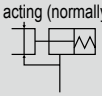
Powerful chuck with high gripping power

CKH2 Series

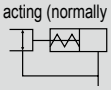
● Operating stroke length: 6, 8, 10, 12 mm

Double acting

Single acting (normally open)



Single acting (normally closed)



RoHS CAD

Specifications

Descriptions	CKH2-50CS	CKH2-63CS	CKH2-80CS	CKH2-100CS
Bore size mm	φ50	φ63	φ80	φ100
Working fluid	Compressed air			
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)			
Min. working pressure MPa	0.3 (≈44 psi, 3 bar)			
Ambient temperature °C	5 (41°F) to 60 (140°F)			
Port size	M5		Rc1/8	
Operating stroke length mm	6	8	10	12
Rod diameter mm	φ14	φ16	φ16	φ20
Volumetric capacity (reciprocating) cm^3	28.3	60.3	118.2	215.5
Repeatability mm	±0.01			
Weight kg	0.59	1.02	2.02	3.45
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)			

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	

*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.

How to order

Without switch (built-in magnet for switch)

CKH2 - 50CS - O

With switch (built-in magnet for switch)

CKH2 - 50CS - O - T2H - R

Ⓐ Size

Ⓑ Option

Ⓒ Switch model No.

Ⓓ Switch quantity

Code	Content
Ⓐ Size	
50CS	
63CS	
80CS	
100CS	
Ⓑ Option	
Blank	Standard (double acting)
O	Single acting (normally open)
C	Single acting (normally closed)
Y1	With small jaw Material: S45C
Y2	With small jaw Material: MC nylon

Ⓒ Switch model No.

Axial lead wire	Radial lead wire	Contact	Voltage AC	Voltage DC	Display	Lead wire
T2H*	T2V*	Proximity		●	1-color display	2-wire
T3H*	T3V*	Proximity		●	1-color display	3-wire

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

Ⓓ Switch quantity	
R	1 on open side
H	1 on closed side
D	2

⚠ Precautions for model No. selection

*1 : Small jaw is not available for inner diameter chuck.

*2 : Refer to pages 1718 to 1719 for the dimensions and compatible model of the small jaw.
When ordered as an option, three are attached at shipment.

[Example of model No.]

CKH2-50CS-O-T2H-R

Ⓐ Size : 50CS
Ⓑ Option : Single acting (normally open)
Ⓒ Switch model No. : Proximity T2H switch, lead wire 1 m
Ⓓ Switch quantity : 1 on open side

How to order switch

SW - T2H

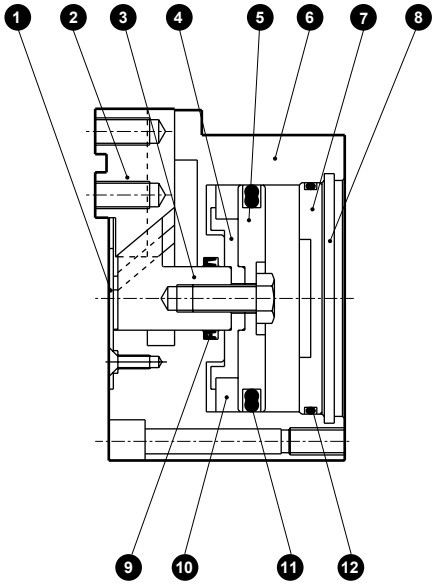
Switch model No.
(Item Ⓒ above)

Note) When the type with two switches is selected, if the model has a short operational stroke length, both switches may turn on depending ON the workpiece size.

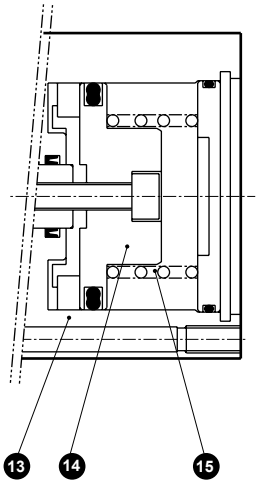
Internal structure and parts list

● CKH2-50CS to 100CS

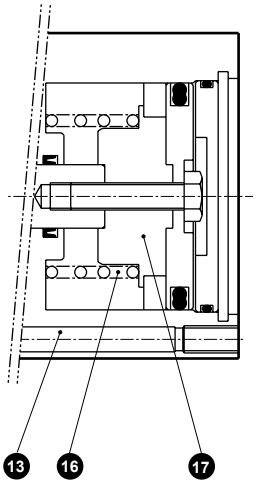
Standard (double acting)



O (normally open)



C (normally closed)



Cannot be disassembled

Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Center guard	Stainless steel		9	Lot sealant	Nitrile rubber	
2	Master key	Carbon steel		10	Magnet		
3	Piston A	Carbon steel		11	Piston seal	Nitrile rubber	
4	Piston B	Aluminum alloy		12	Cylinder sealant	Nitrile rubber	
5	Piston C	Aluminum alloy		13	C, O Body	Aluminum alloy	
6	Body	Aluminum alloy		14	O Piston C	Aluminum alloy	
7	Cylinder guard	Aluminum alloy		15	O Spring	Stainless steel	
8	C type snap ring	Stainless steel (50/60CS) Steel (80CS/100CS)		16	C Spring	Stainless steel	
				17	C Piston B	Aluminum alloy	

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.

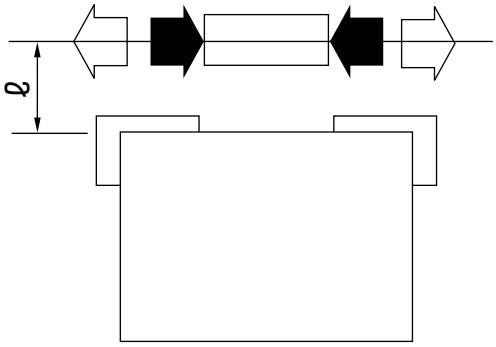
·Open direction (⇦) - - - - - - (shown with broken line)

·Closed direction (➡) ——— (shown with continuous line)

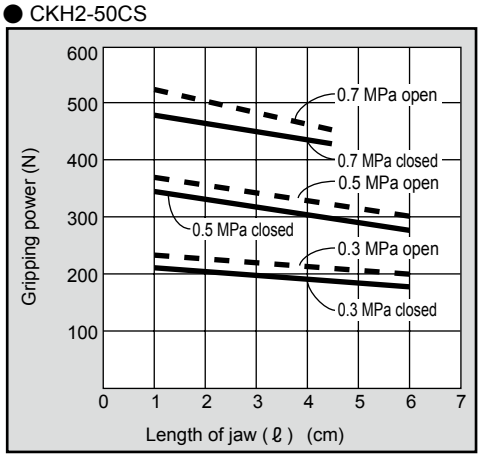
(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.

C type gripping power decreases approximately 10 to 20% in the open direction compared to the double acting.

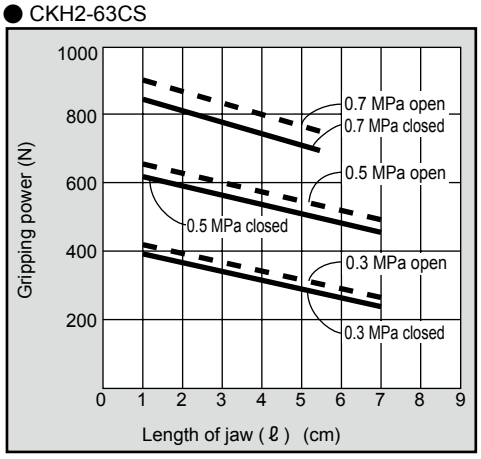
When making a selection, read the precautions for design and selection on page 1722.



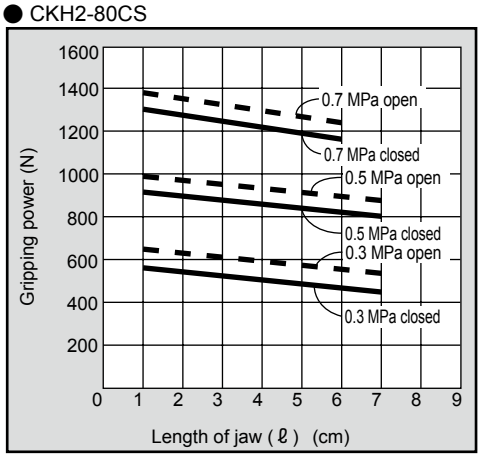
● CKH2-50CS



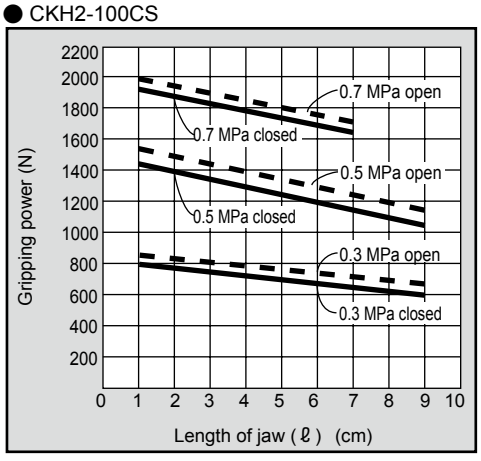
● CKH2-63CS



● CKH2-80CS



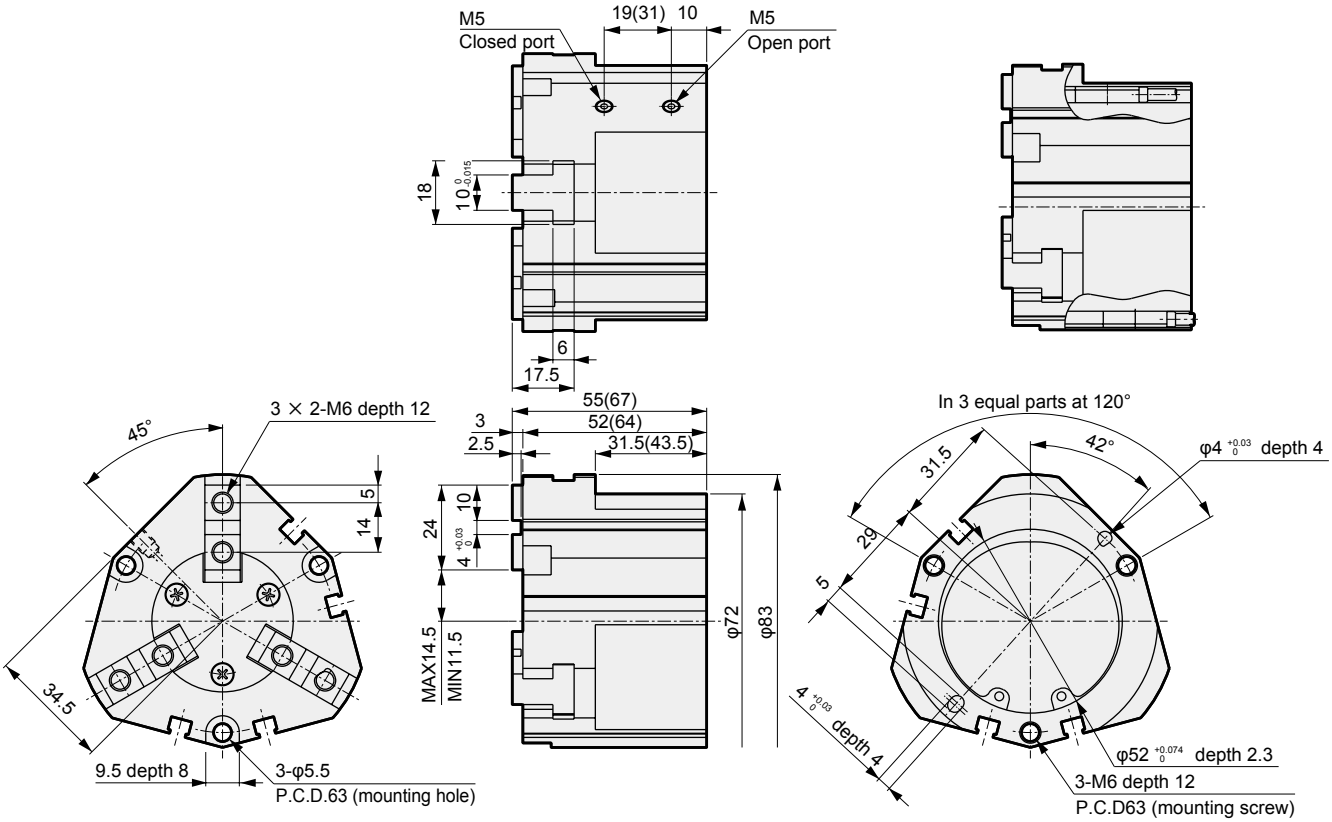
● CKH2-100CS



Dimensions CAD

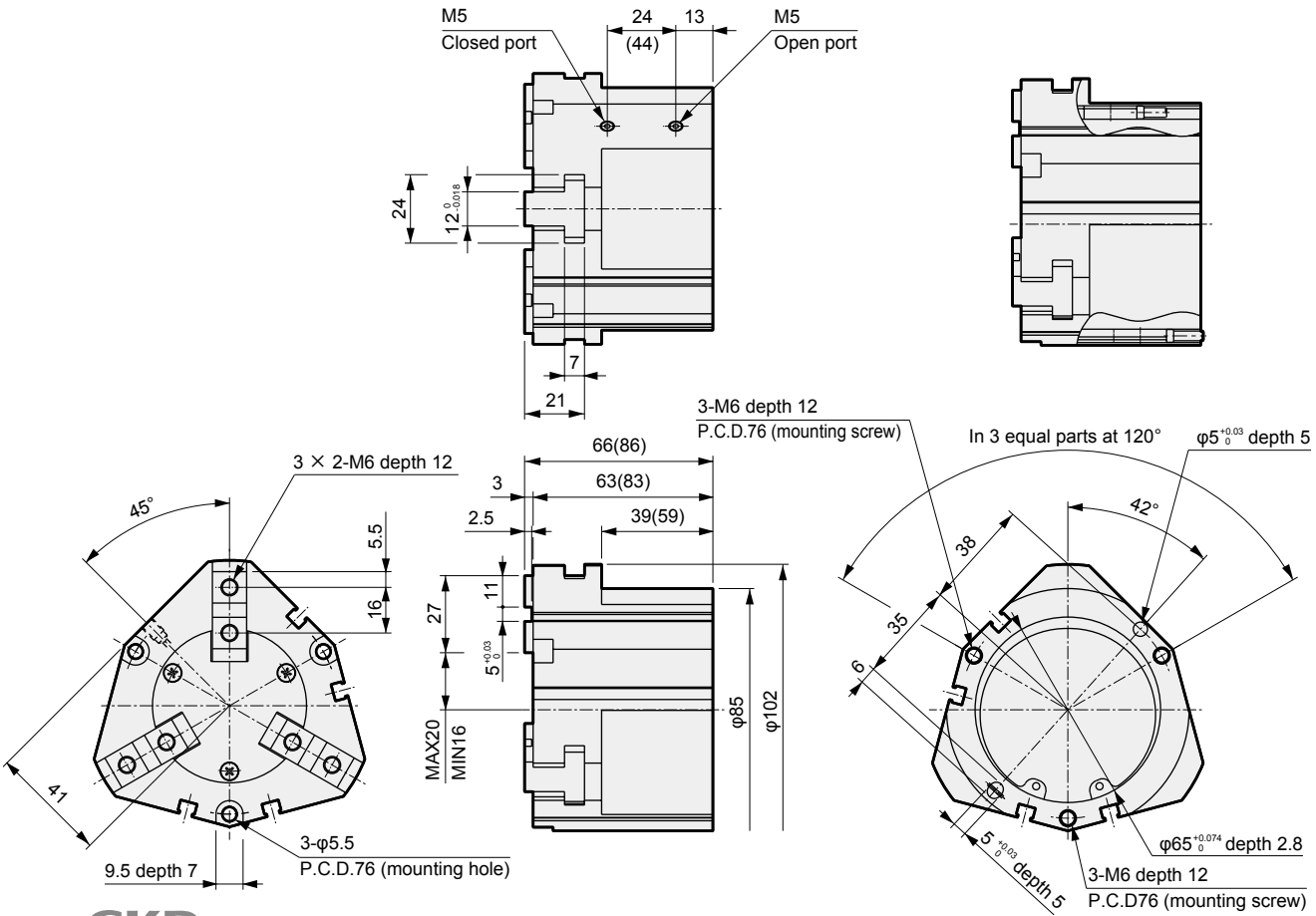
● CKH2-50CS standard/O/C
· Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.

● With switch



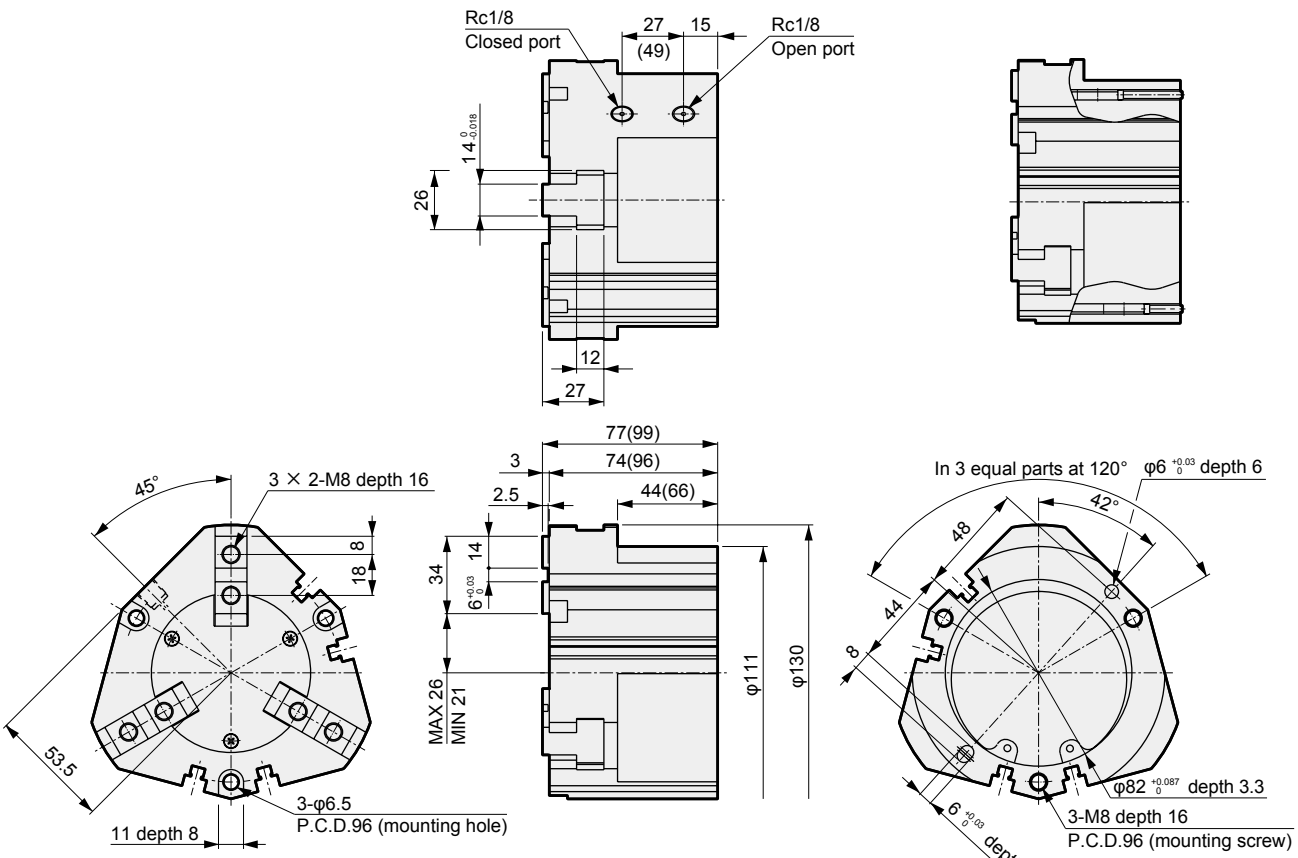
● CKH2-63CS standard/O/C
· Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.

● With switch



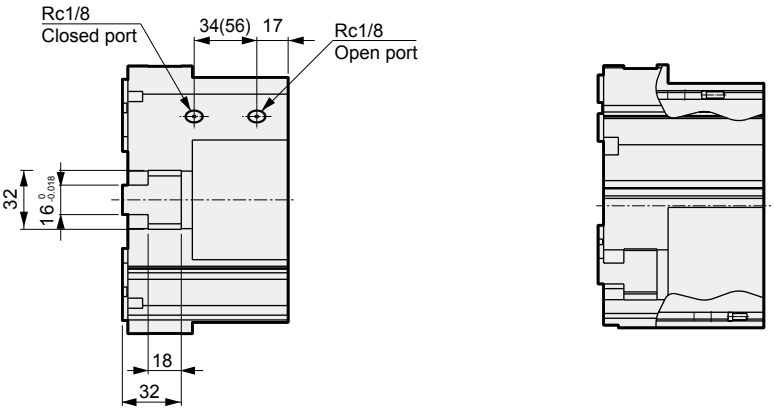
Dimensions

● CKH2-80CS standard/O/C
· Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.



● With switch

● CKH2-100CS standard/O/C
· Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.



● With switch