

Cross roller parallel hand Double acting/single acting

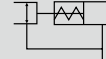
HKP Series

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

Double acting

Single acting (normally open)

Single acting (normally closed)



Specifications

Item	HKP					
	32CS	40CS	50CS	63CS	80CS	
Size	32CS	40CS	50CS	63CS	80CS	
Bore size	mm	ø32	ø40	ø50	ø63	
Actuation	Double acting/single acting				Double acting	
Working fluid	Compressed air					
Max. working pressure	MPa	0.7 (≈100 psi, 7 bar)				
Min. working pressure	Double acting	0.1 (≈15 psi, 1 bar)			0.3 (≈44 psi, 3 bar)	
	Normally open	0.3 (≈44 psi, 3 bar)			-	
	Normally closed					
Note	MPa					
Ambient temperature	°C	5 (41°F) to 60 (140°F)				
Port size		M5	Rc1/8		Rc1/4	
Operating stroke length	mm	24	30	36	40	60
Rod diameter	mm	ø16	ø20	ø28	ø32	ø16
Volumetric capacity (reciprocating)	cm ³	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 (use turbine oil class 1 ISO VG32 if necessary for lubrication)				

Note : When a rubber cover (option) is attached, the min. working pressure is 0.15 MPa for double acting and 0.35 MPa for normally open/normally closed.

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire
	T2H/V	T3H/V
Applications	Dedicated for programmable controller	For programmable controller, relay
Output method	-	NPN output
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA (*1)	30 VDC or less, 100 mA or less
Indicator lamp	LED (Lit when ON)	
Leakage current	1 mA or less	10 μA or less
Weight	1 m:18 g 3 m:49 g 5 m:80 g *3	

*1 : The above max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*2 : Refer to Ending Page 1 for detailed switch specifications and dimensions.

*3 : The weight of switch mounting bracket is 1.5 g.

- LCM
- LCR
- LCC
- LCW
- LX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HRL
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending
- LSH-HP
- LSH
- FH100
- BSA2
- BHA/BHG
- LHA
- LHAG
- HAP
- HKP
- HCP
- HGP
- HLF2
- HLA/HLB
- HLAG/HLBG
- HLC
- HLD
- HMF
- HMF-G
- HMFB
- HFP
- FH500
- HBL
- HJL
- HMD
- HDL
- HJD
- BHE

How to order

Without switch (built-in magnet for switch)

HKP - 32CS - O

With switch (built-in magnet for switch)

HKP - 32CS - O - T2H - R

A Size

B Option

C Switch model No.

D Switch quantity

Code	Description								
A Size									
32CS									
40CS									
50CS									
63CS									
80CS									
B Option									
		Size			32CS	40CS	50CS	63CS	80CS
Blank	Standard (double acting)	●	●	●	●	●			
O	Single acting (normally open)	●	●	●	●				
C	Single acting (normally closed)	●	●	●	●				
G	With rubber cover (nitrile rubber)	●	●	●	●				
C Switch model No.									
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire			
			AC	DC					
T2H*	T2V*	Proximity		●	1-color	2-wire			
T3H*	T3V*			●	display	3-wire			
* Lead wire length									
Blank	1 m (standard)								
3	3 m (option)								
5	5 m (option)								
D Switch quantity									
R	1 on open side								
H	1 on closed side								
D	2								

[Example of model No.]

HKP-32CS-O-T2H-R

Model : Cross roller parallel hand

- A** Size : 32CS
- B** Option : Single acting, normally open type
- C** Switch model No.: Proximity T2H switch, lead wire 1 m
- D** Switch quantity : 1 on open side

How to order switch

1: For switch T*H*

- Switch body + mounting bracket set

HKP - T2H

Model Switch model No.
(Item © above)

- Switch body

SW - T2H

Switch model No.
(Item © above)

- Mounting bracket set

HKP - T

Model

2: For switch T*V*

- Switch body + mounting bracket set

HKP - T2V - R

Model Switch model No. * Switch mounting position
(Item © above)

- Switch body

SW - T2V

Switch model No.
(Item © above)

- Mounting bracket set

HKP - TV - R

Model

* Switch mounting position

* For the switch mounting position, enter R for open switch and H for closed switch
HKP [- 50CS, 63CS, 80CS] can be mounted without a mounting bracket.

Rubber cover part model No.

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

Specifications for rechargeable battery (Catalog No. CC-1226A)

HKP - ... G - ... - P4* ● Design compatible with rechargeable battery manufacturing process.

* Contact CKD for details.

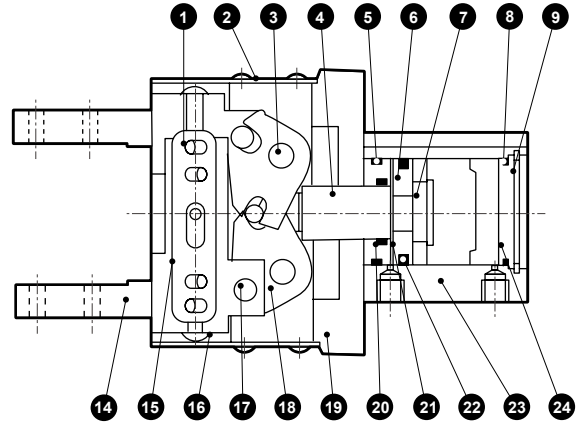
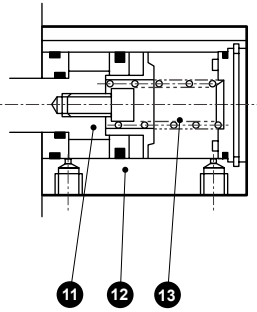
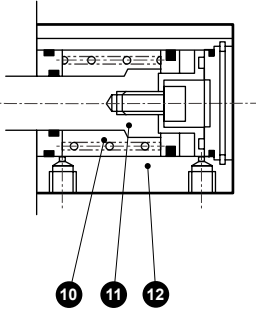
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
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SpdContr
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HLC
HLD
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BHE

Internal structure and parts list

● C (normally closed)

● O (normally open)

● Standard (double acting)



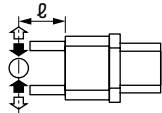
Cannot be disassembled

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Cross roller	Alloy steel		13	Spring	Stainless steel	O type only
2	Side cover	Stainless steel		14	Finger	Steel	
3	Fulcrum axis	Steel		15	Retainer	Stainless steel	
4	Piston rod	Stainless steel		16	Bearing guide	Steel	
5	Cylinder gasket A	Nitrile rubber		17	Operation shaft	Steel	
6	Piston A	Aluminum alloy		18	Arm	Stainless steel	
7	Piston B	Acetal resin (32CS) Stainless steel (40 to 63CS) Aluminum alloy (80CS)		19	Body	Aluminum alloy	
8	Cylinder gasket B	Nitrile rubber		20	Rod packing	Nitrile rubber	
9	Snap ring	Stainless steel		21	Cushion	Resin	
10	Spring	Stainless steel	C type only	22	Piston packing	Nitrile rubber	
11	Piston	Stainless steel		23	Cylinder	Aluminum alloy	
12	Cylinder	Aluminum alloy		24	Cylinder guard	Aluminum alloy (32CS, 50 to 80CS) Acetal resin (40CS)	

Gripping power performance data

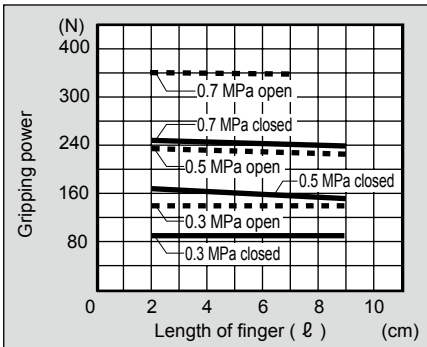
- Gripping power represents the thrust (per one finger) in the arrow direction shown in the figure.
- The gripping power in the opening/closing directions with finger length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

- Open direction (↔) (shown with broken line)
- Closed direction (→) (shown with continuous line)

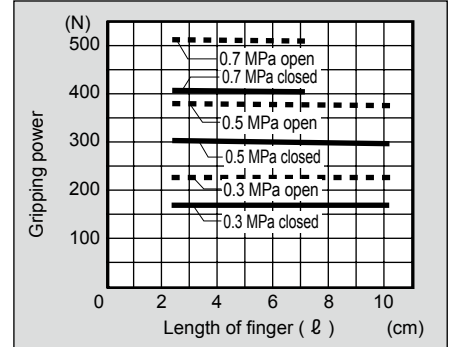


(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.
C type gripping power decreases approximately 10 to 20% in the open direction compared to double acting.
When making a selection, read the precautions for design and selection on page 1764.

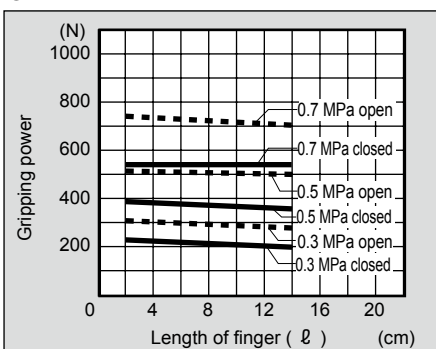
● HKP-32CS



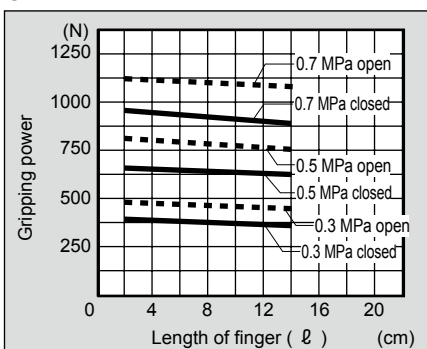
● HKP-40CS



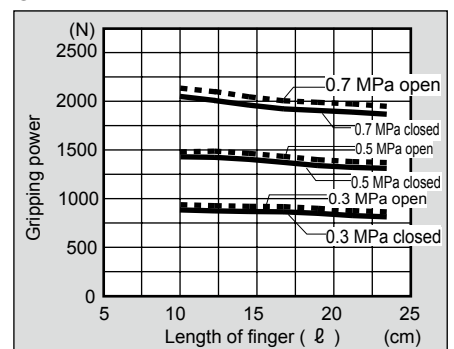
● HKP-50CS



● HKP-63CS



● HKP-80CS

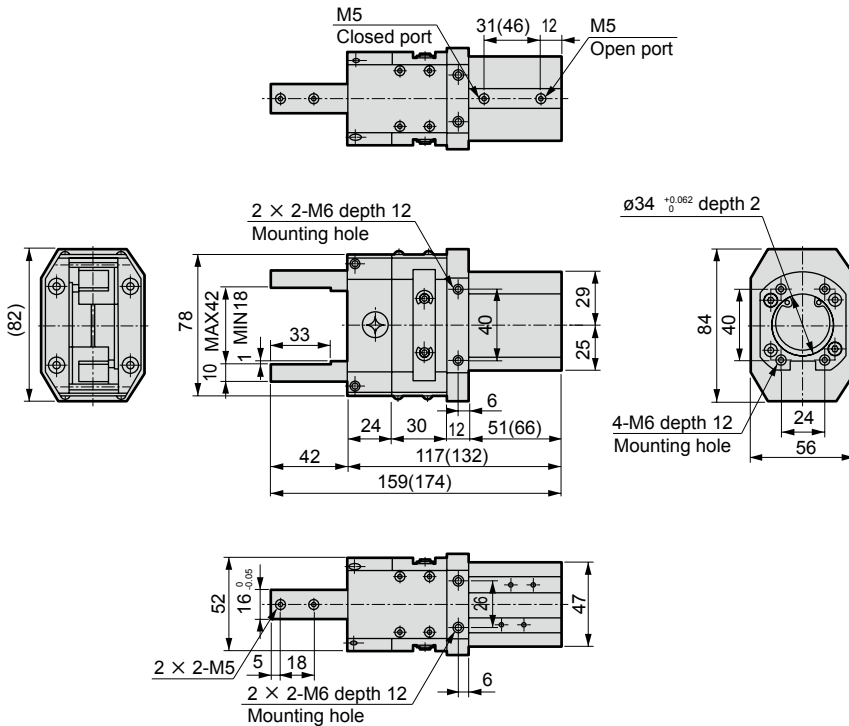


Dimensions



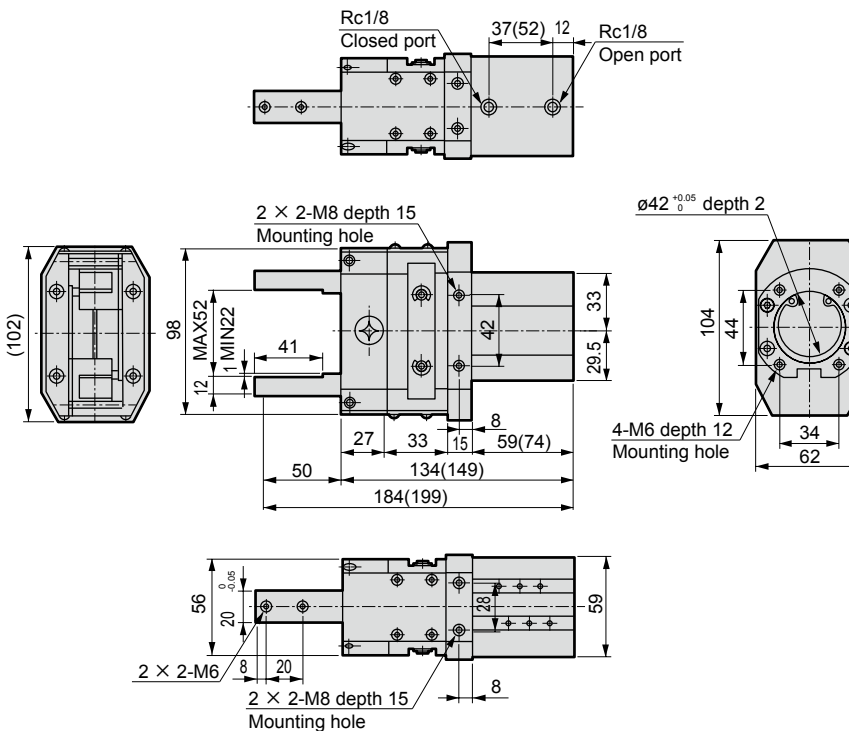
● HKP-32CS standard/O/C

· Dimensions in () are for O [normally open] and C [normally closed] specifications.

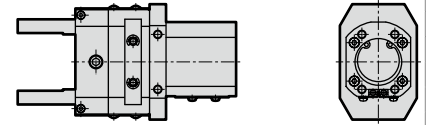


● HKP-40CS standard/O/C

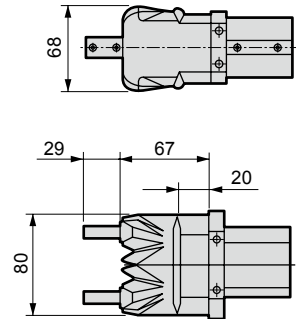
· Dimensions in () are for O [normally open] and C [normally closed] specifications.



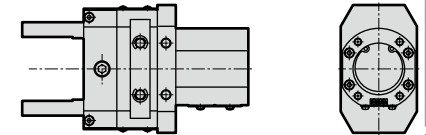
● With switch



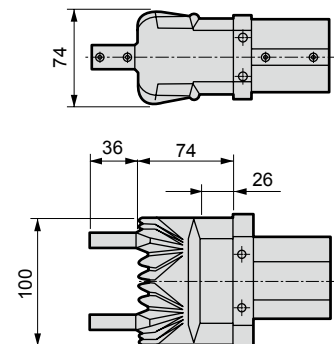
● With rubber cover



● With switch



● With rubber cover



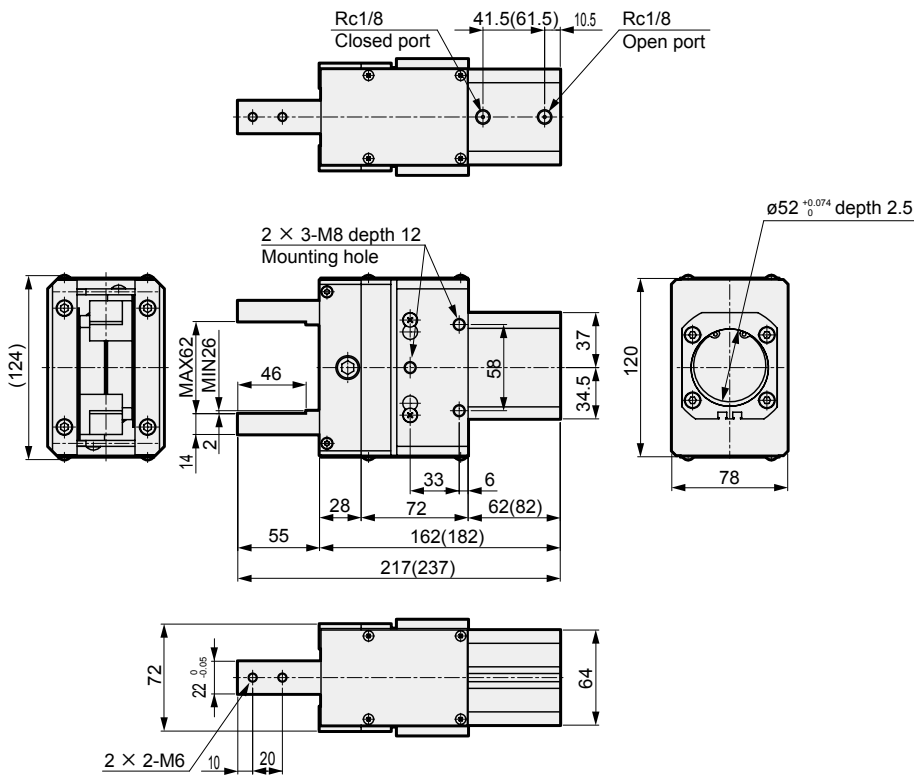
LCM
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LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
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Dimensions

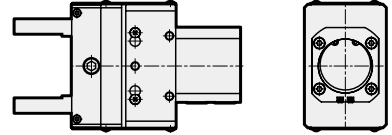


● HKP-50CS standard/O/C

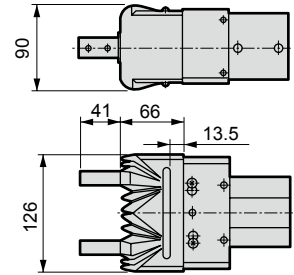
· Dimensions in () are for O [normally open] and C [normally closed] specifications.



● With switch

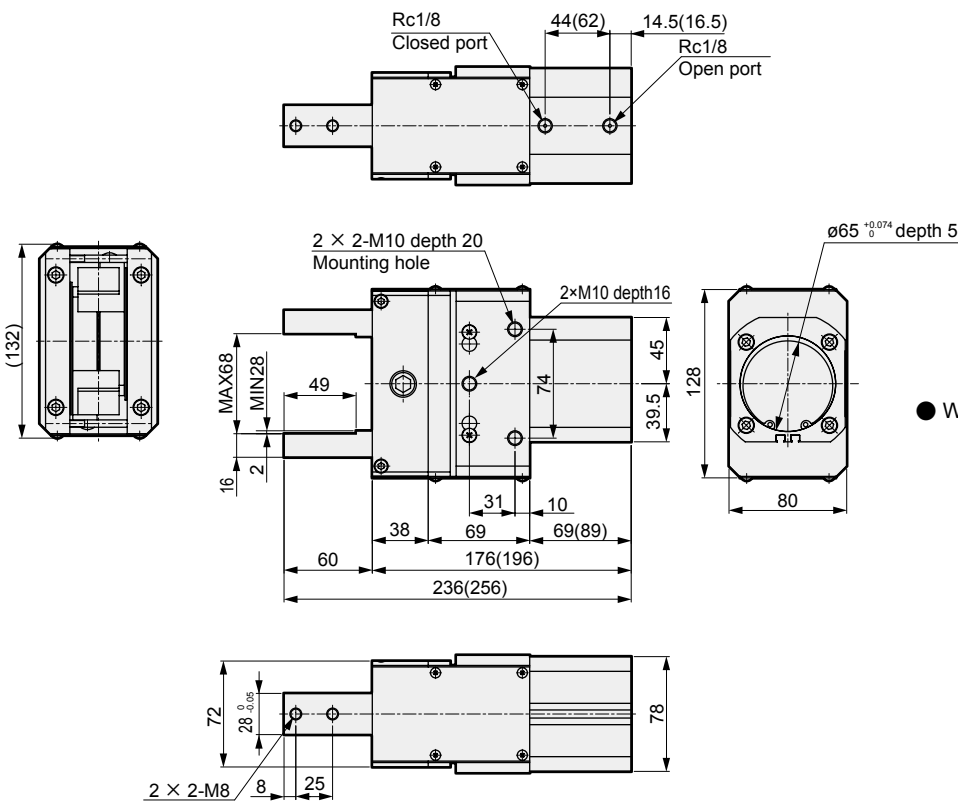


● With rubber cover

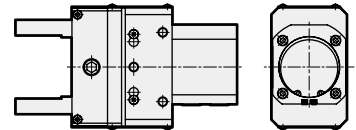


● HKP-63CS standard/O/C

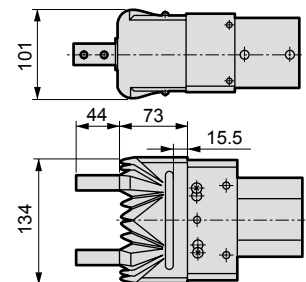
· Dimensions in () are for O [normally open] and C [normally closed] specifications.



● With switch



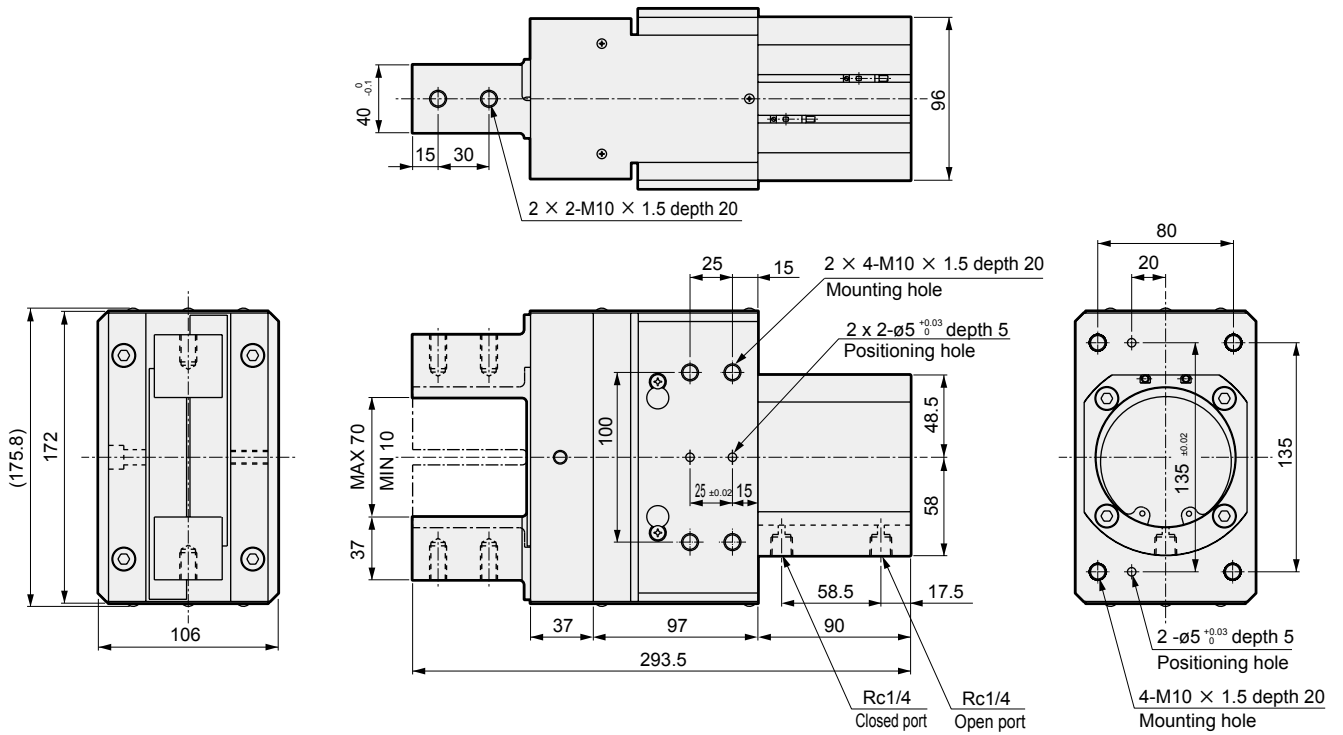
● With rubber cover



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BHE

Dimensions

● HKP-80CS Standard



LCM
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ULK*
JSK/M2
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USSD
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