



Components Catalog Vol.6

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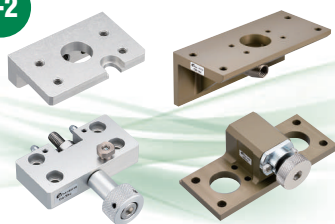
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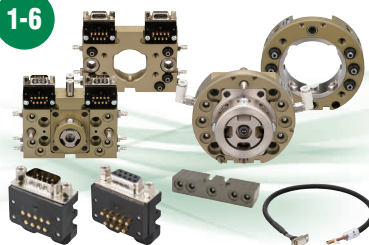
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1-2



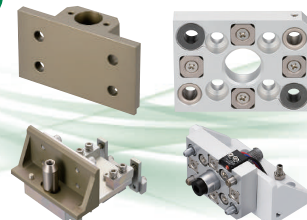
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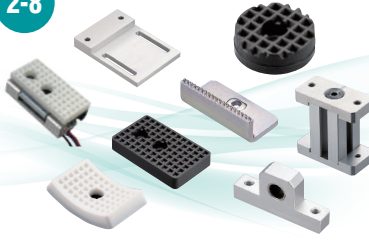
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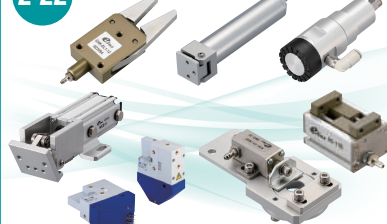
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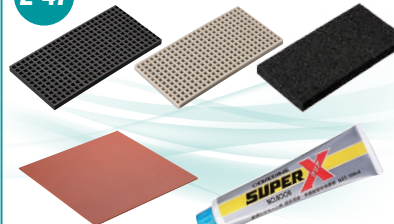
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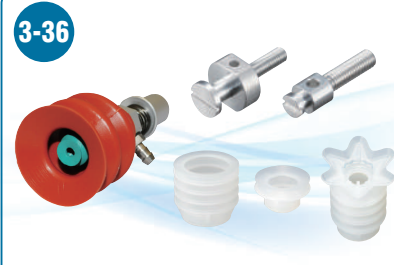
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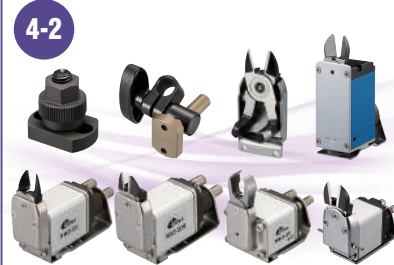
Air Ejector / Filter / Check Valve

3-46

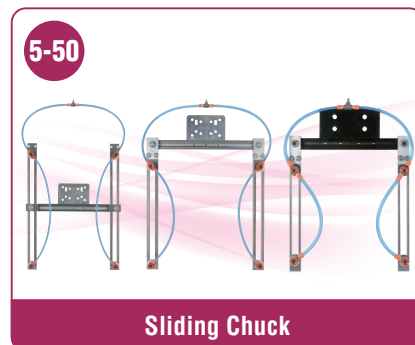
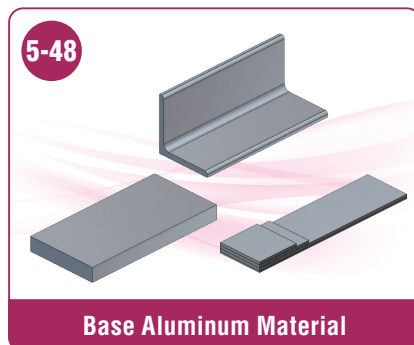
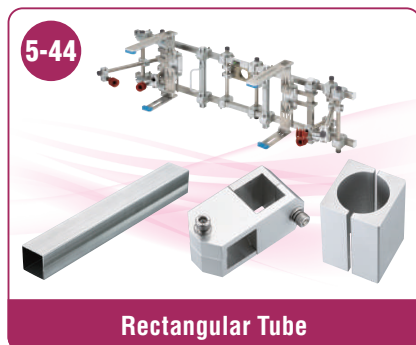
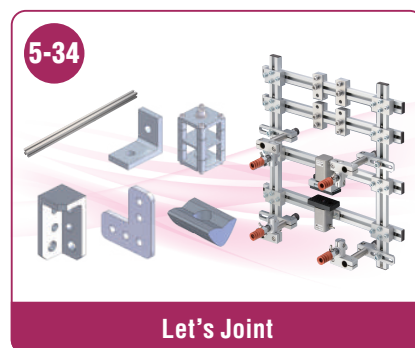
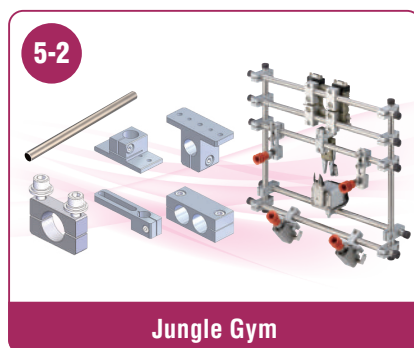


Ultra Small Part Take Out

4-2



Air Nipper (Small - Medium)



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

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Quick Chuck Change

Item to exchange chuck in a short time

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Make your tooling lighter with our resin components

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Perfect item for hand assembling

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Quick Chuck Change (Manual)

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Air Nipper (Large)

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Air Management

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PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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Tool / Jig

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Various Products Information

Information about new product

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Resin Mini Cylinder-MCDR

Order code No.	123691
TYPE	MCDR-10

2-4



Resin Mini Cylinder-MCDR

Order code No.	123692
TYPE	MCDR-20

2-7



Suction Combination Cylinder

Order code No.	211133
TYPE	VMCP-10

2-7



Suction Combination Cylinder

Order code No.	211134
TYPE	VMCP-1220

2-7



Suction Combination Cylinder

Order code No.	211135
TYPE	VMCP-30

2-7



Suction Combination Cylinder

Order code No.	211137
TYPE	VMCP-10-C

2-7



Suction Combination Cylinder

Order code No.	211138
TYPE	VMCP-20-C

2-7



Suction Combination Cylinder

Order code No.	211139
TYPE	VMCP-30-C

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Resin Suction Stem (Mini)

Order code No.	211105
TYPE	VFILP-SS-5-P12

3-22



Resin Suction Stem (Mini)

Order code No.	211106
TYPE	VFILP-SS-10-P12

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Resin Suction Stem (Mini)

Order code No.	211107
TYPE	VFILP-SS-20-P12

3-23



Resin Suction Stem (Mini)

Order code No.	211108
TYPE	VFILP-SS-30-P12

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Resin Suction Stem (Mini)

Order code No.	211109
TYPE	VFILP-SS-5

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Resin Suction Stem (Mini)

Order code No.	211110
TYPE	VFILP-SS-10

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Resin Suction Stem (Mini)

Order code No.	211111
TYPE	VFILP-SS-20

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Resin Suction Stem (Mini)

Order code No.	211112
TYPE	VFILP-SS-30

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Resin Suction Stem (Small)

Order code No.	211092
TYPE	VFILP-S-5-P12

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Resin Suction Stem (Small)

Order code No.	211093
TYPE	VFILP-S-10-P12

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Resin Suction Stem (Small)

Order code No.	211094
TYPE	VFILP-S-20-P12

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Resin Suction Stem (Small)

Order code No.	211095
TYPE	VFILP-S-30-P12

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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Resin Suction Stem (Small)

Order code No.	211097
TYPE	VFILP-S-5

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Resin Suction Stem (Small)

Order code No.	211098
TYPE	VFILP-S-10

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Resin Suction Stem (Small)

Order code No.	211099
TYPE	VFILP-S-20

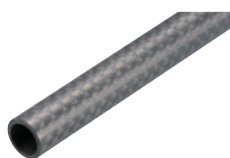
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Resin Suction Stem (Small)

Order code No.	211100
TYPE	VFILP-S-30

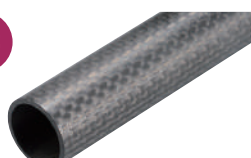
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CFRP Pipe φ 12

Order code No.	023361
TYPE	CFRP 12 * 1.5 * 1500

5-8



CFRP Pipe φ 20

Order code No.	023362
TYPE	CFRP 20 * 1.5 * 1500

5-10



Floating Cross Connector φ 12

Order code No.	054346
TYPE	F-CROSS-12

5-10



Floating Cross Connector φ 20

Order code No.	054347
TYPE	F-CROSS-20

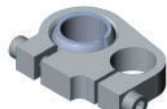
5-13



Floating Parallel Connector φ 12

Order code No.	054344
TYPE	F-PARA-12

5-13



Floating Parallel Connector φ 20

Order code No.	054345
TYPE	F-PARA-20

3-11



Special pad

Pads ideal for taking out soft workpieces or bag-shaped workpieces. See 3-11 for details.

3-36



Pad in Pad

Pad in pad products were newly added. See 3-36 for details.

8-2



Tool

Tools convenient for mounting Eins chucks. See 8-2 for details.

8-4



Jig

Jigs convenient for mounting Eins chucks. See 8-4 for details.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

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Accessory for Container Cylinder

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Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

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Information

Various Products Information

Introduction of the change of sales method about [module products]

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

Order Code No.	Name	TYPE	Page
090155	Suction module for jungle gym (φ8)	JSM-001	5-30
090156	Suction module for jungle gym (φ8)	JSM-002	5-30
090216	Suction module for jungle gym (φ8)	JSM-003B	5-30
090158	Suction module for jungle gym (φ12)	JSM-004	5-30
090159	Suction module for jungle gym (φ12)	JSM-005	5-30
090217	Suction module for jungle gym (φ12)	JSM-006B	5-30
090218	Suction module for jungle gym (φ12)	JSM-007B	5-31
090162	Suction module for jungle gym (φ20)	JSM-008	5-31
090232	Gripper module for jungle gym (φ12)	JGM1-001	5-31
090233	Gripper module for jungle gym (φ12)	JGM1-002	5-31
090234	Gripper module for jungle gym (φ12)	JGM1-003	5-31
090235	Gripper module for jungle gym (φ12)	JGM1-004	5-31
090236	Gripper module for jungle gym (φ12)	JGM1-005	5-31
090237	Gripper module for jungle gym (φ12)	JGM1-006	5-31
090238	Gripper module for jungle gym (φ12)	JGM1-007	5-31
090239	Gripper module for jungle gym (φ12)	JGM1-009	5-31
090240	Gripper module for jungle gym (φ12)	JGM1-011	5-32
090241	Gripper module for jungle gym (φ20)	JGM1-013	5-32
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090245	Gripper module for jungle gym (φ20)	JGM1-023	5-33
090219	Limit switch module for jungle gym (φ8)	JLM-001B	5-33
090220	Limit switch module for jungle gym (φ12)	JLM-002B	5-33
090190	Limit switch module for jungle gym (φ12)	JLM-003	5-33
110569	Suction module for let's joint	LSM-001	5-40
110570	Suction module for let's joint	LSM-002	5-40
110571	Suction module for let's joint	LSM-003	5-40
110689	Suction module for let's joint	LSM-004B	5-40
110690	Suction module for let's joint	LSM-006B	5-40
110577	Gripper module for let's joint (UMCD)	LGM-002	5-41
110696	Gripper module for let's joint (MCD1)	LGM1-005	5-41
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110582	Gripper module for let's joint (MCD1)	LGM-007	5-41
110583	Gripper module for let's joint (MCD1)	LGM-008	5-41
110584	Gripper module for let's joint (MCD1)	LGM-009	5-41
110586	Gripper module for let's joint (MCD1)	LGM-011	5-41
110587	Gripper module for let's joint (MCD1)	LGM-012	5-41
110692	Gripper module for let's joint (MCP)	LGM1-014	5-42
110693	Gripper module for let's joint (MCP)	LGM1-015	5-42
110694	Gripper module for let's joint (MCP)	LGM1-017	5-42
110599	Limit switch module for let's joint	LLM-003	5-42

Product update : specification change to following items

Order Code No.	Old specification		Order Code No.	Name	Specification	Detailed contents of change	Page
230076	XL0054-106	→	230116	Barbed joint	XL0054-106A	Change of head shape	1-16,27
186825	S9 (1AS-9)	→	152689	Packing	P8 NBR-70	Change of sectional diameter	1-16,27
140309	OX-RS12T-LB I	→	140378	Wireless connector 12P-tool side	OX-RS12T1-LB I	Change of inter-connector distance	1-17
140331	OXR-RS12T-20 I	→	140379	Wireless connector 12P-tool side	OXR-RS12T1-20 I		1-29
183948	SSGON2 * 4 SI-M3 M	→	187222	Oval cup • Silicon • White	SSGON-4 * 2-SI-65-M3-M	Change of hardness	3-16
183949	SSGON3.5 * 7 SI-M3 M	→	187223	Oval cup • Silicon • White	SSGON-7 * 3.5-SI-65-M3-M		3-16
183950	SSGON5 * 15 SI-M5 M	→	187224	Oval cup • Silicon • White	SSGON-15 * 5-SI-65-M5-M		3-16
183951	SSGON10 * 30 SI-PT1/8 M	→	187225	Oval cup • Silicon • White	SSGON-30 * 10-SI-65-PT1/8-M		3-16
183952	SSGON15 * 45 SI-PT1/8 M	→	187226	Oval cup • Silicon • White	SSGON-45 * 15-SI-65-PT1/8-M		3-16
183956	SSGO 2 * 4 SI	→	187227	Suction Cups (Oval silicone rubber)	SSGO-4 * 2-SI-65	Change of hardness	3-18
183957	SSGO 3.5 * 7 SI	→	187228	Suction Cups (Oval silicone rubber)	SSGO-7 * 3.5-SI-65		3-18
183958	SSGO 5 * 15 SI	→	187229	Suction Cups (Oval silicone rubber)	SSGO-15 * 5-SI-65		3-18
183959	SSGO 10 * 30 SI	→	187230	Suction Cups (Oval silicone rubber)	SSGO-30 * 10-SI-65		3-18
183960	SSGO 15 * 45 SI	→	187231	Suction Cups (Oval silicone rubber)	SSGO-45 * 15-SI-65		3-18
183059	STFC-4	→	042036	Small air filters	EVFL-44	Change of manufacturer	3-43
183060	STFC-6	→	042037	Small air filters	EVFL-66		3-43

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

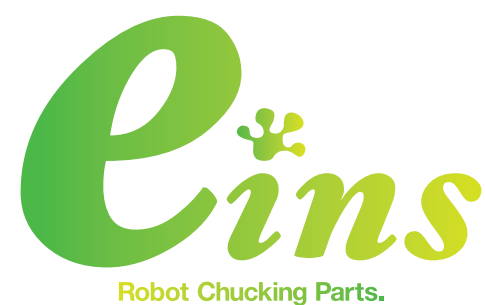
Assembling Tools

Tool / Jig

Information

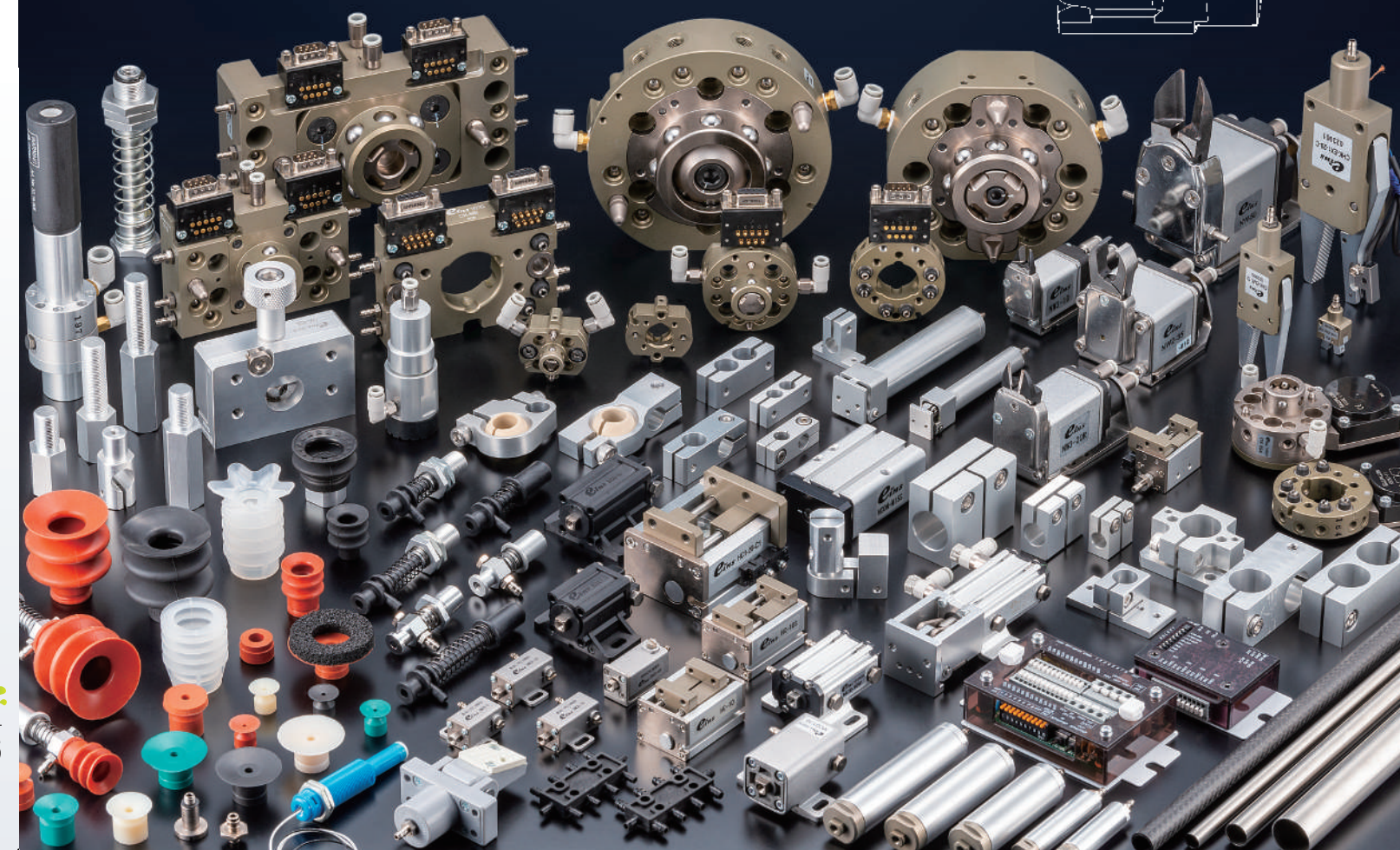
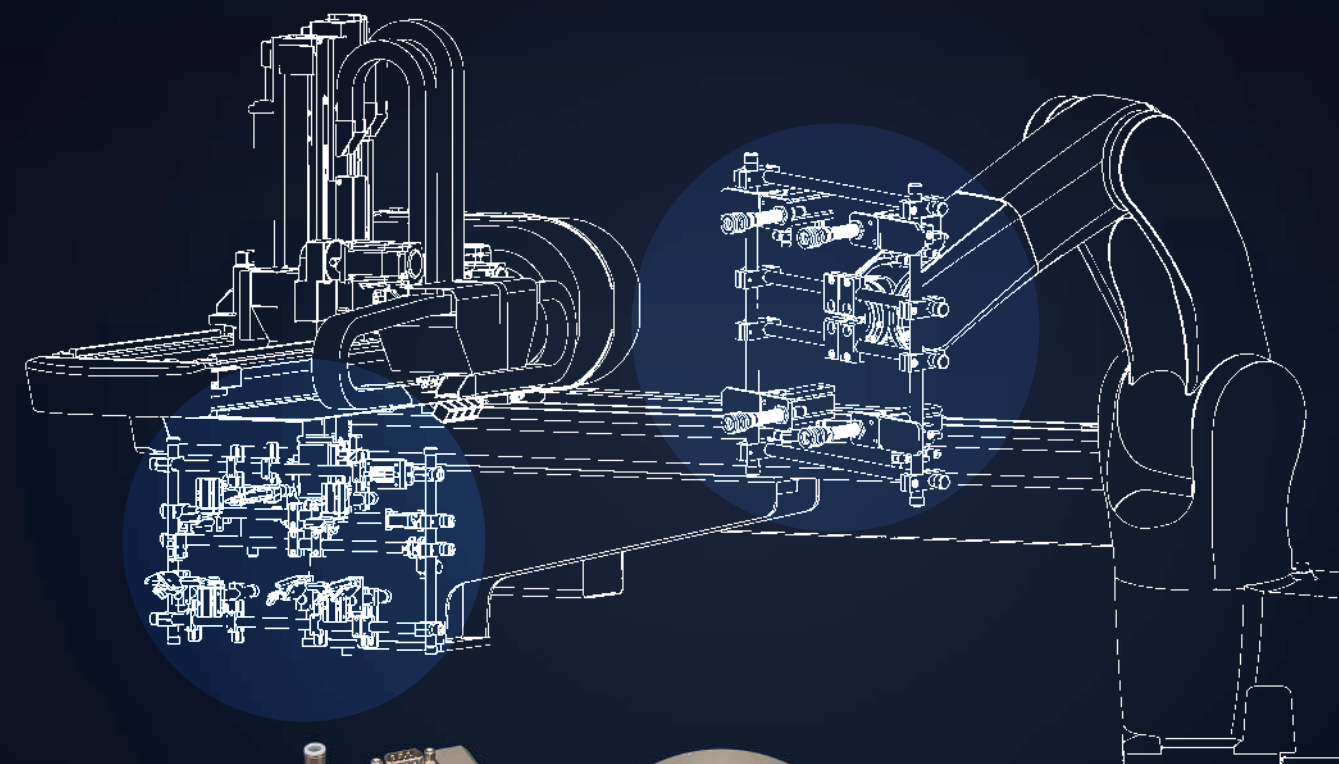
Various Products Information

This image shows a full page of white paper with horizontal dashed lines, typical of primary school handwriting practice paper. The lines are evenly spaced and run across the entire width of the page. There are no margins, text, or other markings present.



Robot End of Arm Tooling

Components Catalog Vol.6



MEMO

3 Features of *Eins* Amazing

1 Extensive experience!
Experts of Eins chuck-plate will teach you how to assemble.

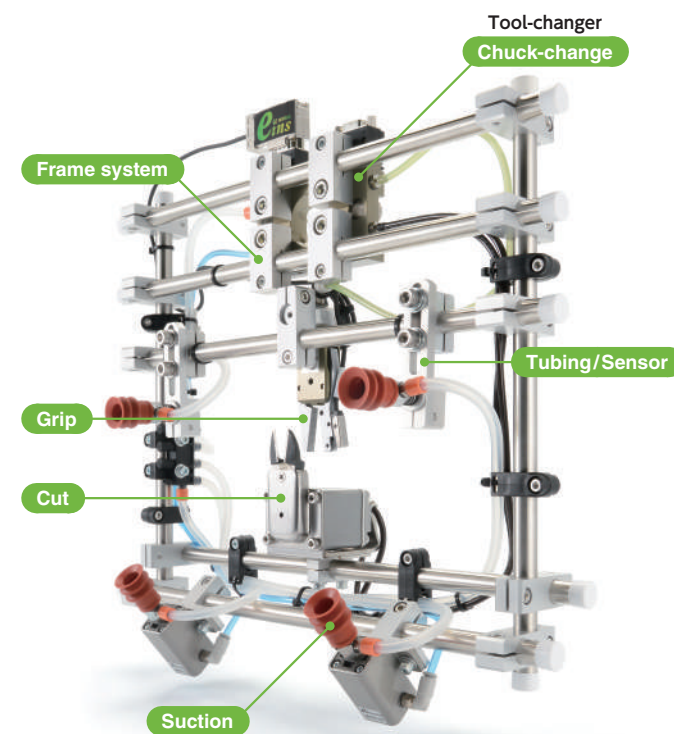
Need to extract small work-piece!

Complicate and difficult to design!

Need to extract work-piece with complex shape!

Need to extract large work-piece!

- Extensive experience with over 10,000 types.
- Reliable management by 3D design.



2 Extensive parts for robo-hand more than 1,400 kinds!
Eins can cover all!

Grip

Suction

Cut

Tubing/Sensor

Steel-Sheet Tool

Module

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!

Quick Chuck Change



Quick Chuck Change (Manual) 1-2

- ▶ OA-SSL/OA-SSI/OA1-SA/OA1-SAI 1-3
- ▶ OA2-LA/OA-LAI/Chuck Spacer (Plastic) 1-4
- ▶ OA-SSL (SUS)/OA-SSI (SUS)/OC-LA/OC-LAI 1-5



Tool Changer 1-6

- ▶ B/BN Type 1-9
- ▶ Long Center Guide 1-14
- ▶ Additional Air Expansion for A/B/BN Type 1-15
- ▶ Accessories for A/B/BN Type 1-16
- ▶ For Take-out Robot Option&Replacement Parts ... 1-18
- ▶ Quick Chuck Change Automatic for Articulated Robots ... 1-22
- ▶ Accessories for Articulated Robots 1-27
- ▶ For Articulated Robots Option&Replacement Parts ... 1-34



Automated Chuck Exchange System 1-36

- ▶ Auto Quick Chuck Change Hanger/Hanger Tool ... 1-37
- ▶ Magnet Chuck Hanger 1-39

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

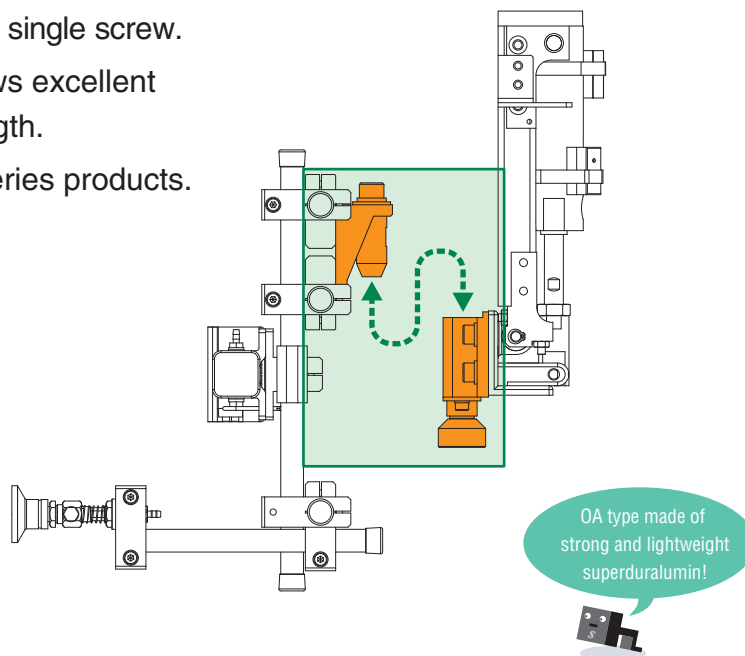
Various Products Information



Quick Chuck Change (Manual)

Quick Chuck Change ● Quick Chuck Change (Manual)

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

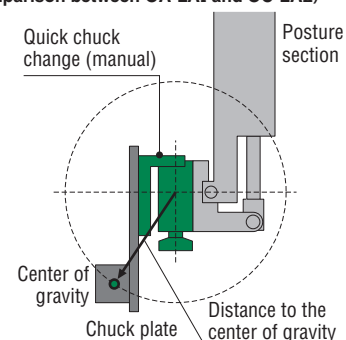
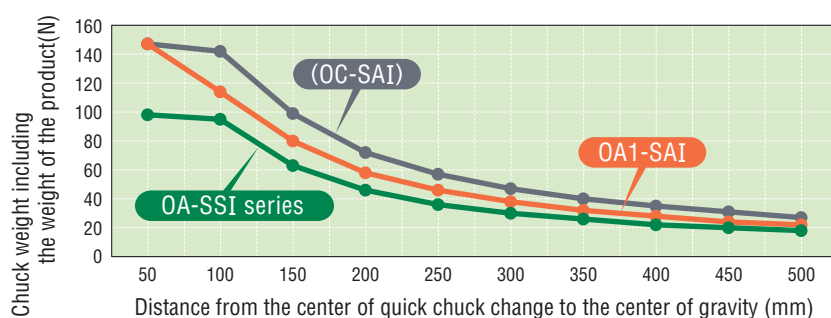


■ Specification

Product name	Order code No. TYPE	Weight (g)	Weight capacity (kg)	Injection press range (ton)	Page of details		
▶ Superduralumin							
Quick chuck change (manual)		140219	166	~ 10	40 ~ 650	1-3	
	OA-SSL						
		140151	97	~ 15			
	OA-SSI						
		140290	190	~ 35	650 ~ 1,600	1-4	
	OA1-SA						
		140257	228	~ 35			
	OA1-SAI						
		140291	547	~ 35	650 ~ 1,600	1-4	
	OA2-LA						
	140155	548	~ 35				
OA-LAI							

Product name	Order code No. TYPE	Weight (g)	Weight capacity (kg)	Injection press range (ton)	Page of details
▶ Stainless steel (SUS)					
Quick chuck change (manual)	 140271	370	~ 10	40 ~ 650	1-5
	OA-SSL (SUS)				
	 140272	265			
	OA-SSI (SUS)				
▶ Made of steel					
Bracket for Quick chuck change	 140042	1,283	~ 35	650 ~ 1,600	1-5
	 140043	1,000			
	OC-LAI				
▶ Plastic					
Spacer	 041645	35	—	—	1-4
	ECP-031				

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





Quick Chuck Change (Manual, Super Duralumin)

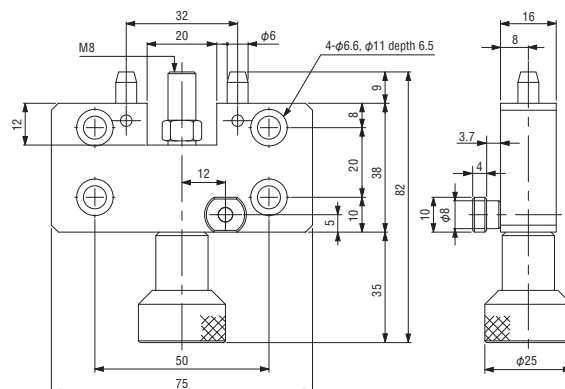
Easy E.O.A.T exchange with only one screw.

► Mounting bolt for OA-SS was extended.



Order code No.	140219
TYPE	OA-SSL

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

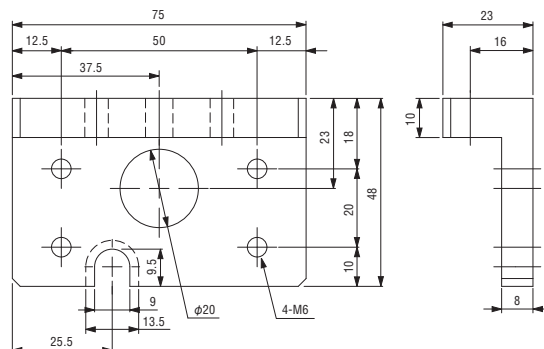


► Compatible with OC type QCC for robot side.



Order code No.	140151
TYPE	OA-SSI

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

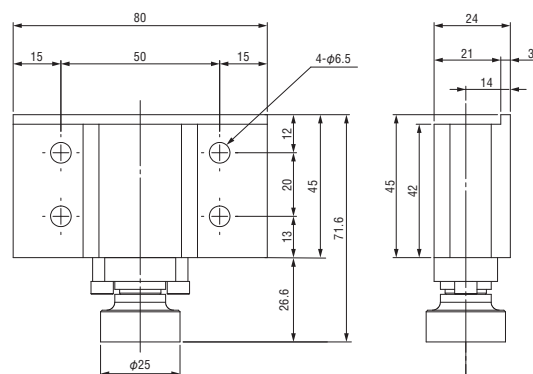


► The material is popular with the aircraft industry because of its light weight and strength.



Order code No.	140290
TYPE	OA1-SA

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

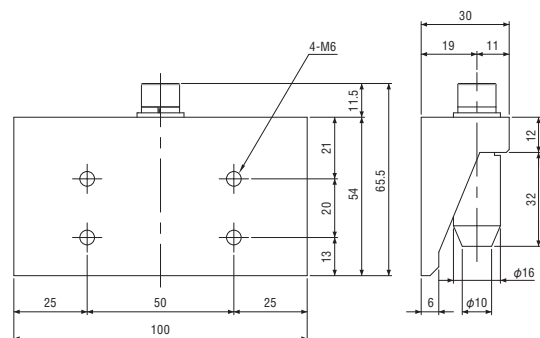


► Compatible with OC type QCC for robot side.



Order code No.	140257
TYPE	OA1-SAI

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



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

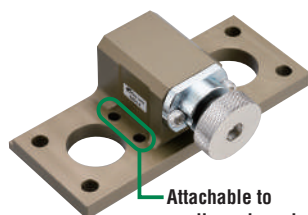


Quick Chuck Change (Manual, Superduralumin) / Chuck Spacer

Easy E.O.A.T exchange with only screw.

Quick Chuck Change ● Quick Chuck Change (Manual)

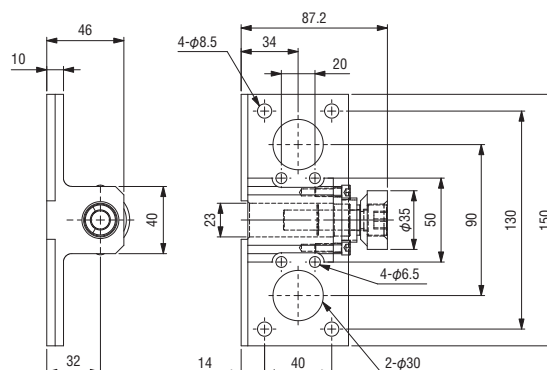
▶ Attachable to medium-size robots.



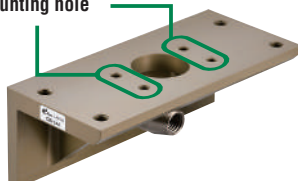
Attachable to medium-size robots.
Mounting hole

Order code No.	140291
TYPE	OA2-LA

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

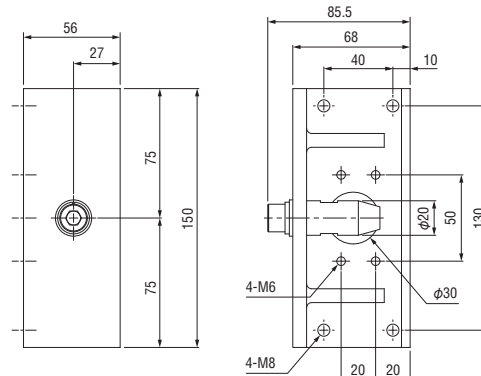


Attachable to medium-size robots.
Mounting hole



Order code No.	140155
TYPE	OA-LAI

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



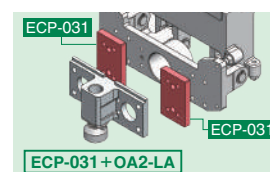
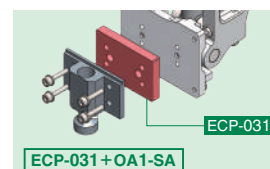
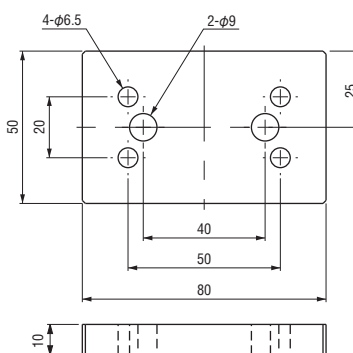
▶ Accessories



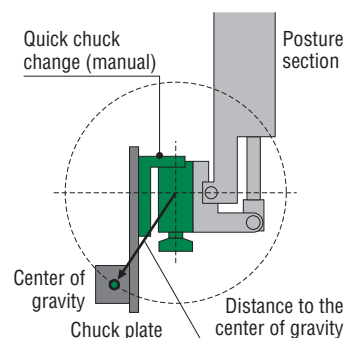
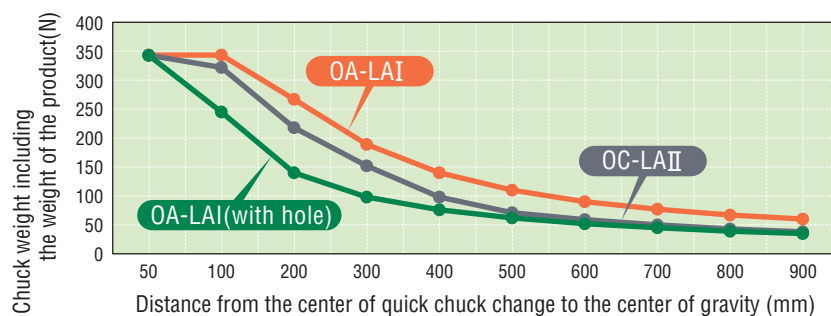
Chuck Spacer for EOAT

Order code No.	041645
TYPE	ECP-031

- Plastic
- Weight: 35g



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





Quick Chuck Change (Manual, Stainless Steel / Steel)

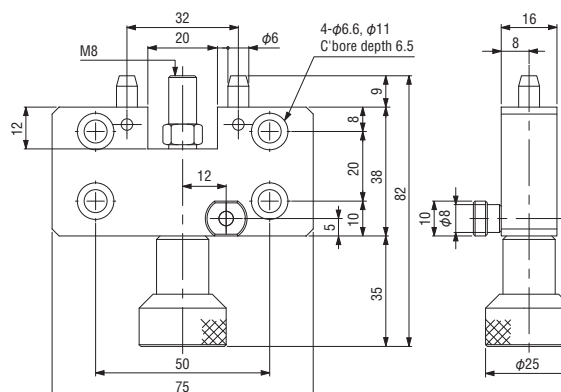
Easy E.O.A.T exchange with only screw.

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



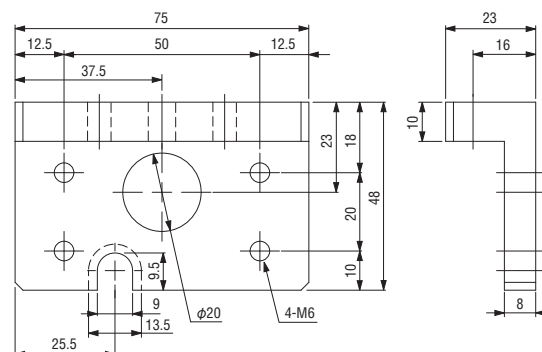
Order code No.	140271
TYPE	OA-SSL (SUS)

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



Order code No.	140272
TYPE	OA-SSI (SUS)

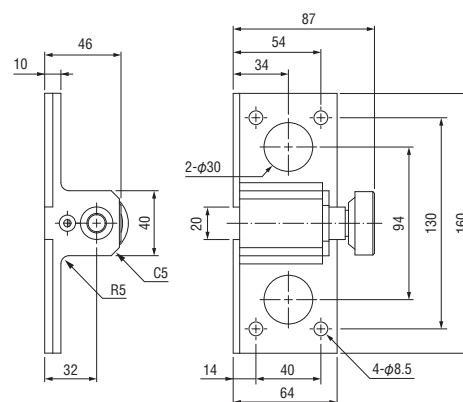
- Stainless steel
- Weight: 265g
- Mounting position: tool side
- Weight capacity: ~ 10kg
- Thickness after connection: 24mm



Quick chuck change (manual)

Order code No.	140042
TYPE	OC-LA

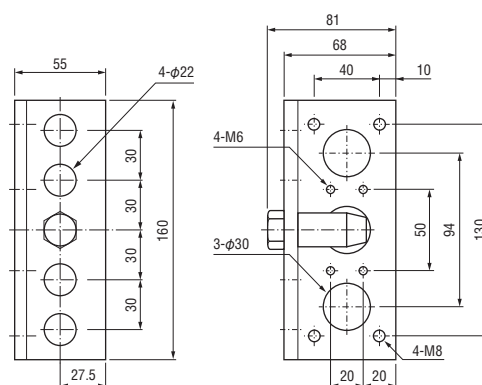
- Steel
- Weight: 1,283g
- Mounting position: robot side
- Weight capacity: ~ 35kg
- Thickness after connection: 59.5mm



Quick chuck change (manual)

Order code No.	140043
TYPE	OC-LAII

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



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

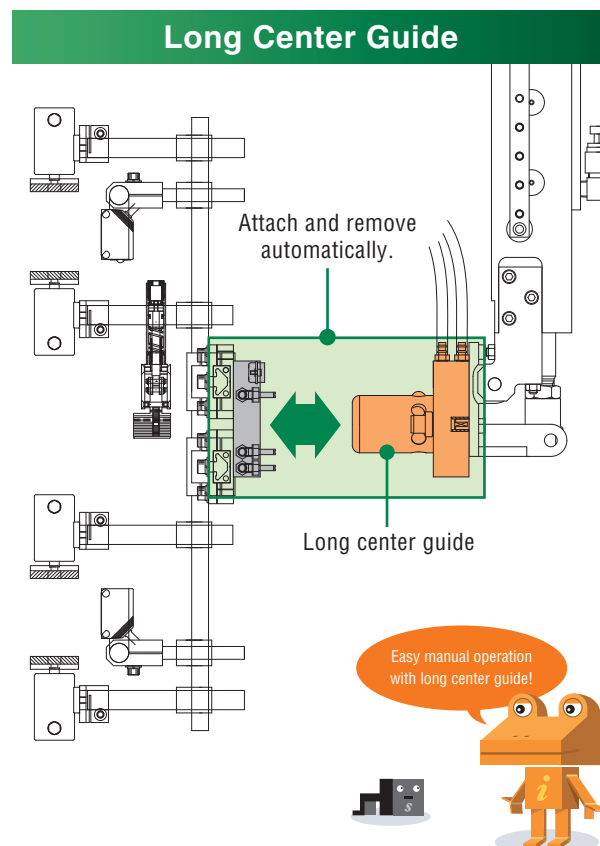
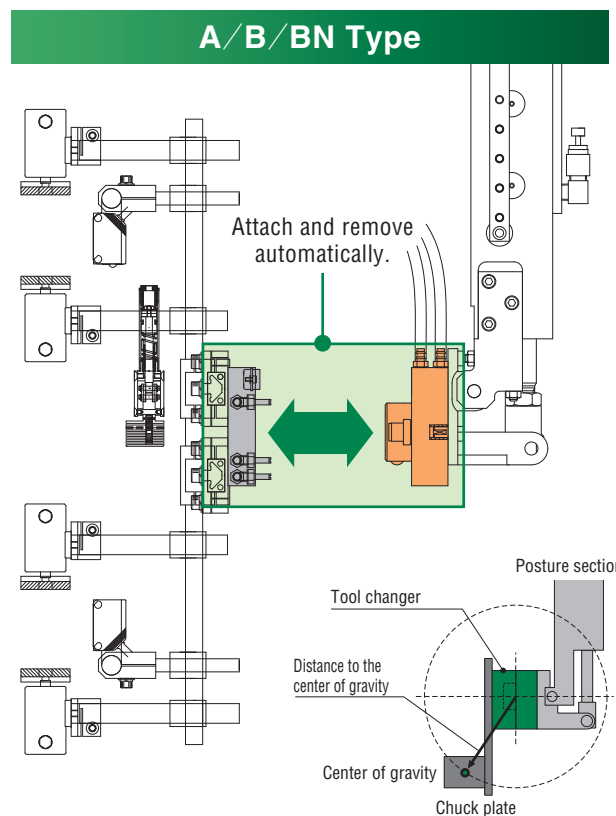
Various Products Information



Tool Changer

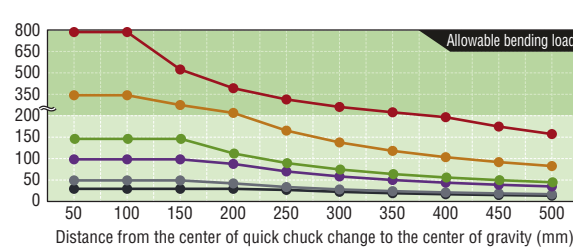
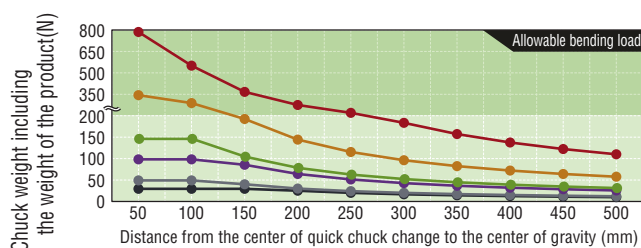
Detachable function as well as drawing function with installation. Ball-lock-type connection allows easy attachment and detachment. With air cut-off circuit (stops air supplies with detachment) High rigidity and long operating life with superduralumin and steel. Safety-circuit mechanism. Inner hold mechanism for air stop.

Quick Chuck Change • Tool Changer



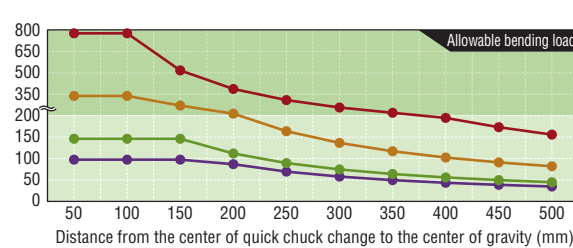
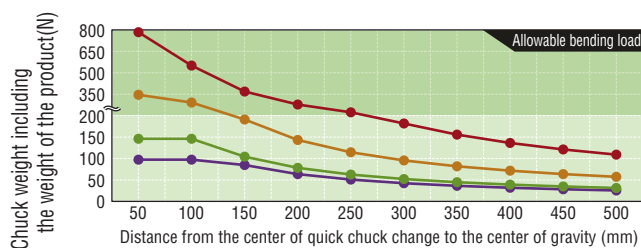
Allowable-load curve of OX-B series

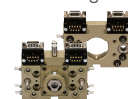
OX-SSB OX-SBS OX-SB TYPE OX-WSB OX-LB OX-WLB



Allowable-load curve of OX-A series

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





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 2A DC24V Max Prove connector Solder fixed type	4 port (M5)	1-9
	 140268	OX-SSBI	120								
	 140181	OX-SB	475	~ 10	80 ~ 650	17.5	12.8	1700 550		6 port (M5)	1-9
	 140182	OX-SBI	235								
	 140299	OX-WSB	845	~ 15	200 ~ 650	22.5	15.7	2,000 700		12 port (M5)	1-10
	 140301	OX-WSBI	365								
	 140183	OX-LB	1,290	~ 35	650 ~ 1,600	41.2	28.7	4,000 750		6 port (M5)	1-11
	 140186	OX-LBI	615								
	 140274	OX-LBF	1,485	~ 80	1,600 ~ 5,000	78.4	54.8	7,000 1,500	9Pin × 2 2A DC24V Max D-SUB Connector Prove connector	10 port (M5)	1-12
	 140273	OX-LBFI	760								
	 140184	OX-WLB	2,720	~ 10	80 ~ 650	17.5	12.8	1,700 500		6 port (M5)	1-13
	 140187	OX-WLBI	1,385								
	 140217	OX-SBY	475	~ 5	80 ~ 300	8.4	6.0	1,000 280			1-9
	 140218	OX-SBYI	235								
	 140275	OX-SBH	440	~ 3	40 ~ 80	6.7	5.0	1,500 480		6 port (M5)	1-10
	 140276	OX-SBHI	245								
	 140233	OX-SBS	305	~ 10	80 ~ 650	17.5	12.8	1,700 550		12 port (M5)	1-11
	 140234	OX-SBSI	122								
	 140280	OX-SSBN	318	~ 15	200 ~ 650	22.5	15.7	2,000 700	—	6 port (M5)	1-10
	 140281	OX-SSBNI	108								
	 140225	OX-SBN	431	~ 35	650 ~ 1,600	41.2	28.7	4,000 750		6 port (M5)	1-11
	 140226	OX-SBNI	197								
	 140300	OX-WSBN	787	~ 3	40 ~ 80	6.7	5.0	1,500 480		6 port (M5)	1-9
	 140302	OX-WSBNI	320								
	 140231	OX-LBN	1,250	~ 10	80 ~ 650	17.5	12.8	1,700 550		6 port (M5)	1-10
	 140232	OX-LBNI	575								
	 140258	OX-LBFN	1,478	~ 5	80 ~ 300	8.4	6.0	1,000 280			1-9
	 140259	OX-LBFNI	756								

Please use manual push button "PB1-E (152308), PBW1-E(152306)" for manual exchange (**1-16** , **6-11**).

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information

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(W) Power to force(N)	Electric contact Connector shape	Piping connect	Page of details
Tool changer	B / BN type (w/o connector)		140277	OX-WLBN	2,680	~ 80	1,600 ~ 5,000	78.4	54.8	$\frac{7,000}{1,500}$	—	10 port (M5)	1-11
			140278	OX-WLBNI	1,345								
			140229	OX-SBYN	435	~ 10	80 ~ 650	17.5	12.8	$\frac{1,700}{550}$		6 port (M5)	1-12
			140230	OX-SBYNI	195								
			140260	OX-SBHN	399								
			140261	OX-SBHNI	202								
	Long center guide (with connector)		140228	OX-LB-30	1,370	~ 35	650 ~ 1,600	41.2	28.7	$\frac{4,000}{750}$	9Pin×2 2A DC24V Max D-SUB connector Probe connector	6 port (M5)	1-14
			140283	OX-WLB-30	2,905	~ 80	1,600 ~ 5,000	78.4	54.8	$\frac{7,000}{1,500}$	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	$\frac{1,700}{550}$	—	6 port (M5)	
			140279	OX-LBN-30	1,330	~ 35	650 ~ 1,600	41.2	28.7	$\frac{4,000}{750}$		6 port (M5)	
		140267	OX-WLBN-30	2,865	~ 80	1,600 ~ 5,000	78.4	54.8	$\frac{7,000}{1,500}$	10 port (M5)			

Please use manual push button "PB1-E (152308), PBW1-E(152306)" for manual exchange (1-16 , 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 φ6 (φ4*2), double action type	AWG20 Max.	0℃ -55℃, 0% -95% (w/o condensation)

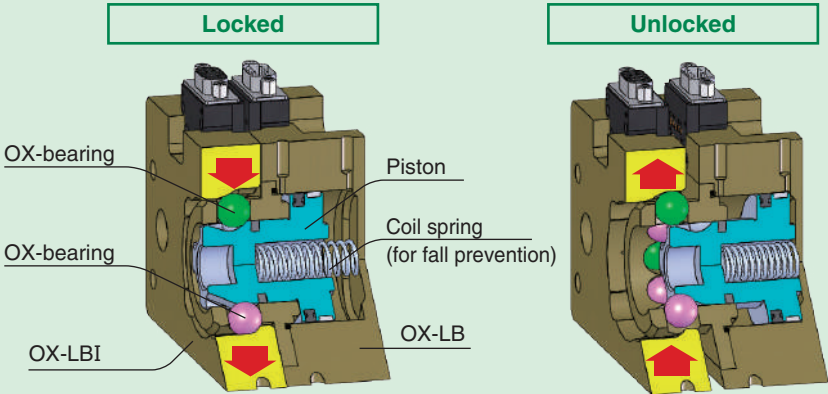
*1 Based on our measurement
 *2 φ4 : OX-SB series (SSB, SB, SBYSBH, SBS, SBN, SBYN, SBHN)

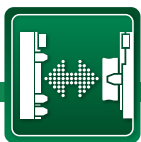
Features

- Original detachable mechanism
(The U.S.: US7,559,265
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

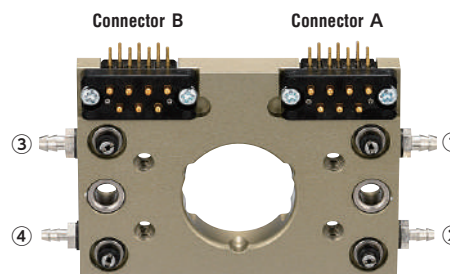
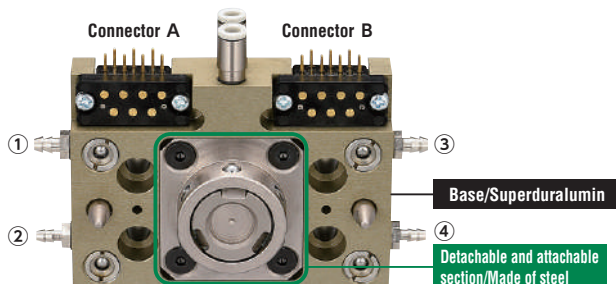
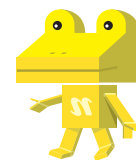




B/BN Type

Easy and reliable attachment and detachment.
Easy and quick attachment and detachment of air/electric signal.

Widening the adherence area reduced undesirable deflections compared with the conventional A type (1-20).
And probe connector reduces loose connections caused by unintentional movement and repeated attachment and detachment. Changing the electric contact section reduces the complication of wiring with D-SUB connectors.



Order code No.	140266
TYPE	OX-SSB

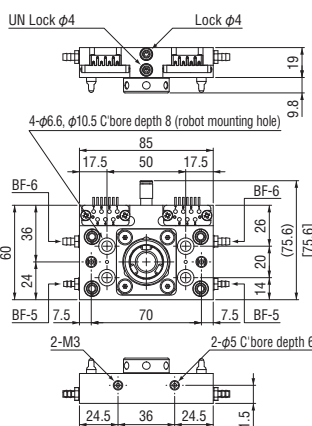
- Weight: 330g
- Weight capacity: ~3kg
- Mounting position: robot side
- Thickness after connection: 29mm

W/o connector

Order code No.	140280
TYPE	OX-SSBN



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



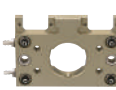
* The value in [] shows the type w/o connector.

Order code No.	140268
TYPE	OX-SSBI

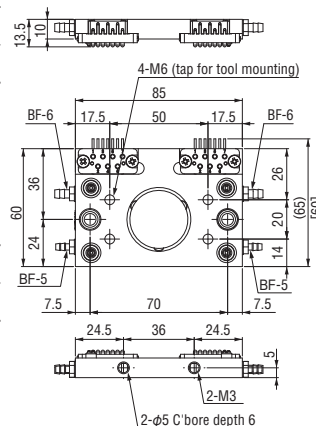
- Superduralumin
- Weight: 120g
- Mounting position: tool side
- Weight capacity: ~3kg
- Thickness after connection: 29mm

W/o connector

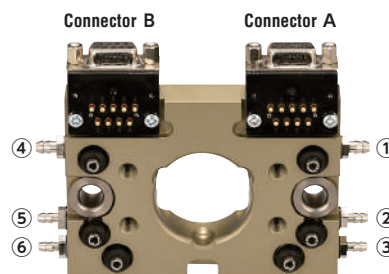
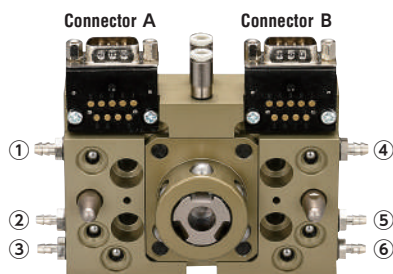
Order code No.	140281
TYPE	OX-SSBNI



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



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

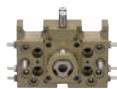


Order code No.	140181
TYPE	OX-SB

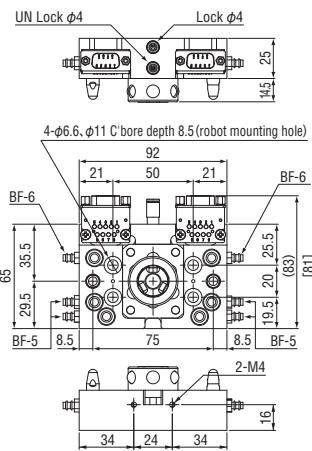
- Superduralumin
- Weight: 475g
- Mounting position: robot side
- Weight capacity: ~10kg
- Thickness after connection: 40mm

W/o connector

Order code No.	140225
TYPE	OX-SBN



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



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

Order code No.	140182
TYPE	OX-SBI

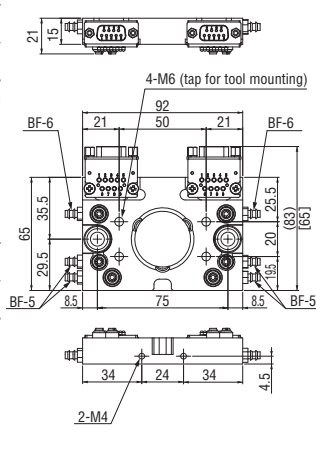
- Superduralumin
- Weight: 235g
- Mounting position: tool side
- Weight capacity: ~10kg
- Thickness after connection: 40mm
- Installable to OX-SBY

W/o connector

Order code No.	140226
TYPE	OX-SBNI



- Superduralumin
- Weight: 197g
- Mounting position: tool side
- Weight capacity: ~10kg
- Thickness after connection: 40mm



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

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

Description of type

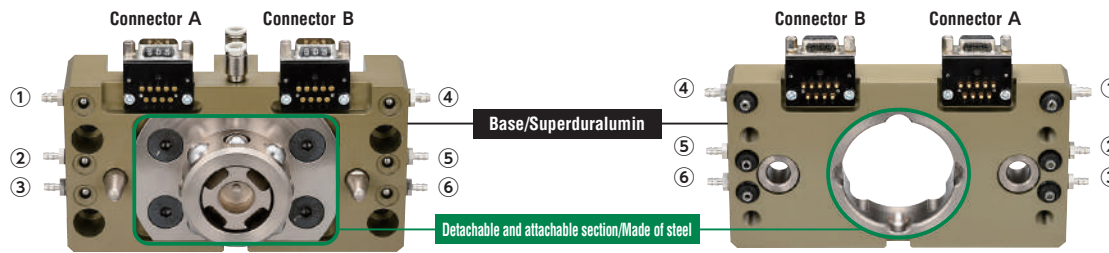
OX- LB N I

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

Type (size)

Connector N (NONE)
No (w / connector)

► Superduralumin-made frame. Improved durability: steel hybrid structure of detachable and attachable section.



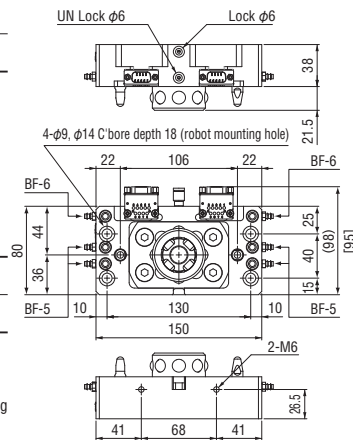
Order code No.	140274
TYPE	OX-LBF

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

W/o connector

Order code No.	140258
TYPE	OX-LBFN

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



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

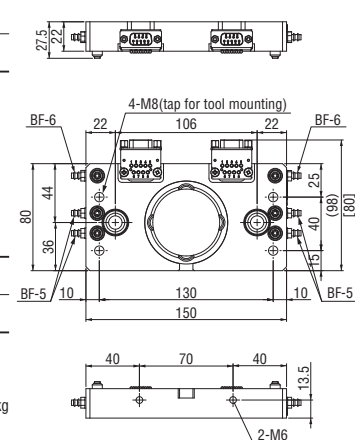
Order code No.	140273
TYPE	OX-LBFI

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

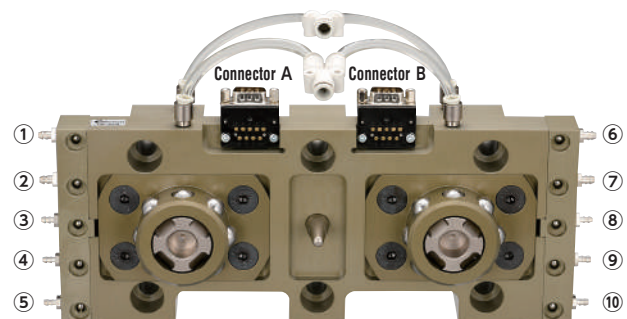
W/o connector

Order code No.	140259
TYPE	OX-LBFNI

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

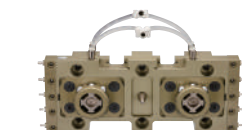


* The value in [] shows the type w/o connector.



Order code No.	140184
TYPE	OX-WLB

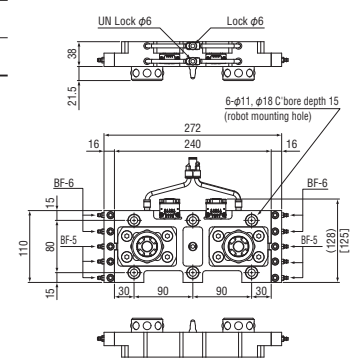
- Superduralumin
- Weight: 2,720g
- Mounting position: robot side
- Weight capacity: ~ 80kg
- Thickness after connection: 60mm



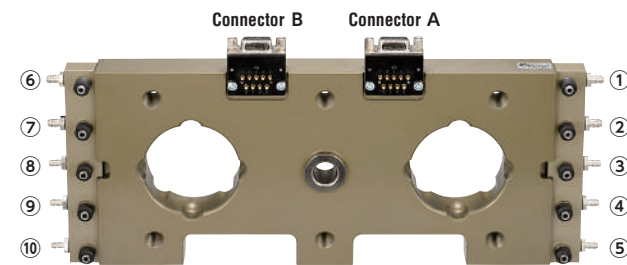
W/o connector

Order code No.	140277
TYPE	OX-WLBN

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

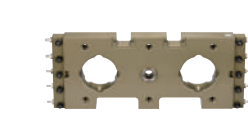


* The value in [] shows the type w/o connector.



Order code No.	140187
TYPE	OX-WLBI

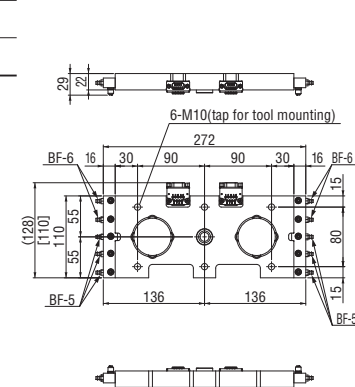
- Superduralumin
- Weight: 1,385g
- Mounting position: tool side
- Weight capacity: ~ 80kg
- Thickness after connection: 60mm



W/o connector

Order code No.	140278
TYPE	OX-WLBNI

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



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

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

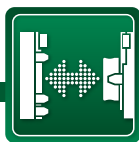
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

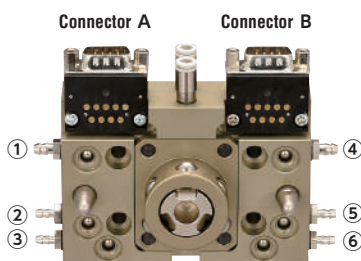


B/BN Type

Also for installation on other manufactures robots!

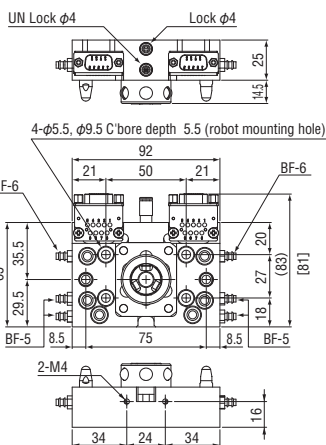
Quick Chuck Change ● Tool Changer

Mounting pitch
27×50



Order code No.	140217
TYPE	OX-SBY

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



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

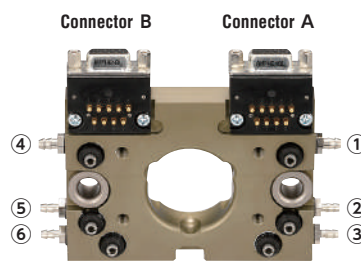
W/o connector

Order code No.	140229
TYPE	OX-SBYN



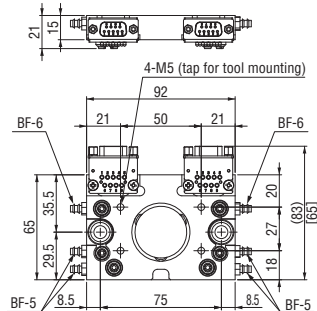
- Superduralumin
- Weight: 435g
- Mounting position: robot side
- Weight capacity: ~10kg
- Thickness after connection: 40mm

Mounting pitch
27×50



Order code No.	140218
TYPE	OX-SBYI

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



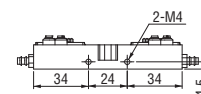
* The value in [] shows the type w/o connector.

W/o connector

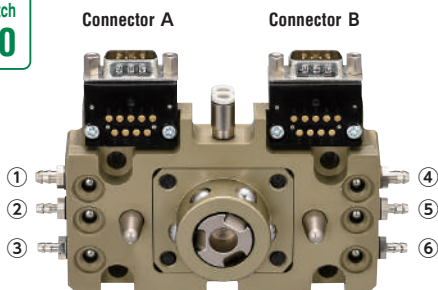
Order code No.	140230
TYPE	OX-SBYNI



- Superduralumin
- Weight: 195g
- Mounting position: tool side
- Weight capacity: ~10kg
- Thickness after connection: 40mm

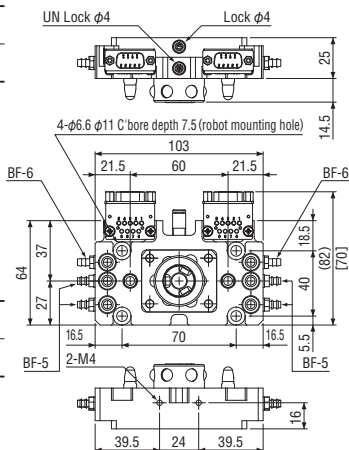


Mounting pitch
40×70



Order code No.	140275
TYPE	OX-SBH

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



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

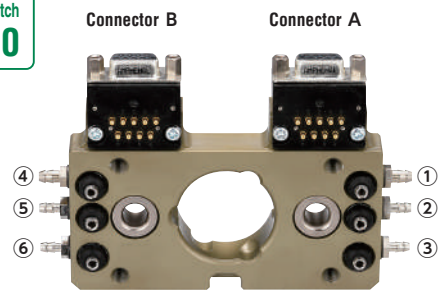
W/o connector

Order code No.	140260
TYPE	OX-SBHN



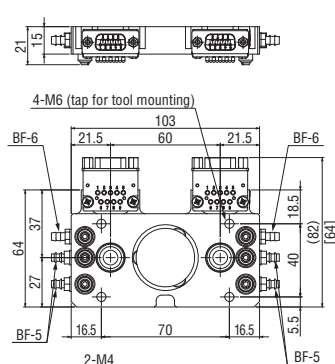
- Superduralumin
- Weight: 399g
- Mounting position: robot side
- Weight capacity: ~10kg
- Thickness after connection: 40mm

Mounting pitch
40×70



Order code No.	140276
TYPE	OX-SBHI

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



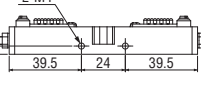
* The value in [] shows the type w/o connector.

W/o connector

Order code No.	140261
TYPE	OX-SBHNI



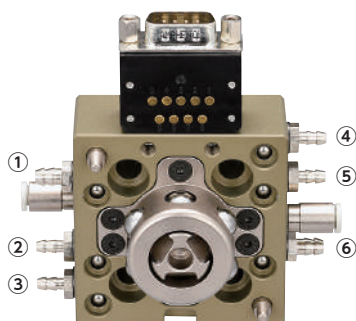
- Superduralumin
- Weight: 202g
- Mounting position: tool side
- Weight capacity: ~10kg
- Thickness after connection: 40mm



Description of type

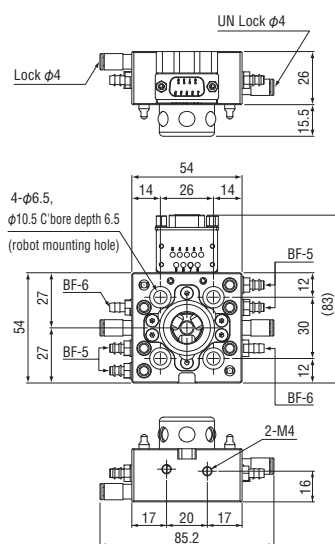
OX- SBY N I Installation side None (ROBOT SIDE)
I (TOOL SIDE)
Type (size) Connector N (NONE)
No (w / connector)

Mounting pitch
30×26

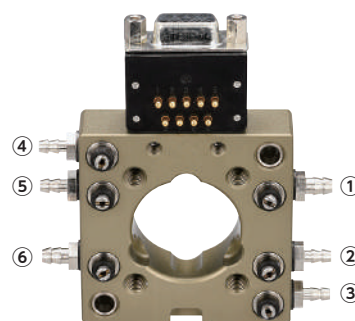


Order code No.	140233
TYPE	OX-SBS

- Superduralumin
 - Weight: 305g
 - Mounting position: robot side
 - Weight capacity: ~ 5kg
 - Thickness after connection: 42mm
 - The connector used is OXR for articulation
- ➔ See (1-28)

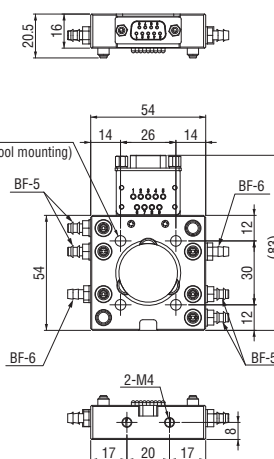


Mounting pitch
30×26



Order code No.	140234
TYPE	OX-SBSI

- Superduralumin
 - Weight: 122g
 - Mounting position: tool side
 - Weight capacity: ~ 5kg
 - Thickness after connection: 42mm
 - The connector used is OXR for articulation
- ➔ See (1-28)



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

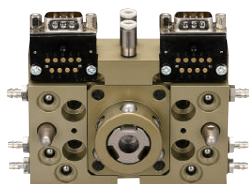




Additional Air Expansion

A type / B type / BN Type

OX-SB (ROBOT SIDE)



OX-SBA (ROBOT SIDE)



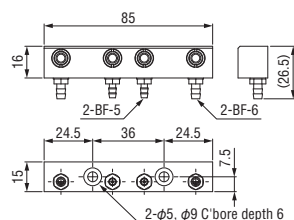
Connected Example



FOR OX-SSB

Order code No.	140294
TYPE	OX-SSBA

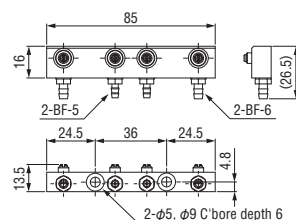
- Weight: 56g
- Attachments: mounting bolt (M3) × 2



FOR OX-SSBI

Order code No.	140295
TYPE	OX-SSBIA

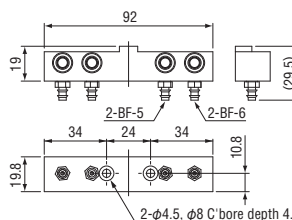
- Weight: 33g
- Attachments: mounting bolt (M3) × 2



FOR OX-SA/OX-SB

Order code No.	140193
TYPE	OX-SBA

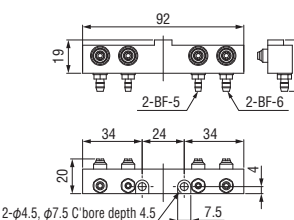
- Weight: 90g
- Attachments: mounting bolt (M4) × 2



FOR OX-SAI/OX-SBI

Order code No.	140194
TYPE	OX-SBIA

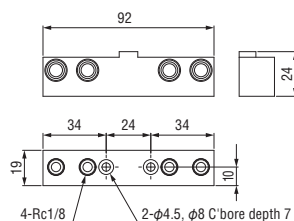
- Weight: 70g
- Attachments: mounting bolt (M4) × 2



FOR OX-SA/OX-SB

Order code No.	140251
TYPE	OX-SBA1

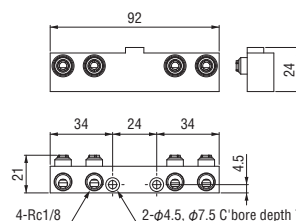
- Weight: 91g
- Air port: 1/8 hole × 4, w/o check valve
- Attachments: mounting bolt (M4) × 2



FOR OX-SAI/OX-SBI

Order code No.	140252
TYPE	OX-SBIA1

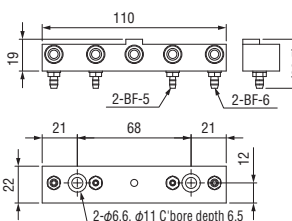
- Weight: 72g
- Air port: 1/8 hole × 4
- Attachments: mounting bolt (M4) × 2



FOR X-LA/OX-LB

Order code No.	140195
TYPE	OX-LBA

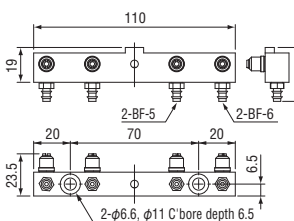
- Weight: 115g
- Attachments: mounting bolt (M6) × 2



FOR OX-LAI/OX-LBI

Order code No.	140196
TYPE	OX-LBIA

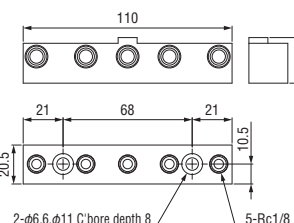
- Weight: 82g
- Attachments: mounting bolt (M6) × 2



FOR OX-LA/OX-LB

Order code No.	140253
TYPE	OX-LBA1

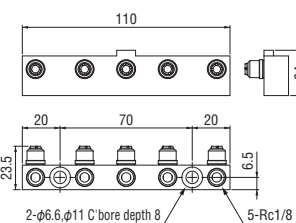
- Weight: 113g
- Air port: 1/8 hole × 5, w/o check valve
- Attachments: mounting bolt (M6) × 2



FOR OX-LAI/OX-LBI

Order code No.	140254
TYPE	OX-LBIA1

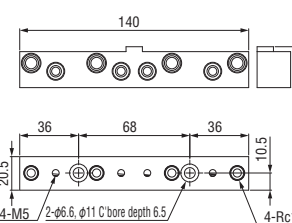
- Weight: 77g
- Air port: 1/8 hole × 5
- Attachments: mounting bolt (M6) × 2



FOR OX-LA/OX-LB

Order code No.	140287
TYPE	OX-LBA3

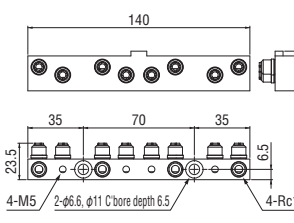
- Weight: 160g
- Air port: 1/8 hole × 5, w/o check valve, hole (M5) × 4
- Attachments: mounting bolt (M6) × 2



FOR OX-LAI/OX-LBI

Order code No.	140288
TYPE	OX-LBIA3

- Weight: 112g
- Air port: 1/8 hole × 5, hole (M5) × 4
- Attachments: mounting bolt (M6) × 2



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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



Order code No.	152308
TYPE	PB1-E
Weight	65g

Manual air valve push slide button



Order code No.	152306
TYPE	PBW1-E
Weight	75g

▶ Air port accessory

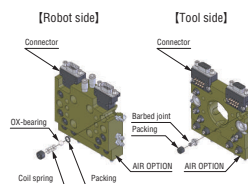
Barbed joint	Tool side		
	For OX-A/B	For OX-SSB/SBS	For WSBI
Order code No.	110623	230116	110722
TYPE	LX0004-101	XL0054-106A	LX0181-203
Weight	2g	1g	1g



OX-bearing	Robot side	
	For OX-A/B	For OX-SSB/SBS
Order code No.	323000	310607
TYPE	φ 6.35	φ 5.5
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.	110649	185221	110619	200223
TYPE	L00999-420	SAWANE5115	L00999-316	UR5-10
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
 L00999-313 XL0054-204	Order code No.	110551	184474	230077	271742
	TYPE	L00999-313	S6 (C00503-A00X8)	XL0054-204	1ASS-5
	Weight	0.2g	0.05g	0.1g	0.05g

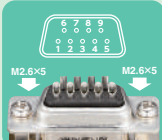
▶ Cable Accessory

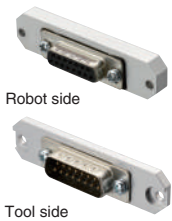
D-SUB cable (OX-A type)		Robot side	Tool side	Robot side	Tool side
 ● Bending radius (mm): R46	Order code No.	140168	140167	140170	140169
	TYPE	OX-DS09-H	OX-DS09-I-H	OX-DS15-H	OX-DS15-I-H
	Weight	40g			
	Cable length	0.5m			
	Electric contact	9Pin		15Pin	
	Electrical wiring	Movable cable (AWG22), for UL			

D-SUB cable for OX (for OX-B)		Robot side	Robot side	Tool side	Tool side
 Straight type ● Bending radius (mm): R46	Order code No.	140197	140247	140202	140364
	TYPE	OX-DS09S-H	OX-DS09S-H (1.5M)	OX-DS09P-I-H	OX-DS09P-I-H (1.5M)
	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			

D-SUB cable for OX (for OX-B)		Robot side (L)	Robot side (L)	Tool side (L)	Tool side (L)
 L type ● Bending radius (mm): R46	Order code No.	140203	140248	140204	140365
	TYPE	OX-DS09SL-H	OX-DS09SL-H (1.5M)	OX-DS09PL-I-H	OX-DS09PL-I-H (1.5M)
	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			

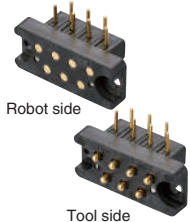
▶ Connector accessory

D-SUB connector (OX-A type)		Robot side	Tool side	Robot side	Tool side
 Robot side  Tool side * Screws are not included.	Order code No.	140172	140171	140174	140173
	TYPE	OX-DS09	OX-DS09-I	OX-DS15	OX-DS15-I
	Weight	4g			
	Electrical wiring	AWG22			
Application  M2.6x5 M2.6x5 D-SUB connector + D-SUB&prove connector  Screw with cross recessed head M2.6x5 [123448] *D-SUB connector can be mounted on cable wiring.	Electric contact	9Pin		15Pin	
	Mounting screw size	OX-A TYPE OX-B TYPE		Screw with cross recessed head M3×6[123446]	
		D-SUB& prove connector		Screw with cross recessed head M2.6×5[123448]	
				Screw with cross recessed head M3×16 (NUT 4PCS) [123449] M3 NUT [123301]	
				Screw with cross recessed head M3×10 [123447]	

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

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

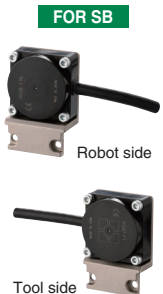
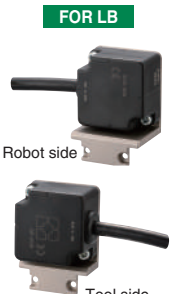
● Connector drawing → See (1-30)

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

● Connector drawing → See (1-30)

▶ 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
 FOR SB Robot side Tool side	Order code No.	140306	140307	140308	140378
	TYPE	OX-RS04R-SB	OX-RS04T-SBI	OX-RS12R-LB	OX-RS12T1-LBI
	Weight	195g	140g	417g	290g
	Drive voltage	12V ± 1.5VDC	—	12V ± 1.5VDC	—
 FOR LB Robot side Tool side	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. → (1-32)				
	*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

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information

Option & Replacement Parts

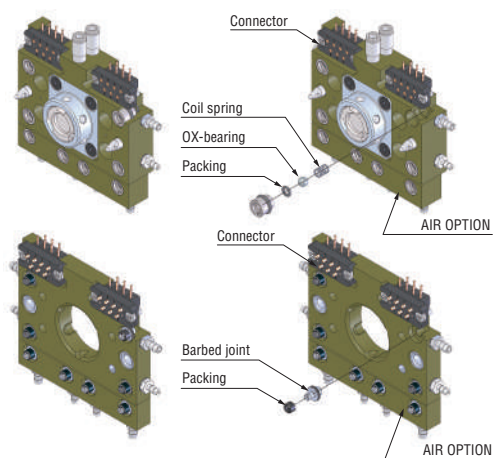
1-18

* 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, 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.

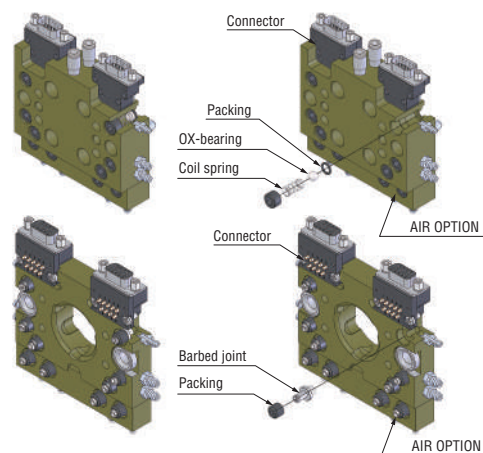
				AIR OPTION													
				Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side	Robot side	Tool side		
				Order code No.	140294	140295	140193	140194	140251	140252	140195	140196	140253	140254	140287	140288	
		Order code No.	TYPE	OX-SSBA	OX-SSBIA	OX-SBA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

* (140288) OX-LB I A3 [for M5 port: (110623) LX0004-101+(110551) L00999-313, for M6 port: (110686) LX0120-202+(110687) LX0120-203]

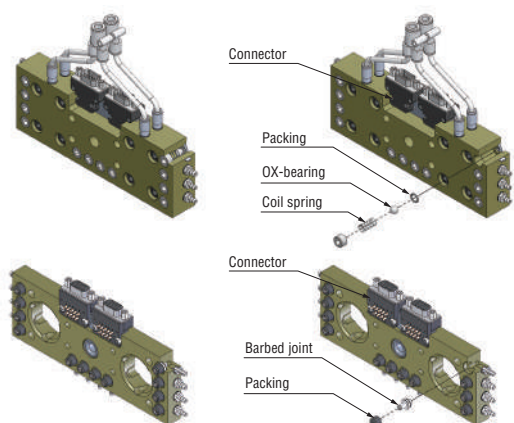
OX-SSB/SSBI



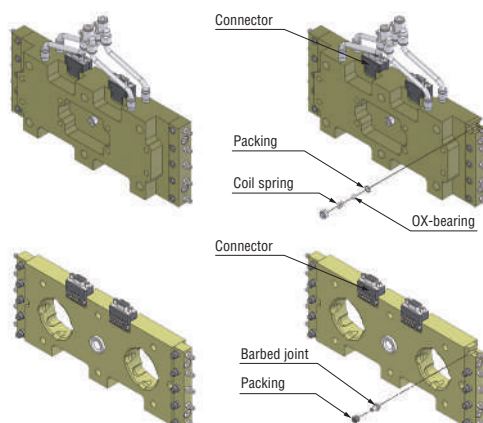
OX-SB/SBI



OX-WSB/WSBI



OX-WLB/WLBI



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

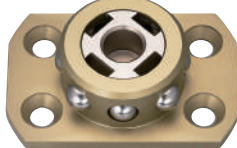
Various Products Information

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		OX-SA (ROBOT SIDE)
	Order code No.	140249
	TYPE	OX-SAP
	Weight	94g
	Attachments PARTS	Piston set, Spring, OX-bearing,holder

Piston		For OX-LA
	Order code No.	140250
	TYPE	OX-LAP
	Weight	336g
	Attachments PARTS	Piston set, Spring, OX-bearing,holder

Substitute product of tool changerr (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)
140225	OX-SBN	+5
140226	OX-SBNI	0
140231	OX-LBN	+9
140232	OX-LBNI	0
140300	OX-WSBN	+4.5
140302	OX-WSBNI	0
140277	OX-WLBN	+8
140278	OX-WLBNI	0
Production stopped		—
140279	OX-LBN-30	+8
140267	OX-WLBN-30	+7.5

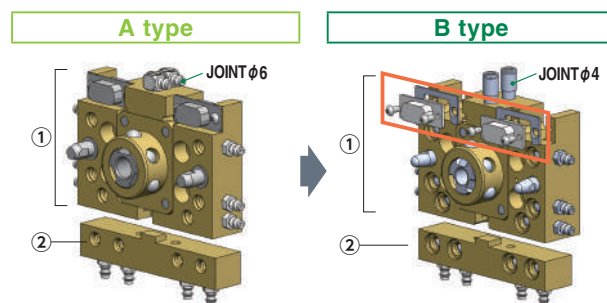
Subroutine product of additional air expansion for A type

*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
140193	OX-SBA
140194	OX-SBIA
140195	OX-LBA
140196	OX-LBIA

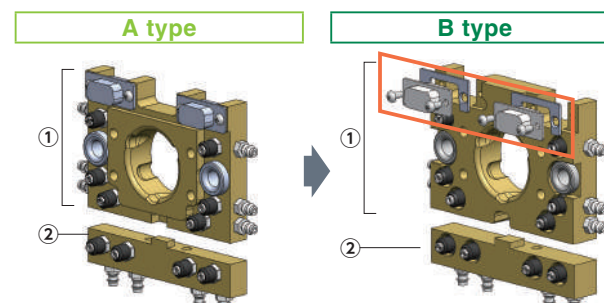
OX-SA (ROBOT SIDE)



	Order code No.	TYPE	Remarks	Qty
①	140225	OX-SBN	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
②	140193	OX-SBA	Additional air expansion	1

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

OX-SAI (TOOL SIDE)



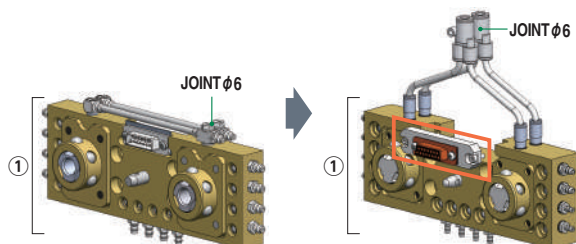
	Order code No.	TYPE	Remarks	Qty
①	140226	OX-SBNI	Tool changer	1
	140289	OX-DS09CNP	Connector plate	2
	140171	OX-DS09-I	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
②	140194	OX-SBIA	Additional air expansion	1

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

OX-WSA (ROBOT SIDE)

A type

B type

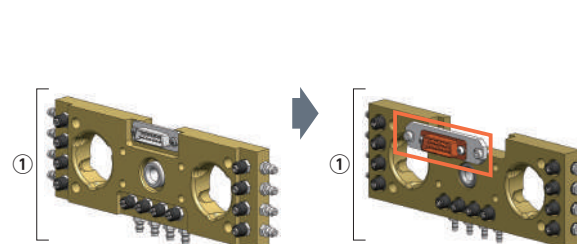


	Order code No.	TYPE	Remarks	Qty
①	140300	OX-WSBN	Tool changer	1
	140304	OX-DS15-WS	D-SUB connector	1

OX-WSAI (TOOL SIDE)

A type

B type

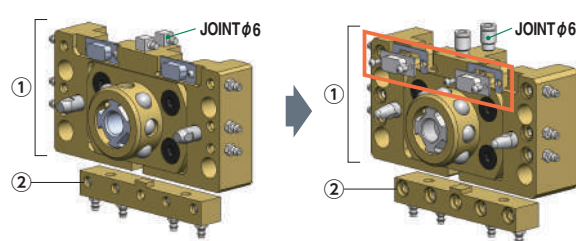


	Order code No.	TYPE	Remarks	Qty
①	140302	OX-WSBNI	Tool changer	1
	140305	OX-DS15-I-WS	D-SUB connector	1

OX-LA (ROBOT SIDE)

A type

B type



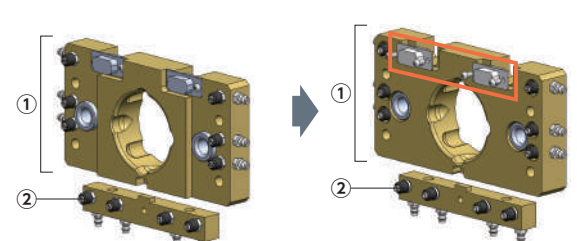
	Order code No.	TYPE	Remarks	Qty
①	140231	OX-LBN	Tool changer	1
	140289	OX-DS09CNP	Connector plate	2
	140172	OX-DS09	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
②	140195	OX-LBA	Additional air expansion	1

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

OX-LAI (TOOL SIDE)

A type

B type



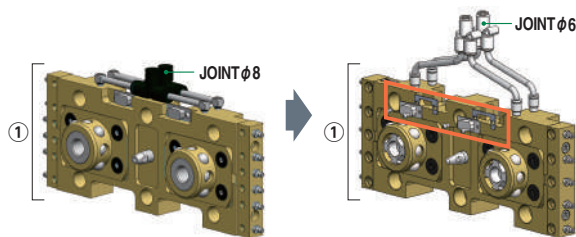
	Order code No.	TYPE	Remarks	Qty
①	140232	OX-LBNI	Tool changer	1
	140171	OX-DS09-I	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4
②	140196	OX-LBIA	Additional air expansion	1

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

OX-WLA (ROBOT SIDE)

A type

B type

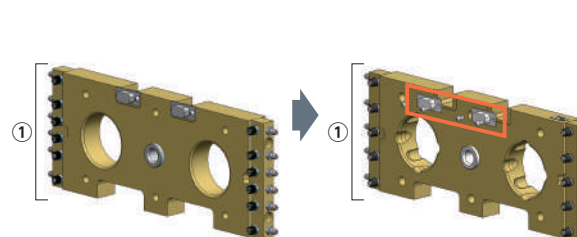


	Order code No.	TYPE	Remarks	Qty
①	140277	OX-WLBN	Tool changer	1
	140289	OX-DS09CNP	Connector plate	2
	140172	OX-DS09	D-SUB connector	2
	123446	BKJ 3-6 (M3*6)	Screw with cross recessed head	4

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

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Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

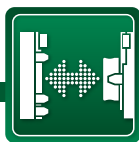
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Quick Chuck Change Automatic for Articulated Robots

Essential tool for high performance of robot.

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) Power to force (N)	Allowable bending moment (Nm)	Allowable torsional moment (Nm)	Electric contact Connector shape	Piping connect	Page of details		
Tool changer		140310	OX-005A	38	~ 0.5	60 50	1.7	0.9	6Pin 2A DC24V Max Connector(option)	22port (M3)	1-23	
		140315	OX-005AI	17								
		140235	OX-03A	125	~ 3	600 160	5.2	1.0		6port (M5)		1-24
		140236	OX-03AI	45								
		140237	OX-05A	250	~ 5		6.5	1.2				
		140238	OX-05AI	115								
		140262	OX-10B	199	~ 10	1,350 400	17.5	12.8				
		140263	OX-10BI	115								
		140292	OX-20B	507	~ 20	2,200 420	28.0	20.0				
		140293	OX-20BI	226								
		140311	OX-35A	1225	~ 35	4,000 750	91.8	55.5				
		140316	OX-35AI	545								
		140313	OX-60A	1440	~ 60	6,000 (180) * Since there is no detachment mechanism, it will be the packing reaction force value.	185.0	225.0				
		140318	OX-60AI	734								
		140312	OX-35AT	1445	~ 35	4,000 750	91.8	55.5				
		140317	OX-35ATI	535								

* Please use manual push button "PB1-E(152308), PBW1-E(152306)" for manual exchange. ➡ 1-27 6-11

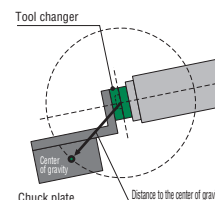
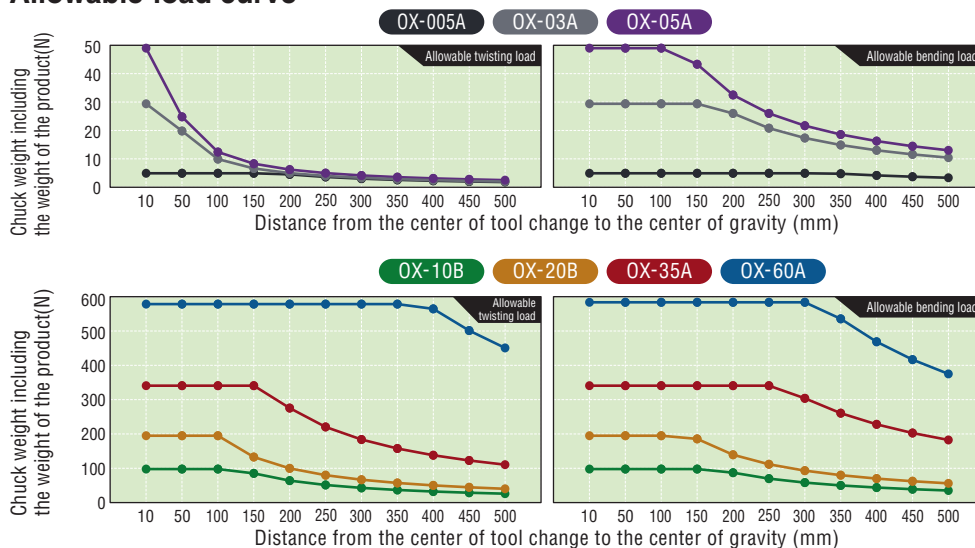
Common specification

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 $\phi 6$: OX-35A, OX-35AT, OX-60A

Allowable-load curve



Description of type

OX- 005

A

I

Installation side None (robot side)
I (Tool side)

Maximum weight capacity (kg)

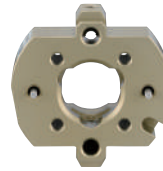
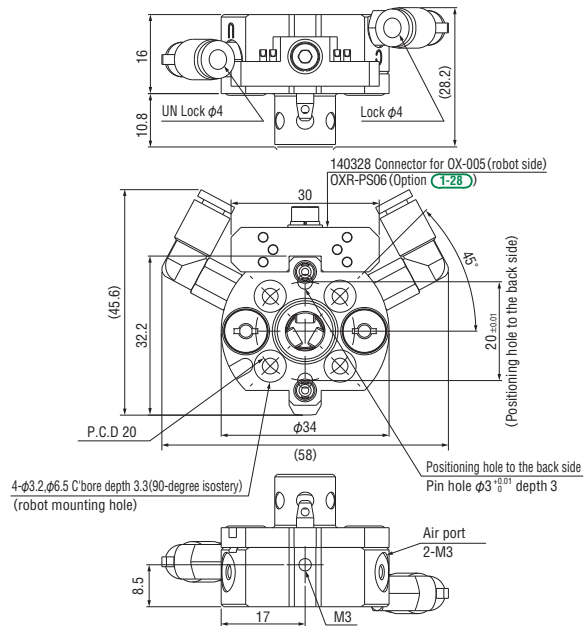
Version

► Supports high-speed operation of parallel link robots.



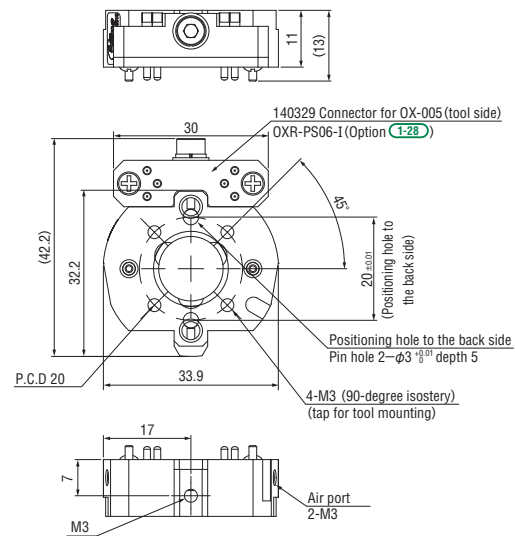
Order code No.	140310
TYPE	OX-005A

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

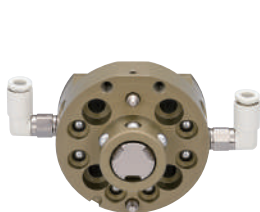


Order code No.	140315
TYPE	OX-005AI

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



► Tool changer for small-size robots. Load capacity 3kg, 5kg

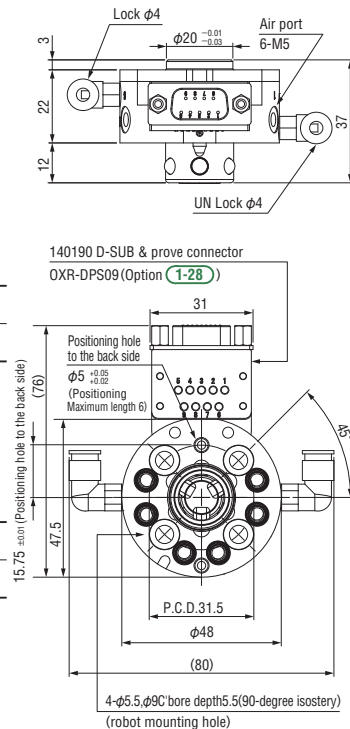


Order code No.	140235
TYPE	OX-03A

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

Order code No.	140237
TYPE	OX-05A

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

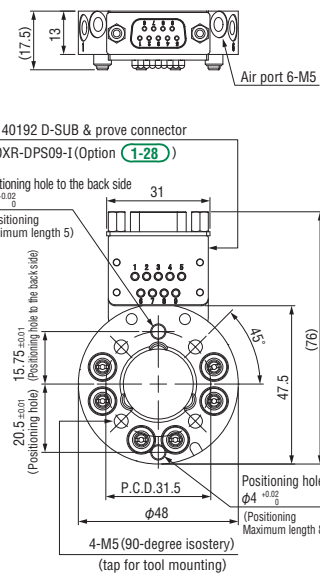


Order code No.	140236
TYPE	OX-03AI

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

Order code No.	140238
TYPE	OX-05AI

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



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

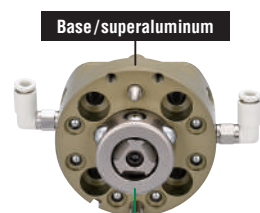
Information

Various Products Information

1-23

Quick Chuck Change Automatic for Articulated Robots

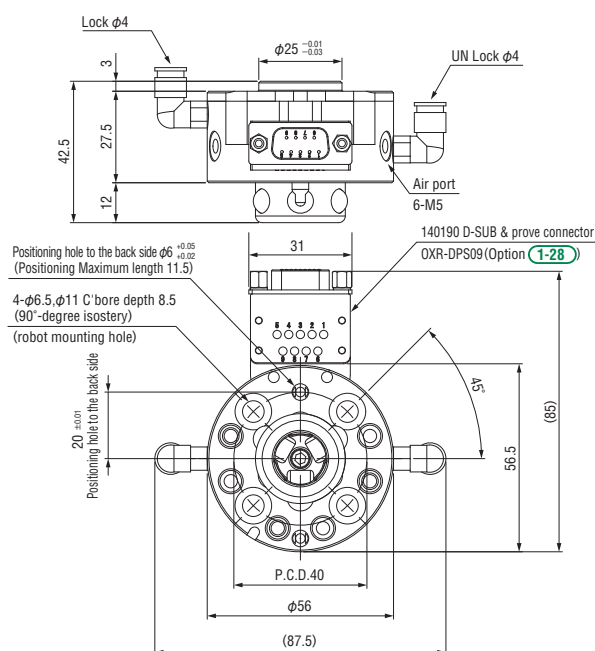
► Tool changer for small-size robots. Load capacity 10kg



Order code No.	140262
TYPE	OX-10B

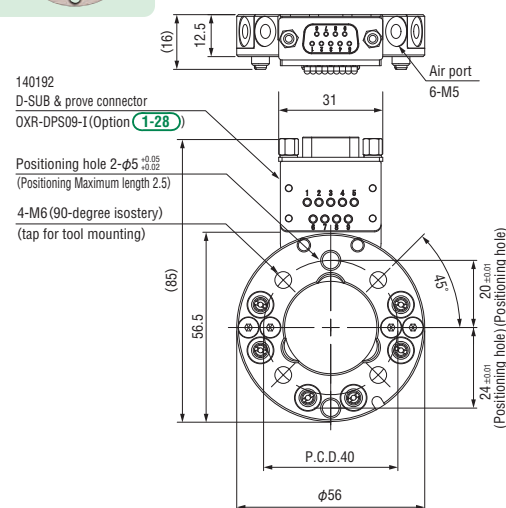
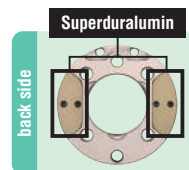
- Weight : 199g
- Mounting position : robot side
- Weight capacity : ~ 10kg
- Thickness after connection : 43mm

Detachable and attachable section/Made of steel

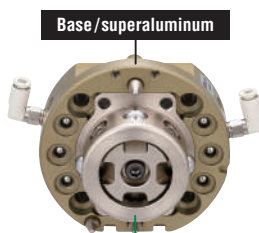


Order code No.	140263
TYPE	OX-10BI

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



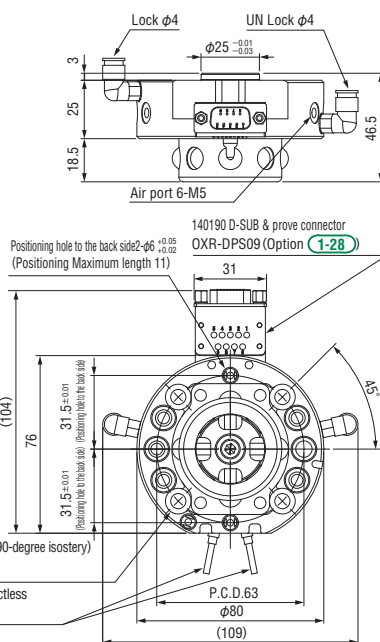
► Tool changer for small-size robots. Load capacity 20kg



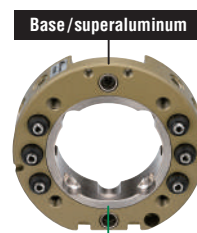
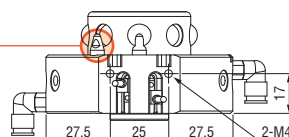
Detachable and attachable section/Made of steel

Order code No.	140292
TYPE	OX-20B

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



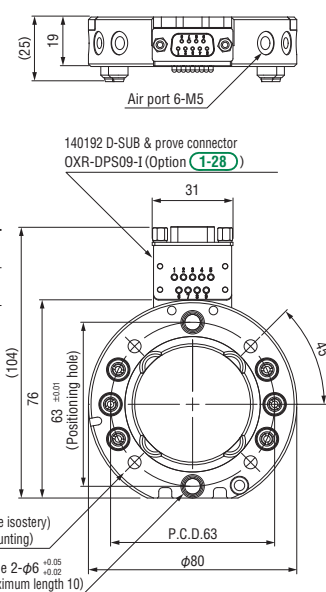
Positioning pin should be removed to connect with 20AI.



Detachable and attachable section/Made of steel

Order code No.	140293
TYPE	OX-20BI

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



Description of type

OX- 35

A

I

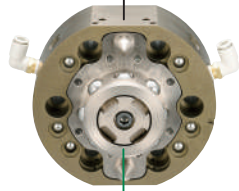
Installation side
None (robot side)
I (Tool side)

Maximum weight capacity (kg)

Version

► For middle-size robot. Load capacity 35kg

Base/superaluminum

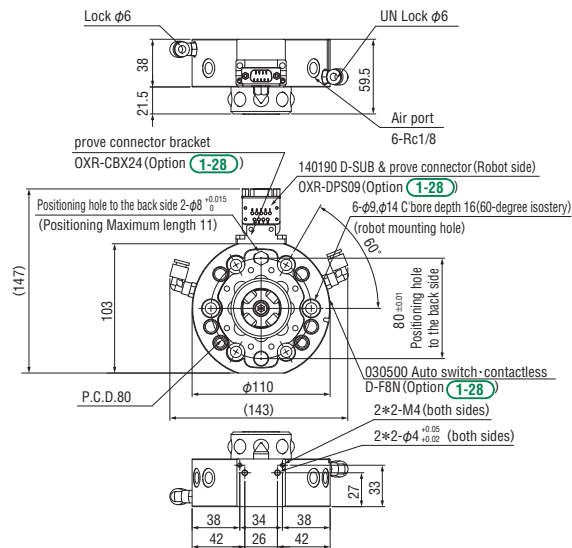


Order code No. **140311**

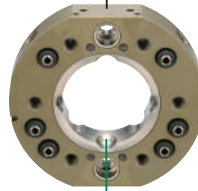
TYPE **OX-35A**

- Weight : 1225g
- Mounting position : robot side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm

Detachable and attachable section/Made of steel



Base/superaluminum

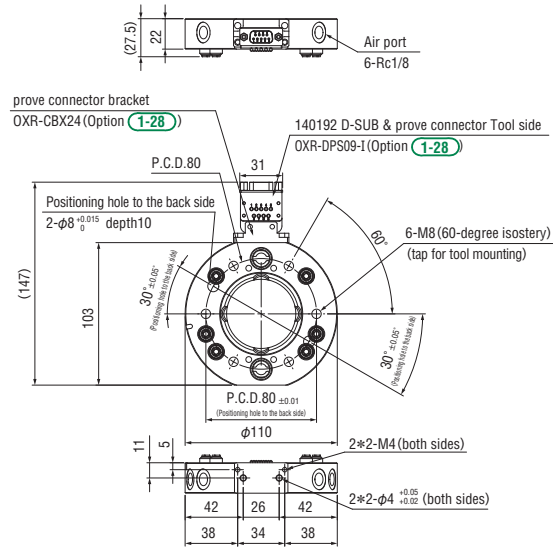


Order code No. **140316**

TYPE **OX-35AI**

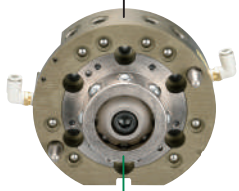
- Weight : 545g
- Mounting position : tool side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm

Detachable and attachable section/Made of steel



► For middle-size robot. Load capacity 35kg

Base/superaluminum

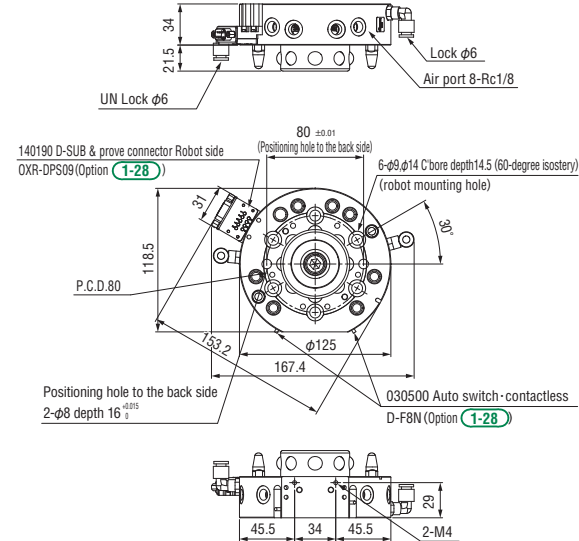


Order code No. **140313**

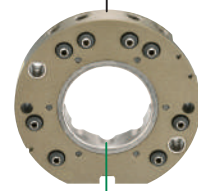
TYPE **OX-60A**

- Weight : 1440g
- Mounting position : robot side
- Weight capacity : ~ 60kg
- Thickness after connection : 56mm

Detachable and attachable section/Made of steel



Base/superaluminum

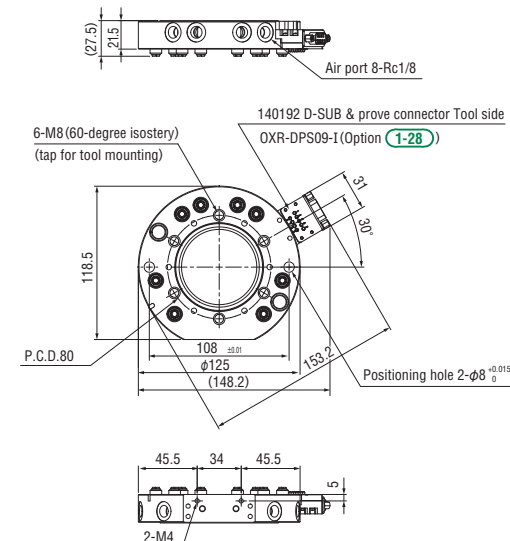


Order code No. **140318**

TYPE **OX-60AI**

- Weight : 734g
- Mounting position : tool side
- Weight capacity : ~ 60kg
- Thickness after connection : 56mm

Detachable and attachable section/Made of steel



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

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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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

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Various Products Information

1-25

The diagram shows the model name **OX-35 AT I** with labels for its components:

- Description of type**: Points to the **OX** part.
- Maximum weight capacity (kg)**: Points to the **35** part.
- Version**: Points to the **AT** part.
- Installation side**: Points to the **I** part, with sub-labels:
 - None (robot side)**
 - I (Tool side)**

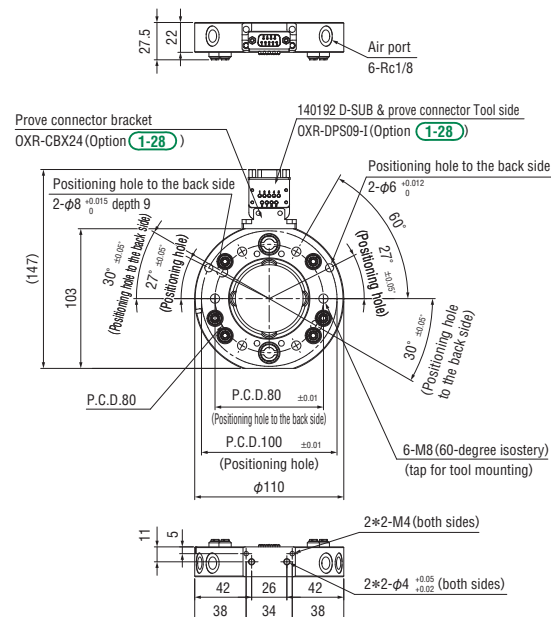
● The products are created after your order. Please contact our sales offices for more information about delivery date / price.



- Weight : 1445g
- Mounting position : robot side
- Weight capacity : ~ 35kg
- Thickness after connection : 60mm



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





Accessories

Quick chuck change automatic (for articulated robots)

► Remote valve for manual tool change actuation

Manual air valve push button



Order code No.	152308
TYPE	PB1-E
Weight	65g

Manual air valve push slide button



Order code No.	152306
TYPE	PBW1-E
Weight	75g

► Air port accessory

■ OX-005A

Additional air expansion



	For OX-005A	
	Robot side	Tool side
Order code No.	140326	140327
TYPE	OX-005AA	OX-005AIA
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.	140296	140297
TYPE	OX-20BA	OX-20BIA
Weight	76g	57g

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

■ For OX-35A, 60A

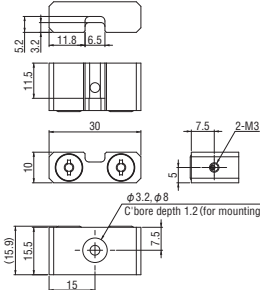
Additional air expansion



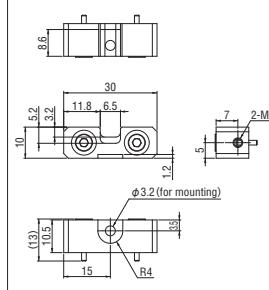
	For OX-35/60	
	Robot side	Tool side
Order code No.	140342	140343
TYPE	OX-60AA	OX-60AIA
Weight	147g	80g

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

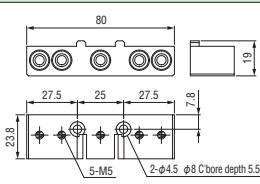
OX-005AA



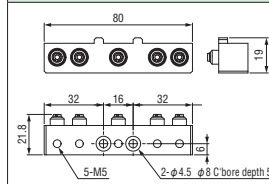
OX-005AIA



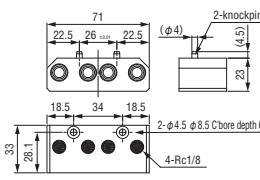
OX-20BA



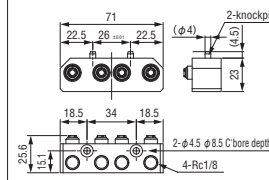
OX-20BIA



OX-60AA



OX-60AIA



Barbed joint



	Tool side		
	For OX-03/05/10	For OX-20	For OX-35/60
Order code No.	230116	110623	110686
TYPE	XL0054-106A	LX0004-101	LX0120-202
Weight	1g	2g	2g

OX-bearing *Material: SUS304



	Robot side			
	For OX-005	For OX-03/05/10	For OX-20	For OX-35/60
Order code No.	382583	310607	323000	152561
TYPE	φ3	φ5.5	φ6.35	φ10
Weight	1g	1g	1g	3g

Coil spring

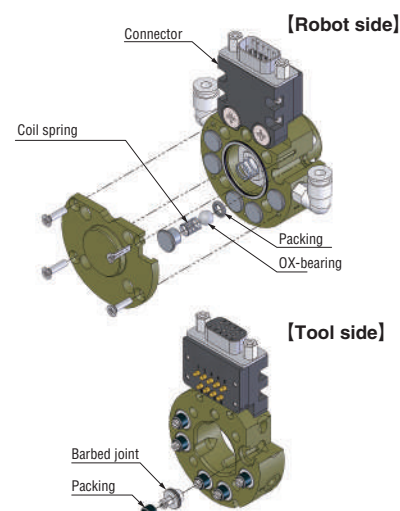


	Robot side			
	For OX-005	For OX-03/05/10	For OX-20	For OX-35/60
Order code No.	230115	200223	110649	200257
TYPE	XL0060-106-2	UR5-10	L00999-420	UR8-15
Weight	1g	0.1g	0.2g	1g

Packing



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



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

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Accessories

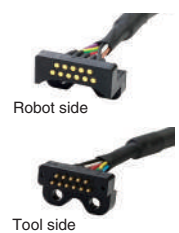
▶ Connector accessory

Connector for OX-005		Robot side	Tool side
	Order code No.	140328	140329
	TYPE	OXR-PS06	OXR-PS06-I
	Weight	3g	
	Electric contact	6Pin	

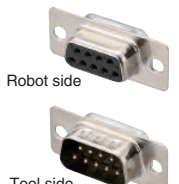
● Connector drawing → [1-30](#)

D-SUB & Prove connector		Robot side	Tool side
	Order code No.	140190	140192
	TYPE	OXR-DPS09	OXR-DPS09-I
	Weight	25g	
	Wiring specification	AWG22	
	Electric contact	9Pin	
	Attached screw	Flat head screw with cross recess M4×10 [123515]	

● Connector drawing → [1-30](#)

Prove connector		Robot side	Tool side
	Order code No.	140362	140363
	TYPE	OXR-PSH11	OXR-PSH11-I
	Weight	53g	
	Wiring specification	solder-fix type (AWG23) 500mm	
	Electric contact	11points	
	Attached screw	Flat head screw with cross recess M4×10 [123515]	

● Connector drawing → [1-30](#)

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

● Screws are not included.

▶ Auto switch・contactless

Auto switch		Order code No.	030500
	TYPE	D-F8N	
	Weight	7g	

- Applied load : relay PLC
- Load electric current : 5 ~ 40mA
- W/ indicator lamp
- Cable Length : 0.5m
- Load voltage : DC24V
- Wiring : → [6-21](#)

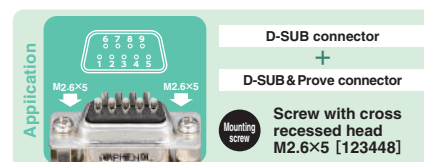
Prove connector (solder)		Robot side	Tool side
	Order code No.	140264	140265
	TYPE	OXR-PS16	OXR-PS16-I
	Weight	8g	11g
	Wiring specification	AWG22	
	Electric contact	16Pin	
	Attached screw	Flat head screw with cross recess M4×10 [123515]	

● Connector drawing → [1-30](#)

Prove connector bracket		Order code No.	140344
	TYPE	OXR-CBX24	
	Weight	33g	

● Accessories : positioning pin, mounting bolt

Required to attach D-SUB & probe connector to OX-35A and OX-35AI.



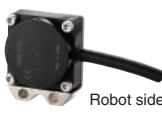
*D-SUB connector can be mounted on cable wiring.

► Wireless connector

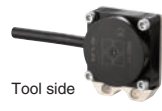
Can be used for the place with moisture and dust with contactless design

Wireless connector

For 03/05

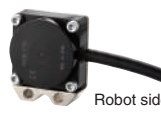


Robot side



Tool side

For 10/20



Robot side



Tool side

	For 03/05 Robot side	For 03/05 Tool side	For 10/20 Robot side	For 10/20 Tool side
Order code No.	140320	140322	140321	140323
TYPE	OXR-RS04R-03	OXR-RS04T-03I	OXR-RS04R-10	OXR-RS04T-10I
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	

*Check the specification and precautions concerning handling. ➔ 1-32

*Check the drawing. ➔ 1-31

*For protection structure IP67

*The output type is NPN type.

*Power supply voltage DC24V

*Cable Length : robot side 2m tool side 1m

For 20 (for load capacity 20kg or more)



Robot side



Tool side

	For 20 Robot side	For 20 Tool side
Order code No.	140330	140379
TYPE	OXR-RS12R-20	OXR-RS12T1-20I
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	

*Check the specification and precautions concerning handling. ➔ 1-32

*Check the drawing. ➔ 1-31

*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.

► Cable Accessory

D-SUB cable (OX-A type)		Robot side	Tool side	Robot side	Tool side
	Order code No.	140168	140167	140170	140169
	TYPE	OX-DS09-H	OX-DS09-I-H	OX-DS15-H	OX-DS15-I-H
	Weight	40g			
	Cable length	0.5m			
	Electric contact	9Pin		15Pin	
	Wiring specification	Movable cable (AWG22), for UL			
● Bending radius (mm) : R46					

D-SUB cable for OX (for OX-B)		Robot side		Tool side	
Straight type 	Order code No.	140197	140247	140202	140364
	TYPE	OX-DS09S-H	OX-DS09S-H (1.5M)	OX-DS09P-I-H	OX-DS09P-I-H (1.5M)
	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)	
L type 	Order code No.	140203	140248	140204	140365
	TYPE	OX-DS09SL-H	OX-DS09SL-H (1.5M)	OX-DS09PL-I-H	OX-DS09PL-I-H (1.5M)
	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					

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

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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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

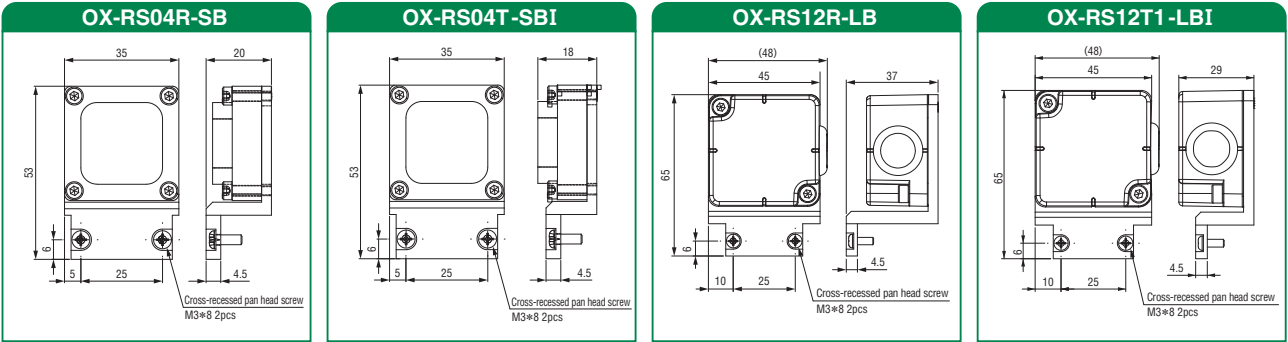
Information

Various Products Information

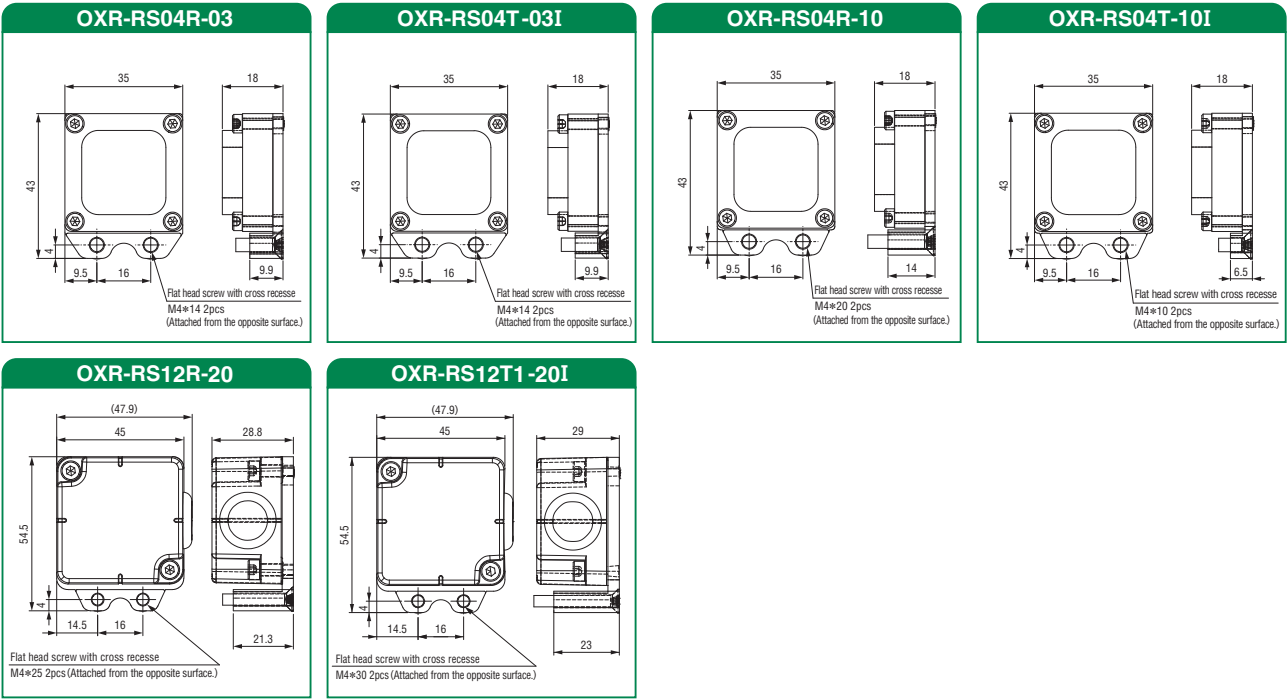
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Drawing of wireless connector

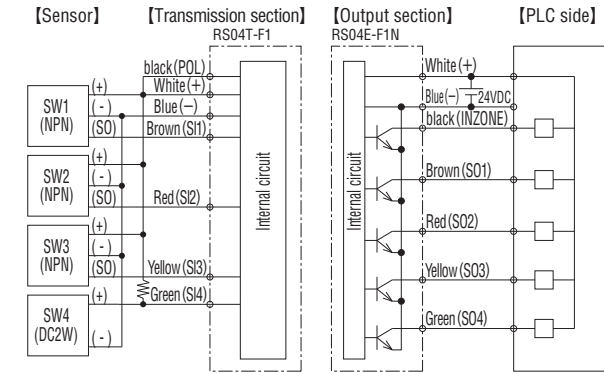
► For Take-out Robot ▶ 1-17



► For Articulated Robots ▶ 1-29

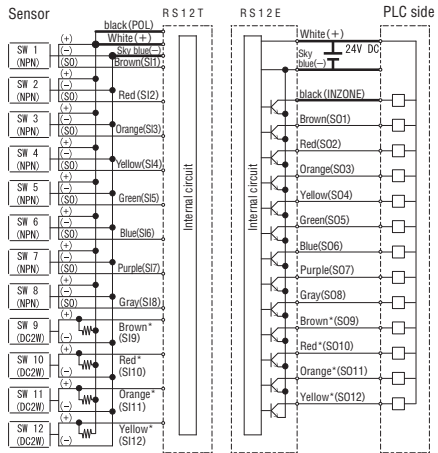


■ OXR-RS04 series Wiring diagram (NPN)



*SW4 in the above figure is a wiring example of a DC 2-wire sensor (wire a resistor of about 1 to 2 KΩ).
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 KΩ).
The green, blue*, and purple* cables of RS12E and RS12T are unused.

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Quick Chuck Change (Manual)

Tool Changer

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Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

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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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

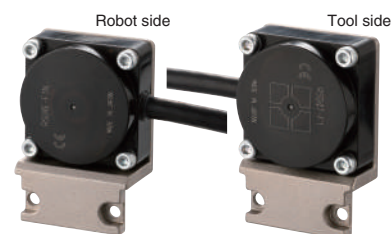
Wireless connector specification and precautions concerning handling

● See (1-17) and (1-29) 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.



► 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 ²	
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 ²	
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 ² + 13×0.18mm ²	
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 ² + 13×0.18mm ²	
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

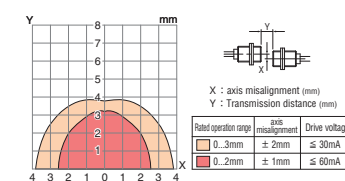
Power supply voltage	12V DC
Total consumption current	≤ 60mA
Residual voltage	≤ 3.5V
Load electric current	—

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

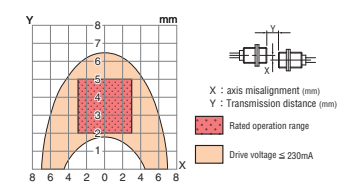
Power supply voltage	12V DC
Total consumption current	≤ 230mA
Residual voltage	≤ 3.5V
Load electric current	—

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

■ Transmission area drawing

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

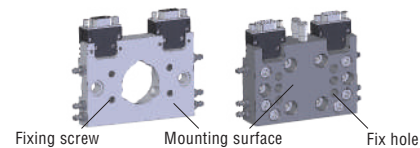
OXR-RS12R-__ / OXR-RS12T-__ I



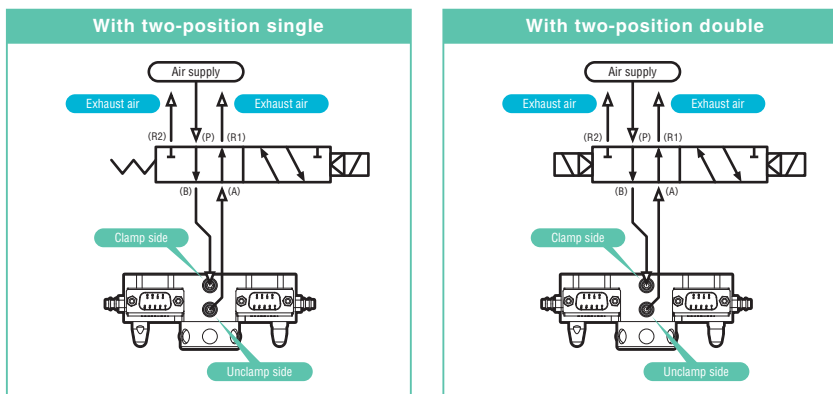


Cautions when using tool changer

- 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)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

Tool Changer for Articulated Robots Option & Replacement Parts

				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
				140310	140315	140235	140236	140237	140238	140262	140263	140292	140293	140311	140316	140313	140318	140312	140317
		Order code No.	TYPE	OX-005A	OX-005AI	OX-03A	OX-03AI	OX-05A	OX-05AI	OX-10B	OX-10BI	OX-20B	OX-20BI	OX-35A	OX-35AI	OX-60A	OX-60AI	OX-35AT	OX-35ATI
Air Option	Robot side		140326	OX-005AA	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Tool side		140327	OX-005AIA	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	Robot side		140296	OX-20BA	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—
	Tool side		140297	OX-20BIA	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—
	Robot side		140342	OX-60AA	—	—	—	—	—	—	—	—	—	—	○	—	○	—	○
	Tool side		140343	OX-60AIA	—	—	—	—	—	—	—	—	—	—	—	○	—	○	○
Air port accessory	Barbed joint		230116	XL0054-106A	—	—	—	○	—	○	—	○	—	—	—	—	—	—	—
			110623	LX0004-101	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—
			110686	LX0120-202	—	—	—	—	—	—	—	—	—	—	—	○	—	○	○
	OX-bearing		382583	φ3	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			310607	φ5.5	—	—	○	—	○	—	○	—	—	—	—	—	—	—	—
			323000	φ6.35	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—
			152561	φ10	—	—	—	—	—	—	—	—	—	—	○	—	○	—	○
	Coil spring		230115	XL0060-106-2	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			200223	UR5-10	—	—	○	—	○	—	○	—	—	—	—	—	—	—	—
			110649	L00999-420	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—
			200257	UR8-15	—	—	—	—	—	—	—	—	—	—	○	—	○	—	○
	Packing (Robot side)		152547	P5 (C000002-S7)	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			186738	SS3 (C03700-A0)	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			271742	1ASS-5	—	—	○	—	○	—	○	—	—	—	—	—	—	—	—
			184474	S6 (C00503-A00X8)	—	—	—	—	—	—	—	—	○	—	—	—	—	—	—
	Packing (Tool side)		152689	P8 NBR-70	—	—	—	—	—	—	—	—	—	—	○	—	○	—	○
			230077	XL0054-204	—	—	—	○	—	○	—	○	—	—	—	—	—	—	—
			110551	L00999-313	—	—	—	—	—	—	—	—	—	○	—	—	—	—	—
			110687	LX0120-203	—	—	—	—	—	—	—	—	—	—	—	○	—	○	○
	Cable accessory	Robot side		140168	OX-DS09-H	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—
Tool side			140167	OX-DS09-I-H	—	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	○*1
Robot side			140197	OX-DS09S-H	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1
Tool side			140247	OX-DS09S-H (1.5m)	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1
Robot side			140202	OX-DS09P-I-H	—	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	○*1
Tool side			140364	OX-DS09P-I-H (1.5m)	—	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	○*1
Robot side			140203	OX-DS09SL-H	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1
Tool side			140248	OX-DS09SL-H (1.5m)	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1
Robot side			140204	OX-DS09PL-I-H	—	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	○*1
Tool side			140365	OX-DS09PL-I-H (1.5m)	—	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	○*1
Connector accessory	Robot side		140328	OXR-PS06	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Tool side		140329	OXR-PS06-I	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—
	Robot side		140190	OXR-DPS09	—	—	○	—	○	—	○	—	○	—	○*2	—	○	—	○*2
	Tool side		140192	OXR-DPS09-I	—	—	—	○	—	○	—	○	—	○	—	○*2	—	○	○*2
	Robot side		140264	OXR-PS16	—	—	○	—	○	—	○	—	○	—	○*2	—	○	—	○*2
	Tool side		140265	OXR-PS16-I	—	—	—	○	—	○	—	○	—	○	—	○*2	—	○	○*2
	Robot side		140362	OXR-PSH11	—	—	○	—	○	—	○	—	○	—	○*2	—	○	—	○*2
	Tool side		140363	OXR-PSH11-I	—	—	—	○	—	○	—	○	—	○	—	○*2	—	○	○*2
	Probe connector		140344	OXR-CBX24	—	—	—	—	—	—	—	—	—	—	○	○	○	○	○
	Robot side		140172	OX-DS09	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1
Tool side		140171	OX-DS09-I	—	—	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	—	○*1	○*1	
Auto switch	Robot side		030500	D-F8N	—	—	—	—	—	—	—	○	—	○	—	○	—	○	—
	Tool side		140320	OXR-RS04R-03	—	—	○	—	○	—	—	—	—	—	—	—	—	—	—
	Robot side		140322	OXR-RS04T-03I	—	—	—	○*3	—	○*3	—	—	—	—	—	—	—	—	—
	Tool side		140321	OXR-RS04R-10	—	—	—	—	—	—	○	—	○	—	○*2	—	○	—	○*2
	Robot side		140323	OXR-RS04T-10I	—	—	—	—	—	—	—	○	—	○	—	○*2	—	○	○*2
	Tool side		140330	OXR-RS12R-20	—	—	—	—	—	—	—	—	○*3	—	○*2	—	○	—	○*2
Wireless connector	Robot side		140379	OXR-RS12T1-20I	—	—	—	—	—	—	—	—	○*3	—	○*2-3	—	○*3	—	○*2-3
	Tool side				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

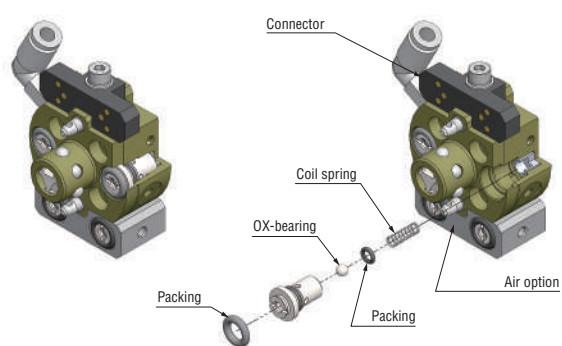
* 1 If you use a cable accessory with no connector, you will need the proper D-sub & probe connectors (★ mark).

* 2 The probe connector mounting bracket is required for the installation of the electrical connector.

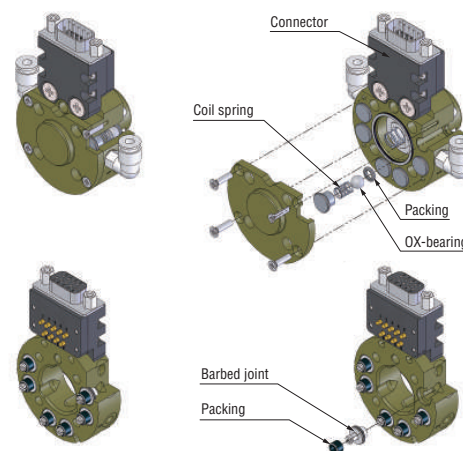
* 3 Because of the thickness of the wireless connector, it will come out from the mounting surface of the tool changer, please confirm the dimension.

				Air option					
				Robot side	Robot side	Tool side	Robot side	Tool side	
				Order code No.	140326	140296	140297	140342	140343
		Order code No.	TYPE	OX-005AA	OX-20BA	OX-20BIA	OX-60AA	OX-60AIA	
Air port accessory	Barbed joint		110623	LX0004-101	—	—	○	—	—
			110686	LX0120-202	—	—	—	—	○
	OX-bearing		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	—	—	—	—	○

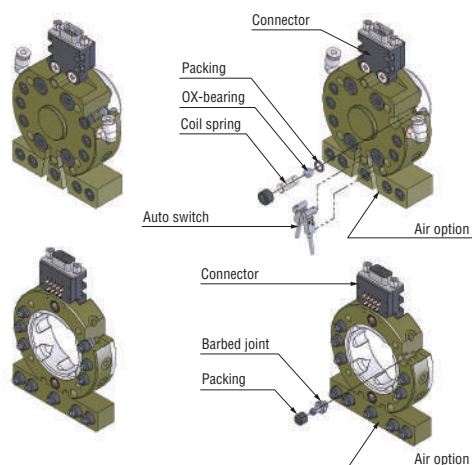
OX-005A/005A I



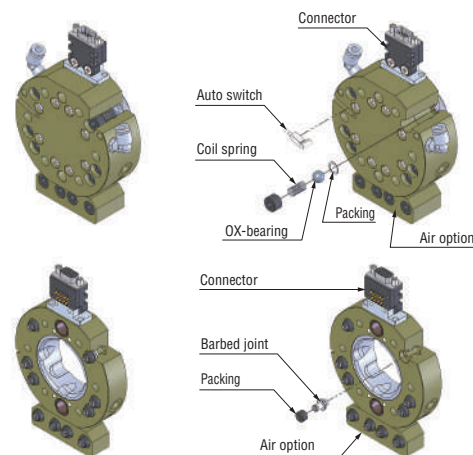
OX-03A (05A, 10B) /03A (05A, 10B) I



OX-20B/20B I



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



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

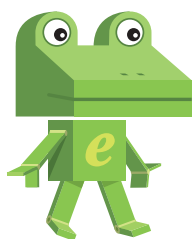
Tool / Jig

Information

Various Products Information



Automated Chuck Exchange System

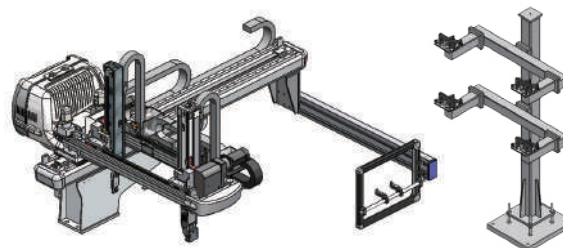


Chuck automatic exchange is effective for reduction of setup time, different connection of air and electrical components, and location accuracy for hand exchanges.

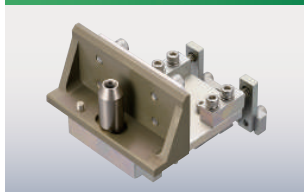
▶ Example of tool station

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.



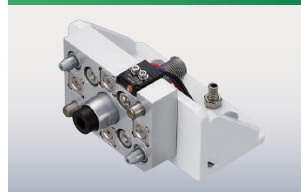
Auto Quick Chuck Change Hanger



Hanger unit attached to tool station.(Station Side)

1-37

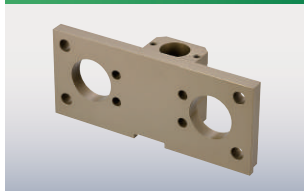
Magnet Chuck Hanger (Fix Side)



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

1-39

Hanger Tool



Hold unit attached to the tool side.

1-37

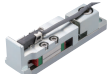
Magnet Chuck Hanger (Tool Side)



Hold unit attached to the tool side.

1-39

■ Specification

	Product name	Order code No.	Weight (g)	Weight capacity (kg)	Page of details
		TYPE			
Auto quick chuck change hanger		072600	182	~ 3	1-37
		HSL			
		072601	1,300	~ 10	1-38
		HSAL			
		072602	2,800	~ 35	
		HLAL			
Hanger tool		196532	43	~ 3	1-37
		TS			
		196533	99	~ 10	1-38
		TSA			
		196656	356	~ 35	
		TLA1			

	Product name	Order code No. TYPE	Weight (g)	Weight capacity (kg)	Page of details	
Magnet chuck hanger (fix side)		072732	540	~ 1 (9.8N)	1-39	
		HNE-48				
		072733	680		1-40	
		HNE-S				
Magnet chuck hanger (tool side)		072811	632	~ 1 (9.8N)	1-39	
		HNE-SL				
		196636	70		~ 1 (9.8N)	1-40
		TNE-48I				
	196637	140	~ 1 (9.8N)	1-40		
	TNE-SI					
	196727	115		~ 1 (9.8N)	1-40	
	TNE-SLI					



Auto Quick Chuck Change Hanger / Hanger Tool

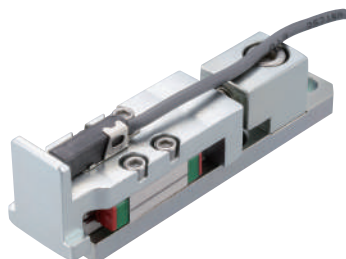
Auto quick chuck change hanger attached to station side. And hanger tool attached to tool side.

Auto quick chuck change hanger (Hook Specification)



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

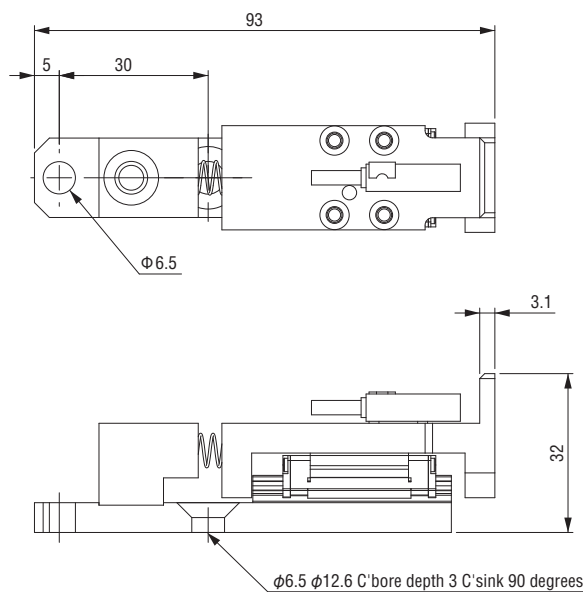
Station side



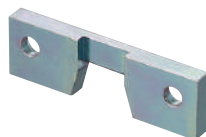
Auto quick chuck change hanger

Order code No.	072600
TYPE	HSL

- Weight: 182g
- Weight capacity: ~ 3kg
- W/sensor: E2S-Q13



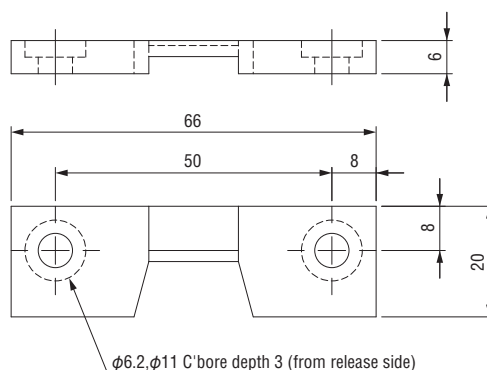
Tool side



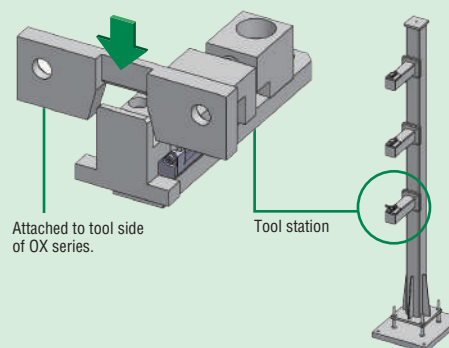
Hanger tool

Order code No.	196532
TYPE	TS

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



Example of combination: HSL and TS



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

Auto Quick Chuck Change Hanger/Hanger Tool

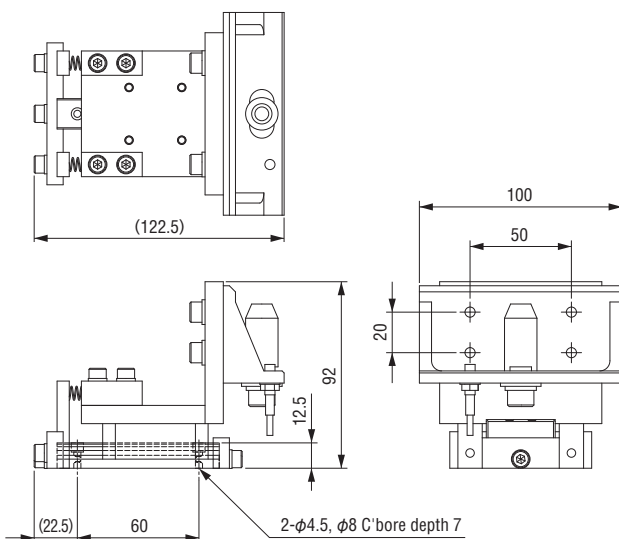
▶ Station side



Auto quick chuck change hanger

Order code No.	072601
TYPE	HSAL

- Weight: 1,300g ● Weight capacity: ~ 10kg
- W/sensor: (E2E-S05S12-WC-C1)
- Detects sensor with mounting bolt of hanger tool.



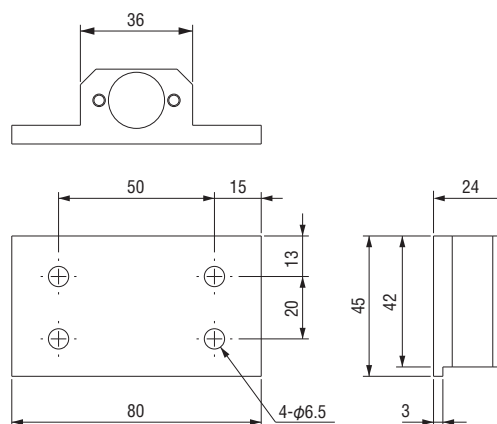
▶ Tool side



Hanger tool

Order code No.	196533
TYPE	TSA

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



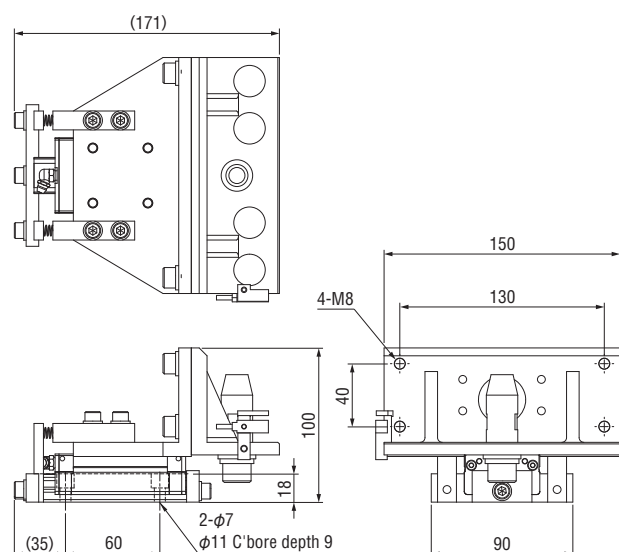
▶ Station side



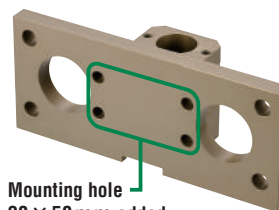
Auto quick chuck change hanger

Order code No.	072602
TYPE	HLAL

- Weight: 2,800g ● Weight capacity: ~ 35kg
- W/sensor: (E2S-W21)
- Detects sensor with mounting bolt of hanger tool.



▶ Tool side

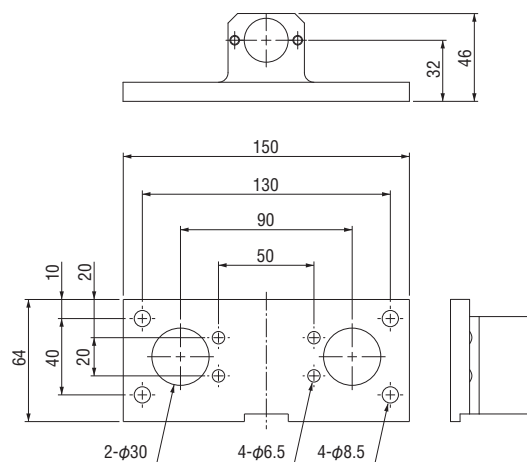


Hanger tool

Order code No.	196656
TYPE	TLA1

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

Mounting hole
20 × 50 mm added





Magnet Chuck Hanger

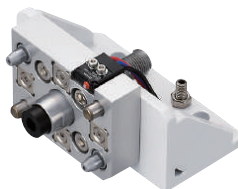
Hanger unit the magnet power of Neodymium.

Auto quick chuck
change hanger
(Neodymium specification)



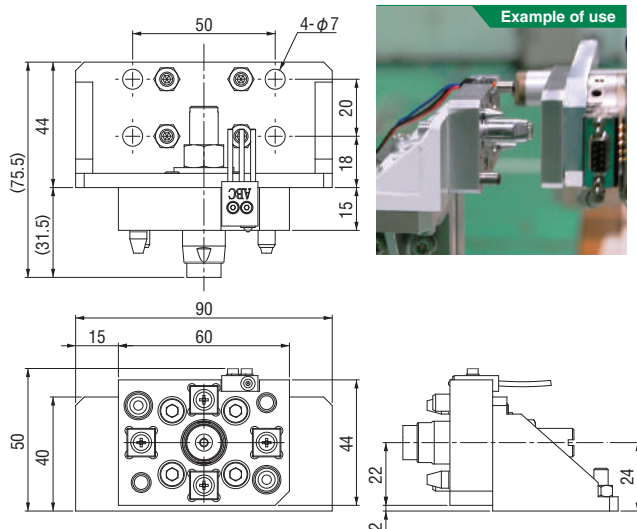
You can see moving images of products by
using QR code reader of your smartphone.

▶ Station side



Magnet chuck hanger (fix side)

Order code No.	072732
TYPE	HNE-48
● Weight: 540g ● Weight capacity: ~1kg (9.8N) ● W/sensor (030317 D2JW-011-MD) ● Wiring: black (COM) blue (NO) red (NC)	

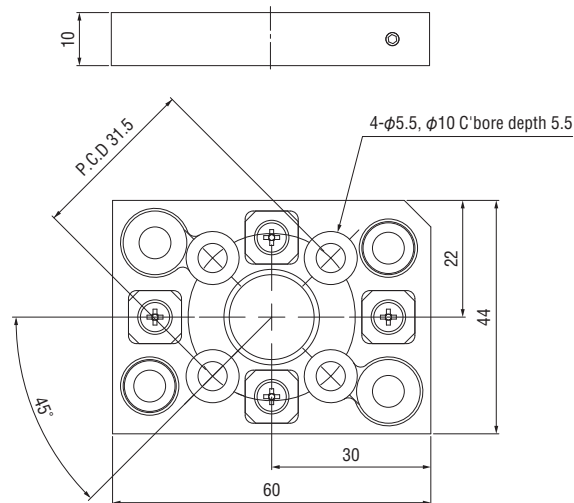


▶ Tool side

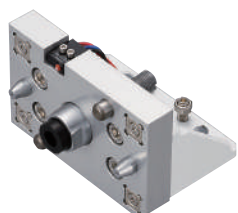


Magnet chuck hanger (tool side)

Order code No.	196636
TYPE	TNE-48I
● Weight: 70g ● Weight capacity: ~1kg (9.8N)	

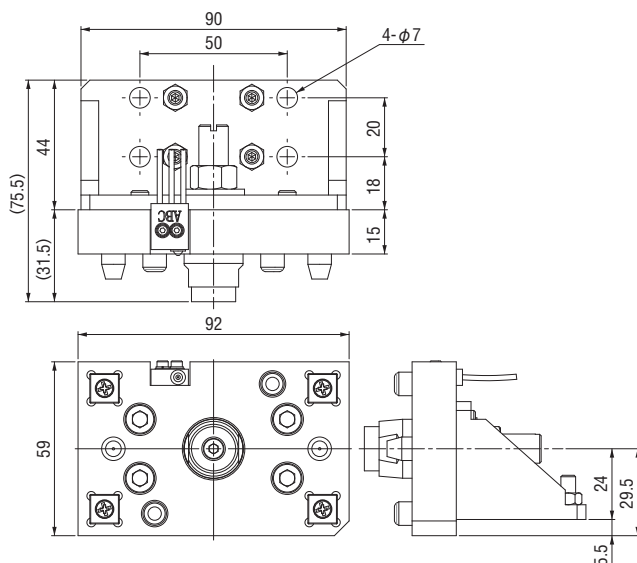


▶ Station side



Magnet chuck hanger (fix side)

Order code No.	072733
TYPE	HNE-S
● Weight: 680g ● Weight capacity: ~1kg (9.8N) ● W/sensor (030317 D2JW-011-MD) ● Wiring: black (COM) blue (NO) red (NC)	

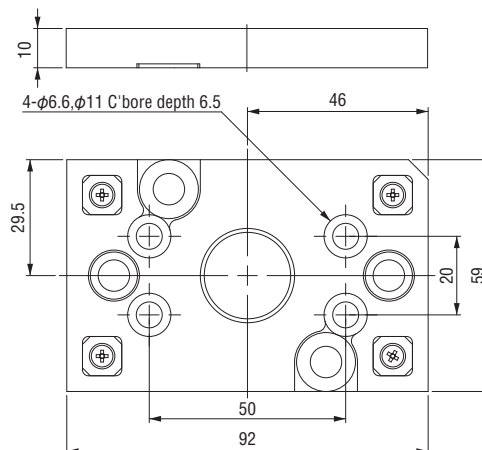


▶ Tool side



Magnet chuck hanger (tool side)

Order code No.	196637
TYPE	TNE-SI
● Weight: 140g ● Weight capacity: ~1kg (9.8N)	



Quick Chuck Change

Quick Chuck
Change
(Manual)

Tool
Changer

Automated
Chuck Exchange
System

Grip

Mini
Cylinder

Accessories
for Mini
Cylinder

Container
Cylinders

Accessory
for Container
Cylinder

Grippers

Rubber
Material /
Grip Pad

Suction

Suction
Cups

Suction
Stem

Pad in Pad

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

Air Management / Sensors

Air
Management

Sensors

PCIO
Communication
Unit

Lightweight Series

Frame / Suction /
Cylinder / Pads /
Manifold

Assembling Tools

Tool / Jig

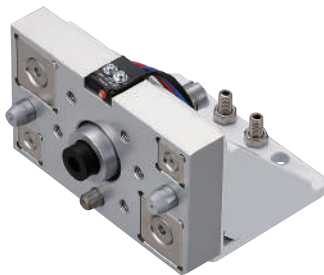
Information

Various Products
Information

Magnet Chuck Hanger

Quick Chuck Change ● Automated Chuck Exchange System

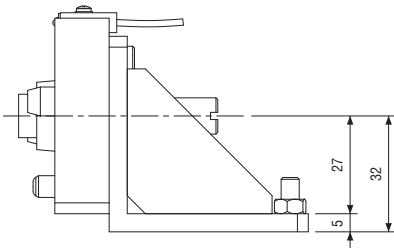
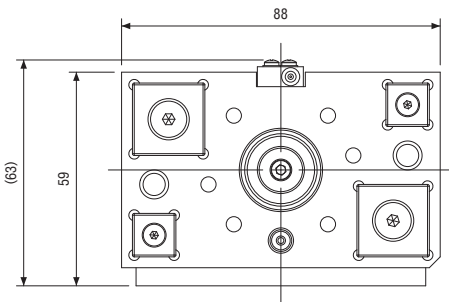
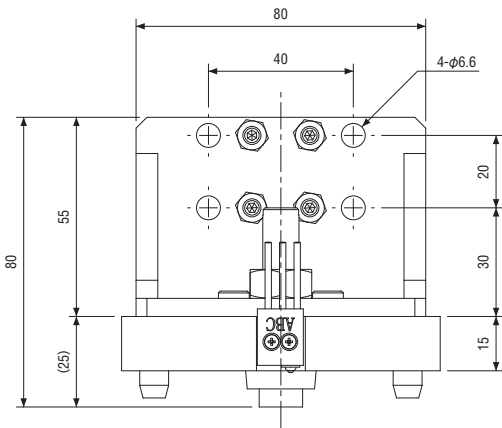
Station side



Magnet chuck hanger (fix side)

Order code No.	072811
TYPE	HNE-SL

- Weight: 632g
- Weight capacity: ~ 1kg (9.8N)
- W/ sensor (030317 D2JW-011-MD)
- Wiring: black (COM) blue (NO) red (NC)



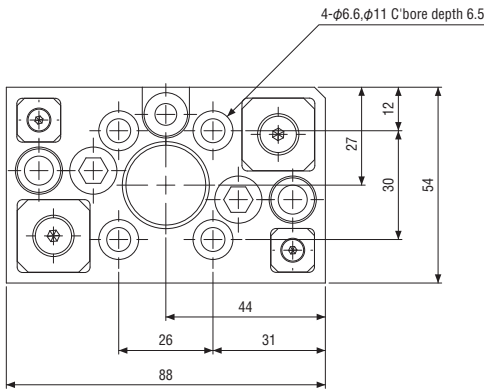
Tool side



Magnet chuck hanger (tool side)

Order code No.	196727
TYPE	TNE-SLI

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



Grip



Mini Cylinder 2-2

- ▶ Micro Mini Cylinder (UMCD) / Mini Cylinder (MCD1) / Resin Cylinder (MCDR) ... 2-4
- ▶ Mini Cylinder (MCE) 2-5
- ▶ Mini Cylinder H 2-6
- ▶ Cylinder for Pipe Attachment (MCP1) / Suction Combination Cylinder (VMCP) 2-7



Accessories for Mini Cylinder ... 2-8

- ▶ Pads 2-10
- ▶ Claws / Nut Plates 2-13
- ▶ Chuck Spacers : Plastic / Aluminum 2-14
- ▶ Extension Shafts / Pillow Blocks / Slide Plates 2-15



Container Cylinders 2-16

- ▶ Mini Container Cylinder (Single / Double) 2-17
- ▶ Container Cylinder (Double / Reinforced) 2-18
- ▶ Container Cylinder w / Guided (Double) 2-19



Accessories for Container Cylinder ... 2-20

- ▶ Pads / Extension Plates / Nut Plates 2-21



Grippers 2-22

- ▶ Runner Chuck E Series (Claw Super Duralumin) ... 2-28
- ▶ Runner Chuck E1 Series (Steel Claw) 2-30
- ▶ Runner Chuck E1 Series (Steel L Claw Type) 2-32
- ▶ Runner Chuck E1 Series (Detachable / Attachable Claw) ... 2-33
- ▶ Runner Module / Runner Chuck Plate 2-35
- ▶ Tunnel Gate Runner Chuck 2-36
- ▶ Pipe Combination Chuck 2-37
- ▶ Hinge Cylinder 2-38
- ▶ Magnet Chucks 2-39
- ▶ Parallel Chucks (Single / Double) 2-40
- ▶ Parallel Hand (Double) 2-44
- ▶ Needle Gripper 2-45
- ▶ Hinge Chuck Clamp Unit (Double) 2-46



Rubber Material / Grip Pad 2-47

- ▶ Rubber Pad / EP Sponge / Silicone Sponge 2-47

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

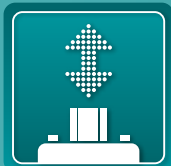
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Mini Cylinder

- ▶ 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)	Output (N)		Stroke (mm)	Weight (g)	Page of details
Micro mini cylinder • UMCD		200122	UMCD-5	Single action type	0.3 ~ 0.5	28		5	16	2-4
		200123	UMCD-10			24		10	22	
		200124	UMCD-5P	Single action type	0.3 ~ 0.5	28		5	14	
		200125	UMCD-10P			24		10	20	
Mini cylinder • MCD1		123219	MCD1-10	Single action type	0.3 ~ 0.5	Push 98	Pull 19	10	65	2-4
		123220	MCD1-20					20	80	
NEW Resin Cylinder • MCDR		123691	MCDR-10	Single action type	0.3 ~ 0.5	Push 98	Pull 19	10	40	2-4
		123692	MCDR-20					20	48	
Mini cylinder • MCE		123504	MCE-10S	Single action type	0.3 ~ 0.5	Push 110	Pull 20	10	58	2-5
		123505	MCE-10T			Push 20	Pull 85			
		123508	MCE-10W	Double action type		Push 130	Pull 108		62	
		123506	MCE-20S	Single action type		Push 105	Pull 22	20	69	
		123507	MCE-20T			Push 22	Pull 82			
		123509	MCE-20W	Double action type		Push 130	Pull 108		71	

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

Product name	Order code No.	TYPE	Structure	Used air pressure (Mpa)	Output (N)		Stroke (mm)	Weight (g)	Page of details
Mini cylinder H (with rubber pad)	 120003	MCY-HS	Single action type		Push 78	Pull 10	20度	45	2-6
Replacement rubber • w/ screw • for MCY-HS	 370877	MCY-HS 37	—	—	—	—	—	1	2-6
Cylinder for pipe attachment	 123699	MCP1-1210	Single action type	0.3 ~ 0.5	30		10	12	2-7
	 123700	MCP1-1220			31		20	14	
	 123701	MCP1-2010			85		10	40	
	 123702	MCP1-2020			84		20	46	
	 123703	MCP1-2030			83		30	50	
NEW Suction Combination Cylinder • VMCP	 211133	VMCP-10	Single action type	0.3 ~ 0.5	54		10	51	2-7
	 211134	VMCP-20			62		20	60	
	 211135	VMCP-30			60		30	78	
	 211137	VMCP-10-C			54		10	69	
	 211138	VMCP-20-C			62		20	78	
	 211139	VMCP-30-C			60		30	96	
Auto switch (reed SW)	 030282	D-A93	—	—	—		—	6	2-5
Auto switch (contactless)	 030425	D-M9N	—	—	—		—	8	2-5

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

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

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

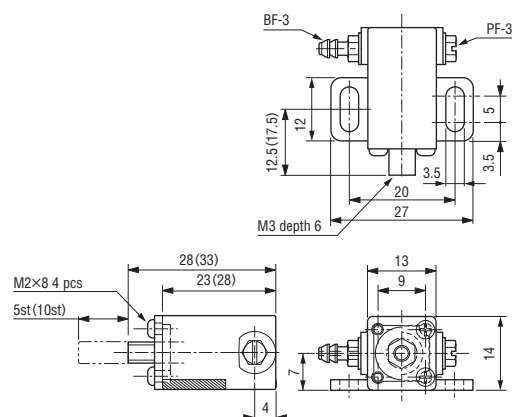
- Stroke: 5mm
- Weight: 16g
- Joint pipe fitting BF-3 included



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.

- ▶ Can be mounted side by side.



Micro mini cylinder • slim type

Order code No.	200124
TYPE	UMCD-5P

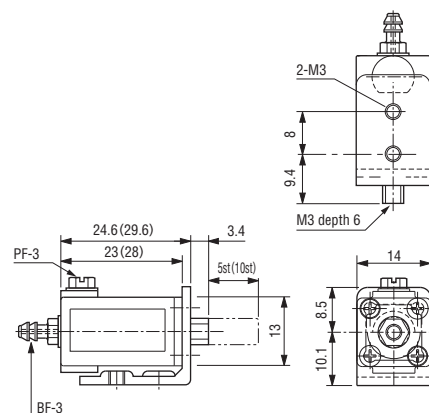
- Stroke: 5mm
- Weight: 14g
- Joint pipe fitting BF-3 included



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

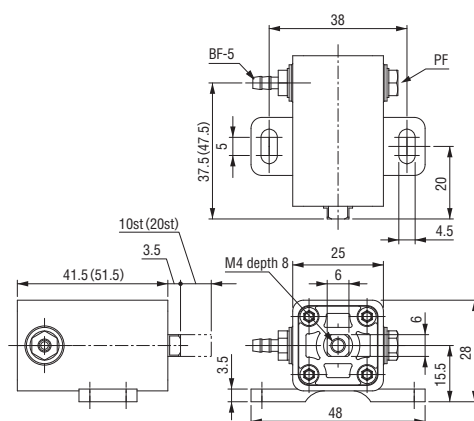
- Stroke: 10mm
- Weight: 65g
- Joint pipe fitting BF-5 included



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.

NEW



Resin Cylinder • MCDR

Order code No.	123691
TYPE	MCDR-10

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

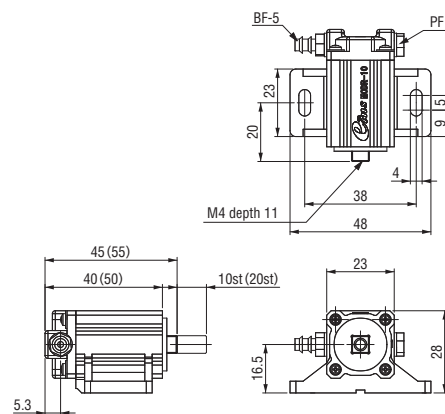
NEW



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 (MCE)

Light weight mini cylinder which allows installation of auto switch for act / return limit.

► Extension-type cylinder



Mini cylinder • MCE10st (push)

Order code No.	123504
TYPE	MCE-10S

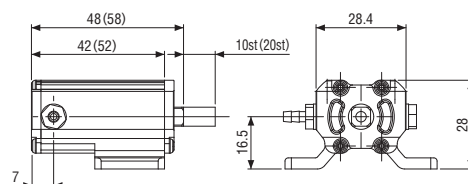
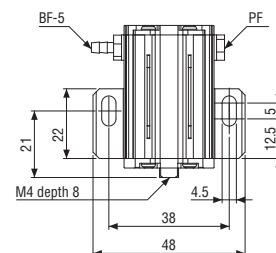
- Stroke: 10mm
- Weight: 58g
- Joint pipe fitting BF-5 included



Mini cylinder • MCE20st (push)

Order code No.	123506
TYPE	MCE-20S

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



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

► Pull cylinder



Mini cylinder • MCE10st (pull)

Order code No.	123505
TYPE	MCE-10T

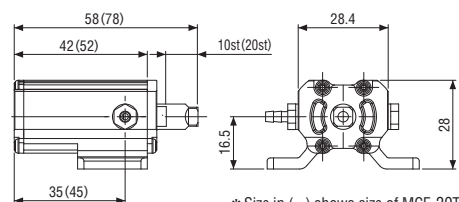
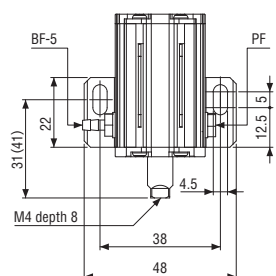
- Stroke: 10mm
- Weight: 58g
- Joint pipe fitting BF-5 included



Mini cylinder • MCE20st (pull)

Order code No.	123507
TYPE	MCE-20T

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



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

► Double-act-type cylinder



Mini cylinder • MCE10st (double action)

Order code No.	123508
TYPE	MCE-10W

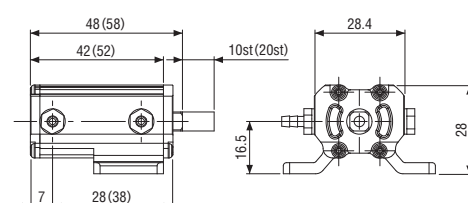
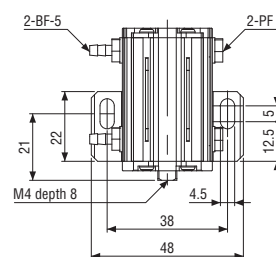
- Stroke: 10mm
- Weight: 62g
- Joint pipe fitting BF-5 included



Mini cylinder • MCE20st (double action)

Order code No.	123509
TYPE	MCE-20W

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



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



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
- Wiring → See 6-21
- Length: 0.5m



Auto switch (contactless)

Order code No.	030425
TYPE	D-M9N

- Weight: 8g
- 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
- Wiring → See 6-21
- Length: 0.5m

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Mini Cylinder H

Hinge cylinder with compact body.

Grip ● Mini Cylinder



Mini cylinder H

Order code No.	120003
TYPE	MCY-HS

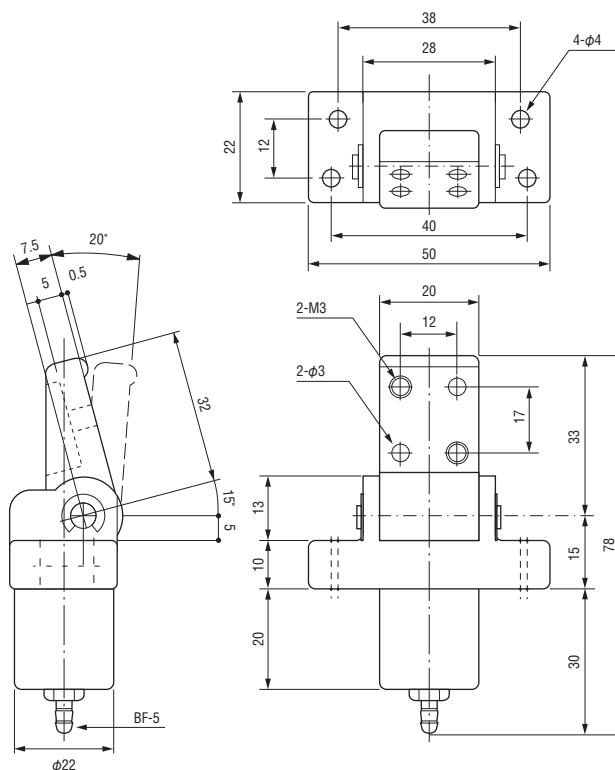
- Body material: PBT polybutylene terephthalate
- Operating angle: 0-20 degrees
- Joint pipe fitting BF-5 included
- Weight: 45g



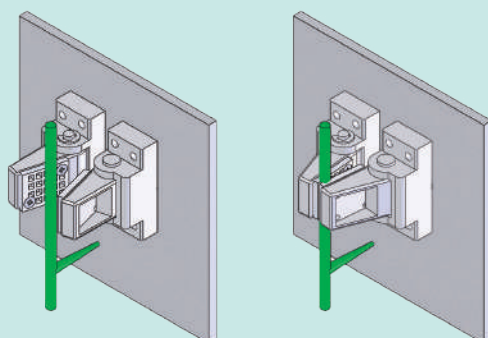
Replacement rubber • w/ screw • for MCY-HS

Order code No.	370877
TYPE	For MCY-HS

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



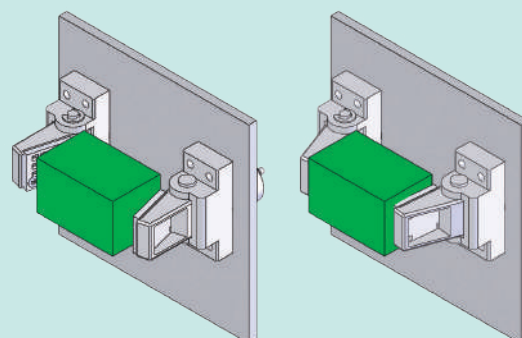
Example of use (runner grip)



Example of use (product grip)

Chuck close state

Example of use (product grip)



Example of use (product grip)

Chuck close state

* Direct attachment to jungle gym is impossible.



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.	123699
TYPE	MCP1-1210

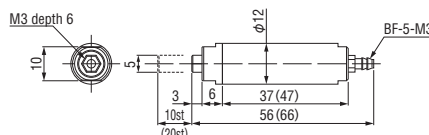
- Stroke: 10mm ● Weight: 12g
- Joint pipe fitting BF-5 included-M3 for piping



Cylinder for pipe attachment

Order code No.	123700
TYPE	MCP1-1220

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



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

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



Cylinder for pipe attachment

Order code No.	123701
TYPE	MCP1-2010

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



Cylinder for pipe attachment

Order code No.	123702
TYPE	MCP1-2020

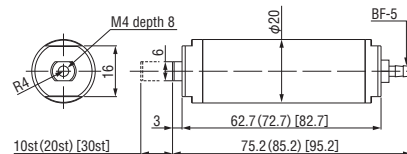
- Stroke: 20mm ● Weight: 46g
- Joint pipe fitting BF-5 included



Cylinder for pipe attachment

Order code No.	123703
TYPE	MCP1-2030

- 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.	211133
TYPE	VMCP-10

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



Suction Combination Cylinder (w/o sensor)

Order code No.	211134
TYPE	VMCP-20

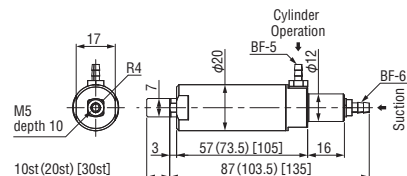
- Stroke: 20mm ● Weight: 60g
- Joint pipe fitting BF-5 included



Suction Combination Cylinder (w/o sensor)

Order code No.	211135
TYPE	VMCP-30

- 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.	211137
TYPE	VMCP-10-C

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



Suction Combination Cylinder (w/ sensor)

Order code No.	211138
TYPE	VMCP-20-C

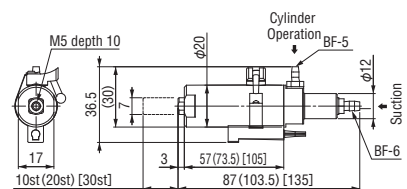
- Stroke: 20mm ● Weight: 78g
- Joint pipe fitting BF-5 included
- Sensor: D-M9N (030425)



Suction Combination Cylinder (w/ sensor)

Order code No.	211139
TYPE	VMCP-30-C

- 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.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Accessories for Mini Cylinder

Pads



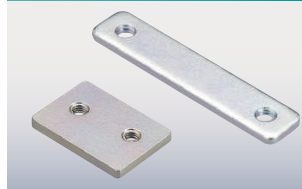
For micro mini cylinder and mini cylinder.

Claws



Most suitable for sprue chuck.

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
Pads	Pad • round • black $\phi 25$ • for mini cylinder		370071	CP-015	13	Nitrile rubber	2-10
	Pad • round • black $\phi 50$ • for mini cylinder		370070	CP-016	53		
	Pad • rectangle • black • for micro mini cylinder		022797	CPUM-01	5		
	Pad • rectangle • black 2 holes • for mini cylinder		023336	CPL-060	22	Chloroprene rubber	
	Pad • curved • black • for mini cylinder		023359	CPL-018	19		
	Pad • rectangle • black • for pull		023219	CP-077	39		
	Pad • rectangle • w/ black SW • for mini cylinder		101832	KRCR-5000	62	Nitrile rubber	2-11
	Pad • rectangle • w/black SW • micro mini cylinder		110568	L1131-100	23		
	Pad • round • white $\phi 25$ • for mini cylinder		022664	CP-074	13	Silicone	2-10
	Pad • round • white $\phi 50$ • for mini cylinder		370107	CP-071	53		
	Pad • rectangle • white • for micro mini cylinder		023113	CPUM-01 (SR)	5		
	Pad • rectangle • white 2 holes • for mini cylinder		023337	CPL-061	22		
	Pad • curved • white • for mini cylinder		023360	CPL-072	19		
	Pad • rectangle • white • for pull		023220	CP-078	39		
	Pad • rectangle • w/ white SW • for mini cylinder		101833	KRCWR-5000	62		2-11
	Pad • rectangle • w/ white SW • for micro mini cylinder		110654	L1131-200	23		
	Steel Pad		023211	CP-06F	37	Steel	2-12
	Pad • rectangle • w/steer SW • mini cylinder		101834	KFCR-5000	76		2-11
	Pad • rectangle • w/SW • mini cylinder		101835	KPCR-5000	52		

Spacers (Aluminum)



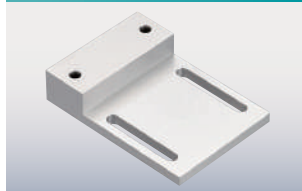
Used to change the mounting height of the mini cylinder.

Extension Shafts / Pillow Blocks



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

Slide Plates



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		101836	KPB-5000	31	Nitrile rubber	2-12
	Pad with SW • White replacement Plate		101837	KPW-5000	31	Silicone	
	Pad with SW • steer replacement Plate		101838	KPF-5000	44	Steel	
	Pad with SW replacement Plate		101839	KP-5000	25		
	Micro limit switch • for KRC / KRCW		030317	D2JW-011-MD (0.1A,30VDC)	8	—	
Claws	Claw • L shape • for micro mini cylinder		022798	CPUM-02	3.6	Steel	2-13
	Claw • round shape φ 25 • for mini cylinder		370072	CP-013	11.4		
	Claw • L shape • for mini cylinder		370073	CP-014	28.4		
Nut plates	Nut plate • for micro mini cylinder		022801	CPUM-05	5.0	Steel	
	Nut plate • for mini cylinder		050033	CP-009	8.2		
	Nut plate • for H cylinder (M3)		050034	CP-010	5.2		
Chuck spacer	Chuck spacer • for micro mini cylinder		041646	ECPUM-03	1.7	PP material	2-14
	Chuck spacer • for mini cylinder		041647	ECP-011	8.6		
Spacer	Spacer • aluminum • 50H		230060	XL0002-050	73	Aluminum	
	Spacer • aluminum • 80H		230061	XL0002-080	93		
	Spacer • aluminum • 100H		230062	XL0002-100	106		
	Spacer • aluminum • 120H		230063	XL0002-120	119		
Mini cylinder extension shaft			370342	CP-033 (30mm)	11	Steel	2-15
			370711	CP-034 (45mm)	16		
Mini cylinder pillow block			370341	CP-007 (10mm)	20	Aluminum	
			370712	CP-008 (20mm)	40		
Mini cylinder slide plate			370793	CP-030 (10H)	53	Aluminum	
			370722	CP-030 (15H)	64		

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Pads

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



Pad • round • black $\phi 25$ • for mini cylinder

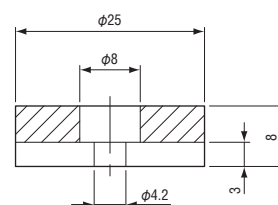
Order code No.	370071
TYPE	CP-015

- Material: nitrile rubber
- Weight: 13g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series

Pad round white $\phi 25$ • for mini cylinder

Order code No.	022664
TYPE	CP-074

- Material: silicone
- Weight: 13g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series



Pad • round • black $\phi 50$ • for mini cylinder

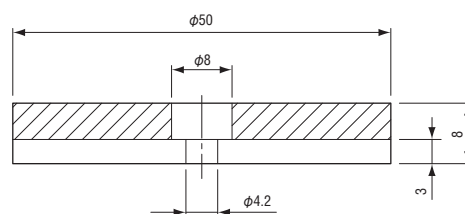
Order code No.	370070
TYPE	CP-016

- Material: nitrile rubber
- Weight: 53g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series

Pad • round • white $\phi 50$ • for mini cylinder

Order code No.	370107
TYPE	CP-071

- Material: silicone
- Weight: 53g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series



Pad • rectangle • black • for micro mini cylinder

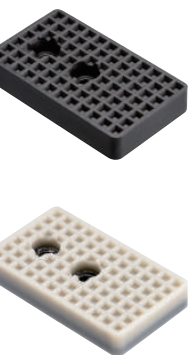
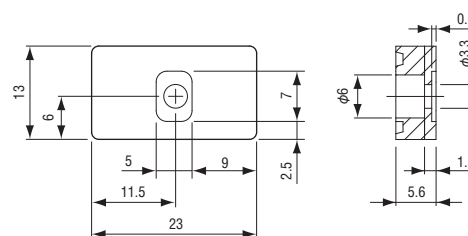
Order code No.	022797
TYPE	CPUM-01

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

Pad • rectangle • white • for micro mini cylinder

Order code No.	023113
TYPE	CPUM-01 (SR)

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



Pad • rectangle • black 2 holes • for mini cylinder

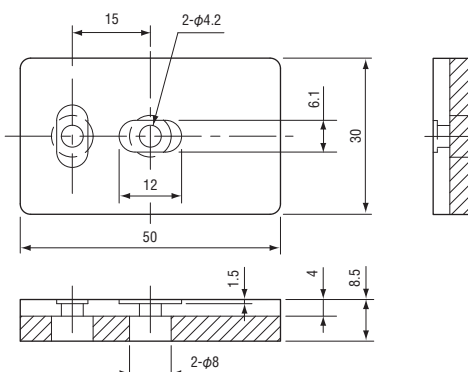
Order code No.	023336
TYPE	CPL-060

- Material: chloroprene rubber
- Weight: 22g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series

Pad • rectangle • white 2 holes • for mini cylinder

Order code No.	023337
TYPE	CPL-061

- Material: silicone
- Weight: 22g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series



► Used when the parts has a curved surface.



Pad • curved • black • for mini cylinder

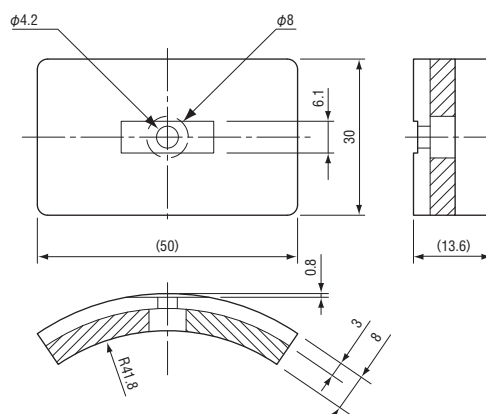
Order code No.	023359
TYPE	CPL-018

- Material: chloroprene rubber
- Weight: 19g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series

Pad • curved • white • for mini cylinder

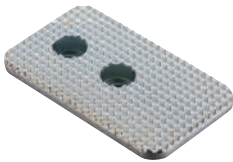
Order code No.	023360
TYPE	CPL-072

- Material: silicone
- Weight: 19g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series



Pads

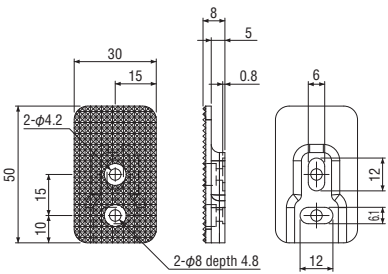
▶ Best suited for sprue slide prevention by using knurling process.



Steel pad

Order code No.	023211
TYPE	CP-06F

- Weight: 37g
- Cylinder: MCD1, MCDR, MCE, MCP1-20 series



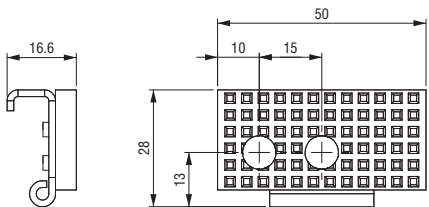
▶ Pad with SW replacement Accessories



Pad with SW • Black replacement Plate

Order code No.	101836
TYPE	KPB-5000

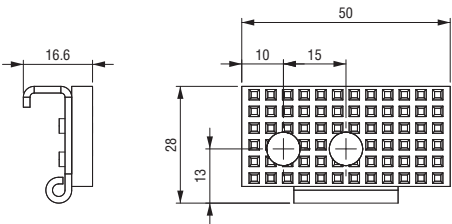
- Weight: 31g
- E-ring attached
- KRCR-5000 (101832) for exchange



Pad with SW • White replacement Plate

Order code No.	101837
TYPE	KPW-5000

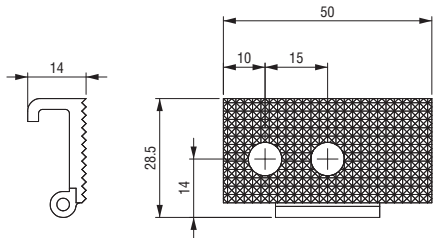
- Weight: 31g
- E-ring attached
- KRCWR-5000 (101833) for exchange



Pad with SW • steer replacement Plate

Order code No.	101838
TYPE	KPF-5000

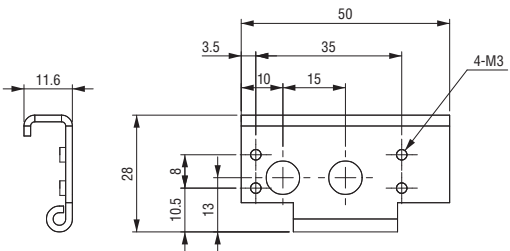
- Weight: 44g
- E-ring attached
- KFCR-5000 (101834) for exchange



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



Order code No.	022798
TYPE	CPUM-02

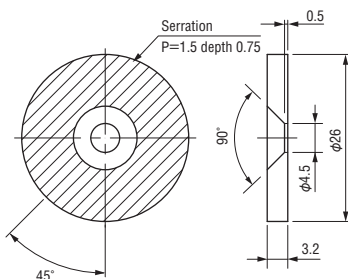
- 

Order code No.	370072
TYPE	CP-013

- 

Order code No.	370073
TYPE	CP-014

-



Technical drawing of a mechanical part. The main view shows a cross-section with a total width of 21, divided into 14.5 and 6.5. The height is 40. A 45° chamfer is indicated. A hole with a diameter of 9 is shown. A detail view of the serration is provided, showing a depth of 0.75 and a pitch of P=1.5. The serration detail also shows a width of 14, a hole diameter of 4.2, and a distance of 6 from the edge. The total length of the part is 32, with a section line at 14.

► Nut Plates



Order code No.	022801
TYPE	CPUM-05

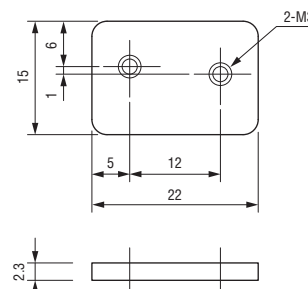
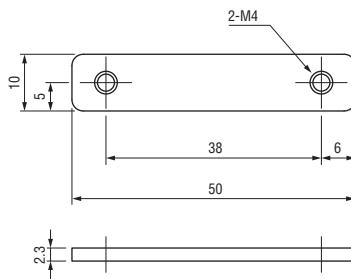
- 

Order code No.	050033
TYPE	CP-009

-
- A rectangular metal plate, likely aluminum, with two threaded holes. The holes are positioned horizontally, one towards the left and one towards the right, with a small gap between them. The plate has a smooth, slightly reflective surface.

Order code No.	050034
TYPE	CP-010

-
- Technical drawing of a mechanical part. The top view shows a rectangular plate with rounded ends. Dimensions include a total width of 10, a distance of 5 from the left edge to the center of the first hole, a distance of 20 between the centers of the two holes, and a distance of 4 from the center of the second hole to the right edge. The total length is 28. A callout indicates a hole with a diameter of 2-M3. The bottom view shows a rectangular plate with a width of 3.2.



Various Products
Information



Chuck Spacers : Plastic / Aluminum

Spacer for height adjustment.

Chuck spacer • for micro mini cylinder

Order code No.	041646
TYPE	ECPUM-03

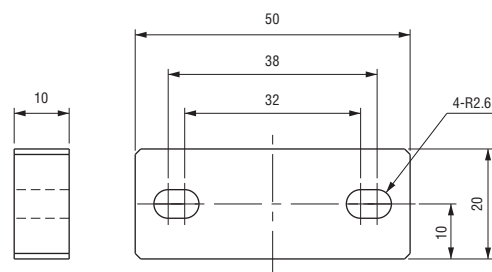
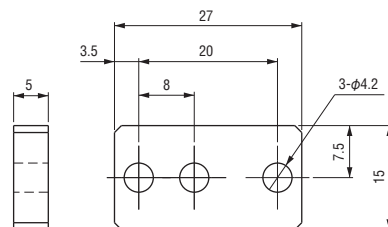
● Weight: 1.7g



Chuck spacer • for mini cylinder

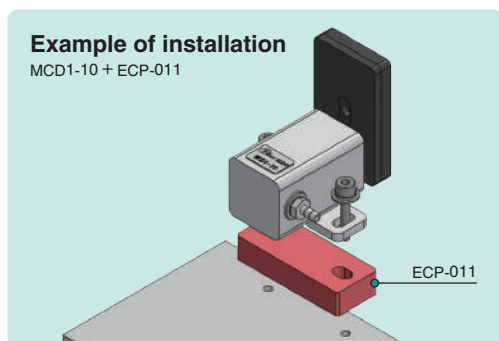
Order code No.	041647
TYPE	ECP-011

● Weight: 8.6g



Example of installation

MCD1-10 + ECP-011



Grip ● Accessories for Mini Cylinder

► Spacer for mini cylinder

Spacer • aluminum • 50H

Order code No.	230060
TYPE	XL0002-050

● Weight: 73g ● Size A: 50mm



Spacer • aluminum • 80H

Order code No.	230061
TYPE	XL0002-080

● Weight: 93g ● Size A: 80mm



Spacer • aluminum • 100H

Order code No.	230062
TYPE	XL0002-100

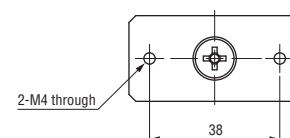
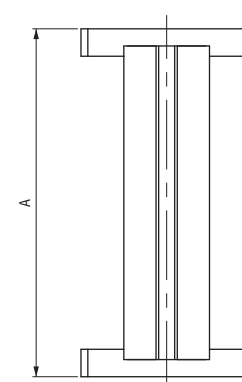
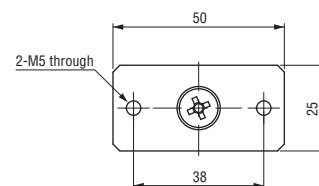
● Weight: 106g ● Size A: 100mm



Spacer • aluminum • 120H

Order code No.	230063
TYPE	XL0002-120

● Weight: 119g ● Size A: 120mm





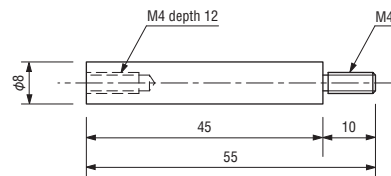
Easy to remote mount the mini cylinder, position adjustment.



- Weight: 11g



- Weight: 16g



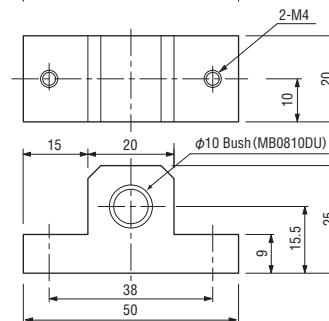
- Cylinder: MCD1 series



- Weight: 20g



- Weight: 40g



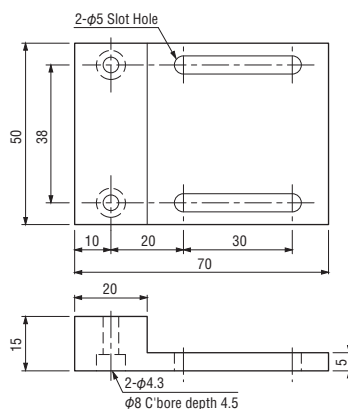
- Cylinder: MCD1 series



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



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



Grip

Accessories for Mini Cylinder

Accessory for Container Cylinder

**Rubber
Material /
Grip Pad**

Cups
Suction

Air Ejector /

Take Out

Vacuum

Air Nipper
(Small-Medium)

Frame / Module

Let's Joint

Base
Aluminum
Material

Air Management / Sensors

PCIO
CommunicationCylinder / Pads /
Manifold

Information



Container Cylinders

■ Specification

Product name		Order code No.	TYPE	Structure	Used air pressure ^{*2} (Mpa)	Withstand pressure (Mpa)	Output ^{*1} (N)	Stroke (mm)	Weight (g)	Page of Details
Mini container cylinder		131014	NCON-M10S	Single action type	0.4~0.5 (4~5kgf/cm ²)	1 (10kgf/cm ²)		10	135	2-17
		131015	NCON-M15S					15	145	
		131016	NCON-M20S					20	155	
		130709	NCON-M10W	Double action type		1 (10kgf/cm ²)	 	10	135	
		130710	NCON-M15W					15	145	
		130711	NCON-M20W					20	155	
		130712	NCON-M25W					25	165	
		130713	NCON-M30W					30	175	
Container cylinder		130707	NCON-20W	Double action type	0.4~0.5 (4~5kgf/cm ²)	1 (10kgf/cm ²)	 	20	340	2-18
		130708	NCON-40W					40	415	
		130829	NCON-80W					80	557	

Product name	Order code No.	TYPE	Structure	Used air pressure ^{*2} (Mpa)	Cylinder diameter (mm)	Output ^{*3} (N)	Stroke (mm)	Weight (g)	Page of Details
Container cylinder reinforced	 130869	NCON-40WK	Double action type	0.39 ~ 0.59	20	314 (32kgf)	40	688	2-18
Container cylinder w/ guided	 060496	GCYL20*20	Double action type	0.4 ~ 0.6	20	157 (16kgf)	20	526	2-19
	 060497	GCYL20*40					40	670	
	 060498	GCYL20*50					50	746	
	 060499	GCYL20*75					75	1,000	
	 060500	GCYL20*100					100	1,192	
	 060501	GCYL20*150					150	1,576	

Auto switch (reed SW)	 030282	D-A93	—	—	—	—	—	6	2-17,19
Auto switch (contactless)	 030425	D-M9N	—	—	—	—	—	8	2-17,19

* 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.

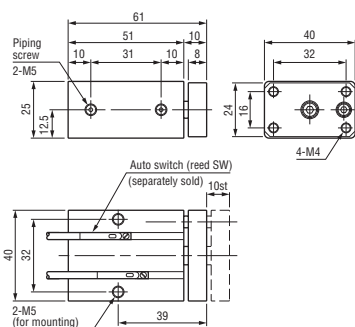
Single Action Type

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



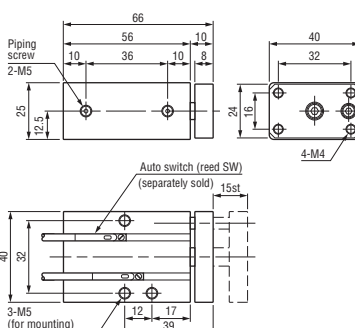
Order code No. **131014**
TYPE **NCON-M10S**

- Stroke: 10mm
- Weight: 135g



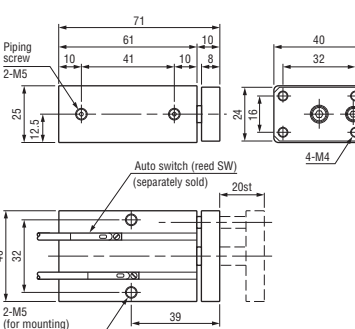
Order code No. **131015**
TYPE **NCON-M15S**

- Stroke: 15mm
- Weight: 145g



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

- Stroke: 20mm
- Weight: 155g



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 (-)
- With indicator lamp
- Terminal process is not made.
- Wiring: See 6-21
- Length: 0.5m



Auto switch (contactless)

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

- 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)
- With indicator lamp
- Terminal process is not made.
- Wiring: See 6-21
- Length: 0.5m



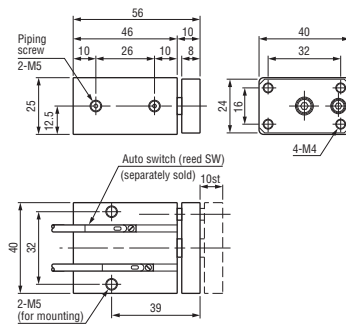
Double Action Type

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



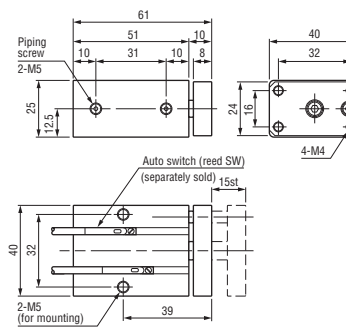
Order code No. **130709**
TYPE **NCON-M10W**

- Stroke: 10mm
- Weight: 135g



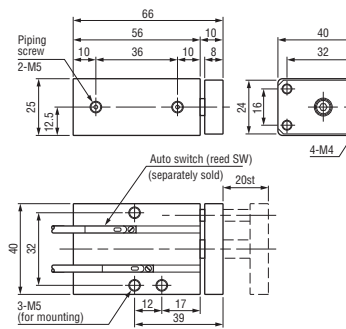
Order code No. **130710**
TYPE **NCON-M15W**

- Stroke: 15mm
- Weight: 145g



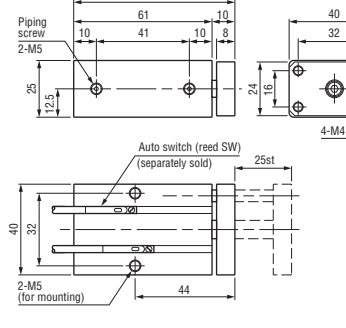
Order code No. **130711**
TYPE **NCON-M20W**

- Stroke: 20mm
- Weight: 155g



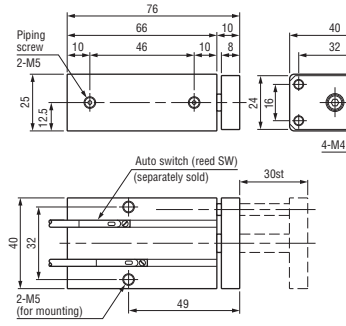
Order code No. **130712**
TYPE **NCON-M25W**

- Stroke: 25mm
- Weight: 165g



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

- Stroke: 30mm
- Weight: 175g



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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.	130707
TYPE	NCON-20W

- Stroke: 20mm
- Weight: 340g



Order code No.	130708
TYPE	NCON-40W

- Stroke: 40mm
- Weight: 415g



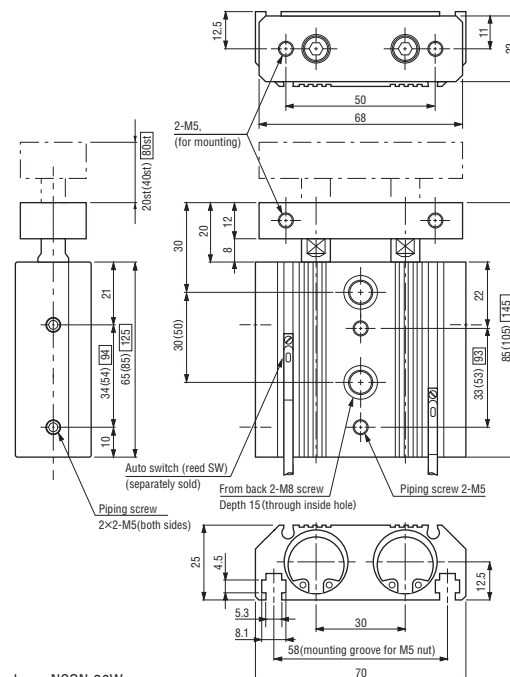
Order code No.	130829
TYPE	NCON-80W

- Stroke: 80mm
- Weight: 557g



Example of mounting

NCON-20W



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

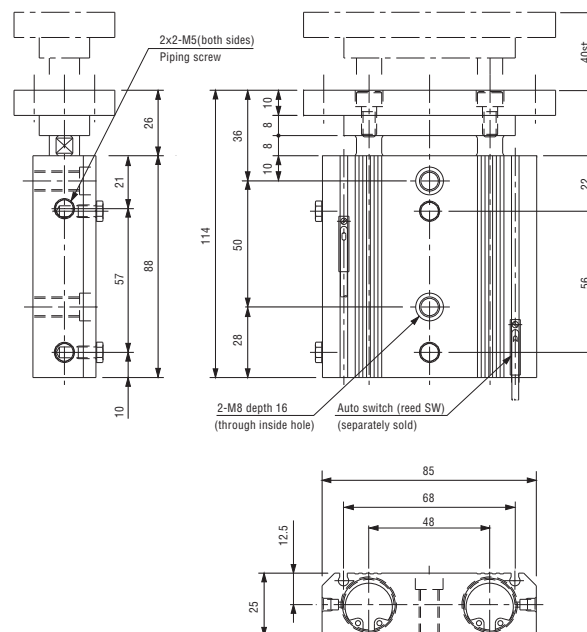
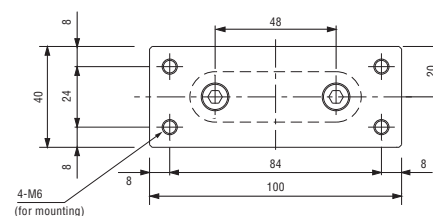
- High durability and long operation life with widemouthed cylinder and reinforcement of piston structure.



Container cylinder • reinforced (double)

Order code No.	130869
TYPE	NCON-40WK

- Stroke: 40mm
- Weight: 688g





Container Cylinder w/ Guided (Double Action)

Improved durability with integral-type aluminum body.

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



Order code No.	060496
TYPE	GCYL20*20

- Stroke: 20mm
- Weight: 526g



Order code No.	060497
TYPE	GCYL20*40

- Stroke: 40mm
- Weight: 670g



Order code No.	060498
TYPE	GCYL20*50

- Stroke: 50mm
- Weight: 746g



Order code No.	060499
TYPE	GCYL20*75

- Stroke: 75mm
- Weight: 1,000g



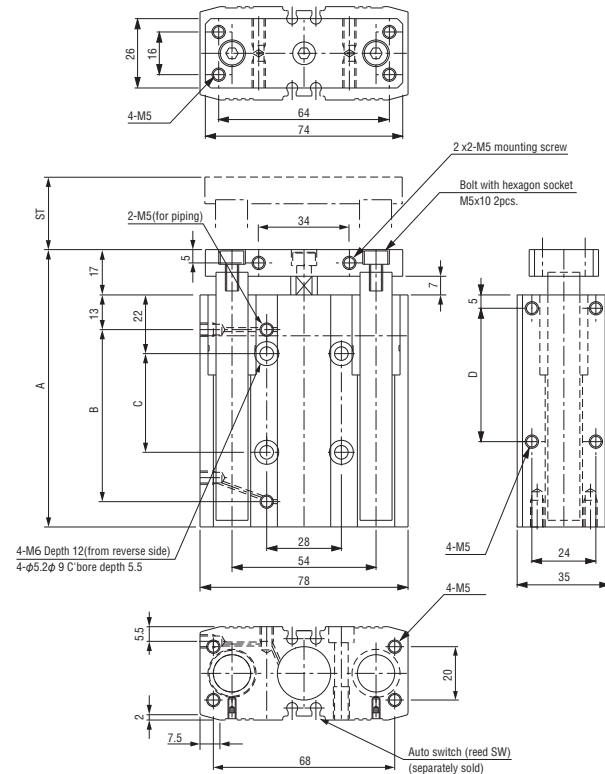
Order code No.	060500
TYPE	GCYL20*100

- Stroke: 100mm
- Weight: 1,192g



Order code No.	060501
TYPE	GCYL20*150

- Stroke: 150mm
- Weight: 1,576g



■ 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.	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
- Wiring: See **6-21**
- Length: 0.5m



Auto switch (contactless)

Order code No.	030425
TYPE	D-M9N

- 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 **6-21**
- Length: 0.5m

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

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Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Accessories for Container Cylinder

Pads



Used for work grip or positioning.

Nut plates

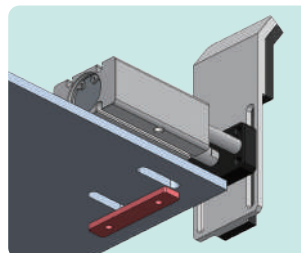


For fixing container cylinders.

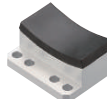
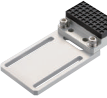
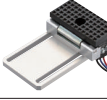
Extension plate



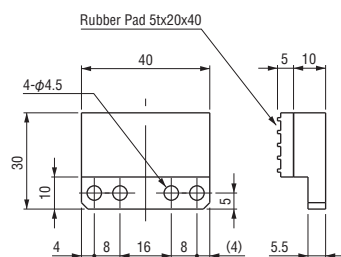
Setting position can be changed according to the work shape.



■ Specification

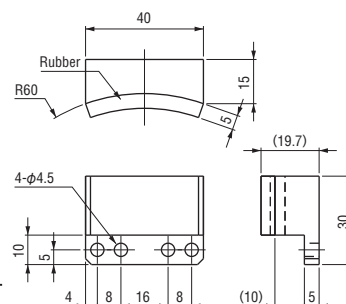
Product name	Order code No.	TYPE	Weight (g)	Material	Page of details
Pad・for mini container cylinder		131256	NCON-CP-01	34	Nitrile rubber
		131257	NCON-CP-02	38	
		131258	NCON-CP-03	38	Steel
		131259	NCON-CP-04	71	Nitrile rubber
		131260	NCON-CP-05	71	
		131281	NCON-CP-06	96	
Extended plate (for wear plate)		230071	XL0006-104	31	Aluminum
Nut plate・for container cylinder		023196	CP-075	10	Steel

2-21



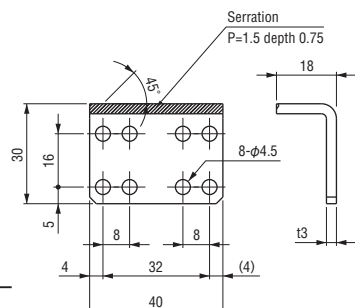
Order code No.	131256
TYPE	NCON-CP-01

-



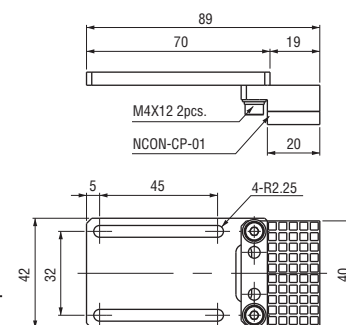
Order code No.	131257
TYPE	NCON-CP-02

-



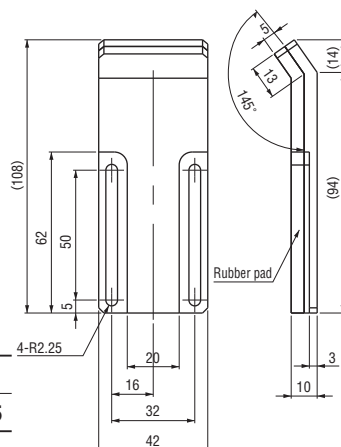
Order code No.	131258
TYPE	NCON-CP-03

-



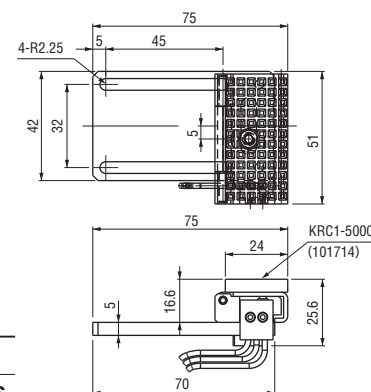
Order code No.	131259
TYPE	NCON-CP-04

- 



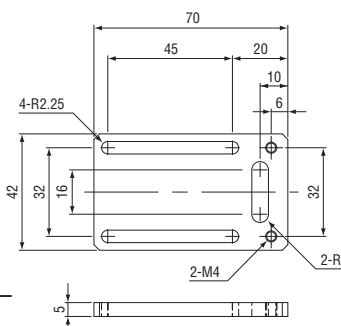
Order code No.	131260
TYPE	NCON-CP-05

- 



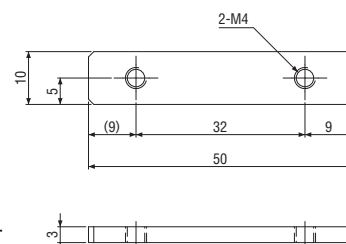
Order code No.	131281
TYPE	NCON-CP-06

- * Wiring: black (COM) blue (NO) red (NC)



Order code No.	230071
TYPE	XL0006-104

- 



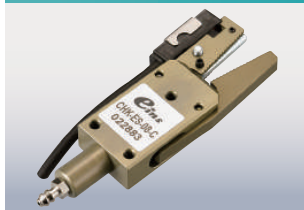
Order code No.	023196
TYPE	CP-075

- 2-21



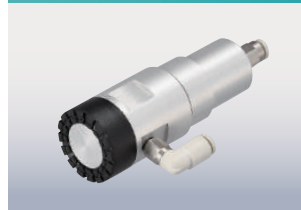
Grippers

Runner Chuck E Series (Claw Superduralumin)



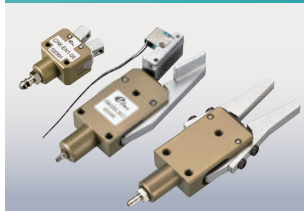
Lightweight, high rigidity, and long operating life with superduralumin. Mounting selection for Tap type and Eins Parts (jungle-gym series) is possible.

Magnet Chucks



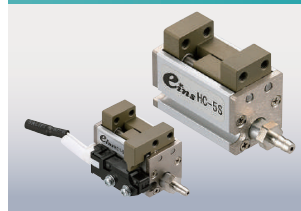
Neodymium magnet is embedded in the piston section. Using with magnet to transfer steel parts.

Runner Chuck E1 Series (Steel Type)



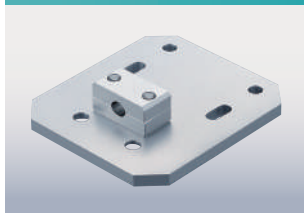
Using superduralumin body and steel claw allows a wide range of uses. Two types of check limits can be selected.

Parallel Chucks (Single / Double)



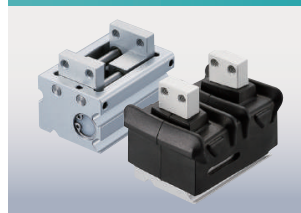
Compact design with low profile and small space.

Runner Module



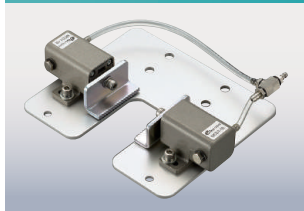
Module kit for runner extraction.

Parallel Hand 15st (Double)



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

Runner Chuck Plate



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

Needle Gripper



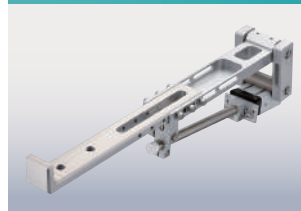
Embedded needle allows holding fiber workpiece with high air permeability.

Tunnel Gate Runner Chuck



Jumping tunnel gate is caught with tapered section.

Hinge Chuck Clamp Unit (Double)



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

Pipe Combination Chuck



Special cylinder of hinge structure which operates 90 degrees. Used with jungle gym series parts.

Runner chuck E series (manual, super duralumin)



W/ sensor
(Straight claw type)

Runner chuck E1 series (Steel claw type)



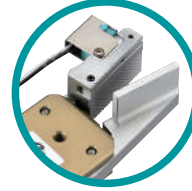
With proximity sensor
(Straight claw type)



With Limit SW
(Straight claw type)



With proximity sensor
(steel L claw type)



With Limit SW
(steel L claw type)

Specification

Product name		Order code No.	TYPE	Weight (g)	Grip (N)	Remarks	Page of Details
E series (Super duralumin - straight claw type)	Runner chuck ES (w/o sensor)	022879	CHK-ES-08	18	5	w/o sensor	2-28
	Runner chuck ES (with sensor)	022883	CHK-ES-08-C	32		Proximity sensor	
	Runner chuck EM (w/o sensor)	022878	CHK-EM-12	46	28	w/o sensor	
	Runner chuck EM (with sensor)	022882	CHK-EM-12-C	56		Proximity sensor	
	Runner chuck EL (w/o sensor)	022877	CHK-EL-12	94	45	w/o sensor	2-29
	Runner chuck EL (with sensor)	022881	CHK-EL-12-C	104		Proximity sensor	
	Runner chuck EX (w/o sensor)	022876	CHK-EX-20	180	80	w/o sensor	
	Runner chuck EX (with sensor)	022880	CHK-EX-20-C	190		Proximity sensor	
E1 series (Steel - straight claw type)	Runner chuck EN (w/o sensor)	022991	CHK-EN1-06	10	2	w/o sensor	2-30
	Runner chuck ES (w/o sensor)	022992	CHK-ES1-08	22	5	w/o sensor	
	Runner chuck ES (with proximity sensor)	022998	CHK-ES1-08-C	38		Proximity sensor	
	Runner chuck ES (with Limit SW)	023004	CHK-ES1-08-C1	33		Limit SW	
	Runner chuck EM (w/o sensor)	022993	CHK-EM1-12	67	28	w/o sensor	2-31
	Runner chuck EM (with proximity sensor)	022999	CHK-EM1-12-C	79		Proximity sensor	
	Runner chuck EM (with Limit SW)	023005	CHK-EM1-12-C1	73		Limit SW	
	Runner chuck EL (w/o sensor)	022994	CHK-EL1-12	143	45	w/o sensor	
	Runner chuck EL (with proximity sensor)	023000	CHK-EL1-12-C	155		Proximity sensor	
	Runner chuck EL (with Limit SW)	023006	CHK-EL1-12-C1	145		Limit SW	
	Runner chuck EX (w/o sensor)	022995	CHK-EX1-20	280	80	w/o sensor	
	Runner chuck EX (with proximity sensor)	023001	CHK-EX1-20-C	283		Proximity sensor	
	Runner chuck EX (with Limit SW)	023007	CHK-EX1-20-C1	272		Limit SW	

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

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PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

Runner Chuck E1 series (Steel claw type)



Runner chuck EM
(Attachment/detachment claw)



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



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



Runner chuck EX
(Attachment/detachment claw)



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



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

■ Specification

Product name			Order code No.	TYPE	Weight (g)	Grip (N)	Remarks	Page of Details
E1 series (steel L claw type)	Runner chuck EL (w/o sensor)		022996	CHK-EL1L-12	170	45	w/o sensor	2-32
	Runner chuck EL (with proximity sensor)		023160	CHK-EL2L-12-C	196		Proximity sensor	
	Runner chuck EL (with Limit SW)		023161	CHK-EL2L-12-C1	186		Limit SW	
	Runner chuck EX (w/o sensor)		022997	CHK-EX1L-20	305	80	w/o sensor	
	Runner chuck EX (with proximity sensor)		023158	CHK-EX2L-20-C	335		Proximity sensor	
	Runner chuck EX (with Limit SW)		023159	CHK-EX2L-20-C1	325		Limit SW	
E1 series (Steel-attachable and detachable type claw)	Runner chuck EM (detachable/attachable claw)		023284	CHK-EMBF-12	70	28	w/o sensor	2-33
	Runner chuck EM (proximity sensor-detachable/attachable claw)		023286	CHK-EMBF-12-C	85		Proximity sensor	
	Runner chuck EM (limit SW-detachable/attachable claw)		023288	CHK-EMBF-12-C1	77		Limit SW	
	Runner chuck EM (attachment/detachment claw)		023285	CHK-EMF-12	12	—	w/o sensor	
	Runner chuck EM (proximity sensor-attachment/detachment claw)		023287	CHK-EMF-12-C	27	—	Proximity sensor	
	Runner chuck EM (limit SW-attachment/detachment claw)		023289	CHK-EMF-12-C1	20	—	Limit SW	
	Runner chuck EX (detachable/attachable claw)		023290	CHK-EXBF-20	272	80	w/o sensor	
	Runner chuck EX (proximity sensor-detachable/attachable claw)		023292	CHK-EXBF-20-C	287		Proximity sensor	
	Runner chuck EX (limit SW-detachable/attachable claw)		023294	CHK-EXBF-20-C1	278		Limit SW	
E1 series (Steel-attachable and detachable type claw)	Runner chuck EX (attachment/detachment claw)		023291	CHK-EXF-20	40	—	w/o sensor	2-34
	Runner chuck EX (proximity sensor-attachment/detachment claw)		023293	CHK-EXF-20-C	54	—	Proximity sensor	
	Runner chuck EX (limit SW-attachment/detachment claw)		023295	CHK-EXF-20-C1	40	—	Limit SW	

Product name			Order code No.	TYPE	Weight (g)	Grip (N)	Remarks	Page o Details
Sensor switch for exchange	Proximity sensor Ass'y (E series)		023086	CHK-ESE	10	—	For ES	2-29
			023087	CHK-EMLXE			For EM, EL, EX	
	Proximity sensor Ass'y (E1 series)		023014	CHK-E1SME	15		For ES1 and EM1	2-31
			023015	CHK-E1LXE			For EL1,EX1, EL2L,EX2L	
	Limit switch Ass'y (E1 series)		023016	CHK-E1SW	7		For ES1,EM1, EL1,EX1, EL2L,EX2L	

Product name			Order code No.	TYPE	Weight (g)	Torque (Nm)	Remarks	Page of Details
Runner module (w/o chuck)		171227	RM-08	—	111	—	For CHK-ES,ES1	2-35
		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	—	MCD1-10/ CP-014	
Tunnel gate runner chuck		090140	J25411-100	—	76	—	UMCD-10/ CPUM-02	2-36
		090141	J25411-000		185		MCD1-10/ CP-014	
Pipe combination chuck E • $\phi 12 \cdot 90$ deg		090204	J25410-40A	—	29	0.03	BF-5 (joint) attached	2-37
Pipe combination chuck D • $\phi 20 \cdot 90$ deg		090203	J25410-30A		78	0.06		
90 degree flat A		131218	N01871-101	—	4.4	—	For J25410-400	2-37,38
90 degree flat B		131479	N01871-102		10.4		J25410-300 MCY-H	
Hinge cylinder		123711	MCE-HA	—	125	0.08	Double action type BF-5 (joint) attached	2-38
Magnet chucks		123218	MGC-20	—	95	—	Double-act-type Cylinder	2-39
Magnet chuck end rubber		123571	MGC-C	—	3	—	End rubber for MGC-20	

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
Accessories for Mini Cylinder
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Accessory for Container Cylinder
Grippers
Rubber Material / Grip Pad

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Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information

Product name			Order code No.	TYPE	Weight (g)	Remarks	Page of Details
Magnet chuck			185352	SSGM 40G1/4-IG	240	W/o sensor	2-39
			185358	SSGM-S-40-G1/4-IG-NPN	260	W/ NPN output sensor	
			185355	SSGM-S-40-G1/4-IG-PNP		W/ PNP output sensor	
			185353	SSGM 50G1/4-IG	440	W/o sensor	
			185359	SSGM-S-50-G1/4-IG-NPN	460	W/ NPN output sensor	
			185356	SSGM-S-50-G1/4-IG-PNP		W/ PNP output sensor	
			185354	SSGM 70G1/4-IG	715	W/o sensor	
			185360	SSGM-S-70-G1/4-IG-NPN	735	W/ NPN output sensor	
			185357	SSGM-S-70-G1/4-IG-PNP		W/ PNP output sensor	
Parallel chuck 5st (single)			072172	HC-5S	32	5mm (stroke)	2-40,41
Parallel chuck 10st (single)			072171	HC-10S	70	10mm (stroke)	
Parallel chuck 10st (double)			072170	HC-10			
With two-wire-type limit switch	Parallel chuck 5st (single)		072702	HC1-5S-C1	50	5mm (stroke)	
	Parallel chuck 10st (single)		072703	HC1-10S-C1	95	10mm (stroke)	
	Parallel chuck 10st (double)		072705	HC1-10-C1			
	Parallel chuck 20st (single)		072704	HC1-20S-C1	305	20mm (stroke)	
	Parallel chuck 20st (double)		072706	HC1-20-C1	300		
Claws	Claw • for parallel chuck		023215	CP-HC10N	9	For HC1-10, 10S	2-41
			023216	CP-HC20N	26	For HC1-20, 20S	
Spacer	Spacer • for parallel chuck		023217	CP-HC10S	1	For HC1-10, 10S	
			023218	CP-HC20S	2	For HC1-20, 20S	

Product name		Order code No.	TYPE	Weight (g)	Remarks	Page of Details	
Auto switch (reed SW)		 030282	D-A93	6	Reed Sw	2-38, 40, 42	
Auto switch (contactless)		 030425	D-M9N	8	Contactless	2-38, 40, 42, 43	
Limit switch Ass'y		 072708	HC1-SW1	10	For HC1-5S/10/10S Mounting bolt nut attached	2-40	
		072709	HC1-SW2		For HC1-20/20S Mounting bolt nut attached		
Parallel chuck 40st (double) * 2		 282205	2HC1-80	650	40mm × 2 (stroke)	2-42	
Parallel chuck (Single action type)	Standard type		123401	55	4mm (stroke)	2-43	
	Narrow type		122451				MHZ2-10SN
Parallel hand 15st (double)			071996	HLA-12AS	152	15mm (stroke)	2-44
Parallel hand 20st (double)			070986	HLA-15AS	276	20mm (stroke)	
Parallel hand 25st (double)			071997	HLA-20AS	504	25mm (stroke)	
Parallel hand 15st w/ rubber cover			071999	HLAG-12AS	157	15mm (stroke)	
Parallel hand 20st w/ rubber cover			072000	HLAG-15AS	281	20mm (stroke)	
Auto switch (contactless)		 010633	E16-M1	18	Contactless	2-44	
Needle gripper			186255	SNG-M-4-0.8	80	Diameter: 0.8mm	2-45
			186256	SNG-AP-10-0.8-V-10	225		
			186257	SNG-AP-10-1.2-V-10			
Needle piston set for exchange (4 pcs)		 041925	ERS-SET-SNG-M-0.8	12	For SNG-M-4-0.8		
Needle holder set for exchange (2 pcs)			041926	ERS-SET-SNG-AP/AE-0.8-10	6	For SNG-AP-10-0.8-V-10	
			041927	ERS-SET-SNG-AP/AE-1.2-10		For SNG-AP-10-1.2-V-10	
Hinge chuck clamp unit (Double action type)		 110688	L11540-000B	913	0-11.5 (degree)	2-46	
Hinge chuck suction stem		 110567	L11540-109	7	—		

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

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

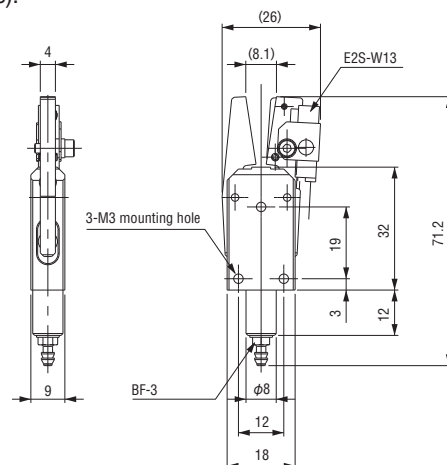
Order code No.	022879
TYPE	CHK-ES-08

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

Runner chuck ES w/ 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



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



CHK-EM-12-C

Runner chuck EM w/o sensor

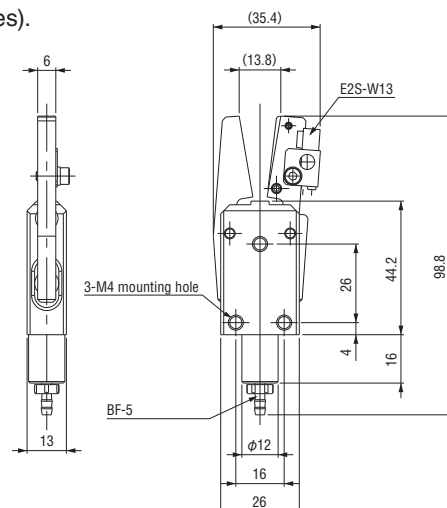
Order code No.	022878
TYPE	CHK-EM-12

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

Runner chuck EM w/ 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



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



CHK-EL-12-C

Runner chuck EL w/o sensor

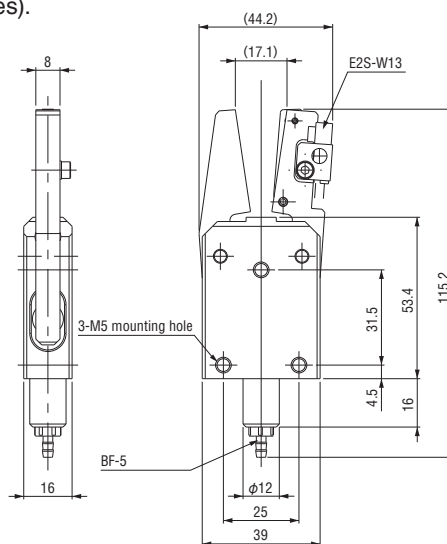
Order code No.	022877
TYPE	CHK-EL-12

- Weight: 94g ● Grip: 45N
- Joint pipe fitting BF-5 included

Runner chuck EL w/ 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



► Attach with tapped hole or Eins connector parts (Jungle Gym ϕ 20 series).



CHK-EX-20-C

Runner chuck EX w/o sensor

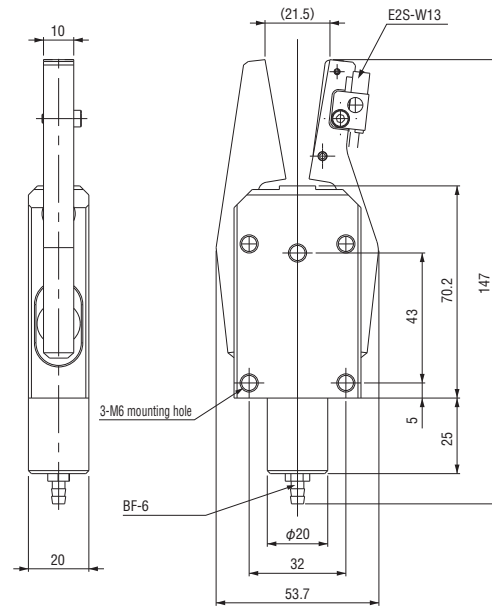
Order code No.	022876
TYPE	CHK-EX-20

- Weight: 180g
- Grip: 80N
- Joint pipe fitting BF-6 included

Runner Chuck EX w/ sensor

Order code No.	022880
TYPE	CHK-EX-20-C

- 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



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information



Proximity sensor Ass'y

Order code No.	023086
TYPE	CHK-ESE

- Weight: 10g
- 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



Proximity sensor Ass'y

Order code No.	023087
TYPE	CHK-EMLXE

- Weight: 10g
- 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

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



Runner Chuck E1 Series (Steel type)

Higher wear resistance steel claws.

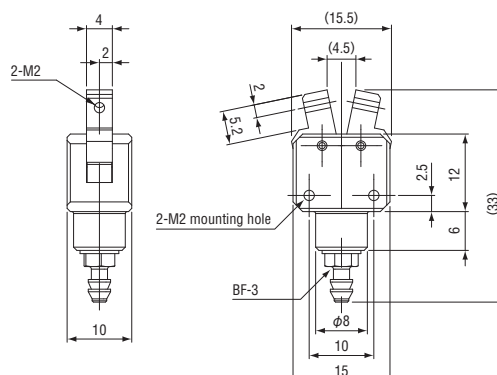
▶ Attach with tapped hole or Eins connector parts (Jungle Gym ϕ 8 series).



Runner chuck EN w/o sensor

Order code No.	022991
TYPE	CHK-EN1-06

- Weight: 10g ● Grip: 2N
- Joint pipe fitting BF-3 included
- Sensor cannot be retrofitted.



▶ Attach with tapped hole or Eins connector parts (Jungle Gym ϕ 8 series).

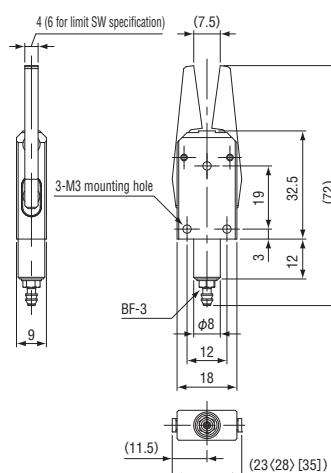


CHK-ES1-08

Runner chuck ES w/o sensor

Order code No.	022992
TYPE	CHK-ES1-08

- Weight: 22g ● Grip: 5N
- Joint pipe fitting BF-3 included
- Sensor cannot be retrofitted.



With
proximity
sensor

With
limit SW

Runner chuck ES w/ proximity sensor

Order code No.	022998
TYPE	CHK-ES1-08-C

- 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 w/ limit SW

Order code No.	023004
TYPE	CHK-ES1-08-C1

- 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 ϕ 12 series).

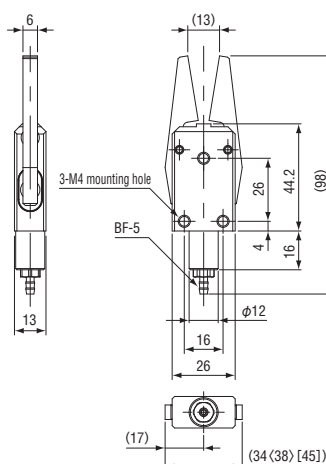


CHK-EM1-12

Runner chuck EM w/o sensor

Order code No.	022993
TYPE	CHK-EM1-12

- Weight: 67g ● Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.



With
proximity
sensor

With
limit SW

Runner chuck EM w/ proximity sensor

Order code No.	022999
TYPE	CHK-EM1-12-C

- 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 w/ limit SW

Order code No.	023005
TYPE	CHK-EM1-12-C1

- 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 ϕ 12 series).



CHK-EL1-12

Runner chuck EL w/ proximity sensor

Order code No.	023000
TYPE	CHK-EL1-12-C

- 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 w/o sensor

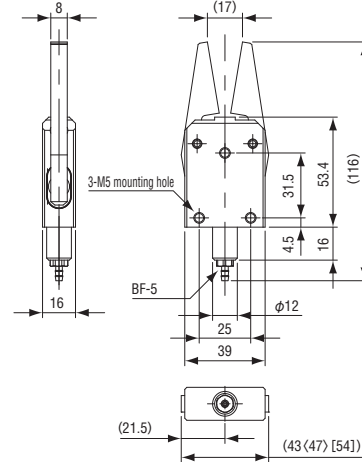
Order code No.	022994
TYPE	CHK-EL1-12

- Weight: 143g
- Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

Runner chuck EL w/ limit SW

Order code No.	023006
TYPE	CHK-EL1-12-C1

- 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



With proximity sensor

With limit SW

* 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 ϕ 20 series).



CHK-EX1-20

Runner chuck EX w/ proximity sensor

Order code No.	023001
TYPE	CHK-EX1-20-C

- 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 w/o sensor

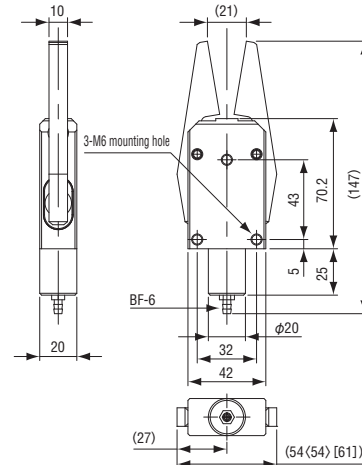
Order code No.	022995
TYPE	CHK-EX1-20

- Weight: 280g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor cannot be retrofitted.

Runner chuck EX w/ limit SW

Order code No.	023007
TYPE	CHK-EX1-20-C1

- 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



With proximity sensor

With limit SW

* 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.	023014
TYPE	CHK-E1SME

- Weight: 15g
- For ES1/EM1 (Installation to E series is impossible).
- Set Includes: proximity sensor, mounting bracket, spring, mounting bolts
- Terminal process is not made.
- Harness length: 1,000mm



Proximity sensor Ass'y

Order code No.	023015
TYPE	CHK-E1LXE

- Weight: 15g
- For EL1/EX1/EL2L/EX2L (Installation to E 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.	023016
TYPE	CHK-E1SW

- Weight: 7g
- For ES1/EM1/EL1/EX1/EL2L/EX2L (Installation to E series is impossible).
- Set Includes: limit switch, 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)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information



Runner Chuck E1 Series (Steel L Claw Type)

Wear resistance improved by using steer claw.

▶ Attach with tapped hole or Eins connector parts (Jungle Gym ϕ 12 series).



CHK-EL1L-12

Runner chuck EL w/ proximity sensor

Order code No.	023160
TYPE	CHK-EL2L-12-C

- 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 w/o sensor

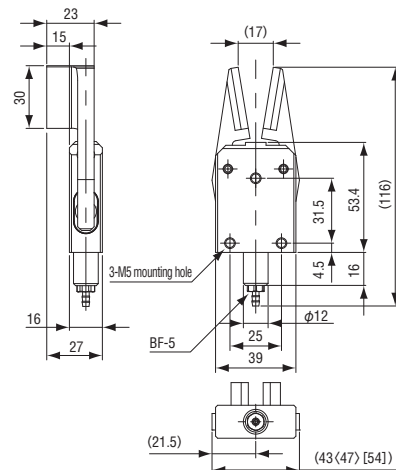
Order code No.	022996
TYPE	CHK-EL1L-12

- Weight: 170g
- Grip: 45N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

Runner chuck EL w/ limit SW

Order code No.	023161
TYPE	CHK-EL2L-12-C1

- 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 ϕ 20 series).



CHK-EX1L-20

Runner chuck EX w/ proximity sensor

Order code No.	023158
TYPE	CHK-EX2L-20-C

- 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 w/o sensor

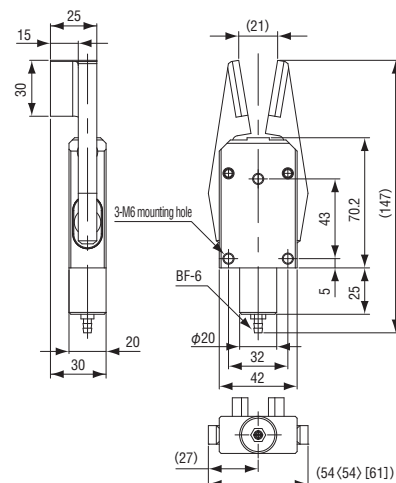
Order code No.	022997
TYPE	CHK-EX1L-20

- Weight: 305g
- Grip: 80N
- Joint pipe fitting BF-6 included
- Sensor cannot be retrofitted.

Runner chuck EX w/ limit SW

Order code No.	023159
TYPE	CHK-EX2L-20-C1

- 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

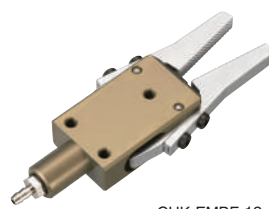
* Base drawing: CHK-EX1L-20
 * Dimension < >: CHK-EX2L-20-C The dimension includes the size of the proximity switch.
 * Dimension []: CHK-EX2L-20-C1 The dimension includes the size of the proximity switch.



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 ϕ 12 series).



CHK-EMBF-12

Runner chuck EM (detachable/ attachable claw)

Order code No.	023284
TYPE	CHK-EMBF-12

- Weight: 70g
- Grip: 28N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

Runner chuck EM (proximity sensor·detachable/ attachable claw)

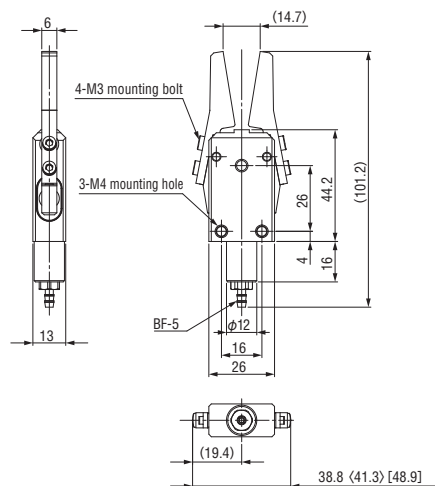
Order code No.	023286
TYPE	CHK-EMBF-12-C

- 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.	023288
TYPE	CHK-EMBF-12-C1

- 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

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

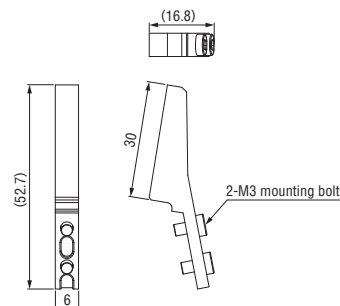
Various Products Information



Runner chuck EM (attachment/ detachment claw)

Order code No.	023285
TYPE	CHK-EMF-12

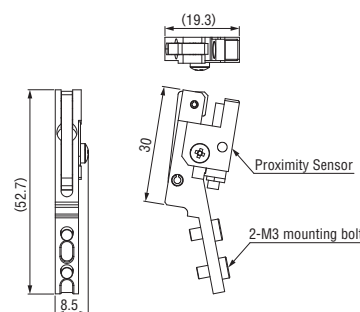
- Weight: 12g
- Sensor cannot be retrofitted.



Runner chuck EM (proximity sensor·attachment/ detachment claw)

Order code No.	023287
TYPE	CHK-EMF-12-C

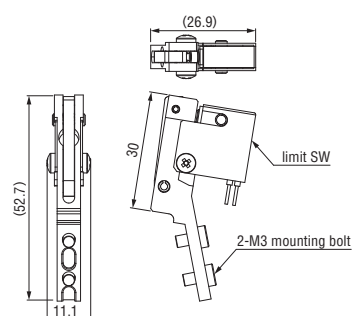
- Weight: 27g
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm
- Sensor Ass'y → See (2-31) (Sensor: CHK-E1SME)



Runner chuck EM (limit SW·attachment/ detachment claw)

Order code No.	023289
TYPE	CHK-EMF-12-C1

- 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 (2-31) (Sensor: CHK-E1SW)



Runner Chuck E1 Series (Detachable / Attachable Claw)

▶ Attach with tapped hole or Eins connector parts (Jungle Gym ϕ 20 series).



CHK-EXBF-20

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-5 included
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm

Runner chuck EX
(detachable/
attachable claw)

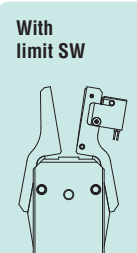
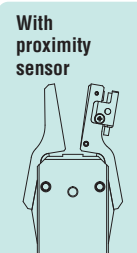
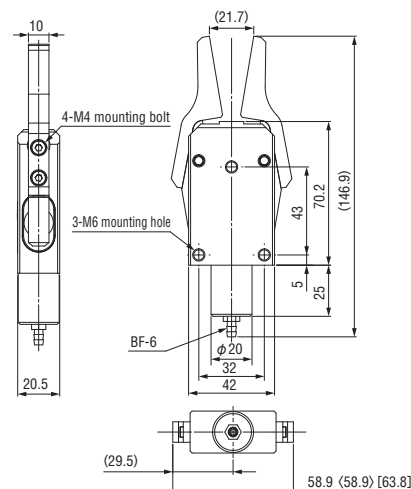
Order code No.	023290
TYPE	CHK-EXBF-20

- Weight: 272g
- Grip: 80N
- Joint pipe fitting BF-5 included
- Sensor cannot be retrofitted.

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-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-20
* Dimension < >: CHK-EMBF-20-C The dimension includes the size of the proximity switch.
* Dimension []: CHK-EMBF-20-C1 The dimension includes the size of the proximity switch.

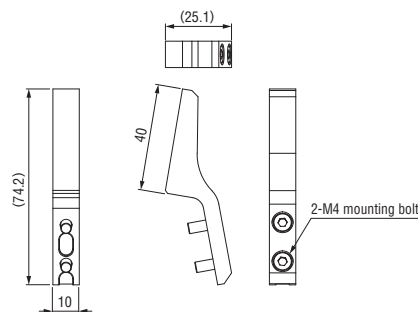
▶ Claw Ass'y with attachable and detachable claw.



Runner chuck EX
(attachment/
detachment claw)

Order code No.	023291
TYPE	CHK-EXF-20

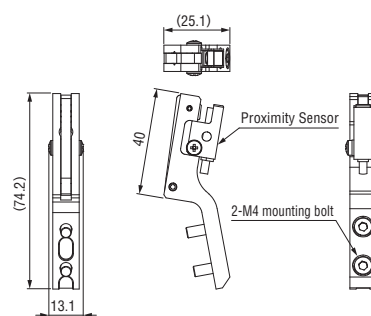
- Weight: 40g
- Sensor cannot be retrofitted.



Runner chuck EX
(proximity sensor·attachment/
detachment claw)

Order code No.	023293
TYPE	CHK-EXF-20-C

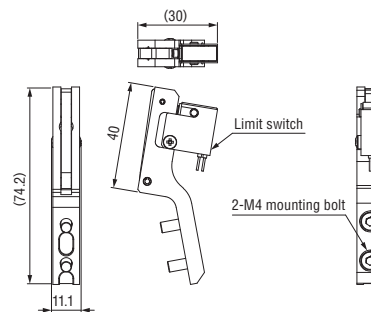
- Weight: 54g
- Sensor: direct current, three-wire system.
- Terminal process is not made.
- Harness length: 1,000mm
- Sensor Ass'y ➔ See (2-31)
- (sensor : CHK-E1LXE)



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 (2-31)
- (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 mounting bracket: Slide bracket Wφ8 - Weight: 111g	
Applicable chuck	CHK-ES/ES1



Runner module w/o chuck

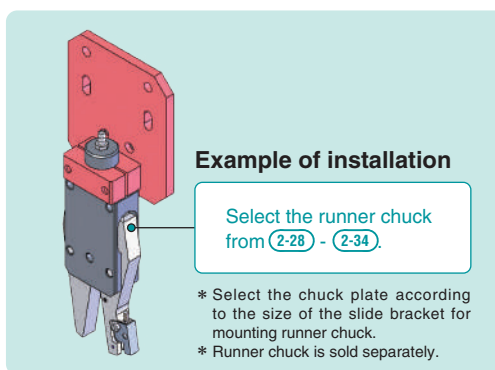
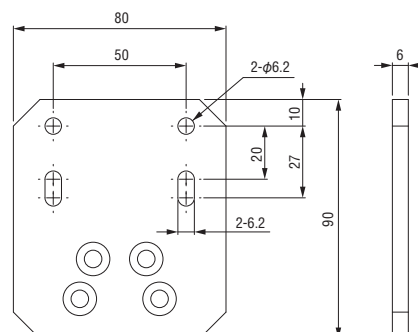
Order code No.	171228
TYPE	RM-12
- Runner chuck mounting bracket: Slide bracket Wφ12 - Weight: 116g	
Applicable chuck	CHK-EM/EM1/EL/EL1/EL2L/EMBF



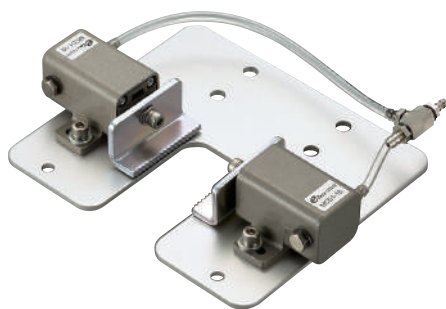
Runner module w/o chuck

Order code No.	171229
TYPE	RM-20
- Runner chuck mounting bracket: Slide bracket Wφ20 - Weight: 131g	
Applicable chuck	CHK-EX/EX1/EX2L/EXBF

Three-point common plate

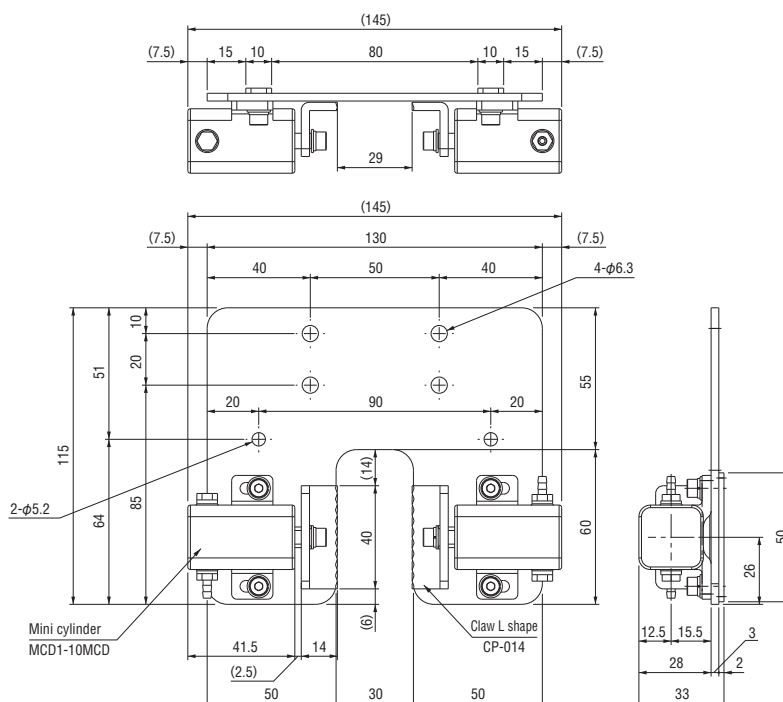


► Runner chuck which grips runners with mini cylinders.



Runner chuck plate

Order code No.	022892
TYPE	CHK-MCD01
Weight: 396g	



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

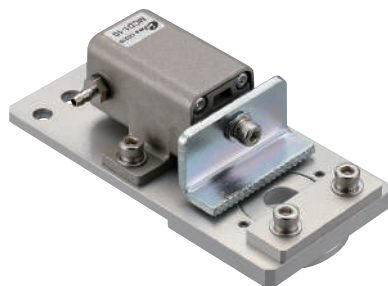
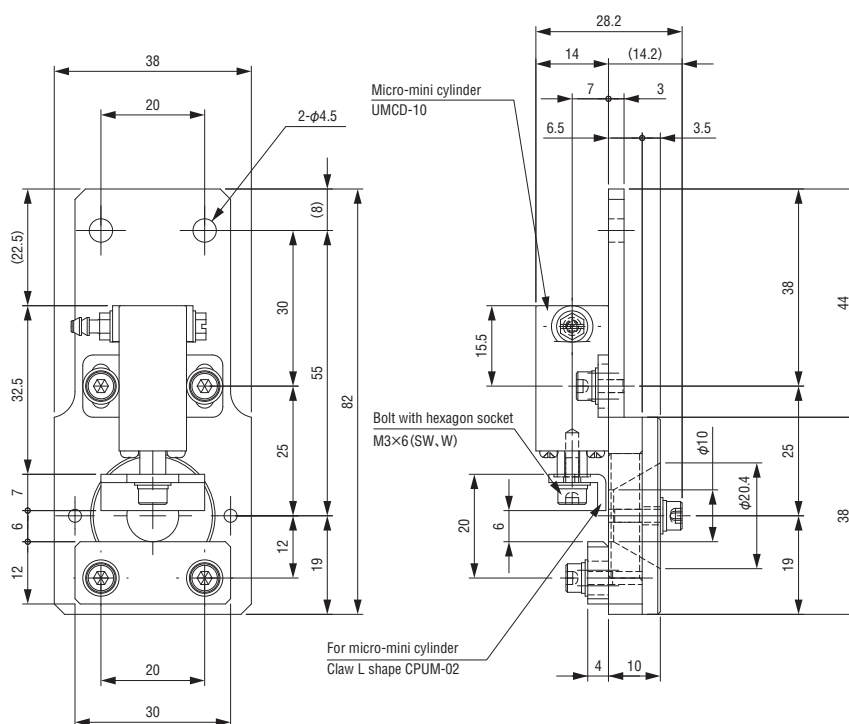
Information

Various Products Information

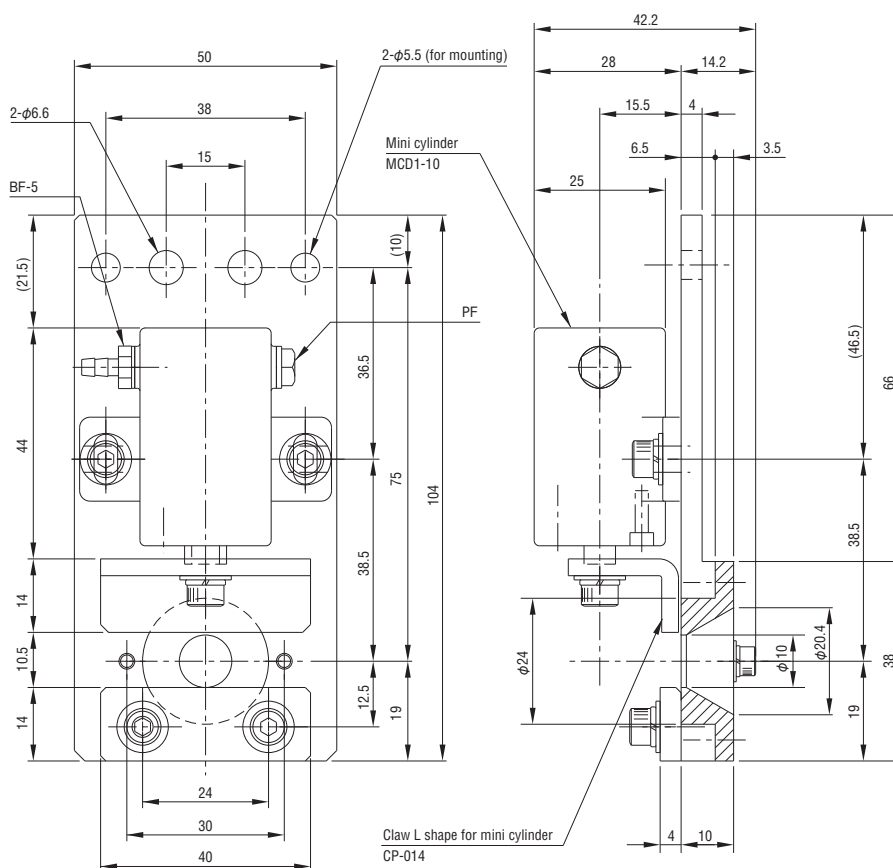


- Weight: 76g

Grip • Grippers



- Weight: 185g





Pipe Combination Chuck

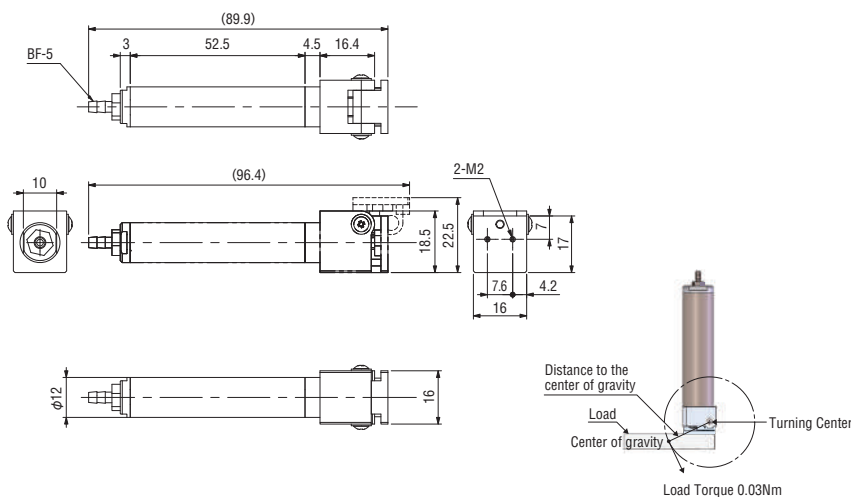
Special cylinder of hinge structure which operates 90 degrees. Connection to jungle gym is possible.

► High-strength specification of link section

Pipe combination chuck E • $\phi 12 \cdot 90 \text{ deg}$

Order code No.	090204
TYPE	J25410-40A

- Weight: 29g
- With joint BF-5 for piping
- Torque: 0.03Nm

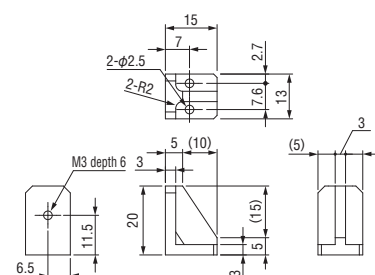


► Option

90 degree flat A

Order code No.	131218
TYPE	N01871-101

- Weight: 4.4g



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

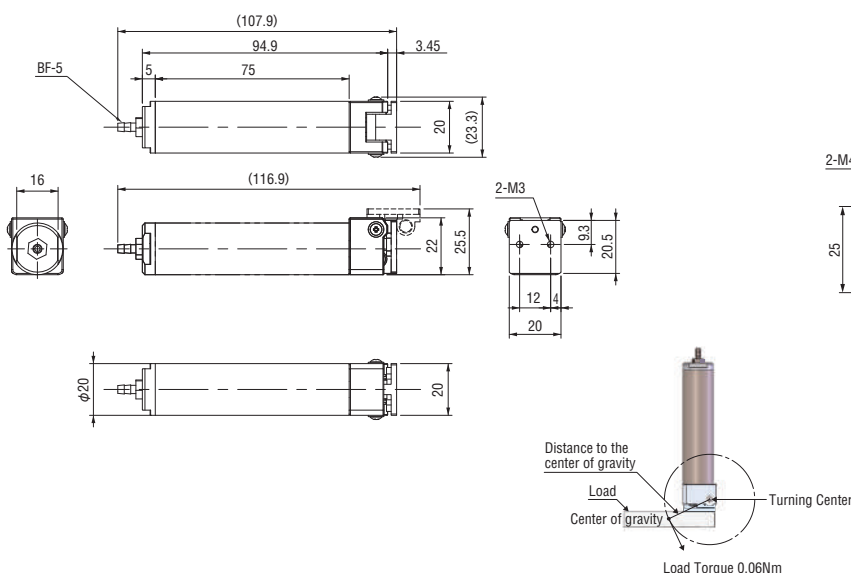
Information

Various Products Information

Pipe combination chuck D • $\phi 20 \cdot 90 \text{ deg}$

Order code No.	090203
TYPE	J25410-30A

- Weight: 78g
- With joint BF-5 for piping
- Torque: 0.06Nm

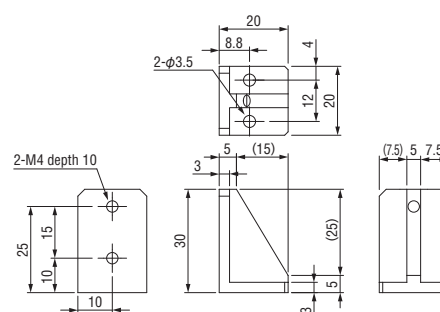


► Option

90 degree flat B

Order code No.	131479
TYPE	N01871-102

- Weight: 10.4g





Hinge Cylinder

Special cylinder of hinge structure which operates 90 degrees.

Hinge cylinder



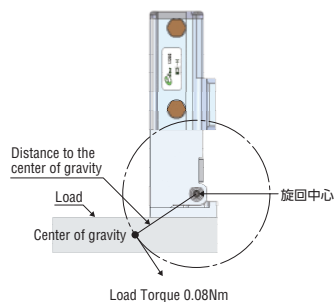
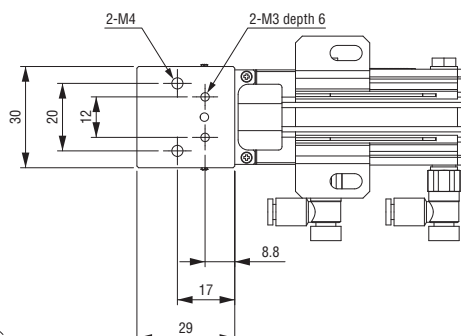
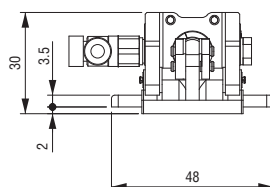
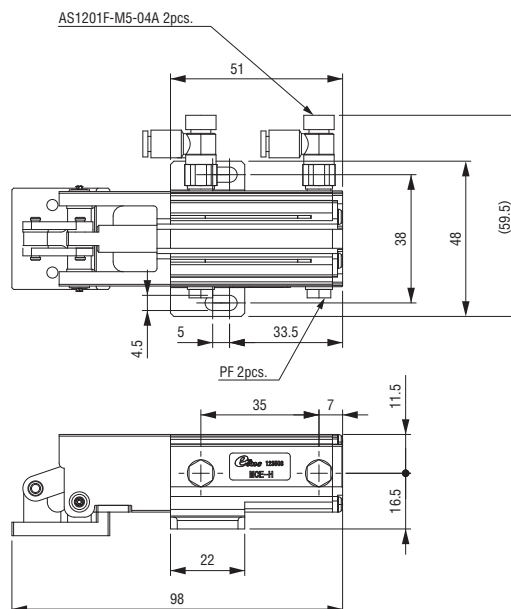
You can see moving images of products by using QR code reader of your smartphone.



Double action type

Order code No.	123711
TYPE	MCE-HA

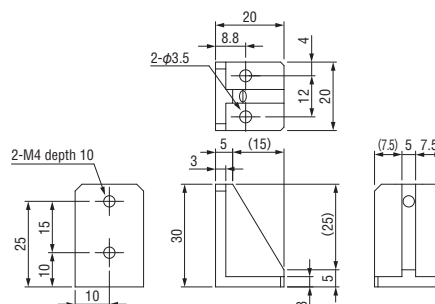
- Weight: 125g
- With Flow controller (AS1201F-M5-04A)
- Torque: 0.08Nm



Option 90 degree flat B

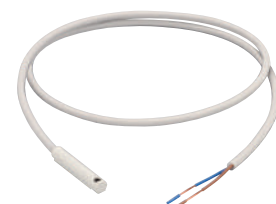
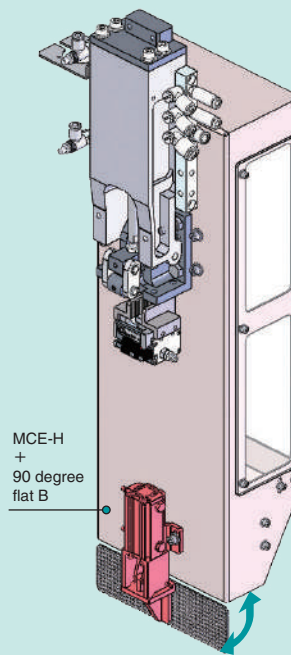
Order code No.	131479
TYPE	N01871-102

- Weight: 10.4g



Example of use

[Used to open/close the bottom plate of BOX chuck.]



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 (6-21)
- Length: 0.5m
- Applicable load: relay, PLC



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 (6-21)
- Length: 0.5m
- Applicable load: relay, PLC



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

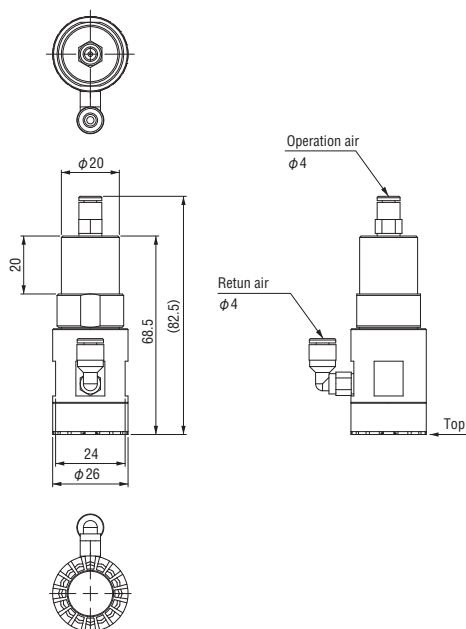
● Double-act-type cylinder ● Weight: 95g



Magnet chuck end rubber

Order code No.	123571
TYPE	MGC-C

● Weight: 3g

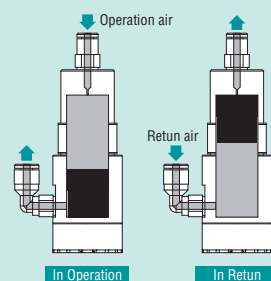


Magnet chucks



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

Operation image



Specification

Standard	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.

- ▶ 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
	Order code No.	185354	185360
	TYPE	SSGM 70G 1/4-IG	SSGM-S-70-G1/4-IG-NPN
	Weight	715g	735g

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

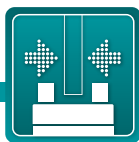
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Parallel Chucks (Single Action / Double Action)

Compact design with low profile and small space.



Parallel chuck • single • 5ST

Order code No.	072172
TYPE	HC-5S

- Stroke: 5mm ● Weight: 32g
- Joint pipe fitting BF-5 included-M3 for piping
- Auto switch for action/return end can be mounted (middle check is impossible).

Parallel chuck • single • 10ST

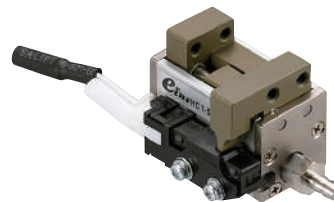
Order code No.	072171
TYPE	HC-10S

- Stroke: 10mm ● Weight: 70g
- Joint pipe fitting BF-5 included
- Auto switch for action/return end can be mounted (middle check is impossible).

Parallel chuck • double • 10ST

Order code No.	072170
TYPE	HC-10

- Stroke: 10mm ● Weight: 70g
- Joint pipe fitting BF-5×2 included
- Auto switch for action/return end can be mounted (middle check is impossible).



* Rated current: 100mA 30VDC

Parallel chuck • single • 5ST

Order code No.	072702
TYPE	HC1-5S-C1

- Stroke: 5mm ● Weight: 50g
- Joint pipe fitting BF-5 included-M3 for piping
- Harness length: 500mm

Parallel chuck • single • 10ST

Order code No.	072703
TYPE	HC1-10S-C1

- Stroke: 10mm ● Weight: 95g
- Joint pipe fitting BF-5 included
- Harness length: 500mm

Parallel chuck • double • 10ST

Order code No.	072705
TYPE	HC1-10-C1

- Stroke: 10mm ● Weight: 95g
- Joint pipe fitting BF-5×2 included
- Harness length: 500mm

Parallel chuck • single • 20ST

Order code No.	072704
TYPE	HC1-20S-C1

- Stroke: 20mm ● Weight: 305g
- Joint pipe fitting BF-5 included
- Harness length: 500mm

Parallel chuck • double • 20ST

Order code No.	072706
TYPE	HC1-20-C1

- Stroke: 20mm ● Weight: 300g
- Joint pipe fitting BF-5×2 included
- Harness length: 500mm



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
- Wiring: 0.5M OUT (+) brown OUT (-) blue
- Indicator light
- Terminal process is not made.
- Wiring → See (6-21) ● Length: 0.5m



Auto switch (contactless)

Order code No.	030425
TYPE	D-M9N

- Weight: 8g ● 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 (6-21) ● Length: 0.5m



Limit switch Ass'y

Order code No.	072708
TYPE	HC1-SW1

- Weight: 10g ● For HC1-5S/10(S)
- Mounting bolt and nut attached
- Rated current: 100mA 30VDC
- Terminal process is not made.
- Harness length: 500mm

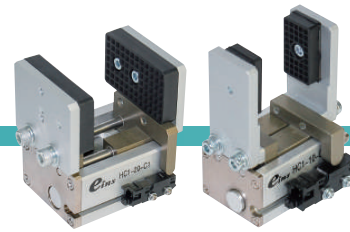
Limit switch Ass'y

Order code No.	072709
TYPE	HC1-SW2

- Weight: 10g ● For HC1-20(S)
- Mounting bolt and nut attached
- Rated current: 100mA 30VDC
- Terminal process is not made.
- Harness length: 500mm

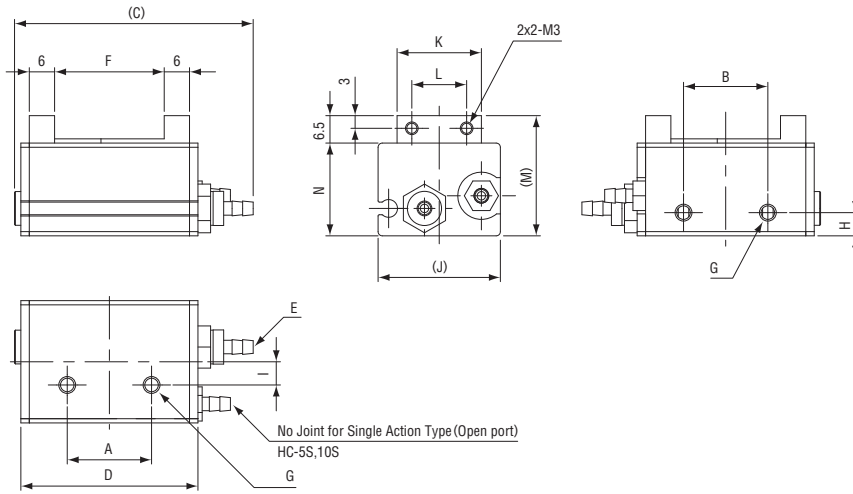
HC/HC1 series specification

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		
HC1-5S-C1	Single action type	0.4 ~ 0.6		5	φ 7	5	—
HC1-10S-C1				10	φ 10	14	—
HC1-10-C1	Double action type			15	15		
HC1-20S-C1	Single action type			20	φ 15	17	—
HC1-20-C1	Double action type					28	28



Example of combination

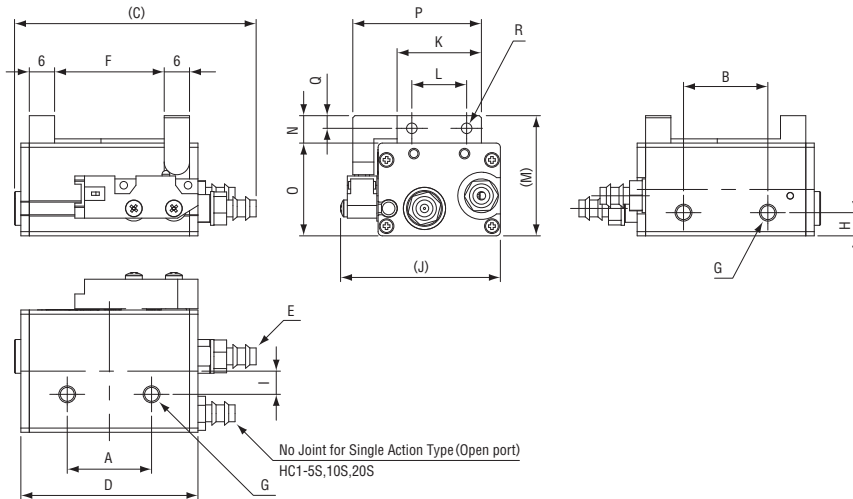
► Outside dimension of HC series



■ Dimensions (mm)

TYPE	HC-5S	HC-10S	HC-10
A	17	20	
B	10	20	
C	45	56.6	
D	32	42	
E	BF-5-M3	BF-5	
F	max16/min11	max26/min16	
G	2-M3 depth 4	2-M4 depth 5	
H	5	5.5	
I	6	5.5	
J	18	29	
K	13	20	
L	8	13	
M	25.5	28.5	
N	19	22	

► 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	
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

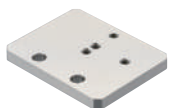


Claw • for parallel chuck

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.

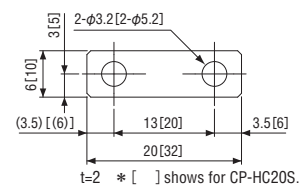
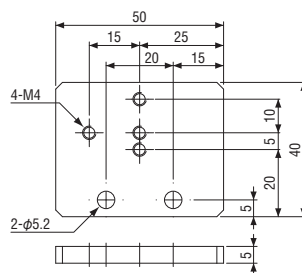
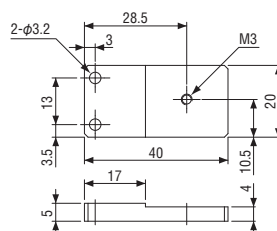


Claw • for parallel chuck

Order code No. **023216**

TYPE **CP-HC20N**

- Weight: 26g
- For HC1-20, 20S
- Installation of CP-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)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

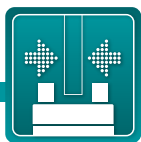
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

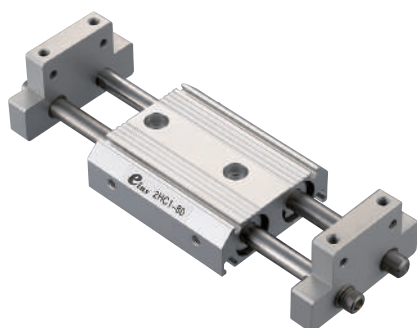
Information

Various Products Information



Parallel Chucks (Double Action)

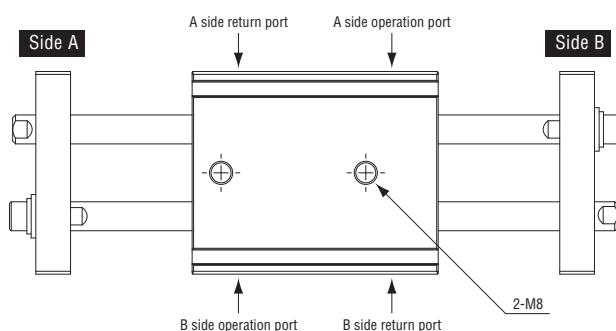
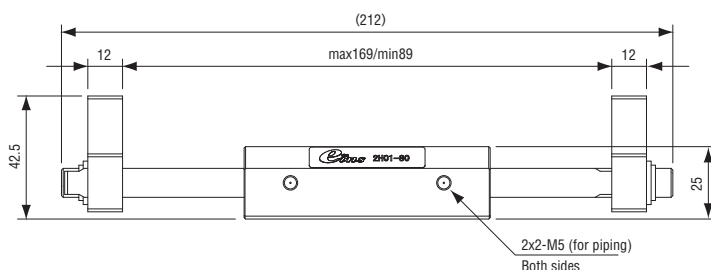
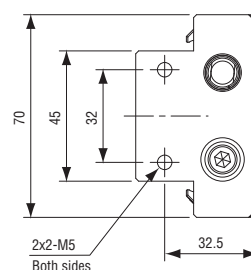
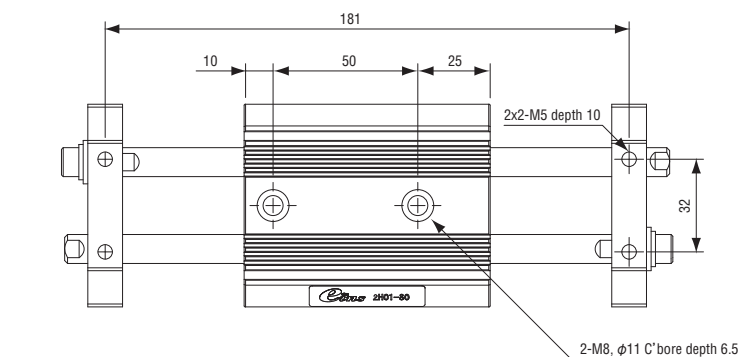
Single open/close of the claws of both sides is possible with the built-in two cylinders.



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. → 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
- Indicator light
- Terminal process is not made.
- Wiring → See 6-21
- Length: 0.5m



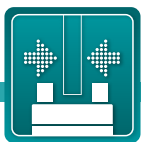
Auto switch (contactless)

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)
- Indicator light
- Terminal process is not made.
- Wiring → See 6-21
- Length: 0.5m

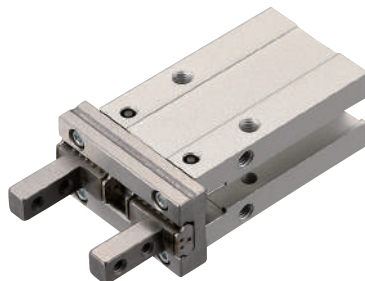
Specification

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)

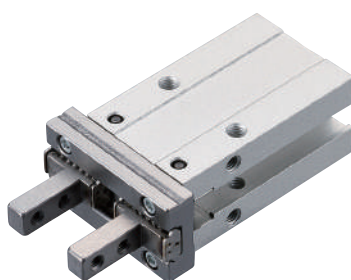
High precision with linear guide!



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 → 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 → 6-5,6,7



Auto switch (contactless)

Order code No.	030425
TYPE	D-M9N

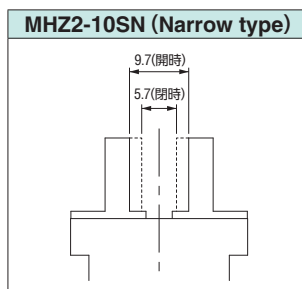
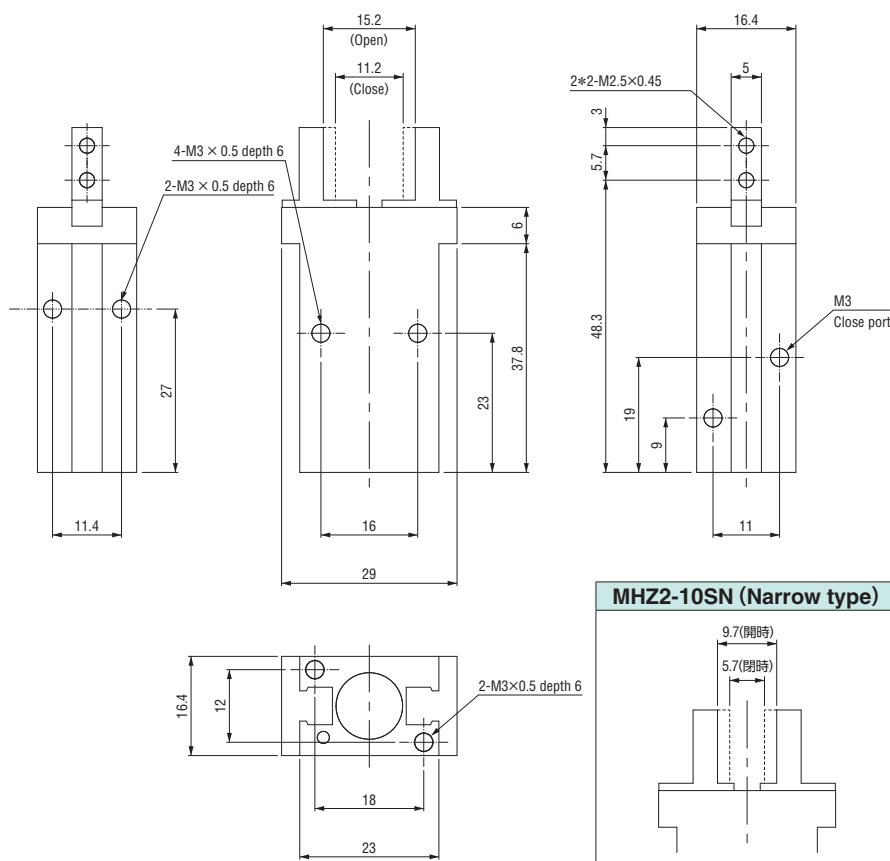
- Weight: 8g
- Applicable load: relay, PLC
- Load voltage: 24VDC
- Load current range: ~40mA or lower
- Wiring: 0.5M + V (brown), Load (black), 0V (blue)
- Indicator light
- Special metal bracket (BMG2-012) is required to attach auto switch.
- Wiring → See 6-21
- Length: 0.5m



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)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

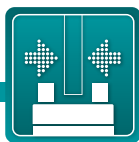
Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

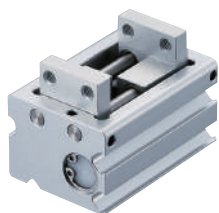
Information

Various Products Information



Parallel Hand (Double Action)

Bushing for extended life.



Double action type Parallel hand • double • 15ST

Order code No.	071996
TYPE	HLA-12AS

- Stroke: 15mm ● Weight: 152g
- Auto switch can be attached as optional*
- Pipe joint is sold separately. → 6-5,6,7

Double action type Parallel hand • double • 20ST

Order code No.	070986
TYPE	HLA-15AS

- Stroke: 20mm ● Weight: 276g
- Auto switch can be attached as optional*
- Pipe joint is sold separately. → 6-5,6,7

Double action type Parallel hand • double • 25ST

Order code No.	071997
TYPE	HLA-20AS

- Stroke: 25mm ● Weight: 504g
- Auto switch can be attached as optional*
- Pipe joint is sold separately. → 6-5,6,7



Double action type Parallel hand • 15ST • double • w/ rubber cover

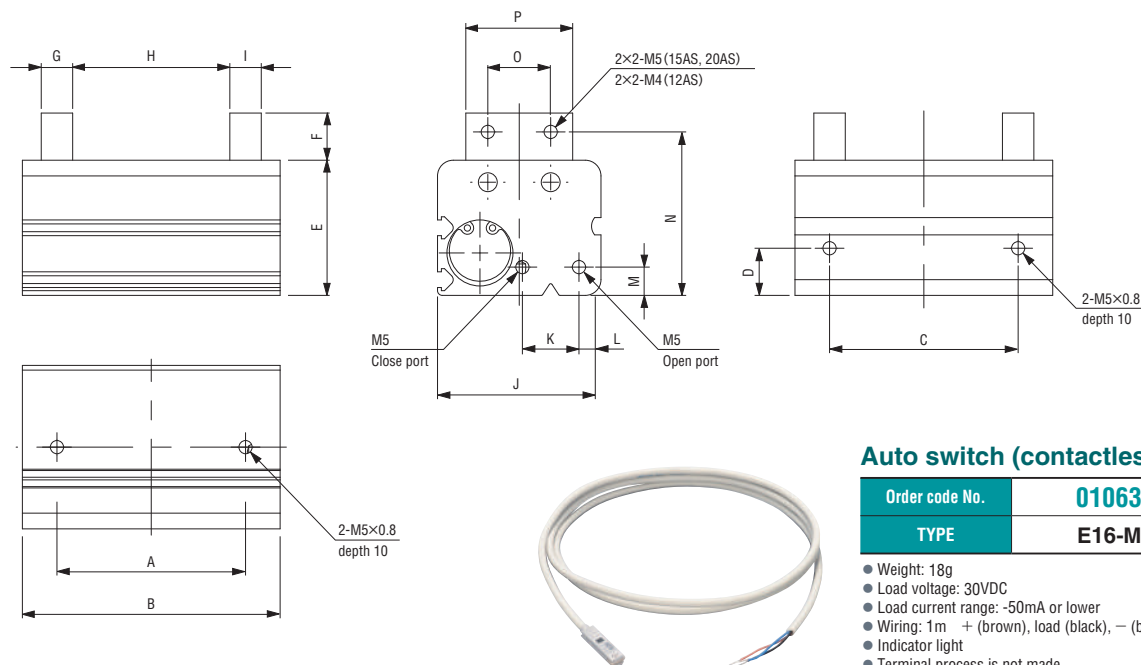
Order code No.	071999
TYPE	HLAG-12AS

- Stroke: 15mm ● Weight: 157g
- Auto switch can be attached as optional*
- Pipe joint is sold separately. → 6-5,6,7

Double action type Parallel hand • 20ST • double • w/ rubber cover

Order code No.	072000
TYPE	HLAG-15AS

- Stroke: 20mm ● Weight: 281g
- Auto switch can be attached as optional*
- Pipe joint is sold separately. → 6-5,6,7



Auto switch (contactless)

Order code No.	010633
TYPE	E16-M1

- Weight: 18g
- Load voltage: 30VDC
- Load current range: -50mA or lower
- Wiring: 1m + (brown), load (black), - (blue)
- Indicator light
- Terminal process is not made.
- Length: 1m

Dimensions

(mm)

TYPE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
HLA-12AS	30	54	30	12	29	10	6	max30/min15	6	37	13.5	4	8	35	14	22
HLA-15AS	40	70	40	13.5	34	12	10	max40/min20	10	43	14	5.5	9	41	18	30
HLA-20AS	60	82	60	15	43	15	10	max50/min25	10	52	18	7	9	52	20	34
HLAG-12AS	30	61	—	—	40	10	8	max30/min15	8	46.8	13.5	4	8	46	10	17
HLAG-15AS	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	HLA,HLAG-12AS	0.3 ~ 0.7	5 ~ 60	15	φ 12	1.69cc/times	± 0.03	No lubrication or turbine oil class 1 [ISOVG32]
	HLA,HLAG-15AS			20	φ 15	3.53cc/times		
	HLA-20AS			25	φ 20	7.85cc/times		



Needle Gripper

Embedded needle allows holding fiber and fabric materials.



Needle gripper (diameter 0.8mm)

Order code No.	186255
TYPE	SNG-M-4-0.8

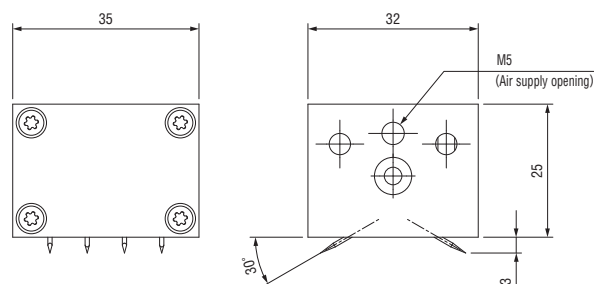
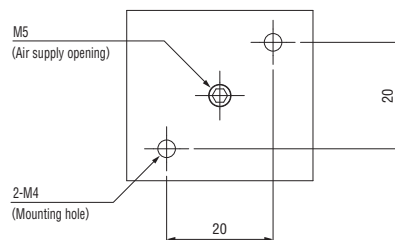
- Weight: 80g
- Air single action type
- Needle will be output with action.



Needle piston set for exchange (4pcs)

Order code No.	041925
TYPE	ERS-SET-SNG-M-0.8

- Weight: 12g
- 4pcs
- For SNG-M-4-0.8



Needle gripper (diameter 0.8mm)

Order code No.	186256
TYPE	SNG-AP-10-0.8-V-10

- Weight: 225g
- Air double action type
- Needle will be output with action.



Needle holder set for exchange (2pcs)

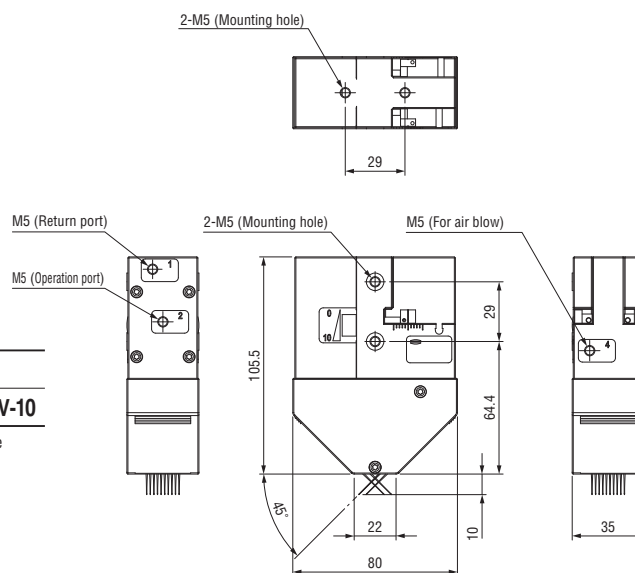
Order code No.	041926
TYPE	ERS-SET-SNG-AP/AE-0.8-10

- Weight: 6g
- For SNG-AP-10-0.8-V-10

Needle gripper (diameter 1.2mm)

Order code No.	186257
TYPE	SNG-AP-10-1.2-V-10

- Weight: 225g
- Air double action type
- Needle will be output with action.



Needle holder set for exchange (2pcs)

Order code No.	041927
TYPE	ERS-SET-SNG-AP/AE-1.2-10

- Weight: 6g
- For SNG-AP-10-1.2-V-10

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

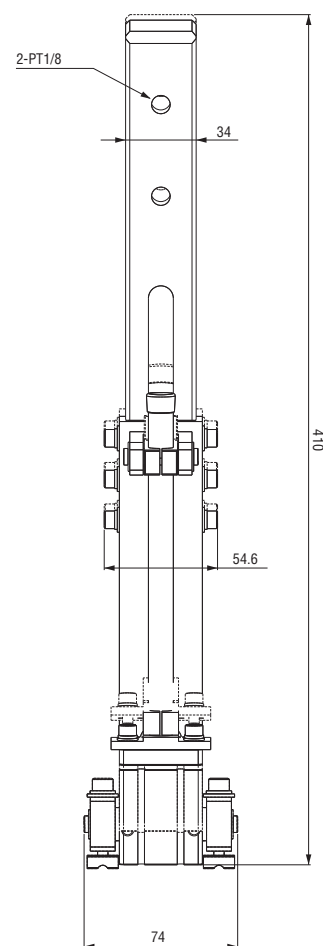
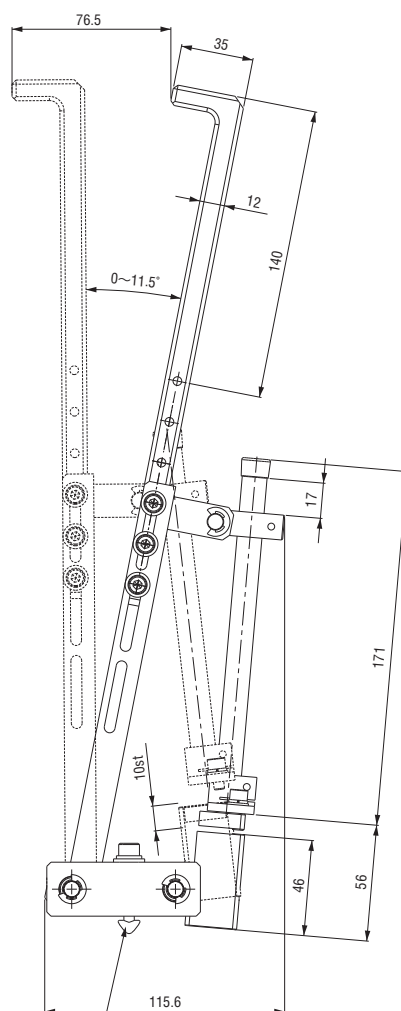
Various Products Information



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 pannel, etc.



Hinge chuck • clamp unit

Order code No.	110688
TYPE	L11540-000B

● Weight: 913g

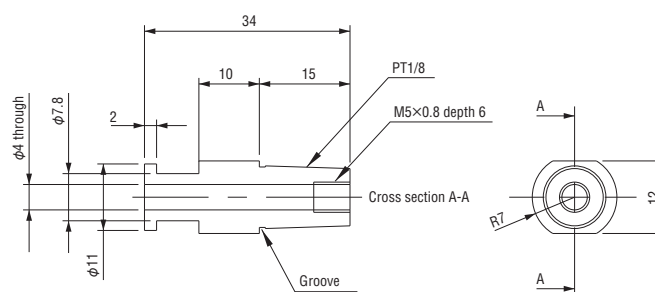
- ▶ Suction cup small series can be mounted.

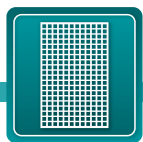


Hinge chuck • suction stem

Order code No.	110567
TYPE	L11540-109

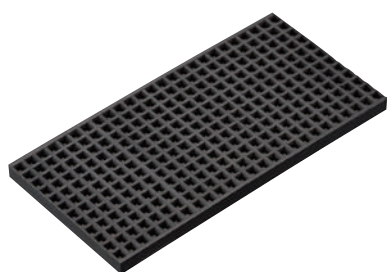
● Weight: 7g





Rubber Pad / EP Sponge / Silicone Sponge

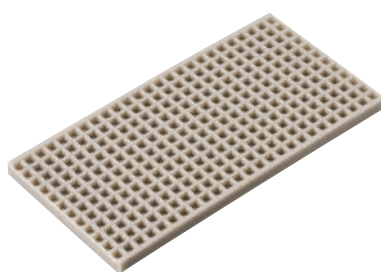
Cut sheets to prevent scratches on products.



Rubber Pad (Nitrile)

Order code No.	370078
TYPE	5T*50*100

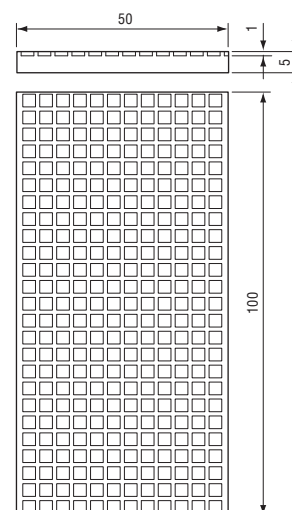
● Weight: 27.6g ● Material: nitrile rubber



Rubber Pad (Silicone)

Order code No.	310536
TYPE	5T*50*100

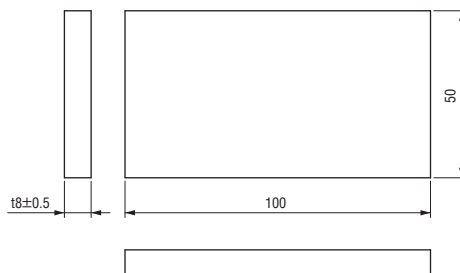
● Weight: 27.6g ● Material: silicon



EP sponge (with double-side tape)

Order code No.	340923
TYPE	8*50*100-EPSP

● 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 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.



Silicone Sponge

Order code No.	293463
TYPE	3T*250*250

● Weight: 102g ● Material: silicon sponge
● 250×250mm・T3mm



Adhesive (sponge Pads)

Order code No.	371759
TYPE	Adhesive Q 50G Clear #4888

- NET: 50ml
- Silicon bond
- Use for adhesion to rubber system.



Adhesive • cemedine • 20ML

Order code No.	371765
TYPE	AX-038 (SUPER X・20TM)

- NET: 20ml



Adhesive • cemedine • 135ML

Order code No.	371677
TYPE	AX-139 (SUPER X・X800B・135ML)

- NET: 135ml
- If you need a Material Safety Data Sheet (SDS), please purchase it.

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
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)

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder
Grippers

Rubber Material / Grip Pad

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

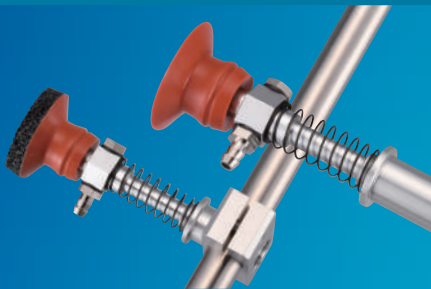
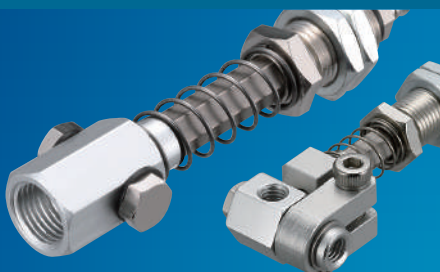
Tool / Jig

Information

Various Products Information

This image shows a full page of a worksheet designed for handwriting practice. It consists of multiple rows of horizontal dashed lines spaced evenly across the page, providing a guide for letter height and placement. The background is plain white, and there are no other markings or text present.

Suction



Suction Cups 3-2

- ▶ Material Properties and Recomend Uses 3-3
- ▶ Suction Cups (standard / screw mount type) 3-4
- ▶ Suction Cups (Bellows / TR / TRN) 3-6
- ▶ Suction Cups w/ Sponge 3-7
- ▶ Suction Cups (Bellows / Flat Face / Free) / Suction Stem Covers (Mini / Small) 3-8
- ▶ Accessory for Suction Cup 3-9
- ▶ Suction Cups (Fluorine Bellows / Multistage Bellows)..... 3-10
- ▶ Special Cups (Sheet Metal / Pouches) 3-11
- ▶ Flat Suction Cups..... 3-12
- ▶ Bellows Type Suction Cups 1.5-stage 3-14
- ▶ Bellows Type Suction Cups 2.5-stage 3-15
- ▶ Oval Cups 3-16
- ▶ Sheet Metal Suction Cups 3-17
- ▶ Suction Cups for Exchange 3-18
- ▶ Vacuum Gripper 3-19



Suction Stem 3-20

- ▶ Suction Stems (Micro / Mini / Small / Large) 3-21
- ▶ Suction Stem with Locking Mechanism 3-28
- ▶ Suction Stem Non-Rotate (Micro / Mini / Small / for 1/8 Connection / Angle Adjustment / Large) 3-29
- ▶ Suction Stem ↔ Suction Cup Selection Table..... 3-31
- ▶ Suction Stems Fixed / for Mini Cylinder 3-32
- ▶ Adjuster 3-33
- ▶ Suction Stem Angle Brackets..... 3-34



Pad in Pad 3-36

- ▶ Inner Stem / Outside Stem 3-36
- ▶ Inner Cup / Outside Cup / Test Kit 3-37
- ▶ Pad in Pad selection List 3-38



Air Ejector / Filter / Check Valve ... 3-40

- ▶ Plastic Ejector Nozzle..... 3-41
- ▶ Air Ejectors..... 3-42
- ▶ Small Air Filters 3-43
- ▶ Small Check Valve for Suction Cup 3-44



Ultra Small Part Take Out 3-46



Vacuum Generator Unit 3-48

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

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Base Aluminum Material

Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Suction Cups

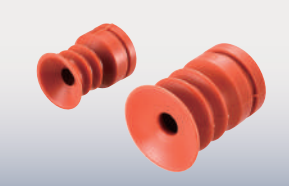
Suction Cups (Standard / Screw Mount Type)



The most suitable one can be selected from wide range of products.

3-4

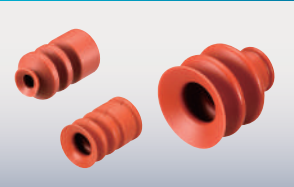
Bellows Cups



Use bellows cups for medium-sized angled parts.

3-8

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

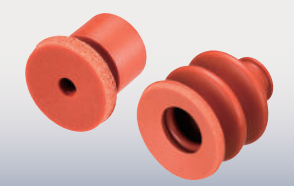
Suction Cups w/ EP Sponge



Use with parts with texture or uneven surfaces.

3-8

Suction Cups w/ Sponge



Use with parts with uneven suction surfaces.
(For work piece with small unevenness)

3-7

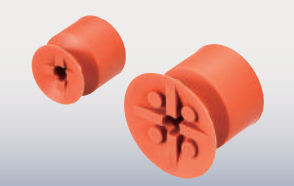
Suction Stem Covers (Mini / Small)



Used as a cap when suction cup is not used.

3-8

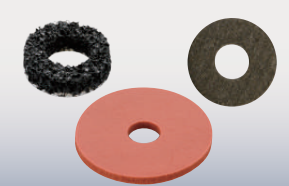
Suction Cup (Flat Face)



Use for parts that are not easily released or require additional support.
Also good with IML applications

3-8

Accessory for Suction Cup



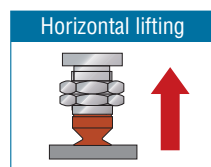
Stick it to the end of the suction cup according to its use.

3-9

EP sponge / Sponge sheet / SD Sheet

Theoretical suction power of suction cup

The theoretical suction power can be obtained with the area of cup and the degree of vacuum caused by using the cup.



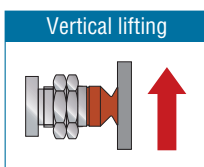
● kPa, N display

$$W = \frac{C \times P}{101} \times 10.13 \times f$$

● mmHg, Kg display

$$W = \frac{C \times P}{760} \times 1.0332 \times f$$

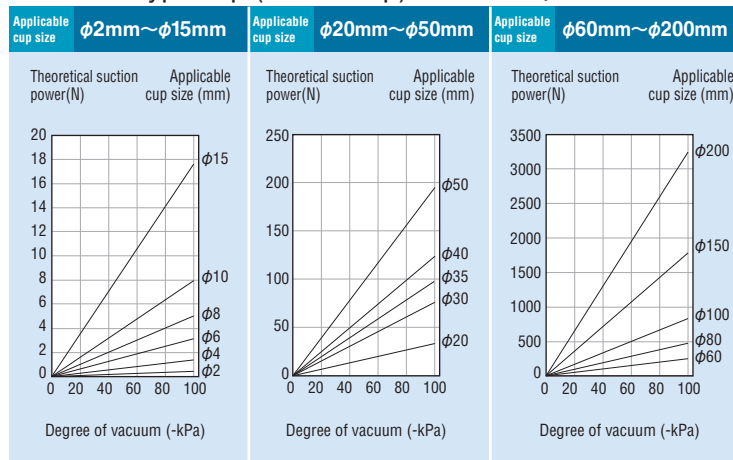
W : Theoretical suction power(N) · (Kg)
P : Degree of vacuum (-kPa) · (-mmHg)
C : Area of cup (cm²) f : Safety factor



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.



Suction Cups (Fluorine Bellows / Multistage Bellows)



- Used for parts with angle.
- Supports work with high cushioning and unevenness.

3-10

Bellows Type Suction Cups 2.5-stage



Effective for non-flat suction surface. There are silicone and mark-less types.

3-15

Special Cups (for Sheet Metal Conveyance / Pouches)



- for sheet metal conveyance.
- Perfect for soft or bag shape workpiece.

3-11

Suction pad for press

Oval Cups



Oval type. There are silicone and mark-less types.

3-16

Flat Suction Cups



Flat basic type. Silicone type and a mark-free type are provided.

3-12

Sheet Metal Suction Cups



Strong holding power in the horizontal direction and excellent balance of stability. Excellent followup ability to a curved surface. Excellent durability with original material.

3-17

Bellows type Suction Cups 1.5-stage



Effective for non-flat suction surface. There are silicone and mark-less types.

3-14

Vacuum Gripper



A single gripper could use for different shape of work piece.

3-19

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	-30~85	-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) standard.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

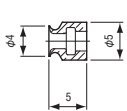
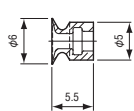
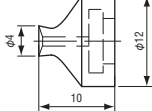
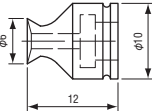
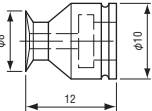
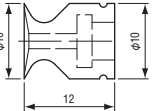
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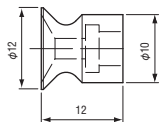
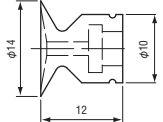
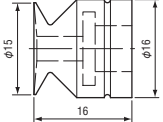
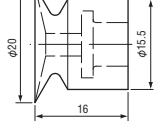
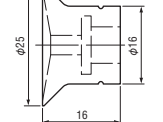
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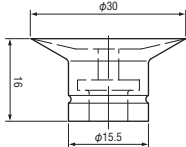
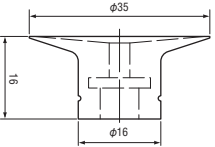
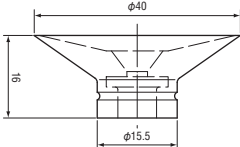
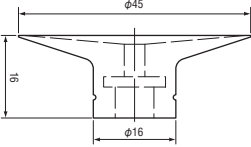


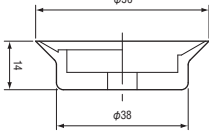
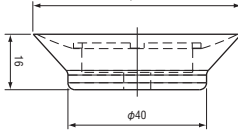
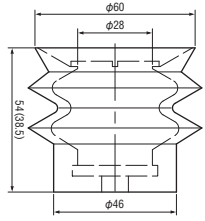
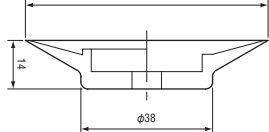
Suction Cups (Standard / Screw Mount Type)

Suction ● Suction Cups

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.	210789	210790	210700	210255	210191	210615
	TYPE	VAPH-4M	VAPH-6M	VAPH-4C	VAPH-6C	VAPH-8C	VAPH-10C
	Weight	0.2g	0.3g	0.4g	0.5g	0.6g	0.7g
Urethane (milk white)	Order code No.	—	—	210701	210395	210396	210703
	TYPE	—	—	VAPU-4C	VAPU-6C	VAPU-8C	VAPU-10C
	Weight	—	—	0.4g	0.6g	0.7g	0.7g
Fluorine (black)	Order code No.	—	—	210702	210402	210403	210704
	TYPE	—	—	VAPF-4C	VAPF-6C	VAPF-8C	VAPF-10C
	Weight	—	—	0.9g	0.9g	1.0g	1.0g
Nitrile (green)	Order code No.	—	—	210791	210792	210793	210794
	TYPE	—	—	VAPN-4C	VAPN-6C	VAPN-8C	VAPN-10C
	Weight	—	—	0.7g	0.7g	0.6g	0.6g
Applicable stem		Micro or VFILB-M,MSH ➔ 3-21,29			Mini, VFIL-SS, or VFILB-SSH ➔ 3-21,22,23,29		

Applicable cup size		φ 12mm	φ 14mm	φ 15mm	φ 20mm	φ 25mm
Suction Cups (standard)						
						
Reinforced silicone (brown)	Order code No.	210192	210616	210193	210194	210617
	TYPE	VAPH-12C	VAPH-14C	VAPH-15C	VAPH-20C	VAPH-25C
	Weight	0.8g	1.0g	2.2g	2.6g	3.3g
Urethane (milk white)	Order code No.	210397	210705	210398	210399	—
	TYPE	VAPU-12C	VAPU-14C	VAPU-15C	VAPU-20C	—
	Weight	0.8g	0.8g	2.4g	2.8g	—
Fluorine (black)	Order code No.	210404	210706	210405	210406	—
	TYPE	VAPF-12C	VAPF-14C	VAPF-15C	VAPF-20C	—
	Weight	1.2g	1.2g	3.5g	3.8g	—
Nitrile (green)	Order code No.	210795	210796	210797	210798	—
	TYPE	VAPN-12C	VAPN-14C	VAPN-15C	VAPN-20C	—
	Weight	1.0g	1.0g	3.1g	3.3g	—
Applicable stem		Mini, VFIL-SS, or VFILB-SSH ➔ 3-21,22,23,29			Small, VFIL-S, or VFILB-SH ➔ 3-24,25,26,29	

Applicable cup size		φ 30mm	φ 35mm	φ 40mm	φ 45mm
Suction Cups (standard)					
Drawing					
Reinforced silicone (brown)	Order code No.	210195	210618	210196	210621
	TYPE	VAPH-30C	VAPH-35C	VAPH-40C	VAPH-45C
	Weight	3.6g	4.0g	5.7g	6.9g
Urethane (milk white)	Order code No.	210400	—	210401	—
	TYPE	VAPU-30C	—	VAPU-40C	—
	Weight	3.6g	—	6.0g	—
Fluorine (black)	Order code No.	210407	—	210408	—
	TYPE	VAPF-30C	—	VAPF-40C	—
	Weight	5.5g	—	8.8g	—
Nitrile (green)	Order code No.	210799	—	210800	—
	TYPE	VAPN-30C	—	VAPN-40C	—
	Weight	4.6g	—	7.6g	—
Applicable stem		Small, VFIL-S, or VFILB-SH ➔ 3-24,25,26,29			

Applicable cup size		φ 50mm	φ 60mm	φ 60mm	φ 70mm
Suction Cups (screw mount type)					
Drawing					
		* The value in () indicates the dimension with suction.			
Reinforced silicone (brown)	Order code No.	210619	210311	210044	210620
	TYPE	VAPH-50F	VAPH-60F	VAPH-60F-2	VAPH-70F
	Weight	11.0g	17.0g	73.0g	17.0g
Fluorine (black)	Order code No.	—	210417	—	—
	TYPE	—	VAPF-60F	—	—
	Weight	—	28.0g	—	—
Nitrile (green)	Order code No.	—	210801	—	—
	TYPE	—	VAPN-60F	—	—
	Weight	—	23.8g	—	—
Applicable stem		Large, VFI-L, or VFIL-H ➔ 3-27,30			

Quick Chuck Change

Quick Chuck Change (Manual)

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Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

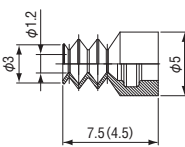
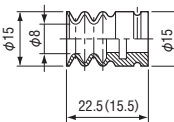
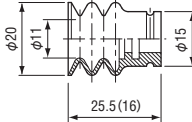
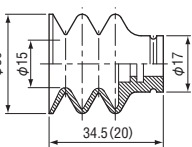
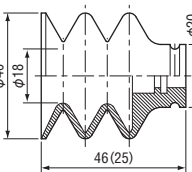
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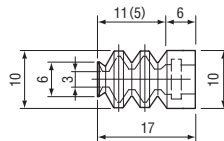
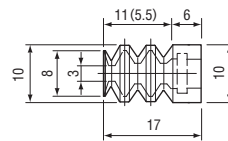
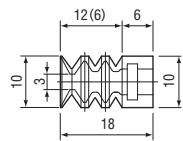
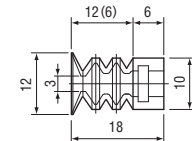
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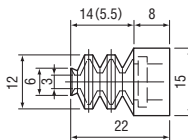
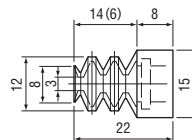
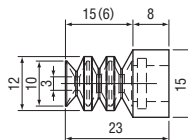
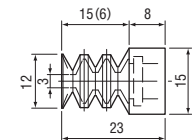


Suction Cups (Bellows/TR/TRN)

► Used for parts with angle

Applicable cup size	φ3mm	φ15mm	φ20mm	φ30mm	φ40mm
Suciton Cups (bellow)					
Drawing					
* The value in () indicates the dimension with suction.					
Reinforced silicone (brown)	Order code No.	210897	210697	210661	210662
	TYPE	VAPH-3C-3	VAPH-15C-3	VAPH-20C-3	VAPH-30C-3
	Weight	1.0g	2.7g	2.9g	7.0g
Applicable stem		Micro or VFILB-M,MSH → 3-21,29			
		Small, VFIL-S, or VFILB-SH → 3-24,25,26,29			

Applicable cup size	φ6mm	φ8mm	φ10mm	φ12mm
Suciton Cups (TR/TRN)				
Drawing				
* The value in () indicates the dimension with suction.				
Reinforced silicone (brown)	Order code No.	196327	196342	196406
	TYPE	TR-1062-1M	TR-1062-2M	TR-1062-3M
	Weight	1.0g	1.0g	1.1g
Nitrile (green)	Order code No.	196403	196401	196399
	TYPE	TRN-1062-1M	TRN-1062-2M	TRN-1062-3M
	Weight	1.4g	1.4g	1.5g
Applicable stem		Mini, VFIL-SS, or VFILB-SSH → 3-21,22,23,29		

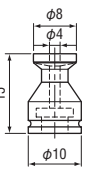
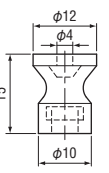
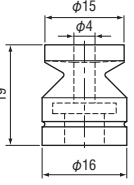
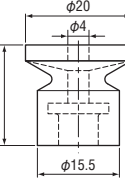
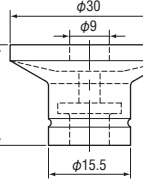
Applicable cup size	φ6mm	φ8mm	φ10mm	φ12mm
Suciton Cups (TR/TRN)				
Drawing				
* The value in () indicates the dimension with suction.				
Reinforced silicone (brown)	Order code No.	193511	193512	196135
	TYPE	TR-1062-1	TR-1062-2	TR-1062-3
	Weight	1.0g	1.0g	1.1g
Nitrile (green)	Order code No.	196404	196402	196400
	TYPE	TRN-1062-1	TRN-1062-2	TRN-1062-3
	Weight	1.4g	1.4g	1.5g
Applicable stem		Small, VFIL-S, or VFILB-SH → 3-24,25,26,29		

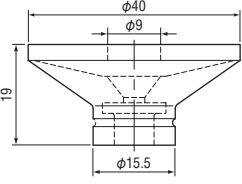
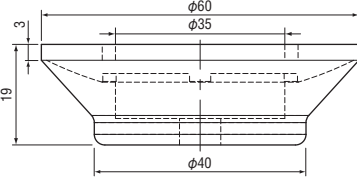


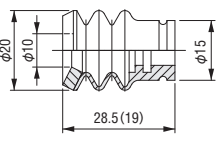
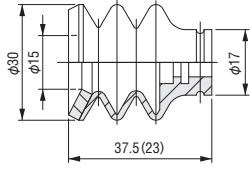
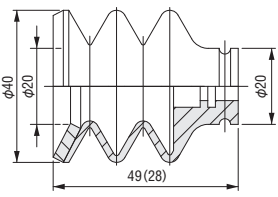
Suction Cups w/ Sponge

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.	210664	210665	210534	210535	210536
	TYPE	VAPH-8C-SP	VAPH-12C-SP	VAPH-15C-SP	VAPH-20C-SP	VAPH-30C-SP
	Weight	0.7g	0.9g	2.6g	2.9g	4.8g
	Heat-resistance	200°C			200°C	
Applicable stem		Mini, VFIL-SS, or VFILB-SSH → 3-21,22,23,29			Small, VFIL-S, or VFILB-SH → 3-24,25,26,29	

Applicable cup size		φ40mm	φ60mm
Suction Cups w/ sponge			 * Cup fixing system: embedded
Drawing			
Reinforced silicone (brown)	Order code No.	210537	210538
	TYPE	VAPH-40C-SP	VAPH-60F-SP
	Weight	8.3g	22.0g
	Heat-resistance	200°C	
Applicable stem		Small, VFIL-S, or VFILB-SH → 3-24,25,26,29	Large, VFI-L, or VFIL-H → 3-27,30

Applicable cup size		φ20mm	φ30mm	φ40mm
Suction Cups (bellows w/ sponge)				
Drawing				
Reinforced silicone (brown)	Order code No.	210914	210915	210916
	TYPE	VAPH-20C-10-3-SP	VAPH-30C-15-3-SP	VAPH-40C-20-3-SP
	Weight	3.0g	8.0g	19.0g
	Heat-resistance	200°C		
Applicable stem		Small, VFIL-S, or VFILB-SH → 3-24,25,26,29		

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Quick Chuck Change (Manual)

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Pad in Pad

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Ultra Small Part Take Out

Vacuum Generator Unit

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Air Nipper (Large)

Frame / Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

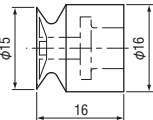
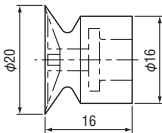
Various Products Information



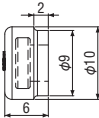
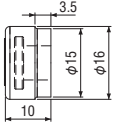
Suction Cups(Bellows/Flat Face/Free) /Suction Stem Covers(Mini/Small)

Used for work pieces with uneven suction surfaces. (For work pieces with uneven suction surfaces.)

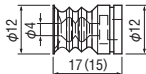
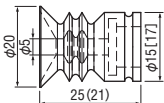
► Used for work pieces that are not released easily from suction cup.

Applicable cup size		φ 15mm	φ 20mm
Suction Cups (flat face)			
Drawing			
Reinforced silicone (brown)	Order code No.	210389	210390
	TYPE	VAPH-15C-1	VAPH-20C-1
	Weight	2.0g	2.4g
Applicable stem		Small, VFIL-S, or VFILB-SH ➔ 3-24,25,26,29	

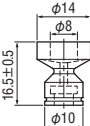
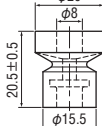
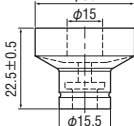
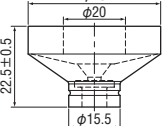
► Used to be attached to the end of suction stem.

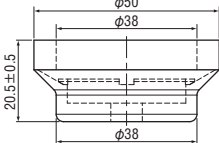
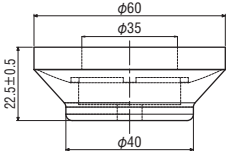
Applicable cup size		φ 10mm	φ 16mm
Suction stem cover			
Drawing			
Reinforced silicone (brown)	Order code No.	211024	211023
	TYPE	VAPH-SSC	VAPH-SC
	Weight	0.35g	1.70g
Applicable stem		Mini, VFIL-SS, or VFILB-SSH ➔ 3-21,22,23,29	Small, VFIL-S, or VFILB-SH ➔ 3-24,25,26,29

► Use bellows cups for medium-sized angled parts.

Applicable cup size		φ 12mm	φ 20mm
Bellows cups			
Drawing			
Reinforced silicone (brown)	Order code No.	210280	210310
	TYPE	VAPH-12C-2	VAPH-20C-2
	Weight	1.1g	2.8g
Urethane (milk white)	Order code No.	210409	210410
	TYPE	VAPU-12C-2	VAPU-20C-2
	Weight	1.2g	3.0g
Fluorine (black)	Order code No.	210411	210412
	TYPE	VAPF-12C-2	VAPF-20C-2
	Weight	1.9g	4.3g
Nitrile (green)	Order code No.	210802	210803
	TYPE	VAPN-12C-2	VAPN-20C-2
	Weight	1.5g	3.9g
Applicable stem		Mini, VFIL-SS, or VFILB-SSH → 3-21,22,23,29	Small, VFIL-S, or VFILB-SH → 3-24,25,26,29

► Used for work pieces with uneven suction surfaces. (For work pieces with large 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.	210859	210860	210861	210862
	TYPE	VAPH-14C-EPSP	VAPH-20C-EPSP	VAPH-30C-EPSP	VAPH-40C-EPSP
	Weight	1.1g	2.8g	4.0g	6.4g
	Heat-resistance	80℃		80℃	
Applicable stem		Mini, VFIL-SS, or VFILB-SSH ➡ 3-21,22,23,29		Small, VFIL-S, or VFILB-SH ➡ 3-24,25,26,29	

Applicable cup size		φ 50mm	φ 60mm
Suction Cups EP sponge		* Cup fixing system: embedded 	* Cup fixing system: embedded 
Drawing			
Reinforced silicone (brown)	Order code No.	210863	210864
	TYPE	VAPH-50F-EPSP	VAPH-60F-EPSP
	Weight	11.5g	18.2g
	Heat-resistance	80°C	
Applicable stem		Large, VFI-L, or VFIL-H → 3-27,30	

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.



Accessory for Suction Cup

► 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.	271682	271683	282552	297701	300485
TYPE	12C-SD	15C-SD	20C-SD	30C-SD	40C-SD
Weight	1.0g	1.0g	1.0g	1.0g	1.0g
Heat-resistance	80°C				

* Generation of leakage reduces vacuum force by 40% after SD sheet is attached. * With double-stick-tape processing.

► EP sponge sheet to be attached at the tip of the suction cup.

Applicable cup size	φ 14mm	φ 20mm	φ 30mm	φ 40mm	φ 50mm	φ 60mm
EP sponge (black)						
Drawing						
Order code No.	271559	282010	294889	300386	310589	322949
TYPE	14C-EPSP	20C-EPSP	30C-EPSP	40C-EPSP	50C-EPSP	60C-EPSP
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.

► Sponge sheet to be attached at the tip of the Suction Cups (Bellow).

Applicable cup size	φ 40mm
Sponge sheet	
Drawing	
Order code No.	072746
TYPE	40C-SP
Weight	1.0g
Heat-resistance	200°C



Adhesive (sponge Pads)

Order code No.	371759
TYPE	Adhesive Q 50Q Clear #4888
- NET : 50ml - Silicon bond - use for adhesion to rubber system.	

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.
- 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.

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)
Tool Changer
Automated Chuck Exchange System

Grip

Mini Cylinder
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Accessory for Container Cylinder
Grippers
Rubber Material / Grip Pad

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

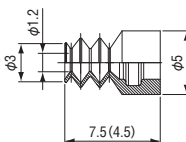
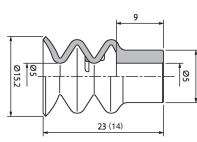
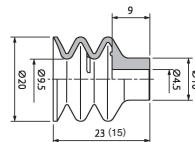
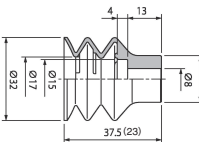
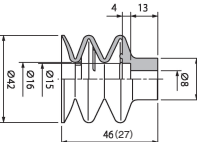
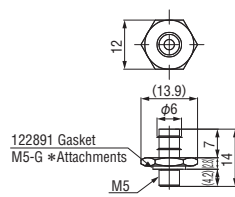
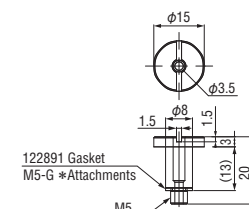
Various Products Information



Suction Cups (Fluorine Bellows/Multistage Bellows)

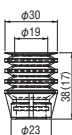
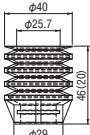
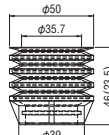
The most suitable one can be selected from wide range of products.

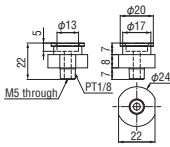
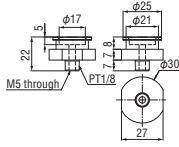
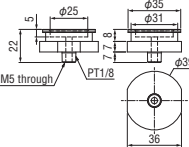
► Used for parts with angle. High temperature resistance and reduce suction cup markings.

Applicable cup size		φ 3mm	φ 15mm	φ 20mm	φ 30mm	φ 40mm
Suction Cups (Fluorine Bellows)						
Drawing						
* The value in () indicates the dimension with suction.						
Fluorine (black)	Order code No.	211101	042042	042043	042044	042045
	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 stem head • M5 • For EPCG15/20		Suction stem head • M5 • For EPCG30/40	
	Order code No.		211102		211103	
	TYPE		VFILK-AH01		VFILK-AH02	
	Weight		3.0g		8.0g	
Drawing						
Applicable stem		Micro or VFILB-M,MSH → 3-21,29	VFILB2-SH system (used by replacing the head)			

* When using a fluorine pad φ 15 mm to φ 40 mm, a special suction head bracket is required.

► The multistage Bellow cap suitable for absorb different angle of parts surface /outer stem.

Applicable cup size	φ30mm	φ40mm	φ50mm
Suction Cup Multistage Bellow			
Drawing			
Order code No.	042071	042072	042073
TYPE	EPLG-30-S5	EPLG-40-S5	EPLG-50-S5
Weight	6.9g	15.7g	20.8g
Applicable stem	VFILA-PHB-1/8	VFILA-PHC-1/8	VFILA-PHD-1/8

Outside stem			
Drawing			
Order code No.	211115	211116	211117
TYPE	VFILA-PHB-1/8	VFILA-PHC-1/8	VFILA-PHD-1/8
Weight	13.0g	18.0g	34.0g
Applicable stem	EPLG-30-S5	EPLG-40-S5	EPLG-50-S5

* Outer stem is necessary for use.



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder
Grippers
Rubber Material / Grin Pad

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

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

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

Air Management

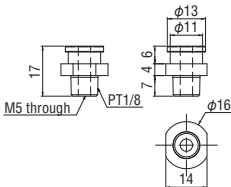
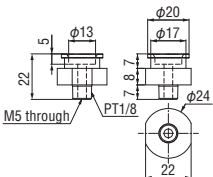
Sensors

PCIO Communication Unit

Frame / Suction /
Cylinder / Pads /
Manifold

Tool / Jig

Various Products
Information

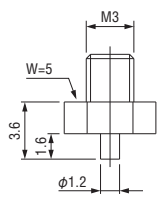
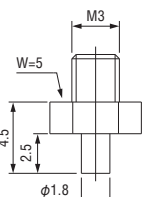
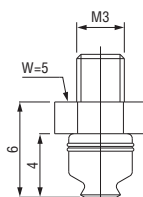
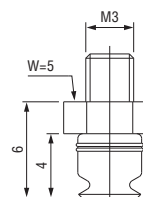
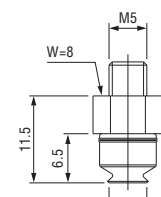
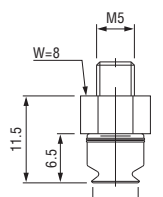
Outside stem		
		
Order code No.	211114	211115
TYPE	VFILA-PHA-1/8	VFILA-PHB-1/8
Weight	4.0g	13.0g
Applicable stem	EPMG-24L	EPMG-40L

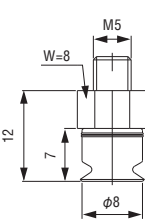
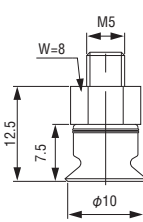
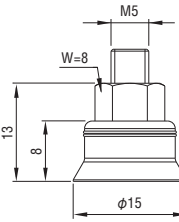
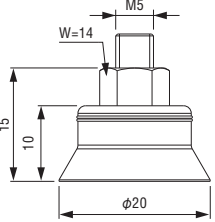
3-11

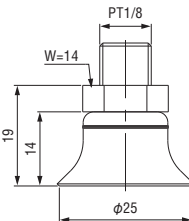
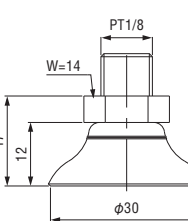
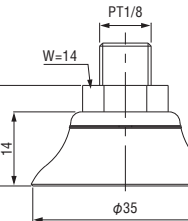
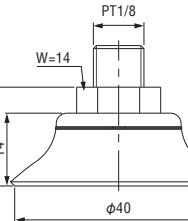


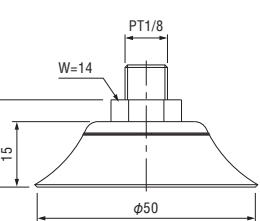
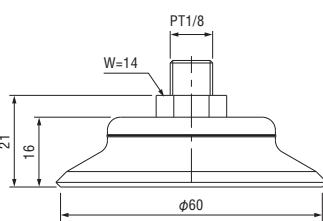
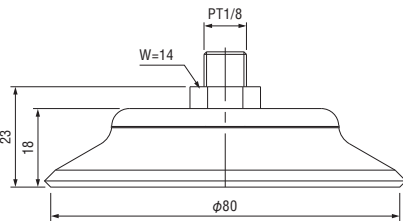
Flat Suction Cups

Flat basic type. Silicone type and a mark-free type are provided.

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.	183823	183824	183825	183826	183827	183828
	TYPE	SQN 1 SI-M3 M	SQN 1.5 SI-M3 M	SQN 2 SI-M3 M	SQN 3.5 SI-M3 M	SQN 5 SI-M5 M	SQN 6 SI-M5 M
	Weight	1.0g	1.0g	1.0g	1.0g	1.1g	1.1g
Mark-free (blue)	Order code No.	—	—	—	—	183797	183798
	TYPE	—	—	—	—	SQN 5 HT1-M5 M	SQN 6 HT1-M5 M
	Weight	—	—	—	—	1.1g	1.1g
Applicable stem		Micro or VFILB-M,MSH → 3-21,29				Non-rotate for mini/small or VFILB/VFILBR → 3-29,30	

Applicable cup size		φ 8mm	φ 10mm	φ 15mm	φ 20mm
Flat Suction Cups					
Drawing					
Silicone (transparent white)	Order code No.	183829	183830	183831	183832
	TYPE	SQN 8 SI-M5 M	SQN 10 SI-M5 M	SQN 15 SI-M5 M	SQN 20 SI-M5 M
	Weight	1.2g	1.3g	4.5g	5.6g
Mark-free (blue)	Order code No.	183799	183800	183801	183802
	TYPE	SQN 8 HT1-M5 M	SQN 10 HT1-M5 M	SQN 15 HT1-M5 M	SQN 20 HT1-M5 M
	Weight	1.2g	1.3g	4.5g	5.6g
Applicable stem		Non-rotate for mini/small or VFILB/VFILBR → 3-29,30			

Applicable cup size		φ 25mm	φ 30mm	φ 35mm	φ 40mm
Flat Suction Cups					
Drawing					
Silicone (transparent white)	Order code No.	183833	183834	183835	183836
	TYPE	SQN 25 SI-PT1/8 M	SQN 30 SI-PT1/8 M	SQN 35 SI-PT1/8 M	SQN 40 SI-PT1/8 M
	Weight	7.2g	7.9g	10.6g	12.2g
Mark-free (blue)	Order code No.	183803	183804	183805	183806
	TYPE	SQN 25 HT1-PT1/8 M	SQN 30 HT1-PT1/8 M	SQN 35 HT1-PT1/8 M	SQN 40 HT1-PT1/8 M
	Weight	7.2g	7.9g	10.6g	12.2g
Applicable stem		Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → 3-27.30			

Applicable cup size		φ 50mm	φ 60mm	φ 80mm
Flat Suction Cups				
Drawing				
Silicone (transparent white)	Order code No.	183837	183838	183839
	TYPE	SQN 50 SI-PT1/8 M	SQN 60 SI-PT1/8 M	SQN 80 SI-PT1/8 M
	Weight	15.3g	34.2g	62.5g
Mark-free (blue)	Order code No.	183807	183808	183809
	TYPE	SQN 50 HT1-PT1/8 M	SQN 60 HT1-PT1/8 M	SQN 80 HT1-PT1/8 M
	Weight	15.3g	34.2g	62.5g
Applicable stem		Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → 3-27.30		

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Accessory for Container Cylinder

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Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

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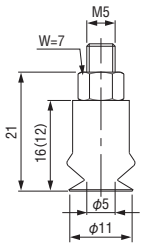
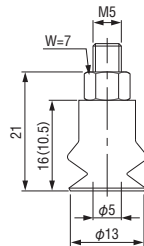
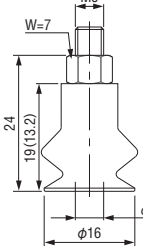
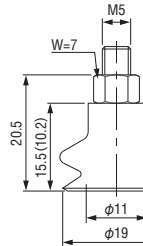
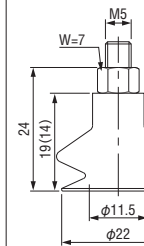
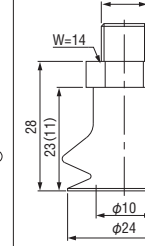
Information

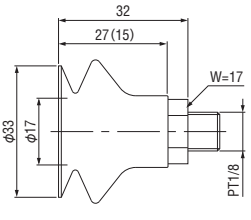
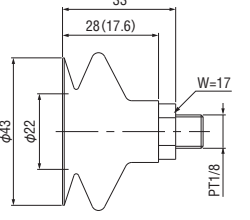
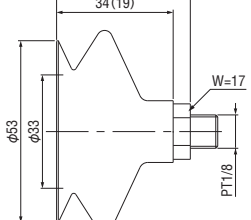
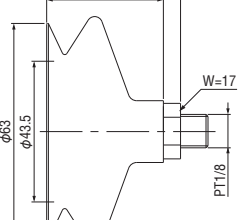
Various Products Information



Bellows Type Suction Cups 1.5-stage

The bellows section contracts with vacuum. There are silicone and mark-less types.

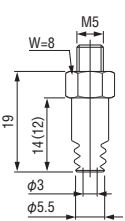
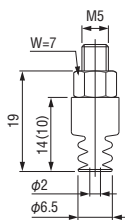
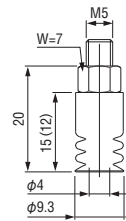
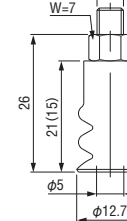
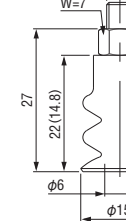
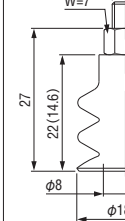
Applicable cup size	φ 11mm	φ 13mm	φ 16mm	φ 19mm	φ 22mm	φ 24mm
Bellows type Suction Cups 1.5-stage						
Drawing						
Silicone (transparent white)	Order code No.	183874	183875	183876	183877	183878
	TYPE	SFSGA 11 SI-M5 M	SFSGA 14 SI-M5 M	SFSGA 16 SI-M5 M	SFSGA 20 SI-M5 M	SFSGA 22 SI-M5 M
	Weight	2.0g	2.1g	2.3g	2.7g	3.1g
Mark-free (blue)	Order code No.	183857	183858	183859	183860	183861
	TYPE	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
	Weight	2.0g	2.1g	2.3g	2.7g	3.1g
Applicable stem	Non-rotate for mini/small or VFILB/VFILBR → 3-29,30					Non-rotate for small or VFILB-1/8, large VFIL, VFIL-H → 3-27,30

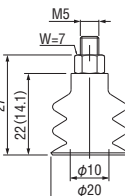
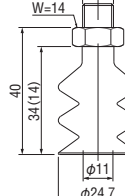
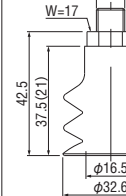
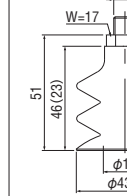
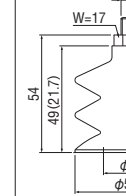
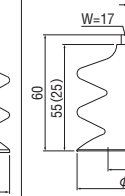
Applicable cup size	φ 33mm	φ 43mm	φ 53mm	φ 63mm
Bellows type Suction Cups 1.5-stage				
Drawing				
Silicone (transparent white)	Order code No.	183879	183880	183881
	TYPE	SFSGA 33 SI-PT1/8 M	SFSGA 43 SI-PT1/8 M	SFSGA 53 SI-PT1/8 M
	Weight	15.0g	18.0g	26.0g
Mark-free (blue)	Order code No.	183862	183863	183864
	TYPE	SFSGA 33 HT1-PT1/8 M	SFSGA 43 HT1-PT1/8 M	SFSGA 53 HT1-PT1/8 M
	Weight	15.0g	18.0g	26.0g
Applicable stem	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → 3-27,30			



Bellows Type Suction Cups 2.5-stage

Effective for non-flat suction surface. There are silicone and mark-less types.

Applicable cup size	φ 5.5mm	φ 6.5mm	φ 9.3mm	φ 12.7mm	φ 15mm	φ 18.5mm
Bellows type Suction Cups 2.5-stage						
Drawing						
* The value in () indicates the dimension with suction.						
Silicone (transparent white)	Order code No.	183909	183910	183911	183912	183913
	TYPE	SFSG 5 SI-M5 M	SFSG 7 SI-M5 M	SFSG 9 SI-M5 M	SFSG 12 SI-M5 M	SFSG 14 SI-M5 M
	Weight	1.5g	1.6g	1.8g	2.2g	2.6g
Mark-free (blue)	Order code No.	—	—	183893	183894	183895
	TYPE	—	—	SFSG 9 HT1-M5 M	SFSG 12 HT1-M5 M	SFSG 14 HT1-M5 M
	Weight	—	—	1.8g	2.2g	2.6g
Applicable stem	Non-rotate for mini/small or VFILB/VFILBR → 3-29,30					

Applicable cup size	φ 20mm	φ 24.7mm	φ 32.6mm	φ 43.5mm	φ 52.5mm	φ 62.2mm
Bellows type Suction Cups 2.5-stage						
Drawing						
* The value in () indicates the dimension with suction.						
Silicone (transparent white)	Order code No.	183915	183916	183917	183918	183919
	TYPE	SFSG 20 SI-M5 M	SFSG 25 SI-PT1/8 M	SFSG 32 SI-PT1/8 M	SFSG 42 SI-PT1/8 M	SFSG 52 SI-PT1/8 M
	Weight	3.3g	8.0g	16.0g	26.0g	31.0g
Mark-free (blue)	Order code No.	183897	183898	183899	183900	—
	TYPE	SFSG 20 HT1-M5 M	SFSG 25 HT1-PT1/8 M	SFSG 32 HT1-PT1/8 M	SFSG 42 HT1-PT1/8 M	—
	Weight	3.3g	8.0g	16.0g	26.0g	—
Applicable stem	Non-rotate for mini/small or VFILB, VFILBR → 3-29,30	Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H → 3-27,30		Large, VFI-L, or VFIL-H → 3-27,30		

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

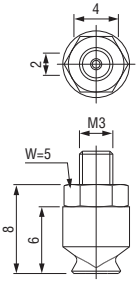
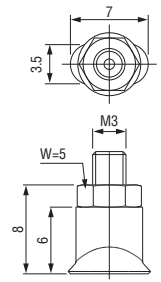
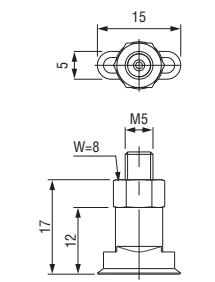
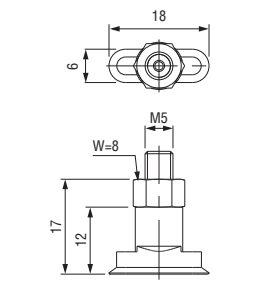
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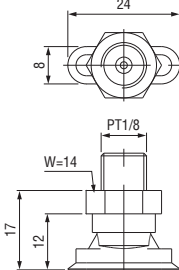
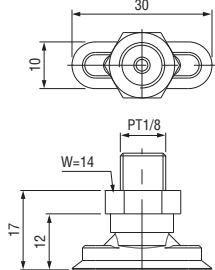
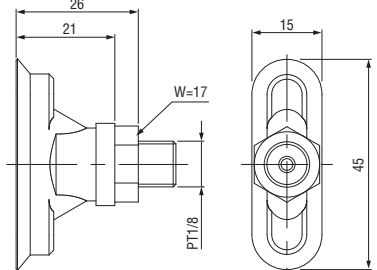
Various Products Information



Oval Cups

Oval type. There are silicone and mark-less types.

Applicable cup size		2×4mm	3.5×7mm	5×15mm	6×18mm
Oval cups					
Drawing					
Silicone (transparent white)	Order code No.	187222	187223	187224	—
	TYPE	SSGON-4*2-SI-65-M3-M	SSGON-7*3.5-SI-65-M3-M	SSGON-15*5-SI-65-M5-M	—
	Weight	2.0g	2.0g	3.4g	—
Mark-free (blue)	Order code No.	183932	183933	183934	183935
	TYPE	SSGON 2*4 HT1-M3 M	SSGON 3.5*7 HT1-M3 M	SSGON 5*15 HT1-M5 M	SSGON 6*18 HT1-M5 M
	Weight	2.0g	2.0g	3.4g	3.7g
Applicable stem		Micro or VFILB-M,MSH ➔ 3-21,29		Non-rotate for mini/small or VFILB/VFILBR ➔ 3-29,30	

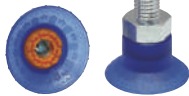
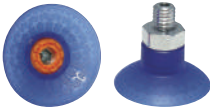
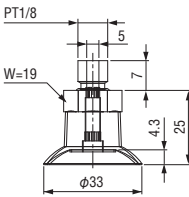
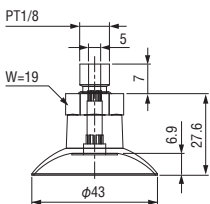
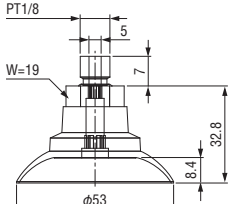
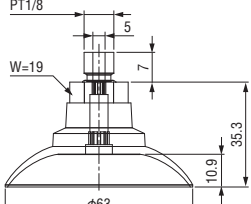
Applicable cup size		8×24mm	10×30mm	15×45mm
Oval cups				
Drawing				
Silicone (transparent white)	Order code No.	—	187225	187226
	TYPE	—	SSGON-30*10-SI-65-PT1/8-M	SSGON-45*15-SI-65-PT1/8-M
	Weight	—	6.8g	14.8g
Mark-free (blue)	Order code No.	183936	183937	183938
	TYPE	SSGON 8*24 HT1-PT1/8 M	SSGON 10*30 HT1-PT1/8 M	SSGON 15*45 HT1-PT1/8 M
	Weight	6.7g	6.8g	14.8g
Applicable stem		Non-rotate for small or VFILB-1/8, large VFI-L, VFIL-H ➔ 3-27,30		

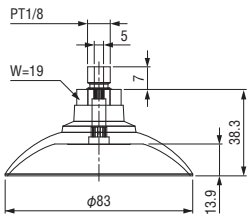
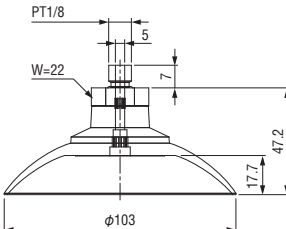
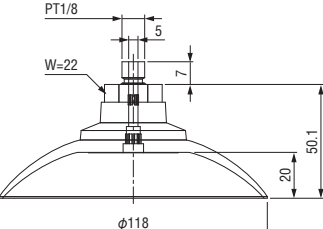


Sheet Metal Suction Cups

Best for high-speed conveyance of oil-filmed sheet metal.

► Strong holding power in the horizontal direction and excellent balance of stability.

Applicable cup size	φ 33mm	φ 43mm	φ 53mm	φ 63mm
Suction Cups for sheet metal w/ screw				
Drawing				
Order code No.	185338	185339	185340	185341
TYPE	SSAXM-30-ED-85-PT1/8M	SSAXM-40-ED-85-PT1/8M	SSAXM-50-ED-85-PT1/8M	SSAXM-60-ED-85-PT1/8M
Holding force*	39N	69N	109N	154N
Horizontal power (with oil)**	41N	71N	110N	155N
Weight	14.0g	15.0g	27.0g	30.0g
Applicable stem	Non-rotate for small or VFILB-1/8, large VFI-L, VFI-H → 3-27.30			

Applicable cup size	φ 83mm	φ 103mm	φ 118mm
Suction Cups for sheet metal w/ screw			
Drawing			
Order code No.	185342	185343	185344
TYPE	SSAXM-80-ED-85-PT1/8M	SSAXM-100-ED-85-PT1/8M	SSAXM-115-ED-85-PT1/8M
Holding force*	270N	412N	549N
Horizontal power (with oil)**	269N	414N	584N
Weight	39.0g	73.0g	91.0g
Applicable stem	Non-rotate for small or VFILB-1/8, large VFI-L, VFI-H → 3-27.30		

* Above holding force is calculated with dried workpiece with a smooth surface (vertical direction, vacuum pressure -60 kPa). Safety factor is not included. Safety factor is not included.
 ** Above horizontal force is calculated with dried/oil-filmed workpiece with a smooth surface (vacuum pressure -60 kPa).

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Suction Cups for Exchange

Suction Cup for exchange in 3-12 - 3-16.

► Suction Cups for Flat suction cup.

Page	Order code No.	TYPE	Material	Cup color
3-12	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
3-13	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
3-12	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
	183815	SQ 20 HT1	Mark-free	Blue
3-13	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 pad for flat oval.

Page	Order code No.	TYPE	Material	Cup color
3-16	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
3-16	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

► Bellows type Suction Cups 1.5-stage.

Page	Order code No.	TYPE	Material	Cup color
3-14	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
3-14	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.

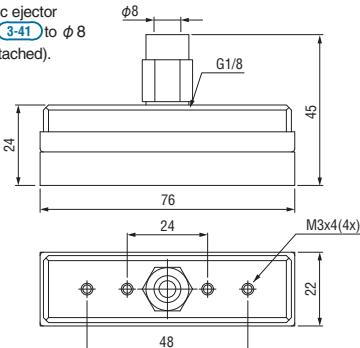
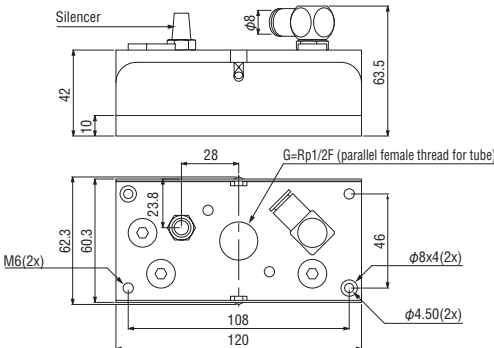
Page	Order code No.	TYPE	Material	Cup color
3-15	183921	SFG 5 SI	silicone	Cloudy transparent
	183922	SFG 7 SI	silicone	Cloudy transparent
	183923	SFG 9 SI	silicone	Cloudy transparent
	183924	SFG 12 SI	silicone	Cloudy transparent
	183925	SFG 14 SI	silicone	Cloudy transparent
	184085	SFG 18 SI	silicone	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
3-15	183930	SFG 52 SI	silicone	Cloudy transparent
	183931	SFG 62 SI	silicone	Cloudy transparent
	183901	SFG 9 HT1	Mark-free	Blue
	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



Vacuum Gripper

A small vacuum gripper suitable for suction and transport of small workpieces.

► A single gripper could use for different shape of work piece. (wood, resin, corrugated cardboard).

Vacuum gripper				
Drawing	* Connect plastic ejector SSBP series (3-41) to $\phi 8$ (ejector not attached). 			
Product name	Vacuum gripper 76 × 22 × 10mm	Sponge seal 76×22 w/o valve (for exchange)	Vacuum gripper 120 × 60 × 10mm	Sponge seal 120×60 w/o valve (for exchange)
Order code No.	183977	183978	183979	183980
TYPE	SFM-76/22-SW-10-B	SFMSEAL76/22SW10BW/OV	SFX-120/60-SW-1.5-10-B	SFXFMSEAL120/60SW10BW/OV
Weight	50.0g	1.5g	500.0g	6.5g

Specification

Product name	TYPE	Number of cells	Inside diameter	Air consumption	Maximum holding power at the time of -60kPa	Heatproof	Ejector
Vacuum gripper	SFM-76/22-SW-10-B	26	5	—	40 (when all cells are covered)	80	Not provided
	SFX-120/60-SW-1.5-10-B	10	15	117 (suction 69)	98 (when all cells are covered)		Provided

* If a workpiece does not hit the suction surface, the special valve will close to prevent vacuum leak, showing maximum holding power. A minimum of 30 to 50% of vacuum cells must be covered with workpieces.

* Product confirmation requires separate circuit.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

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Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

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Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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Tool / Jig

Information

Various Products Information



For Suction Cup Suction Stem

Suction stem

Can be selected according to the type of suction cup and allows secure suction.



Micro

3-21



Mini

3-21



Small

3-24



Large

3-27



Mini

3-21

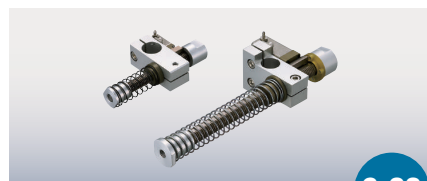


Small

3-24

Suction stems locking mechanism

Non-rotating suction stems. These feature a long stroke, holding unit in position at the stopper cylinder.



3-28

Suction stems non-rotate

Exchangeable head for suction stem.



Micro

3-29



Mini

3-29



Small

3-29



1/8 For connection

3-30

Suction stems non-rotate

Exchangeable head for suction stem.



Angle adjustment

3-30



Large

3-30



3-32

Fixed

Please use with a pad on the tip.

Suction Stems for Mini Cylinder

Used when suction cup is attached to the end of mini cylinder.



3-32

Adjuster

Height of suction stem can be adjusted.



3-33

Suction stem angle brackets

The angle can be adjusted by attaching a pad to the tip.



3-34

■ spring constant value of suction stem

No.	TYPE	Spring constant (N/mm)	spring constant of suction stem (N)
1	VFILB-M/VFILB-M-P8	0.29	2.62
2	VFILB2-SSH/VFILB2-SSH-P12/ VFILB2-SH/VFILB2-SH-P12/ VFILB2-SH1/8/VFILB2-SH1/8-P12	0.65	7.76
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
4	VFIL-H	0.80	16.87
5	VFIL1-SS-5/VFIL2-SS-5-P8/ VFIL2-SS-5-P12	0.50	3.99
6	VFIL1-SS-10/VFIL2-SS-10-P8/ VFIL2-SS-10-P12	0.25	3.99
7	VFIL1-SS-20/VFIL2-SS-20-P8/ VFIL2-SS-20-P12	0.17	4.16

* Spring constant. The spring force during in compression is a reference value.

No.	TYPE	Spring constant (N/mm)	spring constant of suction stem (N)
8	VFIL1-SS-30/VFIL2-SS-30-P8/ VFIL2-SS-30-P12	0.12	4.49
9	VFIL-S-5A/VFIL1-S-5-P12/ VFIL1-S-5-P20	0.27	2.46
10	VFIL-S-10A/VFIL1-S-10-P12/ VFIL1-S-10-P20	0.16	2.63
11	VFIL-S-20A/VFIL1-S-20-P12/ VFIL1-S-20-P20	0.11	2.81
12	VFIL-S-30A/VFIL1-S-30-P12/ VFIL1-S-30-P20	0.08	2.91
13	VFI-L-20-M17/VFI-L-20-P20	1.11	28.96
14	VFI-L-50-M17/VFI-L-50-P20	0.67	37.43
15	VFI-L-100-M22	0.19	19.81



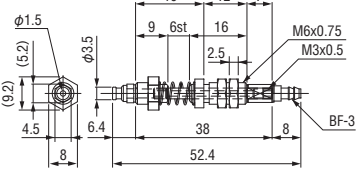
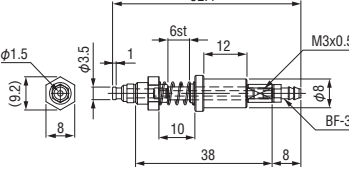
Suction Stems (Micro/Mini)

Can be selected according to the type of suction cup and allows secure suction.



Direct connection on jungle gym series parts is possible.

- The suction cup is sold separately. • Cup fixing system: embedded • Piping joint for suction stem (mini) was changed from BF-5 to BF-6.
- Holder section for suction stem (mini) pipe specification was changed from 13mm to 18mm.

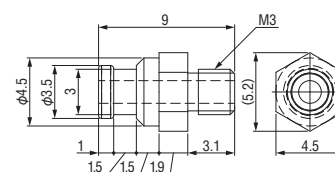
Suction stems (micro)		
Drawing		
Order code No.	210785	210818
TYPE	VFILB-M	VFILB-M-P8
Weight	5g	6g
Piping/Mounting	$\phi 4 / M6 P=0.75$	$\phi 4 / \phi 8$
Applicable cup size	VAPH-4 (6) M $\Rightarrow$ 3-4 / VAPH (F)-3C-3 $\Rightarrow$ 3-6 / $\phi 1.2 \sim 3.5 \Rightarrow$ 3-12	

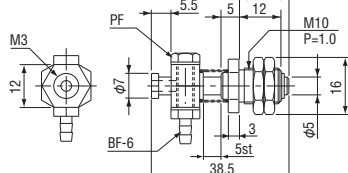
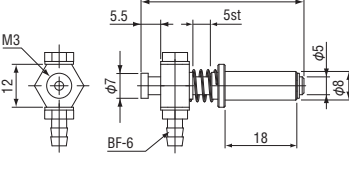
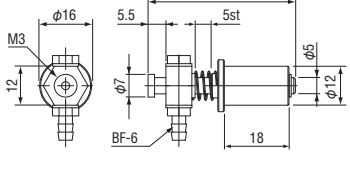


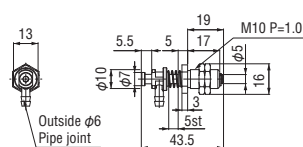
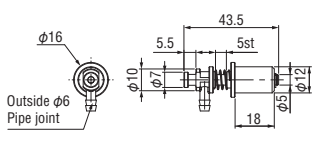
Suction fitting attach head/M3, micro

Order code No.	131316
TYPE	N01891-201

- Weight : 1g • W/ gasket
- Target: suction stem (micro), suction stem non-rotate (micro)



Suction Stems (Mini)			
Drawing (5st)			
Order code No.	211029	211030	211031
TYPE	VFIL1-SS-5	VFIL2-SS-5-P8	VFIL2-SS-5-P12
Weight	14g	9g	13g
Piping/Mounting	$\phi 6 / M10 P=1.0$	$\phi 6 / \phi 8$	$\phi 6 / \phi 12$
Applicable cup size	$\phi 4 \sim 14 \Rightarrow$ 3-4,7,8 / TR-1062-1 $\sim 4M \Rightarrow$ 3-6 / $\phi 1.2 \sim 3.5 \Rightarrow$ 3-12		

Resin Suction stem (Mini)		
Drawing (5st)		
Order code No.	211109	211105
TYPE	VFILP-SS-5	VFILP-SS-5-P12
Weight	9g	4g
Piping/Mounting	$\phi 6 / M10 P=1.0$	$\phi 6 / \phi 12$
Applicable cup size	$\phi 4 \sim 14 \Rightarrow$ 3-4,7,8 / TR-1062-1 $\sim 4M \Rightarrow$ 3-6 / $\phi 1.2 \sim 3.5 \Rightarrow$ 3-12	

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

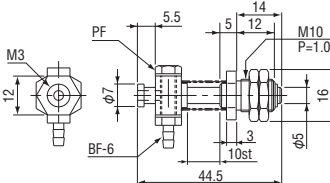
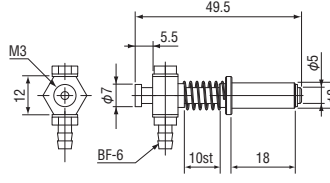
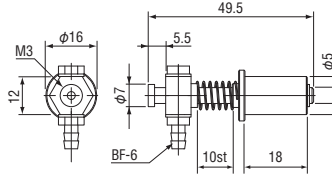
Various Products Information

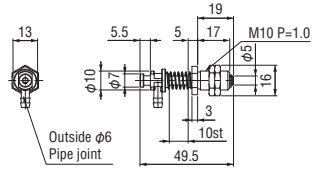
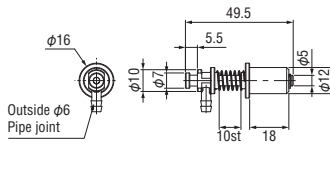


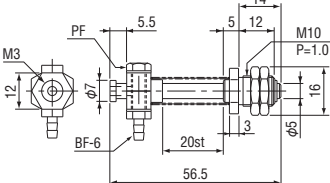
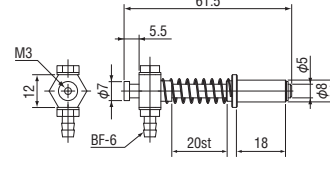
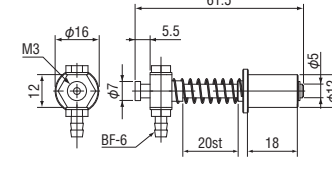
Suction Stems (Mini)

Can be selected according to the type of suction cup and allows secure suction.

- The suction cup is sold separately. • Cup fixing system: embedded • Piping joint for suction stem (mini) was changed from BF-5 to BF-6.
- Holder section for suction stem (mini) pipe specification was changed from 13mm to 18mm.

Suction Stems (Mini)			
Drawing (10st)			
Order code No.	211032	211033	211034
TYPE	VFIL1-SS-10	VFIL2-SS-10-P8	VFIL2-SS-10-P12
Weight	15g	9g	14g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ8	φ6 / φ12
Applicable cup size	φ4 ~ 14 ⇒ 3-4,7,8 / TR-1062-1 ~ 4M ⇒ 3-6 / φ1.2 ~ 3.5 ⇒ 3-12		

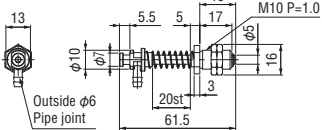
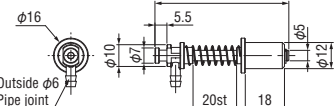
Resin Suction stem (Mini)		
Drawing (10st)		
Order code No.	211110	211106
TYPE	VFILP-SS-10	VFILP-SS-10-P12
Weight	9g	4g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ4 ~ 14 ⇒ 3-4,7,8 / TR-1062-1 ~ 4M ⇒ 3-6 / φ1.2 ~ 3.5 ⇒ 3-12	

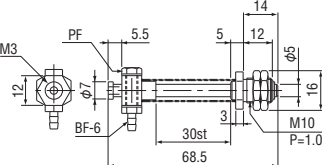
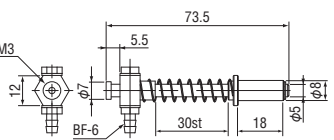
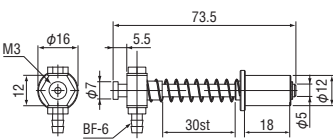
Suction Stems (Mini)			
Drawing (20st)			
Order code No.	211035	211036	211037
TYPE	VFIL1-SS-20	VFIL2-SS-20-P8	VFIL2-SS-20-P12
Weight	15g	10g	14g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ8	φ6 / φ12
Applicable cup size	φ4 ~ 14 ⇒ 3-4,7,8 / TR-1062-1 ~ 4M ⇒ 3-6 / φ1.2 ~ 3.5 ⇒ 3-12		

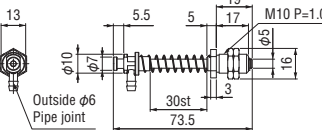
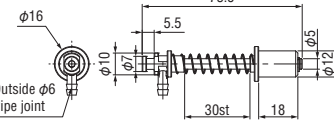


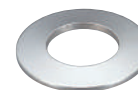
Direct connection on jungle gym series parts is possible.

- The suction cup is sold separately. • Cup fixing system: embedded

Resin Suction stem (Mini)		
Drawing (20st)		
Order code No.	211111	211107
TYPE	VFILP-SS-20	VFILP-SS-20-P12
Weight	10g	6g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ4 ~ 14 ⇒ 3-4,7,8 / TR-1062-1 ~ 4M ⇒ 3-6 / φ1.2 ~ 3.5 ⇒ 3-12	

Suction Stems (Mini)			
Drawing (30st)			
Order code No.	211038	211039	211040
TYPE	VFIL1-SS-30	VFIL2-SS-30-P8	VFIL2-SS-30-P12
Weight	17g	11g	15g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ8	φ6 / φ12
Applicable cup size	φ4 ~ 14 ⇒ 3-4,7,8 / TR-1062-1 ~ 4M ⇒ 3-6 / φ1.2 ~ 3.5 ⇒ 3-12		

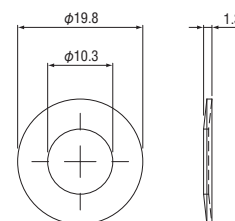
Resin Suction stem (Mini)		
Drawing (30st)		
Order code No.	211112	211108
TYPE	VFILP-SS-30	VFILP-SS-30-P12
Weight	11g	7g
Piping/Mounting	φ6 / M10 P=1.0	φ6 / φ12
Applicable cup size	φ4 ~ 14 ⇒ 3-4,7,8 / TR-1062-1 ~ 4M ⇒ 3-6 / φ1.2 ~ 3.5 ⇒ 3-12	



Taper washer (mini)

Order code No.	371362
TYPE	φ 10 taper washer for VFIL-SS

- Use when fixing a suction stem to the plate.
- Target: suction stem (mini), suction stem non-rotate (mini, small)



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Suction Stem (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
- Holder section for suction stem (small) pipe specification was changed from 16mm to 21mm.

Suction stem (small)			
Drawing (5st)			
Order code No.	210974	211006	211007
TYPE	VFIL-S-5A	VFIL1-S-5-P12	VFIL1-S-5-P20
Weight	20g	15g	22g
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12	φ6 / φ20
Applicable cup size	φ15 ~ 45 → 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is φ5 ~ 22 → 3-12,14,15		

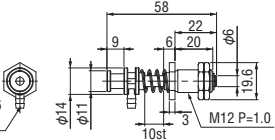
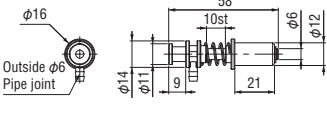
Resin Suction stem (small)		
Drawing (5st)		
Order code No.	211097	211092
TYPE	VFILP-S-5	VFILP-S-5-P12
Weight	16g	7g
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12
Applicable cup size	φ15 ~ 45 → 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is φ5 ~ 22 → 3-12,14,15	

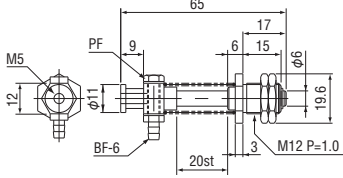
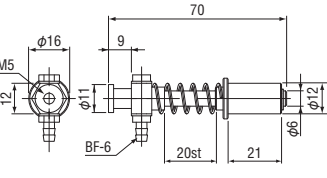
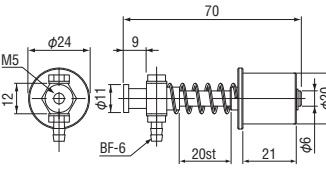
Suction stem (small)			
Drawing (10st)			
Order code No.	210975	211008	211009
TYPE	VFIL-S-10A	VFIL1-S-10-P12	VFIL1-S-10-P20
Weight	21g	16g	29g
Piping/Mounting	φ6 / M12 P=1.0	φ6 / φ12	φ6 / φ20
Applicable cup size	φ15 ~ 45 → 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is φ5 ~ 22 → 3-12,14,15		

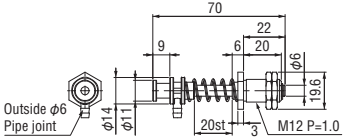
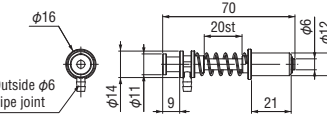


Direct connection on jungle gym series parts is possible.

- The suction cup is sold separately. • Cup fixing system: embedded
- Holder section for suction stem (small) pipe specification was changed from 16mm to 21mm.

Resin Suction stem (small)	 NEW	 NEW Please kindly use it by pressing into the bottom when fixing.
Drawing (10st)		
Order code No.	211098	211093
TYPE	VFILP-S-10	VFILP-S-10-P12
Weight	16g	7g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$
Applicable cup size	$\phi 15 \sim 45 \Rightarrow$ 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is $\phi 5 \sim 22 \Rightarrow$ 3-12,14,15	

Suction stem (small)			
Drawing (20st)			
Order code No.	210976	211010	211011
TYPE	VFIL-S-20A	VFIL1-S-20-P12	VFIL1-S-20-P20
Weight	22g	18g	31g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$	$\phi 6 / \phi 20$
Applicable cup size	$\phi 15 \sim 45 \Rightarrow$ 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is $\phi 5 \sim 22 \Rightarrow$ 3-12,14,15		

Resin Suction stem (small)	 NEW	 NEW Please kindly use it by pressing into the bottom when fixing.
Drawing (20st)		
Order code No.	211099	211094
TYPE	VFILP-S-20	VFILP-S-20-P12
Weight	17g	8g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$
Applicable cup size	$\phi 15 \sim 45 \Rightarrow$ 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is $\phi 5 \sim 22 \Rightarrow$ 3-12,14,15	

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

Suction Stem (Small)



Direct connection on jungle gym series parts is possible.

- The suction cup is sold separately. • Cup fixing system: embedded
- Holder section for suction stem (small) pipe specification was changed from 16mm to 21mm.

Suction stem (small)			
Drawing (30st)			
Order code No.	210977	211012	211013
TYPE	VFIL-S-30A	VFIL1-S-30-P12	VFIL1-S-30-P20
Weight	24g	19g	32g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$	$\phi 6 / \phi 20$
Applicable cup size	$\phi 15 \sim 45 \Rightarrow 3-4,5,6,7,8$ (3-6 is selected from TR-1062-1 ~ 4) / SQN type is $\phi 5 \sim 22 \Rightarrow 3-12,14,15$		

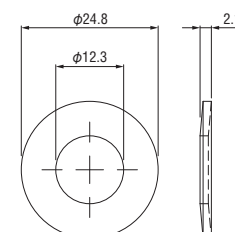
Resin Suction stem (small)		
Drawing (30st)		
Order code No.	211100	211095
TYPE	VFILP-S-30	VFILP-S-30-P12
Weight	18g	9g
Piping/Mounting	$\phi 6 / M12 P=1.0$	$\phi 6 / \phi 12$
Applicable cup size	$\phi 15 \sim 45 \Rightarrow 3-4,5,6,7,8$ (3-6 is selected from TR-1062-1 ~ 4) / SQN type is $\phi 5 \sim 22 \Rightarrow 3-12,14,15$	



Taper washer (small)

Order code No.	370244
TYPE	$\phi 12$ taper washer for VFIL-S

- Use when fixing a suction stem to the plate.
- Target: suction stem (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.

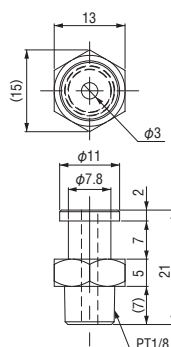
Suction stems (large)				
Drawing				
Order code No.	210886	210887	210888	210889
TYPE	VFI-L-20-P20	VFI-L-50-P20	VFI-L-20-M17	VFI-L-50-M17
Weight	45g	55g	50g	60g
Piping/Mounting	φ6 (RBF → 6-6 and BF-6 → 6-5 are necessary for piping) / φ20			
Applicable cup size	φ24 ~ 118 → 3-7,8,11,13,14,15,17			

Suction stems (large)	
* Use within 100mm stroke.	
Drawing	
Order code No.	210917
TYPE	VFI-L-100-M22
Weight	220g
Piping/Mounting	φ6 / M22 P=1.5
Applicable cup size	φ24 ~ 70

Suction stem attachment head, embedded type, small

Order code No.	230066
TYPE	XL0037-106

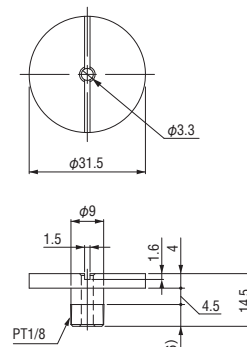
- Weight : 5g
- Target: suction stem (large), suction stem non-rotate (1/8 series), suction stem non-rotate (large)



Suction stem attachment head, screw attach type

Order code No.	230067
TYPE	XL0037-103

- Weight : 10g
- Target: suction stem (large), suction stem non-rotate (1/8 series), suction stem non-rotate (large)



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Suction stem with locking mechanism



Direct connection on jungle gym series parts is possible.

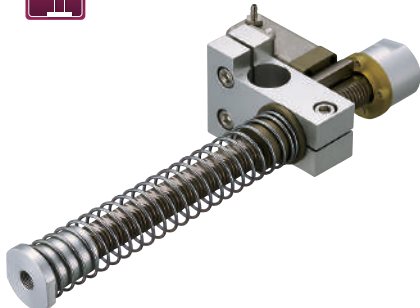
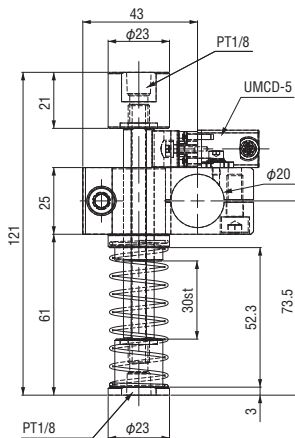
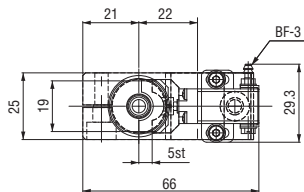
Non-rotating suction stems. These feature a long stroke, these feature a long stroke and the ability to lock the stems position.



Suction stems locking mechanism 50mm

Order code No.	110556
TYPE	L10761-200

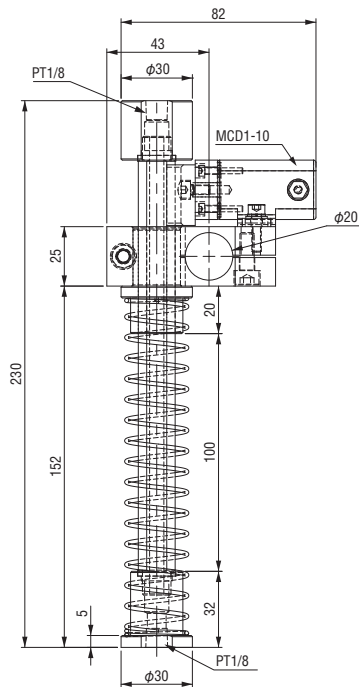
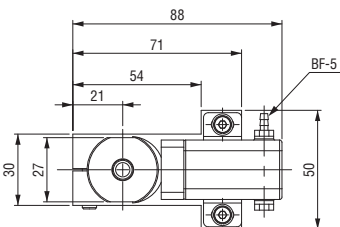
- Weight : 200g
- Piping : $\phi 6$ (RBF **6-6**) and BF-6 **6-5** are necessary for piping)
- Mounting : $\phi 20$



Suction stems locking mechanism 100mm

Order code No.	110565
TYPE	L10761-100

- Weight : 560g
- Piping : $\phi 6$ (RBF **6-6**) and BF-6 **6-5** are necessary for piping)
- Mounting : $\phi 20$





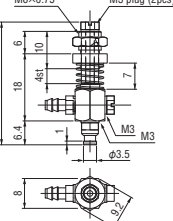
Suction Stems Non-Rotate (Micro/Mini/Small)



Direct connection on jungle gym series parts is possible.

Exchangeable head for suction stem.

- Mounting hole diameter of end section piping joint of VFILB2-SSH (mini) and SH (small) was changed from M4 to M5.
- End section piping joint of VFILB2-SSH (mini) and SH (small) was changed to BF-6.

Applicable cup size	VAPH-4 (6) M → 3-4 / VAPH (F)-3C-3 → 3-6 / $\phi 1.2 \sim 3.5 \rightarrow 3-12$
Suction stems non-rotate (micro)	
Drawing	
Order code No.	210823
TYPE	VFILB-MSH
Weight	5g
Piping/Mounting	$\phi 4 / M6 P=0.75$

* See 3-21 for more details about suction stem accouchement head M3 micro.

► Option of VFILB-SSH



Suction stem attachment head M5 mini

Order code No.	131208
TYPE	N01892-201

- Mounting screw M5
- W/ gasket

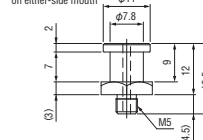
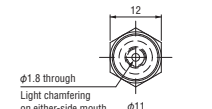
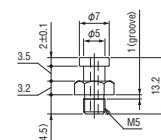
► Option of VFILB-SH

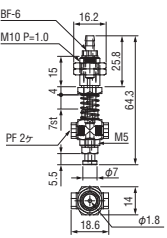


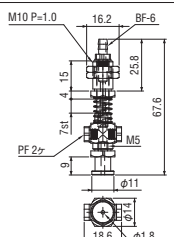
Suction stem attachment head M5 small

Order code No.	131209
TYPE	N01892-301

- Mounting screw M5
- W/ gasket



Applicable cup size	$\phi 4 \sim 14 \rightarrow 3-4, 7, 8$ / TR-1062-1 $\sim 4M \rightarrow 3-6$ / $\phi 1.2 \sim 3.5 \rightarrow 3-12$
Suction stems non-rotate (mini)	
Drawing	
Order code No.	211041
TYPE	VFILB2-SSH
Weight	28g
Piping/Mounting	$\phi 6 / M10 P=1.0$

Applicable cup size	$\phi 5 \sim 45 \rightarrow 3-4, 5, 6, 7, 8$ (3-6 is selected from TR-1062-1 ~ 4) / SQN type is $\phi 5 \sim 22 \rightarrow 3-12, 14, 15$
Suction stems non-rotate (small)	
Drawing	
Order code No.	211045
TYPE	VFILB2-SH
Weight	32g
Piping/Mounting	$\phi 6 / M10 P=1.0$

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

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Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

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Tool / Jig

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Suction Stem Non-Rotate (1/8 Connection/Angle/Large)

Exchangeable head for suction stem.



Direct connection on jungle gym series parts is possible.

- Mounting hole diameter of end section piping joint of VFILB2-SH was changed from M4 to M5.
- End section piping joint of VFILB2-SH was changed to BF-6.

Suction stem non-rotate mini (1/8)				
Drawing				
Order code No.	211049	211050	211051	211052
TYPE	VFILB2-SH 1/8	VFILB2-SH 1/8-P12	VFILB2-SH 1/8-20	VFILB2-SH 1/8-20-P12
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 → 3-7,8,11,13,14,15,17			

* Mounting bracket of suction cup is not attached. Use suction attach head-embedded type-for small 3-27.

Suction stem non-rotate (angle adjustment)				
Drawing				
Order code No.	210991	210993	210992	210994
TYPE	VFILBR-H-10	VFILBR-H-10-P12	VFILBR-H-20	VFILBR-H-20-P12
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 → 3-4,5,6,7,8 (3-6 is selected from TR-1062-1 ~ 4) / SQN type is φ5 ~ 22 → 3-12,14,15			

* Joint for air supply hole is not included. * Mounting bracket of suction cup is not attached. Use suction attach head M5 mini/small 3-29.

Suction Stem Non-Rotate (Large)	
Drawing	
Order code No.	210788
TYPE	VFIL-H
Weight	102g
Piping/Mounting	φ6 (RBF → 6-6) and BF-6 → 6-5 are necessary for piping / φ20
Applicable cup size	φ33 ~ 63 → 3-17

- * Joint for air supply hole is not included.
- * Mounting bracket of suction cup is not attached. Use suction attach head-embedded type-for small 3-27.
- Since the tip is PT1/8 female screw, fixture 1/8G of special cup is supported.



Suction Stem ↔ Suction Cup Selection Table

Please choose the target products from pad size and suction stem.

	bracket	Suction stem				Suction stems non-rotate					
		Suction stem(micro) VFILB-M	Suction Stems(Mini) VFILB-SS	Suction stem(small) VFIL-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 stem non-rotate mini(1/8) VFILB2-SH	Suction stem non-rotate(angle adjusted) VFILBR-H	Suction Stem Non-Rotate(Large) VFIL-H
 Suction Cups *1	Applicable cup size										
	φ 3mm	○	×	×	×	○	×	×	×	×	×
	φ 4mm (micro)	○	×	×	×	○	×	×	×	×	×
	φ 6mm (micro)	○	×	×	×	○	×	×	×	×	×
	φ 4mm	×	○	×	×	×	○	×	×	○	×
	φ 6mm	×	○	×	×	×	○	×	×	○	×
	φ 8mm	×	○	×	×	×	○	×	×	○	×
	φ 10mm	×	○	×	×	×	○	×	×	○	×
	φ 12mm	×	○	×	×	×	○	×	×	○	×
	φ 14mm	×	○	×	×	×	○	×	×	○	×
	φ 15mm	×	×	○	×	×	×	○	×	○	×
	φ 20mm	×	×	○	×	×	×	○	×	○	×
	φ 25mm	×	×	○	×	×	×	○	×	○	×
	φ 30mm	×	×	○	×	×	×	○	×	○	×
	φ 35mm	×	×	○	×	×	×	○	×	○	×
	φ 40mm	×	×	○	×	×	×	○	×	○	×
	φ 45mm	×	×	○	×	×	×	○	×	○	×
	φ 50mm	×	×	×	○	×	×	×	○	×	○
	φ 60mm	×	×	×	×	×	×	×	○	×	○
	φ 70mm	×	×	×	×	×	×	×	○	×	○
 Suction Cups Small *5	φ 6mm	×	×	○	×	×	×	○	×	○	×
	φ 8mm	×	×	○	×	×	×	○	×	○	×
	φ 10mm	×	×	○	×	×	×	○	×	○	×
	φ 12mm	×	×	○	×	×	×	○	×	○	×
	φ 1.2mm	○*2	○*3	×	×	○*2	×	×	×	×	×
 Bellows type Suction Cups *4	φ 1.8mm	○*2	○*3	×	×	○*2	×	×	×	×	×
	φ 2mm	○*2	○*3	×	×	○*2	×	×	×	×	×
	φ 3.5mm	○*2	○*3	×	×	○*2	×	×	×	×	×
	φ 5mm	×	×	×	×	×	×	×	×	×	×
	φ 5.5mm	×	×	×	×	×	×	×	×	×	×
	φ 6mm	×	×	×	×	×	×	×	×	×	×
	φ 6.5mm	×	×	×	×	×	×	×	×	×	×
	φ 8mm	×	×	×	×	×	×	×	×	×	×
	φ 9.3mm	×	×	×	×	×	×	×	×	×	×
	φ 10mm	×	×	×	×	×	×	×	×	×	×
	φ 11mm	×	×	×	×	×	×	×	×	×	×
	φ 12.7mm	×	×	×	×	×	×	×	×	×	×
	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 (Dval with metal fittings) *4	2×4mm	○*2	○*3	×	×	○*2	×	×	×	×	×
	3.5×7mm	○*2	○*3	×	×	○*2	×	×	×	×	×
	5×15mm	×	×	×	×	×	×	×	×	×	×
	6×18mm	×	×	×	×	×	×	×	×	×	×
	8×24mm	×	×	×	×	×	×	×	×	×	×
	10×30mm	×	×	×	×	×	×	×	×	×	×
	15×45mm	×	×	×	×	×	×	×	×	×	×

Attachment head to use			
A	B	C	D
Suction stem attachment head, embedded type, small	Suction stem attachment head, screw attach type	Suction stem attachment head M5 mini	Suction stem attachment head M5 small
PT1/8 mounting hole ↓ Small	PT1/8 Suction Cup (φ 50mm ~) mounting attach head	M5 mounting hole ↓ mini	M5 mounting hole ↓ Small

- * 1 The photograph shows the silicon suction pad, it will applies for different materials (urethane, fluorine and nitrile).
- * 2 Please remove the front suction stem attach head, before use it.
- * 3 Please install it to the front screw hole before use it.
- * 4 The photograph shows the silicon suction pad, it is applies for different materials (mark less rubber).
- * 5 Use the small suction stem applicable type of the suction pad (TR / TRN).

Quick Chuck Change
Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System
Grip
Mini Cylinder
Accessories for Mini Cylinder
Container Cylinders
Accessory for Container Cylinder
Grippers
Rubber Material / Grip Pad
Suction
Suction Cups
Suction Stem
Pad in Pad
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
Air Management / Sensors
Air Management
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Tool / Jig
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- Suction cup and joint are optionally available.

Suction stem fixed mini



- ### Suction stem fixed for small



-

Suction stem mini for micro mini cylinder



-

Suction stem mini for mini cylinder



-
- Technical drawing of a bolt and nut assembly. The drawing includes a side view, a top view, and a detail view of the bolt head. Dimensions are given in millimeters.
- Side View:** Shows a bolt with a diameter of $\phi 3$ and a length of 10, and a nut with a diameter of $\phi 3$ and a length of 10. The bolt is labeled M5X0.8 through and the nut is labeled M4X0.7. The total length of the assembly is 23.5.
 - Top View:** Shows the bolt head with a diameter of $\phi 3$ and a length of 10.
 - Detail View:** Shows the bolt head with a diameter of $\phi 3$ and a length of 10.

Suction stem small for micro mini cylinder



-

Suction stem small for mini cylinder



- 
- Example of use

3-32



Adjuster

Height of suction stem can be adjusted.

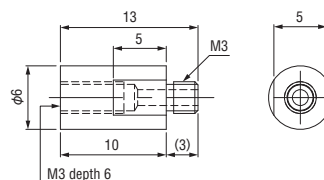
- Extension between suction cup and stem is possible.



Suction stem bracket micro

Order code No.	230072
TYPE	XL0061-100

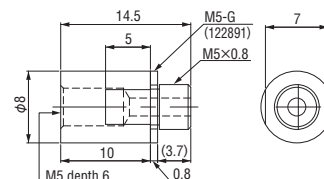
● Weight : 2g



Suction stem bracket mini

Order code No.	230114
TYPE	XL0061-200

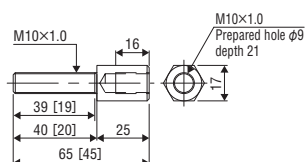
● Weight : 3g



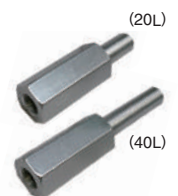
Suction stem bracket • mini (For Suction stem 5st)

	20L	40L
Order code No.	022544	022545
TYPE	CP-023AL (20L)	CP-024AL (40L)

● Weight : 17g (20L) 21g (40L)
● Targetsuction stem : VFIL1-SS-5
● Suction stem nut is not attached.



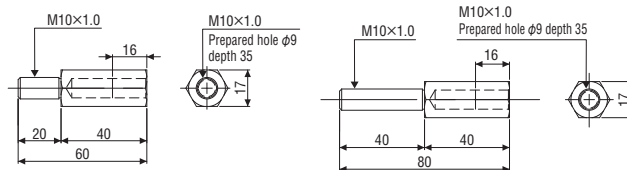
* Size in [] shows size of 20L.



Suction stem bracket • mini (For Suction stem 5/10/20st)

	20L	40L
Order code No.	023338	023339
TYPE	CP-AJM20	CP-AJM40

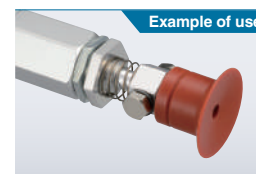
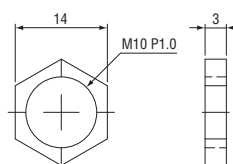
● Weight : 24g (20L) 28g (40L)
● Targetsuction stem : VFIL1-SS-5/10/20
● Suction stem nut is not attached.



Suction stem nut • mini (trivalent white)

Order code No.	120482
TYPE	VFIL-M10 (10*14*3 P1.0)

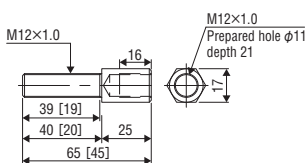
● Weight : 2g ● Screw diameter : M10



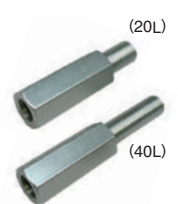
Suction stem bracket • small (For Suction stem 5st)

	20L	40L
Order code No.	022542	022543
TYPE	CP-021AL (20L)	CP-022AL (40L)

● Weight : 17g (20L) 23g (40L)
● Targetsuction stem : VFIL-S-5
● Suction stem nut is not attached.



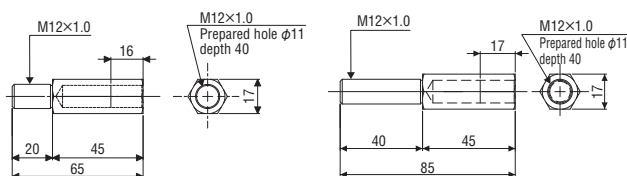
* Size in [] shows size of 20L.



Suction stem bracket • small (For Suction stem 5/10/20st)

	20L	40L
Order code No.	023340	023341
TYPE	CP-AJS20	CP-AJS40

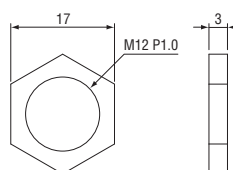
● Weight : 25g (20L) 31g (40L)
● Targetsuction stem : VFIL1-S-5/10/20
● Suction stem nut is not attached.



Suction stem nut • small (trivalent white)

Order code No.	120483
TYPE	VFIL-M12 (12*17*3 P1.0)

● Weight : 3g ● Screw diameter : M12



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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
Rectangular Tube
Base Aluminum Material
Sliding Chuck

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

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Suction Stem Angle Brackets

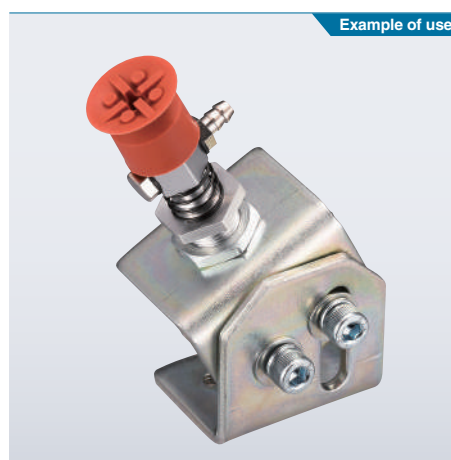
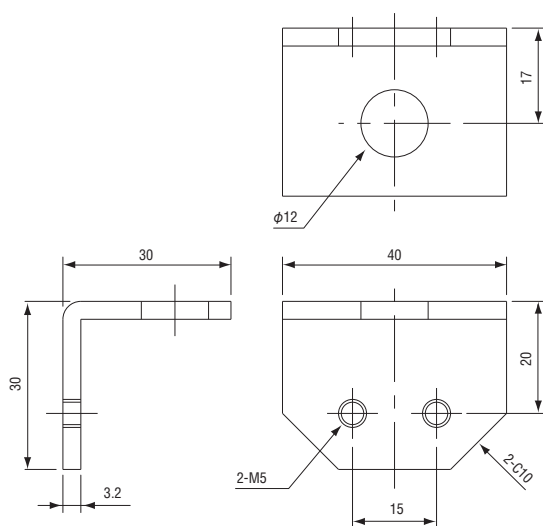
The angle can be adjusted according to the shape of workpiece.



Suction stem 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.



Example of use

● Photo shows right-hand mount type (CP-019R).

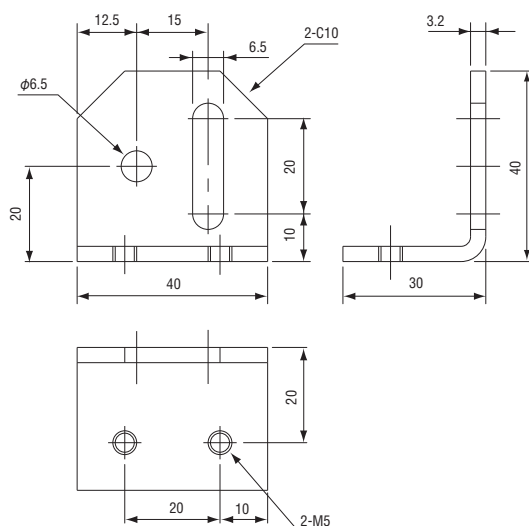
Suction ● Suction Stem



Suction stem angle bracket (L-lower)

Order code No.	370789
TYPE	CP-019L

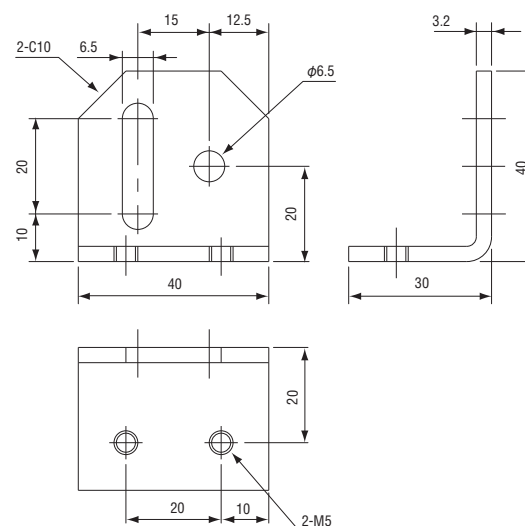
- Weight : 54g
- Fixing bolt M5x15 is available separately.
- Assembly of parts is not available in delivery for an order.



Suction stem 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.



MEMO

Handwriting practice area with 20 sets of dashed lines for tracing on a blue-lined background.



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.

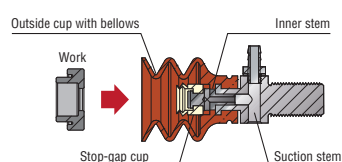
Example of combination



VAPH-30-3 Example of use

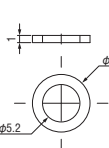
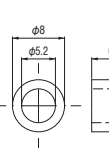


EPLG-50-SS

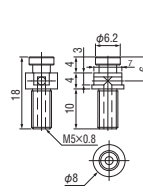
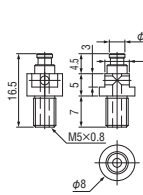
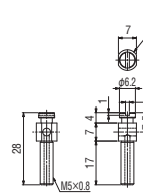
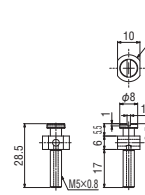
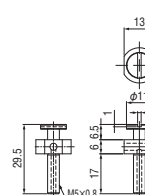
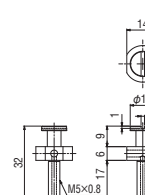


Composed of outside Bellows cap, suction metal fixture, tamping cap, and middle hardware. The flat face of a work is adsorbed with the outside Bellows cap. And holes are stopped up with the tamping cap.

Stem spacer

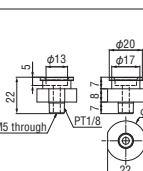
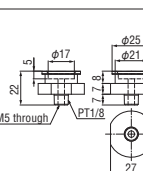
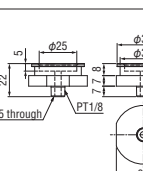
Stem spacer		
Drawing		
Order code No.	210913	187128
TYPE	VFILK-P-S	SP-S5-6
Weight	0.3g	2.0g
Applicable stem	—	

Inner Stem

Inner stem						
	For mini	For micro				
Drawing						
Order code No.	210911	210912	211118	211119	211120	211121
TYPE	VFILK-PS-M5	VFILK-PSS-M5	VFILK-PIA-M5	VFILK-PIB-M5	VFILK-PIC-M5	VFILK-PID-M5
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 Stem

Outside stem			
Drawing			
Order code No.	211115	211116	211117
TYPE	VFILA-PHB-1/8	VFILA-PHC-1/8	VFILA-PHD-1/8
Weight	13.0g	18.0g	34.0g
Applicable inner pad	EPLG-30-S5, EPLG-40L	EPLG-40-S5	EPLG-50-S5
Applicable stem	Suction stem large, non-rotate (1/8 large)		

The combination of pad in pad, please refer to the selection table **3-38**.

Pad in Pad



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

Inner Cup

Applicable cup size	Reinforced silicone (brown)			Silicone (transparent white)	
	φ 3mm	φ 4mm	φ 6mm	φ 6mm	φ 8mm
Inner cup		* Micro	* Micro		
Drawing					
Order code No.	210897	210789	210790	042038	042039
TYPE	VAPH-3C-3	VAPH-4M	VAPH-6M	EPJG-6-S	EPJG-8-S
Weight	1.0g	0.2g	0.3g	0.15g	0.25g
Applicable stem	Micro, VFILK-PSS-M5			Mini, VFILK-PS-M5, VFILK-PIA-M5	

Applicable cup size	Silicone (transparent white)				
	φ 10mm	φ 15mm	φ 20mm	φ 25mm	φ 30mm
Inner cup					
Drawing					
Order code No.	042040	042041	042068	042069	042070
TYPE	EPJG-10-S	EPJG-15-S	EPJG-20-S	EPJG-25-S	EPJG-30-S
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 Cup

Applicable cup size	Reinforced silicone (brown)				Silicone (transparent white)		
	φ 15mm	φ 20mm	φ 30mm	φ 40mm	φ 30mm	φ 40mm	φ 50mm
Outside cup							
Drawing							
Order code No.	210697	210661	210662	210663	042071	042072	042073
TYPE	VAPH-15C-3	VAPH-20C-3	VAPH-30C-3	VAPH-40C-3	EPLG-30-S5	EPLG-40-S5	EPLG-50-S5
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 VFIL-SH → (3-24,25,26,29)				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.	196688
TYPE	TEST KIT VERSION (1)

Contents

Page	Product name	Order code No.	TYPE	Qty	Applicable cup size
Outside cup with bellows	① Bellow Suction Cup (silicon, brown)	210697	VAPH-15C-3	1	⑦⑧
	② Bellow Suction Cup (silicon, brown)	210661	VAPH-20C-3	1	⑦⑧⑩⑪
	③ Bellow Suction Cup (silicon, brown)	210662	VAPH-30C-3	1	⑦⑧⑩⑪⑫
	④ Bellow Suction Cup (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 Cup (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)

Tool Changer

Automated Chuck Exchange System

Grip

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Accessory for Container Cylinder

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Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

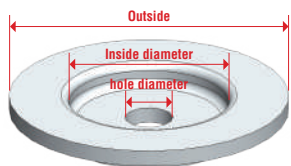
Various Products Information



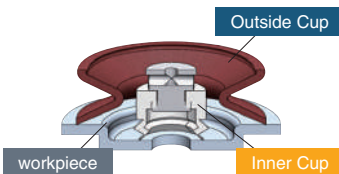
Pad in Pad selection List

Through the combination of parts selection, make it possible to take out even the parts with hole.

Applied Parts Sample View



Suction state image View



Sample Assembly



				Outside cup								
				Order code No.	210697	210661	210662	210663	042071	042072	042073	
				TYPE	VAPH-15C-3	VAPH-20C-3	VAPH-30C-3	VAPH-40C-3	EPLG-30-S5	EPLG-40-S5	EPLG-50-S5	
				Applicable cup size	φ15	φ20	φ30	φ40	φ30	φ40	φ50	
				Pad inner diameter	φ8	φ11	φ15	φ18	φ19	φ25.7	φ35.7	
Inner cup	Order code No.	TYPE	Applicable cup size	Product outer diameter Product hole diameter	φ12 or larger	φ15 or larger	φ19 or larger	φ22 or larger	φ21 or larger	φ26 or larger	φ37 or larger	
	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	B.C	B.C	B.C	
							G	H	I			
				1.2.3	1.2.3	4.5.6	4.5.6	4.5.6	4.5.6			
042040	EPJG-10-S	φ10	φ0.1 ~ φ6			− 1.3mm	− 6.3mm	− 4.1mm	− 5.8mm	− 6.8mm		
						B.D	B.D	B.D	B.D	B.D	B.D	
							G	H	I			
042041	EPJG-15-S	φ15	φ0.1 ~ φ10			1.2.3	1.2.3	4.5.6	4.5.6	4.5.6		
						− 0.3mm	− 5.3mm	− 4.1mm	− 5.8mm	− 6.8mm		
									D	D		
042068	EPJG-20-S	φ20	φ0.1 ~ φ16							H	I	
										4.5.6	4.5.6	
										− 5.2mm	− 6.2mm	
042069	EPJG-25-S	φ25	φ0.1 ~ φ20							E	E	
										H	I	
										4.5.6	4.5.6	
042070	EPJG-30-S	φ30	φ0.1 ~ φ24								− 4.2mm	− 5.2mm
												E
											I	
											4.5.6	
											− 4.1mm	
											F	
											I	
											4.5.6	
											− 0.8mm	

* Please use this setting table as a reference example of the combination.

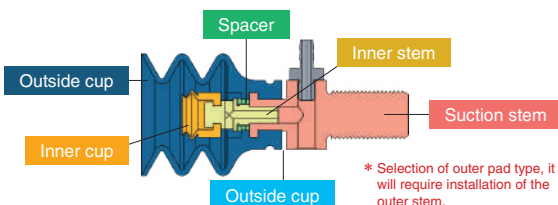
about Order code No.

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

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

Outside cup		
code	Order code No.	TYPE
G	211115	VFILA-PHB-1/8
H	211116	VFILA-PHC-1/8
I	211117	VFILA-PHD-1/8

Stem spacer		
code	Order code No.	TYPE
210913	1mm	VFILK-P-S
187128	6mm	SP-S5-6



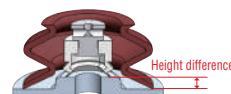
* Selection of outer pad type, it will require installation of the outer stem.

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.

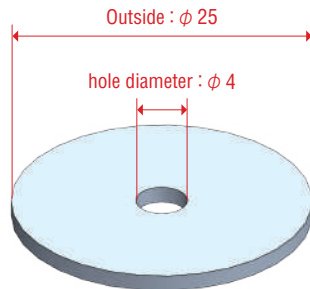




You can see moving images of products by using QR code reader of your smartphone.

► Selection method

e.g.1 Products with through hole Outside : $\phi 25$ Hole diameter : $\phi 4$ Height difference : 0mm



① Inner cup

The hole diameter of the product is $\phi 4$, so please select the pad that its hole diameter is more than $\phi 4$.

② 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.

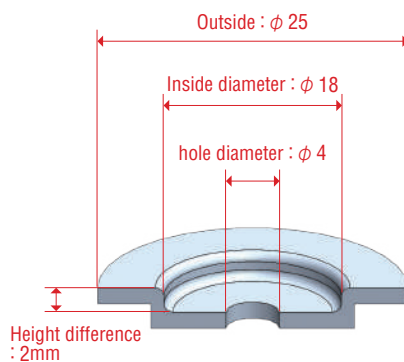
③ Spacer

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 ± 0 when in suction.

* The tolerance of air leak: ± 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



① Inner cup

The hole diameter of the product is $\phi 4$, so please select the pad that its hole diameter is more than $\phi 4$.

② 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.

③ 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: ± 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 I



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 II



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 III



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)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Air Ejector / Filter / Check Valve

Plastic Ejector



Lightweight and high-performance low-price ejector.

3-41

Small Air Filters



The product prevents water, oil, steel powder, and so on sucked from the vacuum side from entering the ejector.

3-43

Air Ejectors



Small, lightweight, and long life.

3-42

Small Check Valve for Suction Cup



Small check valves. Please attach the pad before use.

3-44

Specification

Product name		Order code No.	TYPE	Weight (g)	Page of details
Plastic ejector	Plastic ejector nozzle 1.0mm 	183988	SSBP-10-S2-SDA	22	3-41
	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	—	
Air ejectors		042034	ECV-10HS	80	3-42
Air ejector w/ switch		042035	ECV-10HSCK	120	
Small air filters		042036	EVFL-44	20	3-43
		042037	EVFL-66		
Small check valve for Suction Cup		184150	SSVK-M5	3	3-44
		184151	SSVK-G1/8	11	

3-40



Plastic Ejector Nozzle

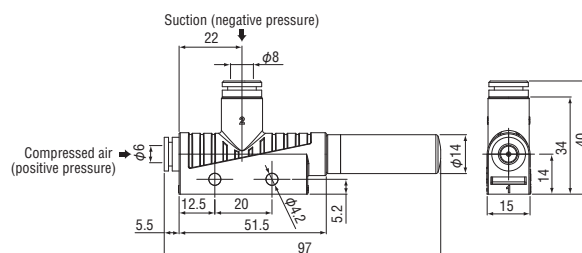
Lightweight and high-performance low-price ejector.



Plastic ejector nozzle 1.0mm

Order code No.	183988
TYPE	SSBP-10-S2-SDA

- Weight : 22g
- Recommended inner diameter of compressed air supply hose: 4mm (2m length)
- Recommended inner diameter of vacuum hose: 6mm (2 m length)



Plastic ejector nozzle 1.5mm

Order code No.	183989
TYPE	SSBP-15-S2-SDA

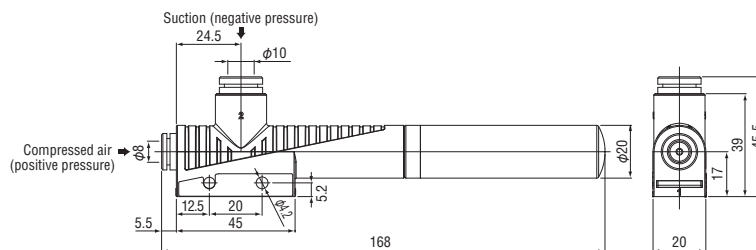
- Weight : 22g
- Recommended inner diameter of compressed air supply hose: 4mm (2m length)
- Recommended inner diameter of vacuum hose: 6mm (2 m length)



Plastic ejector nozzle 2.0mm

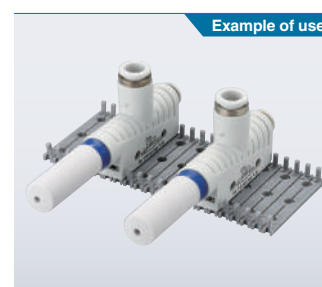
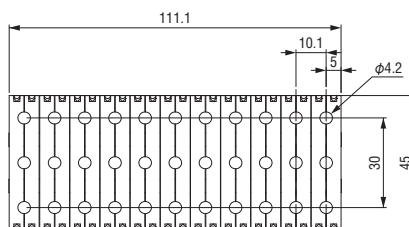
Order code No.	183991
TYPE	SSBP-20-S3-SDA

- Weight : 50g
- Recommended inner diameter of compressed air supply hose: 6mm (2m length)
- Recommended inner diameter of vacuum hose: 7mm (2 m length)



Plastic ejector clip mount base

Order code No.	183990
TYPE	SBEF-PL-110 * 45



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)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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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Jungle Gym
Let's Joint
Rectangular Tube
Base Aluminum Material
Sliding Chuck

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Lightweight Series

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Tool / Jig

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Various Products Information



Air Ejectors

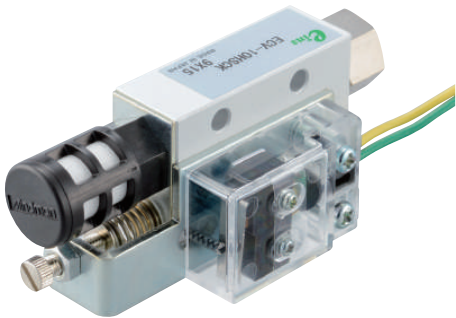
Small, lightweight, and long life.



Order code No.	042034
TYPE	ECV-10HS

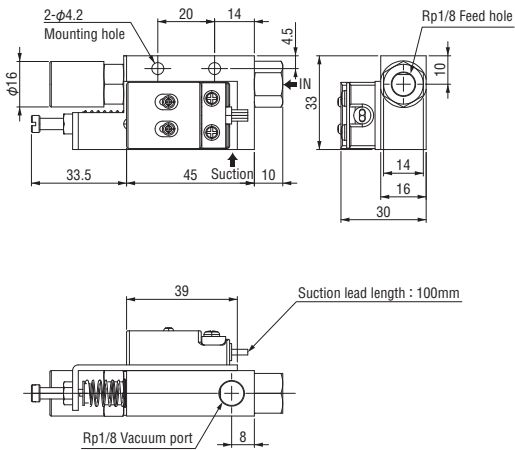
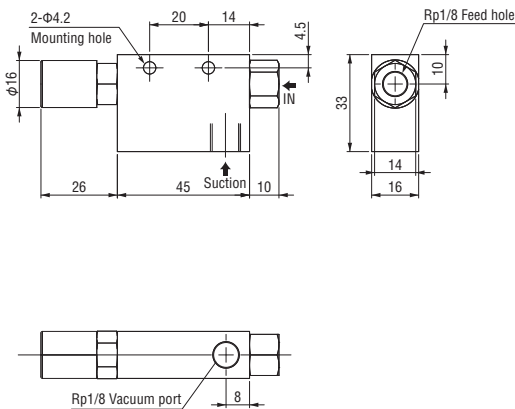
● Weight : 78g

▶ With vacuum switch



Order code No.	042035
TYPE	ECV-10HSCK

● Weight : 120g



Suction ● Air Ejector / Filter / Check Valve

Specification

Product name	TYPE	Nozzle diameter (mm)	Quantity of suction (L/min)	Vacuum pressure (kPa)	Air consumption (L/min)	Supply air (MPa)
Air ejectors	ECV-10HS	φ 1.0	27 (ANR)	-92	44 (ANR)	0.5
	ECV-10HSCK					

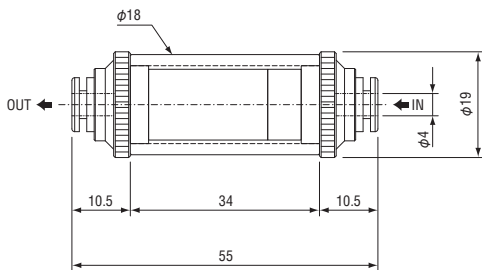


Small Air Filters

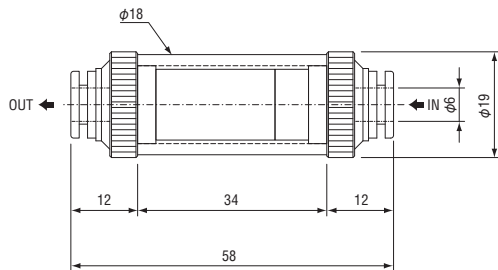
The product prevents water, oil, steel powder, and so on sucked from the vacuum side from entering the ejector.



Order code No.	042036
TYPE	EVFL-44
● Weight : 20g ● Directional	



Order code No.	042037
TYPE	EVFL-66
● Weight : 20g ● Directional	



Specification

Product name	TYPE	Tube size (mm)	Pressure resistance (MPa)	Pressure (kPa)	Nominal filtration rating (μm)
Small air filters	EVFL-44	φ4	0.5	-95.9~0	15
	EVFL-66	φ6			

* Vacuum filter

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

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.



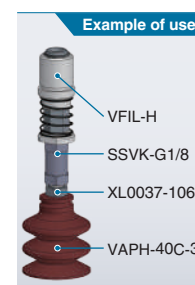
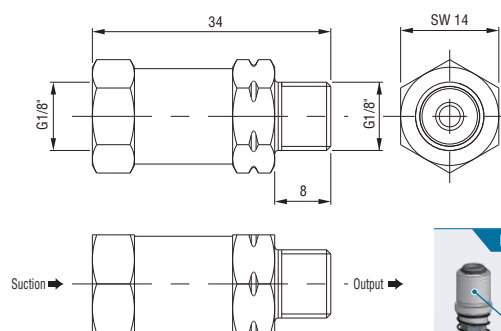
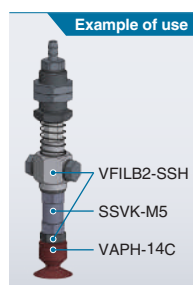
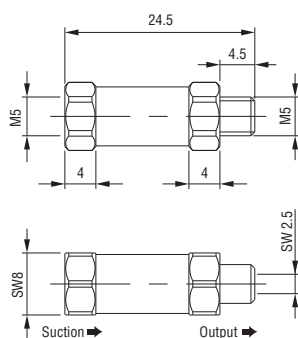
Order code No.	184150
TYPE	SSVK-M5

● Weight : 3g



Order code No.	184151
TYPE	SSVK-G1/8

● 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〉

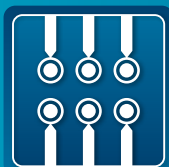
Suction cup	VAPH-15C
Check Valve	SSVK-M5
supply pressure	0.5MPa

Quantity of suction		(Unit : kPa)				
No. of uses		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

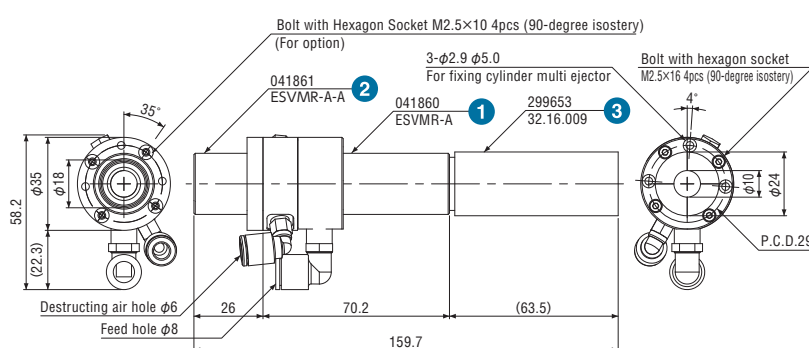
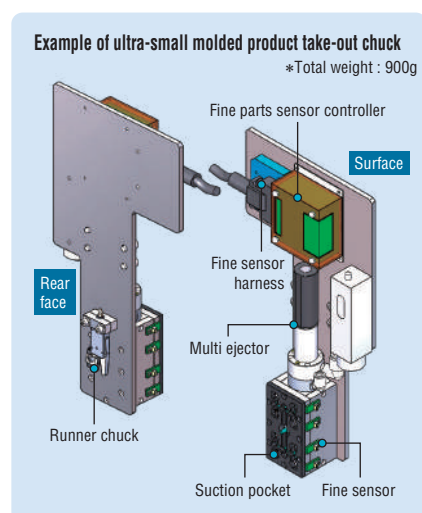
Handwriting practice area with 20 horizontal dashed lines.



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.	041860
TYPE	ESVMR-A

- 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.	041861
TYPE	ESVMR-A-A

- Weight : 19g
- Attachments: mounting bolt (M2.5 x 10) x 4

3



Silencer

Order code No.	299653
TYPE	32.16.009

- Weight : 13g
- Silence, Amount of suction fluid flow: 400 [L/min]

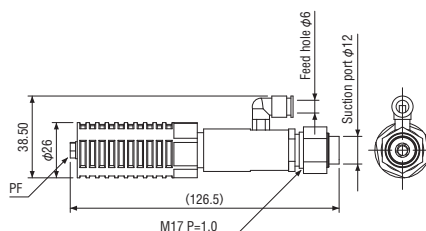
Suction ● Ultra Small Part Take Out



In-line cylinder multi ejector

Order code No.	041836
TYPE	ESVMR1-10-3

- Weight : 64g
- Air consumption : 210 [L/min]
- Suction flow rate : 260 [L/min]
- Noise : 85 [dB]



Silencer

Order code No.	110663
TYPE	L18382-106

- Weight : 22g

micro E.O.A.T.



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



Micro Parts Sensor Controller

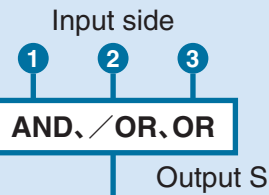
Order code No.	010521
TYPE	B-CONT-UNIT

● 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"



AND

Output S is turned on when all the inputs (1 2 3) are ON.

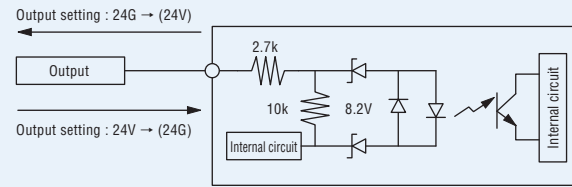
/OR

Output S is turned on when all the inputs (1 2 3) are OFF.

OR

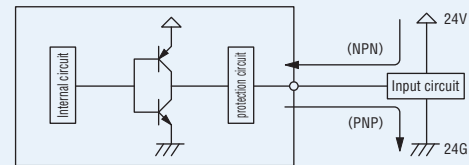
Output S is turned on when either of input (1 2 3) is ON.

Sensing input, OR switching input circuit configuration



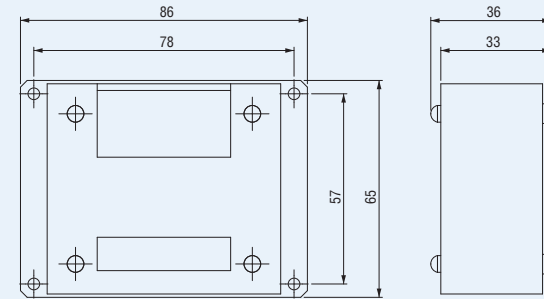
* Sensing input switching: change the input setting with the switch according to the output circuit specification of the customer (as shown in the drawing).

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-φ 3.5

Specification

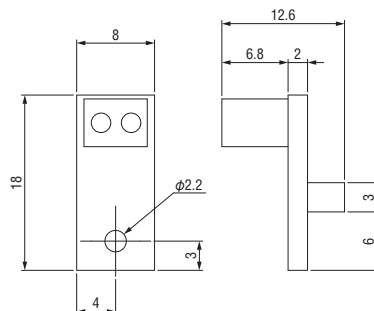
Power supply voltage (V)	Internal consumption current (mA)	Input current (mA)	Output current (mA)	Operating ambient humidity (%)	Ambient temperature (°C)	Operation condition
DC24 (±10%)	120 max. (DC24V)	10 or less / one point	100 (MAX)	35 ~ 80 (non-condensing)	0 ~ 40	There is no particulate and corrosive gas.



Fine sensor unit

Order code No.	010519
TYPE	B-SENS-UNIT

● Weight : 1g



Fine sensor harness

Order code No.	010522
TYPE	B-SENS-H

● Weight : 150g
● Length : 1m

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

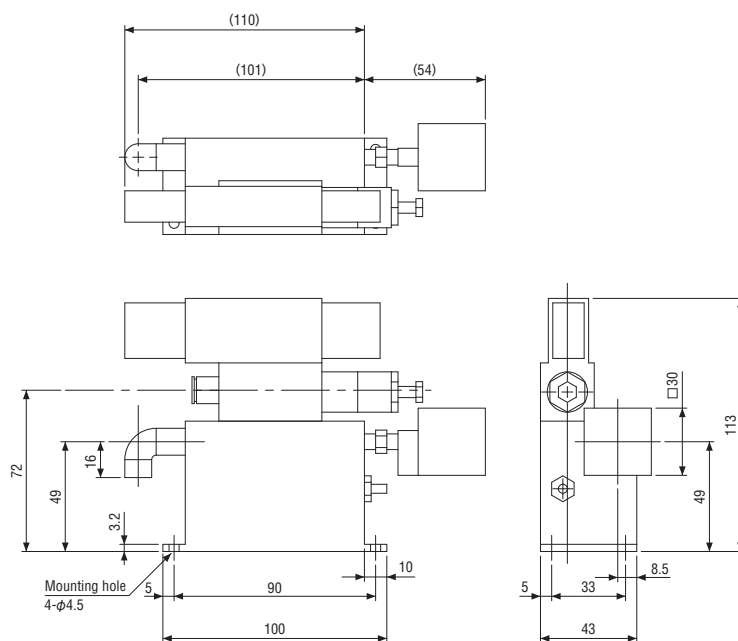
Various Products Information



Vacuum Generator Unit

Supplying dry air allows easy generation of vacuum pressure.

Not available on our online shop site. Please contact our nearest sales office to make purchases.



Order code No.	210804
TYPE	V51-100-8283

● Weight : 800g

■ 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 $\pm$ 1.5dm/min ANR (Supply pressure 0.4MPa)
Air consumption (L/min)	30 ~ 40dm/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	$\pm$ 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 $\pm$ 5kPa (power supply voltage DC24V, ambient temperature 25 $\pm$ 5 $^{\circ}$ 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
- ▶ Replacement Blades 4-9
- ▶ Accessories 4-10
- ▶ Air Nipper ↔ Accessory Selection Table..... 4-11
- ▶ Quick Mount Clip for NW 4-12
- ▶ One Touch Clip for NW 4-13



Air Nipper (Large) 4-14

- ▶ NT Series 4-15
- ▶ NS Series / NR Series / Booster Unit 4-16
- ▶ Nipper Holders / Brackets 4-17
- ▶ NB Series 4-18
- ▶ Sprue Cut Unit / Timing Controller..... 4-19
- ▶ Replacement Blades / Accessories 4-20
- ▶ Heat Air Nipper (NTH Series / NKH Series) 4-22

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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: mm²) of gate.

1. Check the material of cut gate and sprue.

Soft resin

PP, PE, urethane, PS, PVC, PMMA, AS, etc.

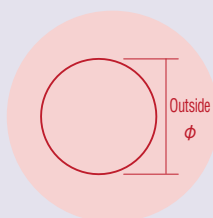
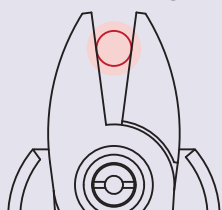
Hard resin

PPS, PA, PBT, LCP, ABS, POM, PC, resin containing glass, etc.

*Cannot be used with copper / iron wire.

2. Check cut diameter (cut area).

■ To cut round gate

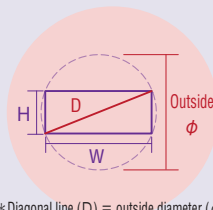
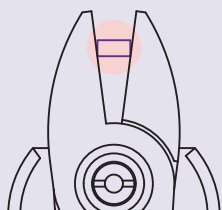


Select the nipper referring to the specification table (right):

Approximate cutting section diameter (φ) >

Outside diameter of gate (φ)

■ To cut square gate



* Diagonal line (D) = outside diameter (φ)

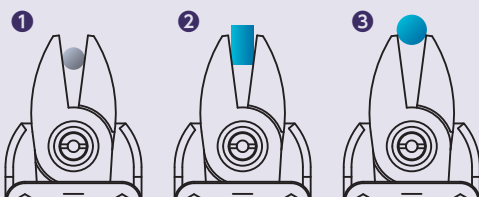
Select the nipper referring to the specification table (right):

Approximate cutting section diameter (φ) >

Gate maximum width (D)

* Cutting guide: (mm²) > H × W

■ 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 carbide tip**.

● Product temperature when the product is cut may influence the finishing state.

● Cutting guide value is for reference.,

- ▶ 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

Specification

Cutting capacity

Product name	Shape of blade	Order code No.	TYPE	Operation	Used air pressure (Mpa)	Withstand pressure (Mpa)	Cutting capacity [soft resin] round bar (mm)	blade section Max opening width of blade (mm)	Weight (g)	Page o details
Mini Air Nipper		131626	NW3-10	Pull (Max.2mm)	0.4 (4kgf/cm²) 0.5 (5kgf/cm²)	0.7 (7kgf/cm²)	φ 1.7 (2.26mm²)	3	110	4-4
		131627	NW3-101							
		131628	NW3-10R	Push (Max.2mm)			φ 2.8 (6.15mm²)	6	222	4-5
		131629	NW3-20	Pull (Max.3mm)					221	
		131630	NW3-201						222	
		131631	NW3-20R	Push (Max.3mm)					φ 2.0 (3.14mm²)	6.5
		131632	NW3-20-V001S	Pull (Max.3mm)			236			
		131633	NW3-20R-V001S	Push (Max.3mm)			7	237	4-7	
		131634	NW3-20-01C	Pull (Max.3mm)						
		131643	NW3-35				Push (Max.3mm)	φ 3.5 (9.61mm²)	9	305
		131644	NW3-35R							
		131645	NW3-35-V001S	Pull (Max.3mm)			φ 3.0 (7.06mm²)	10	322	4-8
		131646	NW3-35R-V001S	Push (Max.3mm)						
		131647	NW3-35-01C	Pull (Max.3mm)					8	
		131603	NW-50	Pull (Max.5mm)			φ 5.0 (19.62mm²)	15	743	4-8
		131604	NW-50R	Push (Max.5mm)					745	

*Reference value Changed according to the use conditions.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Air Nipper (Small · Medium) NWseries

Attaching air nipper to the take-out robot and chuck plate will save labor efficiently.



Standard blade

Order code No.	131626
TYPE	NW3-10

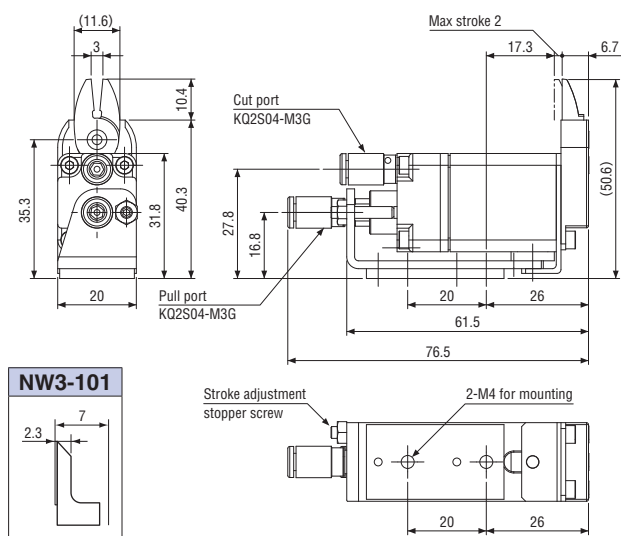
● Weight : 110g



Thin blade

Order code No.	131627
TYPE	NW3-101

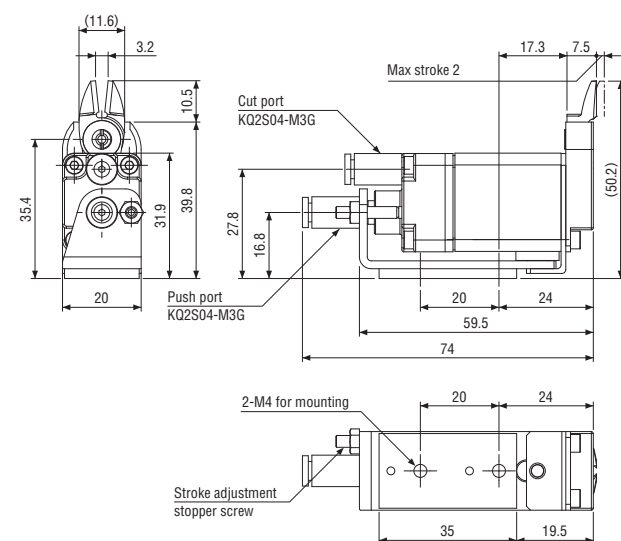
● Weight : 110g



Reverse blade

Order code No.	131628
TYPE	NW3-10R

● Weight : 110g



Standard blade

Order code No.	131629
TYPE	NW3-20

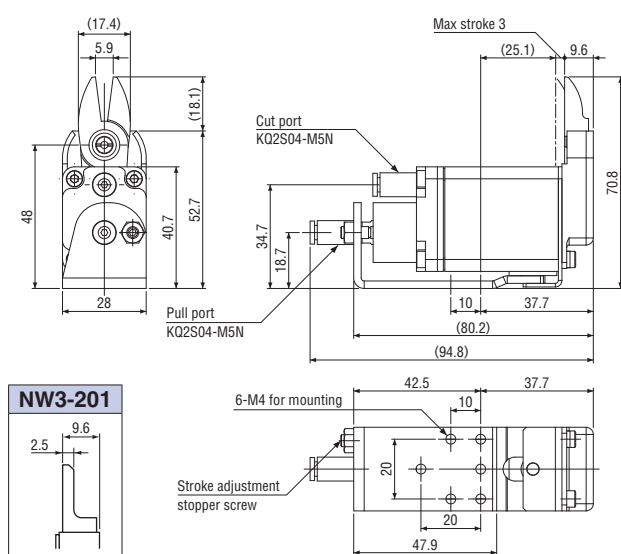
● Weight : 222g



Thin blade

Order code No.	131630
TYPE	NW3-201

● Weight : 221g

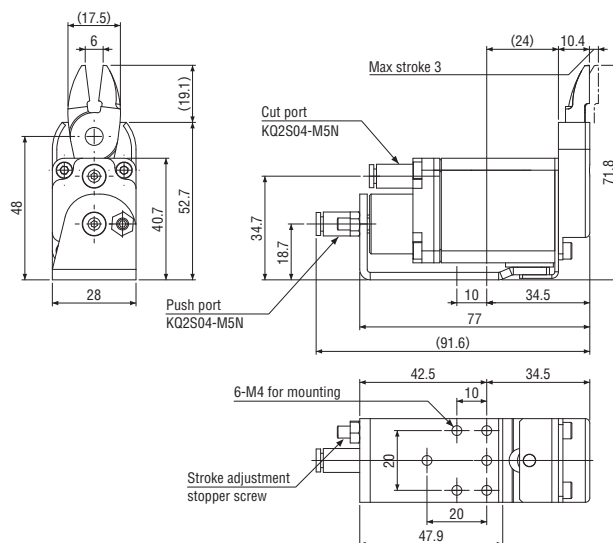




Reverse blade

Order code No.	131631
TYPE	NW3-20R

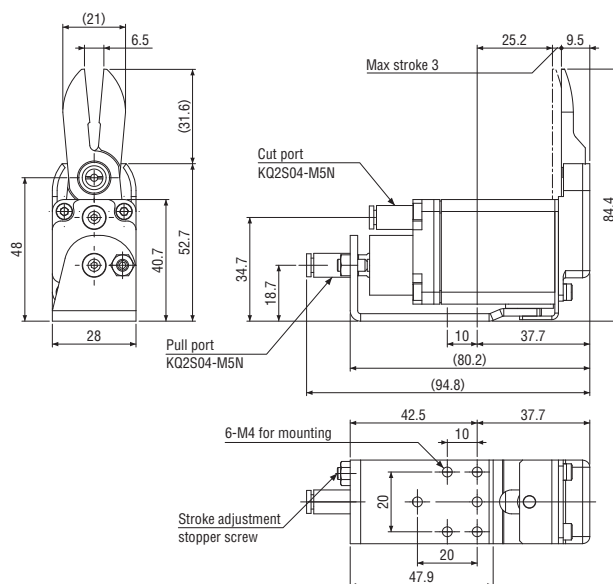
● Weight : 222g



Standard long blade

Order code No.	131632
TYPE	NW3-20-V001S

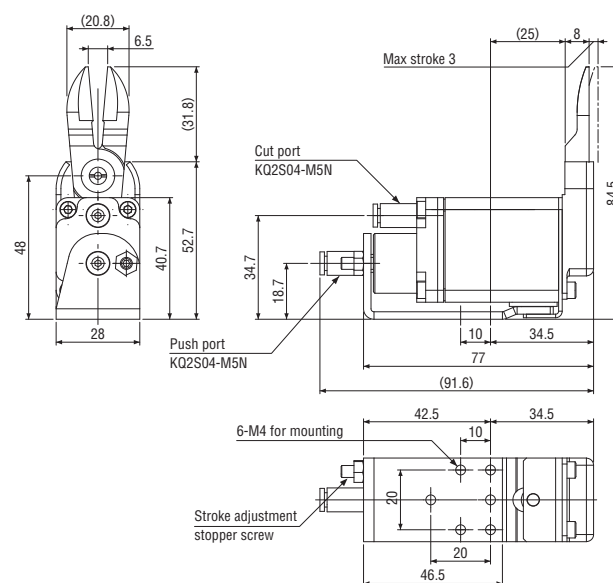
● Weight : 235g



Reversed long blade

Order code No.	131633
TYPE	NW3-20R-V001S

● Weight : 236g



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information

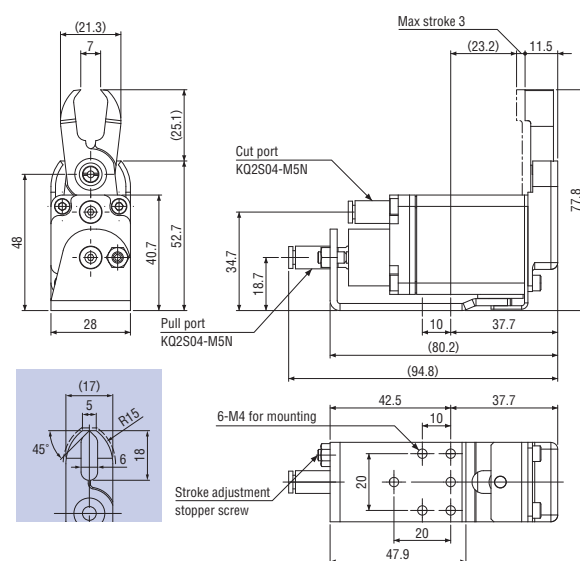
Air Nipper (Small・Medium) NWseries



Clip Type Blade

Order code No.	131634
TYPE	NW3-20-01C

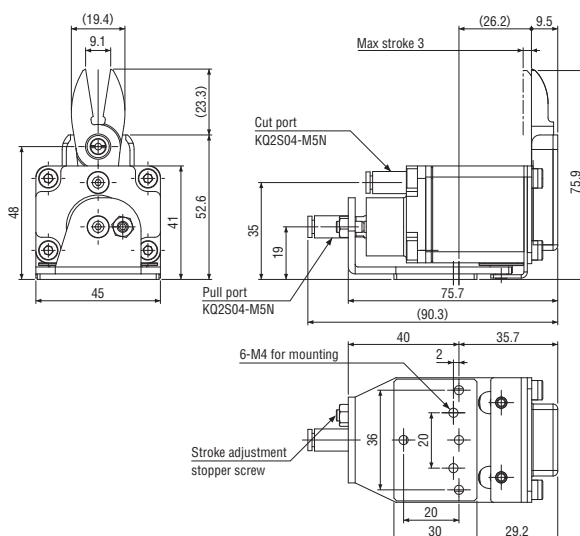
● Weight : 237g



Standard blade

Order code No.	131643
TYPE	NW3-35

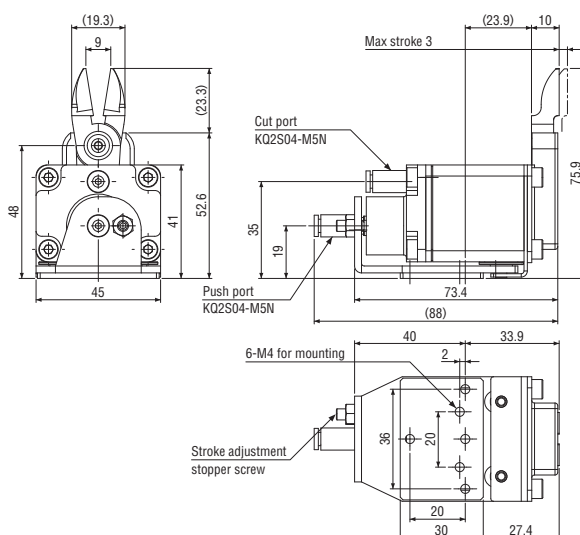
● Weight : 305g



Reverse blade

Order code No.	131644
TYPE	NW3-35R

● Weight : 305g

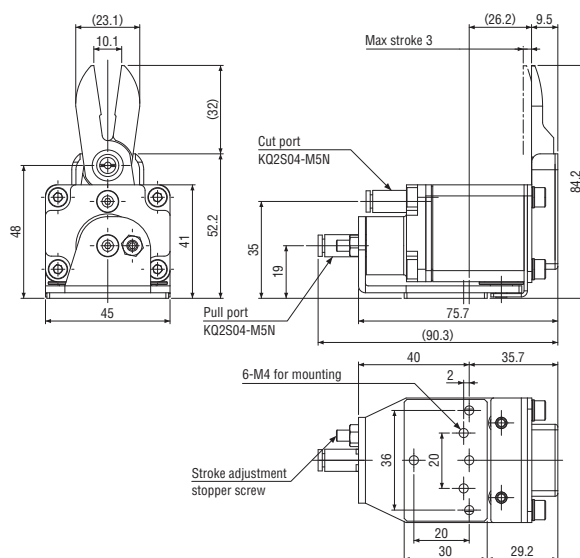




Standard long blade

Order code No.	131645
TYPE	NW3-35-V001S

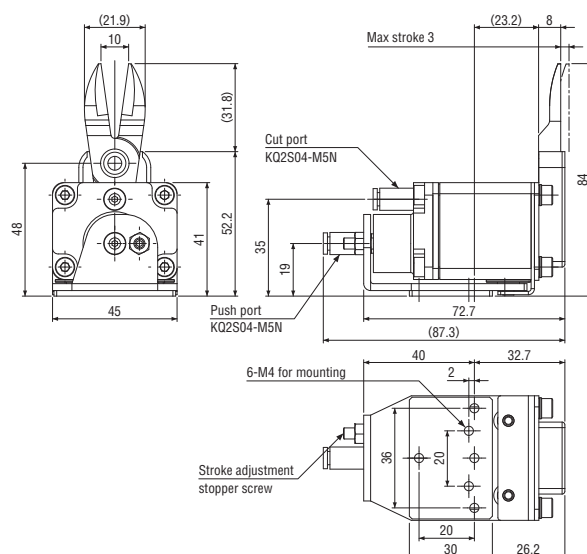
● Weight : 322g



Reversed long blade

Order code No.	131646
TYPE	NW3-35R-V001S

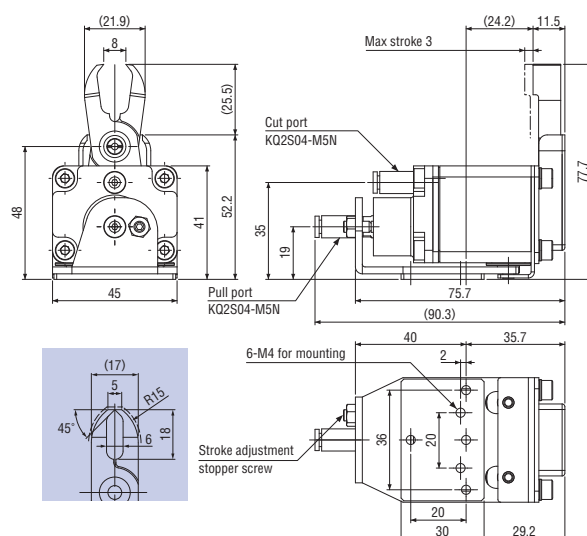
● Weight : 322g



Clip Type Blade

Order code No.	131647
TYPE	NW3-35-01C

● Weight : 325g



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information

Air Nipper (Small・Medium) NWseries

- ▶ The $\phi 5$ (soft resin) product can be cut. The slide includes the new mechanism.

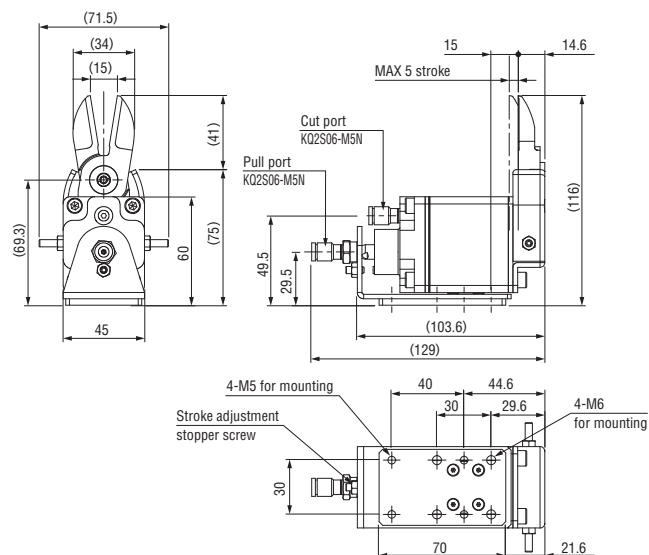


Standard blade

Order code No. **131603**

TYPE **NW-50**

- W/ blade open adjust mechanism
- Weight : 743g

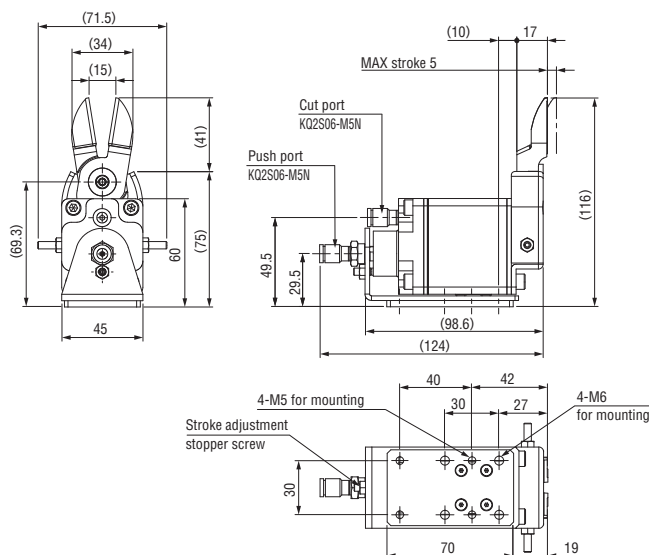


Reverse blade

Order code No. **131604**

TYPE **NW-50R**

- W/ blade open adjust mechanism
- Weight : 745g



Cut ● Air Nipper (Small・Medium)



Air Nipper (Small • Medium) Replacement Blades

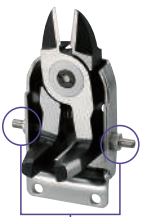
Please use the replacement blade of the air nipper (small and medium type).

Spare Blade					
	Order code No.	041050	041051	041758	041871
	TYPE	EG-NW10	EG-NW101	EG-NW10R	EG1-NW20
	Weight	20g	20g	22g	61g
	Supported nipper	NW3-10(standard blade)	NW3-101(thin blade)	NW3-10R(reversed blade)	NW3-20(standard blade)
	Order code No.	041872	041916	041851	041852
	TYPE	EG1-NW201	EG1-NW20R	EG1-NW35	EG1-NW35R
	Weight	61g	62g	68g	68g
	Supported nipper	NW3-201(thin blade)	NW3-20R(reversed blade)	NW3-35(standard blade)	NW3-35R(reversed blade)

Standard long blade					
	Order code No.	041064	041361	041065	041310
	TYPE	EG-NW20-V001S	EG-NW20R-V001S	EG-NW35-V001S	EG-NW35R-V001S
	Weight	80g	80g	85g	85g
	Supported nipper	NW3-20(standard blade)	NW3-20R(reversed blade)	NW3-35(standard blade)	NW3-35R(reversed blade)

Carbide blade					
	Order code No.	041876	041923	041866	041867
	TYPE	EG1-NW20 (Carbide blade)	EG1-NW20R (Carbide blade)	EG1-NW35 (Carbide blade)	EG1-NW35R (Carbide blade)
	Weight	61g	70g	68g	68g
	Supported nipper	NW3-20(standard blade)	NW3-20R(reversed blade)	NW3-35(standard blade)	NW3-35R(reversed blade)

Clip Type Blade			
	Order code No.	041066	041067
	TYPE	EG-NW20-01C	EG-NW35-01C
	Weight	80g	90g
	Supported nipper	NW3-20,NW3-20R	NW3-35,NW3-35R

Adjustable opening			
	*Delivery time runs about one week from the order date. *Setscrew with hexagon socket and hexagon nut are included.		
	Order code No.	041873	041874
	TYPE	EG1-NW20-AST	EG1-NW201-AST
	Weight	63g	61g
	Supported nipper	NW3-20(standard blade)	NW3-201(thin blade)
	Order code No.	041853	041854
	TYPE	EG1-NW35-AST	EG1-NW35R-AST
	Weight	69g	72g
	Supported nipper	NW3-35(standard blade)	NW3-35R(reversed blade)
	Blade opening can be adjusted by two screws.		

● If you would like another blade, please contact eins.

For NW-50, 50R

Spare Blade			
	Order code No.	041955	041956
	TYPE	EG-NW50	EG-NW50R
	Weight	265g	270g
	Supported nipper	NW-50(standard blade)	NW-50R(reversed blade)

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information



Accessories

Please use for maintenance of the air nipper (small and medium type).

Blade Springs				
	Order code No.	130744	131536	131618
	TYPE	For NW-10	For NW-2-20.35	NW-50.50R
	Weight	0.1g	0.2g	1g
	Supported nipper	NW Series-10, 10R	NW Series-20, 20R, 35, 35R	NW Series-50, 50R

Piston					
	Order code No.	130767	130768	130769	 131654
	TYPE	For NW/NC-10	For NW/NC-20.20R	For NW/NC-35.35R	For NW-50.50R
	Weight	3g	9g	11g	25g
	Supported nipper	NC/NW Series-10, 10R	NC/NW Series-20, 20R	NC/NW Series-35, 35R	NW50, 50R

Piston packing

 NW-10 NW-20	Order code No.	131614	131615
	TYPE	NW1-10.10R (LX0125-001-0)	NW2-20.20R (LX0145-003-0)
	Weight	0.3g	0.5g
	Supported nipper	NC/NW Series-10, 10R	NC/NW Series-20, 20R

 NW-35 NW-50	Order code No.	131487	131616
	TYPE	NW1-35.35R (LX0107-001-0)	NW-50.50R (LX0153-110)
	Weight	1.2g	1g
	Supported nipper	NW Series-35, 35R	NW Series-50, 50R

Piston spring			
	Order code No.	130766	130770
	TYPE	For NC/NW-10 (J09420-014-3)	For NC/NW-20.20R (J07930-013-1)
	Weight	0.2g	0.5g
	Supported nipper	NC/NW Series-10, 10R	NC/NW Series-20, 20R

● Two pieces are used for a nipper

	Order code No.	130771	131617
	TYPE	For NW-35.35R (NC-3506N-1)	NW-50.50R (LX0153-111)
	Weight	5.6g	13g
	Supported nipper	NW Series-35, 35R	NW Series-50, 50R

● One piece be used for a nipper

Slide spring



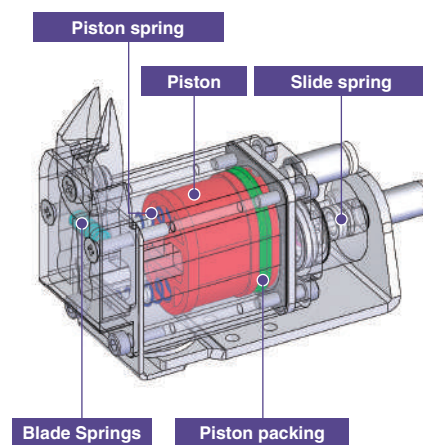
Order code No.	130257	 131679
TYPE	For NC/NW-10 (J09420-016-1)	For NW-10R
Weight	0.1g	0.1g
Supported nipper	NW Series-10	NW Series-10R



Order code No.	130251	131255
TYPE	NC/NW-20.35 (J07930-015-0)	NW-20R.35R (J0793R-004-0)
Weight	0.4g	1g
Supported nipper	NW Series-20, 35	NW Series-20R, 35R



Order code No.	200254	200255
TYPE	UM8-25	UM13-25
Weight	1g	3g
Supported nipper	NW Series-50	NW Series-50R





Air Nipper (Small·Medium) ↔ Accessory Selection Table

Air nipper (Small・Medium)			Air nipper (10Series)			Air nipper (20Series)					Air nipper (35Series)					Air nipper (50Series)		
																		
			131626	131627	131628	131629	131630	131631	131632	131633	131634	131643	131644	131645	131646	131647	131603	131604
			NW3-10	NW3-101	NW3-10R	NW3-20	NW3-201	NW3-20R	NW3-20-V001S	NW3-20R-V001S	NW3-20-01C	NW3-35	NW3-35R	NW3-35-V001S	NW3-35R-V001S	NW3-35-01C	NW-50	NW-50R
Accessories																		
○ : It can be installed — : Cannot be installed																		

Blade Springs		130744 For NW-10	○	○	○	—	—	—	—	—	—	—	—	—	—	—
		131536 For NW2-20.35	—	—	—	○	○	○	○	○	○	○	○	○	—	—
		131618 NW-50.50R	—	—	—	—	—	—	—	—	—	—	—	—	○	○
Piston		130767 For NW/NC-10	○	○	○	—	—	—	—	—	—	—	—	—	—	—
		130768 For NW/NC-20.20R	—	—	—	○	○	○	○	○	—	—	—	—	—	—
		130769 For NW/NC-35.35R	—	—	—	—	—	—	—	—	○	○	○	○	—	—
		131654 For NW-50.50R	—	—	—	—	—	—	—	—	—	—	—	—	○	○
Piston packing		131614 NW1-10.10R (LX0125-001-0)	○	○	○	—	—	—	—	—	—	—	—	—	—	—
		131615 NW2-20.20R (LX0145-003-0)	—	—	—	○	○	○	○	○	—	—	—	—	—	—
		131487 NW1-35.35R(LX0107-001-0)	—	—	—	—	—	—	—	—	○	○	○	○	—	—
		131616 NW-50.50R (LX0153-110)	—	—	—	—	—	—	—	—	—	—	—	—	○	○
Piston spring		130766 For NC/NW-10 (J09420-014-3)	○ 2 required	○ 2 required	○ 2 required	—	—	—	—	—	—	—	—	—	—	—
		130770 NC/NW-20.20R (J07930-013-1)	—	—	—	○ 2 required	○ 2 required	○ 2 required	○ 2 required	○ 2 required	—	—	—	—	—	—
		130771 For NW-35.35R (NC-3506N-1)	—	—	—	—	—	—	—	—	○	○	○	○	—	—
		131617 NW-50.50R (LX0153-111)	—	—	—	—	—	—	—	—	—	—	—	—	○	○
Slide spring		130257 For NC/NW-10 (J09420-016-1)	○	○	—	—	—	—	—	—	—	—	—	—	—	—
		131679 For NW-10R	—	—	○	—	—	—	—	—	—	—	—	—	—	—
		130251 NC/NW-20.35 (J07930-015-0)	—	—	—	○	○	—	○	—	○	—	—	○	—	—
		131255 NW-20R.35R (J0793R-004-0)	—	—	—	—	—	○	—	—	○	—	○	—	—	—
		200254 UM8-25	—	—	—	—	—	—	—	—	—	—	—	—	○	—
		200255 UM13-25	—	—	—	—	—	—	—	—	—	—	—	—	—	○

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



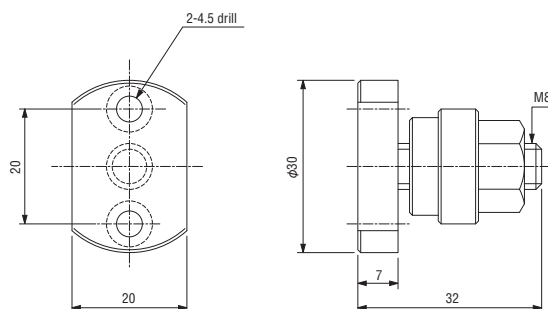
Quick Mount Clip for NW

Metal fixture to fix an air nipper to a NT gate cut unit.



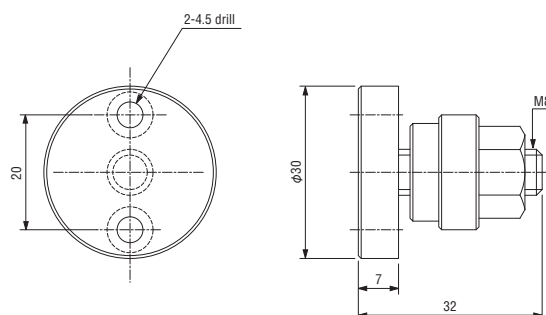
Order code No.	130216
TYPE	For NC/NW-10

- Weight : 61g
- Also can be used for NW-20 and NW-35.
- Accessories : taper washer 1 piece
screw (M4) 2 piece



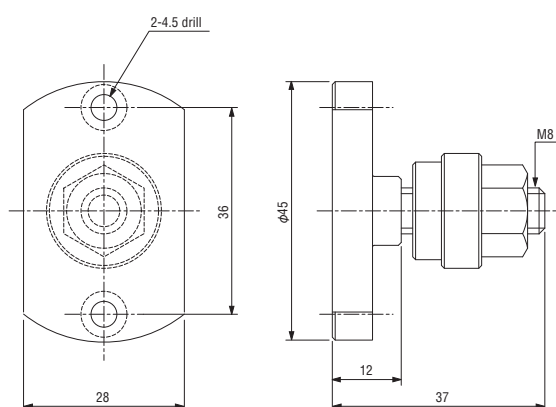
Order code No.	130162
TYPE	For NC/NW-20

- Weight : 70g
- Also can be used for NW-35.
- Accessories : taper washer 1 piece
screw (M4) 2 piece



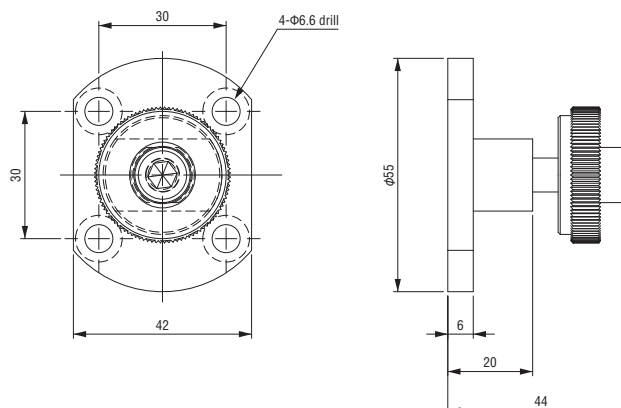
Order code No.	130163
TYPE	For NC/NW-35

- Weight : 99g
- Cannot be used for NW-10 and NW-20.
- Accessories : taper washer 1 piece
screw (M4) 2 piece



Order code No.	131621
TYPE	For NW-50

- Weight : 184g
- Accessories : M6×10 4 piece





One Touch Clip for NW

The mounting angle can be free adjusted without using the tool.



One touch clip for NW

Order code No.	110558
TYPE	L10160-CL

- Weight : 80g
- Accessories : Mounting bolt (M4)*2piece



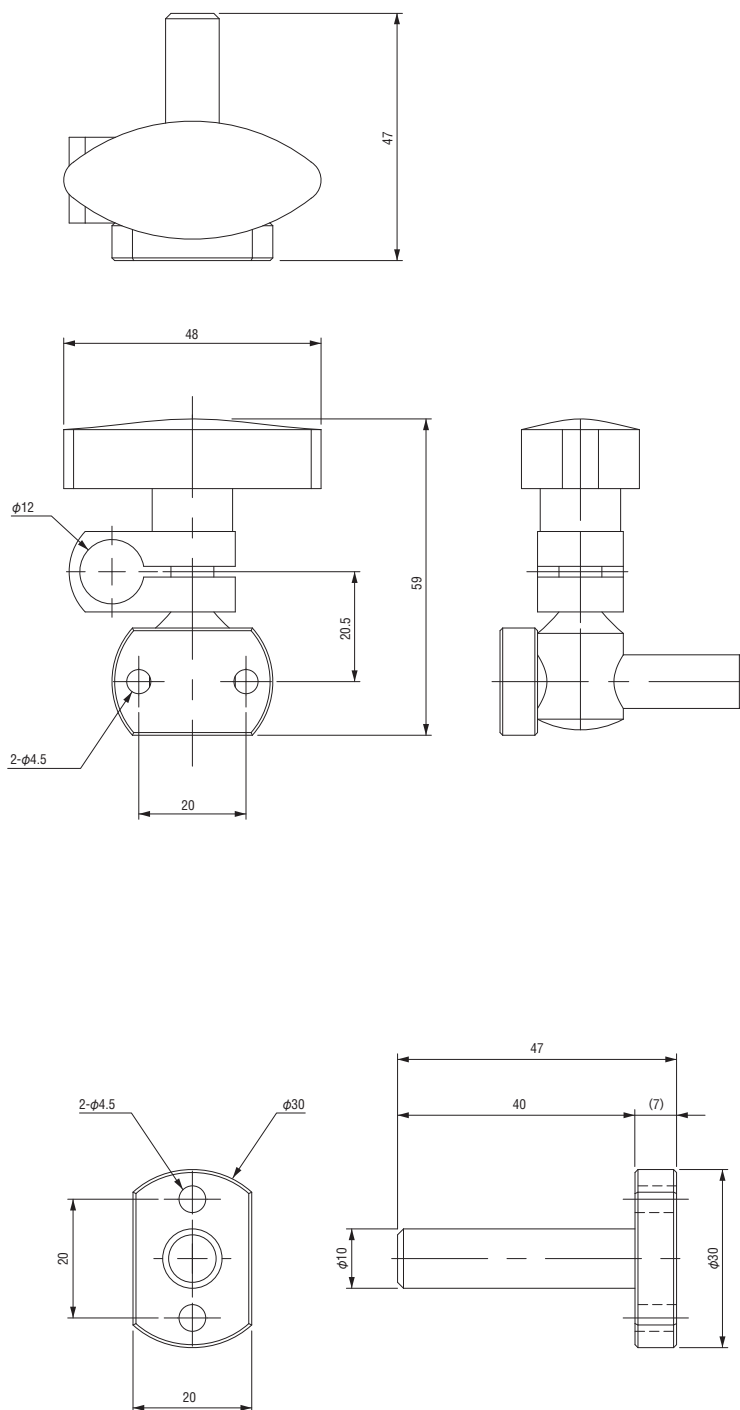
Air Nipper (Small - Medium) is mounted and attached to φ12 SS Jungle Gym.



Nipper mounting brackets

Order code No.	110622
TYPE	L10160-000

- Weight : 20g
- Accessories : Mounting bolt (M4)*2piece



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information



Air Nipper (Large)

■ Specification

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	4-15	
		060208	GT-NT05	Pull	0.5~0.6	196	φ 2.5		325		
		060225	GT-NT05R	Push		441	φ 3.5		515		
		060209	GT-NT10	Pull							
		060226	GT-NT10R	Push		931	φ 5	MAX8	930		
		060227	GT-NT20	Pull							
		060228	GT-NT20R	Push							
	Square type·w/o blade	060240	GT-NS10L	—	0.5~0.6	588	Different according to the spare blade.	—	230	4-16	
		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		
		150786	P-30						330		
Nipper fixing holder		370336	CP-035 (For GT-NR10L)	—	—	—	—	—	68	4-17	
		370337	CP-036 (For GT-NR20)						87		
		370338	CP-037 (For GT-NR30)						105		
Slide bracket		110656	LX0090-100 (L·R)	—	—	—	—	—	128		
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	4-18	
		130230	GT-NB20 5-OSHI	Push					MAX10		720
		130231	GT-NB20 10-HIKU	Pull							2,744
		130235	GT-NB30 10-HIKU	Pull		785					
		060477	GT-NB20LW-10TM	Pull		2,744		1,315			
		060478	GT-NB30LW-10TM	Pull							
	Sprue cut unit		131565	NS20U		—	—	—	—	—	1,078
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	325	4-22
		060354	GT-NTH10	Pull	0.5~0.6	φ 3.5			515	
	Flow controller type	060355	GT-NKH10	—		Thickness:φ1.5, Width:φ7		MAX8	715	
	Heat air nipper air hydro	060356	GT-NKH20	—		Thickness:φ1.5, Width:φ10			700	
	Desktop temperature controller for heat nipper		030492	DTC-001	—	—	—		—	



Air Nipper (Large) NT series

Used for cutting large gate diameter products of direct gate or side gate.

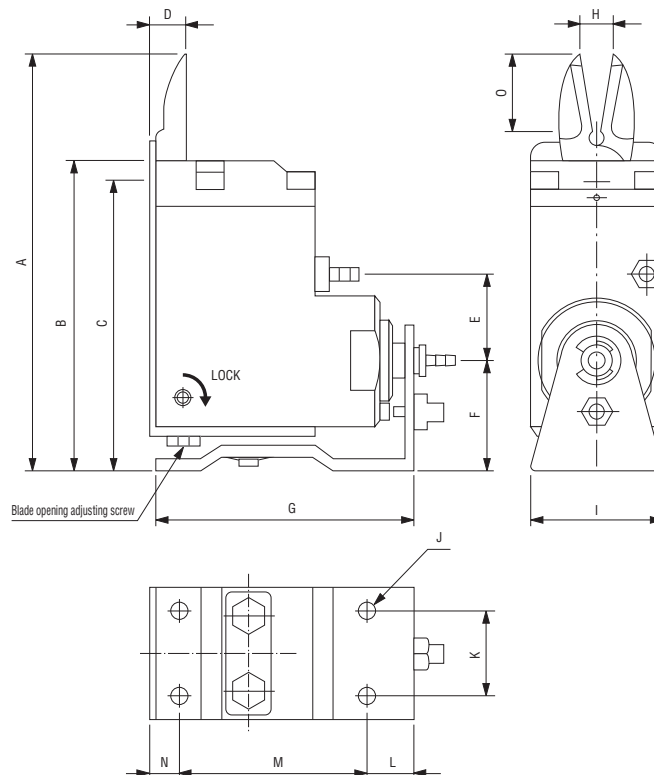
● Spare blades are sold separately. ● The photo shows an example of assembled.

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.	060207
TYPE	GT-NT03

● Weight : 178g

Uses	Operation	Blade
Standard blade	Pull	Option

Order code No.	060208
TYPE	GT-NT05

● Weight : 325g

Uses	Operation	Blade
Standard blade	Pull	Option

Order code No.	060209
TYPE	GT-NT10

● Weight : 515g

Uses	Operation	Blade
Standard blade	Pull	Option

Order code No.	060227
TYPE	GT-NT20

● Weight : 930g

Uses	Operation	Blade
Standard blade	Pull	Option

Order code No.	060225
TYPE	GT-NT05R

● Weight : 325g

Uses	Operation	Blade
Reverse blade	Push	Option

Order code No.	060226
TYPE	GT-NT10R

● Weight : 515g

Uses	Operation	Blade
Reverse blade	Push	Option

Order code No.	060228
TYPE	GT-NT20R

● Weight : 930g

Uses	Operation	Blade
Reverse blade	Push	Option

Spare blade for GT-NT * The standard and reverse directions of spare blade can be changed.				
Order code No.	130403	130310	130311	130404
TYPE	NT03AJ	NE5AJ	NE10AJ	NT20AJ
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)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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



Order code No. **060240**

TYPE **GT-NS10L**

● Weight : 230g

Order code No. **060241**

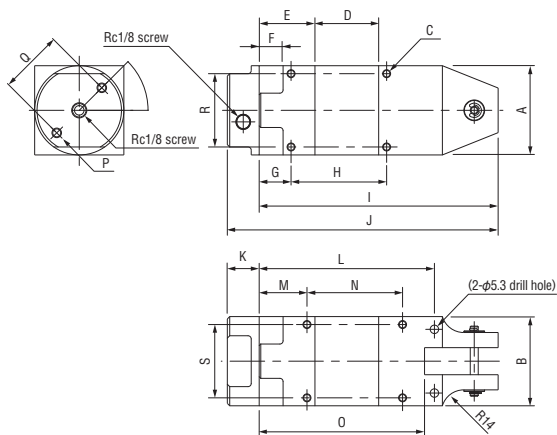
TYPE **GT-NS20**

● Weight : 390g

Order code No. **060242**

TYPE **GT-NS30**

● 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



Order code No. **060083**

TYPE **GT-NR10L**

● Weight : 160g

Order code No. **060084**

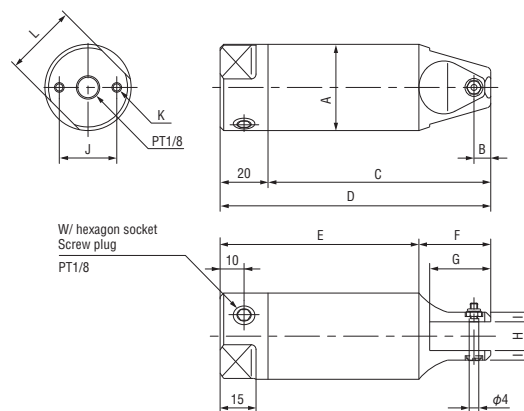
TYPE **GT-NR20**

● Weight : 280g

Order code No. **060085**

TYPE **GT-NR30**

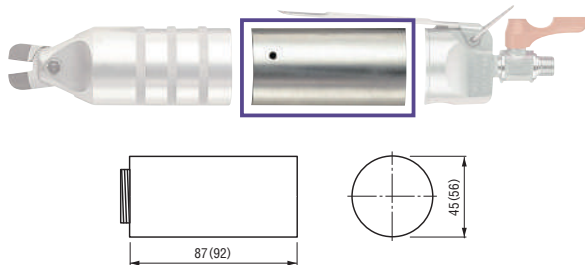
● Weight : 510g



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.

► To increase supply pressure to nipper.

Booster unit

Order code No.	150793
TYPE	P-20

- Weight : 215g
- Air consumption : 508cm³
- Air pressure power : ~0.5MPa
- Applicable : NS20, NR20

Booster unit

Order code No.	150786
TYPE	P-30

- Weight : 330g
- Air consumption : 956cm³
- Air pressure power : ~0.5MPa
- Applicable : NS30, NR30

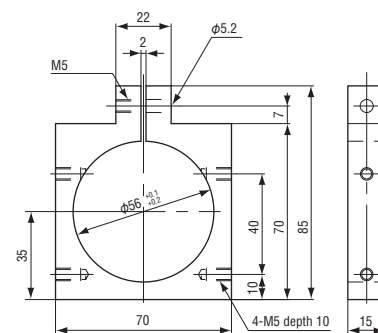


Nipper Holder

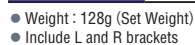
- Weight : 68g

- Weight : 87g

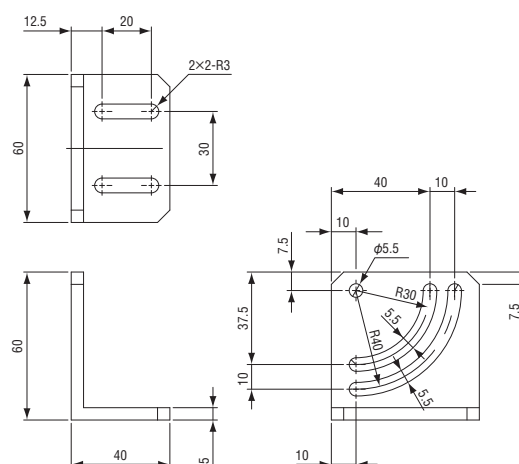
- Weight : 105g



Nipper Bracket



- The photo shows an example of assembled GT-NR20, CP-036, and LX0090-100.



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

Order code No.	130229
TYPE	GT-NB20 5-HIKU

● Weight : 710g ● Slide amount : 5mm

Operation	Blade
Pull	Option

Order code No.	130230
TYPE	GT-NB20 5-OSHI

● Weight : 710g ● Slide amount : 5mm

Operation	Blade
Push	Option

Order code No.	130231
TYPE	GT-NB20 10-HIKU

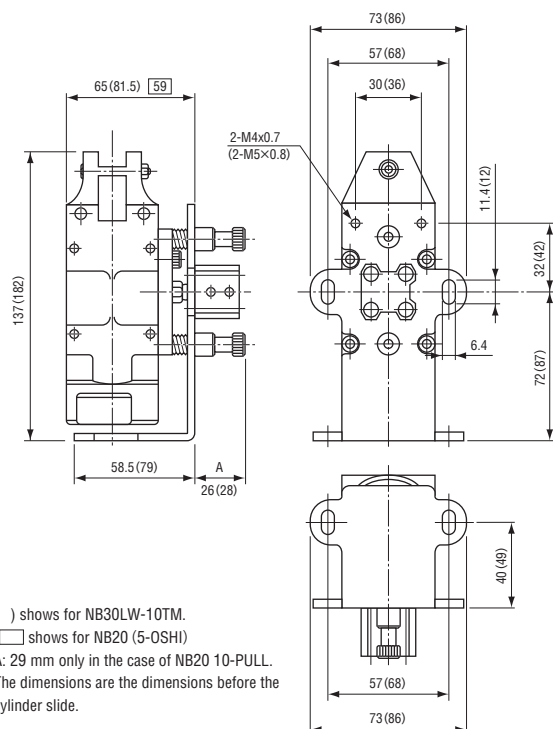
● Weight : 720g ● Slide amount : 10mm

Operation	Blade
Pull	Option

Order code No.	130235
TYPE	GT-NB30 10-HIKU

● Weight : 1,400g ● Slide amount : 10mm

Operation	Blade
Pull	Option



- * () shows for NB30LW-10TM.
- * □ 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.



Blade
Blade not
included

Order code No.	060477
TYPE	GT-NB20LW-10TM

● Weight : 785g ● Slide amount : 10mm

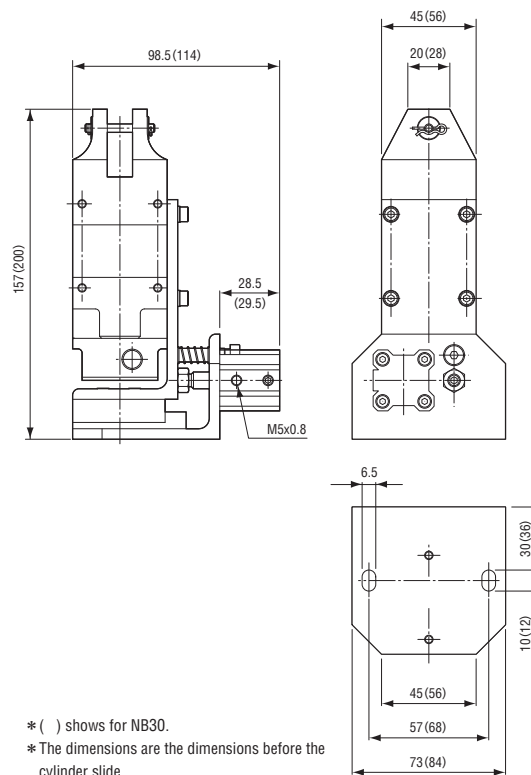
Operation	Blade
Pull	Option

Order code No.	060478
TYPE	GT-NB30LW-10TM

● Weight : 1,315g ● Slide amount : 10mm

Operation	Blade
Pull	Option

High-precision slide mechanism



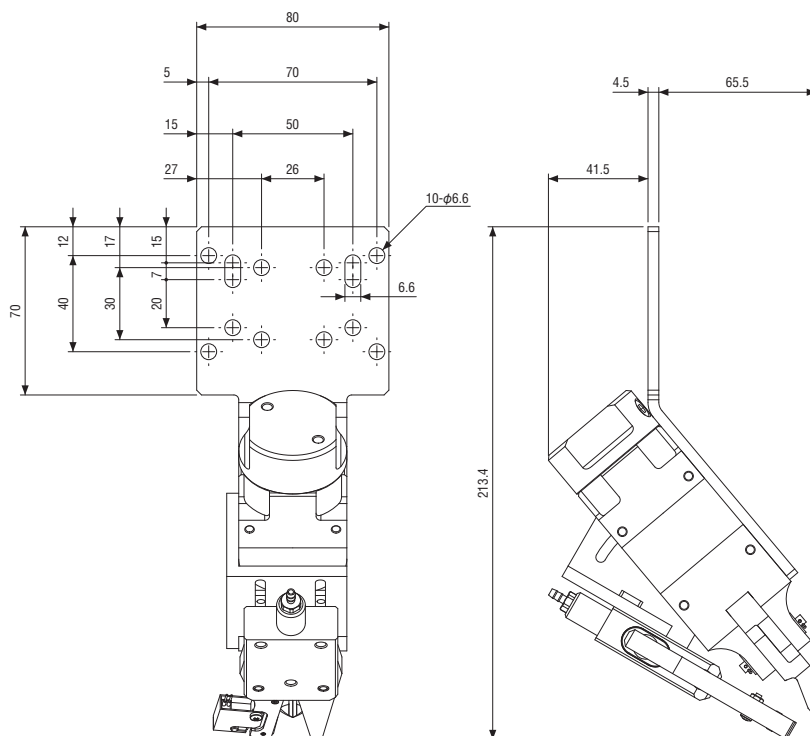
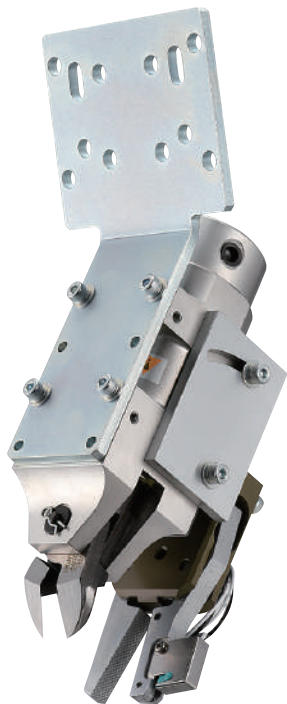
- * () shows for NB30.
- * The dimensions are the dimensions before the cylinder slide.



Sprue Cut Unit / Timing Controller

Maintain sprue during cutting.

- Most suitable for plastic direct gate.



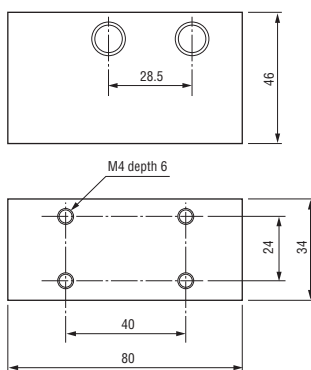
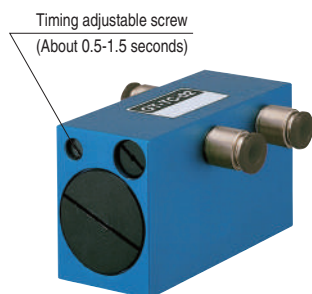
Sprue cut unit

Order code No.	131565
TYPE	NS20U

- 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)	023006	CHK-EL1-12-C1	1	2-31
Air nipper square type w/o blade	060241	GT-NS20	1	4-16
Blade for GT-20L flat	130726	N20PF	1	4-20
Sprue cut unit (parts)	131553	NS20U-P	1	-

- Setting in tubing allows adjustment of slide conditions for slide nippers and cutting timing. (About 0.5-1.5 seconds)

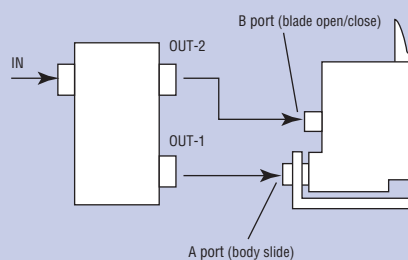


Timing controller

Order code No.	060321
TYPE	GT-TC-02

- Weight : 275g
- Air pressure power : 0.6MPa
- With tube joint : inner diameter φ4mm, outside-diameter φ6mm

Example of connection



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information



Air Nipper (Large) Replacement Blades / Accessory

Spare blades for GT-NS/GT-NR/GT-NB.

● The cutting capacity depends on the material.

▶ Supported nipper : GT-NS10L/GT-NR10L

Drawing	Specifications	
	Order code No.	130218
	TYPE	N10L1S
	Weight	165g
	Opened blade-to blade distance	10mm
	Cutting capacity (soft resin)	φ3.5
	Order code No.	130219
	TYPE	N10L2S
	Weight	170g
	Opened blade-to blade distance	10mm
	Cutting capacity (soft resin)	φ3.5

Drawing	Specifications	
	Order code No.	130724
	TYPE	N10LAP
	Weight	132g
	Opened blade-to blade distance	5mm
	Cutting capacity (soft resin)	φ4
	Order code No.	130725
	TYPE	N10LPF
	Weight	136g
	Opened blade-to blade distance	5mm
	Cutting capacity (soft resin)	φ4

▶ Supported nipper : GT-NS20/GT-NR20/GT-NB20

Drawing	Specifications	
	Order code No.	130222
	TYPE	N203S
	Weight	185g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ6
	Order code No.	130220
	TYPE	N201S
	Weight	200g
	Opened blade-to blade distance	16mm
	Cutting capacity (soft resin)	φ6
	Order code No.	130221
	TYPE	N202S
	Weight	175g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ6
	Order code No.	130726
	TYPE	N20PF
	Weight	130g
	Opened blade-to blade distance	11mm
	Cutting capacity (soft resin)	φ7
	Order code No.	130697
	TYPE	N20AJ
	Weight	125g
	Opened blade-to blade distance	11mm
	Cutting capacity (soft resin)	φ7

Drawing	Specifications	
	Order code No.	130680
	TYPE	N20AP
	Weight	130g
	Opened blade-to blade distance	11mm
	Cutting capacity (soft resin)	φ7
	Order code No.	130727
	TYPE	N20AE
	Weight	145g
	Opened blade-to blade distance	8mm
	Cutting capacity (soft resin)	φ7
	Order code No.	130265
	TYPE	N206S
	Weight	170g
	Opened blade-to blade distance	14mm
	Cutting capacity (soft resin)	φ6
	Order code No.	131602
	TYPE	N207SA
	Weight	190g
	Opened blade-to blade distance	13mm
	Cutting capacity (soft resin)	φ6
	Order code No.	130655
	TYPE	N20AJL
	Weight	230g
	Opened blade-to blade distance	16mm
	Cutting capacity (soft resin)	φ6



N201S



N301S



N30AE

► Supported nipper : GT-NS20/GT-NR20/GT-NB20

Drawing	Specifications
	Order code No. 131466
	TYPE N20AML1498
	Weight 270g
	Opened blade-to blade distance 9.5mm
	Cutting capacity (soft resin) 10×1.5
	Order code No. 131467
	TYPE N20AH
	Weight 240g
	Opened blade-to blade distance 16mm
	Cutting capacity (soft resin) φ6
	Order code No. 131468
	TYPE N20AMR1499
	Weight 270g
	Opened blade-to blade distance 9.5mm
	Cutting capacity (soft resin) 10×1.5
	Order code No. 131469
	TYPE N20AK249
	Weight 240g
	Opened blade-to blade distance 14mm
	Cutting capacity (soft resin) φ5.5

► Supported nipper : GT-NS30/GT-NR30/GT-NB30

Drawing	Specifications
	Order code No. 130225
	TYPE N301S
	Weight 390g
	Opened blade-to blade distance 20mm
	Cutting capacity (soft resin) φ8
	Order code No. 130329
	TYPE N30AP
	Weight 380g
	Opened blade-to blade distance 16mm
	Cutting capacity (soft resin) φ10
	Order code No. 131601
	TYPE N303SA
	Weight 390g
	Opened blade-to blade distance 16mm
	Cutting capacity (soft resin) φ8
	Order code No. 131470
	TYPE N30AJL
	Weight 470g
	Opened blade-to blade distance 19mm
	Cutting capacity (soft resin) φ8

► Blade Springs

	Order code No. 060100
	TYPE GT-NR10L.20(N10L.N20 Spare Blade)
	Supported nipper NS/NR 10L, NS/NR/NB 20

Drawing	Specifications
	Order code No. 131468
	TYPE N20AMR1499
	Weight 270g
	Opened blade-to blade distance 9.5mm
	Cutting capacity (soft resin) 10×1.5
	Order code No. 131469
	TYPE N20AK249
	Weight 240g
	Opened blade-to blade distance 14mm
	Cutting capacity (soft resin) φ5.5
	Order code No. 130730
	TYPE N30PF
	Weight 415g
	Opened blade-to blade distance 15mm
	Cutting capacity (soft resin) φ10
	Order code No. 130729
	TYPE N30AE
	Weight 440g
	Opened blade-to blade distance 12mm
	Cutting capacity (soft resin) φ10
	Order code No. 130795
	TYPE N30AJ
	Weight 370g
	Opened blade-to blade distance 11mm
	Cutting capacity (soft resin) φ10
	Order code No. 060101
	TYPE GT-NR30 (N30 Spare Blade)
	Supported nipper NS/NR/NB 30

Drawing	Specifications
	Order code No. 130730
	TYPE N30PF
	Weight 415g
	Opened blade-to blade distance 15mm
	Cutting capacity (soft resin) φ10
	Order code No. 130729
	TYPE N30AE
	Weight 440g
	Opened blade-to blade distance 12mm
	Cutting capacity (soft resin) φ10
	Order code No. 130795
	TYPE N30AJ
	Weight 370g
	Opened blade-to blade distance 11mm
	Cutting capacity (soft resin) φ10
	Order code No. 060101
	TYPE GT-NR30 (N30 Spare Blade)
	Supported nipper NS/NR/NB 30

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

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.

▶ Excellent and without cracking.



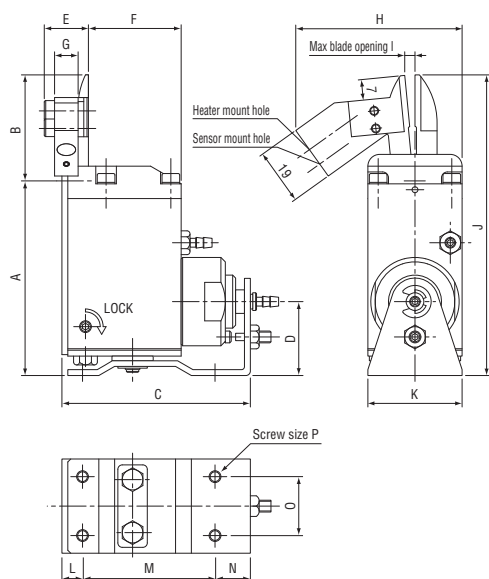
Heat air nipper slide vertical

Order code No.	060353
TYPE	GT-NTH05

● Weight : 325g

Order code No.	060354
TYPE	GT-NTH10

● Weight : 515g
● Heater specification : 80W/120V Length 300mm
● Sensor specifications : K thermocouple Length 1000mm



▶ Suitable for the gate cut of glass fiber/hard plastics.

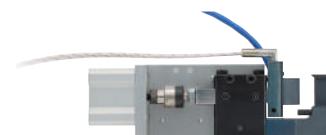
▶ Excellent and without cracking



Flow controller type (job order production)

Order code No.	060355
TYPE	GT-NKH10

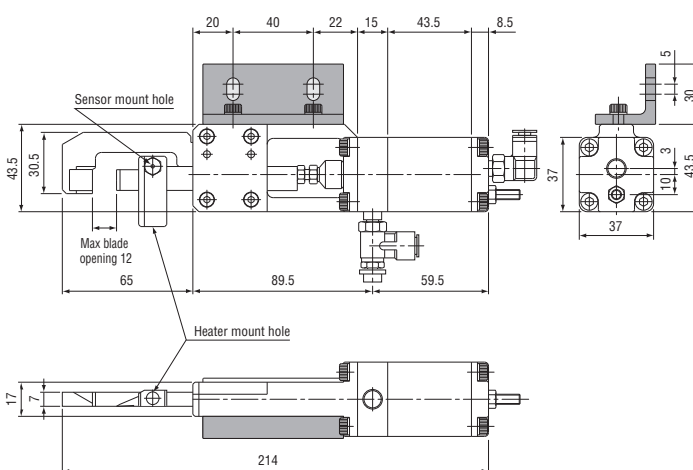
● Weight : 715g
● Heater specification : 80W/120V Length 300mm
● Sensor specifications : K thermocouple Length 1000mm



Air hydro type (job order production)

Order code No.	060356
TYPE	GT-NKH20

● Weight : 700g
● Heater specification : 80W/100V Length 300mm
● Sensor specifications : K thermocouple Length 300mm
● Hydro converter is required.
Hydro converter (Recommended product) : KOGANEI CO., LTD.
type : AHC 32×50



* The drawing indicates GT-NKH10.
* Option (bracket)

● Delivery time runs about 30 days from the order date.

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

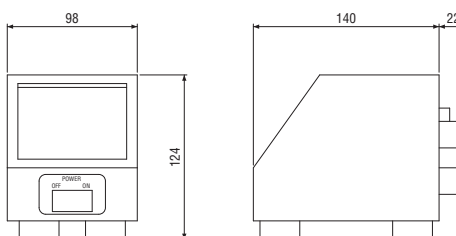
▶ Desktop temperature controller for heat nipper



Desktop temperature controller for heat nipper

Order code No.	030492
TYPE	DTC-001

● Weight : 900g
● Power supply voltage : AC100-240V
● Power consumption : about 3W or 5VA (no-load condition)
● *Output capacity : 12 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.
● power cable not included.



Frame / Module



Jungle Gym 5-2

- ▶ List of Jungle Gym 5-3
- ▶ Jungle Gym SS • CFRP Pipe / Resin Fixture 5-8
- ▶ Pipe End Cap / SS Pipe Cutter / Clip 5-9
- ▶ Jangle Gym Series Parts (Connector) 5-10
- ▶ Jangle Gym Series Parts (Bracket) 5-13
- ▶ Jangle Gym Series Parts (Rotate) 5-19
- ▶ Jangle Gym Series Parts (Sride) 5-21
- ▶ Jangle Gym Series Parts (Washer) 5-24
- ▶ Jangle Gym Series Parts (Nut / Bushing) 5-25
- ▶ Base Frame Module 5-26
- ▶ Suction Module 5-30
- ▶ Gripper Module 5-31
- ▶ Limit Switch Module 5-33



Let's Joint 5-34

- ▶ List of Let's Joint 5-35
- ▶ Base Frame Module 5-38
- ▶ Suction Module 5-40
- ▶ Gripper Module 5-41
- ▶ Limit Switch Module 5-42



Rectangular Tube 5-44

- ▶ Rectangular Tube / Pipe End Cap 5-45
- ▶ Rectangular Tube Series Parts 5-46



Base Aluminum Material 5-48



Sliding Chuck 5-50

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

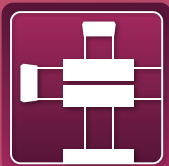
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

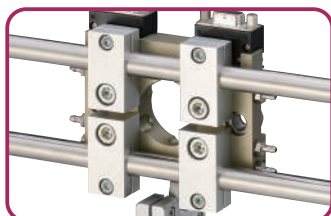
Various Products Information



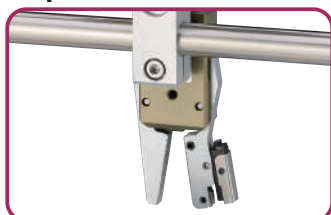
Jungle Gym

- ▶ Features rigidity and weight reduction. Frame is made of thin-wall stainless. Connectors are made fro super Duralumin.
- ▶ Setup time is reduced, with easy adjustment of gripping components and frame.

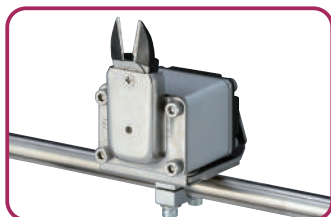
Frame / Module



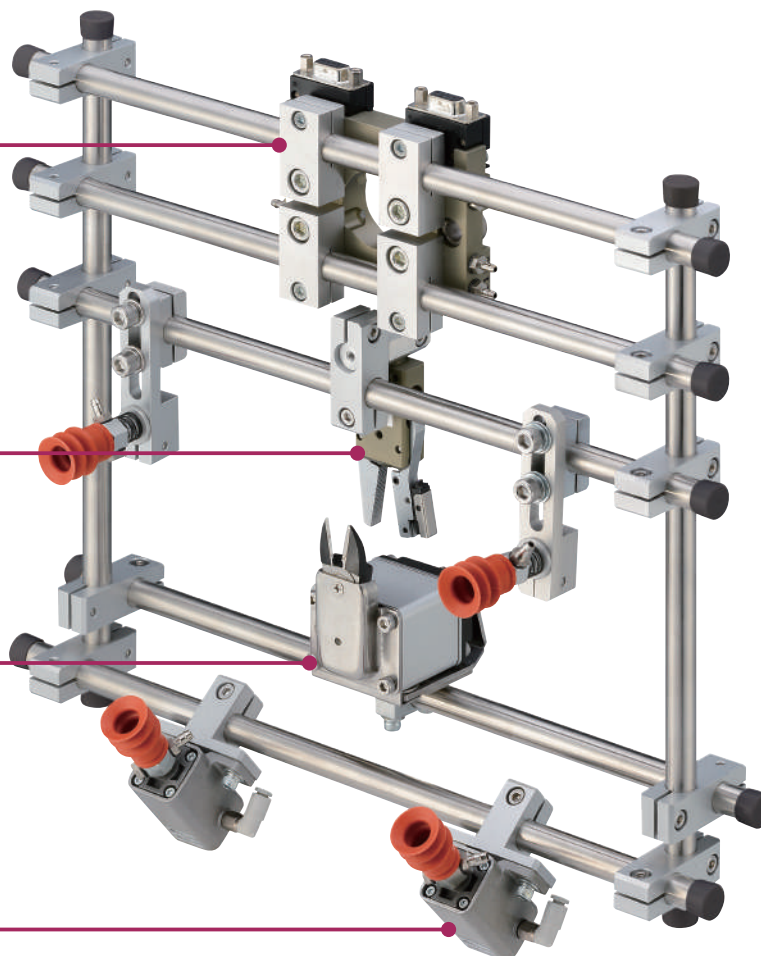
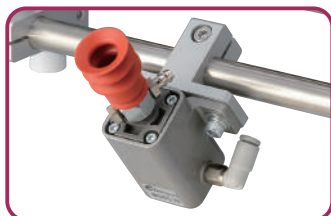
Grip



Cut



Suction

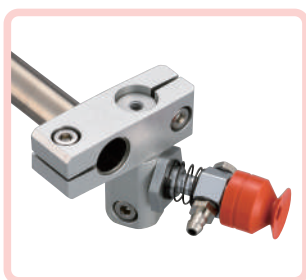


Tubing **6-1**

Three Kinds of SS pies ($\phi 8$ / $\phi 12$ / $\phi 20$) 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 cup + Suction stem + Rotation bracket + Cross connector



Order code No.	210193
TYPE	VAPH-15C



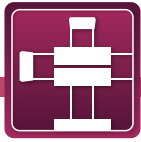
Order code No.	131173
TYPE	N01864-306



Order code No.	210974
TYPE	VFIL-S-5A



Order code No.	131099
TYPE	N01861-202



List of Jungle Gym

Various parts can be attached to jungle gym SS ø8, ø12, and ø20.

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
		TYPE	
Frame	Jungle gym SS pipe ø 8	340905	5-8
		8*0.6*500	
		340906	
		8*0.6*1000	
		340907	
		8*0.6*1500	
	Jungle gym SS pipe ø 12	271527	
		12*0.6*500	
		271528	
		12*0.6*1000	
		271529	
		12*0.6*1500	
	Jungle gym SS pipe ø 20	281812	
		20*0.8*500	
		281813	
		20*0.8*1000	
	NEW Jungle gym CFRP pipe ø 12	281814	
		20*0.8*1500	
	NEW Jungle gym CFRP pipe ø 20	023361	
		CFRP 12 * 1.5 * 1500	
	NEW Jungle gym CFRP pipe ø 20	023362	
		CFRP 20 * 1.5 * 1500	
Resin Fixture	Tie wrap base ø 12	171210	5-9
		RCA12	
	Tie wrap base ø 20	171211	
		RCA20	
	Plastic Fixture ø 12 (M4)	171212	
		RCB12	
Pipe end cap	Pipe end cap ø 8	171213	
		RCB20	
	Pipe end cap ø 12	171338	
		R-CAP-8	
Pipe end cap	Pipe end cap ø 12	171339	
		R-CAP-12	
	Pipe end cap ø 20	171340	
Pipe cutter	SS pipe cutter	101206	5-9
		K-203	
	Spare blade for pipe cutter	101207	
		K-203-1	

Product name		Order code No.	Page of details
		TYPE	
Pipe cutter	Ratchet style tube cutter	197172	5-9
		TTCR-322T	
Replacement blade for ratchet style tube cutter		061138	5-9
		GFC-15NT	
Clip	Clip • TMA • ø 20 * ø 20	196559	5-9
		TMA-CL (20*20)	
	Clip • TMA • ø 20 * ø 12	196560	
		TMA-CL (20*12)	
	Clip • TMA • ø 12 * ø 12	196561	
		TMA-CL (12*12)	
	Clip • TMA • ø 12 * ø 8	196562	
		TMA-CL (12*8)	
	Clip • TMA • ø 8 * ø 8	196563	
		TMA-CL (8*8)	
Connector	Clip • TMA • ø 12 * ø 10	196564	5-10
		TMA-CL (12*10)	
	Cross connector ø 8 ø 8	131102	
		N01861-207	
	Cross connector ø 12 ø 8	131098	
		N01861-201	
	Cross connector ø 12 ø 12	131099	
		N01861-202	
	Cross connector ø 20 ø 12	131100	
		N01861-204	
Connector	Cross connector ø 20 ø 20	131101	5-10
		N01861-206	
	Cross connector • long • ø 20 ø 20	131573	
		N01861-206B	
	Cross connector ø 12 ø 12 (rear entrance)	131569	
		N01861-202A	
	Cross connector ø 20 ø 20 (rear entrance)	131570	
		N01861-206A	
	NEW Floating Cross Connector ø 12	054346	
		F-CROSS-12	
NEW Floating Cross Connector ø 20		054347	5-10
		F-CROSS-20	
	T Connector # 1 • ø 8 ø 8	131108	
T Connector # 1 • ø 8 ø 8		N01861-306	5-10
	T Connector # 1 • ø 8 ø 12	131105	
T Connector # 1 • ø 8 ø 12		N01861-303	

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

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Various Products Information

List of Jungle Gym

Product name		Order code No.	Page of details
		TYPE	
Connector	T Connector # 1 • $\phi 12 \phi 8$	131104 N01861-302	5-11
	T Connector # 1 • $\phi 12 \phi 12$	131103 N01861-301	
	T Connector # 1 • $\phi 12 \phi 20$	131109 N01861-307	
	T Connector # 1 • $\phi 20 \phi 12$	131106 N01861-304	
	T Connector # 1 • $\phi 20 \phi 20$	131107 N01861-305	
	T Connector # 2 • $\phi 8 \phi 8$	131115 N01861-406	
	T Connector # 2 • $\phi 8 \phi 12$	131112 N01861-403	
	T Connector # 2 • $\phi 12 \phi 8$	131111 N01861-402	
	T Connector # 2 • $\phi 12 \phi 12$	131110 N01861-401	
	T Connector # 2 • $\phi 12 \phi 20$	131116 N01861-407	5-12
	T Connector # 2 • $\phi 20 \phi 12$	131113 N01861-404	
	T Connector # 2 • $\phi 20 \phi 20$	131114 N01861-405	
	Parallel connector • $\phi 8 \phi 8$	131096 N01861-107	
	Parallel connector • $\phi 8 \phi 12$	131092 N01861-101	
	Parallel connector • $\phi 12 \phi 12$	131093 N01861-102	
	Parallel connector • $\phi 20 \phi 12$	131094 N01861-104	5-13
	Parallel connector • $\phi 20 \phi 20$	131095 N01861-106	
	Connector • for SSW	131097 N01861-108	

Product name		Order code No.	Page of details
		TYPE	
NEW Connector	Floating Paraller Connector $\phi 12$	054344 F-PARA-12	5-13
	Floating Paraller Connector $\phi 20$	054345 F-PARA-20	
	Straight connector • $\phi 8$	131488 N01868-501	
	Straight connector • $\phi 12$	131489 N01868-502	
	Straight connector • $\phi 20$	131490 N01868-503	
	Access bracket • $\phi 12 \cdot M6$	131125 N01862-210	5-14
Bracket	Access bracket • $\phi 20 \cdot M6$	131126 N01862-211	
	Attachment bracket • $\phi 8 \cdot M5$	131306 N01862-208	
	Attachment bracket • $\phi 8 \cdot M6$	131121 N01862-205	
	Attachment bracket • $\phi 12 \cdot M5$	131305 N01862-204	
	Attachment bracket • $\phi 12 \cdot M6$	131118 N01862-201	
	Attachment bracket • $\phi 12 \cdot M8$	131225 N01862-213	
	Attachment bracket • $\phi 20 \cdot M6$	131123 N01862-207	5-14
	Attachment bracket • $\phi 20 \cdot M8$	131226 N01862-214	
	Suction bracket • $\phi 8 \cdot M5$	131122 N01862-206	
	Suction bracket • $\phi 8 \cdot M6$	131124 N01862-209	
	Suction bracket • $\phi 12 \cdot M5$	131119 N01862-202	
	Suction bracket • $\phi 12 \cdot M6$	131127 N01862-212	

Product name			Order code No.	Page of details
			TYPE	
Bracket	Suction bracket • φ 12 • PT1/8		131120 N01862-203	5-14
	Cylinder bracket • φ 8		131075 N01915-113	
	Cylinder bracket • φ 12		131074 N01915-112	
	Cylinder bracket • φ 20		131066 N01915-103	
	Swing Bracket		131065 N01915-102	5-15
	Slide bracket • φ 8		131151 N01863-207	
	Slide bracket • φ 12		131145 N01863-201	
	Slide bracket • φ 20		131149 N01863-205	
	Slide bracket • W • φ 8		131217 N01863-113	
	Slide bracket • W • φ 12		131128 N01863-101	
	Slide bracket • W • φ 20		131134 N01863-111	
	Sensor bracket • φ 12		131189 N01867-101	5-16
	Sensor bracket		131077 N01915-201	
	Chuck bracket • TH • φ 8		131188 N01866-502	
	Chuck bracket • TH • φ 12		131187 N01866-501	
	Chuck bracket • φ 12		131067 N01915-105	
	Nipper bracket • A		131078 N01915-301	
	Nipper bracket • B		131216 N01915-302	

Product name			Order code No.	Page of details
			TYPE	
Bracket	Nipper bracket • C		131080 N01915-303	5-16
	Nipper bracket • D		131081 N01915-304	
	Nipper bracket • E		131082 N01915-305	
	Bracket • L • φ 8 • for UMCD		131180 N01866-202	5-17
	Bracket • L • φ 12 • for MCD		131179 N01866-201	
	Bracket • T • φ 12 • for MCD		131176 N01866-101	
	Bracket • T • φ 20 • for MCD		131554 N01866-103A	
	Bracket • T • φ 8 • for UMCD		131177 N01866-102	
	Bracket • TH • φ 8 • for UMCD		131182 N01866-302	
	Bracket • TH • φ 12 • for MCD		131181 N01866-301	5-18
	Bracket • TH • φ 20 • for MCD		131183 N01866-303	
	Bracket • TV • φ 8 • for UMCD		131185 N01866-402	
	Bracket • TV • φ 12 • for MCD		131184 N01866-401	
	Bracket • TV • φ 20 • for MCD		131186 N01866-403	
	Bracket • φ 8		131073 N01915-111	
	Bracket • φ 12		131071 N01915-109	
	Bracket • φ 20		131072 N01915-110	
	Bracket • W • φ 8		131070 N01915-108	

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

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Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

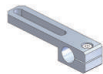
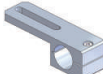
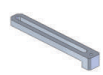
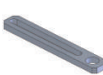
Information

Various Products Information

List of Jungle Gym

Product name		Order code No.	Page of details
		TYPE	
Bracket	Bracket • W • ϕ 12	131068 N01915-106	5-18
	Bracket • W • ϕ 20	131069 N01915-107	
	Bracket • NCON	131083 N01915-401	5-19
	Rotation bracket • ϕ 20	131064 N01915-101	
	Rotation bracket • M10 • 8A	131434 N01864-305	
	Rotation bracket • M12 • 12A	131173 N01864-306	
	Rotation bracket • M17 • 20A	131174 N01864-307	
	Rotation bracket • PT1/8 • 8A	131175 N01864-401	
	Rotation bracket • ϕ 8 • 8A	131170 N01864-303	
	Rotation bracket • ϕ 8 • 8B	131606 N01864-103A	
Rotation	Rotation bracket • ϕ 8 • M5A	131164 N01864-202	5-20
	Rotation bracket • ϕ 8 • M10A	131435 N01864-201	
	Rotation bracket • ϕ 8 • M12A	131433 N01864-205	
	Rotation bracket • ϕ 12 • PT1/8A	131166 N01864-204	
	Rotation bracket • ϕ 12 • 8A	131169 N01864-302	
	Rotation bracket • ϕ 12 • 8B	131600 N01864-101A	
	Rotation bracket • ϕ 12 • 12A	131168 N01864-301	
	Rotation BKT • ϕ 12 • 12AL	131567 N01864-301L	

Product name		Order code No.	Page of details
		TYPE	
Bracket	Rotation bracket • ϕ 12 • 12B	131605 N01864-102A	5-20
	Rotation bracket • ϕ 20 • 20A	131171 N01864-304	
	Rotation BKT • ϕ 20 • 20AL	131568 N01864-304L	
Rotation	Suction rotate # A • ϕ 8	131194 N01868-104	5-21
	Suction rotate # A • ϕ 12	131191 N01868-101	
	Suction rotate # B • M5 • ϕ 12	131192 N01868-102	
Bracket	Slide bracket 40 • M3	131158 N01863-214	5-22
	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 • ϕ 8	131152 N01863-208	
	Slide bracket 40 • W • ϕ 8	131131 N01863-106	
	Slide bracket 40 • W • ϕ 12	131132 N01863-107	
Slide bracket	Slide bracket 40 • W • ϕ 20	131137 N01863-114	5-22
	Slide bracket 40 • T • W • ϕ 8	230051 XL0005-102	

Product name			Order code No.	Page of details
			TYPE	
Bracket	Slide bracket 40 • T • ϕ 8		230056	5-22
			XL0005-107	
	Slide bracket 40 • T • ϕ 12		230052	
			XL0005-103	
	Slide bracket 40 • T • ϕ 20		230054	
			XL0005-105	
	Slide bracket 70 • M3		131159	
			N01863-217	
	Slide bracket 70 • M5		131148	
			N01863-204	
	Slide bracket 70 • M6		131157	
			N01863-213	
	Slide bracket 70 • PT1/8		131155	
			N01863-211	
	Slide bracket 70 • W • M10		131141	5-23
			N01863-120	
	Slide bracket 70 • W • M12		131142	
			N01863-121	
	Slide bracket 70 • W • M17		131144	
			N01863-124	
	Slide bracket 70 • ϕ 8		131153	
			N01863-209	
	Slide bracket 70 • W • ϕ 8		131133	
			N01863-110	
	Slide bracket 70 • W • ϕ 12		131130	
			N01863-103	
	Slide bracket 70 • W • ϕ 20		131138	5-24
			N01863-115	
	Slide bracket 70 • T • W • ϕ 8		230053	
			XL0005-104	
	Slide bracket 70 • T • ϕ 8		230057	
			XL0005-108	
	Slide bracket 70 • T • ϕ 12		230050	
			XL0005-101	
	Slide bracket 70 • T • ϕ 20		230055	
			XL0005-106	

Product name			Order code No.	Page of details
			TYPE	
Washer	Slide washer • ϕ 8 / ϕ 12		131146	5-24
			N01863-202	
	Slide washer • W • ϕ 8 / ϕ 12		131129	
			N01863-102	
	Slide washer • ϕ 20		131150	
	Slide washer • W • ϕ 20		131135	
			N01863-206	
Nut plate	Nut plate for slide bracket		023197	
			CP-076	
Nut	Bushing nut • ϕ 8 • M5		131200	5-25
			N01868-401	
	Bushing nut • ϕ 8 • M6		131206	
			N01868-410	
	Bushing nut • ϕ 12 • M5		131202	
			N01868-403	
	Bushing nut • ϕ 12 • M10		131201	
			N01868-402	
	Bushing nut • ϕ 12 • PT1/8		131207	
			N01868-411	
Bushing	Bushing nut • ϕ 20 • M12		131205	
			N01868-409	
	Bushing nut • ϕ 20 • PT1/8		131199	
			N01868-305	
	Bushing nut • M5-M3		131204	
			N01868-407	
	Bushing • ϕ 12 ϕ 8		131196	
			N01868-301	
	Bushing • ϕ 20 ϕ 8		131197	
			N01868-302	
	Bushing • ϕ 20 ϕ 12		131198	
			N01868-303	

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

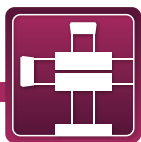
Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information



Jungle Gym SS • CFRP Pipe / Resin Fixture

Using thin-walled stainless steel pipes allows weight reduction and structural rigidity.



Jungle gym SS pipe φ 8

Order code No.	340905
TYPE	8*0.6*500

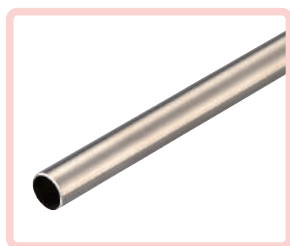
● Weight : 56g

Order code No.	340906
TYPE	8*0.6*1000

● Weight : 112g

Order code No.	340907
TYPE	8*0.6*1500

● Weight : 144g



Jungle gym SS pipe φ 12

Order code No.	271527
TYPE	12*0.6*500

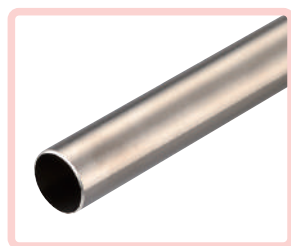
● Weight : 88g

Order code No.	271528
TYPE	12*0.6*1000

● Weight : 169g

Order code No.	271529
TYPE	12*0.6*1500

● Weight : 250g



Jungle gym SS pipe φ 20

Order code No.	281812
TYPE	20*0.8*500

● Weight : 172g

Order code No.	281813
TYPE	20*0.8*1000

● Weight : 352g

Order code No.	281814
TYPE	20*0.8*1500

● Weight : 543g



Jungle gym CFRP pipe φ 12

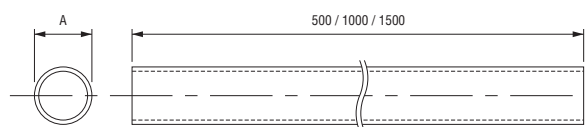
Order code No.	023361
TYPE	CFRP 12*1.5*1500

● Weight : 121g

Jungle gym CFRP pipe φ 20

Order code No.	023362
TYPE	CFRP 20*1.5*1500

● Weight : 200g



Specification

Product name	A	Thickness	Material	Outside diameter tolerance
Jungle gym SS pipe φ 8	φ 8	0.6mm	SUS304	0 ~ - 0.06
Jungle gym SS pipe φ 12	φ 12	0.6mm		
Jungle gym SS pipe φ 20	φ 20	0.8mm		0 ~ - 0.10
Jungle gym CFRP pipe φ 12	φ 12	1.5mm	CFRP	- 0.05 ~
Jungle gym CFRP pipe φ 20	φ 20	1.5mm		- 0.15 *

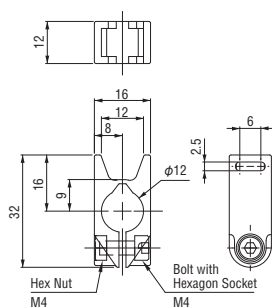
*The tolerance of outside diameter is a rough standard.



Tie wrap base φ 12

Order code No.	171210
TYPE	RCA12

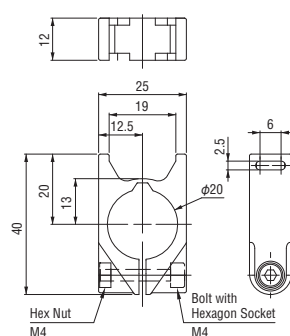
● Weight : 5g



Tie wrap base φ 20

Order code No.	171211
TYPE	RCA20

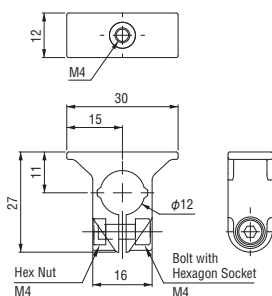
● Weight : 7g



Plastic Fixture φ 12 (M4)

Order code No.	171212
TYPE	RCB12

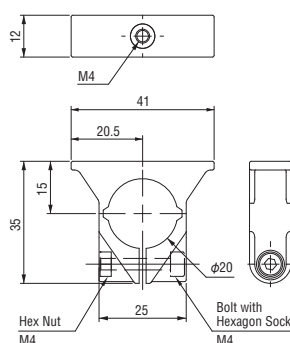
● Weight : 6g

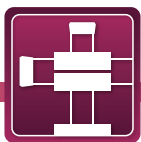


Plastic Fixture φ 20 (M4)

Order code No.	171213
TYPE	RCB20

● Weight : 9g





Pipe End Cap / SS 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 SS pipe.



Pipe end cap φ8

Order code No.	171338
TYPE	R-CAP-8

- Weight : 0.2g

Pipe end cap φ12

Order code No.	171339
TYPE	R-CAP-12

- Weight : 0.4g

Pipe end cap φ20

Order code No.	171340
TYPE	R-CAP-20

- Weight : 3.0g



SS pipe cutter

Order code No.	101206
TYPE	K-203

- Weight : 205g
- Coping with stainless steel pipe, copper tubes

Spare blade for pipe cutter

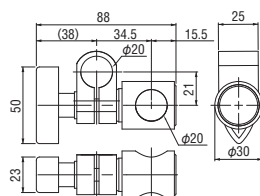
Order code No.	101207
TYPE	K-203-1

- Weight : 3g
- Pipe cutter (K-203) spare blade

Clip · TMA · φ20 * φ20

Order code No.	196559
TYPE	TMA-CL (20*20)

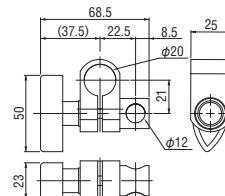
- Weight : 270g



Clip · TMA · φ20 * φ12

Order code No.	196560
TYPE	TMA-CL (20*12)

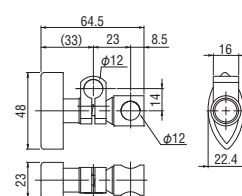
- Weight : 160g



Clip · TMA · φ12 * φ12

Order code No.	196561
TYPE	TMA-CL (12*12)

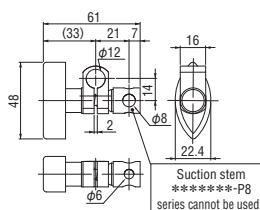
- Weight : 75g



Clip · TMA · φ12 * φ8

Order code No.	196562
TYPE	TMA-CL (12*8)

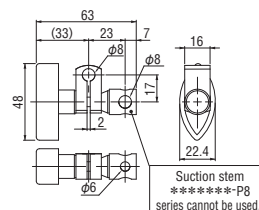
- Weight : 85g



Clip · TMA · φ8 * φ8

Order code No.	196563
TYPE	TMA-CL (8*8)

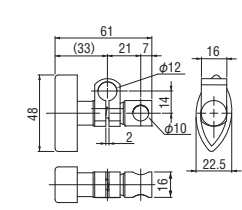
- Weight : 55g



Clip · TMA · φ12 * φ10

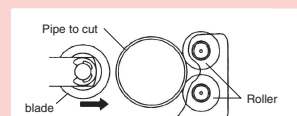
Order code No.	196564
TYPE	TMA-CL (12*10)

- Weight : 62g

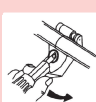


How to use

- 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.



- 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.



Ratchet style Tube cutter

Order code No.	197172
TYPE	TTCR-322T

- Weight : 270g
- Applicable to pipes of copper, aluminum, brass and vinyl chloride. Because of the automatic transport function, it will be cut beautifully.



Ratchet style replacement blade for tube cutter

Order code No.	061138
TYPE	GFC-15NT

- Weight : 3g
- Replacement blade exclusively for the tuber cutter (TTCR-322T)

Quick Chuck Change

Quick Chuck
Change
(Manual)

Tool
Changer

Automated
Chuck Exchange
System

Grip

Mini
Cylinder

Accessories
for Mini
Cylinder

Container
Cylinders

Accessory
for Container
Cylinder

Grippers

Rubber
Material /
Grip Pad

Suction

Suction
Cups

Suction
Stem

Pad in Pad

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

Air Management / Sensors

Air
Management

Sensors

PCIO
Communication
Unit

Lightweight Series

Frame / Suction /
Cylinder / Pads /
Manifold

Assembling Tools

Tool / Jig

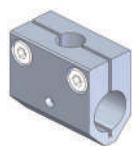
Information

Various Products
Information



Frame / Module ● Jungle Gym

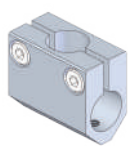
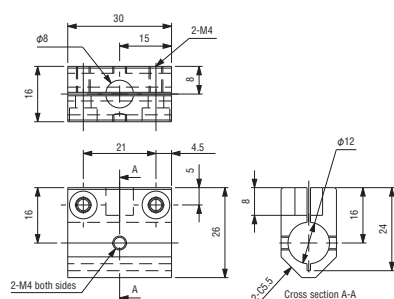




**T Connector # 1 •
φ12 φ8**

Order code No. **131104**
TYPE **N01861-302**

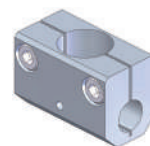
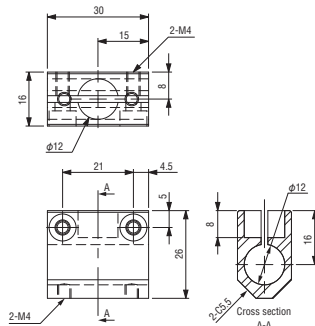
● Weight : 18.7g



**T Connector # 1 •
φ12 φ12**

Order code No. **131103**
TYPE **N01861-301**

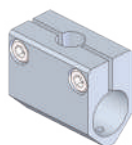
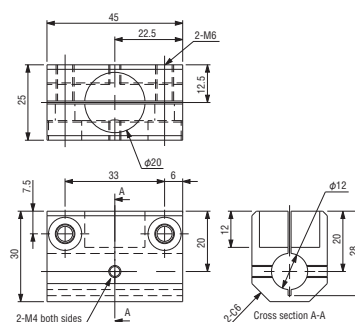
● Weight : 17.5g



**T Connector # 1 •
φ12 φ20**

Order code No. **131109**
TYPE **N01861-307**

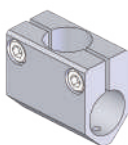
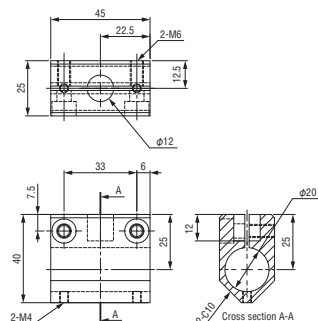
● Weight : 57.8g



**T Connector # 1 •
φ20 φ12**

Order code No. **131106**
TYPE **N01861-304**

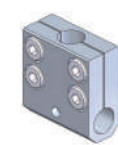
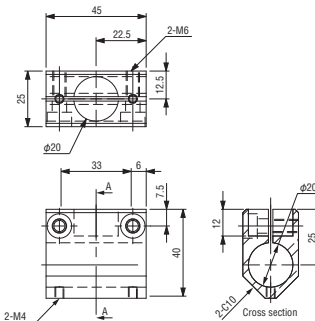
● Weight : 62.4g



**T Connector # 1 •
φ20 φ20**

Order code No. **131107**
TYPE **N01861-305**

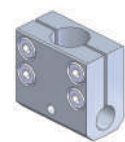
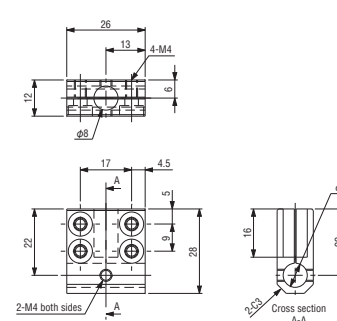
● Weight : 55.9g



**T Connector # 2 •
φ8 φ8**

Order code No. **131115**
TYPE **N01861-406**

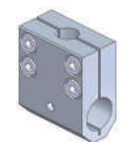
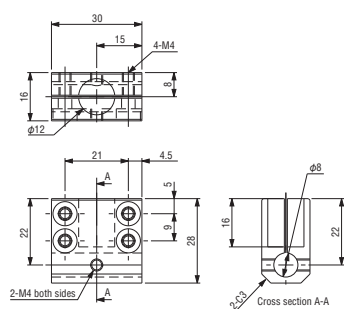
● Weight : 14.6g



**T Connector # 2 •
φ8 φ12**

Order code No. **131112**
TYPE **N01861-403**

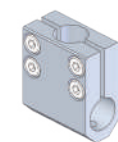
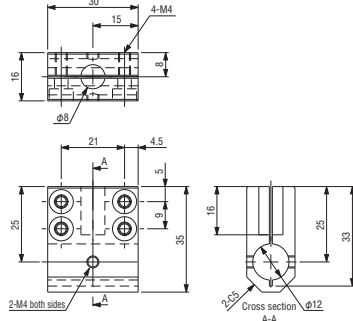
● Weight : 30.8g



**T Connector # 2 •
φ12 φ8**

Order code No. **131111**
TYPE **N01861-402**

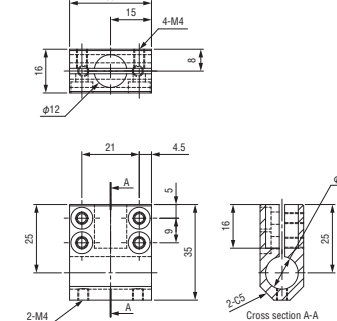
● Weight : 28.3g



**T Connector # 2 •
φ12 φ12**

Order code No. **131110**
TYPE **N01861-401**

● Weight : 25.7g



**Quick Chuck
Change**

Quick Chuck
Change
(Manual)

Tool
Changer

Automated
Chuck Exchange
System

Grip

Mini
Cylinder

Accessories
for Mini
Cylinder

Container
Cylinders

Accessory
for Container
Cylinder

Grippers

Rubber
Material /
Grip Pad

Suction

Suction
Cups

Suction
Stem

Pad in Pad

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

Air Management / Sensors

Air
Management

Sensors

PCIO
Communication
Unit

Lightweight Series

Frame / Suction /
Cylinder / Pads /
Manifold

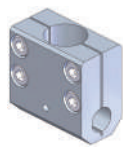
Assembling Tools

Tool / Jig

Information

Various Products
Information

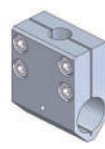
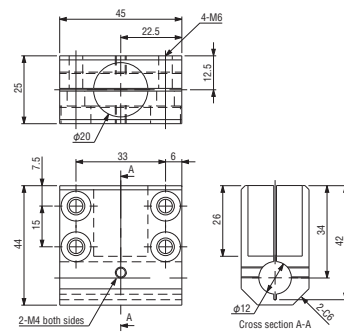
Jungle Gym Series Parts



**T Connector # 2 •
φ12 φ20**

Order code No.	131116
TYPE	N01861-407

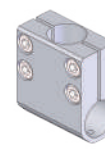
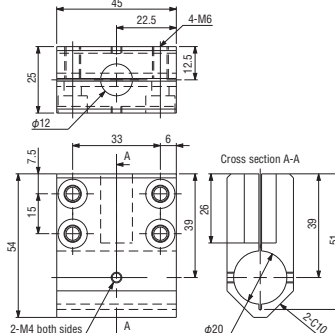
● Weight : 87.2g



**T Connector # 2 •
φ20 φ12**

Order code No.	131113
TYPE	N01861-404

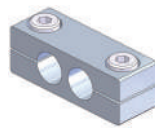
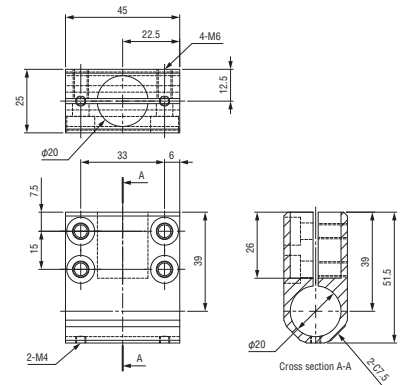
● Weight : 107.4g



**T Connector # 2 •
φ20 φ20**

Order code No.	131114
TYPE	N01861-405

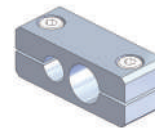
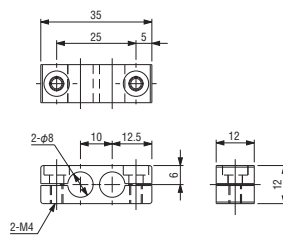
● Weight : 77.3g



**Parallel connector •
φ8 φ8**

Order code No.	131096
TYPE	N01861-107

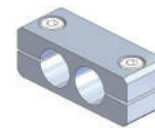
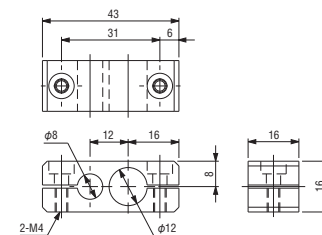
● Weight : 9.1g



**Parallel connector •
φ8 φ12**

Order code No.	131092
TYPE	N01861-101

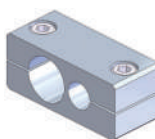
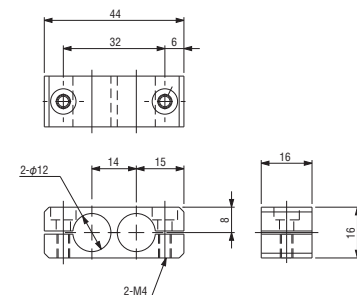
● Weight : 20.6g



**Parallel connector •
φ12 φ12**

Order code No.	131093
TYPE	N01861-102

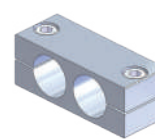
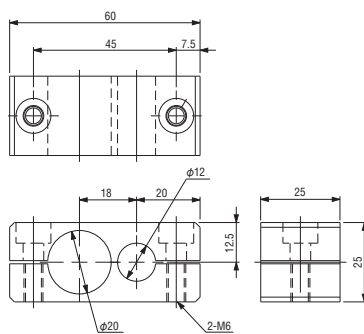
● Weight : 18.6g



**Parallel connector •
φ20 φ12**

Order code No.	131094
TYPE	N01861-104

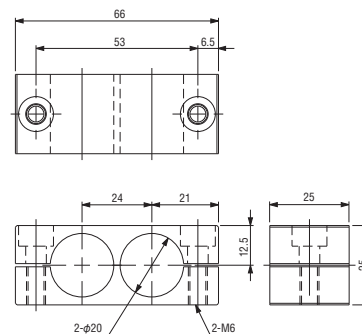
● Weight : 67.2g

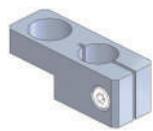


**Parallel connector •
φ20 φ20**

Order code No.	131095
TYPE	N01861-106

● Weight : 60.7g

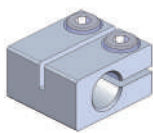
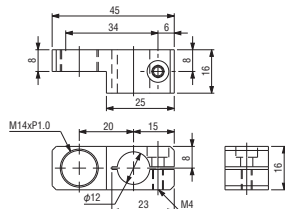




Connector • for SSW

Order code No.	131097
TYPE	N01861-108

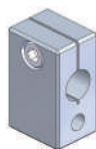
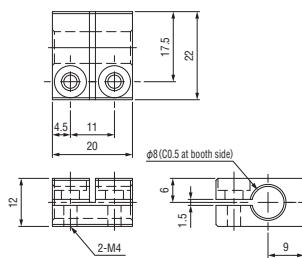
● Weight : 15.5g



Straight connector • φ8

Order code No.	131488
TYPE	N01868-501

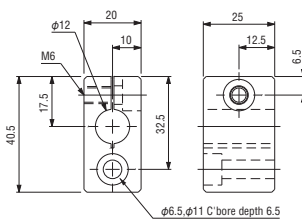
● Weight : 12.2g



Access bracket • φ12 • M6

Order code No.	131125
TYPE	N01862-210

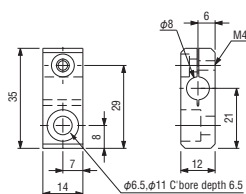
● Weight : 41.5g



Attachment bracket • φ8 • M6

Order code No.	131121
TYPE	N01862-205

● Weight : 11.1g

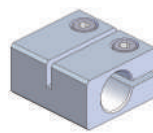
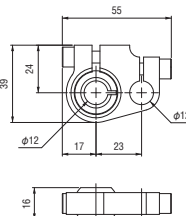


NEW

Floating Paraller Connector φ12

Order code No.	054344
TYPE	F-PARA-12

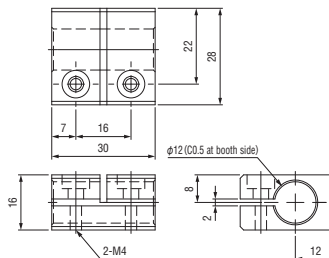
● Weight : 40.0g



Straight connector • φ12

Order code No.	131489
TYPE	N01868-502

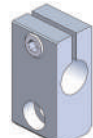
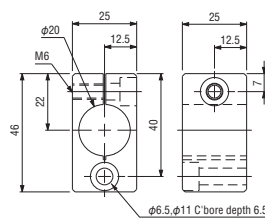
● Weight : 26.8g



Access bracket • φ20 • M6

Order code No.	131126
TYPE	N01862-211

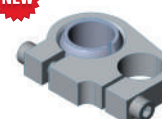
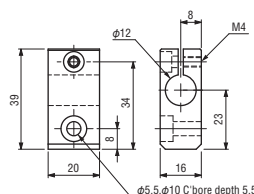
● Weight : 50.8g



Attachment bracket • φ12 • M5

Order code No.	131305
TYPE	N01862-204

● Weight : 30.0g

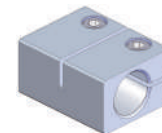
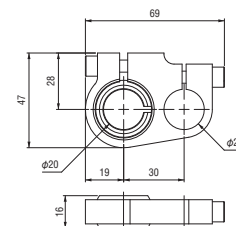


NEW

Floating Paraller Connector φ20

Order code No.	054345
TYPE	F-PARA-20

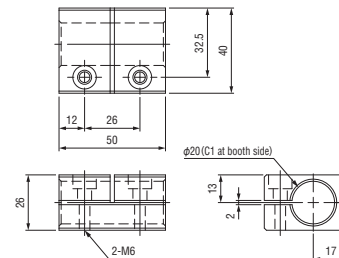
● Weight : 56.0g



Straight connector • φ20

Order code No.	131490
TYPE	N01868-503

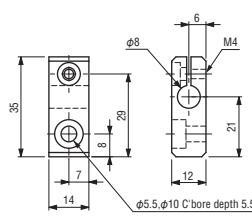
● Weight : 102.1g



Attachment bracket • φ8 • M5

Order code No.	131306
TYPE	N01862-208

● Weight : 15.0g



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

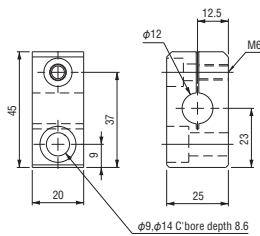
Jungle Gym Series Parts



**Attachment bracket •
φ12 • M8**

Order code No.	131225
TYPE	N01862-213

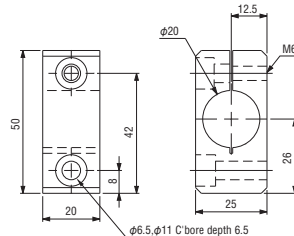
● Weight : 41.5g



**Attachment bracket •
φ20 • M6**

Order code No.	131123
TYPE	N01862-207

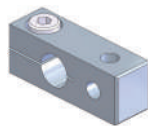
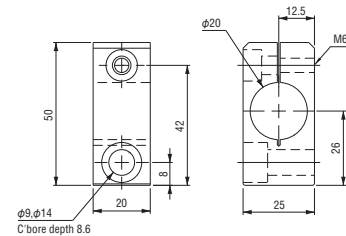
● Weight : 44.7g



**Attachment bracket •
φ20 • M8**

Order code No.	131226
TYPE	N01862-214

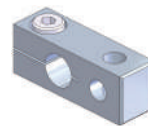
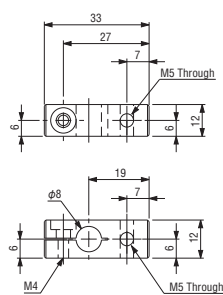
● Weight : 50.7g



**Suction bracket •
φ8 • M5**

Order code No.	131122
TYPE	N01862-206

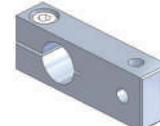
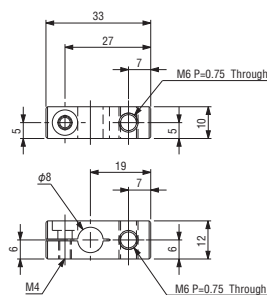
● Weight : 8.1g



**Suction bracket •
φ8 • M6**

Order code No.	131124
TYPE	N01862-209

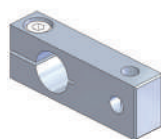
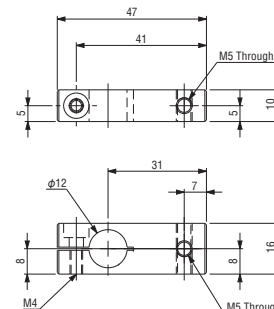
● Weight : 7.8g ● M6 (fine)



**Suction bracket •
φ12 • M5**

Order code No.	131119
TYPE	N01862-202

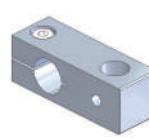
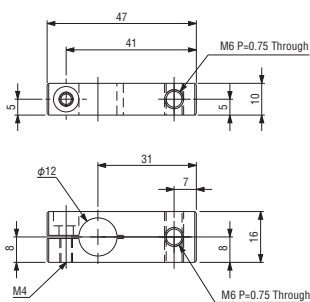
● Weight : 15.7g



**Suction bracket •
φ12 • M6**

Order code No.	131127
TYPE	N01862-212

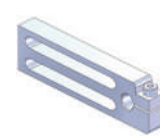
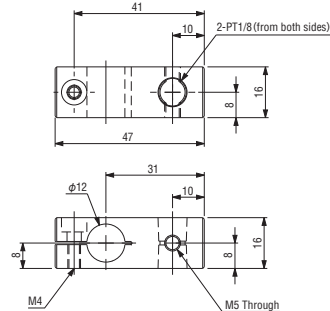
● Weight : 15.4g ● M6 (fine)



**Suction bracket •
φ12 • PT1/8**

Order code No.	131120
TYPE	N01862-203

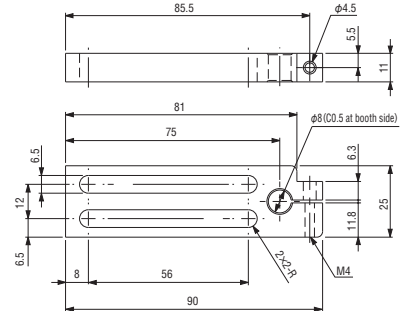
● Weight : 24.1g

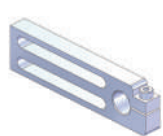


**Cylinder bracket •
φ8**

Order code No.	131075
TYPE	N01915-113

● Weight : 44g

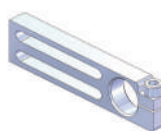
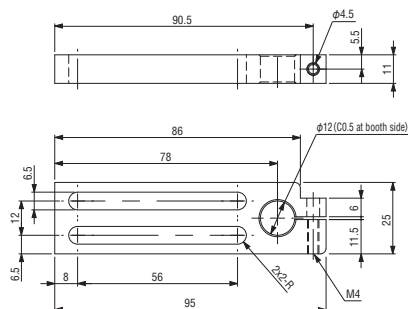




Cylinder bracket • φ12

Order code No.	131074
TYPE	N01915-112

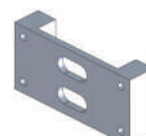
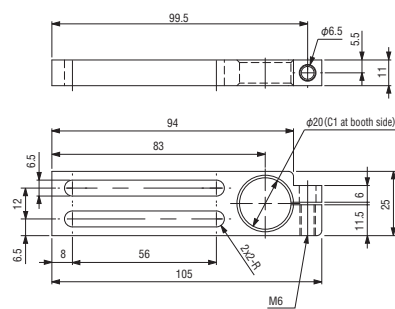
● Weight : 45g



Cylinder bracket • φ20

Order code No.	131066
TYPE	N01915-103

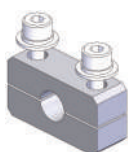
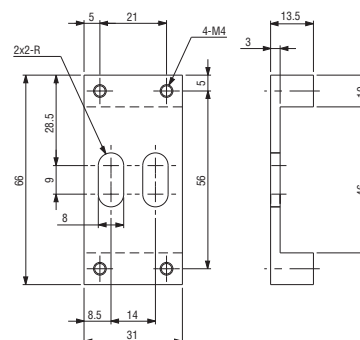
● Weight : 49g



Swing Bracket

Order code No.	131065
TYPE	N01915-102

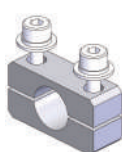
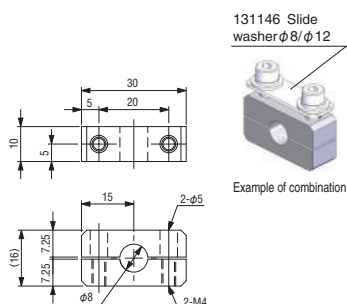
● Weight : 32.1g



Slide bracket • φ8

Order code No.	131151
TYPE	N01863-207

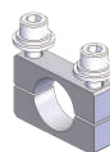
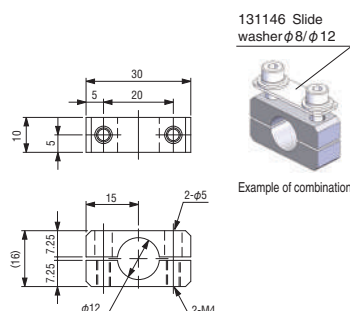
● Weight : 10.4g



Slide bracket • φ12

Order code No.	131145
TYPE	N01863-201

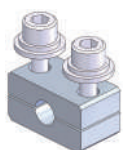
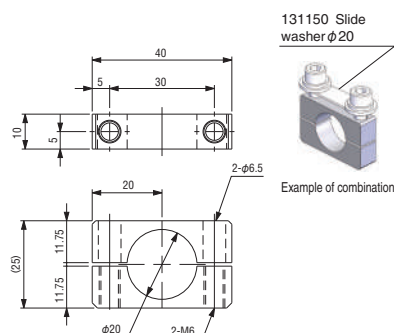
● Weight : 8.5g



Slide bracket • φ20

Order code No.	131149
TYPE	N01863-205

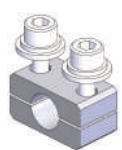
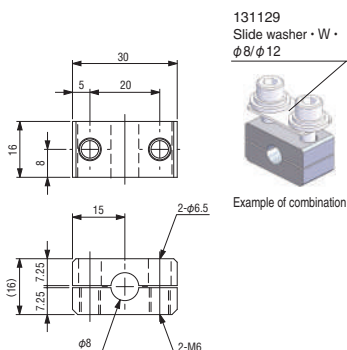
● Weight : 15.0g



Slide bracket • W • φ8

Order code No.	131217
TYPE	N01863-113

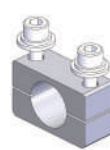
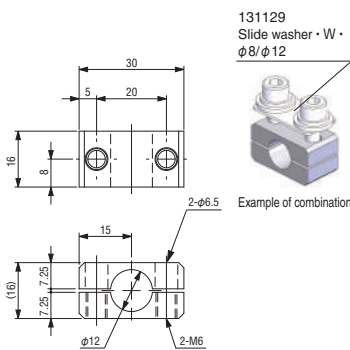
● Weight : 12.0g



Slide bracket • W • φ12

Order code No.	131128
TYPE	N01863-101

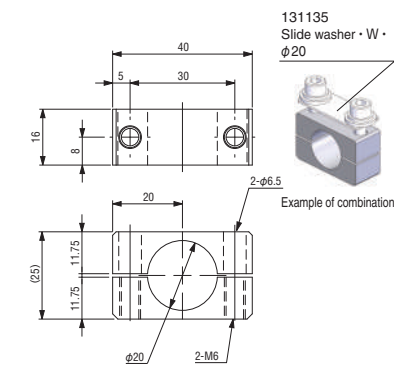
● Weight : 13.3g



Slide bracket • W • φ20

Order code No.	131134
TYPE	N01863-111

● Weight : 26.2g



Quick Chuck Change

Quick Chuck
Change
(Manual)

Tool
Changer

Automated
Chuck Exchange
System

Grip

Mini
Cylinder

Accessories
for Mini
Cylinder

Container
Cylinders

Accessory
for Container
Cylinder

Grippers

Rubber
Material /
Grip Pad

Suction

Suction
Cups

Suction
Stem

Pad in Pad

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

Air Management / Sensors

Air
Management

Sensors

PCIO
Communication
Unit

Lightweight Series

Frame / Suction /
Cylinder / Pads /
Manifold

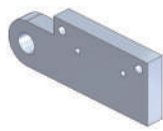
Assembling Tools

Tool / Jig

Information

Various Products
Information

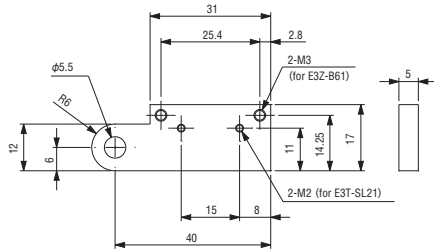
Jungle Gym Series Parts



Sensor bracket • $\phi 12$

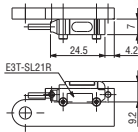
Order code No. **131189**
TYPE **N01867-101**

● Weight : 9.2g



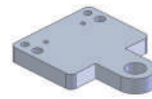
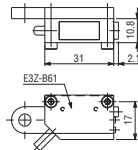
Sensor Mounting Example ①

E3T-SL21R



Sensor Mounting Example ②

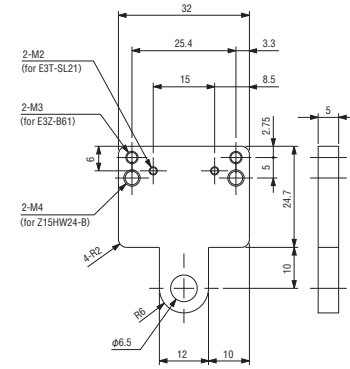
E3Z-B61



Sensor bracket

Order code No. **131077**
TYPE **N01915-201**

● Weight : 12.6g



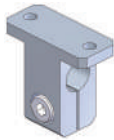
Sensor Mounting Example ①

E3T-SL21



Sensor Mounting Example ②

E3Z-B61

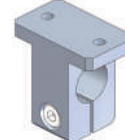
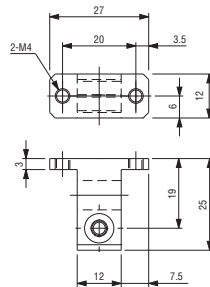


Chuck bracket • TH • $\phi 8$

Order code No. **131188**
TYPE **N01866-502**

● Weight : 8.6g

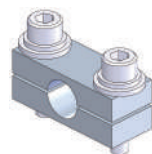
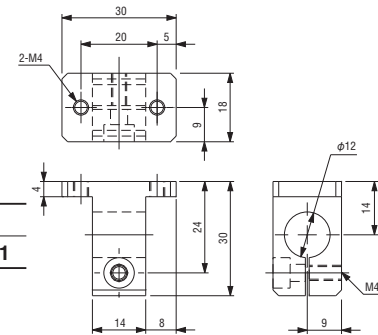
● If base frame $\phi 8$ is used, this product may be loosened and rotated.



Chuck bracket • TH • $\phi 12$

Order code No. **131187**
TYPE **N01866-501**

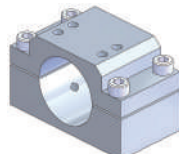
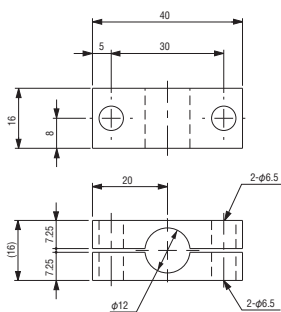
● Weight : 18.3g



Chuck bracket • $\phi 12$

Order code No. **131067**
TYPE **N01915-105**

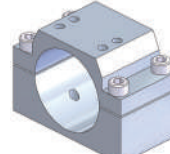
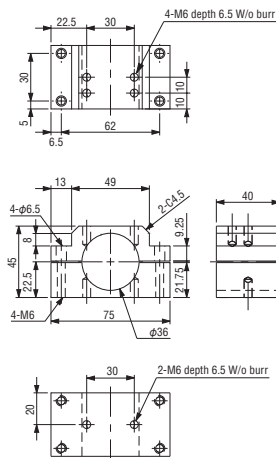
● Weight : 19.6g



Nipper bracket • A

Order code No. **131078**
TYPE **N01915-301**

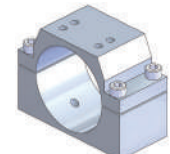
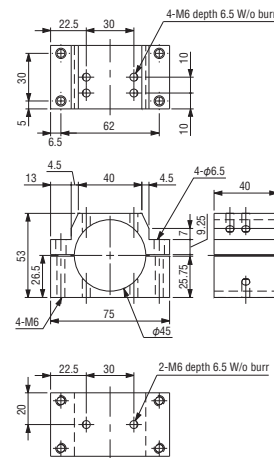
● Weight : 208.8g



Nipper bracket • B

Order code No. **131216**
TYPE **N01915-302**

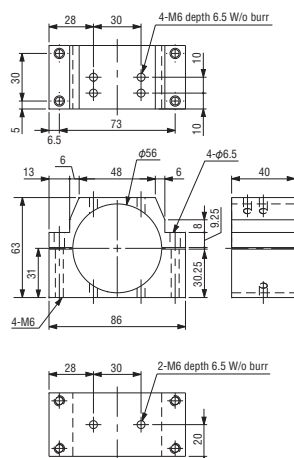
● Weight : 198.4g



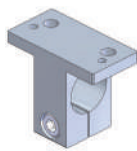
Nipper bracket • C

Order code No. **131080**
TYPE **N01915-303**

● Weight : 241.3g



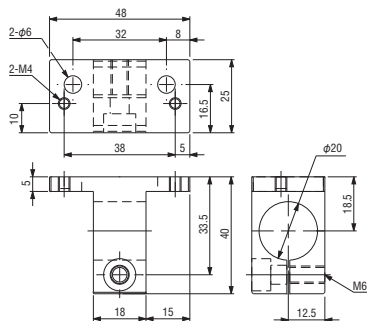
Jungle Gym Series Parts



**Bracket • TH • φ20 •
for MCD**

Order code No.	131183
TYPE	N01866-303

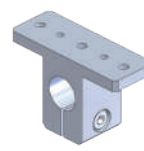
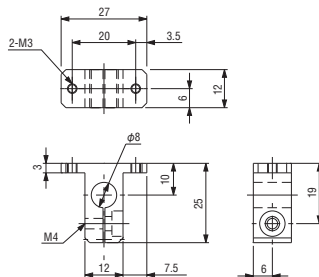
- Weight : 40.6g
- Check the length of mounting bolt for mini cylinder.
- There may be interference between pipe and bolt when you attach mini container cylinder.



**Bracket • TV • φ8 •
for UMCD**

Order code No.	131185
TYPE	N01866-402

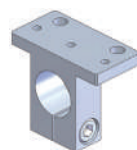
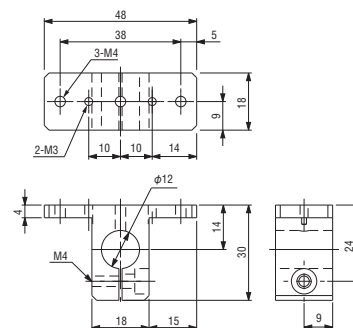
- Weight : 8.7g
- If base frame φ8 is used, this product may be loosened and rotated.



**Bracket • TV • φ12 •
for MCD**

Order code No.	131184
TYPE	N01866-401

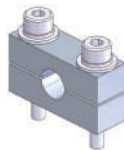
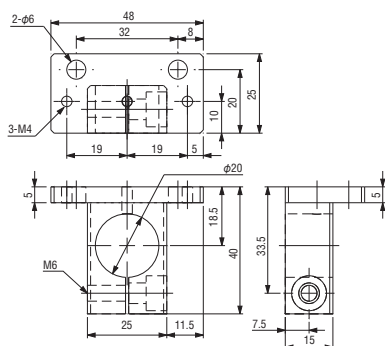
- Weight : 25.6g



**Bracket • TV • φ20 •
for MCD**

Order code No.	131186
TYPE	N01866-403

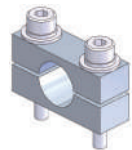
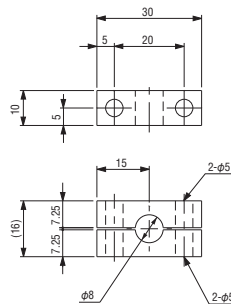
- Weight : 35.9g



Bracket • φ8

Order code No.	131073
TYPE	N01915-111

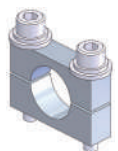
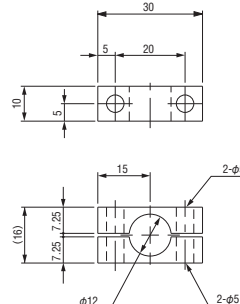
- Weight : 10.0g



Bracket • φ12

Order code No.	131071
TYPE	N01915-109

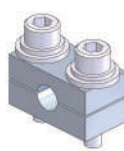
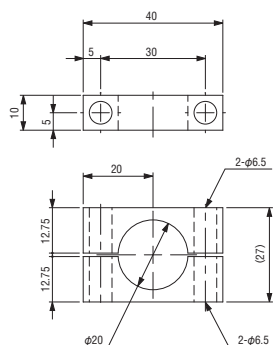
- Weight : 8.2g



Bracket • φ20

Order code No.	131072
TYPE	N01915-110

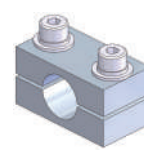
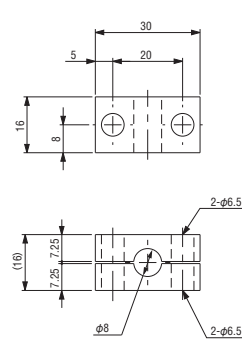
- Weight : 16.1g



Bracket • W • φ8

Order code No.	131070
TYPE	N01915-108

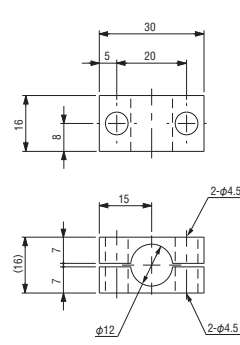
- Weight : 15.8g

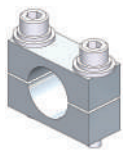


Bracket • W • φ12

Order code No.	131068
TYPE	N01915-106

- Weight : 12.9g

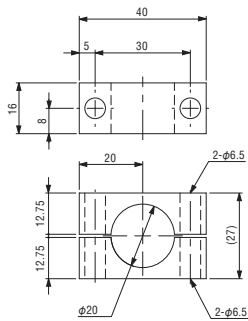




Bracket • W • $\phi 20$

Order code No.	131069
TYPE	N01915-107

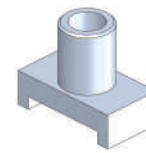
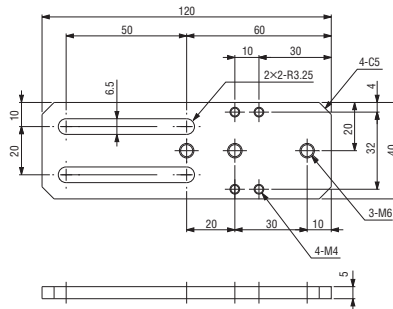
● Weight : 28.6g



Bracket • NCON

Order code No.	131083
TYPE	N01915-401

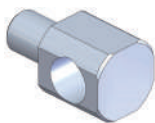
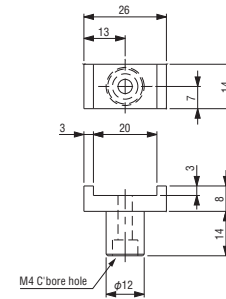
● Weight : 153.7g
● for NCON-20W, 40W, 80W



Rotation bracket • $\phi 20$

Order code No.	131064
TYPE	N01915-101

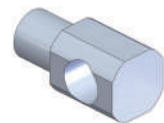
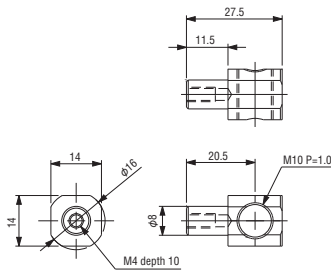
● Weight : 8.9g



Rotation bracket • M10 • 8A

Order code No.	131434
TYPE	N01864-305

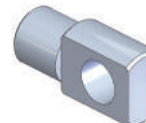
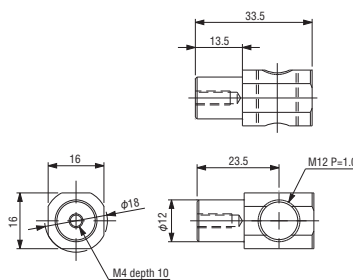
● Weight : 7.0g



Rotation bracket • M12 • 12A

Order code No.	131173
TYPE	N01864-306

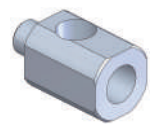
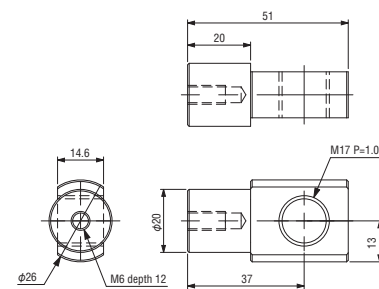
● Weight : 12.9g



Rotation bracket • M17 • 20A

Order code No.	131174
TYPE	N01864-307

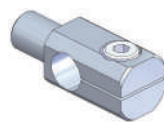
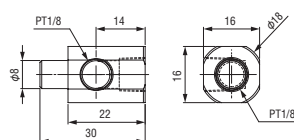
● Weight : 59.3g



Rotation bracket • PT1/8 • 8A

Order code No.	131175
TYPE	N01864-401

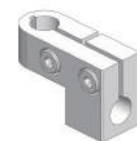
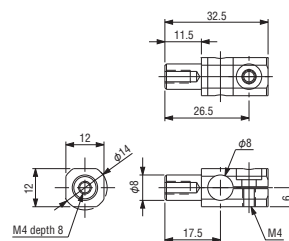
● Weight : 11.8g



Rotation bracket • $\phi 8$ • 8A

Order code No.	131170
TYPE	N01864-303

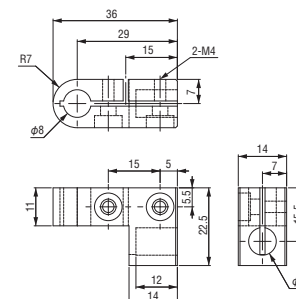
● Weight : 6.6g



Rotation bracket • $\phi 8$ • 8B

Order code No.	131606
TYPE	N01864-103A

● Weight : 18.0g



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

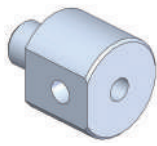
Assembling Tools

Tool / Jig

Information

Various Products Information

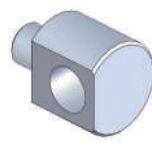
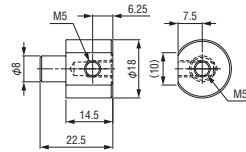
Jungle Gym Series Parts



**Rotation bracket ・
φ8・M5A**

Order code No.	131164
TYPE	N01864-202

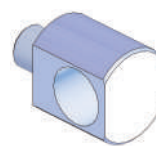
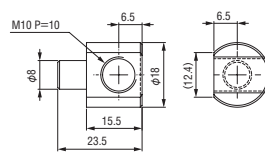
● Weight : 10.0g



**Rotation bracket ・
φ8・M10A**

Order code No.	131435
TYPE	N01864-201

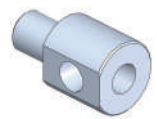
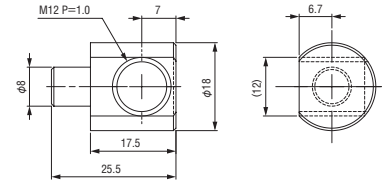
● Weight : 8.0g



**Rotation bracket ・
φ8・M12A**

Order code No.	131433
TYPE	N01864-205

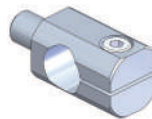
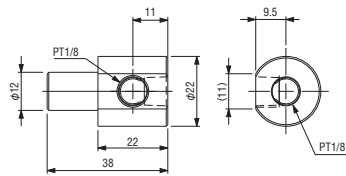
● Weight : 7.6g



**Rotation bracket ・
φ12・PT1/8A**

Order code No.	131166
TYPE	N01864-204

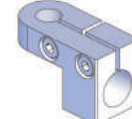
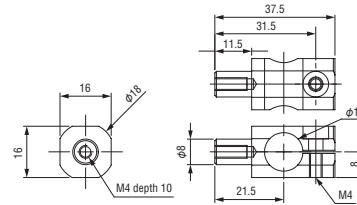
● Weight : 24.6g



**Rotation bracket ・
φ12・8A**

Order code No.	131169
TYPE	N01864-302

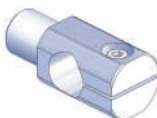
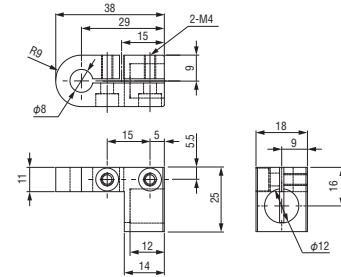
● Weight : 11.9g



**Rotation bracket ・
φ12・8B**

Order code No.	131600
TYPE	N01864-101A

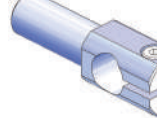
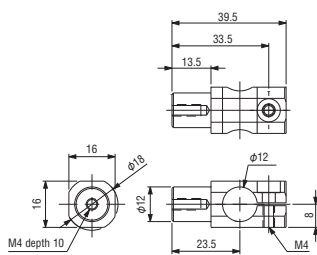
● Weight : 24.0g



**Rotation bracket ・
φ12・12A**

Order code No.	131168
TYPE	N01864-301

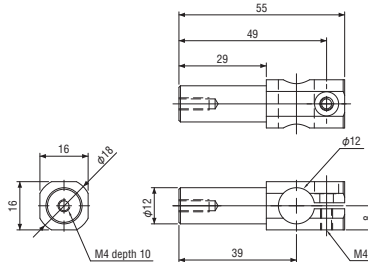
● Weight : 14.6g



**Rotation bracket ・
φ12・12AL**

Order code No.	131567
TYPE	N01864-301L

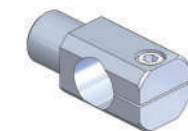
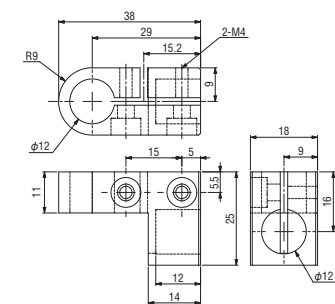
● Weight : 15.0g



**Rotation bracket ・
φ12・12B**

Order code No.	131605
TYPE	N01864-102A

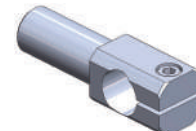
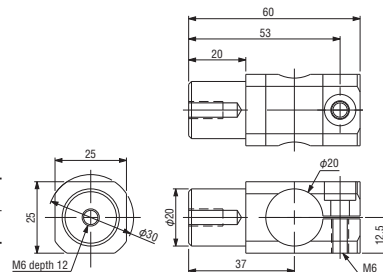
● Weight : 22.0g



**Rotation bracket ・
φ20・20A**

Order code No.	131171
TYPE	N01864-304

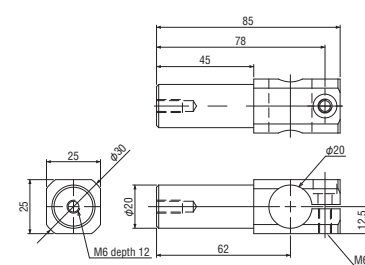
● Weight : 50.7g



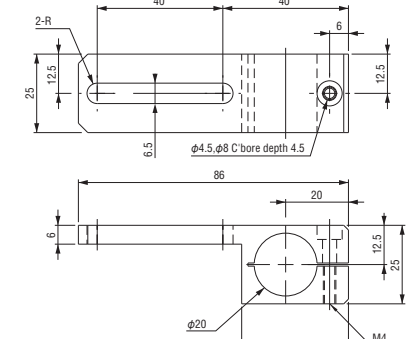
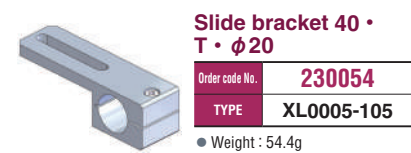
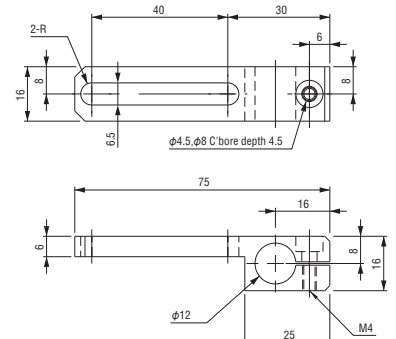
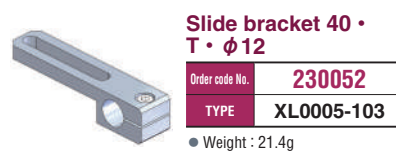
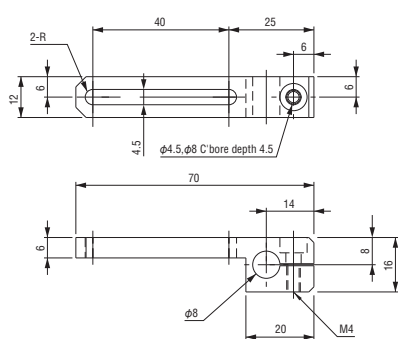
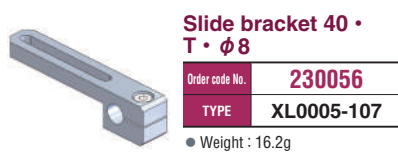
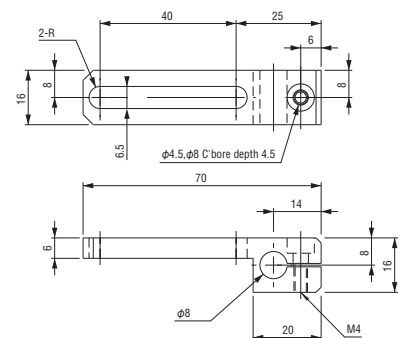
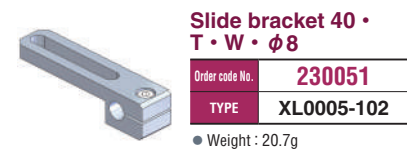
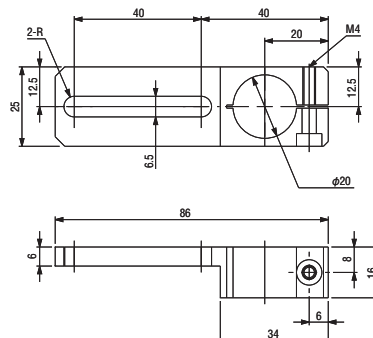
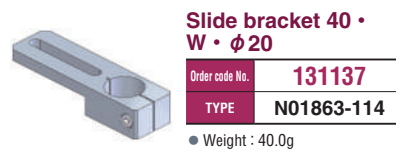
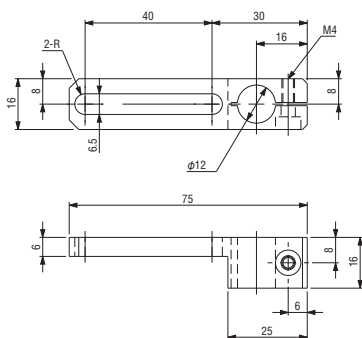
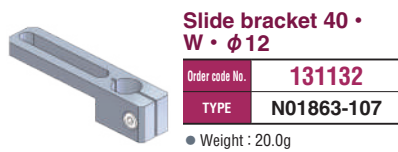
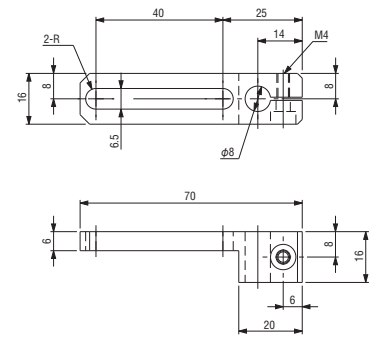
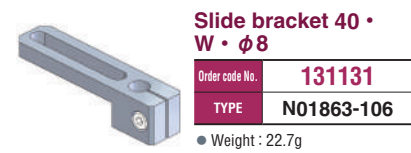
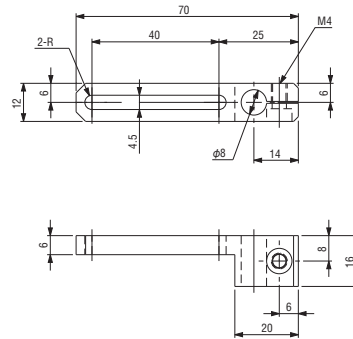
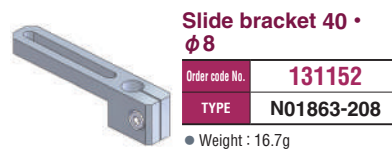
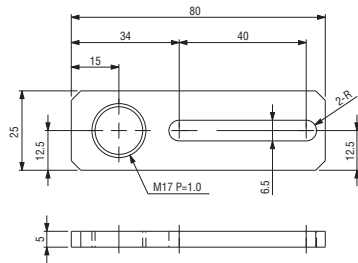
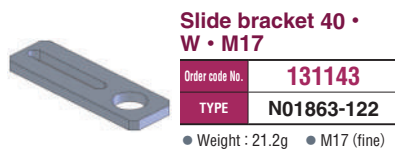
**Rotation bracket ・
φ20・20AL**

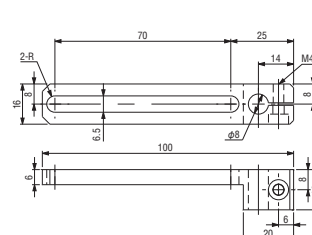
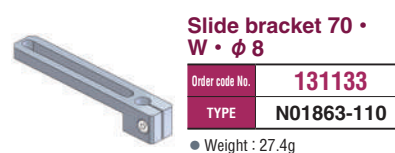
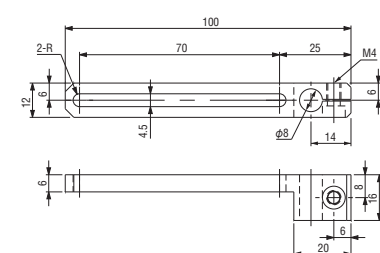
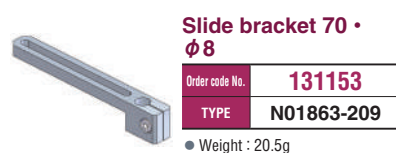
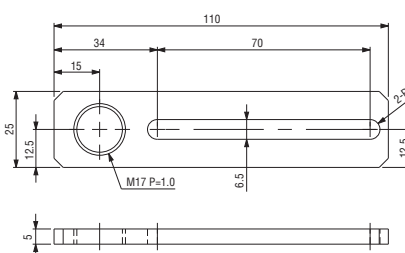
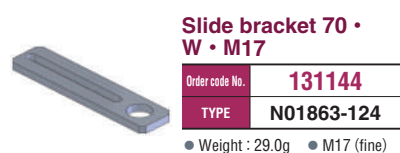
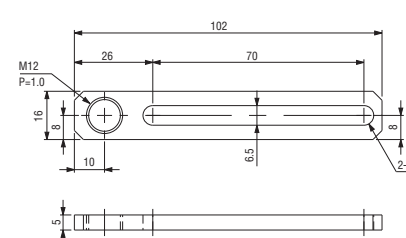
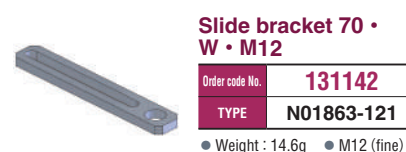
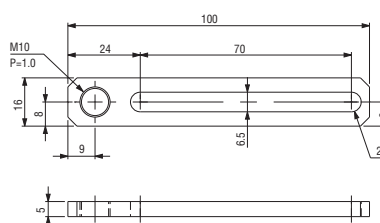
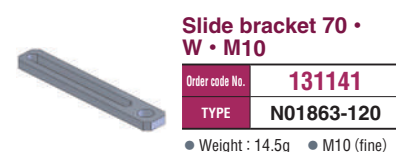
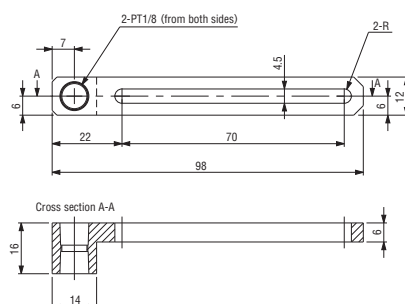
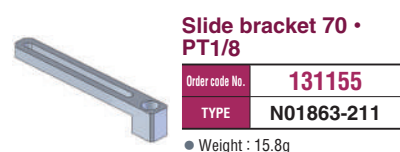
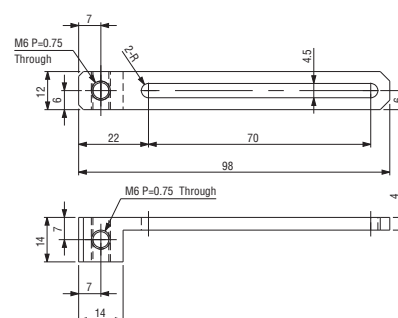
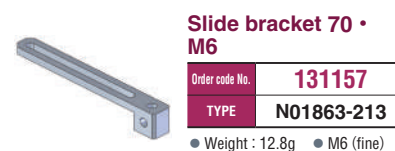
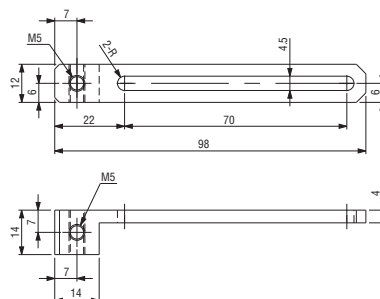
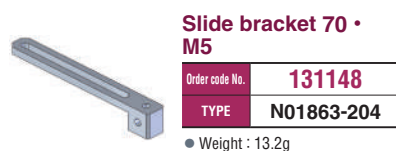
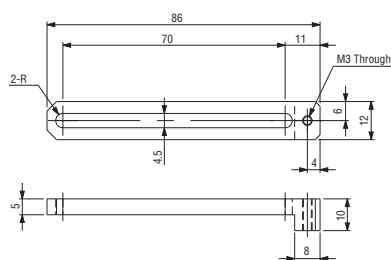
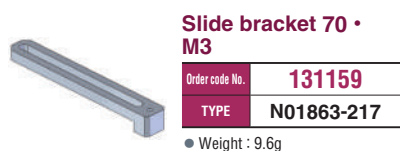
Order code No.	131568
TYPE	N01864-304L

● Weight : 80.0g



Jungle Gym Series Parts





Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

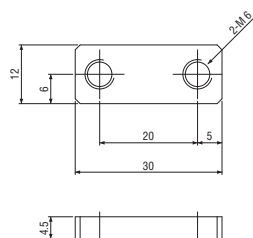
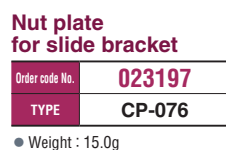
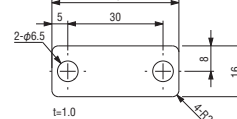
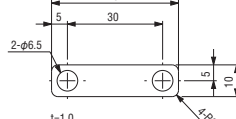
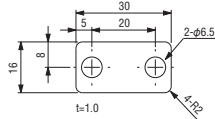
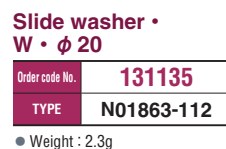
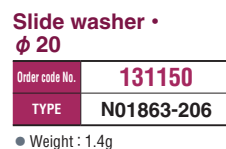
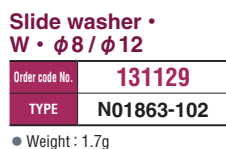
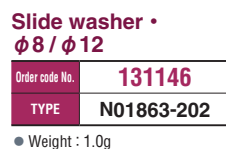
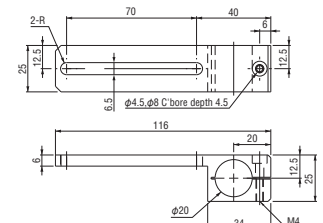
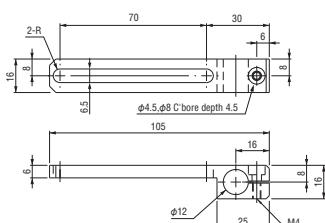
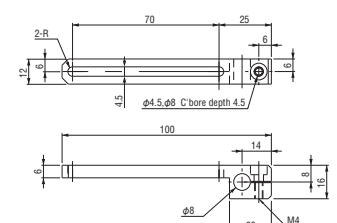
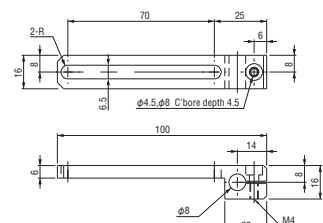
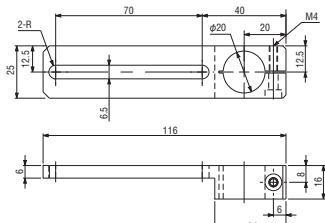
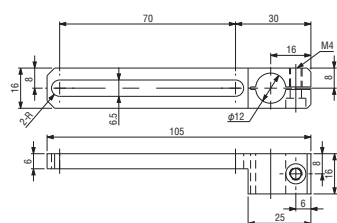
Assembling Tools

Tool / Jig

Information

Various Products Information

Frame / Module ● Jungle Gym

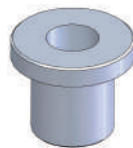
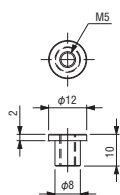




Bushing nut • $\phi 8$ • M5

Order code No.	131200
TYPE	N01868-401

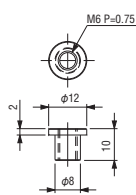
● Weight : 1.4g



Bushing nut • $\phi 8$ • M6

Order code No.	131206
TYPE	N01868-410

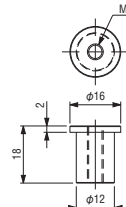
● Weight : 1.3g ● M6 (fine)



Bushing nut • $\phi 12$ • M5

Order code No.	131202
TYPE	N01868-403

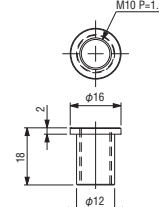
● Weight : 5.5g



Bushing nut • $\phi 12$ • M10

Order code No.	131201
TYPE	N01868-402

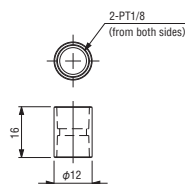
● Weight : 3.0g ● M10 (fine)



Bushing nut • $\phi 12$ • PT1/8

Order code No.	131207
TYPE	N01868-411

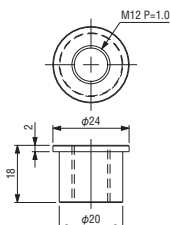
● Weight : 1.7g



Bushing nut • $\phi 20$ • M12

Order code No.	131205
TYPE	N01868-409

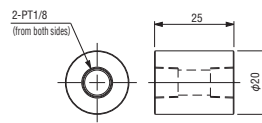
● Weight : 12.3g ● M12 (fine)



Bushing nut • $\phi 20$ • PT1/8

Order code No.	131199
TYPE	N01868-305

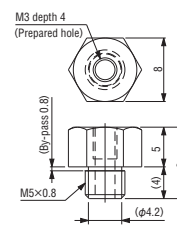
● Weight : 40.0g



Bushing nut • M5-M3

Order code No.	131204
TYPE	N01868-407

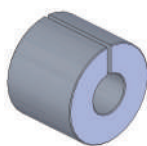
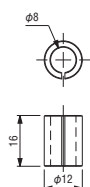
● Weight : 2.6g



Bushing • $\phi 12 \phi 8$

Order code No.	131196
TYPE	N01868-301

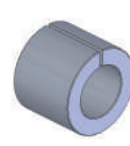
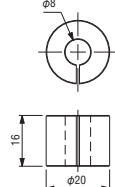
● Weight : 2.8g



Bushing • $\phi 20 \phi 8$

Order code No.	131197
TYPE	N01868-302

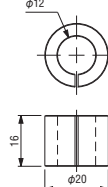
● Weight : 11.6g



Bushing • $\phi 20 \phi 12$

Order code No.	131198
TYPE	N01868-303

● Weight : 8.9g



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

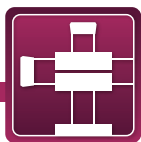
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

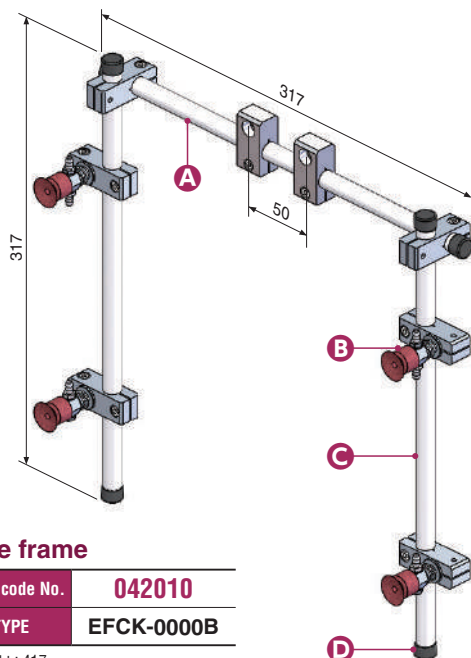
Various Products Information



Base Frame Module

Modularized chuck parts for jungle gym

● Pipe lengths of SUS pipes specified in each configuration module and components are different from that of base frame.



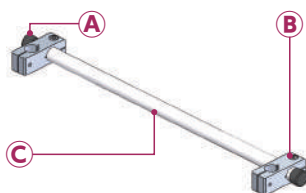
Base frame

Order code No.	042010
TYPE	EFCK-0000B

● Weight : 417g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Base frame for jungle gym	EFCK-0001B	042011	1	5-26
B : Suction module for jungle gym (φ 12)	JSM-004	090158	4	5-26
C : Jungle gym SS pipe φ 12	12*0.6*1000	271528	1	5-8
D : Pipe end cap · φ 12	R-CAP-12	171339	4	5-9

Base frame for jungle gym

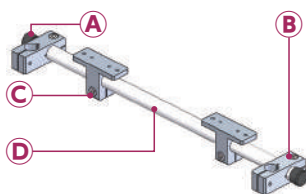


Order code No.	042012
TYPE	EFCK-0002B

● Weight : 96g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Pipe end cap · φ 12	R-CAP-12	171339	2	5-9
B : Cross connector · φ 12 φ 12	N01861-202	131099	2	5-10
C : Jungle gym SS pipe φ 12	12*0.6*500	271527	1	5-8

Base frame for jungle gym



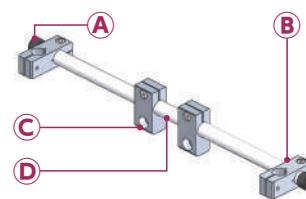
Order code No.	042014
TYPE	EFCK-0004B

● Weight : 144g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Pipe end cap · φ 12	R-CAP-12	171339	2	5-9
B : Cross connector · φ 12 φ 12	N01861-202	131099	2	5-10
C : Bracket · TH · φ 12 · for MCD	N01866-301	131181	2	5-17
D : Jungle gym SS pipe φ 12	12*0.6*500	271527	1	5-8

Base frame for jungle gym

components of EFCK-0000...A



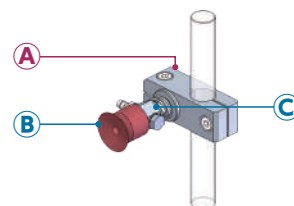
Order code No.	042011
TYPE	EFCK-0001B

● Weight : 148g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Pipe end cap · φ 12	R-CAP-12	171339	2	5-9
B : Cross connector · φ 12 φ 12	N01861-202	131099	2	5-10
C : Attachment bracket · φ 12 · M6	N01862-201	131118	2	5-13
D : Jungle gym SS pipe φ 12	12*0.6*500	271527	1	5-8

Suction module for jungle gym (φ 12)

components of EFCK-0000...B

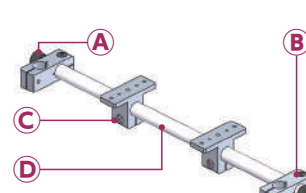


Order code No.	090158
TYPE	JSM-004

● Weight : 39g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ 12 φ 12	N01861-202	131099	1	5-10
B : Suction cups (standard/silicon/brown)	VAPH-20C	210194	1	3-4
C : Suction stem for small	VFIL1-S-5-P12	211006	1	3-24

Base frame for jungle gym

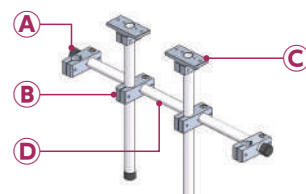


Order code No.	042013
TYPE	EFCK-0003B

● Weight : 151g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Pipe end cap · φ 12	R-CAP-12	171339	2	5-9
B : Cross connector · φ 12 φ 12	N01861-202	131099	2	5-10
C : Bracket · TV · φ 12 · for MCD	N01866-401	131184	2	5-18
D : Jungle gym SS pipe φ 12	12*0.6*500	271527	1	5-8

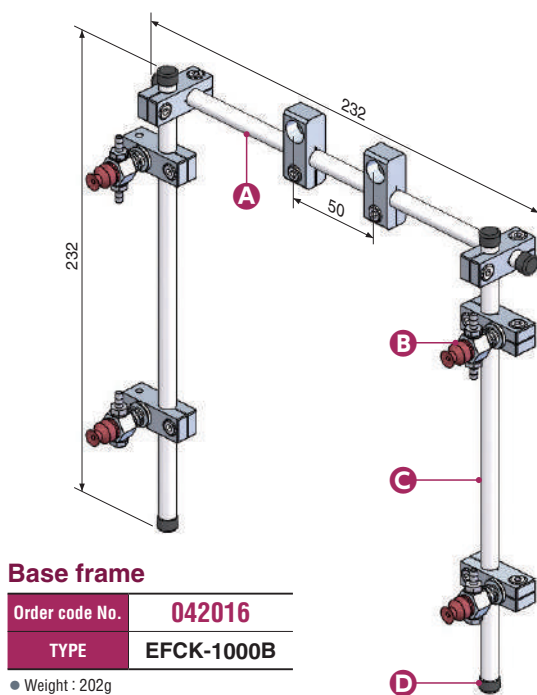
Base frame for jungle gym



Order code No.	042015
TYPE	EFCK-0005B

● Weight : 247g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Pipe end cap · φ 12	R-CAP-12	171339	4	5-9
B : Cross connector · φ 12 φ 12	N01861-202	131099	4	5-10
C : Bracket · T · φ 12 · for MCD	N01866-101	131176	2	5-17
D : Jungle gym SS pipe φ 12	12*0.6*1000	271528	1	5-8



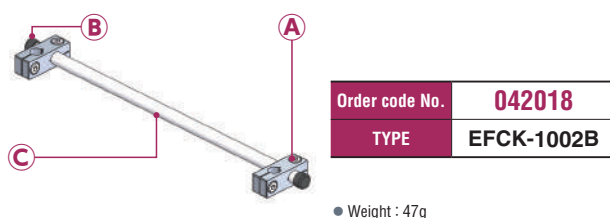
Base frame

Order code No.	042016
TYPE	EFCK-1000B

● Weight : 202g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Base frame for jungle gym	EFCK-1001B	042017	1	5-27
B : Suction module for jungle gym (φ8)	JSM-001	090155	4	5-27
C : Jungle gym SS pipe φ8	8*0.6*500	340905	1	5-8
D : Pipe end cap φ8	R-CAP-8	171338	4	5-9

Base frame for jungle gym



● Weight : 47g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector φ8 φ8	N01861-207	131102	2	5-10
B : Pipe end cap φ8	R-CAP-8	171338	2	5-9
C : Jungle gym SS pipe φ8	8*0.6*500	340905	1	5-8

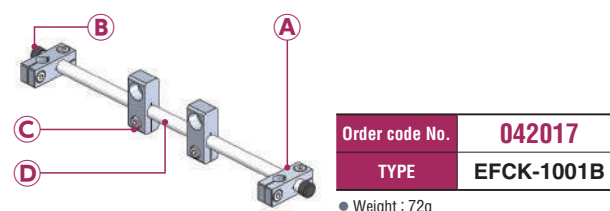
Base frame for jungle gym

Order code No.	041662
TYPE	EFCK-1003

Configuration parts	TYPE	Order code No.	No. of uses	Details
A : Cross connector φ8 φ8	N01861-207	131102	2	5-10
B : Pipe end cap φ8	R-CAP-8	171338	2	5-9
C : Bracket TV φ8 for UMCD	N01866-402	131185	2	5-18
D : Jungle gym SS pipe φ8	8*0.6*500	340905	1	5-8

* Pipe length is 500mm if only SS pipe φ8 is ordered.

Base frame for jungle gym components of EFCK-1000...A

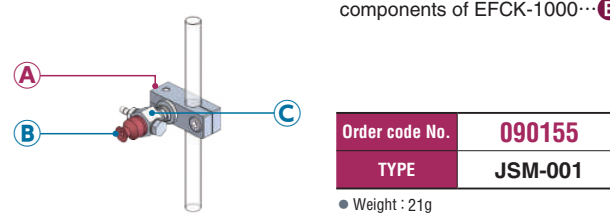


Order code No.	042017
TYPE	EFCK-1001B

● Weight : 72g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector φ8 φ8	N01861-207	131102	2	5-10
B : Pipe end cap φ8	R-CAP-8	171338	2	5-9
C : Attachment bracket φ8 M6	N01862-205	131121	2	5-13
D : Jungle gym SS pipe φ8	8*0.6*500	340905	1	5-8

Suction module for jungle gym (φ8) components of EFCK-1000...B



Order code No.	090155
TYPE	JSM-001

● Weight : 21g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector φ8 φ8	N01861-207	131102	1	5-10
B : Suction cups (standard/silicon/brown)	VAPH-8C	210191	1	3-4
C : Suction stem mini	VFIL2-SS-5-P8	211030	1	3-21

Change method of sales (Order as sub-module kit)

Base frame for jungle gym

Order code No.	041664
TYPE	EFCK-1005

● Weight : 101g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector φ8 φ8	N01861-207	131102	4	5-10
B : Pipe end cap φ8	R-CAP-8	171338	4	5-9
C : Bracket T φ8 for UMCD	N01866-102	131177	2	5-17
D : Jungle gym SS pipe φ8	8*0.6*500	340905	1	5-8

Base frame for jungle gym

Order code No.	041663
TYPE	EFCK-1004

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector φ8 φ8	N01861-207	131102	2	5-10
B : Pipe end cap φ8	R-CAP-8	171338	2	5-9
C : Bracket TH φ8 for UMCD	N01866-302	131182	2	5-17
D : Jungle gym SS pipe φ8	8*0.6*500	340905	1	5-8

* Pipe length is 500mm if only SS pipe φ8 is ordered.

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

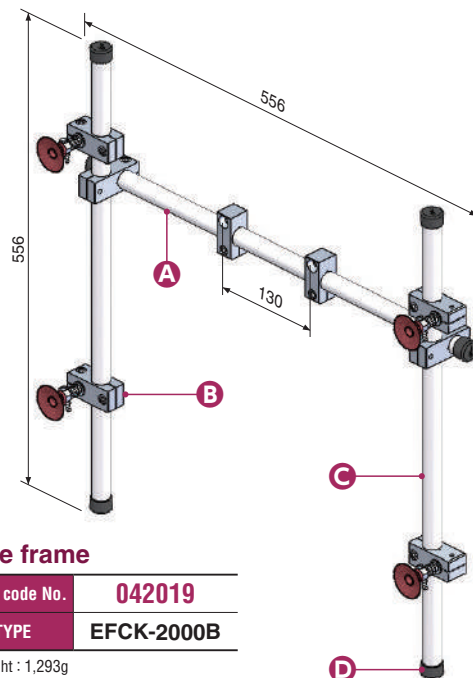
Tool / Jig

Information

Various Products Information

Base Frame Module

● Pipe lengths of SUS pipes specified in each configuration module and components are different from that of base frame.



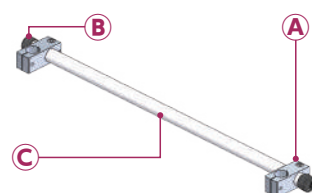
Base frame

Order code No.	042019
TYPE	EFCK-2000B

● Weight : 1,293g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Base frame for jungle gym	EFCK-2001B	042020	1	5-28
B : Suction module for jungle gym (φ20)	JSM-008	090162	4	5-28
C : Jungle gym SS pipe φ20	20*0.8*1500	281814	1	5-8
D : Pipe end cap · φ20	R-CAP-20	171340	4	5-9

Base frame for jungle gym

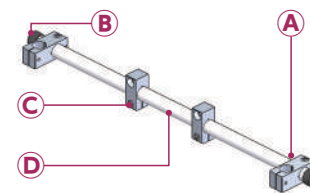


Order code No.	042021
TYPE	EFCK-2002B

● Weight : 358g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ20 φ20	N01861-206	131101	2	5-10
B : Pipe end cap · φ20	R-CAP-20	171340	2	5-9
C : Jungle gym SS pipe φ20	20*0.8*1000	281813	1	5-8

Base frame for jungle gym components of EFCK-2000...

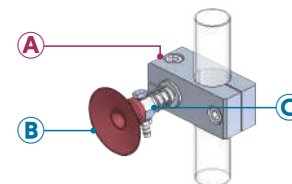


Order code No.	042020
TYPE	EFCK-2001B

● Weight : 452g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ20 φ20	N01861-206	131101	2	5-10
B : Pipe end cap · φ20	R-CAP-20	171340	2	5-9
C : Attachment bracket · φ20 · M8	N01862-214	131226	2	5-14
D : Jungle gym SS pipe φ20	20*0.8*1000	281813	1	5-8

Suction module for jungle gym (φ20) components of EFCK-2000...



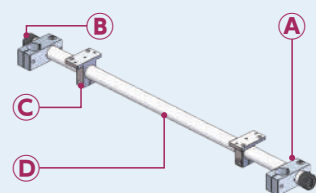
Order code No.	090162
TYPE	JSM-008

● Weight : 102g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ20 φ12	N01861-204	131100	1	5-10
B : Suction cups (standard/silicon/brown)	VAPH-40C	210196	1	3-5
C : Suction stem for small	VFIL1-S-5-P12	211006	1	3-24

Change method of sales (Order as sub-module kit)

Base frame for jungle gym

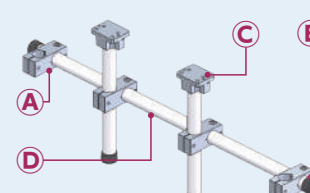


Order code No.	041668
TYPE	EFCK-2003

● Weight : 379g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ20 φ20	N01861-206	131101	2	5-10
B : Pipe end cap · φ20	R-CAP-20	171340	2	5-9
C : Bracket · TV · φ20 · for MCD	N01866-403	131186	2	5-18
D : Jungle gym SS pipe φ20	20*0.8*1000	281813	1	5-8

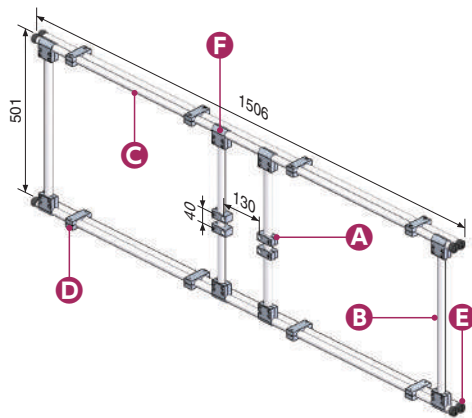
Base frame for jungle gym



Order code No.	041670
TYPE	EFCK-2005

● Weight : 767g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Cross connector · φ20 φ20	N01861-206	131101	4	5-10
B : Pipe end cap · φ20	R-CAP-20	171340	4	5-9
C : Bracket · T · φ20 · for MCD	N01866-103A	131554	2	5-17
D : Jungle gym SS pipe φ20	20*0.8*1000	281813	1	5-8



Base frame for jungle gym

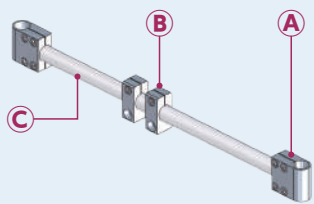
Order code No.	042024
TYPE	EFCK-2500B

● Weight : 4,282g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Attachment bracket · $\phi 20 \cdot M8$	N01862-214	131226	4	5-14
B : Jungle gym SS pipe $\phi 20$	20*0.8*500	281812	4	5-8
C : Jungle gym SS pipe $\phi 20$	20*0.8*1500	281814	4	5-8
D : Parallel connector · $\phi 20 \phi 20$	N01861-106	131095	8	5-12
E : Pipe end cap · $\phi 20$	R-CAP-20	171340	8	5-9
F : T Connector#2 · $\phi 20 \phi 20$	N01861-405	131114	4	5-12

► Change method of sales (Order as sub-module kit)

Base frame for jungle gym components of EFCK-2500...A

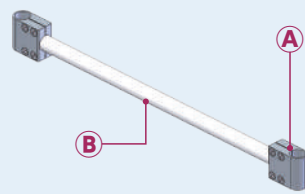


Order code No.	041672
TYPE	EFCK-2501

● Weight : 457g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : T Connector#2 · $\phi 20 \phi 20$	N01861-405	131114	2	5-12
B : Attachment bracket · $\phi 20 \cdot M8$	N01862-214	131226	2	5-14
C : Jungle gym SS pipe $\phi 20$	20*0.8*500	281812	1	5-8

Base frame for jungle gym components of EFCK-2500...B



Order code No.	041673
TYPE	EFCK-2502

● Weight : 363g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : T Connector#2 · $\phi 20 \phi 20$	N01861-405	131114	2	5-12
B : Jungle gym SS pipe $\phi 20$	20*0.8*500	281812	1	5-8

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

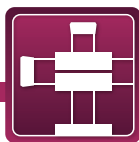
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

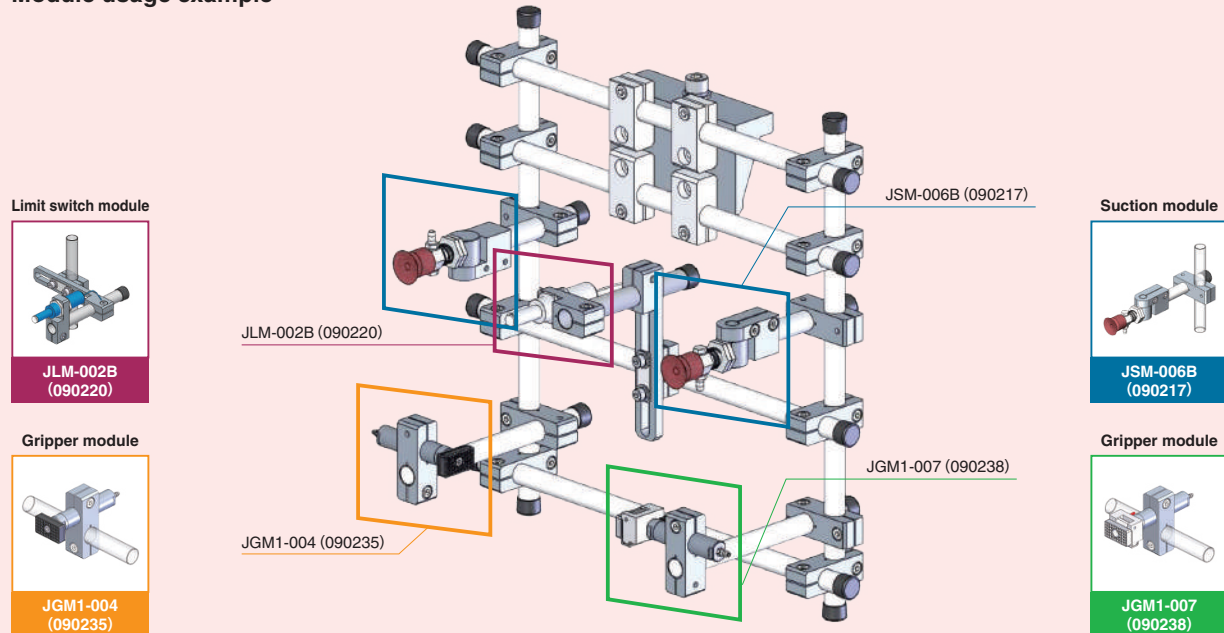
Various Products Information



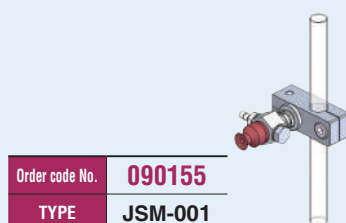
Suction Module (Order as sub-module kit)

module parts for jungle gym

Module usage example



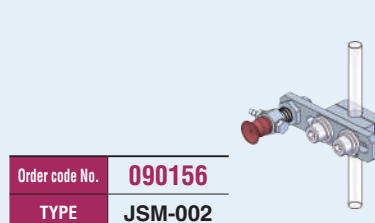
Change method of sales (Order as sub-module kit)



Order code No.	090155
TYPE	JSM-001

Suction module for jungle gym (φ8)

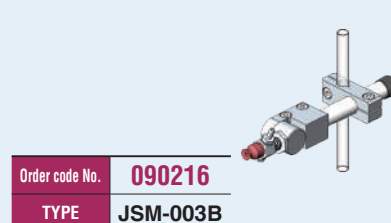
Configuration parts	TYPE	Order code No.
Cross connector · φ8φ8	N01861-207	131102
Suction cups (standard/silicon/brown)	VAPH-8C	210191
Suction stem mini	VFIL2-SS-5-P8	211030



Order code No.	090156
TYPE	JSM-002

Suction module for jungle gym (φ8)

Configuration parts	TYPE	Order code No.
Slide bracket · W · φ8	N01863-113	131217
Slide washer · W · φ8 / φ12	N01863-102	131129
Slide bracket 40 · W · M10	N01863-117	131139
Suction stem mini	VFIL1-SS-5	211029
Suction cups (standard/silicon/brown)	VAPH-14C	210616

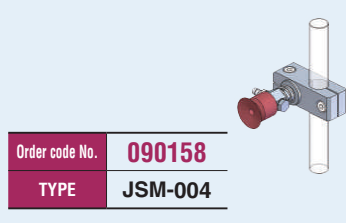


Order code No.	090216
TYPE	JSM-003B

Suction module for jungle gym (φ8)

Configuration parts	TYPE	Order code No.
Cross connector · φ8φ8	N01861-207	131102
Rotation bracket · φ8 · 8B	N01864-103A	131606
Rotation bracket · φ8 · M10A	N01864-201	131435
Suction stem mini	VFIL1-SS-5	211029
Suction cups (standard/silicon/brown)	VAPH-8C	210191
Pipe end cap (Black) · φ8	R-CAP-8	171338
Jungle gym SS pipe φ8 *	8*0.6*500	340905

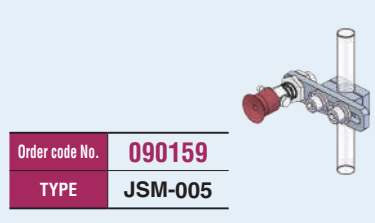
* Please cut it at 80mm before use.



Order code No.	090158
TYPE	JSM-004

Suction module for jungle gym (φ12)

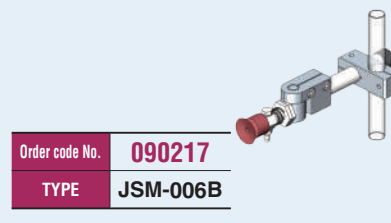
Configuration parts	TYPE	Order code No.
Cross connector · φ12φ12	N01861-202	131099
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Suction stem for small	VFIL1-S-5-P12	211006



Order code No.	090159
TYPE	JSM-005

Suction module for jungle gym (φ12)

Configuration parts	TYPE	Order code No.
Slide bracket · W · φ12	N01863-101	131128
Slide washer · W · φ8 / φ12	N01863-102	131129
Slide bracket 40 · W · M12	N01863-118	131140
Suction stem for small (M5)	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-20C	210194



Order code No.	090217
TYPE	JSM-006B

Suction module for jungle gym (φ12)

Configuration parts	TYPE	Order code No.
Cross connector · φ12φ12	N01861-202	131099
Rotation bracket · φ12 · 8B	N01864-101A	131600
Rotation bracket · φ8 · 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) · φ12	R-CAP-12	171339
Jungle gym SS pipe φ12 *	12*0.6*500	271527

* Please cut it at 80mm before use.

Suction Module / Grip Module (Order as sub-module kit)

► Change method of sales (Order as sub-module kit)

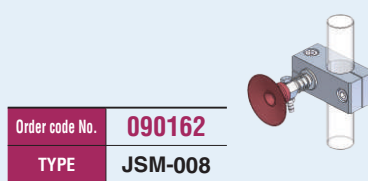


Order code No. **090218**
TYPE **JSM-007B**

Suction module for jungle gym (φ 12)

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 stems Non rotate (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 SS pipe φ 12 *	12*0.6*500	271527

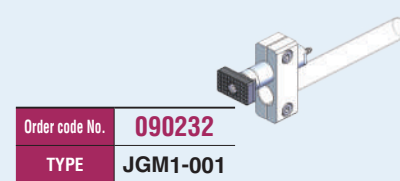
* Please cut it at 100mm before use.



Order code No. **090162**
TYPE **JSM-008**

Suction module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cross connector · φ 20 φ 12	N01861-204	131100
Suction cups (standard/silicon/brown)	VAPH-40C	210196
Suction stem for small	VFIL1-S-5-P12	211006



Order code No. **090232**
TYPE **JGM1-001**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1210	123699
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Parallel connector · φ 12 φ 12	N01861-102	131093
Bolt with Hexagon Socket	M3*6	123231



Order code No. **090233**
TYPE **JGM1-002**

Gripper module for jungle gym (φ 12)

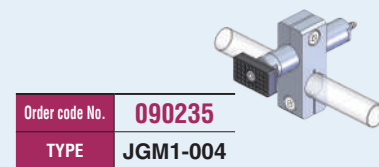
Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1210	123699
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Cross connector · φ 12 φ 12	N01861-202	131099
Bolt with Hexagon Socket (trivalent chromate white)	M3*6	123231



Order code No. **090234**
TYPE **JGM1-003**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Parallel connector · φ 12 φ 12	N01861-102	131093
Bolt with Hexagon Socket (trivalent chromate white)	M3*6	123231



Order code No. **090235**
TYPE **JGM1-004**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Cross connector · φ 12 φ 12	N01861-202	131099
Bolt with Hexagon Socket	M3*6	123231



Order code No. **090236**
TYPE **JGM1-005**

Gripper module for jungle gym (φ 12)

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	M3*6	123231



Order code No. **090237**
TYPE **JGM1-006**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
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	M3*6	123231



Order code No. **090238**
TYPE **JGM1-007**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle w/ black SW for micro mini cylinder	L1131-100	110568
Cross connector · φ 12 φ 12	N01861-202	131099
Bolt with Hexagon Socket	M3*8	123232



Order code No. **090170**
TYPE **JGM-008**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle w/ black SW for micro mini cylinder	L1131-100	110568
Parallel connector · φ 12 φ 12	N01861-102	131093
Bolt with Hexagon Socket	M3*8	123232



Order code No. **090239**
TYPE **JGM1-009**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1210	123699
Claw L shape for micro mini cylinder	CPUM-02	022798
Cross connector · φ 12 φ 12	N01861-202	131099
Bolt with Hexagon Socket	M3*6	123231



Order code No. **090172**
TYPE **JGM-010**

Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Claw L shape for micro mini cylinder	CPUM-02	022798
Parallel connector · φ 12 φ 12	N01861-102	131093
Bolt with Hexagon Socket	M3*6	123231

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

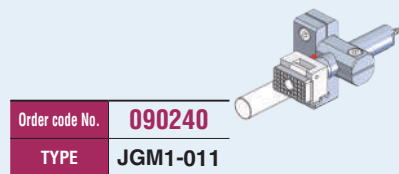
Tool / Jig

Information

Various Products Information

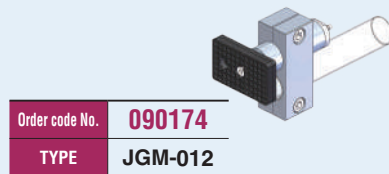
Grip Module (Order as sub-module kit)

► Change method of sales (Order as sub-module kit)



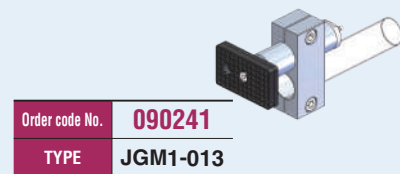
Gripper module for jungle gym (φ 12)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle w/ black SW for micro mini cylinder	L1131-100	110568
Cross connector · φ 12 φ 12	N01861-202	131099
Rotation bracket · φ 12 · 12A	N01864-301	131168
Bolt with Hexagon Socket	M3*8	123232



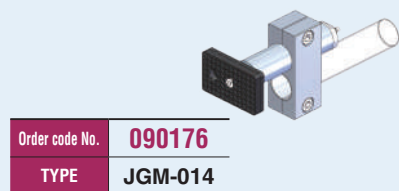
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Parallel connector · φ 20 φ 20	N01861-106	131095
Bolt with Hexagon Socket	M4*10	122795



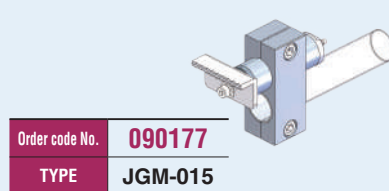
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Parallel connector · φ 20 φ 20	N01861-106	131095
Bolt with Hexagon Socket	M4*10	122795



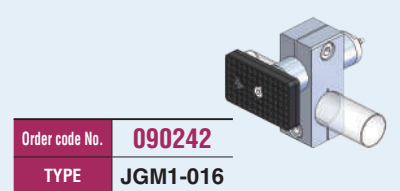
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2030	123703
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Parallel connector · φ 20 φ 20	N01861-106	131095
Bolt with Hexagon Socket	M4*10	122795



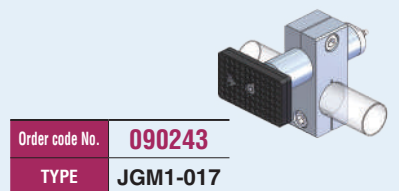
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Claw L shape for micro mini cylinder	CP-014	370073
Parallel connector · φ 20 φ 20	N01861-106	131095
Bolt with Hexagon Socket	M4*10	122795



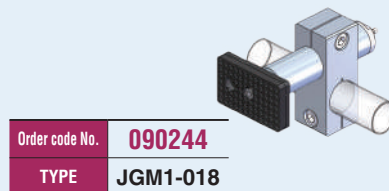
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Cross connector · φ 20 φ 20	N01861-206	131101
Bolt with Hexagon Socket	M4*10	122795



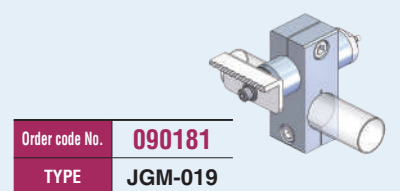
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Cross connector · φ 20 φ 20	N01861-206	131101
Bolt with Hexagon Socket	M4*10	122795



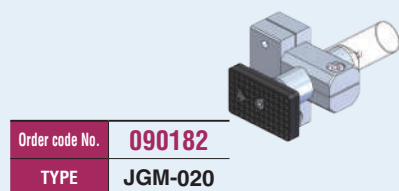
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2030	123703
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Cross connector · φ 20 φ 20	N01861-206	131101
Bolt with Hexagon Socket	M4*10	122795



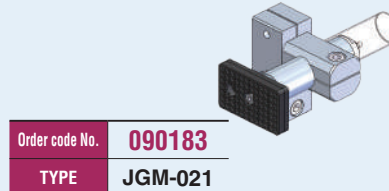
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Claw L shape for micro mini cylinder	CP-014	370073
Cross connector · φ 20 φ 20	N01861-206	131101
Bolt with Hexagon Socket	M4*10	122795



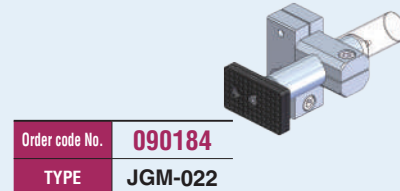
Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Cross connector · φ 20 φ 20	N01861-206	131101
Rotation bracket · φ 20 · 20A	N01864-304	131171
Bolt with Hexagon Socket	M4*10	122795



Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Cross connector · φ 20 φ 20	N01861-206	131101
Rotation bracket · φ 20 · 20A	N01864-304	131171
Bolt with Hexagon Socket	M4*10	122795

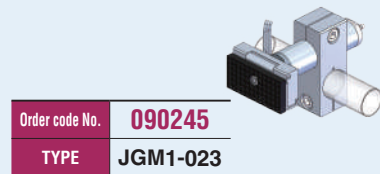


Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2030	123703
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Cross connector · φ 20 φ 20	N01861-206	131101
Rotation bracket · φ 20 · 20A	N01864-304	131171
Bolt with Hexagon Socket	M4*10	122795

Grip Module / Limit Switch Module (Order as sub-module kit)

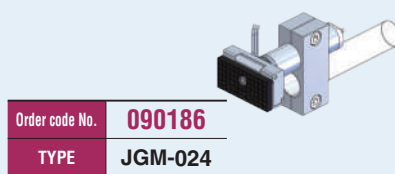
► Change method of sales (Order as sub-module kit)



Order code No.	090245
TYPE	JGM1-023

Gripper module for jungle gym (φ 20)

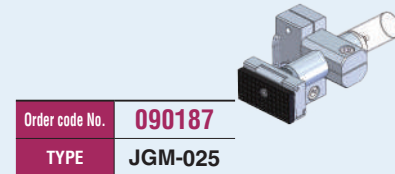
Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle w/ black SW for mini cylinder	KRC1-5000	101714
Cross connector · φ 20 φ 20	N01861-206	131101
Bolt with Hexagon Socket	M4*10	122795



Order code No.	090186
TYPE	JGM-024

Gripper module for jungle gym (φ 20)

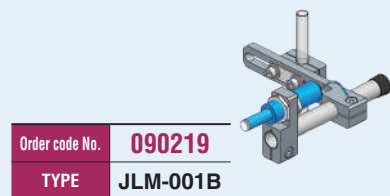
Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle w/ black SW for mini cylinder	KRC1-5000	101714
Parallel connector · φ 20 φ 20	N01861-106	131095
Bolt with Hexagon Socket	M4*10	122795



Order code No.	090187
TYPE	JGM-025

Gripper module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle w/ black SW for mini cylinder	KRC1-5000	101714
Cross connector · φ 20 φ 20	N01861-206	131101
Rotation bracket · φ 20 · 20A	N01864-304	131171
Bolt with Hexagon Socket	M4*10	122795

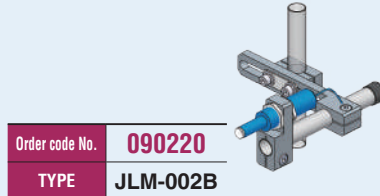


Order code No.	090219
TYPE	JLM-001B

Limit switch module for jungle gym (φ 8)

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 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 SS pipe φ 12 *	12*0.6*500	271527

* Please cut it at 100mm before use.

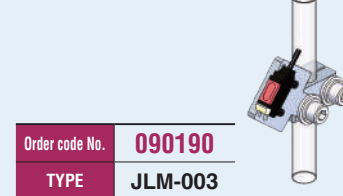


Order code No.	090220
TYPE	JLM-002B

Limit switch module for jungle gym (φ 12)

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 SS pipe φ 12 *	12*0.6*500	271527

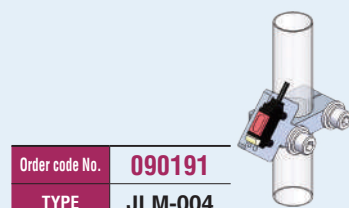
* Please cut it at 100mm before use.



Order code No.	090190
TYPE	JLM-003

Limit switch module for jungle gym (φ 12)

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



Order code No.	090191
TYPE	JLM-004

Limit switch module for jungle gym (φ 20)

Configuration parts	TYPE	Order code No.
Bracket · φ 20	N01915-110	131072
Sensor bracket	N01915-201	131077
Photo sensor	E3T-SL21R (NPN)	041412

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

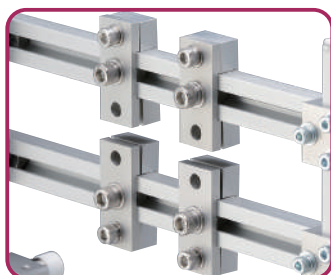
Various Products Information



Let's Joint

- ▶ Combination of Eins parts makes building an E.O.A.T. for many different shape of products easy.
- ▶ Light weight and easy fabrication.

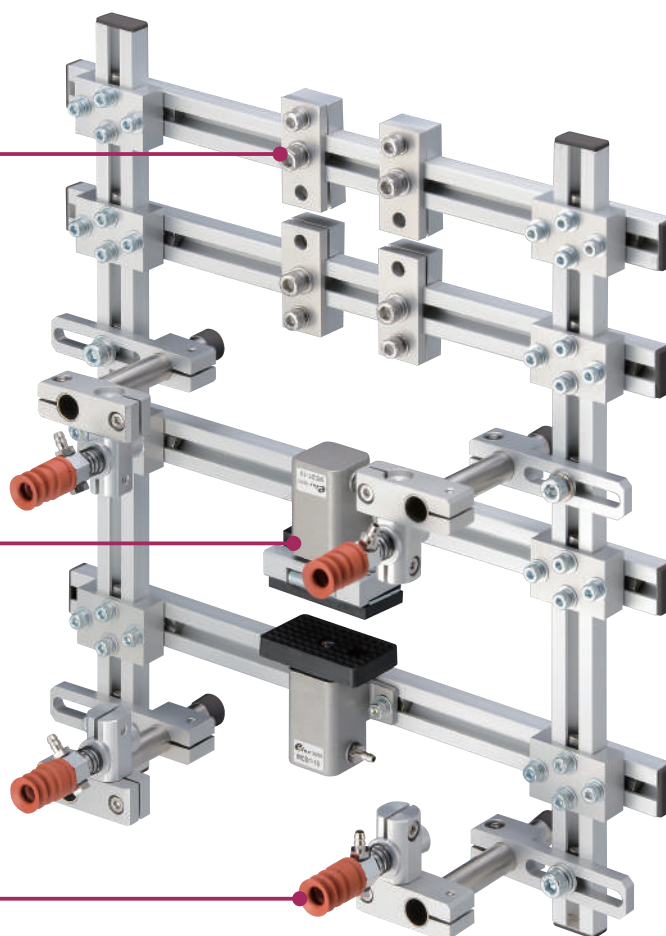
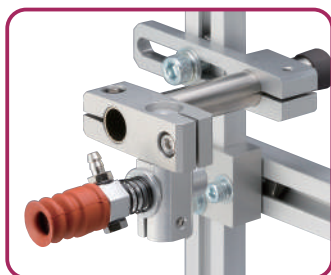
Frame / Module



Grip



Suction

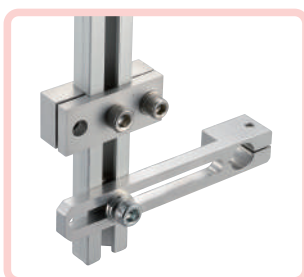


Tubing **6-1**

Let's Joint series parts based on three different size of aluminium profile extrusions to build an end of arm tool.
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.	271520
TYPE	10*20*500



Order code No.	131222
TYPE	N01911-204-205SET



Order code No.	131130
TYPE	N01863-103



Order code No.	131056
TYPE	N01914-103



List of Let's Joint

Various parts can be attached to let's joint frame.

■ 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
Profile end cap	Profile end cap • 10-20		131213
			N01902-004
	Profile end cap • 25-25		131214
			N01902-005
	Profile end cap • 25-50		131215
			N01902-006
Connector set	Connector 20 • set B		131221
			N01911-201-203SET
	Connector 20 • set C		131222
			N01911-204-205SET
	Cross connector • 20/25 • set A		131223
Connector			N01911-208-106-201SET
	Connector 25 • set A		131224
			N01911-101-102SET
	Cross connector • 20		131028
			N01911-206
	Cross connector • 25		131019
			N01911-103
	Cross connector • 25/50		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
Block	Cylinder connector 25 • A		131020
			N01911-104
	Cylinder connector 25 • B		131021
			N01911-105
	Connector block 50 • B		131040
			N01912-203
	Connector block • for GCYL		131039
			N01912-202
	Connector block • light		131038
			N01912-106
Bracket	Connector block 25/50 • A		131041
			N01912-301
	Connector block 25 • C		131035
			N01912-103
	Connector block 25 • D		131036
			N01912-104
	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)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

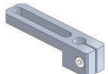
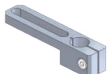
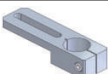
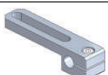
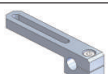
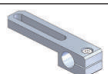
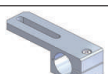
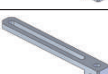
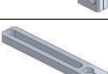
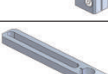
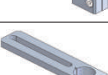
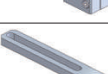
Assembling Tools

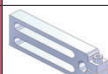
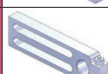
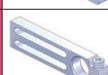
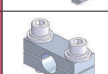
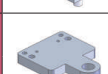
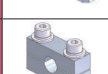
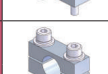
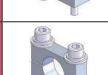
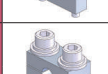
Tool / Jig

Information

Various Products Information

List of Let's Joint

Product name			Order code No.
			TYPE
Bracket	Slide bracket 40 • W • $\phi 8$		131131 N01863-106
	Slide bracket 40 • W • $\phi 12$		131132 N01863-107
	Slide bracket 40 • W • $\phi 20$		131137 N01863-114
	Slide bracket 40 • T • W • $\phi 8$		230051 XL0005-102
	Slide bracket 40 • T • $\phi 8$		230056 XL0005-107
	Slide bracket 40 • T • $\phi 12$		230052 XL0005-103
	Slide bracket 40 • T • $\phi 20$		230054 XL0005-105
	Slide bracket 70 • M3		131159 N01863-217
	Slide bracket 70 • M5		131148 N01863-204
	Slide bracket 70 • M6		131157 N01863-213
	Slide bracket 70 • PT1/8		131155 N01863-211
	Slide bracket 70 • W • M10		131141 N01863-120
	Slide bracket 70 • W • M12		131142 N01863-121
	Slide bracket 70 • W • M17		131144 N01863-124
	Slide bracket 70 • $\phi 8$		131153 N01863-209
	Slide bracket 70 • W • $\phi 8$		131133 N01863-110
	Slide bracket 70 • W • $\phi 12$		131130 N01863-103
	Slide bracket 70 • W • $\phi 20$		131138 N01863-115
	Slide bracket 70 • T • W • $\phi 8$		230053 XL0005-104

Product name			Order code No.
			TYPE
Bracket	Slide bracket 70 • T • $\phi 8$		230057 XL0005-108
	Slide bracket 70 • T • $\phi 12$		230050 XL0005-101
	Slide bracket 70 • T • $\phi 20$		230055 XL0005-106
	Swing Bracket		131065 N01915-102
	Connector bracket 25 • E		131037 N01912-105
	Suction link bracket • M12		131090 N01918-201
	Cylinder bracket • $\phi 8$		131075 N01915-113
	Cylinder bracket • $\phi 12$		131074 N01915-112
	Cylinder bracket • $\phi 20$		131066 N01915-103
	Link bracket 25/50		131034 N01911-402
	Chuck bracket • $\phi 12$		131067 N01915-105
	Sensor bracket		131077 N01915-201
	Nipper bracket • D		131081 N01915-304
	Nipper bracket • E		131082 N01915-305
	Bracket • NCON		131083 N01915-401
	Bracket • $\phi 8$		131073 N01915-111
	Bracket • $\phi 12$		131071 N01915-109
	Bracket • $\phi 20$		131072 N01915-110
	Bracket • W • $\phi 8$		131070 N01915-108

Product name			Order code No.
			TYPE
Bracket	Bracket • W • ϕ 12		131068 N01915-106
	Bracket • W • ϕ 20		131069 N01915-107
	Rotation bracket • ϕ 20		131064 N01915-101
	Connector plate20 • A		131413 N01913-201
	Connector plate25 • A		131406 N01913-101
	Connector plate25 • B		131407 N01913-102
Plate	Connector plate25 • C		131405 N01913-103
	Connector plate25 • D		131045 N01913-104
	Connector plate25 • F		131047 N01913-106
	Connector plate25 • G		131411 N01913-107
	Connector plate25 • H		131049 N01913-108
	Connector plate25/50 • A		131416 N01913-401
	Connector plate50 • A		131051 N01913-301
	Connector plate50 • B		131415 N01913-302
	Washer A • for let's joint		131087 N01918-102
	Washer B • for let's joint		131088 N01918-103
	Nut • M4		131061 N01914-108
	Nut • M4 • 2P • 32, M5 • 2P • 28		131063 N01914-202
Nut	Nut • M4 • 2P • 38, M3 • 2P • 20		131062 N01914-201

Product name			Order code No.
			TYPE
Nut	Nut • M6		131056 N01914-103
	Nut • M6 • 2P • 12		131055 N01914-102
	Nut • M6 • 2P • 15		131054 N01914-101
	Nut • M6 • 2P • 20		131058 N01914-105
	Nut • M6 • 2P • 25		131059 N01914-106
	Nut • M6 • 3P • 15		131057 N01914-104
	Nut • M6 • 3P • 30		131060 N01914-107
	Nut plate • for Slide bracket		023197 CP-076
	Guide bar • 100		131084 N01916-201
	Guide bar • 200		131085 N01916-202
Spacer	Spacer 25 • T5 • P25		131086 N01918-101
Plate	Attach plate • A		131091 N01918-301

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

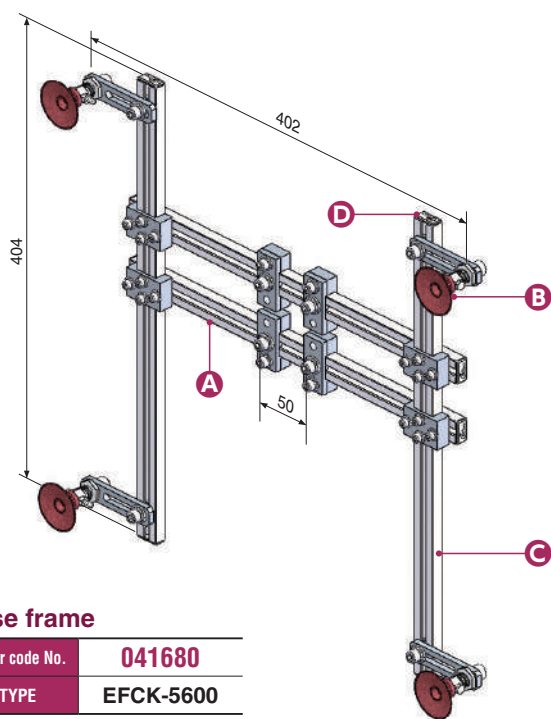
Information

Various Products Information



Base Frame Module

Modularized chuck parts for let's joint.



Base frame

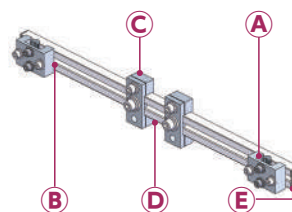
Order code No.	041680
TYPE	EFCK-5600

● Weight : 775g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Base frame for let's joint.	EFCK-5601	041681	2	5-38
B : Suction module for let's joint.	LSM-003	110571	4	5-38
C : Let's joint profile	10*20*500	271520	2	5-35
D : Profile end cap 10-20	N01902-004	131213	4	5-35

Base frame for let's joint.

components of EFCK-5600...A



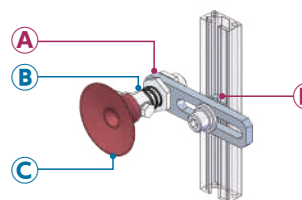
Order code No.	041681
TYPE	EFCK-5601

● Weight : 180g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Connector 20 * F	N01911-207	131029	2	5-35
B : Nut * M4	N01914-108	131061	8	5-37
C : Connector 20 * set C	N01911-204-205set	131222	2	5-35
D : Let's joint profile	10*20*500	271520	1	5-35
E : Profile end cap 10-20	N01902-004	131213	2	5-35

Suction module for let's joint.

components of EFCK-5600...B

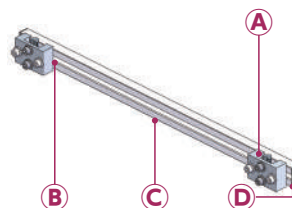


Order code No.	110571
TYPE	LSM-003

● Weight : 50g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Slide bracket 40 * W * M12	N01863-118	131140	1	5-35
B : Suction stem for small	VFIL-S-5A	210974	1	3-24
C : Suction cups (standard/silicon/brown)	VAPH-40C	210196	1	3-5
D : Nut * M6	N01914-103	131056	1	5-37

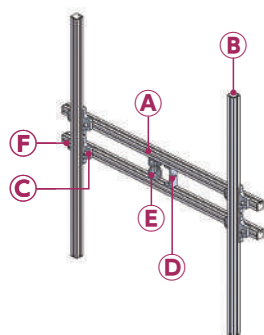
Base frame for let's joint.



Order code No.	041682
TYPE	EFCK-5602

● Weight : 130g

Configuration module	TYPE	Order code No.	No. of uses	Details
A : Connector 20 * F	N01911-207	131029	2	5-35
B : Nut * M4	N01914-108	131061	8	5-37
C : Let's joint profile	10*20*500	271520	1	5-35
D : Profile end cap 10-20	N01902-004	131213	2	5-35

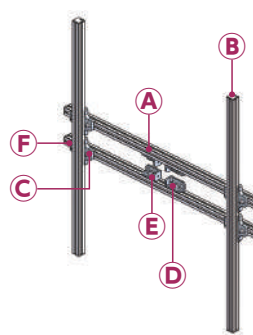


Base frame

Order code No.	041683
TYPE	EFCK-7000

● Weight : 3,114g

Configuration module	TYPE	Order code No.	No. of uses	Details
A Let's joint · 25 * 25 * 1500	25 * 25 * 1500	281753	2	5-35
B Profile end cap · 25 · 25	N01902-005	131214	8	5-35
C Cross connector · 25	N01911-103	131019	4	5-35
D Connector block25 · C	N01912-103	131035	4	5-35
E Nut · M6 · 2P · 15	N01914-101	131054	4	5-37
F Nut · M6	N01914-103	131056	16	5-37

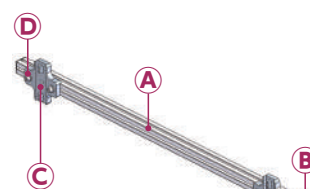


Base frame

Order code No.	041686
TYPE	EFCK-7500

● Weight : 3,476g

Configuration module	TYPE	Order code No.	No. of uses	Details
A Let's joint · 25 * 25 * 1500	25 * 25 * 1500	281753	2	5-35
B Profile end cap · 25 · 25	N01902-005	131214	8	5-35
C Cross connector · 25	N01911-103	131019	4	5-35
D Connector block25 · D	N01912-104	131036	4	5-35
E Nut · M6 · 2P · 15	N01914-101	131054	4	5-37
F Nut · M6	N01914-103	131056	16	5-37

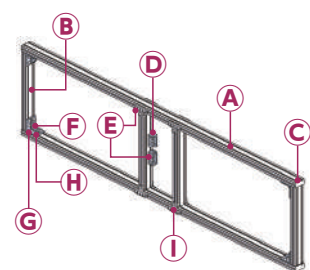


Base frame for let's joint.

Order code No.	041685
TYPE	EFCK-7002

● Weight : 961g

Configuration module	TYPE	Order code No.	No. of uses	Details
A Let's joint · 25 * 25 * 1000	25 * 25 * 1000	281809	1	5-35
B Profile end cap · 25 · 25	N01902-005	131214	2	5-35
C Cross connector · 25	N01911-103	131019	2	5-35
D Nut · M6	N01914-103	131056	8	5-37

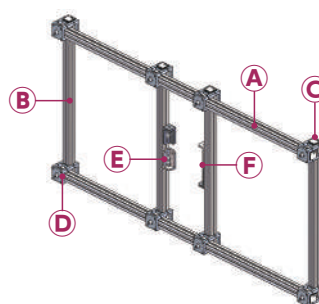


Base frame

Order code No.	041692
TYPE	EFCK-8000

● Weight : 7,612g

Configuration module	TYPE	Order code No.	No. of uses	Details
A Let's joint · 25 * 50 * 1500	25 * 50 * 1500	281754	2	5-35
B Let's joint · 25 * 50 * 500	25 * 25 * 500	281808	4	5-35
C Profile end cap · 25 · 50	N01902-006	131215	4	5-35
D Connector block25 · D	N01912-104	131036	4	5-35
E Nut · M6 · 2P · 15	N01914-101	131054	20	5-37
F Connector block50 · B	N01912-203	131040	4	5-35
G Nut · M6 · 2P · 20	N01914-105	131058	8	5-37
H Nut · M6 · 2P · 25	N01914-106	131059	8	5-37
I Connector plate25 · D	N01913-104	131045	8	5-37



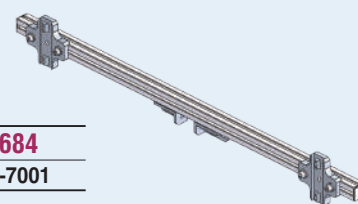
Base frame

Order code No.	041689
TYPE	EFCK-7600

● Weight : 3,992g

Configuration module	TYPE	Order code No.	No. of uses	Details
A Let's joint · 25 * 25 * 1000	25 * 25 * 1000	281809	2	5-35
B Let's joint · 25 * 25 * 500	25 * 25 * 500	281808	4	5-35
C Profile end cap · 25 · 25	N01902-005	131214	12	5-35
D Connector 25 · set A	N01911-101-102SET	131224	8	5-35
E Connector block25 · D	N01912-104	131036	4	5-35
F Nut · M6 · 2P · 15	N01914-101	131054	4	5-37

► Change method of sales (Order as sub-module kit)



Order code No.	041684
TYPE	EFCK-7001

Base frame for let's joint.

Configuration parts	TYPE	Order code No.
Cross connector · 25	N01911-103	131019
Connector block25 · D	N01912-104	131036
Nut · M6 · 2P · 15	N01914-101	131054
Profile end cap · 25 · 25	N01902-005	131214
PROFILE25 * 25	25 * 25 * 500	281807

* PROFILE length is 500mm if only PROFILE is ordered.

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

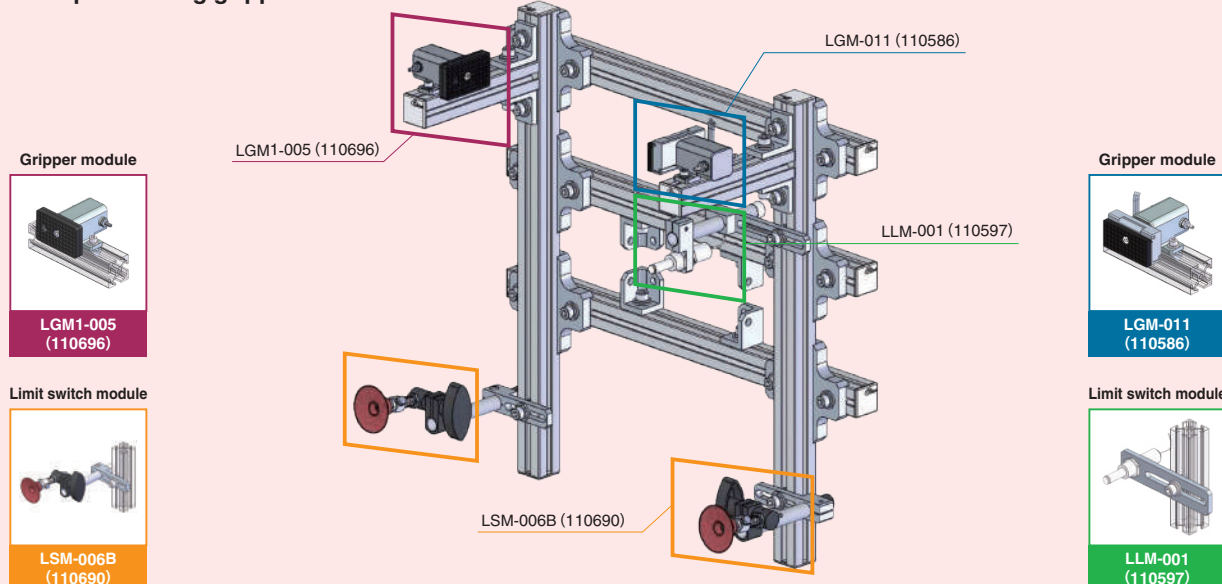
Various Products Information



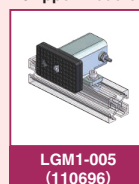
Suction Module (Order as sub-module kit)

Modularized chuck parts for let's joint.

Example of using gripper module



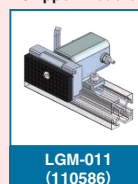
Gripper module



Limit switch module



Gripper module



Limit switch module



Change method of sales (Order as sub-module kit)



Order code No.	110569
TYPE	LSM-001

Suction module for let's joint

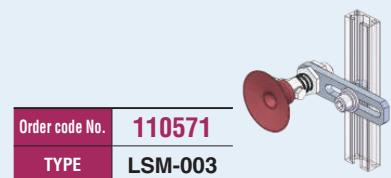
Configuration parts	TYPE	Order code No.
Bracket · φ8	N01915-111	131073
Rotation bracket · φ8 · M12A	N01864-205	131433
Suction stem for small	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Nut · M4	N01914-108	131061
Slide washer · φ8 / φ12	N01863-202	131146
Bolt with Hexagon Socket	M4*25	122798
for M4 SW, flat W	M4	122773-122778



Order code No.	110570
TYPE	LSM-002

Suction module for let's joint

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-20C	210194
Nut · M6	N01914-103	131056
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M6*15 (E)	122821



Order code No.	110571
TYPE	LSM-003

Suction module for let's joint

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

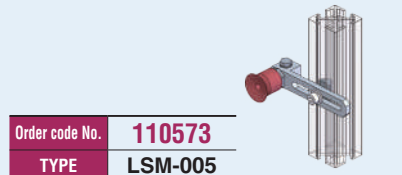


Order code No.	110689
TYPE	LSM-004B

Suction module for let's joint

Configuration parts	TYPE	Order code No.
Nut · M6 · 3P · 15	N01914-104	131057
Chuck bracket · φ12	N01915-105	131067
Rotation bracket · φ12 · 8B	N01864-101A	131600
Rotation bracket · φ8 · M12A	N01864-205	131433
Suction stem for small	VFIL-S-5A	210974
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Pipe end cap (black) · φ12	R-CAP-12	171339
Jungle gym SS pipe φ12 *	12*0.6*500	271527
Bolt with Hexagon Socket	M6*25	122969
for M6 SW, flat W	M6	122775-122780

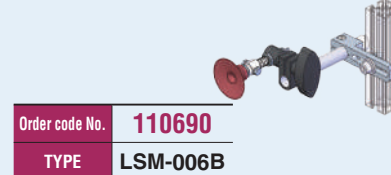
* Please cut it at 80mm before use.



Order code No.	110573
TYPE	LSM-005

Suction module for let's joint

Configuration parts	TYPE	Order code No.
Slide bracket 70 · M5	N01863-204	131148
Suction cups (standard/silicon/brown)	VAPH-20C	210194
Fitting	PF	190106
Fitting	BF-6	190108
Nut · M4	N01914-108	131061
Suction stem attachment head M5 small	N01892-301	131209
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4*12 (E)	122812



Order code No.	110690
TYPE	LSM-006B

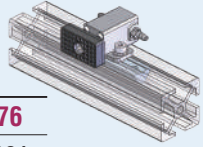
Suction module for let's joint

Configuration parts	TYPE	Order code No.
Pipe end cap (black) · φ12	R-CAP-12	171339
Slide bracket 40 · W · φ12	N01863-107	131132
Nut · M6	N01914-103	131056
Suction stems Non rotate (small)	VFILB2-SH	211045
Suction cups (standard/silicon/brown)	VAPH-40C	210196
Clip · TMA · φ12 * φ10	TMA-CL (12*10)	196564
Jungle gym SS pipe φ12 *	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.

Grip Module (Order as sub-module kit)

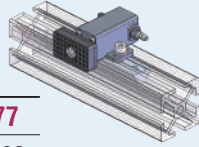
► Change method of sales (Order as sub-module kit)



Order code No.	110576
TYPE	LGM-001

Gripper module for let's joint (UMCD)

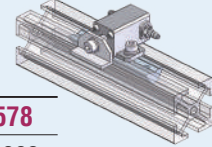
Configuration parts	TYPE	Order code No.
Micro mini cylinders	UMCD-5	200122
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-3	010473
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 10	122790
for M3 SW, flat W	M3	122772, 122777
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 6	123231



Order code No.	110577
TYPE	LGM-002

Gripper module for let's joint (UMCD)

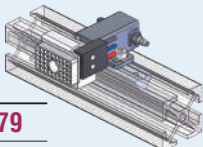
Configuration parts	TYPE	Order code No.
Micro mini cylinders	UMCD-10	200123
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-3	010473
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 10	122790
for M3 SW, flat W	M3	122772, 122777
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 6	123231



Order code No.	110578
TYPE	LGM-003

Gripper module for let's joint (UMCD)

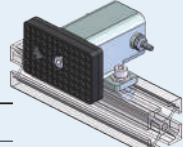
Configuration parts	TYPE	Order code No.
Micro mini cylinders	UMCD-5	200122
Claw L shape for micro mini cylinder	CPUM-02	022798
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-3	010473
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 10	122790
for M3 SW, flat W	M3	122772, 122777
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 6	123231



Order code No.	110579
TYPE	LGM-004

Gripper module for let's joint (UMCD)

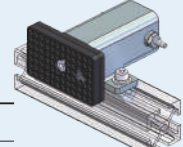
Configuration parts	TYPE	Order code No.
Micro mini cylinders	UMCD-10	200123
Pad rectangle w/ SW for micro mini cylinder	L1131-100	110568
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-3	010473
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 10	122790
for M3 SW, flat W	M3	122772, 122777
Bolt with Hexagon Socket (trivalent chromate white)	M3 · 8	123232



Order code No.	110696
TYPE	LGM1-005

Gripper module for let's joint (MCD1)

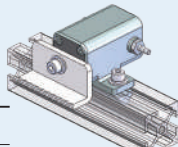
Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-10	123219
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-5	190109
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4 · 12 (E)	122812
Bolt with Hexagon Socket (trivalent chromate white)	M4 · 10	122795



Order code No.	110697
TYPE	LGM1-006

Gripper module for let's joint (MCD1)

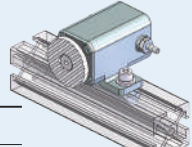
Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-20	123220
Pad rectangle black 2 holes for mini cylinder	CPL-060	023336
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-5	190109
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4 · 12 (E)	122812
Bolt with Hexagon Socket (trivalent chromate white)	M4 · 10	122795



Order code No.	110582
TYPE	LGM-007

Gripper module for let's joint (MCD1)

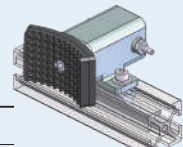
Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-10	123219
Claw L shape for micro mini cylinder	CP-014	370073
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4 · 12 (E)	122812
Bolt with Hexagon Socket (trivalent chromate white)	M4 · 10	122795
Fitting	BF-5	190109



Order code No.	110583
TYPE	LGM-008

Gripper module for let's joint (MCD1)

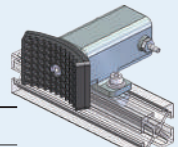
Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-10	123219
Claw L shape for mini cylinder	CP-013	370072
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-5	190109
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4 · 12 (E)	122812
Flat head screw with hexagon socket	M4 · 8	122785



Order code No.	110584
TYPE	LGM-009

Gripper module for let's joint (MCD1)

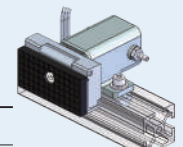
Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-10	123219
Pad curved black for mini cylinder	CPL-018	023359
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-5	190109
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4 · 12 (E)	122812
Flat head screw with hexagon socket	M4 · 8	122785



Order code No.	110585
TYPE	LGM-010

Gripper module for let's joint (MCD1)

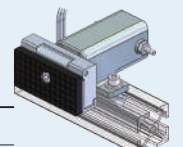
Configuration parts	TYPE	Order code No.
Mini cylinder · MCD	MCD1-20	123220
Pad curved black for mini cylinder	CPL-018	023359
Nut · M4 · 2P · 38, M3 · 2P · 20	N01914-201	131062
Fitting	BF-5	190109
Bolt with hexagon socket (SW + flat W) (trivalent chromate white)	M4 · 12 (E)	122812
Bolt with Hexagon Socket (trivalent chromate white)	M4 · 10	122795



Order code No.	110586
TYPE	LGM-011

Gripper module for let's joint (MCD1)

Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-10	123219
Pad rectangle w/ black SW for mini cylinder	KRCR-5000	101832
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



Order code No.	110587
TYPE	LGM-012

Gripper module for let's joint (MCD1)

Configuration parts	TYPE	Order code No.
Mini cylinder · MCD1	MCD1-20	123220
Pad rectangle w/ black SW for mini cylinder	KRCR-5000	101832
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

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

Grip Module / Limit Switch Module (Order as sub-module kit)

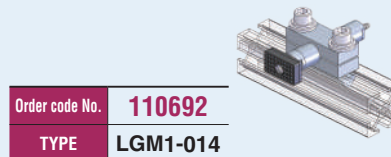
► Change method of sales (Order as sub-module kit)



Order code No. **110588**
TYPE **LGM-013**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1210	123699
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Chuck bracket · φ 12	N01915-105	131067
Nut · M6 · 3P · 15	N01914-104	131057
Bolt with Hexagon Socket (trivalent chromate white)	M6*25	122969
for M6 SW, flat W	M6	122775.122780
Bolt with Hexagon Socket (trivalent chromate white)	M3*6	123231



Order code No. **110692**
TYPE **LGM1-014**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle black for micro mini cylinder	CPUM-01	022797
Chuck bracket · φ 12	N01915-105	131067
Nut · M6 · 3P · 15	N01914-104	131057
Bolt with Hexagon Socket (trivalent chromate white)	M6*25	122969
for M6 SW, flat W	M6	122775.122780
Bolt with Hexagon Socket (trivalent chromate white)	M3*6	123231



Order code No. **110693**
TYPE **LGM1-015**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1220	123700
Pad rectangle w/SW for micro-mini cylinder	L1131-100	110568
Chuck bracket · φ 12	N01915-105	131067
Nut · M6 · 3P · 15	N01914-104	131057
Bolt with Hexagon Socket (trivalent chromate white)	M6*25	122969
for M6 SW, flat W	M6	122775.122780
Bolt with Hexagon Socket (trivalent chromate white)	M3*8	123232



Order code No. **110591**
TYPE **LGM-016**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-1210	123699
Claw L shape for micro mini cylinder	CPUM-02	022798
Chuck bracket · φ 12	N01915-105	131067
Nut · M6 · 3P · 15	N01914-104	131057
Bolt with Hexagon Socket (trivalent chromate white)	M6*25	122969
for M6 SW, flat W	M6	122775.122780
Bolt with Hexagon Socket (trivalent chromate white)	M3*8	123232



Order code No. **110694**
TYPE **LGM1-017**

Gripper module for let's joint (MCP)

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



Order code No. **110593**
TYPE **LGM1-018**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
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



Order code No. **110594**
TYPE **LGM-019**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2030	123703
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



Order code No. **110595**
TYPE **LGM-020**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2020	123702
Pad rectangle w/ black SW for mini cylinder	KRCR-5000	101832
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



Order code No. **110596**
TYPE **LGM-021**

Gripper module for let's joint (MCP)

Configuration parts	TYPE	Order code No.
Cylinder for pipe attachment	MCP1-2010	123701
Claw L shape for micro mini cylinder	CP-014	370073
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



Order code No. **110597**
TYPE **LLM-001**

Limit switch module for let's joint

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

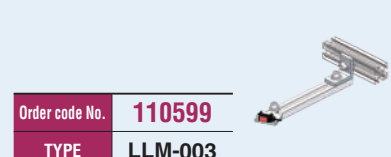


Order code No. **110598**
TYPE **LLM-002**

Limit switch module for let's joint

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 SS 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.



Order code No. **110599**
TYPE **LLM-003**

Limit switch module for let's joint

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.

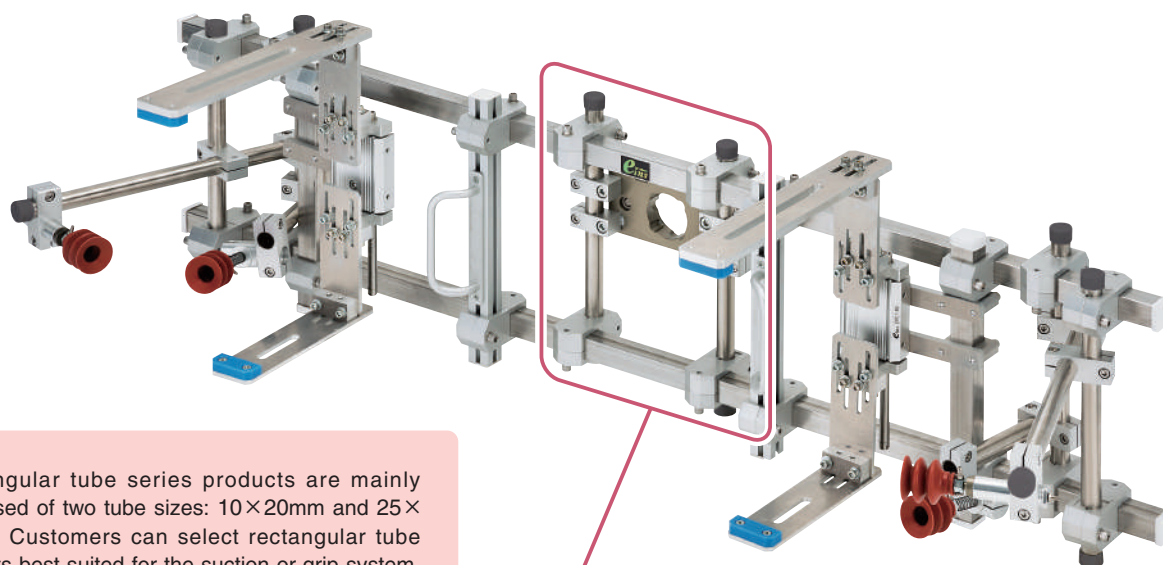
MEMO

Handwriting practice area with 20 horizontal dashed lines.



Rectangular Tube

- ▶ Light weight, strong, and better rotate resistance.
- ▶ Combination of Eins parts makes building an E.O.A.T. for many different shape of products easy.



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 •
φ 20 • M8



Tubing **6-1**

Rectangular tube



Jungle gym
SS pipe φ 20



Cross connector •
25-25



Conversion block • 25-φ 20



Rectangular Tube / Pipe End Cap

Attaches various kinds of components based on the rectangular tube.



Rectangular tube

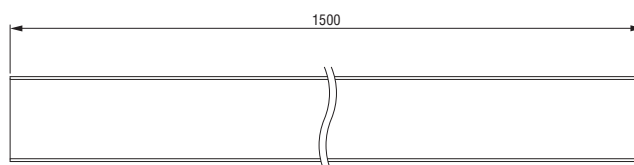
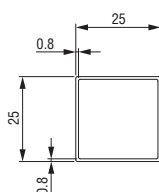
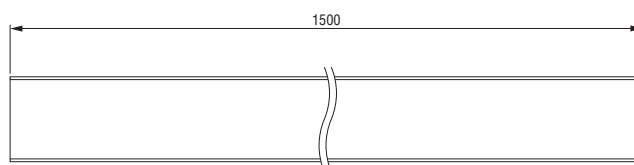
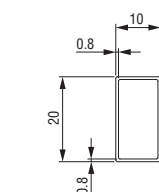
* Diameter of a pipe may expand when you cut the pipe.

Order code No.	185124
TYPE	S10*20*1500

● Weight : 535g

Order code No.	185125
TYPE	S25*25*1500

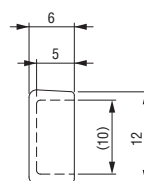
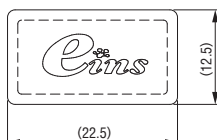
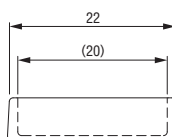
● Weight : 895g



Pipe end cap • 10*20

Order code No.	185219
TYPE	S-CAP 10-20

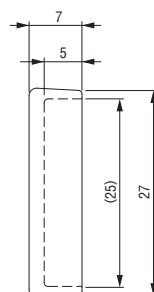
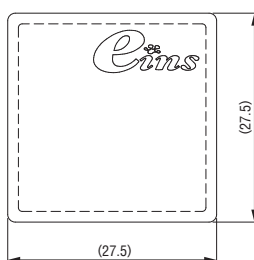
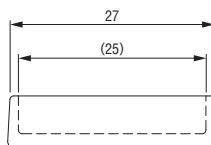
● Weight : 1g



Pipe end cap • 25*25

Order code No.	185218
TYPE	S-CAP 25-25

● Weight : 3g



Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

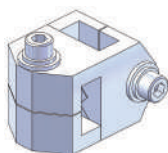
Information

Various Products Information



Rectangular Tube Series Parts

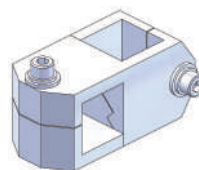
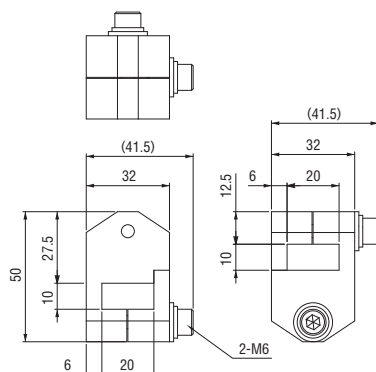
Securely fixes the Let's SUS square pipe by precision processing.



Cross connector • 10-20

Order code No.	185126
TYPE	S-CROSS 10-20

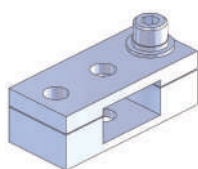
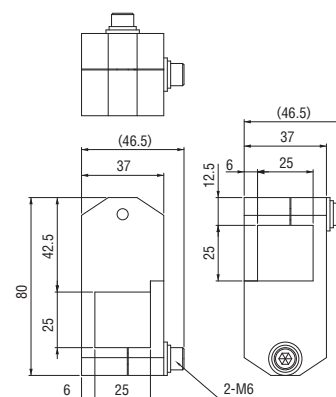
● Weight : 102g



Cross connector • 25-25

Order code No.	185127
TYPE	S-CROSS 25-25

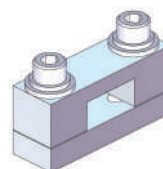
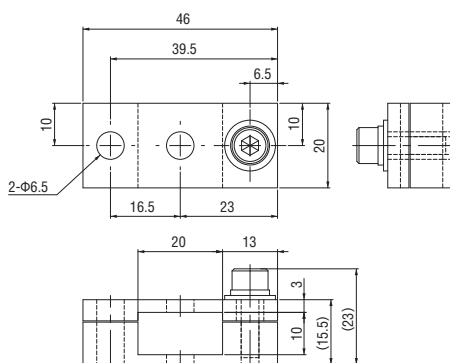
● Weight : 170g



Attachment bracket • 10-20 • M6

Order code No.	185128
TYPE	S-ATBR 10-20 • M6

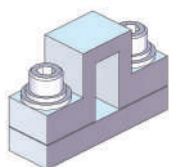
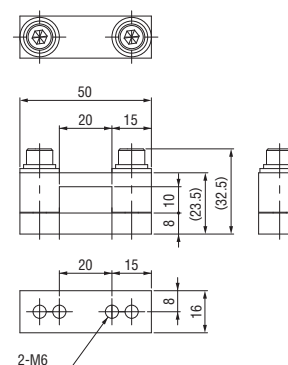
● Weight : 30g



Slide bracket • 10-20

Order code No.	185129
TYPE	S-SLBR 10-20

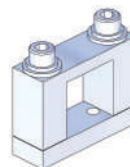
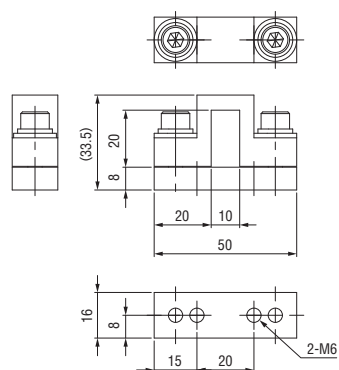
● Weight : 55g



Slide bracket • 20-10

Order code No.	185130
TYPE	S-SLBR 20-10

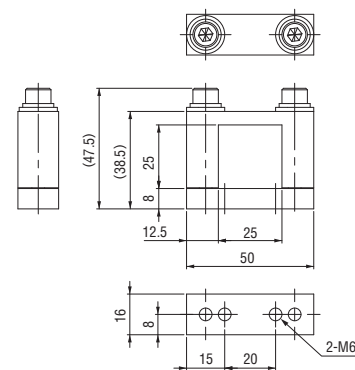
● Weight : 57g

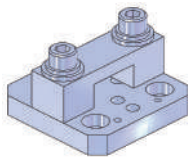


Slide bracket • 25-25

Order code No.	185131
TYPE	S-SLBR 25-25

● Weight : 73g

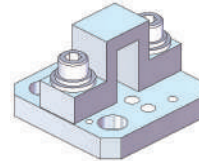
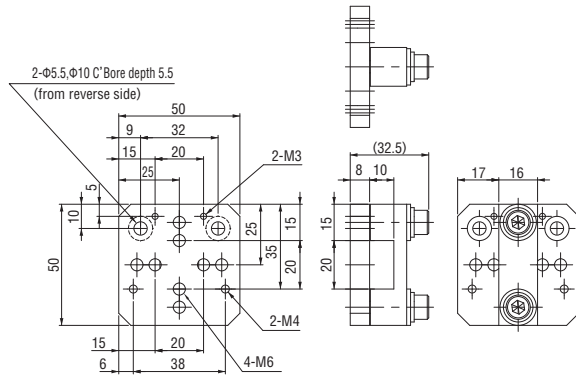




Bracket • 10 • MCD

Order code No.	185132
TYPE	S-BR10 MCD

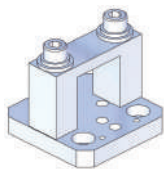
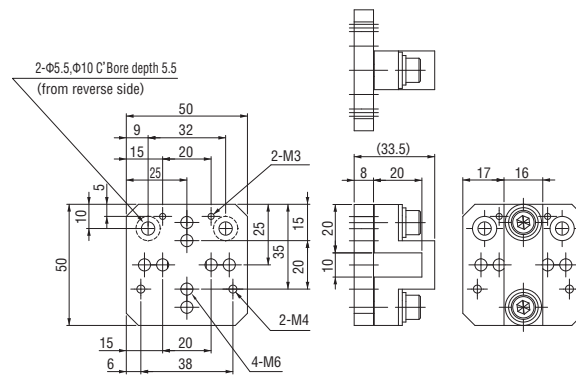
● Weight : 87g



Bracket • 20 • MCD

Order code No.	185133
TYPE	S-BR20 MCD

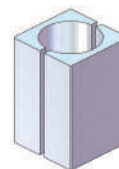
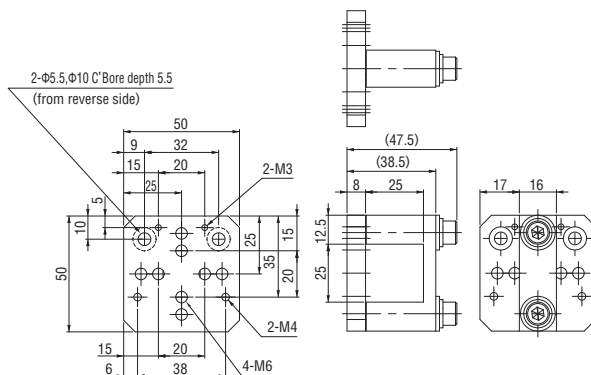
● Weight : 90g



Bracket • 25 • MCD

Order code No.	185134
TYPE	S-BR25 MCD

● Weight : 105g

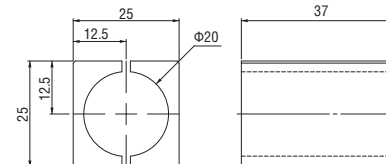


Conversion block • 25- φ 20

Order code No.	185135
TYPE	S-CBL25-D20

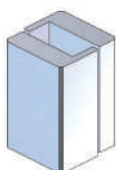
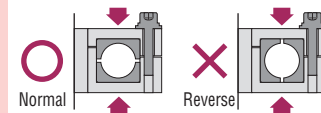
● Weight : 31g

Convert to rectangular tube 25x25 inner dimension to jungle gym φ 20.



Notes on use

Reverse attachment prevents fixing of conversion block.

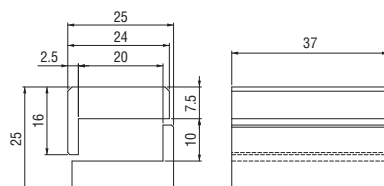


Conversion block • 25-10-20

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	2-4
Pitch 38-M4	Mini cylinder	2-4
Pitch 32-C'Bore	Mini container cylinder	2-17
Pitch 20-M6	Slide bracket φ 8, φ 12	5-15
	Slide bracket	5-21,22,23,24
	Nipper bracket	5-36
	Bracket • NCON	5-36

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

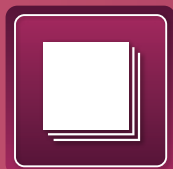
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

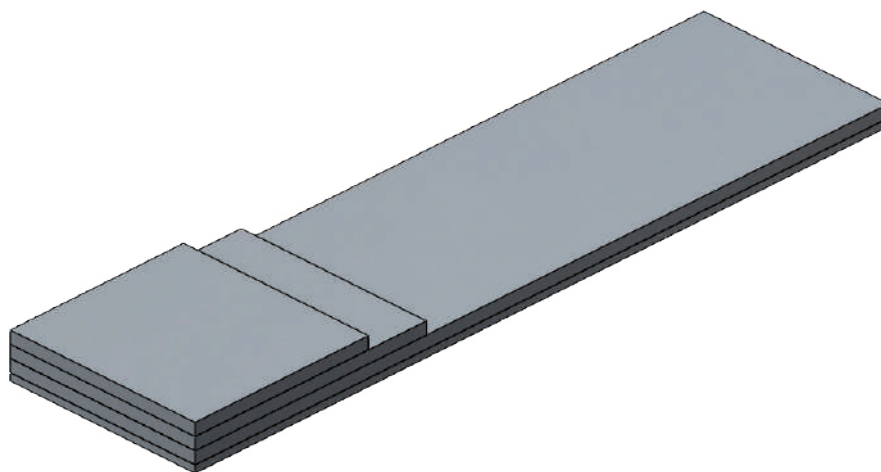
Information

Various Products Information

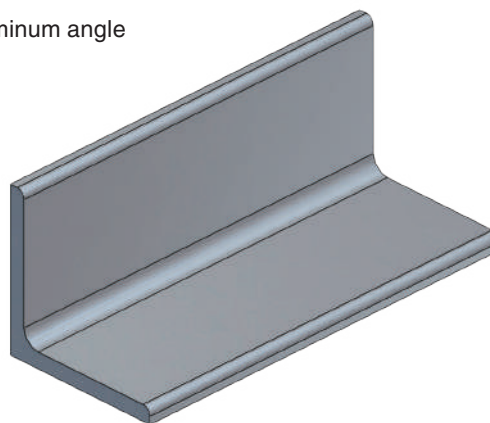


Base Aluminum Material

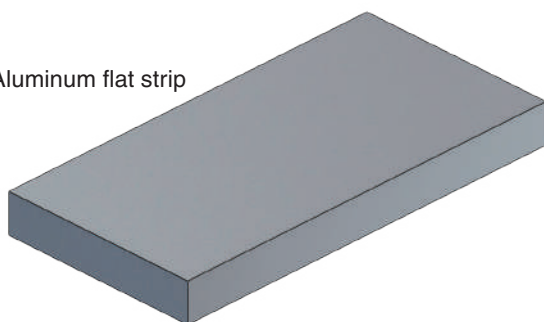
▶ Aluminum plate



▶ Aluminum angle



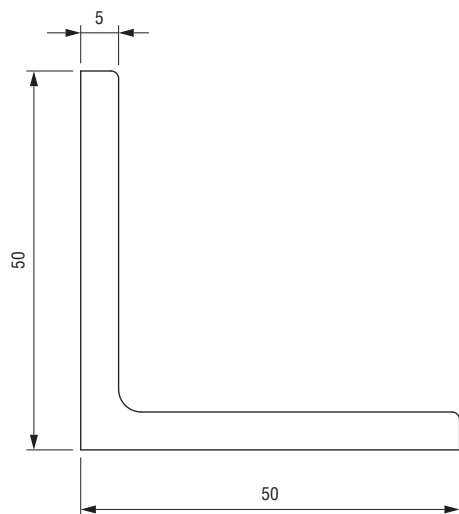
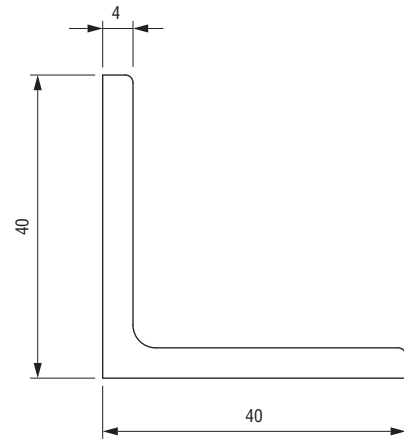
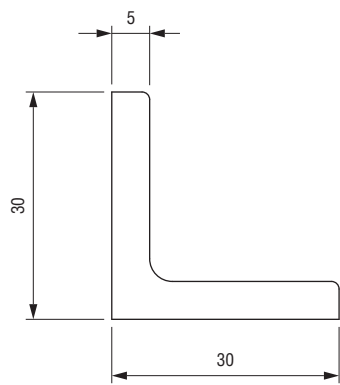
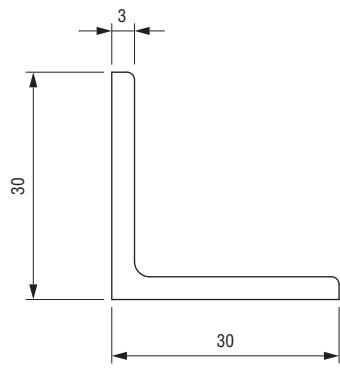
▶ Aluminum flat strip



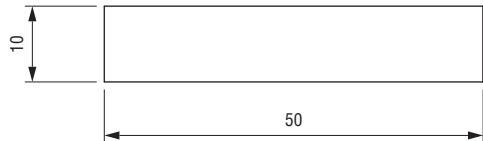
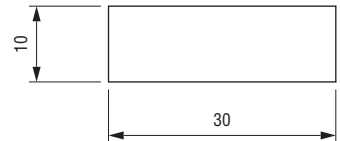
■ Specification

Product name	TYPE	Order code No.	Weight (g)	Remarks
Aluminum plate	3T*400*1200	370029	3,920	Material code : A5052
	5T*400*300	370028	1,630	Material code : A5052
	5T*400*400	370027	2,180	Material code : A5052
	5T*400*1200	370026	6,530	Material code : A5052
Aluminum angle	3T*30*30*2M	370074	900	Material code : A5052
	4T*40*40*2M	370075	1,670	Material code : A6063
	5T*30*30*2M	370077	1,400	Material code : A6063
	5T*50*50*2M	370076	2,440	Material code : A6063
Aluminum flat strip	10T*30*2M	370373	1,470	Material code : A6063
	10T*50*2M	370374	2,630	Material code : A6063

▶ Aluminum angle



▶ Aluminum flat strip



Quick Chuck Change

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

Grip

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

Suction

- Suction Cups
- Suction Stem
- Pad in Pad
- 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

Air Management / Sensors

- Air Management
- Sensors
- PCIO Communication Unit

Lightweight Series

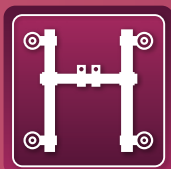
- Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

- Tool / Jig

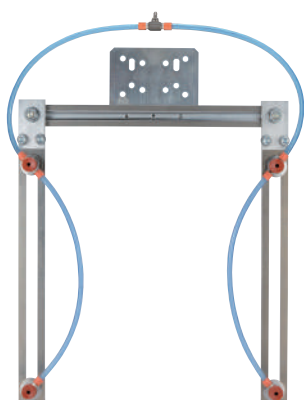
Information

- Various Products Information



Sliding Chuck

- ▶ Suction stem can be moved freely according to the shape of workpiece.
 - ▶ Chuck mounting section can be attached to other Manufacturer's robots.
- The material of vertical bar was changed to duralumin to enhance rigidity.



► Suction stem for small

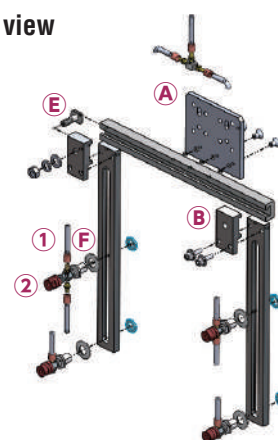
Sliding chuck

Order code No.	054285
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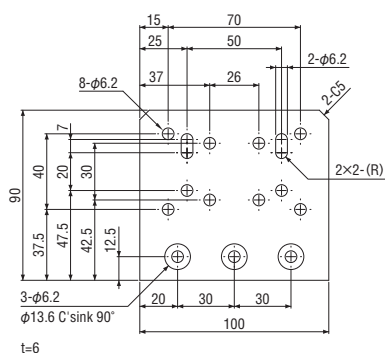
TYPE	FCK1-0000
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- Weight : 1.150g

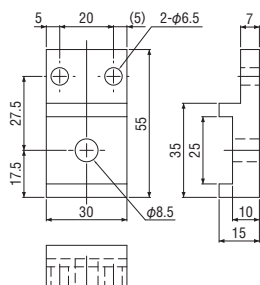
Exploded view



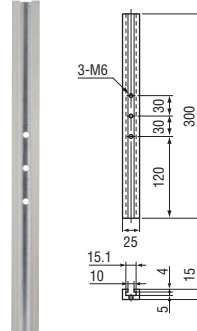
A Chuck mounting base



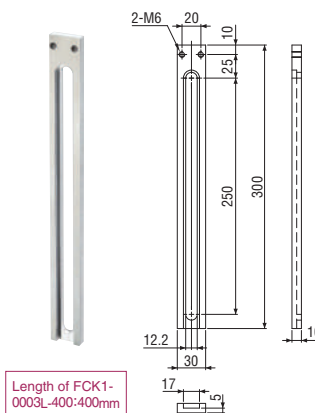
B Sliding holder



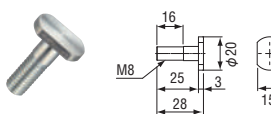
C Universal chuck
slide base



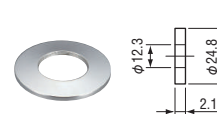
D Vertical bar (L)



E Sliding chuck fastening bolt



F Taper washer (small)

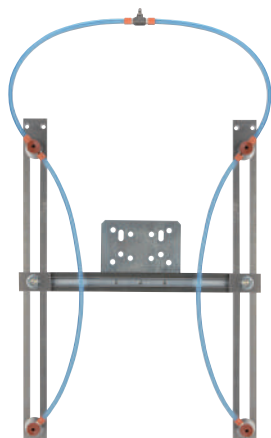


■ Specification

	Product name		TYPE	Order code No.	Weight (g)
A	Chuck mounting base		FCK1-0001	054287	393
B	Sliding holder		FCK1-0002S	054288	41
C	Universal chuck slide base		FCK2-0004	054325	213
D	Vertical bar (L)	300mm (standard)	FCK1-0003L	054289	139
		400mm	FCK1-0003L-400	054290	183
E	Sliding chuck fastening bolt		FCK1-0005	054326	11
1	Suction stem for small(M5)		VFIL-S-5A	210974	20
2	Suction cup (standard/silicon/brown)		VAPH-15C	210193	2.2
F	Taper washer • for small		φ12 (for VFIL-S)	370244	4

■ Information of used bolt

	Product name	TYPE	Order code No.	Qty
A+C	Flat head screw with hexagon socket	M6*10	122786	3
B+C	Nut class 1	M8	122783	2
	Spring washer	M8	122776	2
	Flat washer	M8	122781	2
B+D	Bolt with hexagon socket (SW+flat W)	M6*20	122822	4

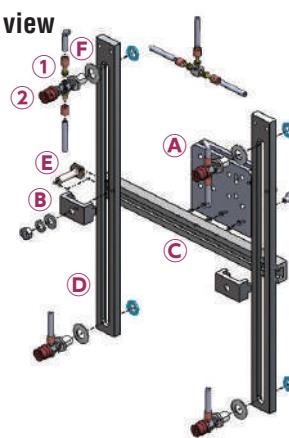


► Suction stem for small
Universal chuck (H type)

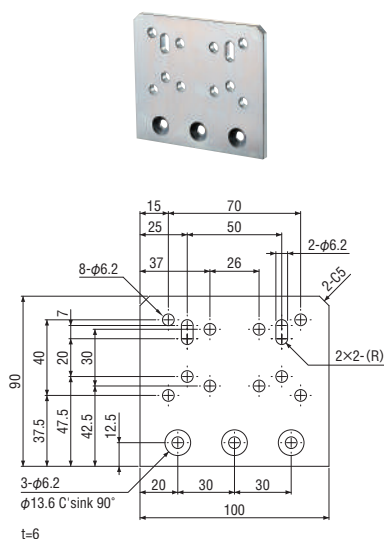
Order code No.	054286
TYPE	FCKH-0000

● Weight : 1,185g

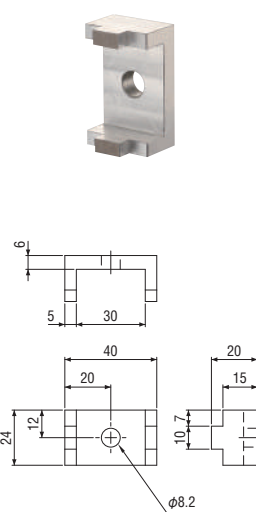
Exploded view



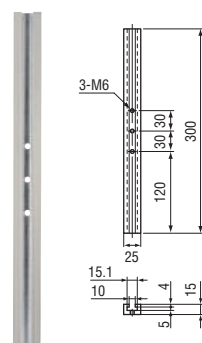
A Chuck mounting base



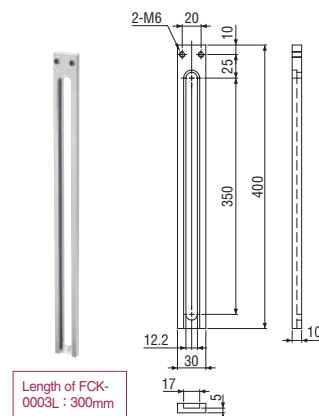
B Sliding holder H



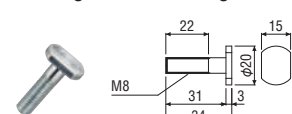
C Universal chuck slide base



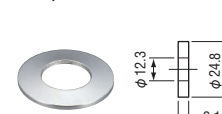
D Vertical bar (L)



E Sliding chuck fastening bolt H



F Taper washer (small)



■ Specification

	Product name		TYPE	Order code No.	Weight (g)
A	Chuck mounting base		FCK1-0001	054287	393
B	Sliding holder H		FCKH-0007	054291	21
C	Universal chuck slide base		FCK2-0004	054325	213
D	Vertical bar (L)	400mm (standard)	FCK1-0003L-400	054290	183
		300mm	FCK1-0003L	054289	139
E	Sliding chuck fastening bolt H		FCKH-0005L	054292	16
1	Suction stem for small(M5)		VFIL-S-5A	210974	20
2	Suction cup (standard/silicon/brown)		VAPH-15C	210193	2.2
F	Taper washer • for small		φ12 (for VFIL-S)	370244	4

■ Information of used bolt

	Product name	TYPE	Order code No.	Qty
A+C	Flat head screw with hexagon socket	M6*10	122786	3
B+C	Nut class 1	M8	122783	2
	Spring washer	M8	122776	2
	Flat washer	M8	122781	2

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

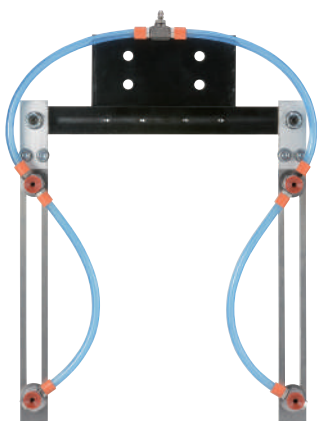
Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information



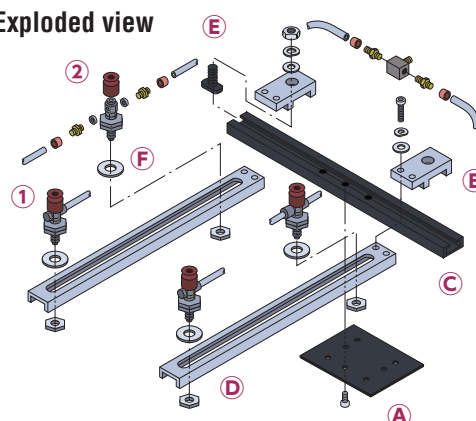
► Suction stem mini
Sliding chuck (mini)

Order code No. **054324**

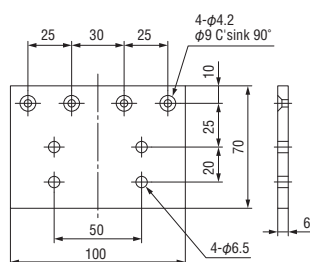
TYPE **FCK1-1000**

● Weight : 616g

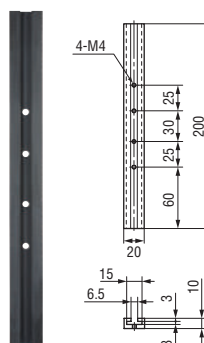
Exploded view



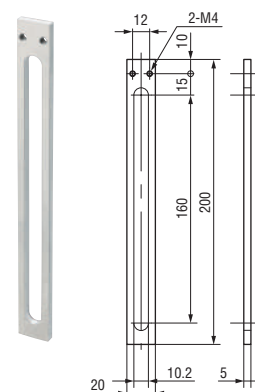
A Chuck mounting base



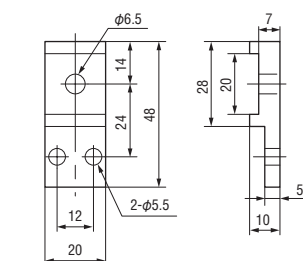
C Universal chuck slide base



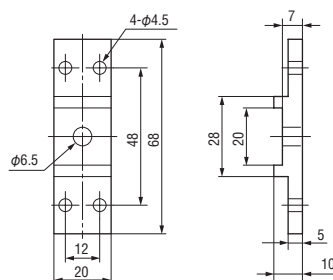
D Vertical bar



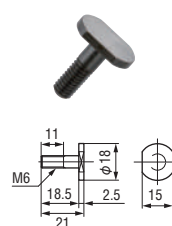
B Sliding holder



Sliding holder



E Sliding chuck fastening bolt



* Used to change to H type.

■ Specification

	Product name	TYPE	Order code No.	Weight (g)
A	Chuck mounting base	FCK1-1001	054340	313
B	Sliding holder	FCK1-1002	054321	16
C	Universal chuck slide base	FCK1-1004	370735	69
D	Vertical bar 200mm	FCK1-1003	054322	32
E	Sliding chuck fastening bolt	FCK1-1005	370736	8
1	Suction cups (standard/silicon/brown)	VAPH-12C	210192	0.8
2	Suction stem mini	VFIL1-SS-5	211029	14
F	Taper washer * for small	φ10 (for VFIL-SS)	371362	1.9
	Sliding holder	FCK1-1006	050794	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
	Flat washer	M6	122780	2
B+D	Bolt with hexagon socket (SW+flat W)	M4*12	122812	4

Air Management / Sensors



Air Management 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 6-16

- ▶ Star Sensor 6-17
- ▶ Limit Switch 6-18
- ▶ Limit Switch Micro / Limit Switch 6-19
- ▶ Limit Switch Mounting Bracket 6-20
- ▶ Auto Switch (Reed · Contactless) 6-21
- ▶ Photo Sensor 6-22
- ▶ Photo Area Sensor 6-24
- ▶ Fiber Units 6-25
- ▶ Fiber Amplifier Unit 6-26
- ▶ Proximity Sensor Runner Confirm 6-30
- ▶ Multi AND Board 6-32



PCIO Communication Unit 6-34

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

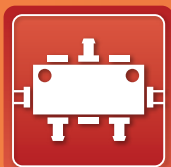
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

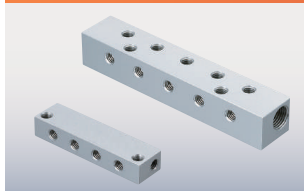
Information

Various Products Information



Air Management

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



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

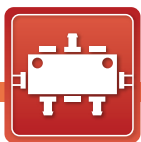
Cable Ties/Cable Tie mount/Tube Cutter



Use to secure your tubing on plate or jungle gym.

6-10

6-2



Manifold

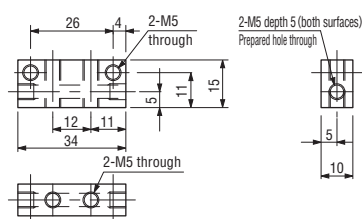
Air circuit is branched off in two or more directions.



Manifold • mini

Order code No.	122034
TYPE	MM-6P

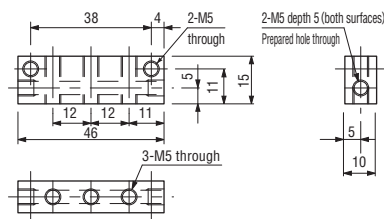
● Weight : 10g ● Mounting : M5/P26



Manifold mini

Order code No.	122035
TYPE	MM-8P

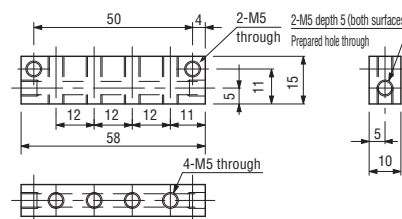
● Weight : 14g ● Mounting : M5/P38



Manifold mini

Order code No.	122036
TYPE	MM-10P

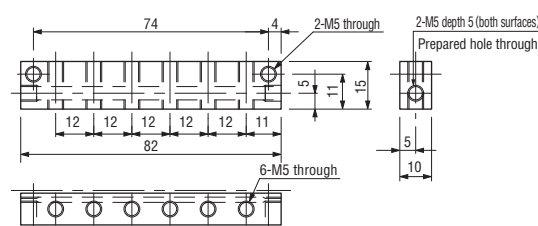
● Weight : 17g ● Mounting : M5/P50



Manifold mini

Order code No.	122037
TYPE	MM-14P

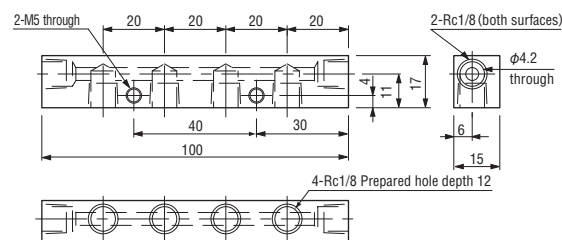
● Weight : 25g
● Mounting : M5/P74



Manifold small

Order code No.	122040
TYPE	MS-6P (1/8)

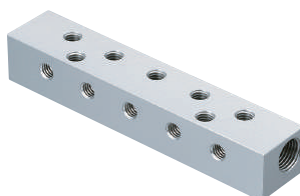
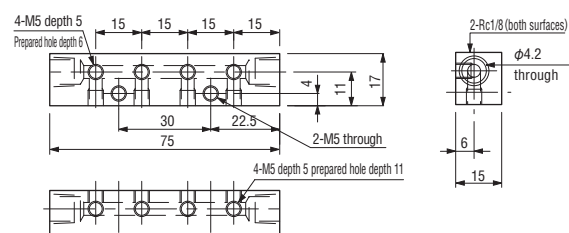
● Weight : 52g
● Mounting : M5/P40



Manifold small

Order code No.	122038
TYPE	MS-10P

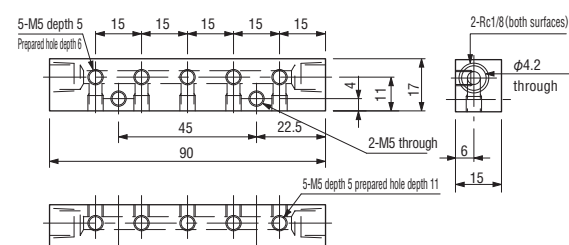
● Weight : 41g
● Mounting : M5/P30



Manifold small

Order code No.	122039
TYPE	MS-12P

● Weight : 50g
● Mounting : M5/P45



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

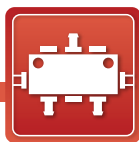
Frame / Suction / Cylinder / Pads / Manifold

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.	123195
TYPE	MP-10P-BF5

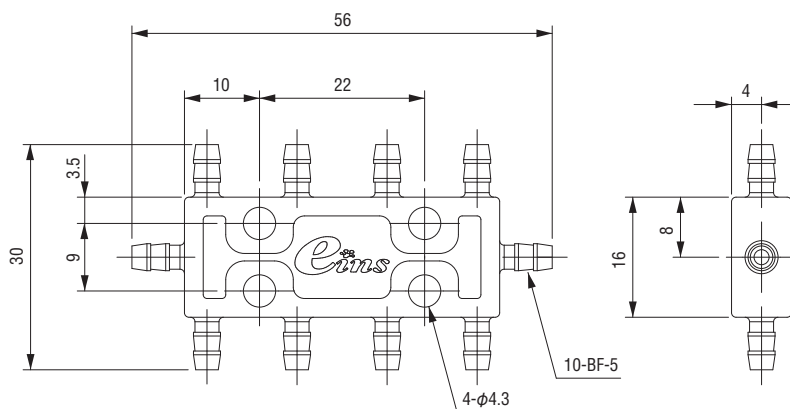
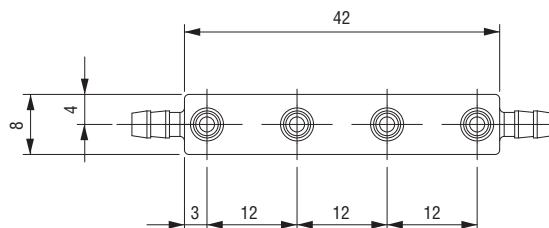
● Weight : 5g



Cap for resin manifold • BF5

Order code No.	010585
TYPE	BF5-CAP

● Weight : 1g



Light weight plastic manifold BF6

Order code No.	123196
TYPE	MP-10P-BF6

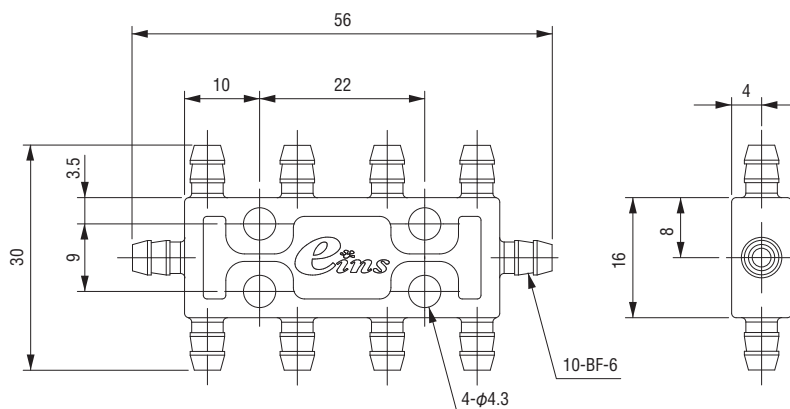
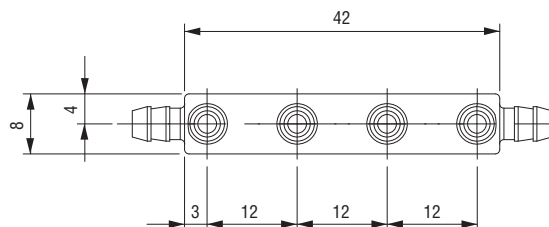
● Weight : 5g

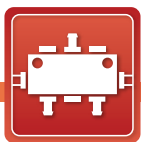


Cap for resin manifold • BF6

Order code No.	010586
TYPE	BF6-CAP

● Weight : 1g

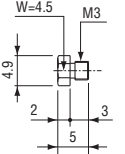
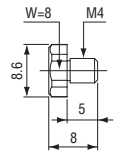
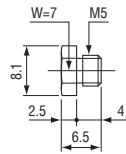
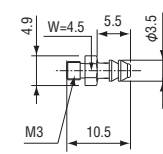
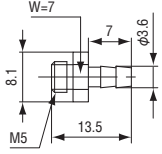
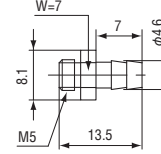


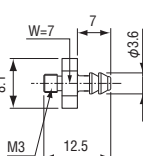
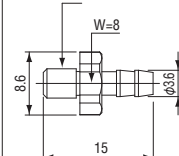
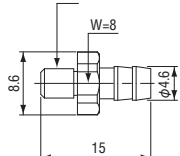
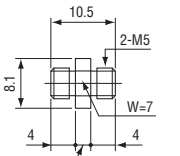
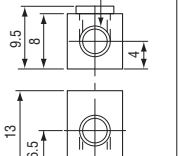
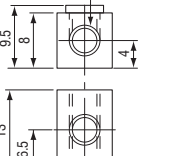


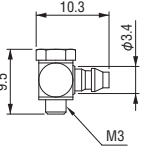
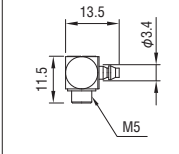
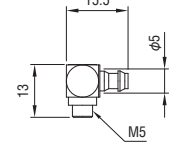
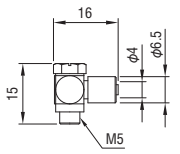
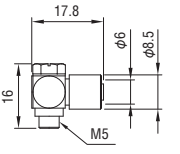
Fitting

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.	010474	151349	190106	010473	190109	190108
TYPE	PF-3	PF-M4	PF	BF-3	BF-5	BF-6
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			For micro-mini cylinder		
						
Drawing						
Order code No.	010416	010482	010481	190107	190110	190111
TYPE	BF-5-M3	BF-5-M4	BF-6-M4	NF	EF	TF
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.	120543	120692	122892	120500	122832
TYPE	M-3ALU-4	M-5ALU-4	M-5ALU-6	MS-5HLH-4	MS-5HLH-6
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)

Tool Changer

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Grip

Mini Cylinder

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Base Aluminum Material

Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

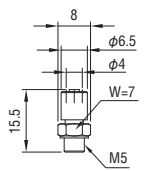
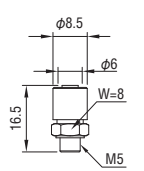
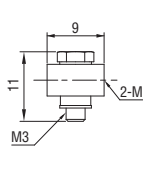
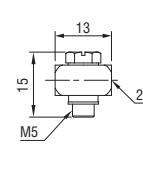
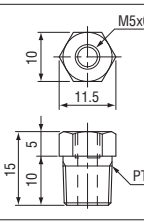
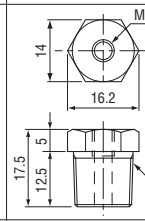
Tool / Jig

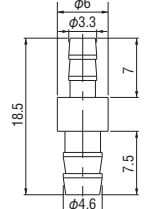
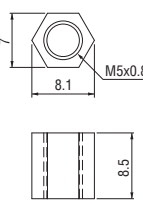
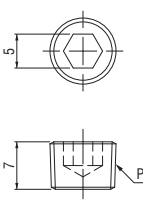
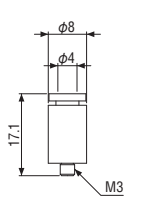
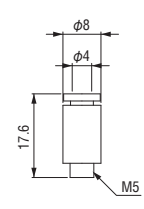
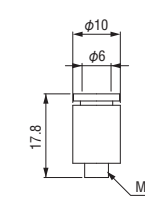
Information

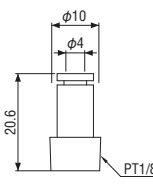
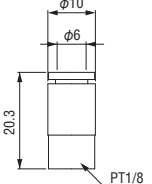
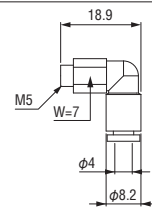
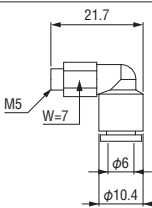
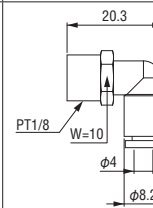
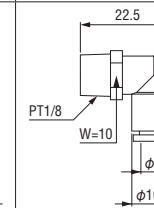
Various Products Information

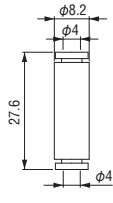
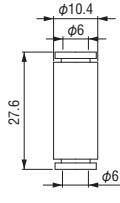
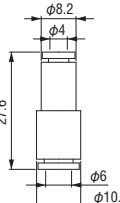
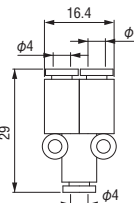
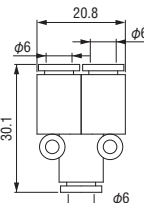
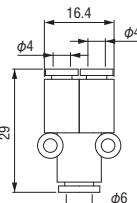
Fitting

● Please select from **6-9** for the air tube to be connected.

Fitting	Hose nipple		Universal tee			
						
Drawing						
Order code No.	122831	122049	123471	120607	190112	190113
TYPE	MS-5H-4	MS-5H-6	M-3UT	M-5UT	RBF	RBF-1
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	φ 4	φ 6	—	—	—	—

Fitting	Reducer nipple	Joint	Socket plug (trivalent chromate white)	Male connector		
						
Drawing						
Order code No.	300385	022667	271714	101749	101467	101466
TYPE	4-S-6	CF	1/8	KQ2S04-M3G	KQ2S04-M5N	KQ2S06-M5N
Weight	1.2g	1.75g	2.5g	2.0g	3.0g	4.1g
Connection	—	M5	1/8	M3	M5	M5
Tube Size	φ 4, φ 4.5, φ 6	—	—	φ 4	φ 4	φ 6

Fitting	Male connector		Male elbow union			
						
Drawing						
Order code No.	101746	101468	101462	101464	101710	101463
TYPE	KQ2S04-01NS	KQ2S06-01NS	KQ2L04-M5N	KQ2L06-M5N	KQ2L04-01NS	KQ2L06-01NS
Weight	8.0g	6.5g	3.1g	3.2g	4.0g	5.2g
Connection	1/8	PT1/8	M5	M5	PT1/8	PT1/8
Tube Size	φ 4	φ 6	φ 4	φ 6	φ 4	φ 6

Fitting	Straight union		Straight reducer union	Union y		Reducer union y
						
Drawing						
Order code No.	101469	101470	101471	101472	101465	101473
TYPE	KQ2H04-00A	KQ2H06-00A	KQ2H04-06A	KQ2U04-00A	KQ2U06-00A	KQ2U04-06A
Weight	1.6g	2.1g	2.0g	2.9g	4.1g	3.3g
Connection	—	—	—	—	—	—
Tube Size	φ 4	φ 6	φ 4、φ 6	φ 4	φ 6	φ 4、φ 6

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Quick Chuck Change (Manual)

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Rectangular Tube

Base Aluminum Material

Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

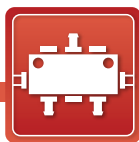
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

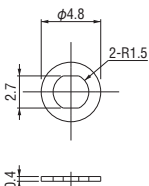
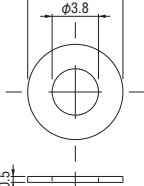
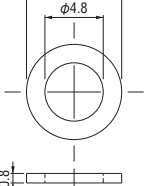
Various Products Information

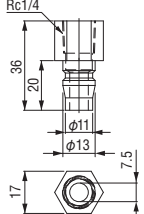
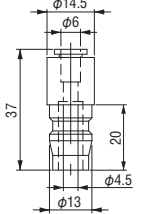
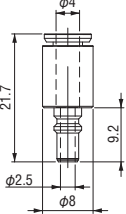
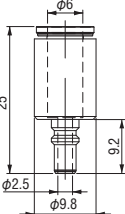


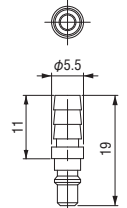
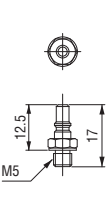
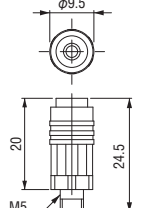
Gasket / Air Coupler / Micro Coupler

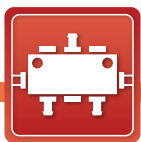
Use with pipe connections.

● Please select from **6-9** for the air tube to be connected.

Gasket			
Drawing			
Order code No.	122889	122890	122891
TYPE	M3-G	M4-G	M5-G
Weight	—	—	—
Connection	—	—	—
Tube Size	—	—	—

Air coupler				
Drawing				
Order code No.	280018	322948	122893	122894
TYPE	20PF	60PC	MC-04PC	MC-06PC
Weight	29.0g	24.0g	5.0g	3.0g
Connection	Rc1/4	—	—	—
Tube Size	—	φ 6	φ 4	φ 6

Micro coupler			
Drawing			
Order code No.	120170	120120	120121
TYPE	MC-04PH	MC-05PM	MC-05SM
Weight	1.5g	2.0g	7.0g
Connection	—	M5	M5
Tube Size	φ 6	—	—



Tube / Sleeve

Use for connecting air powered devices, flexible to work with your robots movements.

Polyurethane tube (flexible)



Order code No.	196516	196277	193564	196513
TYPE	TU0425W-20	TU0425B-20	TU0425BU-20	TU0425R-20
Tube Color	White	Black	Blue	Red
Length	20m			
Outside × Inside diameter	φ4 × φ2.5			
Order code No.	196514	196515	196520	196278
TYPE	TU0425Y-20	TU0425G-20	TU0604W-20	TU0604B-20
Tube Color	Yellow	Green	White	Black
Length	20m			
Outside × Inside diameter	φ4 × φ2.5		φ6 × φ4	
Order code No.	193566	196517	196518	196519
TYPE	TU0604BU-20	TU0604R-20	TU0604Y-20	TU0604G-20
Tube Color	Blue	Red	Yellow	Green
Length	20m			
Outside × Inside diameter	φ6 × φ4			

Soft polyurethane tube (more flexible)



Order code No.	196530	196531
TYPE	TUS0425W-20	TUS0604W-20
Tube Color	White	
Length	20m	
Outside × Inside diameter	φ4 × φ2.5	φ6 × φ4

Urethane tube (flexible)



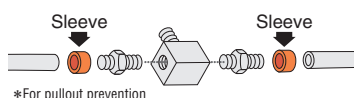
Order code No.	200039	200113	200040	200112
TYPE	UF4.5 * 2.7 (5M)	UF4.5 * 2.7 (20M)	UF6 * 4 (5M)	UF6 * 4 (20M)
Tube Color	Light blue			
Length	5m	20m	5m	20m
Outside × Inside diameter	φ4.5 × φ2.7		φ6 × φ4	

Silicone tube (super flexible)



Order code No.	300514	322194
TYPE	4 * 2 (5M)	6 * 3 (5M)
Tube Color	Translucent	
Length	5m	
Outside × Inside diameter	φ4 × φ2	φ6 × φ3

Sleeve



*For pullout prevention

Order code No.	300001
TYPE	BS-06
Weight	0.2g

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

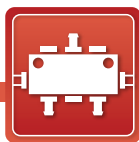
Frame / Suction / Cylinder / Pads / Manifold
--

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.	001920	001921	001922	001923	001924
	TYPE	AB100-W	AB150-W	AB200-W	AB300-W	AB350-W
	Length	100mm	152mm	202mm	301mm	382mm
	Per bag	1,000pcs.	100pcs.			50pcs.

Cable Ties / tag

	Order code No.	152324
	TYPE	PLF1M-C
	Length	109mm
	Per bag	100pcs.

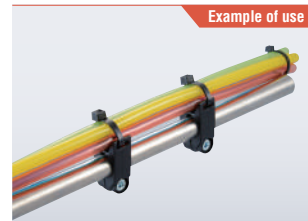
Cable tie mount

	Order code No.	183222	183223
	TYPE	SKM-20	SKM-30
	Length	20×20×5.3	30×30×6
	Per bag	100pcs.	



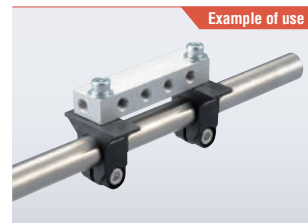
Tie wrap base

	Order code No.	171210	171211
	TYPE	RCA12	RCA20
	Weight	0.2g	
	Per bag	φ 12	φ 20



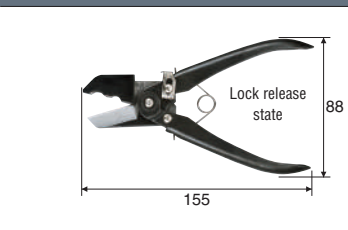
Plastic Fixture (M4)

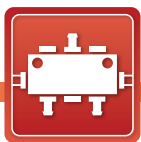
	Order code No.	171212	171213
	TYPE	RCB12	RCB20
	Weight	0.2g	
	Per bag	φ 12	φ 20



Tube cutter

* Do not use for cutting metal such as electric wire.

	Order code No.	190508
	TYPE	TK-1
	Weight	140g
	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.

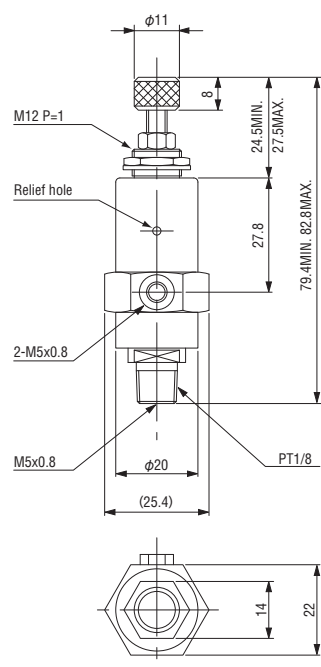
- Grip strength of components such as mini cylinder is adjusted by regulating pressure.



Regulator

Order code No.	190009
TYPE	RSR

- Weight : 108g



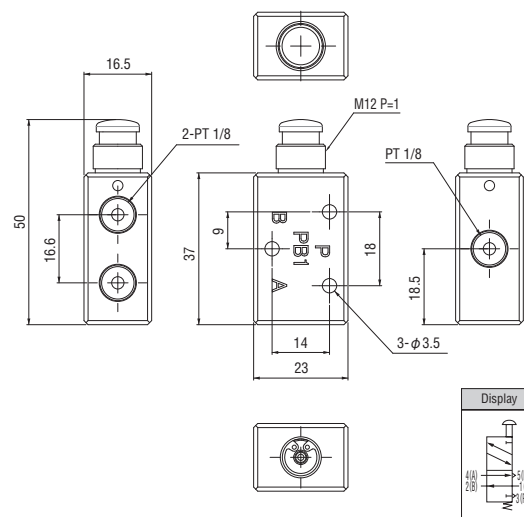
- Used to switch port of air (A/B). Momentary action.



Manual air valve push button

Order code No.	152308
TYPE	PB1-E

- Weight : 65g
- Fixing bolt and nut are separately sold.



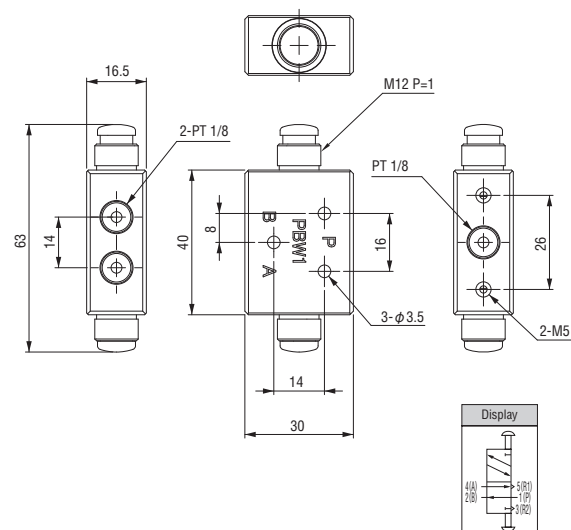
- Used to switch port of air (A/B).



Manual air valve push slide button

Order code No.	152306
TYPE	PBW1-E

- Weight : 75g
- Fixing bolt and nut are separately sold.



Mountable on RSR, PB1-E, and PBE1-E.
"120483" is separately required for installation to PB1-E, PBW1-E.

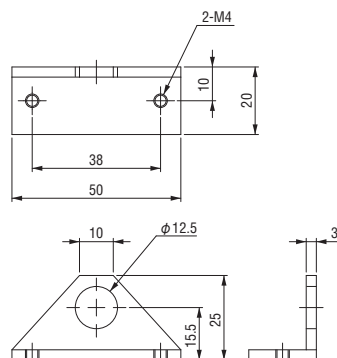
- Mounting bracket for push button and regulator.



RSR 4P mount BKT

Order code No.	020830
TYPE	CP-055

- Weight : 2g



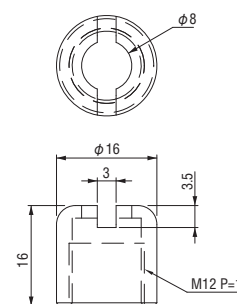
- Installation to PB1-E and PBW1-E is possible.



Push button cap

Order code No.	152307
TYPE	PB1-C

- Weight : 5g
- With spring washer



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

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Accessory for Container Cylinder

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Rubber Material / Grip Pad

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Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

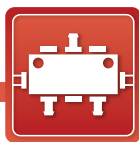
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



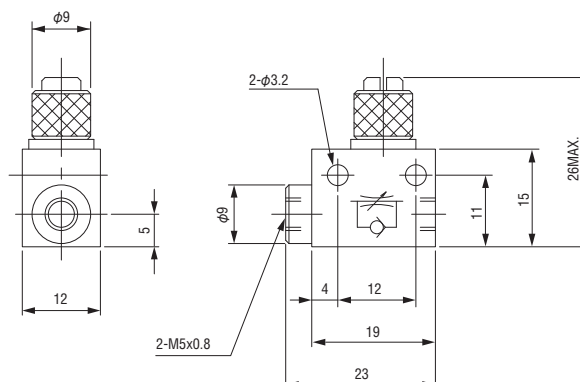
Flow Controller

Speed of air cylinder can be adjusted.



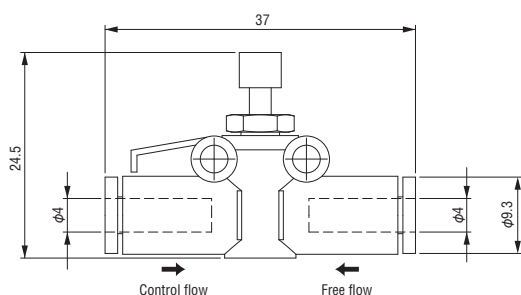
Order code No.	190002
TYPE	SC0

- Weight : 29g
- Directional



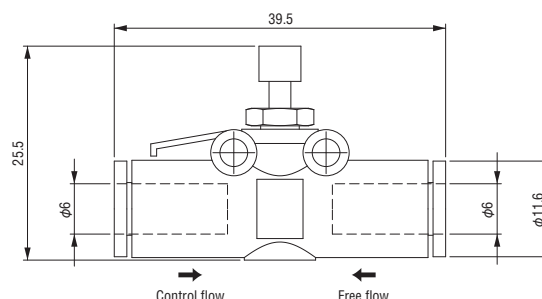
Order code No.	002199
TYPE	AS1002F-04

- Weight : 5.5g
- Directional



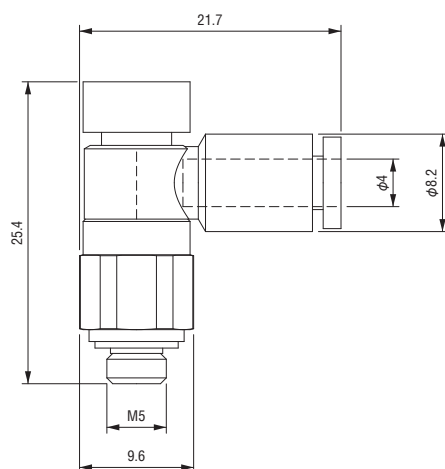
Order code No.	002200
TYPE	AS1002F-06

- Weight : 6.5g
- Directional



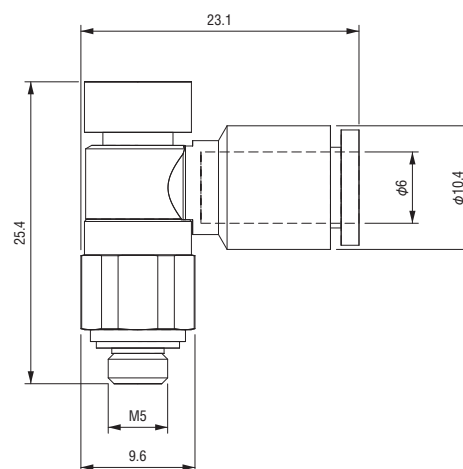
Order code No.	002239
TYPE	AS1201F-M5-04A

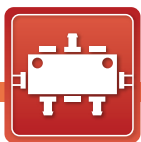
- Weight : 5g
- Meter out type



Order code No.	002288
TYPE	AS1201F-M5-06A

- Weight : 6g
- Meter out type





Valve Joint (Quick Exhaust Valve / Finger Valve)

Used to control air flow.

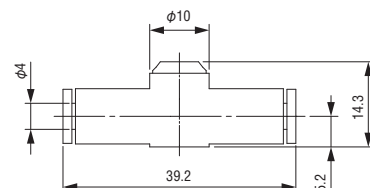
- ▶ Quick exhaust valve with one-touch pipe joint.



Quick exhaust valve

Order code No.	002216
TYPE	AQ240F-04-00

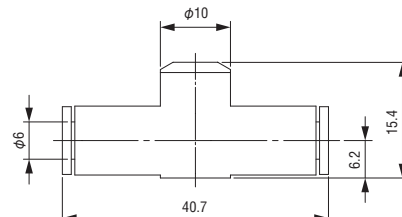
- Weight : 5g
- Silencer is included.
- Directional



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.



2-port valve

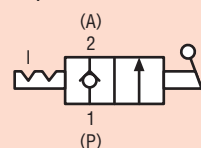
Finger valve

Order code No.	210935
TYPE	VHK2-04F-04FL

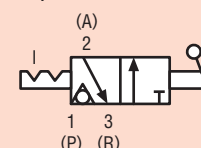
- Weight : 15g
- Applicable tube size : $\phi 4$
- Directional

Structural drawing

2-port valve



3-port valve



Finger valve

Order code No.	210936
TYPE	VHK2-06F-06FL

- Weight : 16g
- Applicable tube size : $\phi 6$
- Directional

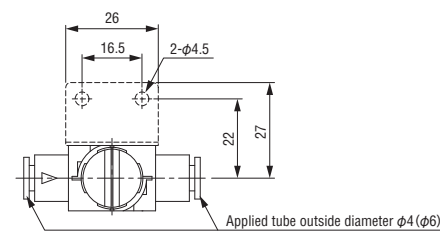


3-port valve

Finger valve

Order code No.	210937
TYPE	VHK3-04F-04FL

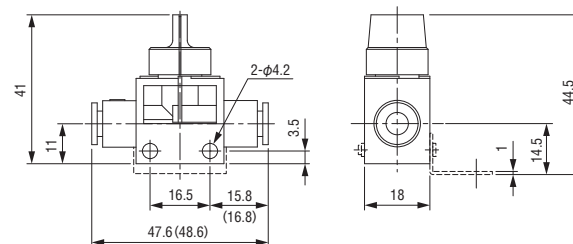
- Weight : 15g
- Applicable tube size : $\phi 4$
- Directional



Finger valve

Order code No.	210938
TYPE	VHK3-06F-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)

Tool Changer

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Accessory for Container Cylinder

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Rubber Material / Grip Pad

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Suction Cups

Suction Stem

Pad in Pad

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

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

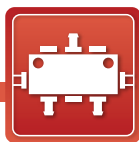
Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



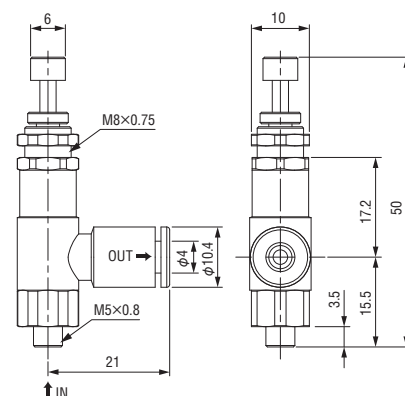
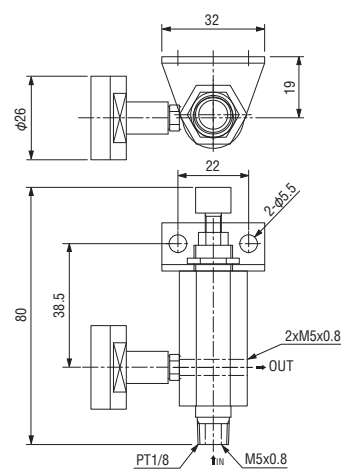
Mini Pressure Regulator

Grips work piece gently by decreasing gripping force.



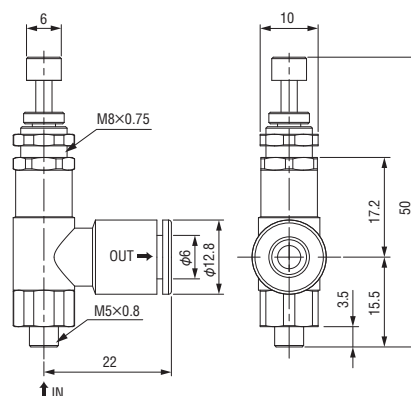
Order code No.	001312
TYPE	ARJ210-M5BG

● Weight : 60g



Order code No.	001382
TYPE	ARJ1020F-M5-04

● Weight : 16g



Order code No.	001447
TYPE	ARJ1020F-M5-06

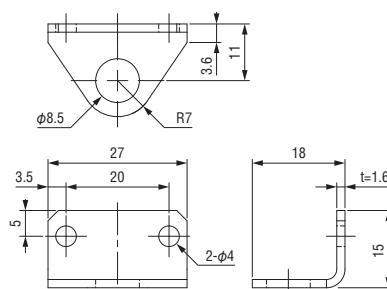
● Weight : 16g



ARJ1 Regulator Bracket

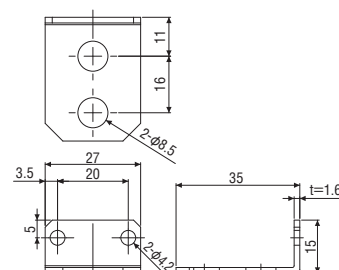
Order code No.	110655
TYPE	LX0109-102

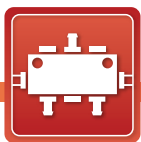
● Weight : 8g



Order code No.	002356
TYPE	ARJ1B2

● Weight : 14g





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 (trivalent chromate white)

	Product name	Order code No.	TYPE
1	Cross-recessed pan head screw (trivalent chromate white)	123446	BKJ3-6 (M3 * 6)
2	Cross-recessed pan head screw (trivalent chromate white)	123447	BKJ3-10 (M3 * 10)
3	Cross-recessed pan head screw (Stainless Steel)	123448	NKJ2.6-5 (M2.6 * 5)
4	Cross-recessed pan head screw (trivalent chromate white)	123449	M3 * 16
5	Bolt with hexagon socket (SW + flat W)	122812	M4 * 12 (E)
6	Bolt with hexagon socket (SW + flat W)	122821	M6 * 15 (E)
7	Bolt with hexagon socket (SW + flat W)	122822	M6 * 20 (E)
8	Bolt with Hexagon Socket	123231	M3 * 6
9	Bolt with Hexagon Socket	123232	M3 * 8
10	Bolt with Hexagon Socket	122790	M3 * 10
11	Bolt with Hexagon Socket	122795	M4 * 10
12	Bolt with Hexagon Socket	122798	M4 * 25
13	Bolt with Hexagon Socket	122805	M6 * 15
14	Bolt with Hexagon Socket	122969	M6 * 25
15	Bolt with Hexagon Socket	122989	M6 * 35
16	Flat head screw with cross recess (trivalent chromate white)	122787	M2.5 * 16
17	Flat head screw with cross recess (Stainless Steel)	123515	M4 * 10
18	Flat head screw with hexagon socket	122785	M4 * 8
19	Flat head screw with hexagon socket	371193	M4 * 12
20	Flat head screw with hexagon socket	122786	M6 * 10
21	Spring washer	122772	M3
22	Spring washer	122773	M4
23	Spring washer	122775	M6
24	Spring washer	122776	M8
25	Flat Washer (Trivalent Chromate)	122777	M3
26	Flat Washer (Trivalent Chromate)	122778	M4
27	Flat Washer (Trivalent Chromate)	122780	M6
28	Flat Washer (Trivalent Chromate)	122781	M8
29	Hex Nut (Trivalent Chromate)	123301	M3
30	Nut class 1 (trivalent chromate white)	122782	M6
31	Nut class 1 (trivalent chromate white)	122783	M8

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

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Accessory for Container Cylinder

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Suction Stem

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Assembling Tools

Tool / Jig

Information

Various Products Information



Sensors

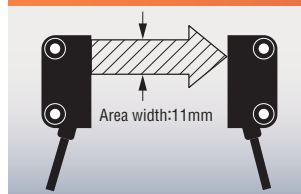
Star Sensor



Plunger switch
with over-travel

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

Limit Switch



Heavy duty switch
for large part confirmation

6-18

Fiber Units



Minute workpiece is
detected by using optical
amplifier E3 series together.

6-25

Limit Switch Micro / Limit Switch



Easy-to-use small limit
switches.

6-19

Fiber Amplifier Unit



Amplifier for optical fiber.

6-26

Limit Switch Mounting Bracket



Use to mount a limit switch,
allowing a proper position
for product confirmation to
be secured.

6-20

Proximity Sensor Runner Confirm



Confirmation sensor for
Eins function chuck.

6-30

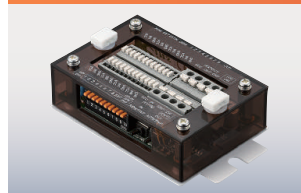
Auto Switch (Reed · Contactless)



It can be used for container
cylinders and mini cylinders.

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

6-16



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

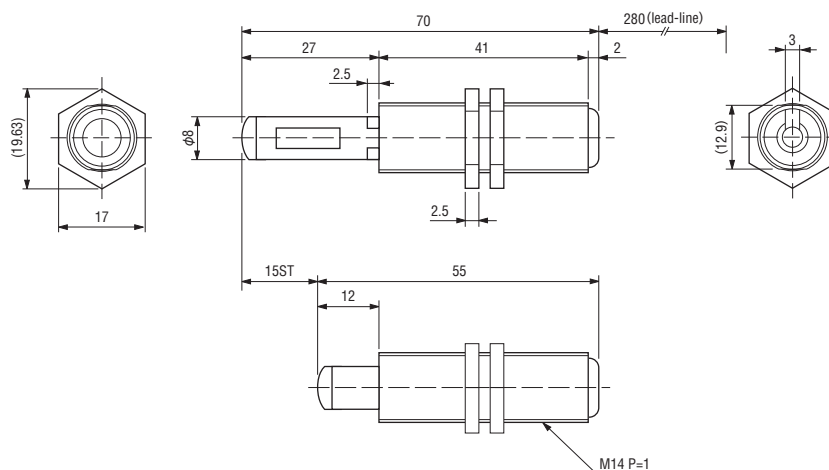
Order code No.	181139
TYPE	SSW-15

- Weight : 14g
- With 280mm lead line.
- Sensing-stroke range : 2.5mm-15mm

Replacement rubber head for SSW-15

Order code No.	270449
TYPE	14103301 (SSW-15)

- (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	Operation temperature	- 25°C to 80°C
	Useful life	1 × 10 ⁸ times / DC10mV-10μA
		1 × 10 ⁷ times / DC10V-4mA
		250 × 10 ⁴ 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.

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Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

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Rectangular Tube
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Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information



Limit Switch

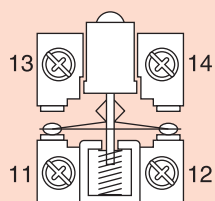
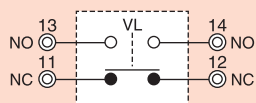
Excellent for large molded parts.



Limit switch

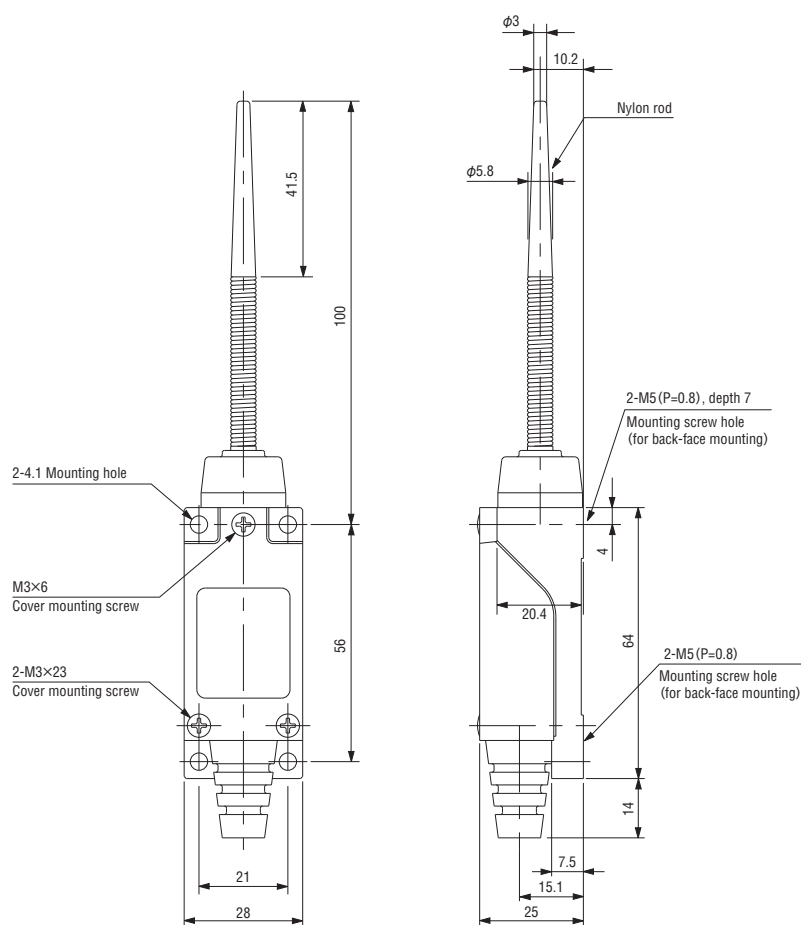
Order code No.	000012
TYPE	AZ8166

● Weight : 111g



NO connection (13,14)
Signal "ON" after lever is pressed.

NC connection (11,12)
Signal "OFF" after lever is pressed.





Limit Switch Micro / Limit Switch

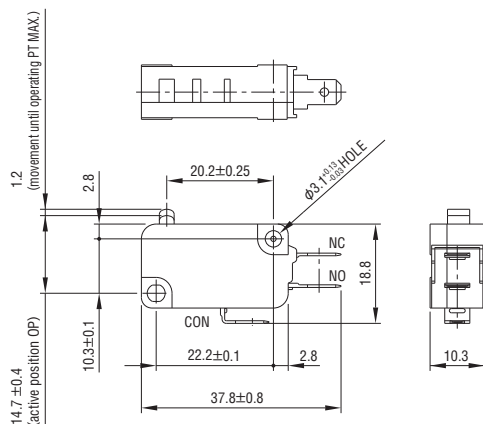
Easy-to-use small limit switches.



Limit switch micro

Order code No.	210843
TYPE	VX-5-1A2

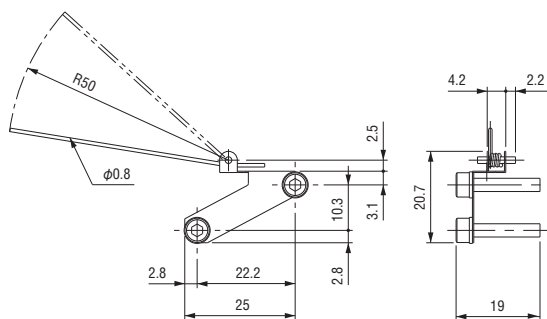
● Weight : 6g



Limit switch hinge lever

Order code No.	210414
TYPE	VAV-5

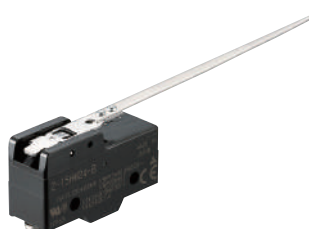
● Weight : 5g



Connection terminal

Order code No.	196749
TYPE	TMEDN480509-FA

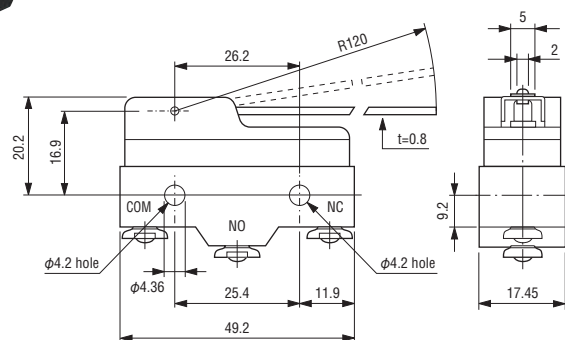
● Weight : 0.8g



Limit switch

Order code No.	250012
TYPE	Z-15HW24-B

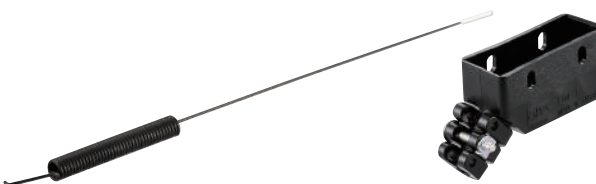
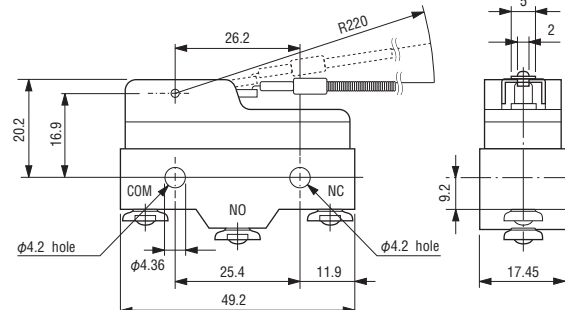
● Weight : 36g ● Stainless steel lever
● Can be attached to sensor bracket (N01915-201).



Limit switch • hinge lever type

Order code No.	250017
TYPE	Z-15GW55-B (NC W/SPRING)

● Weight : 42g
● Can be attached to sensor bracket (N01915-201).



Limit switch spring

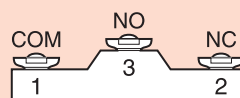
Order code No.	250018
TYPE	For Z-15GW55-B

● Weight : 8g

Limit switch micro case

Order code No.	140039
TYPE	OM-1

● Weight : 19g
● Mounting screws are not included.



COM+NO Signal "ON" after lever is pressed.
COM+NC Signal "OFF" after lever is pressed.

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information



Limit Switch Mounting Bracket

Use to mount a limit switch, allowing a proper position for product confirmation to be secured.



Order code No.	020837
TYPE	CP-059-A

● Weight : 9g



Order code No.	020838
TYPE	CP-059-B

● Weight : 10g



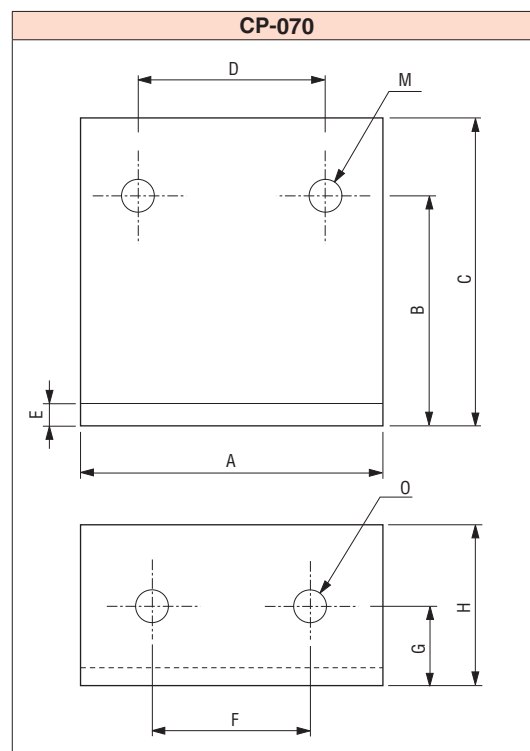
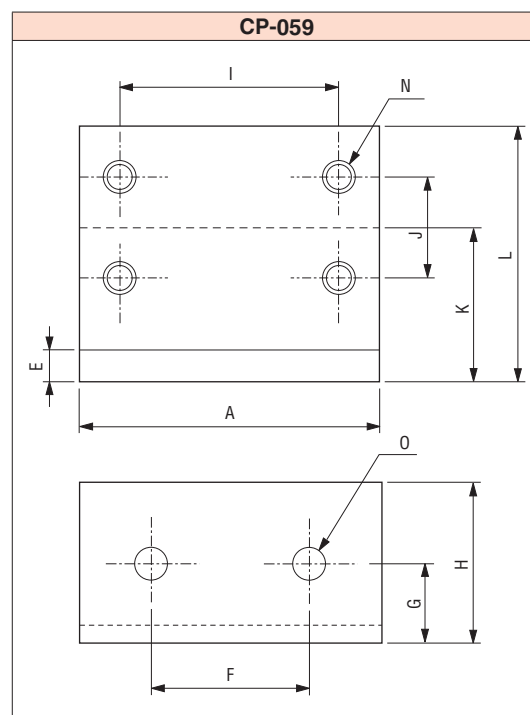
Order code No.	020839
TYPE	CP-059-C

● Weight : 11g



Order code No.	021009
TYPE	CP-070

● Weight : 17g



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



Auto Switch (Reed·Contactless)

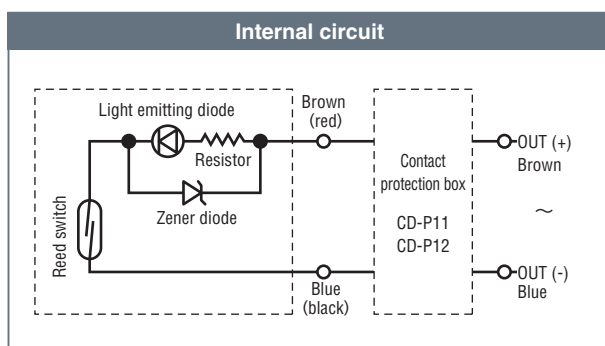
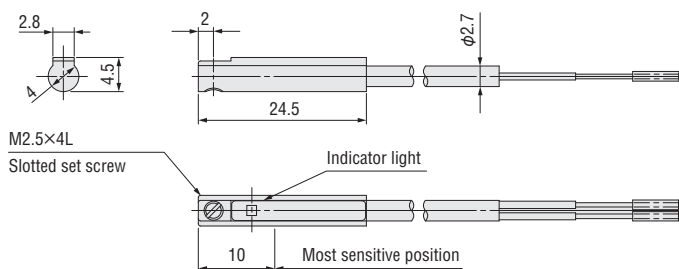
Can be attached to container cylinder series and resin mini cylinder.



Auto switch (Reed SW)

Order code No.	030282
TYPE	D-A93

- Weight : 6g
- Length : 0.5m
- Terminal process is not made.



Specification

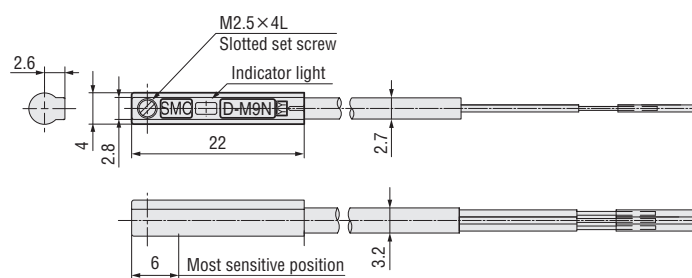
TYPE	D-A93 (w/indicator lamp)
Applicable load	relay, PLC
Load voltage	DC24V
Load current range	5 ~ 40mA
Contact protection circuit	none
Internal drop voltage	2.4V or Less (~20mA) / 3V or Less (~40mA)
Indicator light	When indicator lamp ON : red light emitting diode lighting
TYPE	CE marking
Lead wire	0.5M Load (brown) , - (blue)



Auto switch (contactless)

Order code No.	030425
TYPE	D-M9N

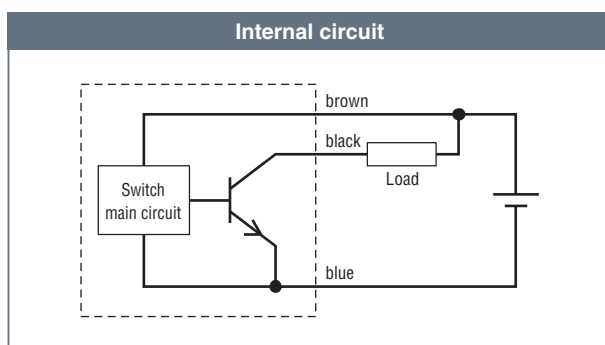
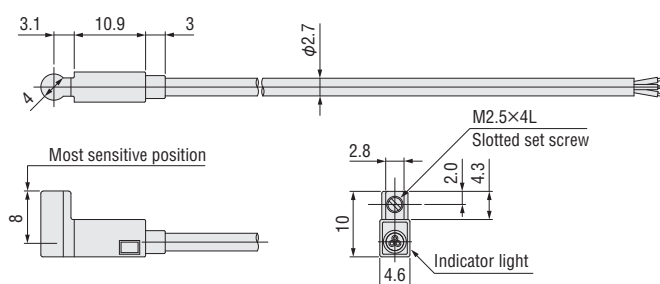
- Weight : 8g
- Length : 0.5m
- Terminal process is not made.



Auto switch (contactless)

Order code No.	030500
TYPE	D-F8N

- Weight : 7g
- Length : 0.5m
- Terminal process is not made.



Specification

TYPE	D-F8N · D-M9N
Output system	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	DC28V or lower
Load electric current	40mA or less
Internal drop voltage	1.5V or less (0.8V or less with load electric current 10mA)
Leakage current	100 μ A or less with DC24V
Indicator light	Red light emitting diode lighting
TYPE	CE marking, RoHS
Lead wire	0.5M + V (brown) , Load (black) , 0V (blue)

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

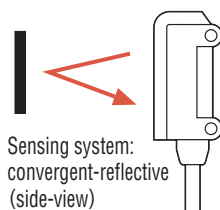
Various Products Information



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.



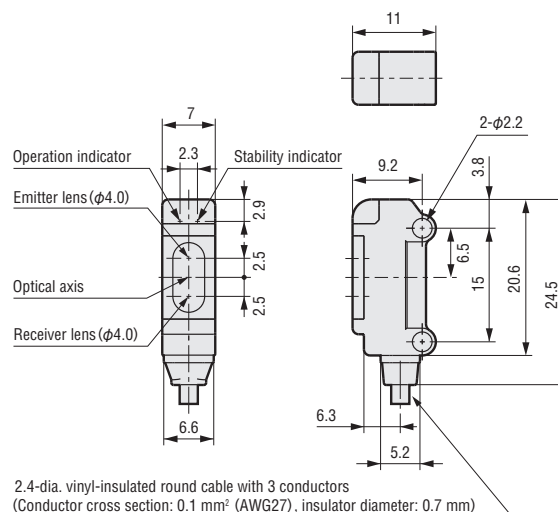
Sensing system:
convergent-reflective
(side-view)

Order code No.	041412
TYPE	E3T-SL21R (NPN)

● Length : 2m

Order code No.	041649
TYPE	E3T-SL23R (PNP)

● Length : 2m



* Wiring : brown (+V), black (load), blue (0V)

Specification

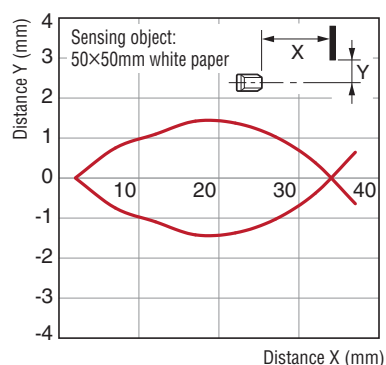
TYPE	E3T-SL21R (NPN)	E3T-SL23R (PNP)
Sensing system	Convergent-reflective (side-view)	
Output system	NPN output	PNP output
Sensing distance	5 to 30mm (50×50mm white paper)	
Minimum detectable object (typical)	0.15-mm dia. (sensing distance of 10mm)	
Hysteresis (white paper)	6mm max.	
Light source (wavelength)	Red LED λ =650nm	
Power supply voltage	DC12-24V ± 10%, ripple (p-p)	
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	
Withstand voltage	AC1,000V, 50/60Hz, 1min	
Vibration resistance (Destruction)	Destruction 10 to 2,000Hz, 1.5-mm double amplitude or 300m/s ² for 0.5 hrs each in X, Y, and Z directions	
Shock resistance (Destruction)	1,000m/s ² 3 times each in X, Y, and Z directions	
Degree of protection	IP67 (IEC60529)	
Connection method	Pre-wired (standard length : 2m)	
Weight	About 20g	
Material	case	polyethyleneterephthalate
	Display window	denatured polyarylate
	Lens	denatured polyarylate
Accessories	instruction manual, installation Phillips screws (side-view models : M2×14, flat : M2×8), nuts, spring washers, flat washers	

Input/output stage circuit diagram

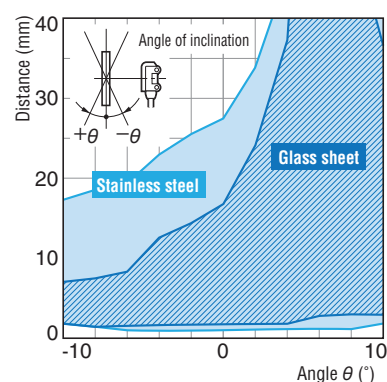
TYPE	Operation mode	Time chart	Output circuit
SE3T-SL21R (NPN output)	Light incident ON	Light incident Light interrupted Operation indicator (orange) ON OFF Output transistor ON OFF Load (e.g., relay) Operation Reset (Between brown (1) and black (4) leads)	
SE3T-SL23R (PNP output)	Light incident ON	Light incident Light interrupted Output transistor ON OFF Output transistor ON OFF Load (e.g., relay) Operation Reset (Between blue (3) and black (4) leads)	

Technical characteristics

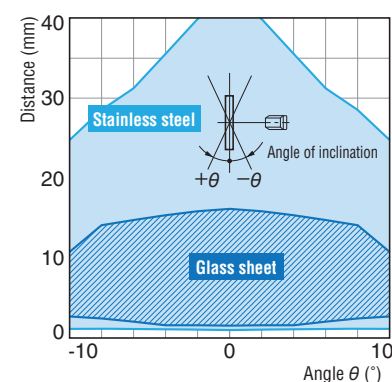
Operation area characteristics



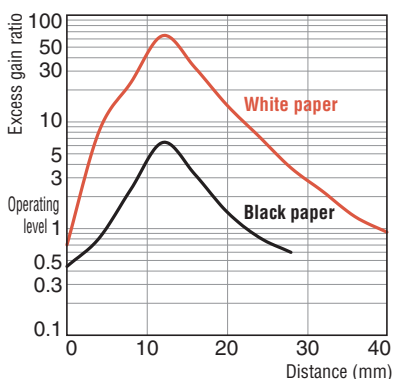
Angle detection area characteristics (vertical direction)



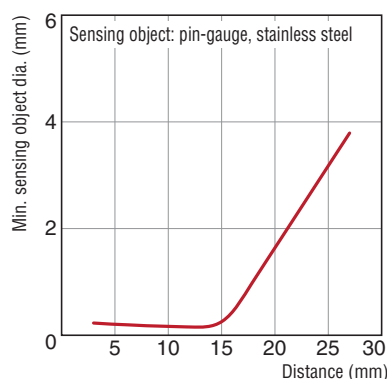
Angle detection area characteristics (horizontal direction)



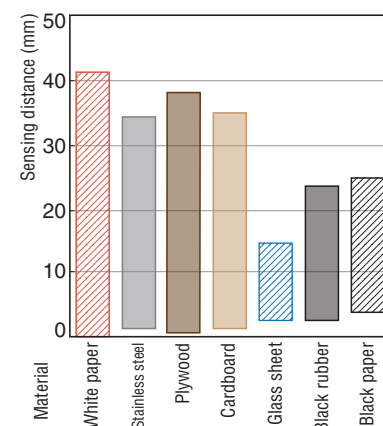
Detected object size – Distance characteristics



Light-receiving output – Distance characteristics



Detection distance – Material characteristics



Quick Chuck Change

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

Grip

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

Suction

- Suction Cups
- Suction Stem
- Pad in Pad
- 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

Air Management / Sensors

- Air Management

Sensors

- PCIO Communication Unit
- Lightweight Series
- Frame / Suction / Cylinder / Pads / Manifold

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.

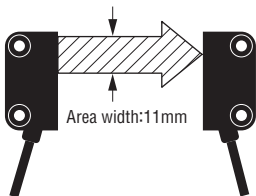
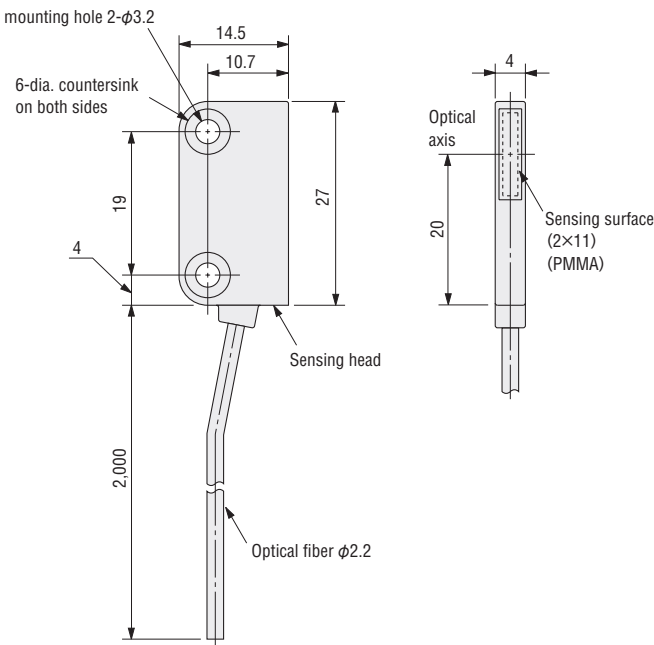


Photo area sensor

Order code No.	041415
TYPE	E32-T16PR

- 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

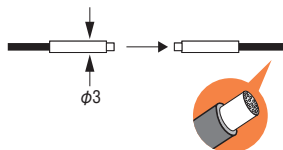
Fiber unit	E32-T16PR			
Sensing system	area-sensing			
Sensing distance (mm) *1	1,100	840	560	220
Ambient temperature range *2	- 40°C to 70°C			
Ambient humidity range *2	35% to 85% RH			
Fiber material	Plastic (vinyl chloride coated)			
Degree of protection	IP50 (IEC)			

*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 ambient temperature and humidity.



Fiber Units

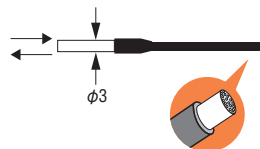
Minute workpiece is detected by using optical amplifier E3 series together.



Fiber unit • $\phi 3$ mm through beam

Order code No.	041413
TYPE	E32-T12R

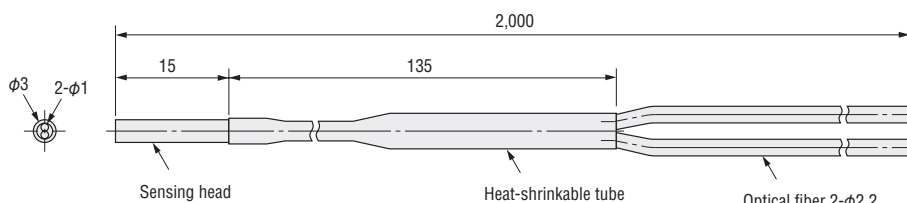
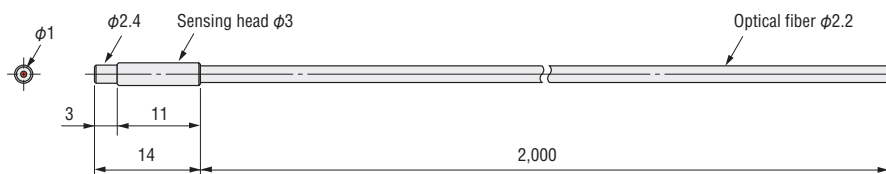
- Use the product with the optical amplifier sold separately.
- Length : 2m
- Detection head quality : Brass nickel plating



Fiber unit • $\phi 3$ mm reflect

Order code No.	041414
TYPE	E32-D12R

- Use the product with the optical amplifier sold separately.
- Length : 2m
- 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) *1	700 530 350 140	300 170 120 50
Ambient temperature range *2	- 40°C to 70°C	
Ambient humidity range *2	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 ambient temperature and humidity.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

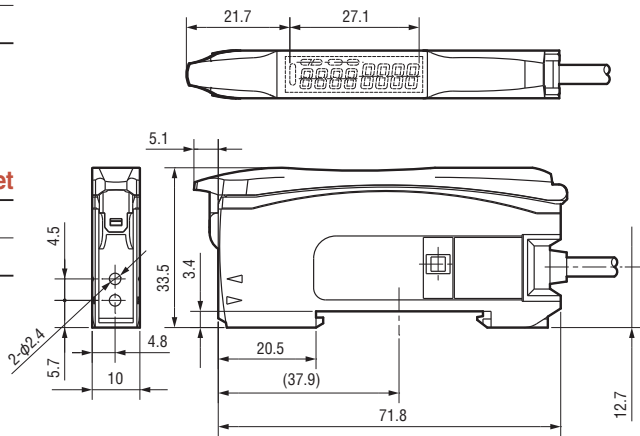


Fiber Amplifier Unit

Amplifier for optical fiber.



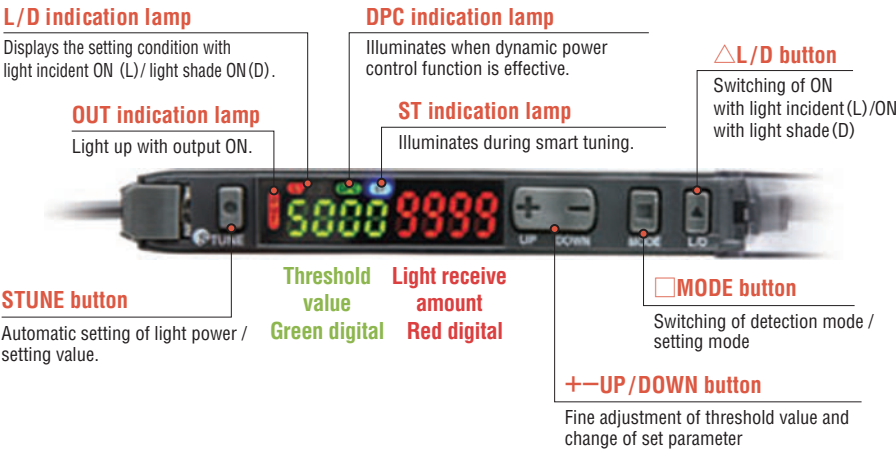
Order code No.	041954
TYPE	E3X-HD11 2M
● Function : AND/OR output ● Length : 2m ● NPN specification	
Fiber amplifier mounting bracket	
Order code No.	041697
TYPE	E39-L143



Input / output stage circuit diagram

TYPE	Operation mode	Time chart	Operation selector	Output circuit
E3X-HD11 (2M)	Light incident ON	ch1/ ch2 Light incident Light interrupted Operation indicator (orange) ON OFF Output transistor ON OFF Load (e.g., relay) Operation Reset (Between brown and black leads)	L·ON (LIGHT ON)	
	Light interrupted ON	ch1/ ch2 Light incident Light interrupted Operation indicator (orange) ON OFF Output transistor ON OFF Load (e.g., relay) Operation Reset (Between brown and black leads)	D·ON (DARK ON)	

Part names



■ Specification

TYPE		E3X-HD11 2M
Light source (wavelength)		Red 4 element light emitting diode (625nm)
Power supply voltage		12 to 24 VDC $\pm 10\%$, ripple(p-p) 10% or less
Power consumption		720mW or less, (power supply voltage 24V, current consumption 30mA or less / power supply voltage 12V, current consumption 60mA or less)
Control output	Load power supply voltage	DC26.4V or less Open-collector output
	Load electric current	1-3 devices : 100mA or less, 4 devices : 20mA or less
	Residual voltage	Load electric current less than 10mA : 1V or less, load electric current 10mA to 100mA : 2V or less
	OFF state current	0.1 mA or less
Protection circuits		Reverse connection protection of power supply, output short circuit protection, output reverse connection protection
Response time	Super-highspeed mode*	NPN output : action/return : 50 μ s each
	High-speed mode	Action : return : 250 μ s each (default setting)
	Standard mode	Operate or reset : 1ms
	Giga power mode	Operate or reset : 16ms
No. of interference prevent devices		10 (optical communication synchronous) *
Automatic power control		Always effective
Other functions		"Power tuning, differential function, DPC function, timer (off delay/on delay/one shot), zero reset, setting reset, eco mode"
Ambient illumination		Illumination of light receiving face Incandescent lamp : 20,000 lux max. Sunlight : 30,000 lux max.
Ambient temperature range		Operating : When 1 to 2 units are connected : -25 to $+55^{\circ}\text{C}$ Groups of 3 to 10 Amplifiers : -25°C to 50°C , Groups of 11 to 16 Amplifiers : -25°C to 45°C Storage : -30 to 70°C (with no icing or condensation)
Ambient humidity range		Operating and storage : 35% to 85% (with no condensation)
Insulation resistance		More than 20M Ω (DC500V mega)
Withstand voltage		AC1,000V 50/60Hz 1min
Vibration resistance (Destruction)		10 to 55Hz, 1.5-mm double amplitude 2 hours each in X, Y, and Z directions
Shock resistance (Destruction)		500m/s ² 3 times each in X, Y, and Z directions
Degree of protection		IEC standards IP50 (w/protective cover)
Mass(packaging condition/only main body)		About 105g/about 64g
Material	case	Polycarbonate (PC)
	cover	Polycarbonate (PC)
	cable	PVC
Accessories		Instruction manual

* 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.
Six interference prevent devices can be used if power tuning which includes E3X-DA-S is connected. And five interference prevent devices can be used if power tuning which includes E3X-MDA is connected.

■ For correct use

⚠ Warning



This product cannot be used for detecting directly or indirectly the human body for the purpose of safety. Do not use this product as a detecting device for protection of human body.

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)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

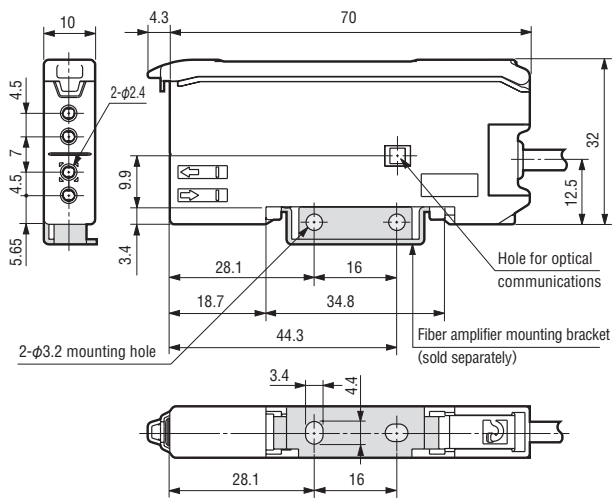
Information

Various Products Information

Fiber Amplifier Unit



Order code No.	041696
TYPE	E3X-MDA11
● Function: AND/OR output ● Two channel type ● Length : 2m ● NPN specification	
Fiber amplifier mounting bracket	
Order code No.	041697
TYPE	E39-L143



Input / output stage circuit diagram

TYPE	Operation mode	Time chart	Operation selector	Output circuit
E3X-MDA11 (NPN)	Light incident ON	ch1/ ch2 Light incident [Red bar] Light interrupted [Red bar] Operation indicator (orange) ON [Red bar] OFF [Red bar] Output transistor ON [Red bar] OFF [Red bar] Load (e.g., relay) Operation [Red bar] Reset [Red bar] (Between brown and black leads)	L · ON (LIGHT ON)	
	Light interrupted ON	ch1/ ch2 Light incident [Red bar] Light interrupted [Red bar] Operation indicator (orange) ON [Red bar] OFF [Red bar] Output transistor ON [Red bar] OFF [Red bar] Load (e.g., relay) Operation [Red bar] Reset [Red bar] (Between brown and black leads)	D · ON (DARK ON)	

Part names

Main digital (red display)

Light receiving amount or description of function is displayed.

Sub digital (green display)

A threshold value or a set value of function is displayed.

Lock lever

detaching/ attaching fiber

Operation key

Function setting operation
UP
DOWN
MODE

Operation indicator(ch1)

Orange lit...Output ON
OFF

Operation indicator (ch2)

Orange lit...Output ON
OFF

Channel change-over switch

channel for display or setting is selected.

SET/RUN selector

Switching of SET/RUN

■ Specification

TYPE		E3X-MDA11 (NPN)
Light source (wavelength)		Red LED (635nm)
Power supply voltage		12 to 24 VDC $\pm 10\%$, ripple(p-p) 10% or less
Power consumption		1,080 mW max. (current consumption : 45 mA max. at power supply voltage of 24 VDC)
Control output	Load power supply voltage	DC26.4V or less, open collector output type ^{*1}
	Load electric current	50mA max.; residual voltage : 1V max.
Protection circuits		Reverse connection protection of power supply, output short circuit protection, output reverse connection protection
Response time	Super-highspeed mode ^{*2}	Operate or reset : 130 μs ^{*2+3}
	High-speed mode	Operate or reset : 450 μs
	Standard mode	Operate or reset : 1ms
	High-resolution mode	Operate or reset : 4ms
Sensitivity setting		Teaching or manual method
Function	Power tuning	Light emission power and reception gain, digital control method
	timer	Select from OFF-delay, ON-delay, or one-shot timer. 1ms to 5s (1 to 20ms set in 1-ms increments, 20 to 200ms set in 10-ms increments, 200ms to 1s set in 100-ms increments, and 1 to 5 s set in 1 s-increments)
	Automatic power control	High-speed control method for emission current
	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		Illumination of light receiving face Incandescent lamp : 10,000 lux max. Sunlight : 20,000 lux max.
Ambient temperature range		Operating : When 1 to 2 units are connected : -25°C to 55°C , Groups of 3 to 10 Amplifiers : -25°C to 50°C , Groups of 11 to 16 Amplifiers : -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		More than 20M Ω (DC500V mega)
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 standards IP50 (w/protective cover)
Connection method		Code drawing type
Weight (packed state)		About 100g
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 μs for operation and reset respectively.

*4 Mutual interference prevention can be used for up to 5 units (10 channels) if power tuning is enabled.

■ For correct use

⚠ Warning



This product cannot be used for detecting directly or indirectly the human body for the purpose of safety. Do not use this product as a detecting device for protection of human body.

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)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information



Proximity Sensor Runner Confirm

Confirmation sensor for Eins function chuck.



Order code No.	041417
TYPE	E2S-W13 (NPN)

● DC 3-wire system ● Length : 1m

Order code No.	041640
TYPE	E2S-W15 (PNP)

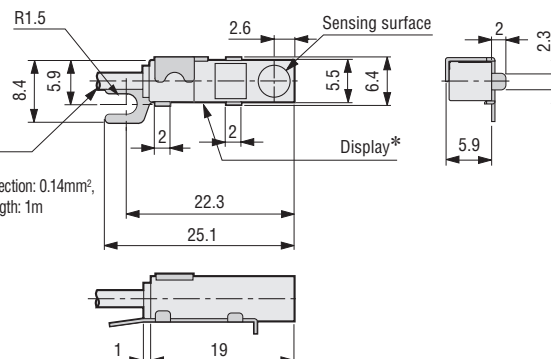
● Length : 1m

With mounting bracket attached

Vinyl insulation round type cord
 $\phi 2.9$ vinyl-insulated round cable
 with 2 / 3 conductors (conductor cross section: 0.14mm²,
 insulator diameter: 0.9 mm), standard length: 1m



Shape : unsealed



※ Operation indicator (orange)

※ Wiring : brown (+V), black (load), blue (0V)

Specification

TYPE		E2S-W13 (NPN)	E2S-W15 (PNP)
Sensing surface		Top	
Sensing distance		1.6mm $\pm$ 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		Steel, 12 $\times$ 12 $\times$ 1mm	
Response frequency*1		1kHz min.	
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.)	
	Residual voltage	1.0V max. (under load current of 50mA with cable length of 1m)	
Indicators		Operation indicator (orange)	
Operation mode (with sensing object approaching)		NO	
Protection circuits		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		$\pm$ 15% max. of sensing distance at 23°C in the temperature range of -25 to 70°C	
Voltage influence		$\pm$ 2.5% max. of sensing distance at rated voltage in rated voltage $\pm$ 10% range	
Insulation resistance		50 M Ω min. (at 500 VDC) between current-carrying parts and case	
Withstand voltage		1,000VAC for 1min between current-carrying parts and case	
Vibration resistance (Destruction)		Destruction : 10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions	
Shock resistance (Destruction)		500m/s ² 3 times each in X, Y, and Z directions	
Degree of protection		IEC 60529 IP67	
Connection method		Pre-wired (standard length : 1m)	
Weight (packed state)		About 20g	
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.

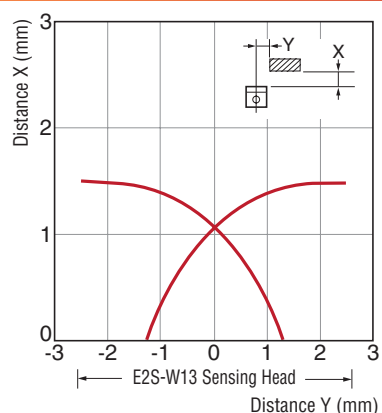
* 2 Not for runner chuck. See page [2-29,31](#) for runner chuck.

Input/output stage circuit diagram

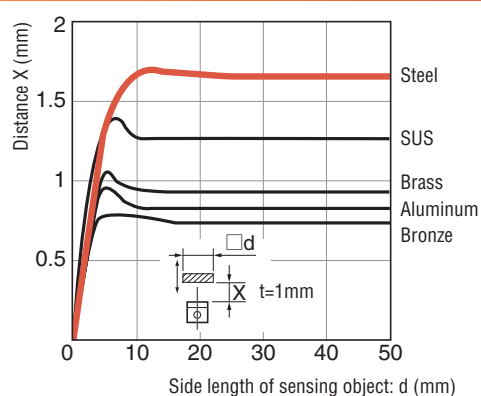
TYPE	Operation mode	Output system	Time chart	Output circuit
E2S-W13 (NPN)	NO	NPN	Sensing object Present Not present Output transistor (Load) ON OFF Operation indicator (orange) ON OFF	
E2S-W15 (PNP)	NO	PNP	Sensing object Present Not present Output transistor (Load) ON OFF Operation indicator (orange) ON OFF	

Technical characteristics (typical example)

Detection area



Influence of detected object size and material



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

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Sliding Chuck

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

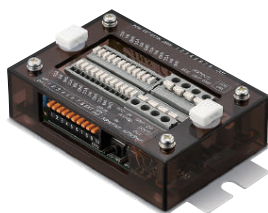
Information

Various Products Information



Multi AND Board

Combine multiple sensors to create one output to robot



Eight-point specification

Multi AND board

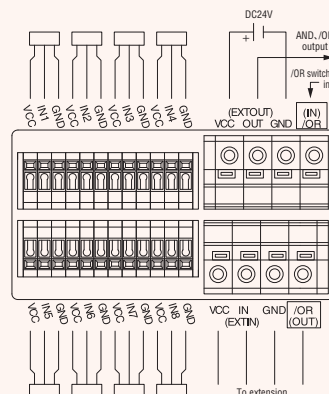
Order code No. **002161**

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.

Wiring specification



Connection method

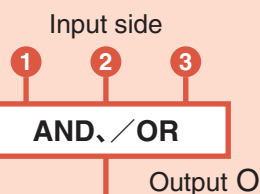
- ① Push down the button with tools such as minus driver.
- ② Put the stripped electric wire into the wire insert hole of the terminal block.
- ③ Release the button. And connection completed.

* 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.

About "AND" and "/OR"



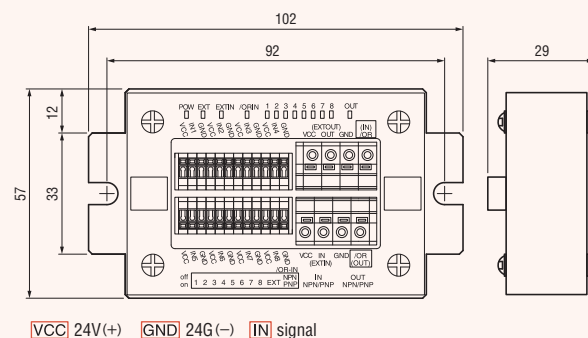
AND

Output O is turned on
when all the inputs
(123) are ON.

/OR

Output O is turned on
when all the inputs
(123) are OFF.

Outside dimension / mounting dimension



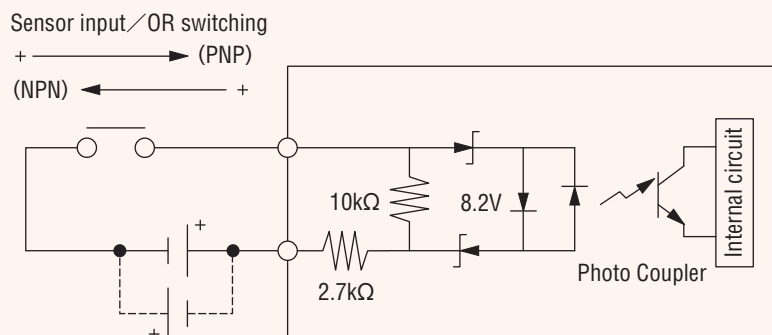
- * 2-φ6 (mounting hole) : M4-M5
- * Use the mounting washer (φ10mm or less) for M5.

Specification

Max. number of connection sensors	Power supply voltage (V)	Internal consumption current (mA)	Sensor input terminal (mA)	Operating ambient humidity (%)	Operation temperature (°C)	Operation condition
8	DC24 (±10%)	100 or less (DC24V)	10 or less / one point	35-80 (non-condensing)	0-40	No particulate and corrosive gas

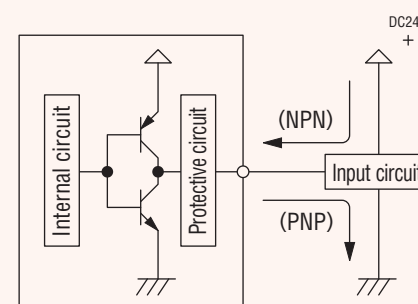
* Can be extended to 32 points.

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)

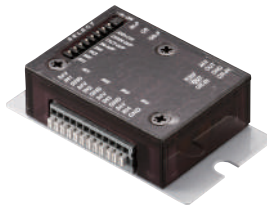


- * Select NPN/PNP as illustrated above according to the input circuit specification of the customer.

Multi AND board



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



Four-point specification

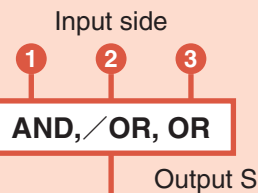
Multi AND board 4P

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.

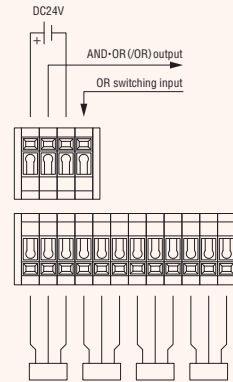
/OR

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



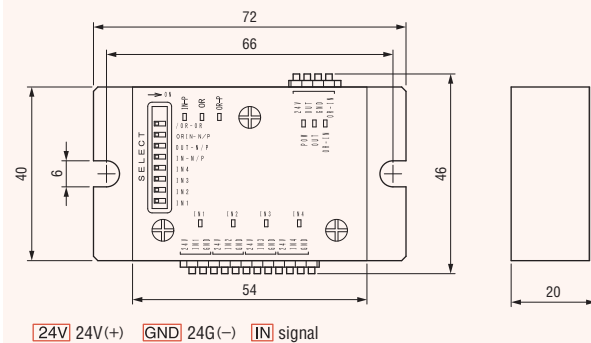
Connection method

- 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



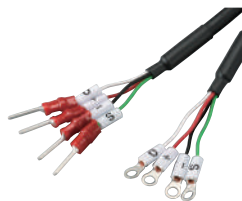
* 2-φ6 (mounting hole) : M4-M5

* 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)	Operating ambient humidity (%)	Operation 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

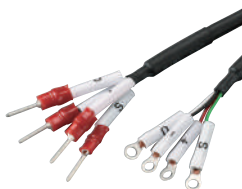


Eight-point specification

Connection harness • for multi AND boards

Order code No.	123106
TYPE	MAND-EH05 • 500MM

● Overall length : 500mm

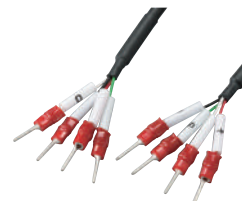


Eight-point specification

Connection harness • for multi AND boards

Order code No.	123107
TYPE	MAND-EH10 • 1000MM

● Overall length : 1,000mm



Eight-point specification

Connection harness • for multi AND boards

Order code No.	123105
TYPE	MAND-EH02 • 200MM

● Overall length : 200mm



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)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

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Air Nipper (Large)

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Let's Joint

Rectangular Tube

Base Aluminum Material

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Air Management

Sensors

PCIO Communication Unit

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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	
Operating ambient humidity	35%~80% (non-condensing)	
Operation 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

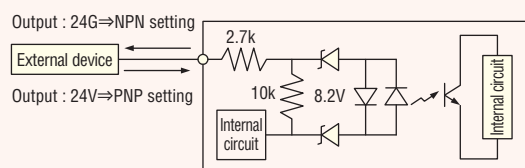
Power Communication I/O unit(32)

Order code No.	152313
TYPE	E-PCIO-UNIT 32

● Weight : 131g

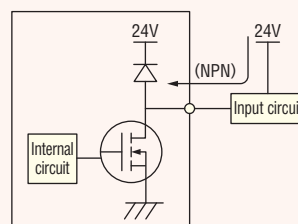
Configuration of Input circuit

Input switch



* Please switch the switch according to the output specifications of the customer, referring to the above figure.

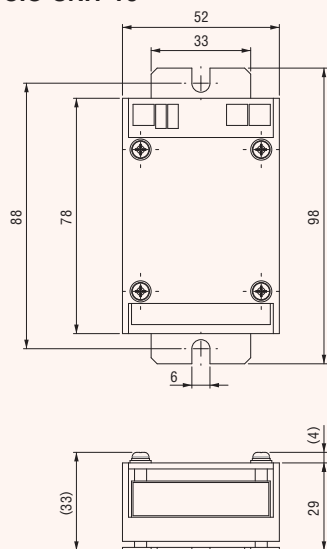
Configuration of output circuit



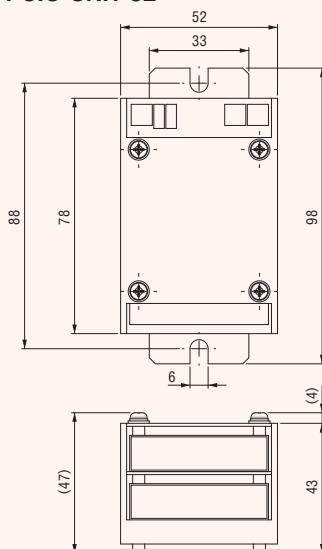
* Only NPN is used for the output specification of the unit.

Outside dimension / mounting dimension

E-PCIO-UNIT 16



E-PCIO-UNIT 32



PCIO communication harness (03)

Order code No.	152314
TYPE	E-PCIO-HNS 03

● Harness length : 300mm



PCIO marktube

Order code No.	041770
TYPE	E-PCIO-MKT SET

● 2 set

Lightweight Series



Frame 7-2

- ▶ CFRP Pipe (φ 12 / φ 20) 7-2
- ▶ Pipe End Cap 7-2
- ▶ Resin Fixture 7-2



Suction 7-3

- ▶ Resin Suction Stem (Mini / Small) 7-3



Cylinder / Pads / Manifold 7-4

- ▶ Resin Cylinder • MCDR 7-4
- ▶ Pads (Rectangle / Curved) 7-4
- ▶ Plastic Manifold 7-4

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

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Suction Stem

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Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information

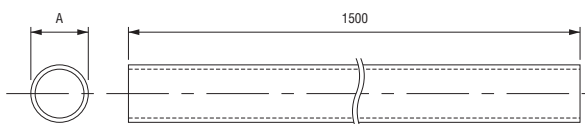


Frame

More lightweight parts line up. The combination of the lightweight series makes the hand lighter, improves the stopping accuracy of the robot.

Component	Old Weight	New Weight	Weight Reduction
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

* 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 $\phi 12$	$\phi 12$	0.6mm	CFRP	-0.05
Jungle gym CFRP pipe $\phi 20$	$\phi 20$	0.8mm		-0.15 *

* The external diameter tolerance are reference use only.

Pipe end cap $\phi 12 \cdot \phi 20$

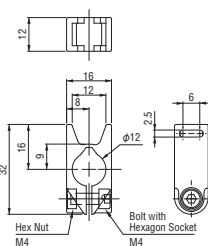
Order code No.	171339	171340
TYPE	R-CAP-12	R-CAP-20

● Weight: $\phi 12/0.4g$, $\phi 20/3.0g$

Tie wrap base $\phi 12$ (tie band)

Order code No.	171210
TYPE	RCA12

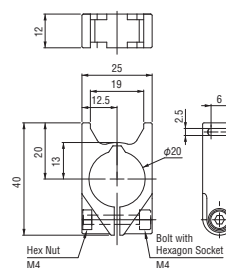
● Weight: 5g



Tie wrap base $\phi 20$ (tie band)

Order code No.	171211
TYPE	RCA20

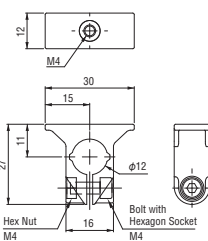
● Weight: 7g



Plastic Fixture $\phi 12$ (M4)

Order code No.	171212
TYPE	RCB12

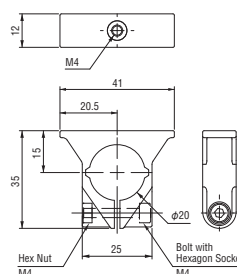
● Weight: 6g



Plastic Fixture $\phi 20$ (M4)

Order code No.	171213
TYPE	RCB20

● Weight: 9g





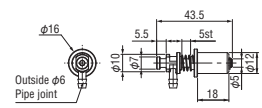
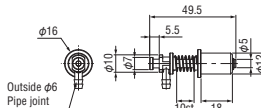
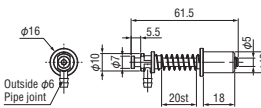
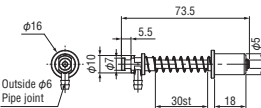
Suction

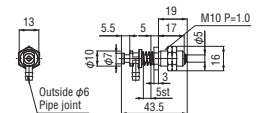
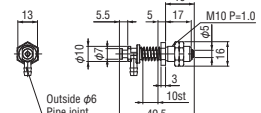
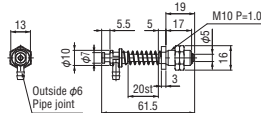
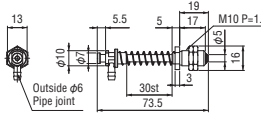
To achieve the lightweight products, the body is made of resin.

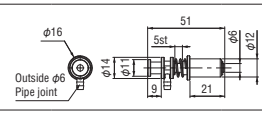
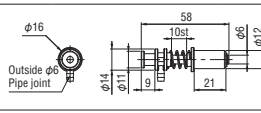
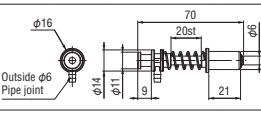
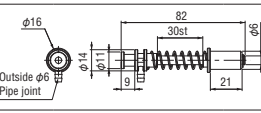


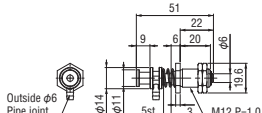
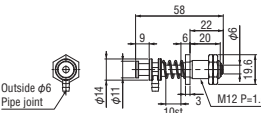
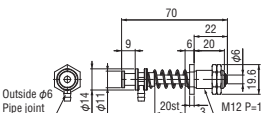
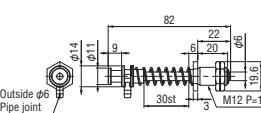
Direct connection on jungle gym series parts is possible.

- The suction cup is sold separately. • Cup fixing system: embedded

NEW Resin Suction Stem (mini)	 Please kindly use it by pressing into the bottom when fixing.	 Please kindly use it by pressing into the bottom when fixing.	 Please kindly use it by pressing into the bottom when fixing.	 Please kindly use it by pressing into the bottom when fixing.
Drawing				
Order code No.	211105	211106	211107	211108
TYPE	VFILP-SS-5-P12	VFILP-SS-10-P12	VFILP-SS-20-P12	VFILP-SS-30-P12
Weight	4g	4g	6g	7g
Piping/mounting	$\phi 6 / \phi 12$			
Applicable cup size	$\phi 4 \sim 14$			

NEW Resin Suction Stem (mini)				
Drawing				
Order code No.	211109	211110	211111	211112
TYPE	VFILP-SS-5	VFILP-SS-10	VFILP-SS-20	VFILP-SS-30
Weight	9g	9g	10g	11g
Piping/mounting	$\phi 6 / M10 P=1.0$			
Applicable cup size	$\phi 4 \sim 14$			

NEW Resin Suction Stem (small)	 Please kindly use it by pressing into the bottom when fixing.	 Please kindly use it by pressing into the bottom when fixing.	 Please kindly use it by pressing into the bottom when fixing.	 Please kindly use it by pressing into the bottom when fixing.
Drawing				
Order code No.	211092	211093	211094	211095
TYPE	VFILP-S-5-P12	VFILP-S-10-P12	VFILP-S-20-P12	VFILP-S-30-P12
Weight	7g	7g	8g	9g
Piping/mounting	$\phi 6 / \phi 12$			
Applicable cup size	$\phi 15 \sim 45$			

NEW Resin Suction Stem (small)				
Drawing				
Order code No.	211097	211098	211099	211100
TYPE	VFILP-S-5	VFILP-S-10	VFILP-S-20	VFILP-S-30
Weight	16g	16g	17g	18g
Piping/mounting	$\phi 6 / M12 P=1.0$			
Applicable cup size	$\phi 15 \sim 45$			

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

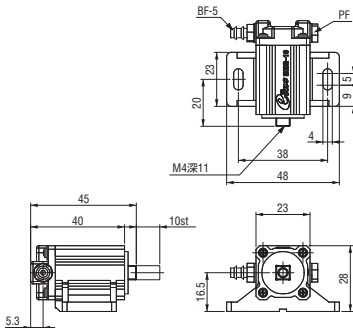
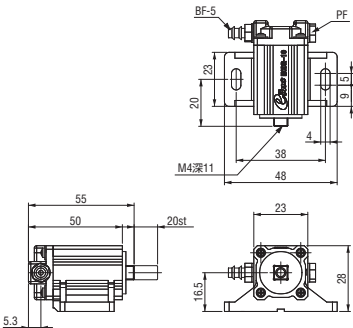
Information

Various Products Information



Cylinder / Pads / Manifold

Additional light weight parts and components. Best cylinder to make a light weight tool.

Product name		Resin Cylinder • MCDR		
Drawing				
Order code No.	123691		123692	
TYPE	MCDR-10		MCDR-20	
Weight	40g		48g	
● Stroke : 10mm ● Joint pipe fitting BF-5 included ● With Mounting washer ● Stroke : 20mm ● Joint pipe fitting BF-5 included ● With Mounting washer				

● Stroke : 10mm ● Joint pipe fitting BF-5 included ● With Mounting washer ● Stroke : 20mm ● Joint pipe fitting BF-5 included ● With Mounting washer

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.	023336	023337	023359	023360
TYPE	CPL-060	CPL-061	CPL-018	CPL-072
Weight	22g	22g	19g	19g
Material	Chloroprene rubber	Silicone	Chloroprene rubber	Silicone
Cylinder	MCDR, MCD1, 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.	123195	010585	123196	010586
TYPE	MP-10P-BF5	BF5-CAP	MP-10P-BF6	BF6-CAP
Weight	5g	1g	5g	1g

Lightweight Series

Assembling Tools



Tool / Jig 8-2

- ▶ Bolt Fastening Tool 8-2
- ▶ Hex Bolt / Joint Tightening Tool / Cutting Tool / Adhesives ... 8-3
- ▶ Wiring and Piping Tool / Measuring Tool / Adjusting Tool / Jig ... 8-4

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

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Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Bolt Fastening Tool

Recommend assembly tools.



Mega-Driver Normal Phillips Size (+)

Order code No.	350352
TYPE	900-1-75

- Weight: 85g
- Blade size: No.1 (M2.0 ~ M2.6)



Mega-Driver Normal Phillips Size (+)

Order code No.	350353
TYPE	900-2-100

- Weight: 100g
- Blade size: No.2 (M3.0 ~ M5.0)



Mega-Driver slotted Size (-)

Order code No.	350354
TYPE	900-6-100

- Weight: 95g
- Blade size: 6.0
- Blade is almost straight.



Precision Screwdriver Set

Order code No.	197170
TYPE	TD-56

- Weight: 175g
- Blade size: (+)0.00/(-)2.3, 1.8, 1.2, 0.9



Ceramic adjustable driver

Order code No.	350355
TYPE	9000-1.8-30

- Weight: 18g
- Blade size: (-)1.8



Electric screwdriver (adapter bits 5set)

Order code No.	284778
TYPE	220USB-5

- Weight: 160g
- Bit : ⊕1, ⊕2×2, ⊕3, ⊖6
- Cable, AC adapter for USB charging



Electric screwdriver (cable bit 1set)

Order code No.	284779
TYPE	220USB-1

- Weight: 160g
- Bit : ⊕2
- USB charging cable



Electric screwdriver Rigid Hex Bit (5 set)

Order code No.	061139
TYPE	GS5P-31

- Weight: 70.6g
- Opposite side (mm): 2.5/4.0/5.0/6.0
- Electric screwdriver (220 USB) for hex bit set.



Ultra-Thin Blasé Ratchet Screwdriver

Order code No.	197169
TYPE	TD-76

- Weight: 98g
- High precision ratchet gear with magnet bit



Ball Point Wrench for Tightening (Long Type)9-piece set

Order code No.	341075
TYPE	8309BP-L

- Weight: 375g
- 9 set(mm) : 1.5/2.0/2.5/3.0/4.0/5.0/6.0/8.0/10.0



Ball Point Wrench for Tightening (Long Type)H2

Order code No.	341077
TYPE	8300BP-L H2

- Weight: 3g
- One specification of 8309BP-L (Opposite side 2.0mm)



Ball Point Wrench for Tightening (Long Type)H2.5

Order code No.	341078
TYPE	8300BP-L H2.5

- Weight: 5g
- One specification of 8309BP-L (Opposite side 2.5mm)



Ball Point Wrench for Tightening (Long Type)H3

Order code No.	341079
TYPE	8300BP-L H3

- Weight: 9g
- One specification of 8309BP-L (Opposite side 3.0mm)



Ball Point Wrench for Tightening (Long Type)H4

Order code No.	341080
TYPE	8300BP-L H4

- Weight: 18g
- One specification of 8309BP-L (Opposite side 4.0mm)



Ball Point Wrench for Tightening (Long Type)H5

Order code No.	341081
TYPE	8300BP-L H5

- Weight: 31g
- One specification of 8309BP-L (Opposite side 5.0mm)



Ball Point Wrench for Tightening (Long Type)H6

Order code No.	341082
TYPE	8300BP-L H6

- Weight: 51g
- One specification of 8309BP-L (Opposite side 6.0mm)



Ball Point Wrench Stubby for Tightening (Long Type)9-piece set

Order code No.	341076
TYPE	8209BP-L

- Weight: 361g
- 9 set(mm) : 1.5/2.0/2.5/3.0/4.0/5.0/6.0/8.0/10.0



Ball Point Wrench Stubby for Tightening (Long Type)H2.5

Order code No.	341083
TYPE	8200BP-L H2.5

- Weight: 7g
- One specification of 8209BP-L (Opposite side 2.5mm)



Ball Point Wrench Stubby for Tightening (Long Type)H3

Order code No.	341084
TYPE	8200BP-L H3

- Weight: 8g
- One specification of 8209BP-L (Opposite side 3.0mm)



Ball Point Wrench Stubby for Tightening (Long Type)H4

Order code No.	341085
TYPE	8200BP-L H4

- Weight: 16g
- One specification of 8209BP-L (Opposite side 4.0mm)



Ball Point Wrench Stubby for Tightening (Long Type)H5

Order code No.	341086
TYPE	8200BP-L H5

- Weight: 28g
- One specification of 8209BP-L (Opposite side 5.0mm)



Hex Bolt / Joint Tightening Tool / Cutting Tool / Adhesives

Preferred item for EOAT assembling

Hex Bolt / Joint Tightening Tool



Double open end spanner

Order code No.	187038
TYPE	SMS621H

- Weight: 640g
- Set content (mm) : 8*10/11*13/12*14/14*17/17*19/22*24



Extremely thin spanner set

Order code No.	187039
TYPE	SNT-0550

- Weight: 290g
- Set content (mm) : 8*9/10*12/11*13/14*17/19*21



Open spanner set

Order code No.	197171
TYPE	TS-05

- Weight: 66g
- Set content (mm) : 3.2*5.5/4*5/6*7/8*9/10*11



Adjustable wrench 150mm

Order code No.	221303
TYPE	WMA-150

- Weight: 140g
- Convenient scale: 150mm.
- With graduations for convenient use

Hex Bolt / Joint Tightening Tool



Nut socket driver

Order code No.	030520
TYPE	D-86-4.5

- Weight: 54g
- Opposite side: 4.5mm



Nut socket driver

Order code No.	030521
TYPE	D-86-7

- Weight: 63g
- Opposite side: 7mm



SS pipe cutter

Order code No.	101206
TYPE	K-203

- Weight: 215g
- Coping with stainless steel pipe, copper tubes.



Spare blade for pipe cutter

Order code No.	101207
TYPE	K-203-1

- Weight: 3g
- Pipe cutter(K-203) spare blade

Cutting Tool



Ratchet style tube cutter

Order code No.	197172
TYPE	TTCR-322T

- Weight: 270g
- Coping with copper, aluminum, brass, PVC pipe. Because of the automatic transport function, it will make clean cut surface.



Replacement blade for Ratchet style tube cutter

Order code No.	061138
TYPE	GFC-15NT

- Weight: 3g
- The replacement blade for tube cutter (TTCR-322T) only.



Erect nipper

Order code No.	310695
TYPE	55S-150

- Weight: 150g
- Cutting capacity: Iron wire ϕ 1.5 mm, Copper wire : ϕ 2.6 mm



Pipe reamer (For copper tubes and stainless tubes)

Order code No.	197173
TYPE	TSR-2

- Weight: 200g
- Applied pipe outer diameter: ϕ 8-35mm

Adhesives



Adhesive (Sponge Pads)

Order code No.	371759
TYPE	Adhesive Q 50G Clear #4888

- NET: 50ml
- Silicon bond
- Use for adhesion to rubber system.



Adhesive Cemedine 20ML

Order code No.	371765
TYPE	AX-038 (Super X · 20TM)

- NET: 20ml



Adhesive Cemedine 135ML

Order code No.	371677
TYPE	AX-139 (Super X8008 · 135ML)

- NET: 135ml
- If you need a Material Safety Data Sheet (SDS), please purchase it.

Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold
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Assembling Tools

Tool / Jig

Information

Various Products Information



Wiring and Piping Tool / Measuring Tool / Adjusting Tool / Jig

● Preferred item for EOAT assembling ● Manual assembly time can be significantly reduced.

Wiring and Piping Tool



Wire strippers

Order code No.	384142
TYPE	3000A

- Weight: 350g
- Completely strip the wire quickly with one hand operation.



Manual one-hand type crimping tool

Order code No.	002364
TYPE	AK15A

- Weight: 400g
- Range of use(mm): 1.25/2.0/5.5/8.0



Switch checker

Order code No.	042058
TYPE	E39-VA

- Weight: 20g
- Portable power supply with built-in battery



Ceramic heater soldering iron

Order code No.	054350
TYPE	FX600-02

- Weight: 61g
- Perfect for soldering electronic parts.



Soldering Station (with sponge)

Order code No.	054351
TYPE	FH300-81

- Weight: 502g
- Base size(mm): $\phi 85 \times D140$



Lead free solder

Order code No.	054352
TYPE	FS600-3

- Weight: 150g
- Solder: linear 1mm



Hot glue gun

Order code No.	072955
TYPE	HB-80

- Weight: 220g
- Optimum for assembly work such as electronic parts holding.



Hot glue

Order code No.	072956
TYPE	HB-100S

- Weight: 100g
- Hot glue (HB-80) exclusive



Aluminum alloy vise

Order code No.	197174
TYPE	TAB-70

- Weight: 1098g
- size(mm) : 188×158×155.
- Mouth width: 70mm
- Mouth opening: 60mm

Measuring tool



Straight Scale (150mm)

Order code No.	271792
TYPE	13005

- Weight: 10g
- First class JIS specification (Non Calibration update)
- Shinwa make



Straight Scale (300mm)

Order code No.	271793
TYPE	13013

- Weight: 65g
- First class JIS specification (Non Calibration update)
- Shinwa make



Tough gear HG (Major 5.5m)

Order code No.	341087
TYPE	80821

- Weight: 329g
- First class JIS specification (Non Calibration update)
- Shinwa make
- Origin 0 point correction slide hook equipped
- Protect the body with shock absorption protector.



Combination hammer

Order code No.	200263
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.	042060
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.	042059
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.

Information



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▶ Overseas Network 9-12

▶ Domestic Network 9-14

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCID Communication Unit

Lightweight Series

Frame / Suction / Cylinder / Pads / Manifold

Assembling Tools

Tool / Jig

Information

Various Products Information



Index type / model

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Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

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Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessory for Container Cylinder

Grippers

Rubber Material / Grip Pad

Suction

Suction Cups

Suction Stem

Pad in Pad

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

Air Management / Sensors

Air Management

Sensors

PCIO Communication Unit

Lightweight Series

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Quick Chuck Change

Quick Chuck Change (Manual)
Tool Changer
Automated Chuck Exchange System

Grip

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

Suction

Suction Cups
Suction Stem
Pad in Pad
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

Air Management / Sensors

Air Management
Sensors
PCIO Communication Unit

Lightweight Series

Frame / Suction Cylinder / Pads / Manifold
--

Assembling Tools

Tool / Jig

Information

Various Products Information

Index type / model

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Quick Chuck Change (Manual)

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Mini Cylinder

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Container Cylinders

Accessory for Container Cylinder

Grippers

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Suction

Suction Cups

Suction Stem

Pad in Pad

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

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Sendai Sales Office

Niigata Sales Office

Kanagawa Sales Office

Koushin Sales Office

Tokyo Shuttle center

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Osaka Branch Office

Shiga Sales Office

Hiroshima Sales Office

Fukuoka Sales Office

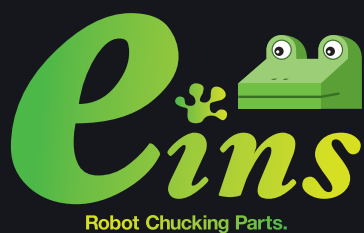
Oita Shuttle center

 **Eins show room Annex**

9-14

MEMO

Handwriting practice area with 20 horizontal dashed lines.



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