



Cross Roller Parallel Gripper Double Acting Type/Single Acting Type

# HKP Series

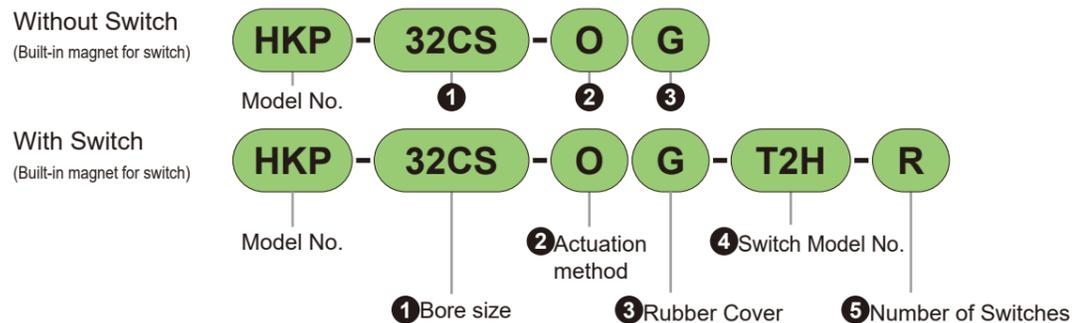
● Operating stroke: 24, 30, 36, 40, 60 mm



## HKP Series

Model No. Notation Method

### Model No. Notation Method



#### ① Bore Size (mm)

Code	Content
32CS	ø32
40CS	ø40
50CS	ø50
63CS	ø63
80CS	ø80

#### ② Actuation method

Code	Content
Blank	Standard (Double Acting Type)
O	Single Acting (Normally Open)
C	Single Acting (Normally Closed)

Note) For 80CS, O, C cannot be selected.

#### ③ Rubber Cover

Code	Content
G	With rubber cover (Nitrile rubber)

Note) For 80CS, with rubber cover (G) cannot be selected.

#### ④ Switch Model No.

For switch details, please refer to P. 573. Switches are included with the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead wire *1	
			AC	DC	AC	DC	Straight	L-shape
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20 *2	T2H□	T2V□
	1-Color Flexible Lead Wire	2-wire	-	10 to 30	-	5 to 20 *2	T2HR3	T2VR3
	1-Color	3-wire (NPN)	-	30 or less	-	100 or less	T3H□	T3V□
3-wire (PNP)		-	T3PH□				T3PV□	

\*1: For "□" in the switch model No., enter the code selected from the "Lead wire length" table.

\*2: The maximum load current value above, 20 mA, is at 25 °C. If the switch operating ambient temperature is higher than 25 °C, it will be lower than 20 mA. (At 60 °C, it will be 5 to 10 mA.)

\*3: Switches other than the model No.s listed above are also available. (Custom Product) For details, see P. 573.

#### \*Lead wire length

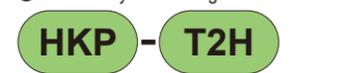
Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length  
1m T2H  
3m T2H③  
5m T2H⑤

### Switch Single Unit Model No. Notation Method

1: For switch T□H□

● Switch body + Mounting bracket set \*1



Model ④ Switch Model No.

● Switch body only



④ Switch Model No.

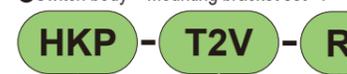
● Mounting bracket set \*1



Model

2: For switch T□V□

● Switch body + Mounting bracket set \*1



Model ④ Switch Model No.

● Switch body only



④ Switch Model No.

● Mounting bracket set \*1



Model

Code	Content
R	Open side
H	Closed side

Code	Content
R	Open side
H	Closed side

\*1: HKP-[50CS, 63CS, 80CS] can be mounted without a mounting bracket. Select "Switch body only".

\*2: The weight of the switch mounting bracket is 1.5 g.

### Rubber cover part model No.

Size	Part Model No.
32CS	HKP-32K
40CS	HKP-40K
50CS	HKP-50K
63CS	HKP-63K

#### ⑤ Number of Switches

Code	Content
R	With 1 pc. on Open Side
H	With 1 pc. on Close Side
D	With 2 pcs

Rechargeable Battery Compatible Specification (Catalog No. CC-1226AA)

● Structure usable in rechargeable battery manufacturing processes



\*Please contact us for details.

Hand (Gripper)

LSH-HP  
LSH  
FH100  
BSA2  
BHA  
BHG  
BHE  
LHA  
LHAG  
HAP-1C  
HAP-2 to 4CS  
HKP  
HCP  
HGP  
LST-HP  
HLF2  
HLA/HLB  
HLAG/HLBG  
HLC  
HLD  
HMC-HP  
HMF  
HMF-G  
HMF-B  
HFP  
FH500  
HBL  
HJL  
HMD  
HDL  
HJD

Cylinder Switch  
Ending

Hand (Gripper)

LSH-HP  
LSH  
FH100  
BSA2  
BHA  
BHG  
BHE  
LHA  
LHAG  
HAP-1C  
HAP-2 to 4CS  
HKP  
HCP  
HGP  
LST-HP  
HLF2  
HLA/HLB  
HLAG/HLBG  
HLC  
HLD  
HMC-HP  
HMF  
HMF-G  
HMF-B  
HFP  
FH500  
HBL  
HJL  
HMD  
HDL  
HJD

Cylinder Switch  
Ending

## Specifications

Item	HKP-32CS	HKP-40CS	HKP-50CS	HKP-63CS	HKP-80CS	
Bore size	mm	ø32	ø40	ø50	ø63	ø80
Actuation method	Double Acting Type/Single Acting Type				Double Acting Type	
Operating Fluid	Compressed Air					
Max. Working Pressure	MPa					
Min. Operating Pressure	Double Acting Type				0.1	
	Normally Open				0.3	
	Normally Closed				-	
Ambient Temperature	°C					
Port Size	M5	Rc1/8			Rc1/4	
Operating stroke	mm	24	30	36	40	60
Rod diameter	mm	ø16	ø20	ø28	ø32	ø16
Internal volume (reciprocating)	cm <sup>3</sup>	25.3	49.5	89.4	162.9	354.5
Repeatability	mm	±0.01				
Weight	kg	1.36	1.95	4.2	5.4	10.6
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)					

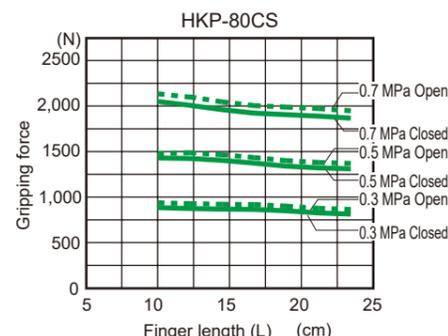
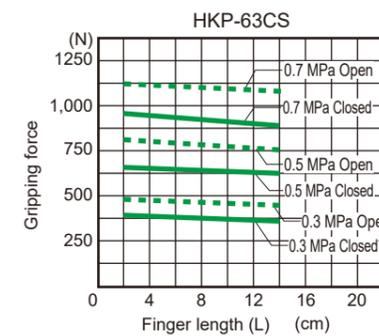
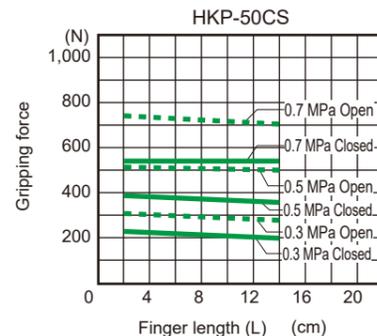
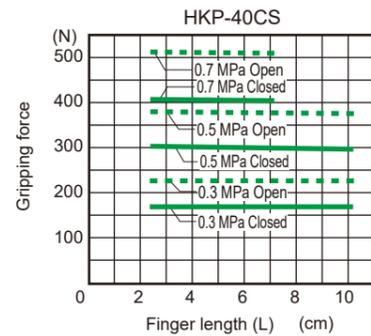
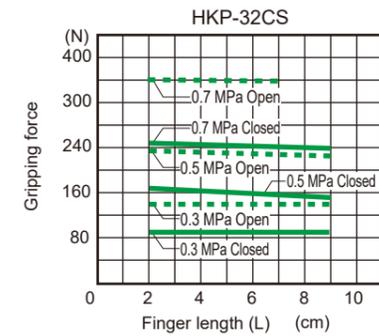
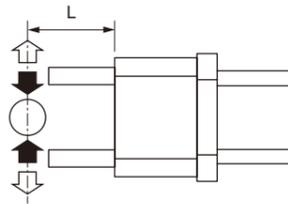
Note) When a rubber cover (option) is attached, the min. working pressure is double acting: 0.15MPa Normally Open/Normally Closed: 0.35 MPa.

## Gripping Force Performance Data

- Gripping force represents the thrust (for one finger) in the direction of the arrow shown in the figure.
- The gripping force in the opening/closing directions with finger length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

- Open direction (←) - - - (broken line)
- Closing direction (→) — (solid line)

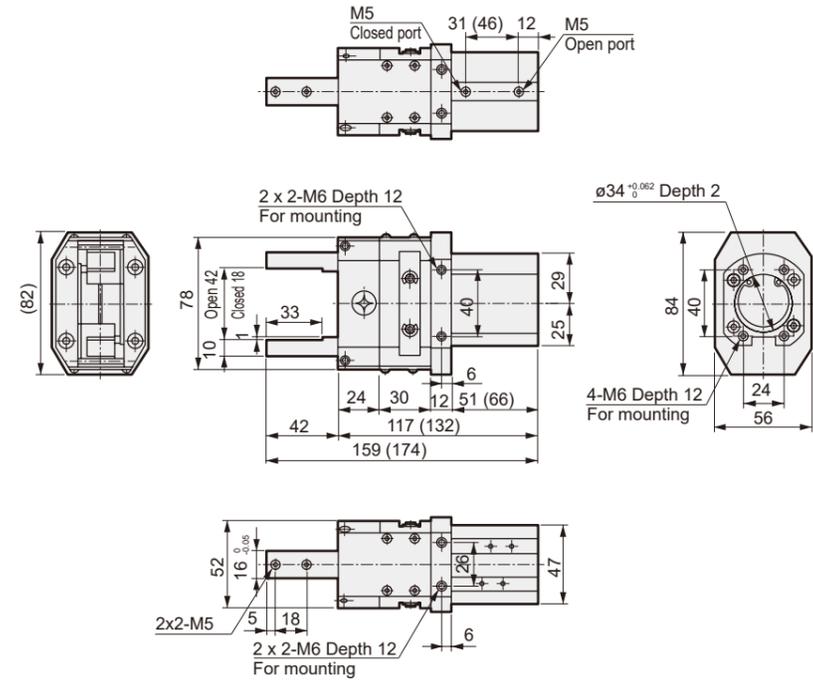
Note) O type gripping force is approx. 20 to 30 % lower in the closing direction compared to the double acting type. C type gripping force is approx. 10 to 20 % lower in the opening direction compared to the double acting type. When selecting, check the design and selection precautions on P. 336.



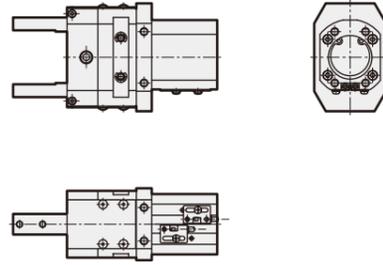
## Outline Dimension Drawing

●HKP-32CS Standard/O/C

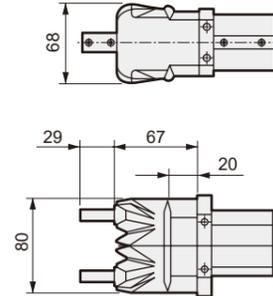
• Dimensions in ( ) are for O [Normally Open] and C [Normally Closed] specifications.



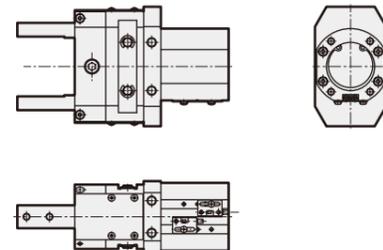
●With Switch



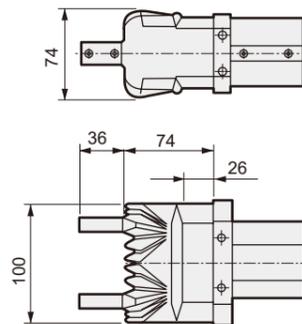
●With rubber cover



●With Switch

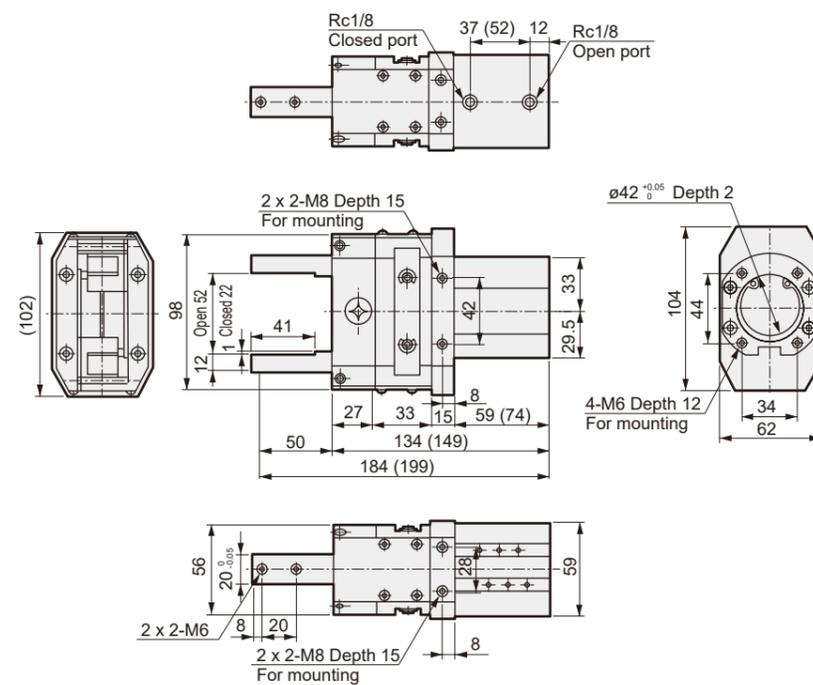


●With rubber cover

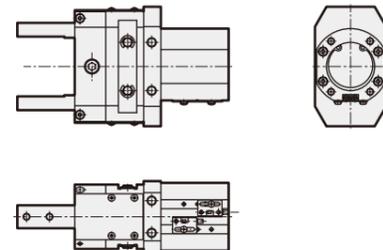


●HKP-40CS Standard/O/C

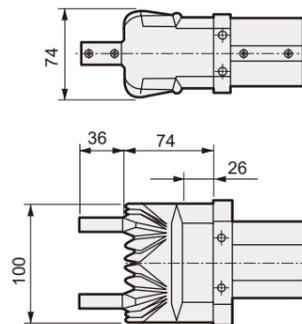
• Dimensions in ( ) are for O [Normally Open] and C [Normally Closed] specifications.



●With Switch



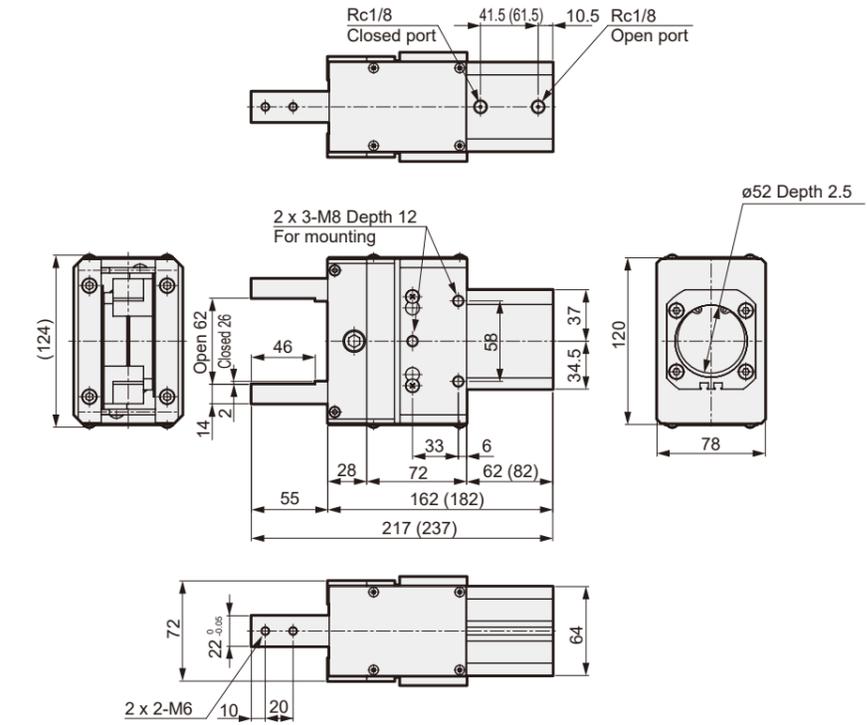
●With rubber cover



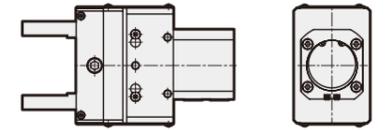
## Outline Dimension Drawing

●HKP-50CS Standard/O/C

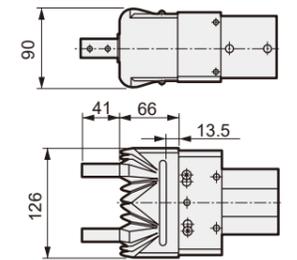
• Dimensions in ( ) are for O [Normally Open] and C [Normally Closed] specifications.



●With Switch

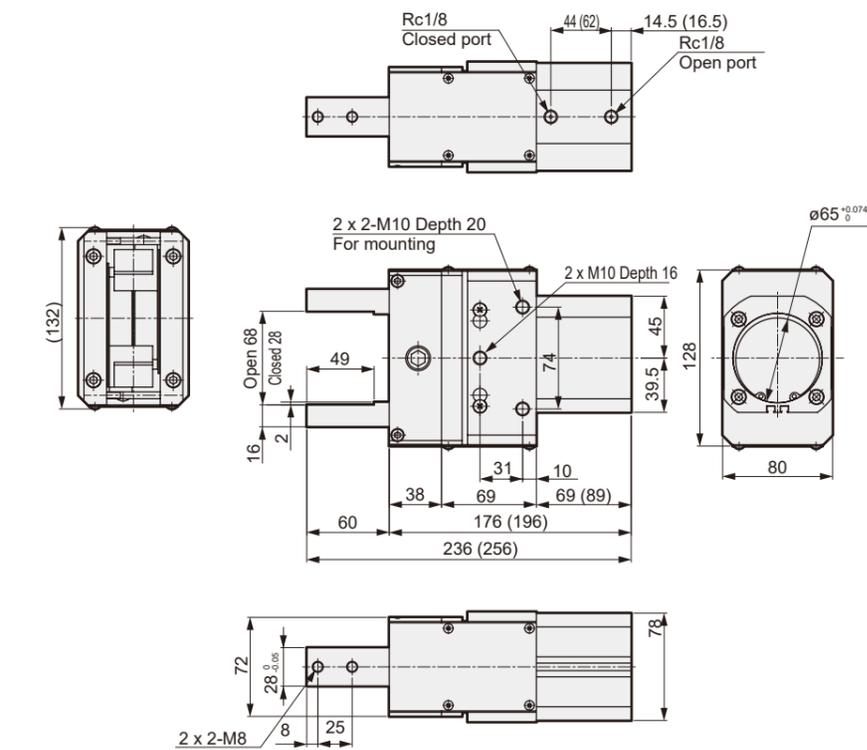


●With rubber cover

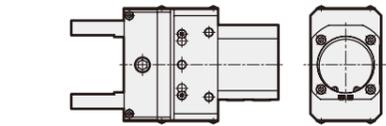


●HKP-63CS Standard/O/C

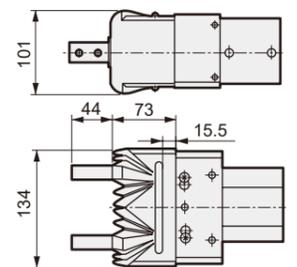
• Dimensions in ( ) are for O [Normally Open] and C [Normally Closed] specifications.



●With Switch



●With rubber cover



Hand (Gripper)

LSH-HP  
LSH  
FH100  
BSA2  
BHA  
BHG  
BHE  
LHA  
LHAG

HAP-1C  
HAP-2 to 4CS  
HKP

HCP  
HGP  
LST-HP  
HLF2  
HLA/HLB  
HLAG/HLBG  
HLC  
HLD  
HMC-HP  
HMF  
HMF-G  
HMF-B  
HFP  
FH500  
HBL  
HJL  
HMD  
HDL  
HJD  
Cylinder Switch  
Ending

Hand (Gripper)

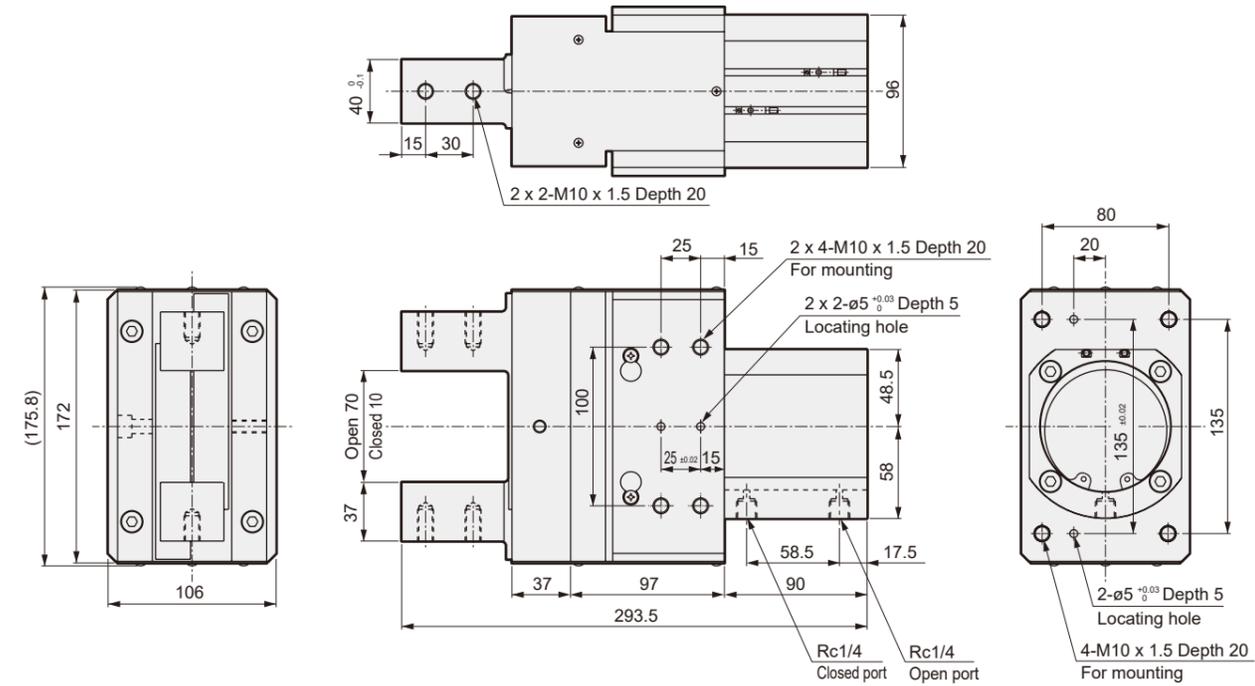
LSH-HP  
LSH  
FH100  
BSA2  
BHA  
BHG  
BHE  
LHA  
LHAG

HAP-1C  
HAP-2 to 4CS  
HKP

HCP  
HGP  
LST-HP  
HLF2  
HLA/HLB  
HLAG/HLBG  
HLC  
HLD  
HMC-HP  
HMF  
HMF-G  
HMF-B  
HFP  
FH500  
HBL  
HJL  
HMD  
HDL  
HJD  
Cylinder Switch  
Ending

## Outline Dimension Drawing

●HKP-80CS Standard



Hand (Gripper)

- LSH-HP
- LSH
- FH100
- BSA2
- BHA
- BHG
- BHE
- LHA
- LHAG
- HAP-1C
- HAP-2 to 4CS
- HKP**
- HCP
- HGP
- LST-HP
- HLF2
- HLA/HLB
- HLAG/HLBG
- HLC
- HLD
- HMC-HP
- HMF
- HMF-G
- HMF-B
- HFP
- FH500
- HBL
- HJL
- HMD
- HDL
- HJD

Cylinder Switch Ending

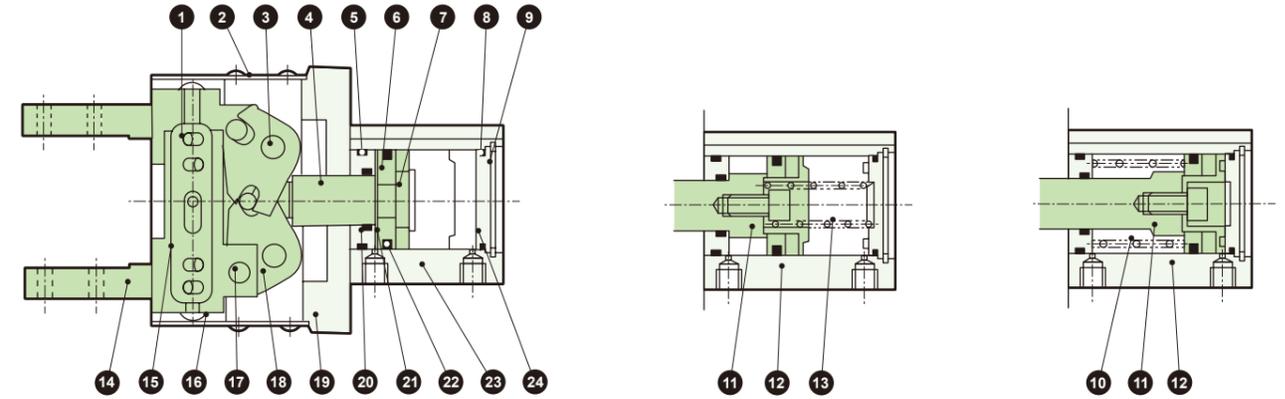
## Internal Structure Diagram/Material

## Internal Structure Diagram/Material

●Standard (Double Acting)

●O (Normally Open) Type

●C (Normally Closed) Type



Hand (Gripper)

- LSH-HP
- LSH
- FH100
- BSA2
- BHA
- BHG
- BHE
- LHA
- LHAG
- HAP-1C
- HAP-2 to 4CS
- HKP**
- HCP
- HGP
- LST-HP
- HLF2
- HLA/HLB
- HLAG/HLBG
- HLC
- HLD
- HMC-HP
- HMF
- HMF-G
- HMF-B
- HFP
- FH500
- HBL
- HJL
- HMD
- HDL
- HJD

Cylinder Switch Ending

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Cross Roller	Alloy Steel		13	Coil Spring	Stainless Steel	
2	Side cover	Stainless Steel		14	Finger	Steel	
3	Pivot Shaft	Steel		15	Retainer	Stainless Steel	
4	Piston Rod	Stainless Steel	Standard type only	16	Bearing guide	Steel	
5	Gasket A	Nitrile Rubber		17	Operating Shaft	Steel	
6	Piston A	Aluminum Alloy	Standard type only	18	Arm	Stainless Steel	
7	Piston B	32CS: Polyacetal 40 to 63CS: Stainless Steel 80CS: Aluminum Alloy		19	Adapter	Aluminum Alloy	
8	Gasket B	Nitrile Rubber		20	Rod Packing	Nitrile Rubber	
9	Retaining ring	Stainless Steel		21	Cushion	Resin	
10	Coil Spring	Stainless Steel		22	Piston Packing	Nitrile Rubber	
11	Piston	Stainless Steel		23	Body	Aluminum Alloy	Standard type only
12	Adapter	Aluminum Alloy		24	Cover	32CS, 50 to 80CS: Aluminum Alloy 40CS: Polyacetal	

**Do not disassemble**