b>SSAXM-50-ED85-PT1/8AGJNT</b>	<b>SSAXM-60-ED85-PT1/8AGJNT</b>
Holding force* <sup>1</sup>	39N	69N	109N	154N
Horizontal power (with oil)* <sup>2</sup>	41N	71N	110N	155N
Weight	23.2g	23.7g	36.3g	41.0g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29.31</a>			

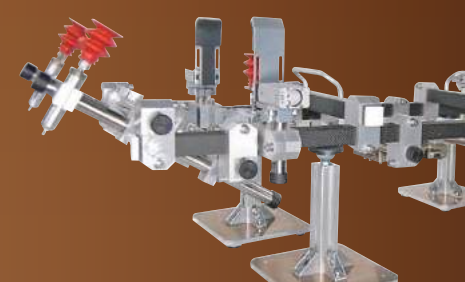
Applicable cup size	φ83mm	φ103mm	φ118mm
Suction Cups for sheet metal w/ screw			
Drawing			
Order code No.	<b>187566</b>	<b>187567</b>	<b>187568</b>
TYPE	<b>SSAXM-80-ED85-PT1/8AGJNT</b>	<b>SSAXM-100-ED85-PT1/8AGJNT</b>	<b>SSAXM-115-ED85-PT1/8AGJNT</b>
Holding force* <sup>1</sup>	270N	412N	549N
Horizontal power (with oil)* <sup>2</sup>	269N	414N	584N
Weight	50.5g	89.8g	109.9g
Applicable stems	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → <a href="#">3-29.31</a>		

# Assembling Tools



## Tool / Jig ..... 9-2

- ▶ Tools to Fastening Bolts and Joints ..... 9-2
- ▶ Tools to Fastening Bolts and Joints / Pipe Cutting Tool ..... 9-3
- ▶ Cutting Tool ..... 9-4
- ▶ Cutting Tool / Cutter / Deburring ..... 9-5
- ▶ Wiring Tool / Pliers Tool ..... 9-6
- ▶ Tube / Duct Cutting Tool / Measuring Tool ..... 9-7
- ▶ Adhesives / Adjustment Tool / Jig / Static Solutions Parts ... 9-8



### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Base Cylinder / Pads / Bush Manifolds

### By Industry

Logistics - Palletizing  
Steel Metal - Stamping  
Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



# Tools to Fastening Bolts and Joints

Recommend assembly tools.

## Tools to Fastening Bolts and Joints



**Megadora Standard Screwdriver (+)**

Order code No.	<b>350352</b>
TYPE	<b>900-1-75</b>

- Weight: 85g
- Blade size: No.1 (M2.0 ~ M2.6)



**Megadora Standard Screwdriver (+)**

Order code No.	<b>350353</b>
TYPE	<b>900-2-100</b>

- Weight: 100g
- Blade size: No.2 (M3.0 ~ M5.0)



**Megadora Standard Screwdriver (-)**

Order code No.	<b>350354</b>
TYPE	<b>900-6-100</b>

- Weight: 95g
- Blade size: 6.0
- Blade is almost straight.



**Precision Screwdriver Set**

Order code No.	<b>197170</b>
TYPE	<b>TD-56</b>

- Weight: 175g
- Blade size: (+)0.00/(-)2.3, 1.8, 1.2, 0.9
- Often used in precision equipment, etc. A screwdriver for turning small diameter screws.



**Ceramic adjuster driver**

Order code No.	<b>350355</b>
TYPE	<b>9000-1.8-30</b>

- Weight: 18g
- Blade size: (-)1.8
- Uses a zirconia ceramic chip that is non-inductive and non-magnetic. Ideal for adjusting coils and trimmers.



**Electric screwdriver (adapter bits 5set)**

Order code No.	<b>284778</b>
TYPE	<b>220USB-5</b>

- Weight: 160g
- Bit: ⊕1, ⊕2×2, ⊕3, ⊖6
- Cable, AC adapter for USB charging
- Quick tightening is done using an electric motor, and final tightening is done using a manual screwdriver. Comes with high brightness LED light.



**Electric screwdriver (cable bit 1set)**

Order code No.	<b>284779</b>
TYPE	<b>220USB-1</b>

- Weight: 160g
- Bit: ⊕2
- USB charging cable
- Quick tightening is done using an electric motor, and final tightening is done using a manual screwdriver. Comes with high brightness LED light.



**Electric screwdriver Rigid Hex Bit (5 set)**

Order code No.	<b>061139</b>
TYPE	<b>GS5P-31</b>

- Weight: 70.6g
- Opposite side (mm): 2.5/4.0/5.0/6.0
- Electric screwdriver (220 USB) for hex bit set.



**Flat-shaped Ratchet Screwdriver**

Order code No.	<b>197169</b>
TYPE	<b>TD-76</b>

- Weight: 98g
- High precision ratchet gear with magnet bit
- Magnetized bits make it easy to work in tight spaces.
- Accessories: Bits +1, +2, +2, +3, -4, -6. Hex width across flats 2.5, 3, 4, 5, 6 × 18mm



**Ball Point Wrench (Long Type)9-piece set**

Order code No.	<b>341075</b>
TYPE	<b>8309BP-L</b>

- Weight: 375g
- 9 set(mm) : 1.5/2.0/2.5/3.0/4.0/5.0/6.0/8.0/10.0
- Wrench for hexagon socket head bolts. Diagonal rotation work is feasible for hexagon socket head bolts sized M1.6 to M12.



**Ball Point Wrench (Long Type)H2**

Order code No.	<b>341077</b>
TYPE	<b>8300BP-L H2</b>

- Weight: 3g
- One specification of 8309BP-L (Opposite side 2.0mm)
- Hexagon socket head bolts sized M2.5



**Ball Point Wrench (Long Type)H2.5**

Order code No.	<b>341078</b>
TYPE	<b>8300BP-L H2.5</b>

- Weight: 5g
- One specification of 8309BP-L (Opposite side 2.5mm)
- Hexagon socket head bolts sized M3



**Ball Point Wrench (Long Type)H3**

Order code No.	<b>341079</b>
TYPE	<b>8300BP-L H3</b>

- Weight: 9g
- One specification of 8309BP-L (Opposite side 3.0mm)
- Hexagon socket head bolts sized M4



**Ball Point Wrench (Long Type)H4**

Order code No.	<b>341080</b>
TYPE	<b>8300BP-L H4</b>

- Weight: 18g
- One specification of 8309BP-L (Opposite side 4.0mm)
- Hexagon socket head bolts sized M5



**Ball Point Wrench (Long Type)H5**

Order code No.	<b>341081</b>
TYPE	<b>8300BP-L H5</b>

- Weight: 31g
- One specification of 8309BP-L (Opposite side 5.0mm)
- Hexagon socket head bolts sized M6



**Ball Point Wrench (Long Type)H6**

Order code No.	<b>341082</b>
TYPE	<b>8300BP-L H6</b>

- Weight: 51g
- One specification of 8309BP-L (Opposite side 6.0mm)
- Hexagon socket head bolts sized M8





# Tools to Fastening Bolts and Joints / Pipe Cutting Tool

Preferred item for EOAT assembling

## Tools to Fastening Bolts and Joints



### Ball Point Wrench Stubby (Long Type) 9-piece set

Order code No.	<b>341076</b>
TYPE	<b>8209BP-L</b>

- Weight: 361g
- 9 set(mm) : 1.5/2.0/2.5/3.0/4.0/5.0/6.0/8.0/10.0
- Wrench for hexagon socket head bolts. Diagonal rotation work is feasible for hexagon socket head bolts sized M1.6 to M12.



### Ball Point Wrench Stubby (Short Type) H2.5

Order code No.	<b>341083</b>
TYPE	<b>8200BP-L H2.5</b>

- Weight: 7g
- One specification of 8209BP-L (Opposite side 2.5mm)
- Hexagon socket head bolts sized M3



### Ball Point Wrench Stubby (Short Type) H3.0

Order code No.	<b>341084</b>
TYPE	<b>8200BP-L H3</b>

- Weight: 8g
- One specification of 8209BP-L (Opposite side 3.0mm)
- Hexagon socket head bolts sized M4



### Ball Point Wrench Stubby (Short Type) H4.0

Order code No.	<b>341085</b>
TYPE	<b>8200BP-L H4</b>

- Weight: 16g
- One specification of 8209BP-L (Opposite side 4.0mm)
- Hexagon socket head bolts sized M5



### Ball Point Wrench Stubby (Short Type) H5.0

Order code No.	<b>341086</b>
TYPE	<b>8200BP-L H5</b>

- Weight: 28g
- One specification of 8209BP-L (Opposite side 5.0mm)
- Hexagon socket head bolts sized M6



### SMS Double open end spanner

Order code No.	<b>187038</b>
TYPE	<b>SMS621H</b>

- Weight: 640g
- Set content (mm) : 8\*10/11\*13/12\*14/14\*17/17\*19/22\*24



### SNT thin spanner set

Order code No.	<b>187039</b>
TYPE	<b>SNT-0550</b>

- Weight: 290g
- Set content (mm) : 8\*9/10\*12/11\*13/14\*17/19\*21



### Open spanner set

Order code No.	<b>197171</b>
TYPE	<b>TS-05</b>

- Weight: 66g
- Set content (mm) : 3.2\*5.5/4\*5/6\*7/8\*9/10\*11



### Adjustable wrench 150mm

Order code No.	<b>221303</b>
TYPE	<b>WMA-150</b>

- Weight: 140g
- Convenient scale: 150mm. With graduations for convenient use



### Nut socket driver

Order code No.	<b>030520</b>
TYPE	<b>D-86-4.5</b>

- Weight: 54g
- Opposite side: 4.5mm
- The nut can be easily tightened by simply fitting the nut into the socket at the tip and rotating the handle.



### Nut socket driver

Order code No.	<b>030521</b>
TYPE	<b>D-86-7</b>

- Weight: 63g
- Opposite side: 7mm
- The nut can be easily tightened by simply fitting the nut into the socket at the tip and rotating the handle.

## Pipe Cutting Tool



### SUS Pipe cutter

Order code No.	<b>101206</b>
TYPE	<b>K-203</b>

- Weight: 215g
- It is easy to operate when cutting cylindrical materials such as metal pipes and PVC pipes, and the material can be cut straight.



### Spare blade for pipe cutter

Order code No.	<b>101207</b>
TYPE	<b>K-203-1</b>

- Weight: 3g
- Pipe cutter(K-203) spare blade



### Pipe reamer (For copper tubes and stainless tubes)

Order code No.	<b>197173</b>
TYPE	<b>TSR-2</b>

- Weight: 200g
- Applied pipe outer diameter:  $\phi$  8-35mm
- You can easily remove burrs from the outer and inner surfaces of copper and stainless steel pipes by simply rotating them after cutting.

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

#### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information





# Cutting Tool

Preferred item for EOAT assembling

## Cutting Tool



### Electronic nippers

Order code No.	<b>310706</b>
TYPE	<b>55S-120</b>

- Weight: 85g ● Total length: 122mm
- Cutting capacity: Iron wire  $\phi$  0.8mm, Copper wire :  $\phi$  1.2mm
- Blade type: Thin blade (suitable for cutting thin lines)



### Electronic nippers

Order code No.	<b>310695</b>
TYPE	<b>55S-150</b>

- Weight: 150g ● Total length: 155mm
- Cutting capacity: Iron wire  $\phi$  1.5mm, Copper wire :  $\phi$  2.6mm
- Blade type: Thin blade (suitable for cutting thin lines)



### Diagonal cutting nippers

Order code No.	<b>286129</b>
TYPE	<b>205H-150</b>

- Weight: 225g ● Total length: 168mm
- Cutting capacity: Iron wire  $\phi$  2.0 mm, Copper wire :  $\phi$  2.6 mm
- Blade type: Thick blade (suitable for cutting thick lines)



### Diagonal cutting nippers

Order code No.	<b>286130</b>
TYPE	<b>205H-175</b>

- Weight: 285g ● Total length: 193mm
- Cutting capacity: Iron wire  $\phi$  2.0 mm, Copper wire :  $\phi$  3.0 mm
- Blade type: Thick blade (suitable for cutting thick lines)



### High plastic nippers

Order code No.	<b>271846</b>
TYPE	<b>160S-125</b>

- Weight: 90g ● Total length: 131mm
- Cutting capacity: Soft resin  $\phi$  3.0mm
- Blade type: circular blade (standard blade)



### High plastic nippers

Order code No.	<b>271847</b>
TYPE	<b>160S-150</b>

- Weight: 130g ● Total length: 159mm
- Cutting capacity: Soft resin  $\phi$  5.0mm
- Blade type: circular blade (standard blade)



### High plastic nippers

Order code No.	<b>271848</b>
TYPE	<b>160SF-125</b>

- Weight: 90g ● Total length: 131mm
- Cutting capacity: Soft resin  $\phi$  3.0mm
- Blade type: Flat blade (the entire blade surface fits perfectly on the product)



### High plastic nippers

Order code No.	<b>271849</b>
TYPE	<b>160SF-150</b>

- Weight: 130g ● Total length: 159mm
- Cutting capacity: Soft resin  $\phi$  5.0mm
- Blade type: Flat blade (the entire blade surface fits perfectly on the product)



### Miniature plastic cutting nippers

Order code No.	<b>123885</b>
TYPE	<b>M12-125</b>

- Weight: 85g ● Total length: 129mm
- Cutting capacity: Soft resin  $\phi$  3.0mm
- Blade type: circular blade (standard blade)



### Plastic nippers (carbide tipped)

Order code No.	<b>023445</b>
TYPE	<b>CT160F-150</b>

- Weight: 130g ● Total length: 159mm
- Cutting capacity: Soft resin  $\phi$  5.0mm
- Blade type: Flat blade (the entire blade surface fits perfectly on the product)



### Heavy-duty plastic nippers

Order code No.	<b>350363</b>
TYPE	<b>99-175</b>

- Weight: 260g ● Total length: 188mm
- Cutting capacity: Soft resin  $\phi$  9.0mm
- Blade type: circular blade (standard blade)



### Heavy-duty plastic nippers

Order code No.	<b>350364</b>
TYPE	<b>99-200</b>

- Weight: 340g ● Total length: 216mm
- Cutting capacity: Soft resin  $\phi$  10.0mm
- Blade type: circular blade (standard blade)



### Plastic nippers (Limited edition)

Order code No.	<b>187586</b>
TYPE	<b>SPN130F</b>

- Weight: 110g ● Total length: 130mm
- Cutting capacity: Soft resin  $\phi$  5.0mm
- Blade type: Flat blade (the entire blade surface fits perfectly on the product)



### Compound cutting nippers

Order code No.	<b>221473</b>
TYPE	<b>WA1000F-160</b>

- Weight: 185g ● Total length: 156mm
- Cutting capacity: Soft resin  $\phi$  5.0mm
- Blade shape: circular blade (standard blade)



### End cutting plastic nippers

Order code No.	<b>286133</b>
TYPE	<b>25EF-145</b>

- Weight: 125g ● Total length: 144mm
- Cutting capacity: Soft resin  $\phi$  3.0mm
- Blade type: Kuikiri type



### Tip edge nippers

Order code No.	<b>261888</b>
TYPE	<b>02SP-125</b>

- Weight: 70g ● Total length: 122mm
- Cutting capacity: Soft resin  $\phi$  2.0mm
- Blade type: circular blade (standard blade)



### End cutting plastic nippers

Order code No.	<b>286131</b>
TYPE	<b>24EF-115</b>

- Weight: 75g ● Total length: 119mm
- Cutting capacity: Soft resin  $\phi$  3.0mm
- Blade type: Kuikiri type



### Peeling nippers

Order code No.	<b>387221</b>
TYPE	<b>33S-125</b>

- Weight: 90g ● Total length: 131mm
- Cutting capacity: Iron wire  $\phi$  0.8mm, Copper wire :  $\phi$  1.2mm
- Blade shape: Flat blade (the entire blade surface fits perfectly on the product)  
: Thin blade (suitable for cutting thin lines)



### Peeling nippers

Order code No.	<b>387222</b>
TYPE	<b>33S-150</b>

- Weight: 125g ● Total length: 158mm
- Cutting capacity: Iron wire  $\phi$  1.5mm, Copper wire :  $\phi$  2.6mm
- Blade shape: Flat blade (the entire blade surface fits perfectly on the product)  
: Thin blade (suitable for cutting thin lines)



# Cutting Tool / Cutter / Deburring

Preferred item for EOAT assembling

## Cutting Tool (Heat nippers)



### Heat nippers

Order code No.	<b>073320</b>
TYPE	<b>HT180DX</b>

- Weight: 310g
- Total length: 190mm
- Cutting capacity: Soft resin  $\phi$ 4.0mm
- Blade shape: circular blade (standard blade)
- For small diameter resin/with spring
- Maximum temperature of the blade: 160°C



### Heater

Order code No.	<b>221472</b>
TYPE	<b>W19</b>

- Weight: 19g
- Replacement heater for HT180DX.



### Transformer

Order code No.	<b>197348</b>
TYPE	<b>TRF100D</b>

- Weight: 2,000g
- Input voltage: AC100V (power cord 1.9m)
- Output voltage: AC26V
- Capacity: 32VA
- Temperature measurement method: Thermistor method
- Digital display
- Used for HT180DX heat nipper (with sensor).

## Cutter / Deburring



### Top sheet cutter

Order code No.	<b>286172</b>
TYPE	<b>209B</b>

- Weight: 17.5g
- Ideal for peeling off EP sponge sheet coatings.



### Work finisher (deburbing cutter / large)

Order code No.	<b>221474</b>
TYPE	<b>WF-1540</b>

- Weight: 56g
- Total length: 175mm
- Blade length: 40mm
- Blade material: Ceramic



### Work finisher (deburbing cutter / small)

Order code No.	<b>221475</b>
TYPE	<b>WF-620</b>

- Weight: 20g
- Total length: 133mm
- Blade length: 40mm
- Blade material: Ceramic



### Work finisher (micro finish T set)

Order code No.	<b>123923</b>
TYPE	<b>MFC2140</b>

- Weight: 36g
- Blade material: Ceramic
- Blade tip: T type



### Work finisher blade (micro finish T/2 pcs)

Order code No.	<b>123925</b>
TYPE	<b>MFC2001</b>

- Weight: 13g
- Blade material: Ceramic
- Blade tip: T type



### Work finisher blade (micro finish T/5 pcs)

Order code No.	<b>123927</b>
TYPE	<b>MFC3001</b>

- Weight: 30g
- Blade material: Ceramic
- Blade tip: T type



### Work finisher (micro finish R set)

Order code No.	<b>123924</b>
TYPE	<b>MFC2150</b>

- Weight: 36g
- Blade material: Ceramic
- Blade tip: R type



### Work finisher blade (micro finish R/2 pcs)

Order code No.	<b>123926</b>
TYPE	<b>MFC2002</b>

- Weight: 13g
- Blade material: Ceramic
- Blade tip: R type



### Work finisher blade (micro finish R/5 pcs)

Order code No.	<b>123928</b>
TYPE	<b>MFC3002</b>

- Weight: 30g
- Blade material: Ceramic
- Blade tip: R type

#### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

#### Grip

Mini Cylinder

Accessories for Mini Cylinder

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Grippers

Rubber Material / Grip Pad

#### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

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Air Nipper (Small-Medium)

Air Nipper (Large)

#### Frame / Module

Jungle Gym

Let's Joint

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Base Aluminum Material

Sliding Chuck

#### Pneumatic Components / Sensors

Pneumatic Components

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#### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

#### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

#### Assembling Tools

Tool / Jig

#### Information

Various Products Information



# Wiring Tool / Pliers Tool

Preferred item for EOAT assembling

## Wiring Tool



### Wire strippers

Order code No.	<b>384142</b>
TYPE	<b>3000A</b>

- Weight: 350g
- Completely strip the wire quickly with one hand operation.



### Mini wire stripper

Order code No.	<b>211157</b>
TYPE	<b>VST25</b>

- Weight: 295g
- Capable of stripping wires with a core diameter of  $\phi 0.25$  to  $\phi 2.6$ mm without any adjustment.
- Cutting range: copper wire  $\phi 2.6$ mm



### Manual one-hand type crimping tool

Order code No.	<b>002364</b>
TYPE	<b>AK15A</b>

- Weight: 400g
- For copper wire bare crimp terminals/bare crimp sleeves (P.B)



### Switch checker

Order code No.	<b>042058</b>
TYPE	<b>E39-VA</b>

- Weight: 20g
- Power supply voltage: DC18V (2 9V dry batteries)
- Handy power supply with built-in battery. (Sensor dedicated power supply)
- Operation of various sensors can be confirmed by buzzer sound and LED
- With battery low detection function



### Ceramic heater soldering iron

Order code No.	<b>054350</b>
TYPE	<b>FX600-02</b>

- Weight: 61g
- Perfect for soldering electronic parts.
- Adjustable from 200 to 500°C
- Built-in temperature controller in the grip. You can easily set the temperature by simply turning the dial.



### Soldering Station (with sponge)

Order code No.	<b>054351</b>
TYPE	<b>FH300-81</b>

- Weight: 502g
- Base size(mm):  $\phi 85 * D140$



### Lead free solder

Order code No.	<b>073361</b>
TYPE	<b>HS-304</b>

- Weight: 100g
- Solder: linear 1mm



### Hot glue gun

Order code No.	<b>072955</b>
TYPE	<b>HB-80</b>

- Weight: 220g
- Optimum for assembly work such as electronic parts holding.



### Hot glue

Order code No.	<b>072956</b>
TYPE	<b>HB-100S</b>

- Weight: 100g
- Hot glue (HB-80) exclusive



### Aluminum alloy vise

Order code No.	<b>197174</b>
TYPE	<b>TAB-70</b>

- Weight: 1,098g
- size(mm) : 188 × 158 × 155. Mouth width: 70mm, Mouth opening: 60mm

## Pliers Tool



### Long nose side cutting pliers

Order code No.	<b>271844</b>
TYPE	<b>105-150</b>

- Weight: 140g
- Cutting capacity: Iron wire  $\phi 1.5$  mm, Copper wire : 2.6 mm
- Total length: 163mm



### Long nose side cutting pliers

Order code No.	<b>271845</b>
TYPE	<b>105-175</b>

- Weight: 185g
- Cutting capacity: Iron wire  $\phi 2.0$  mm, Copper wire : 3.0 mm
- Total length: 191mm



### Duck bill pliers

Order code No.	<b>286132</b>
TYPE	<b>2500-200</b>

- Weight: 205g
- Tip shape: Height 7.0mm\* Width 5.0mm : Jagged cross eyes
- Total length: 200mm



### Screw pliers

Order code No.	<b>250266</b>
TYPE	<b>ZA185</b>

- Weight: 280g
- Total length: 195mm
- Application: Suitable for removing crushed and rusted screws.



# Tube / Duct Cutting Tool / Measuring Tool

Preferred item for EOAT assembling

## Tube / Duct Cutting Tool



### Tube cutters

Order code No.	<b>190508</b>
TYPE	<b>TK-1</b>

- Weight: 154g
- Applicable tube material: soft plastic tube, nylon, polyurethane, etc.)
- Applicable tube outer diameter: 13mm or less



### Merry cutters

Order code No.	<b>187587</b>
TYPE	<b>SX10-210</b>

- Weight: 380g
- Total length: 210mm
- Tip blade opening: 39mm
- Blade length: 65mm
- Straight cut.
- Suitable for cutting all kinds of soft materials.



### Merry cutters

Order code No.	<b>187589</b>
TYPE	<b>SX5-195</b>

- Weight: 170g
- Total length: 195mm
- Tip blade opening: 24mm
- Blade length: 53mm
- Straight cut.
- Suitable for cutting all kinds of soft materials.



### Tube cutters

Order code No.	<b>023446</b>
TYPE	<b>CX5</b>

- Weight: 170g
- Total length: 195mm
- Tip blade opening: 22mm
- Blade length: 53mm
- A cutter specialized for cutting hoses.



### Duct cutters

Order code No.	<b>187588</b>
TYPE	<b>SX15-210</b>

- Weight: 395g
- Total length: 210mm
- Tip blade opening: 37mm
- Blade length: 65mm
- For cutting communication moldings and cutting ducts.



### Moulding cutters

Order code No.	<b>030530</b>
TYPE	<b>DX80-255</b>

- Weight: 470g
- Total length: 255mm
- Tip blade opening: 85mm
- Blade length: 92mm
- Can cut wiring ducts up to 80mm wide.



### Duct plastic nippers

Order code No.	<b>030528</b>
TYPE	<b>DK65-250</b>

- Weight: 505g
- Total length: 260mm
- Blade shape: Circular blade (standard blade)/ Resin-specific blade
- Length 65.0mm, thickness 21.5mm
- Can cut wiring ducts up to 80mm wide.
- Easy to open the duct.
- Can also be used to cut gates in deep areas of resin molded products.



### Duct cutters (Fixed appliance)

Order code No.	<b>197347</b>
TYPE	<b>TDC100</b>

- Weight: 8,400g
- Tip blade opening: 25mm
- Blade length: 110mm
- Can cut wiring ducts up to 100mm wide.



### DIN rail round nippers

Order code No.	<b>030529</b>
TYPE	<b>DRN4</b>

- Weight: 350g
- Total length: 200mm
- For finishing corners of DIN rails.
- Aluminum DIN rails can have their corner radius processed smoothly.



### Ratchet style tube cutter

Order code No.	<b>197172</b>
TYPE	<b>TTCR-322T</b>

- Weight: 270g
- Coping with copper, aluminum, brass, PVC pipe. Because of the automatic transport function, it will make clean cut surface.
- Stainless steel pipes cannot be cut.
- Replacement blade for Ratchet style tube cutter



### Replacement blade for Ratchet style tube cutter

Order code No.	<b>061138</b>
TYPE	<b>GFC-15NT</b>

- Weight: 3g
- The replacement blade for tube cutter (TTCR-322T) only.
- Stainless steel pipes cannot be cut.

## Measuring Tool



### Straight Scale (150mm)

Order code No.	<b>271792</b>
TYPE	<b>13005</b>

- Weight: 10g
- First class JIS specification (Non Calibration update)
- Shinwa make



### Straight Scale (300mm)

Order code No.	<b>271793</b>
TYPE	<b>13013</b>

- Weight: 65g
- First class JIS specification (Non Calibration update)
- Shinwa make



### Tough gear HG (Major 5.5m)

Order code No.	<b>341087</b>
TYPE	<b>80821</b>

- Weight: 329g
- First class JIS specification (Non Calibration update)
- Origin 0 point correction slide hook equipped (Shinwa)
- Protect the body with shock absorption protector.

### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Section / Resin Cylinders / Pads / Resin Manifolds

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Logistics - Palletizing / Sheet Metal - Stamping - Metal Fabrication

### Assembling Tools

### Tool / Jig

### Information

Various Products Information



# Adhesives / Adjustment Tool / Jig / Static Solutions Parts

Preferred item for EOAT assembling

## Adhesives



### Adhesive (Sponge Pads)

Order code No.	<b>371759</b>
TYPE	Adhesive Q 50G Clear #4888

- NET: 50ml
- Silicon bond
- Please use it to bond silicone pads and sponges.



### Adhesive Cemedine 20ML

Order code No.	<b>371765</b>
TYPE	AX-038 (Super X • 20TM)

- NET: 20ml
- Please use it for adhering rubber plates.



### Adhesive Cemedine 135ML

Order code No.	<b>002481</b>
TYPE	AX-250 (Super X 8008 • 135ML)

- NET: 135ml
- If you need a Material Safety Data Sheet (SDS), please purchase it.
- Please use it for adhering rubber plates.

## Adjusting Tool



### Combination hammer

Order code No.	<b>200263</b>
TYPE	UD7-10

- Weight: 730g
- Combination hammer is made of two kinds of materials, steel and resin.

## Jig



### Mounting pitch fixing plate

Order code No.	<b>042060</b>
TYPE	EINS JIG TYPE J-01

- Weight: 140g
- Mounting pitch(20×50mm) easy to adjust position
- Hand mounting pitch can be adjusted easily.



### EOAT assembly stand

Order code No.	<b>042059</b>
TYPE	EINS JIG TYPE C-01

- Weight: 1100g
- Adjustable within 40mm up and down
- The stand is convenient for wiring and piping adjustment work in assembly process.

## Static Solutions Parts



### Ionizing Fan

Order code No.	<b>054363</b>
TYPE	F-120R

- Weight: 900g
- Ion generation method: Piezoelectric high frequency AC corona discharge type
- Static neutralization time: 1.5 seconds or less
- Ion balance: within ±10V
- Individual packaging size: 295 x 225 x 115



### Cross-Flow Ionizing Fan

Order code No.	<b>023455</b>
TYPE	CF-600

- Weight: 4600g
- Thin and wide static electricity removal fan.
- Ion generation method: AC (20kHz) corona discharge type
- Static neutralization time: 1.5 seconds or less
- Ion balance: within ±10V
- Individual packaging size: 645×290×230



### Pneu-Power Ion Gun

Order code No.	<b>061261</b>
TYPE	G-9

- Weight: 470g
- A handy static electricity removal power tool.
- Static electricity can be removed using only compressed air.
- Ion generation method: AC high frequency corona discharge type
- Static neutralization time: 1 second or less
- Ion balance: ±30V
- Individual packaging size: 294×250×63



### Electrostatic Field Meter

Order code No.	<b>042120</b>
TYPE	Eye-02

- Weight: 200g
- Unseen static electricity can be measured using this useful tool.
- Ion balance: 0 ~ ±200V
- Individual packaging size: 195 x 115 x 80
- Power supply: 9V battery (006P type)
- Measurement range: Charged potential ±0 to ±1.50kV (LO range), ±1.0 to ±22.0kV (HI range)
- Measurement distance: 25mm ± 0.5mm (between main body and charged object)



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### Quick Chuck Change

Quick Chuck Change Manual

Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

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**Quick Chuck Change**

Quick Chuck Change Manual
Quick Chuck Change Manual (OM Type)
Tool Changer
Automated Hand Exchange System
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Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessories for Container Cylinder
Grippers
Rubber Material / Grip Pad
Suction
Suction Cups
Suction Stems
Pad in Pad
Vacuum Gripper
Air Ejector / Filter / Check Valve
Ultra Small Part Take Out
Vacuum Generator Unit
Cut
Air Nipper (Small-Medium)
Air Nipper (Large)
Frame / Module
Jungle Gym
Let's Joint
Rectangular Tube
Base Aluminum Material
Sliding Chuck
Pneumatic Components / Sensors
Pneumatic Components
Sensors / Multi AND Board
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Lightweight Parts Series
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By Industry
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**Quick Chuck Change**

Quick Chuck Change Manual
Quick Chuck Change Manual (OM Type)
Tool Changer
Automated Hand Exchange System
<b>Grip</b>
Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessories for Container Cylinder
Grippers
Rubber Material / Grip Pad
<b>Suction</b>
Suction Cups
Suction Stems
Pad in Pad
Vacuum Gripper
Air Ejector / Filter / Check Valve
Ultra Small Part Take Out
Vacuum Generator Unit
<b>Cut</b>
Air Nipper (Small-Medium)
Air Nipper (Large)
<b>Frame / Module</b>
Jungle Gym
Let's Joint
Rectangular Tube
Base Aluminum Material
Sliding Chuck
<b>Pneumatic Components / Sensors</b>
Pneumatic Components
Sensors / Multi AND Board
PCIO Communication Unit
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<b>By Industry</b>
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**Quick Chuck Change**

Quick Chuck Change Manual
Quick Chuck Change Manual (OM Type)
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Automated Hand Exchange System
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Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessories for Container Cylinder
Grippers
Rubber Material / Grip Pad
<b>Suction</b>
Suction Cups
Suction Stems
Pad in Pad
Vacuum Gripper
Air Ejector / Filter / Check Valve
Ultra Small Part Take Out
Vacuum Generator Unit
<b>Cut</b>
Air Nipper (Small-Medium)
Air Nipper (Large)
<b>Frame / Module</b>
Jungle Gym
Let's Joint
Rectangular Tube
Base Aluminum Material
Sliding Chuck
<b>Pneumatic Components / Sensors</b>
Pneumatic Components
Sensors / Multi AND Board
PCIO Communication Unit
<b>Lightweight Parts Series</b>
Frame / Suction / Resin Cylinders / Pads / Resin Manifolds
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### Quick Chuck Change

Quick Chuck Change Manual
Quick Chuck Change Manual (OM Type)

Tool Changer

Automated Hand Exchange System

### Grip

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Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Rubber Material / Grip Pad

### Suction

Suction Cups

Suction Stems

Pad in Pad

Vacuum Gripper

Air Ejector / Filter / Check Valve

Ultra Small Part Take Out

Vacuum Generator Unit

### Cut

Air Nipper (Small-Medium)

Air Nipper (Large)

### Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

### Pneumatic Components / Sensors

Pneumatic Components

Sensors / Multi AND Board

PCIO Communication Unit

### Lightweight Parts Series

Frame / Suction / Resin Cylinders / Pads / Resin Manifolds

### By Industry

Logistics-Palletizing/Sheet Metal-Stamping-Metal Fabrication

### Assembling Tools

Tool / Jig

### Information

Various Products Information



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## South AMERICA [www.starseiki.com.br](http://www.starseiki.com.br)

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Avenida do Estado,1677-Bom Retiro-CEP:108-000, Sao Paulo-SP-BRAZIL

## EUROPE [www.eins1.eu](http://www.eins1.eu)

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## ASIA [www.eins1.cn](http://www.eins1.cn)

- China STAR SEIKI (SHANGHAI) CO., LTD.**  
Room 308, Building 2, 2071 Hongmei Road, Xuhui District, Shanghai,China
- China STAR SEIKI (SHANGHAI) CO., LTD. DALIAN OFFICE**  
No.15-14, No.3 Building YiFeng Moden City, Economic and Technology Development Zone, DaLian, Liaoning, China.
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Room A308, Phase II, HaiFa Business Building, No. 3 ChangLe Road, HuLi District, XiaMen, Fujian, China
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Room 415, No.78 Shunhuidong Road, Fengshan Street, Yuyao City, Ningbo, Zhejiang Province, China



**China STAR SEIKI (SHANGHAI) CO., LTD. CHENGDU OFFICE**  
 Room 2601, Unit 1, Building 13, No.109, Congdong Road, Wanda Plaza, Bidu District, Chengdu City, Sichuan, China

**China STAR AUTOMATION (SHENZHEN) CO., LTD.**  
 No.6, West SongShan Road, BoGang Village ShaJing Town, BaoAn District, ShenZhen, GuangDong, China

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**China STAR SEIKI (HONGKONG) CO., LTD.**  
 22/F, Unit 2206, CCT Telecom Building, No.11 Wo Shing Street, Fo Tan, Shatin, New Territories, Hong Kong, China

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 7F, No.120, Chung Cheng Rd., Shih Lin District, Taipei 11158, Taiwan

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**Singapore STAR SEIKI SINGAPORE PTE. LTD.**  
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**Indonesia PT. STAR SEIKI INDONESIA**  
 Kawasan CBD, Ruko Town Square BETOS Blok G 25-26Jl. Cut Mulia 003/009Ket. Margatayu, Kec. Bekasi Timur, Bekasi Jawa Barat 17113 Indonesia

**Philippines STAR SEIKI PHILIPPINES INC.**  
 Innorev Bldg.Phase 6A. Lot 3281-1 SEZ Laguna Technopark, Binan, Laguna 4024, Philippines.

**Vietnam STAR SEIKI (VIETNAM) CO., LTD.**  
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**Vietnam BRANCH OF STAR SEIKI (VIETNAM) CO., LTD. IN HO CHI MINH CITY**  
 GIC BUILDING 4FLOOR, ROOM402, NO 414, UNG VAN KHIEM STREET, WARD 25, BINH THANH DISTRICT, HOCHIMINH CITY, VIETNAM.

**India STAR SEIKI INDIA PRIVATE LIMITED**  
 no.401, 4th Floor, Time Tower, M.G Road, Near M.G Metro Station Gurgaon, Haryana-122002, India

**India STAR SEIKI INDIA PRIVATE LIMITED. CHENNAI OFFICE**  
 106, RL Complex,GST Road, Chrompet, Chennai Tamil Nadu-600044, India

## OSEANIA

**Australia RADIUS TECHNOLOGY PTY. LTD.**  
 9/2 Sibthorpe Street, Braeside Victoria 3195, Australia



# Global Network -Domestic Network-



## JAPAN

[www.eins1.jp](http://www.eins1.jp)

 **Headquarters / Aichi Plant**

## Eins Division

3-133, Akita, Ohguchi-cho, Niwa-gun, Aichi Pref., 480-0132, JAPAN  
PHONE:(+81)587-95-6491[daial-in] FAX:(+81)587-94-1319

**Headquarters / International Division**



3-133, Akita, Ohguchi-cho, Niwa-gun, Aichi Pref., 480-0132, JAPAN  
PHONE:(+81)587-95-7572 FAX:(+81)587-95-7573

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**Kanagawa Sales Office**

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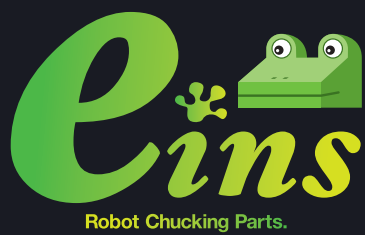
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