



Cross roller parallel hand Double acting/single acting

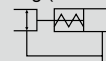
# HKP Series

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

Double acting

Single acting (normally open)

Single acting (normally closed)



## Specifications

Descriptions		HKP				
Size		32CS	40CS	50CS	63CS	80CS
Bore size	mm	φ32	φ40	φ50	φ63	φ80
Actuation		Double acting/single acting				Double acting
Working fluid		Compressed air				
Max. working pressure	MPa	0.7 (≈100 psi, 7 bar)				
Min. working pressure Note	MPa	Double acting	0.1 (≈15 psi, 1 bar)			0.3 (≈44 psi, 3 bar)
		Normally open	0.3 (≈44 psi, 3 bar)			-
		Normally closed				
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	φ16	φ20	φ28	φ32	φ16
Volumetric capacity (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 (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

Descriptions	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 other switch specifications.

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

LCW  
LCR  
LCG  
LCX  
LCM  
STM  
STG  
STS/STL  
STR2  
UCA2  
ULK\*  
JSK/M2  
JSG  
JSC3/JSC4  
USSD  
UFCD  
USC  
JSB3  
LMB  
LML  
HCM  
HCA  
LBC  
CAC4  
UCAC2  
CAC-N  
UCAC-N  
RCC2  
RCS  
PCC  
SHC  
MCP  
GLC  
MFC  
BBS  
RRC  
GRC  
RV3\*  
NHS  
HR  
LN  
Hand  
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MechHnd/Chuk  
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LHAG  
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HLAG/HLBG  
HLD  
HCP  
HMF  
HMFb  
HFP  
HLC  
HGP  
FH500  
HBL  
HDL  
HMD  
HJD  
HJL  
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	Content						
<b>A Size</b>							
32CS							
40CS							
50CS							
63CS							
80CS							
<b>B Option</b>							
		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)		●	●	●	●	
<b>C Switch model No.</b>							
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	
<b>* Lead wire length</b>							
Blank	1 m (standard)						
3	3 m (option)						
5	5 m (option)						
<b>D Switch quantity</b>							
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.

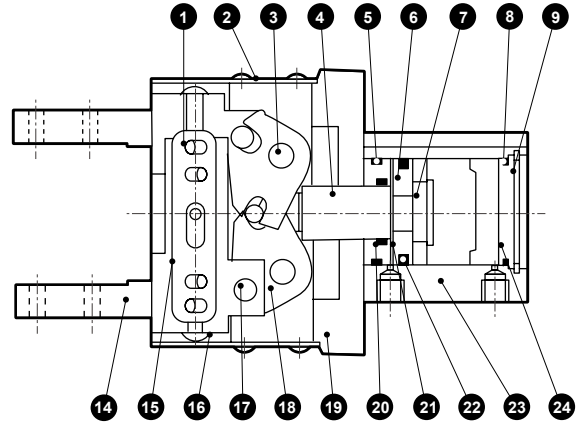
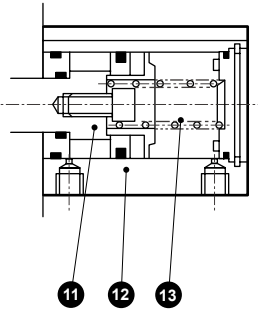
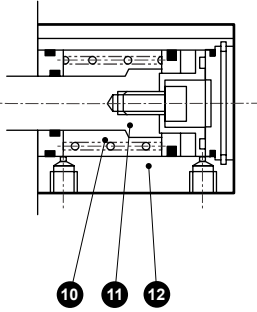
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LCR
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LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
<b>Hand</b>
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
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FH100
HAP
BSA2
BHA/BHG
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LHAG
<b>HKP</b>
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HLA/HLBG
HLD
HCP
HMF
HMFB
HFP
HLC
HGP
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## Internal structure and parts list

● C (normally closed)

● O (normally open)

● Standard (double acting)



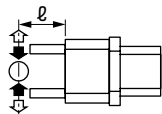
**Cannot be disassembled**

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	Master key	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	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

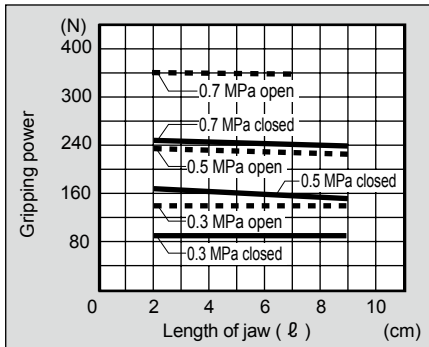
The gripping power in the opening/closing directions with jaw length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

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

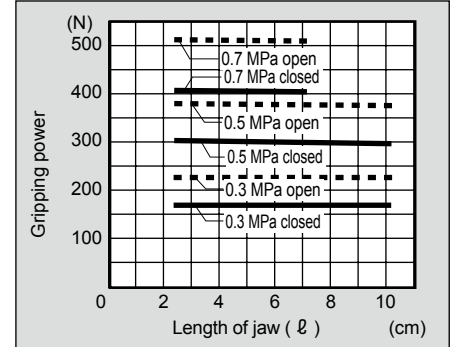


(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.  
C type gripping power decreases approximately 10 to 20% in the open direction compared to double acting.  
When making a selection, read the precautions for design and selection on page 1636.

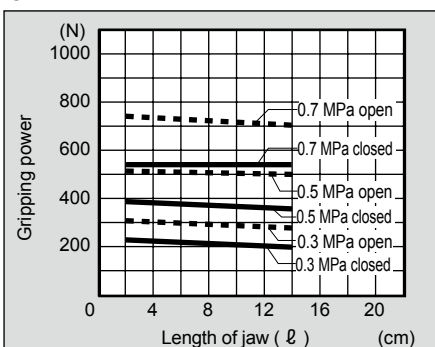
### ● HKP-32CS



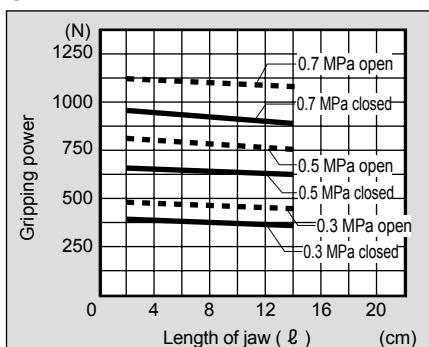
### ● HKP-40CS



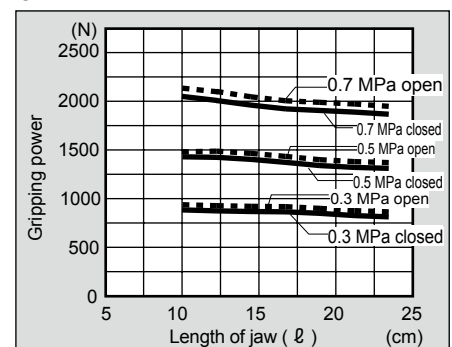
### ● HKP-50CS



### ● HKP-63CS



### ● HKP-80CS



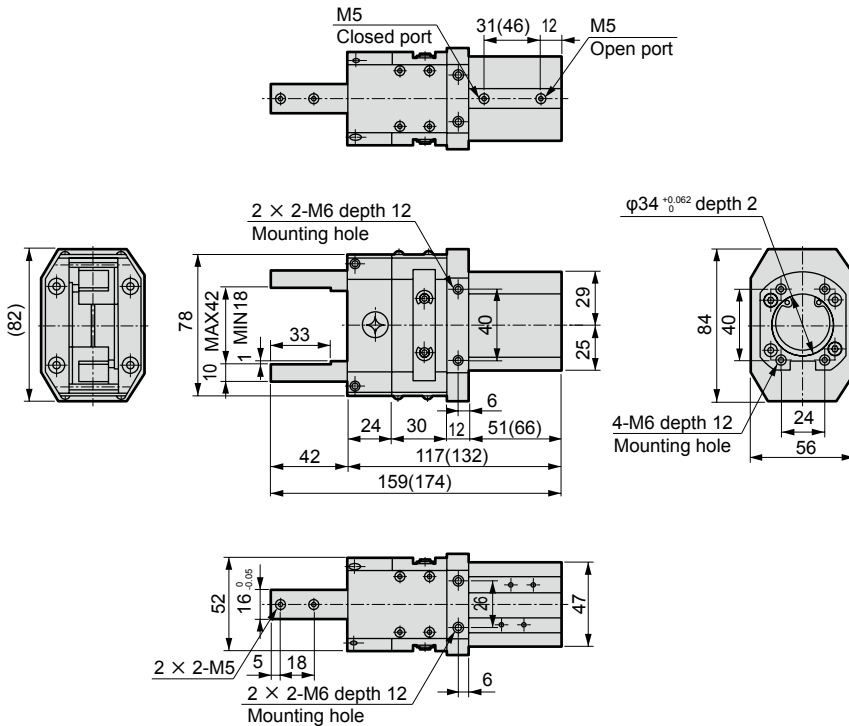
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STR2  
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HMFB  
HFP  
HLC  
HGP  
FH500  
HBL  
HDL  
HMD  
HJD  
HJL  
BHE

### Dimensions



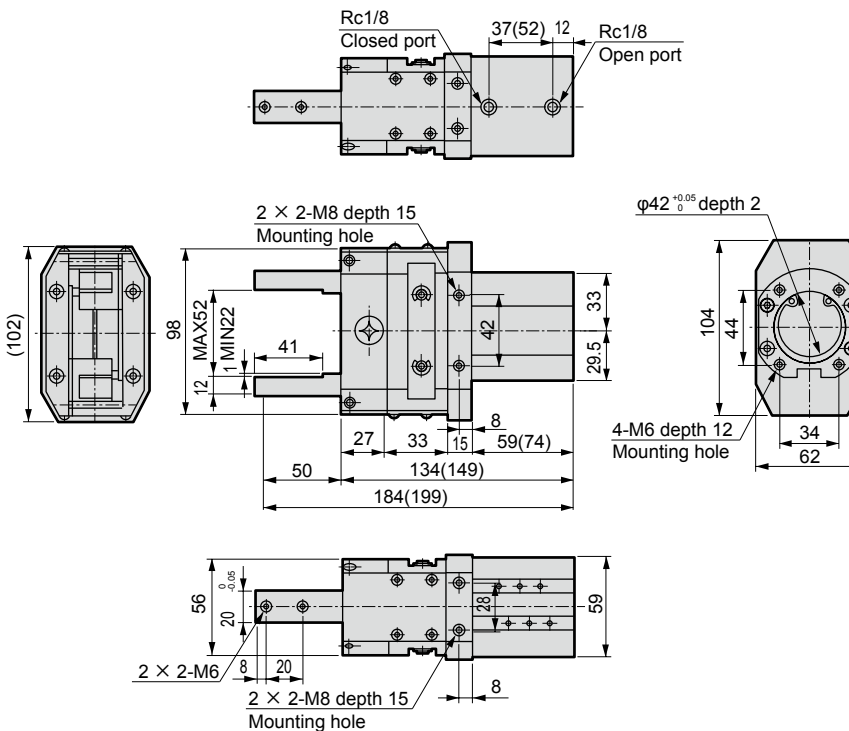
#### ● HKP-32CS standard/O/C

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

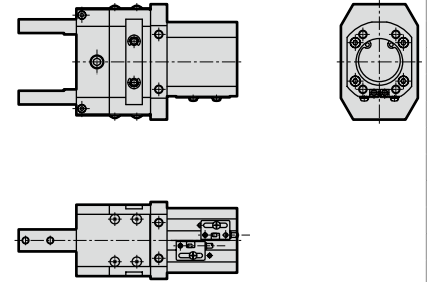


#### ● HKP-40CS standard/O/C

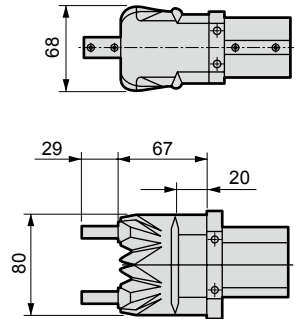
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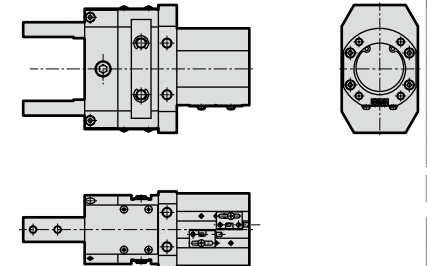
#### ● With switch



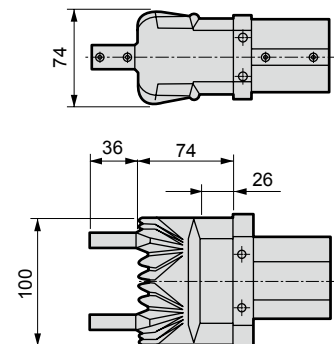
#### ● With rubber cover



#### ● With switch



#### ● With rubber cover



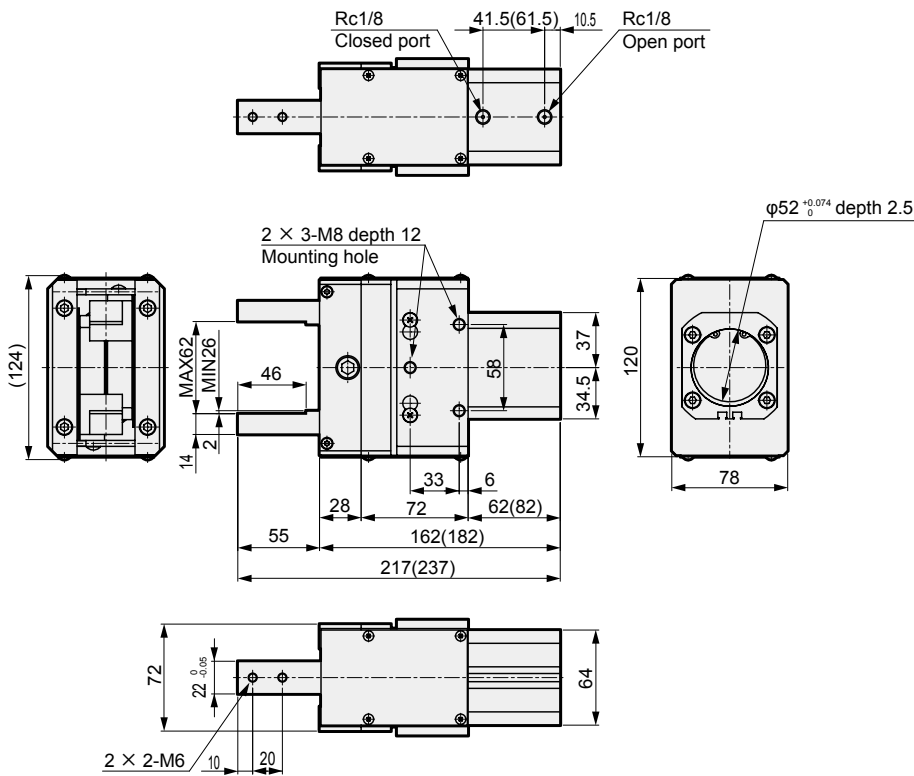
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
<b>Hand</b>
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending
LSH
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
<b>HKP</b>
HLA/HLB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

## Dimensions

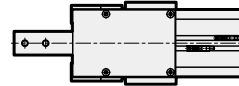
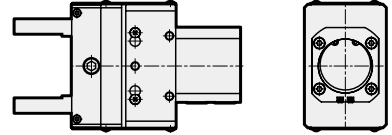


### ● HKP-50CS standard/O/C

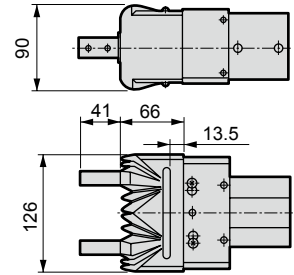
· Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.



### ● With switch

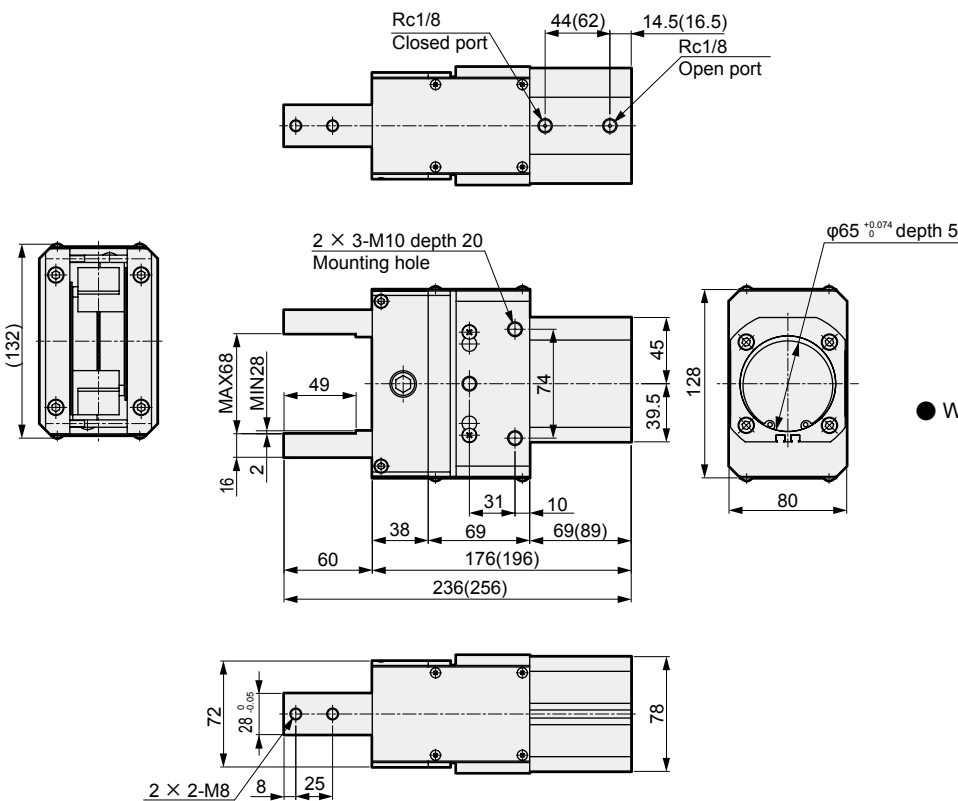


### ● With rubber cover

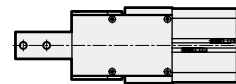
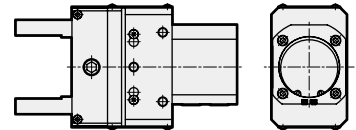


### ● HKP-63CS standard/O/C

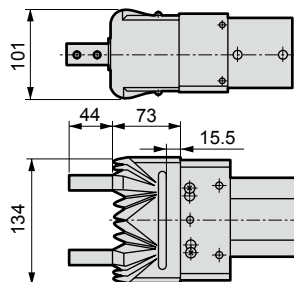
· Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.



### ● With switch



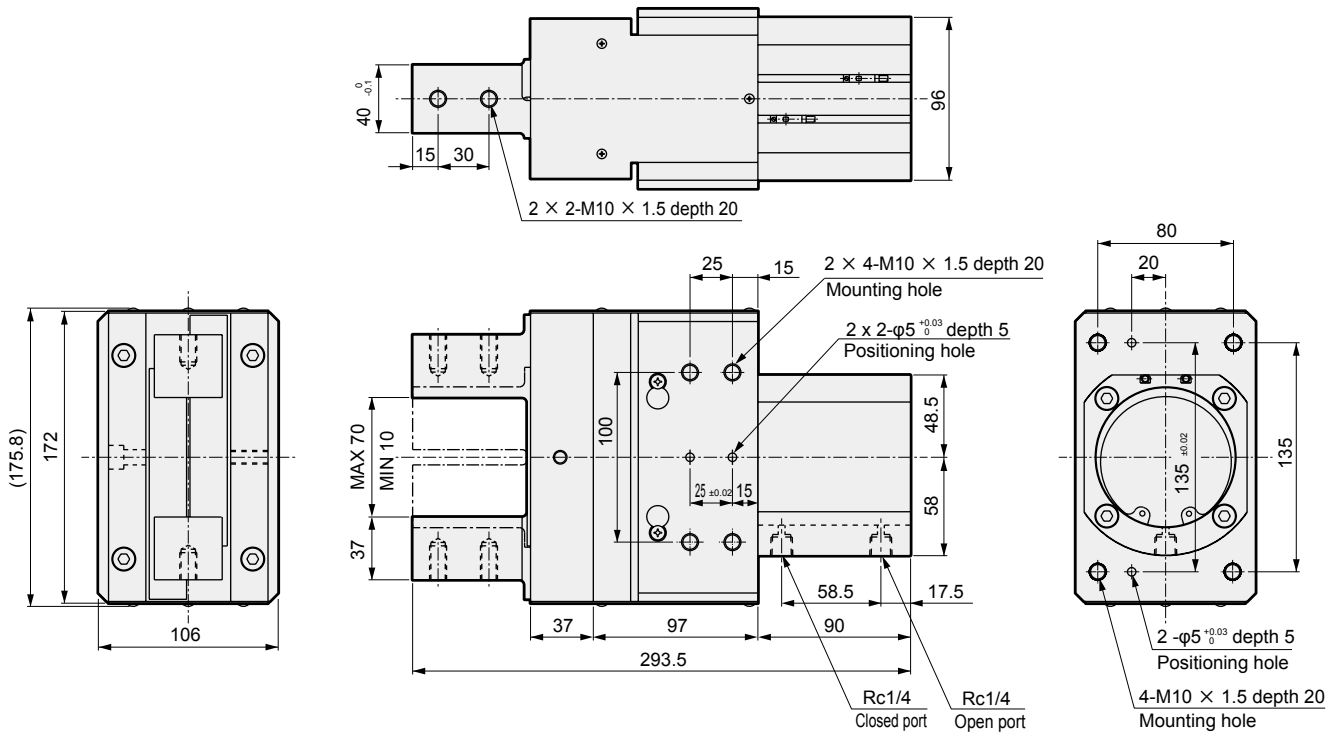
### ● With rubber cover



- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK\*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
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- UCAC-N
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- BHE

### Dimensions

● HKP-80CS Standard



LCW
LCR
LCG
LCX
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STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
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