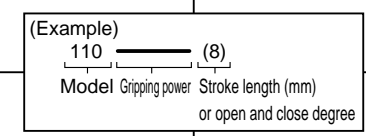


Range of gripping power at supply pressure 0.5MPa and general jaw length

* Grip applies to one jaw.
 Other than CKLB2: Gripping power ×3
 CKLB2: Gripping power ×2

Variation	Model no.	Action of jaw (J)	Gripping power (N)					Gripping power (N)					Switch model no.	Page
			5	10	50	50	100	500	1000	2000				
3-way jaw bearing chuck	CKG			16CS (6) 25CS (6)		32CS (8) 40CS (11) 50CS (16)							T2H/V, T3H/V	420
3-way jaw long stroke chuck	CK			1CS (20) 1.5CS (40) 2CS (40)									T2H/V T2H/V	426
3-way jaw thin chuck	CKA		15CS (6)	20CS (5) 25CS (7) 30CS (9)		40CS (12) 50CS (20) 60CS (25) 70CS (30) (38)							T2H/V, T3H/V	432
Thin chuck	CKS			08CS (10) 12CS (12)		16CS (16) 20CS (20) 25CS (28) 32CS (32)							T2H/V T3H/V	440
Hollow chuck	CKF			15CS (5) 20CS (5) 25CS (7)		30CS (8) 40CS (16)							T2H/V, T3H/V	450
Ultra long stroke chuck	CKJ			16CS (80) (40)		40CS (80) (40) 63CS (130) (65)							T2H/V, T3H/V	456
Powerful chuck	CKL2			20CS (5) 25CS (6)		32CS (8) 40CS (10) 50CS (12) 63CS (16) 80CS (20) 100CS (23)							T2H/V T3H/V	466
Position locking type powerful chuck	CKL2-*-HC			32CS (8) 40CS (10)		50CS (12) 63CS (16) 80CS (20)							T2H/V T3H/V	474
High gripping power powerful chuck	CKH2					50CS (6) 63CS (8) 80CS (10) 100CS (12)							T2H/V T3H/V	480
Bi-directional powerful chuck	CKLB2			20CS (5) 25CS (6)		32CS (8) 40CS (10) 50CS (12) 63CS (16) 80CS (20) 100CS (23)							T2H/V T3H/V	486



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2-*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2-*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Chuck



Safety precautions

Always read this section before starting use.

Refer to Intro 69 for general details on the cylinders, and to Ending 78 for cylinder switches.

Chuck

Design & Selection

WARNING

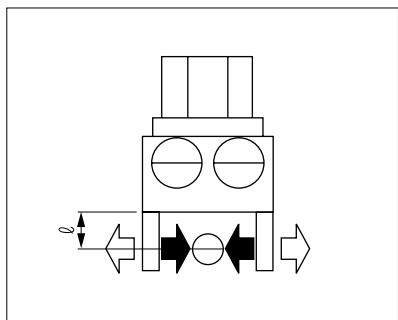
■ If the moving workpiece poses a possible risk to personnel or if fingers could be caught in the master key, etc., install a protective cover, etc.

■ If circuit pressure drops due to a service interruption or problems in the air source, gripping power drops and the workpiece could drop. Provide position locking measures, etc., so that personnel are not injured or machines damaged.

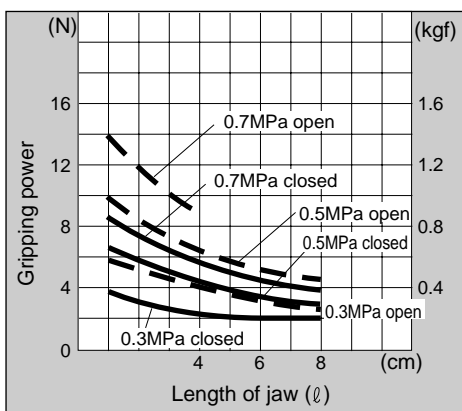
CAUTION

■ Cautions on gripping power

- The grip is for one master jaw when all master and small jaws contact the workpiece as shown below.



- Performance data indicates the gripping power at hand jaw length ℓ at a supply pressure of 0.15 to 0.7 MPa.

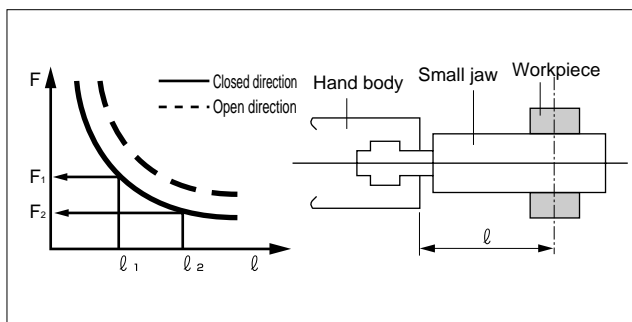


- To obtain gripping power from performance data, if the distance to the workpiece's center of gravity is ℓ when manufacturing the small jaw, gripping power F is expressed as follows:

$$\begin{aligned} \text{When } \ell = \ell_1 \text{ then } F &= F_1 \\ \text{When } \ell = \ell_2 \text{ then } F &= F_2 \end{aligned}$$

Refer to the drawing below.

- The jaw's working maximum length can be used within performance data.
- When N is used to express the number of jaws as reference for the coefficient for transferring workpiece weight W_L
 $W_L \times 9.8: (F \times N) = 1:5$ (only gripping)
 $W_L \times 9.8: (F \times N) = 1:10$ (normal transfer)
 $W_L \times 9.8: (F \times N) = 1:20$ (sudden acceleration transfer)
 $W_L \times 9.8$: Workpiece weight (kg)
 F : Gripping power (N)
 N : Number of jaws

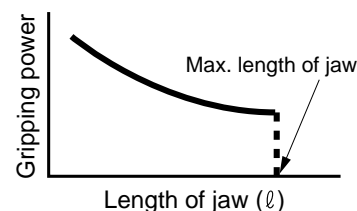


■ Use as short and light a small jaw as possible.

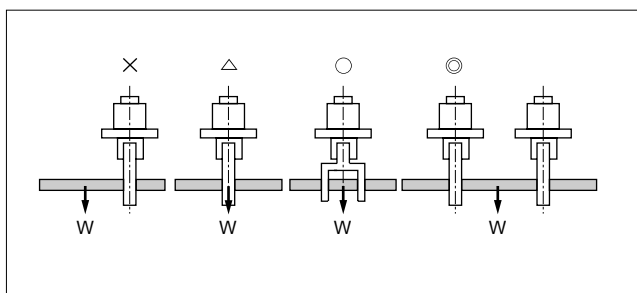
If the small jaw is long and heavy, inertia increases when opening and closing. This causes play in the master key, and may adversely affect life.

- The small jaw's length must be within performance data.
- The weight of the small jaw affects life, so check that the weight is within the following value:

$$W < 1/4H \text{ (1 pc.)} \quad \begin{aligned} W: & \text{ Weight of small jaw} \\ H: & \text{ Product weight of hand} \end{aligned}$$

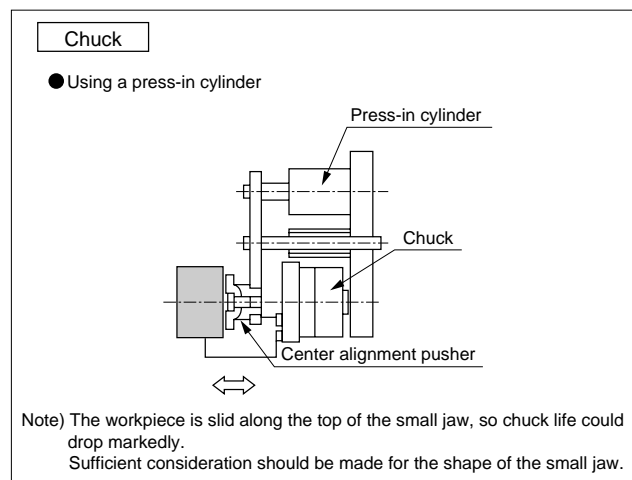


- When gripping a long or large workpiece, the center of gravity must be gripped to provide stable prehension. It is also necessary to stabilize prehension by increasing the size or using multiple jaws.



- Select a model that has sufficient power to grip the workpiece weight.
- Select a model that has sufficient opening/closing width for the workpiece size.

- If directly installing the workpiece into the jig with chuck, consider clearance during design, or the hand could be damaged.



Installation & Adjustment

⚠ CAUTION

- If a lateral load or load with a large impact is applied to the master key, play or damage could occur in the master key. Adjust and check that external force is not applied to the master key.
- If the clamp is operated carefully and slowly as possible, accuracy increases. Repeatability also stabilizes.
- Regularly grease the sliding section of the master key. Periodic replenishment of grease will extend the life of the part.

- When installing the small jaw, check that a lateral load is not applied to the master key.

- Tighten with the following tightening torque.

Screw nominal	M3	M4	M5	M6	M8
Recommended tightening torque (N·m)	0.59	1.4	2.8	4.8	12.0

During Use & Maintenance

⚠ CAUTION

- Do not disassemble or modify the body.

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK

Ending

Chuck



3-way jaw bearing chuck double acting/single acting

CKG Series

- Operational stroke length: 6, 8, 11, 16mm



Specifications

Descriptions		CKG				
Size		16CS	25CS	32CS	40CS	50CS
Cylinder bore size	mm	φ 16	φ 25	φ 32	φ 40	φ 50
Actuation		Double acting/single acting				
Working fluid		Compressed air				
Max. working pressure	MPa	0.7				
Min. working pressure ^{Note} MPa	Double acting	0.1				
	Normally open	0.3				
	Normally closed					
Ambient temperature	°C	5 to 60				
Port size		M5				
Operational stroke length	mm	6		8	11	16
Rod diameter	mm	φ 9	φ 10	φ 14	φ 18	φ 20
Capacity of reciprocating	cm ³	1.0	2.2	5.1	10.1	36.1
Repeatability	mm	± 0.01				
Product weight	kg	0.24	0.47	0.80	1.4	2.3
Lubrication		Not required (use turbine oil Class 1 ISO VG32 for lubrication)				

Note: When rubber cover (option), Min. working pressure is to be 16CS : 0.2MPa, 25CS to 50CS: 0.15MPa.

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 2)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less

Note 2: Max. load current above: 20 mA at 25°C. If ambient temperature around switch is higher than 25°C, 5 to 10mA at 60°C for T2 type, while 5 to 15mA at 60°C for S2 type.

How to order

Without switch

CKG - **16CS** - **O**

With switch

CKG - **16CS** - **O** - **T2H** - **R**

A Size

B Option
Note 1, Note 2

C Switch model no.
Note 3

D Switch quantity

⚠ Note on model no. selection

Note 1: Y11 and Y21 are available for CKG-16CS, while Y11, Y12, Y21 and Y22 are available for CKG-25CS to 40CS, and Y11 and Y21 are available for CKG-50CS.

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw. When ordering as option, 3 pieces are provided.

Note 3: Switches other than **C** switch model no. are available. (Custom order) Refer to Ending 1 for details.

<Example of model number>

CKG-16CS-O-T2H-R

Model: Bearing chuck

A Size: 16CS

B Option: Single acting, normally open type

C Switch model no.: Proximity T2H switch, lead wire 1m

D Switch quantity: One on open side

How to order switch

(T type switch)

SW - **T2H**

Switch model no.
(Item above **C**)

Only CKG-50CS

- For switch T*H*
- Switch body + mounting bracket

CKG - **T2H**

Switch model no.
(Item above **C**)

- For switch T*V*
- Switch body + mounting bracket

CKG - **T2V** - *

Switch model no.
(Item above **C**)

(Select either R (open) or H (closed) for sections marked with an asterisk (*).)

Only CKG-50CS

- Mounting bracket

CKG - **T**

- Mounting bracket

CKG - **TV** - *

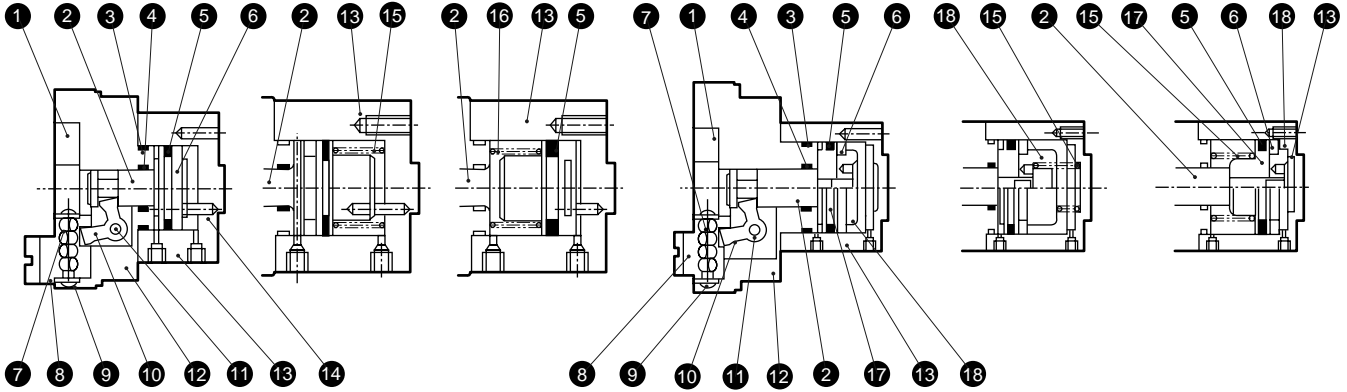
Symbol	Descriptions			
A Size				
16CS				
25CS				
32CS				
40CS				
50CS				
B Option				
Blank	Standard (double acting)			
O	Single acting (normally open)			
C	Single acting (normally closed)			
G	Rubber cover (with nitrile rubber)			
Y11	With small jaw material (S50C) Outer mount chuck (small jaw No.: 540 to 710)			
Y12	With small jaw material (S50C) Inner mount chuck (small jaw No.: 610 to 630)			
Y21	With small jaw material (MC nylon) Outer mount chuck (small jaw No.: 510 to 540,710)			
Y22	With small jaw material (MC nylon) Inner mount chuck (small jaw No.: 610 to 630)			
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

3-way jaw bearing chuck
Chuck

Internal structure and parts list

● CKG-16CS to 40CS ● CKG-50CS
 • Standard type • O (normally open) type • C (normally closed) type • Standard type • O (normally open) type • C (normally closed) type

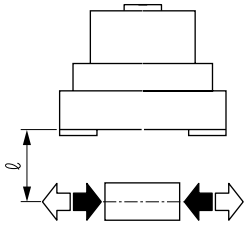


No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Bearing guide	Steel		10	Arm	Steel	
2	Piston A	Stainless steel		11	Fulcrum axis	Steel	
3	Cylinder gasket	Nitrile rubber		12	Body	Aluminum alloy	
4	Rod packing seal	Nitrile rubber		13	Cylinder	Aluminum alloy	
5	Piston packing seal	Nitrile rubber		14	Non rotating	Stainless steel	
6	Magnet			15	Spring	Stainless steel	O type
7	Cross roller	Alloy steel		16	Spring	Stainless steel	C type
8	Master key	Steel		17	Piston B	Stainless steel	
9	Bearing holder	Steel		18	Piston C	Stainless steel	

Gripping performance data

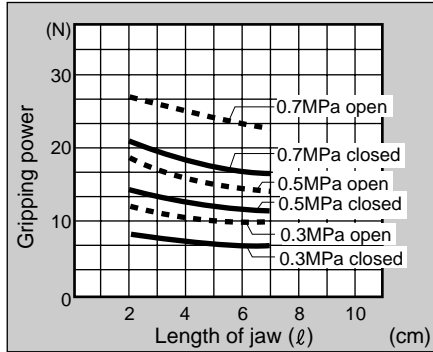
Gripping power that functions to open and closed directions with jaw length ℓ of hand at supply pressure 0.3, 0.5 or 0.7 MPa is shown.

- Open direction (◀) ----- (shown with broken line)
- Closed direction (▶) ————— (shown with continuous line)

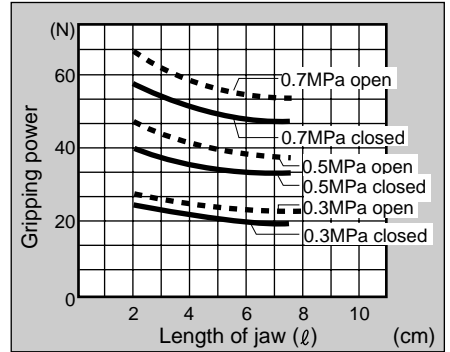


(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.
 C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction.
 Grip performance data indicates the grip for one jaw.
 Since two jaws are used, double the grip in the graph when making a selection.

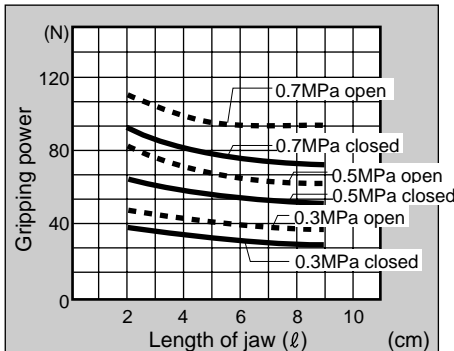
● CKG-16CS



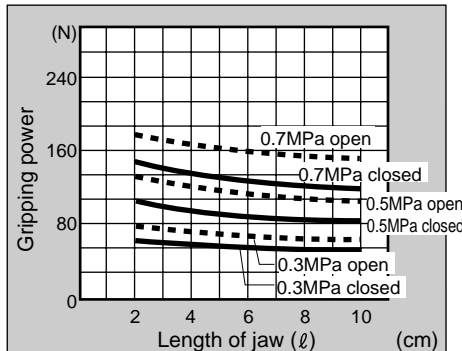
● CKG-25CS



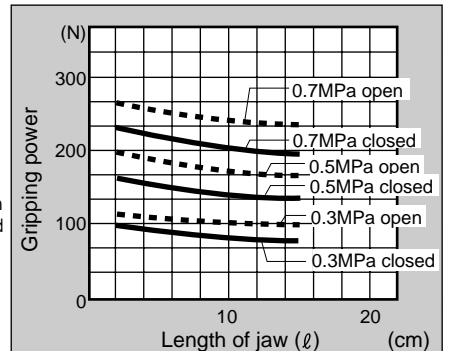
● CKG-32CS



● CKG-40CS



● CKG-50CS

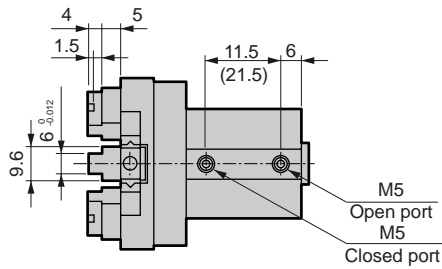


Dimensions

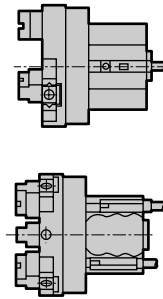


● CKG-16CS standard/O/C

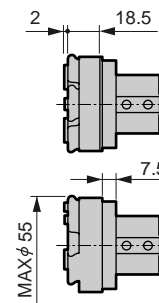
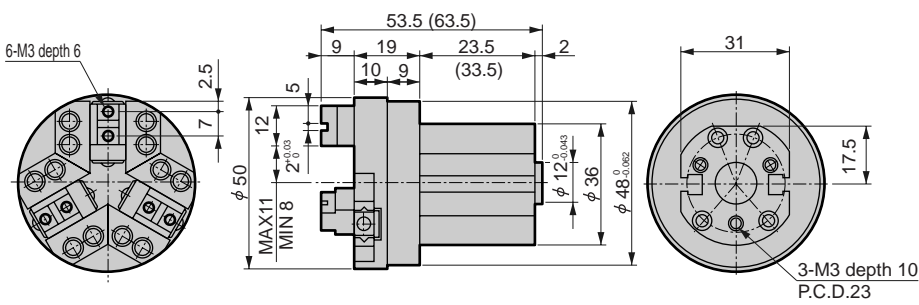
· Dimensions in () for O [normally open] and C [normally closed] specifications.



● With switch

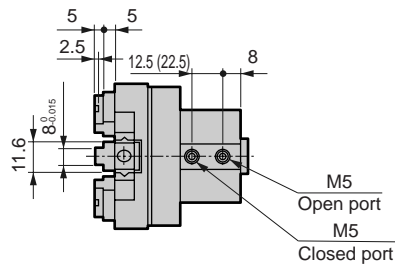


● With rubber cover

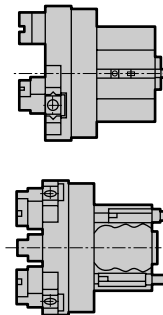


● CKG-25CS standard/O/C

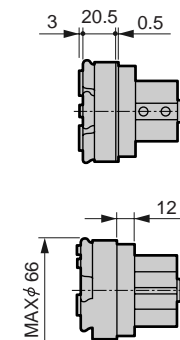
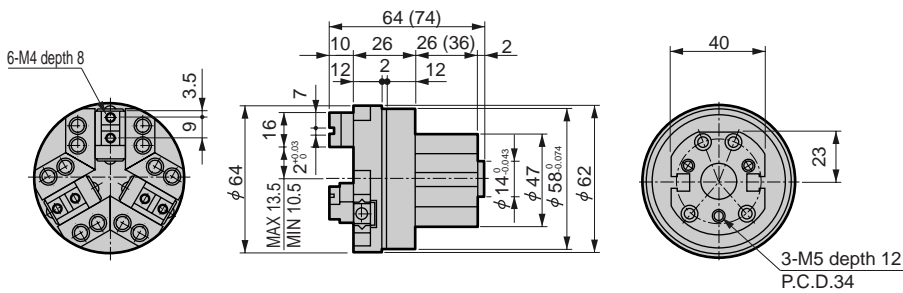
· Dimensions in () for O [normally open] and C [normally closed] specifications.



● With switch



● With rubber cover



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

3-way jaw bearing chuck
Chuck

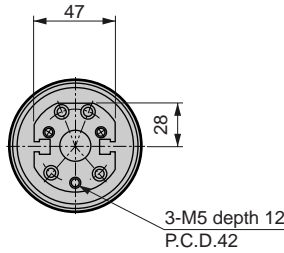
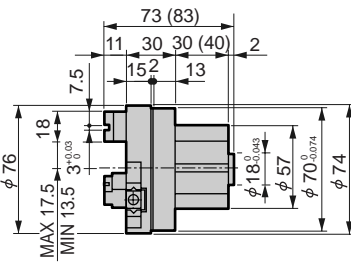
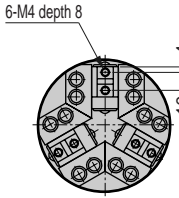
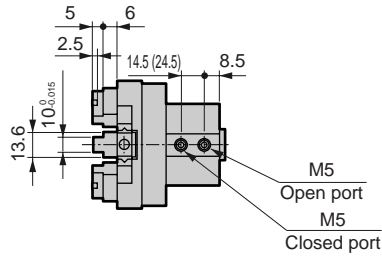
Dimensions



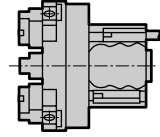
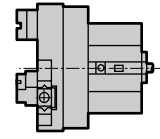
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 -*.HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

● CKG-32CS standard/O/C

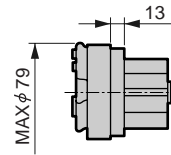
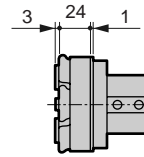
· Dimensions in () for O [normally open] and C [normally closed] specifications.



● With switch

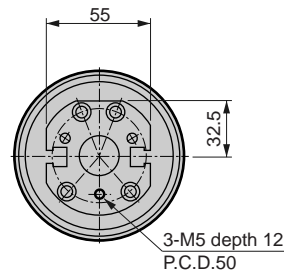
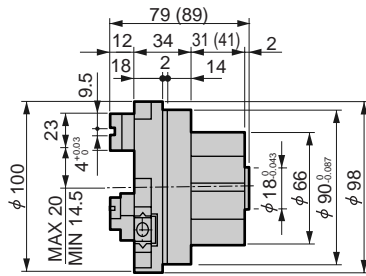
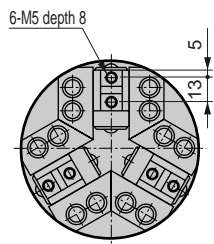
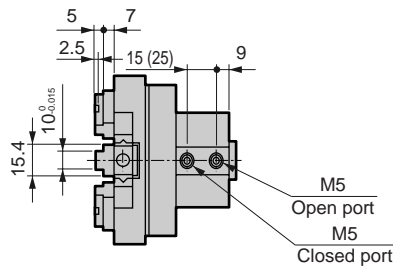


● With rubber cover

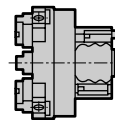
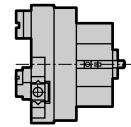


● CKG-40CS standard/O/C

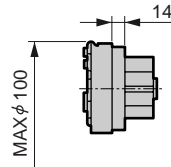
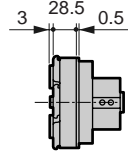
· Dimensions in () for O [normally open] and C [normally closed] specifications.



● With switch



● With rubber cover

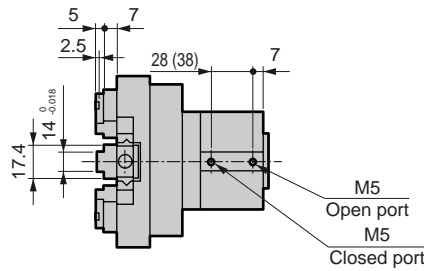


Dimensions

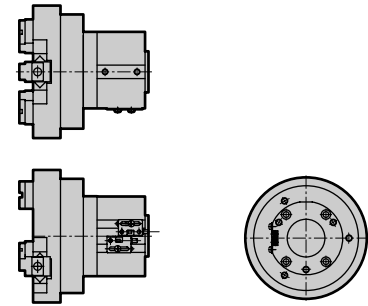


● CKG-50CS standard/O/C

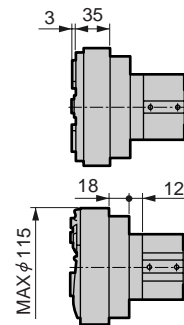
· Dimensions in () for O [normally open] and C [normally closed] specifications.



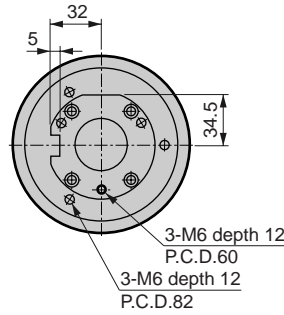
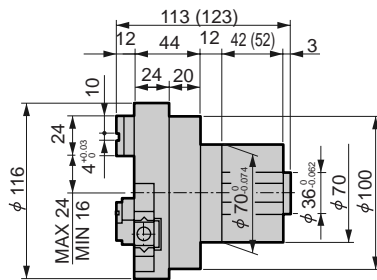
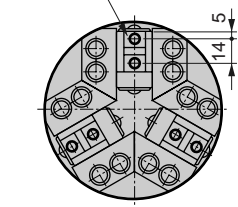
● With switch



● With rubber cover



6-M6 depth 10



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

3-way jaw bearing chuck
Chuck



3-way jaw long stroke chuck double acting/single acting

CK Series

- Operational stroke length: 20, 40mm



Specifications

Descriptions		CK		
Size		1CS	1.5CS	2CS
Cylinder bore size	mm	φ 25	φ 44	
Actuation		Double acting/single acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.3		
Ambient temperature	°C	5 to 60		
Port size		M5	Rc1/8	
Operational stroke length	mm	20		40
Rod diameter	mm	φ 12	φ 16	
Capacity of reciprocating	cm ³	7.9	26.4	52.8
Repeatability	mm	± 0.03		
Product weight	kg	0.85	1.90	2.90
Lubrication		Not required (use turbine oil Class 1 ISO VG32 for lubrication)		

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less

Note 1: Maximum load current above: 20mA is applied at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA with 60°C)

- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK**
- CKA
- CKS
- CKF
- CKJ
- CKL2
- CKL2-*.HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

How to order

Without switch

CK - 1CS - O

With switch

CK - 1CS - O - T3H - R

A Size

B Option
Note 1

C Switch model no.
Note 2

D Switch quantity

Symbol	Descriptions			
A Size				
1CS				
1.5CS				
2CS				
B Option				
Blank	Standard (double acting)			
O	Single acting (normally open)			
C	Single acting (normally closed)			
Y1	With small jaw material (S50C)			
Y2	With small jaw material (MC nylon)			
C Switch model no.				
Axial lead wire	Radial lead wire	Proximity Contact	Indicator	Lead wire
T2H*	T2V*			
T3H*	T3V*	3-wire		
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

Note 1: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw.
When ordering as option, 3 pieces are provided.

Note 2: Switches other than **C** switch model no. are available. (Custom order) Refer to Ending 1 for details.

<Example of model number>

CK-1CS-O-T3H-R

Model: Long stroke chuck

- A** Size : 1CS
- B** Option : Single acting, normally open type
- C** Switch model no. : Proximity T3H switch, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

SW - T2H

Switch model no.
(Item above **C**)

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

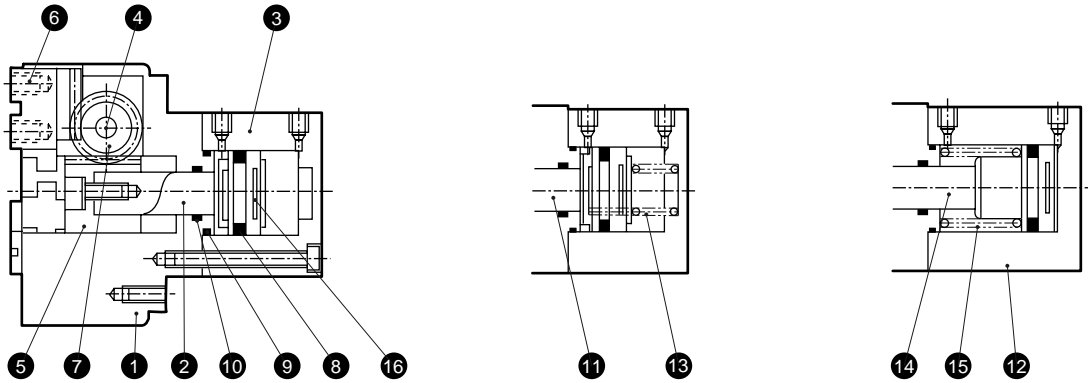
3-way jaw long stroke chuck
Chuck

Internal structure and parts list

● Standard (double acting) type

● O (normally open) type

● C (normally closed) type

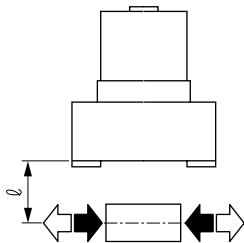


No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Chuck body	Aluminum alloy		10	Rod packing seal	Nitrile rubber	
2	Piston	Steel		11	Piston	Steel	
3	Cylinder	Aluminum alloy		12	Cylinder	Aluminum alloy	
4	Pinion gear axis	Steel		13	Spring	Stainless steel	
5	Rack	Steel		14	Piston	Steel	
6	Master key	Steel		15	Spring	Stainless steel	
7	Pinion gear	Steel		16	Magnet	MC	Nickeling
8	Piston packing seal	Nitrile rubber					
9	Cylinder gasket	Nitrile rubber					

Gripping performance data

Gripping power which functions to open direction and closed direction with length L of hand jaw at supply pressure 0.3, 0.5 or 0.7 MPa is shown.

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

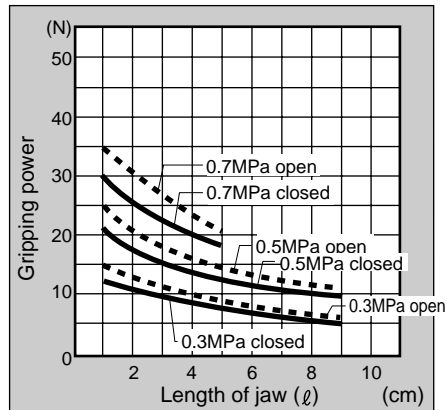


(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.

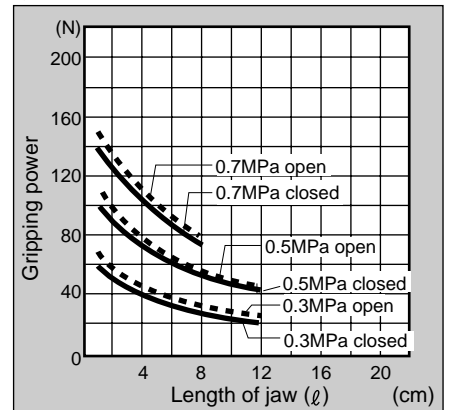
C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction.

Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

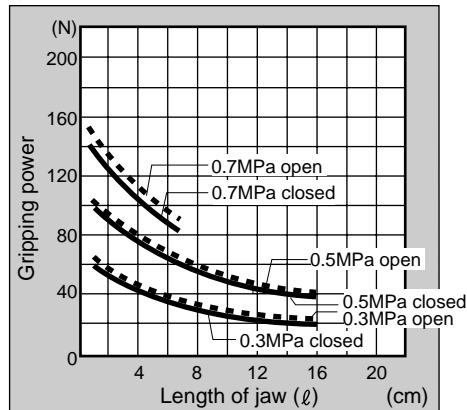
● CK-1CS



● CK-1.5CS



● CK-2CS



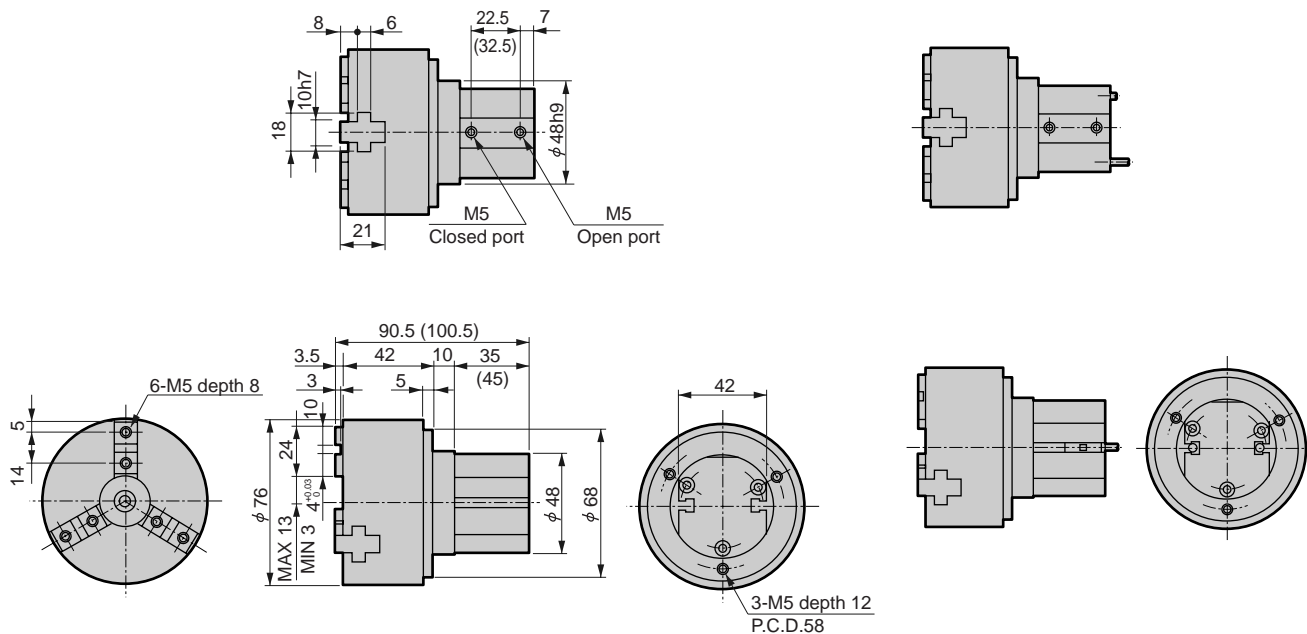
Dimensions



● CK-1CS standard/O/C

- Dimension in () for C [normally closed] specifications

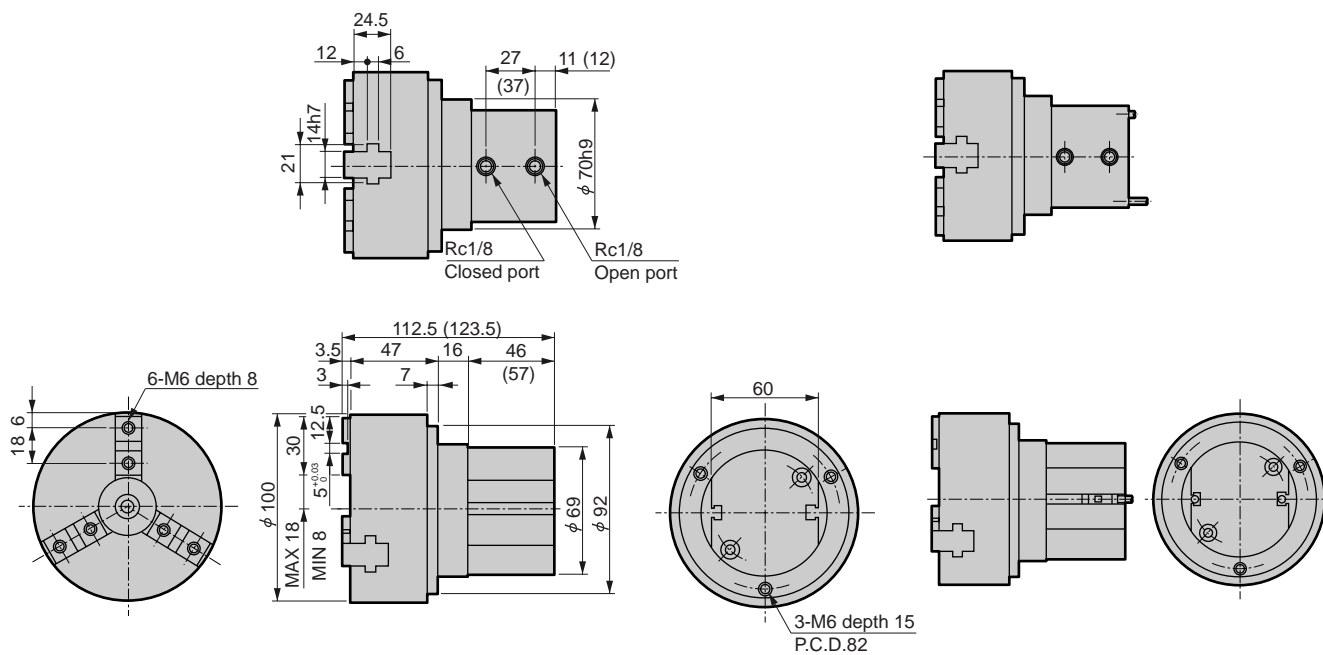
● With switch



● CK-1.5CS standard/O/C

- Dimension in () for C [normally closed] specifications

● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

3-way jaw long stroke chuck
Chuck

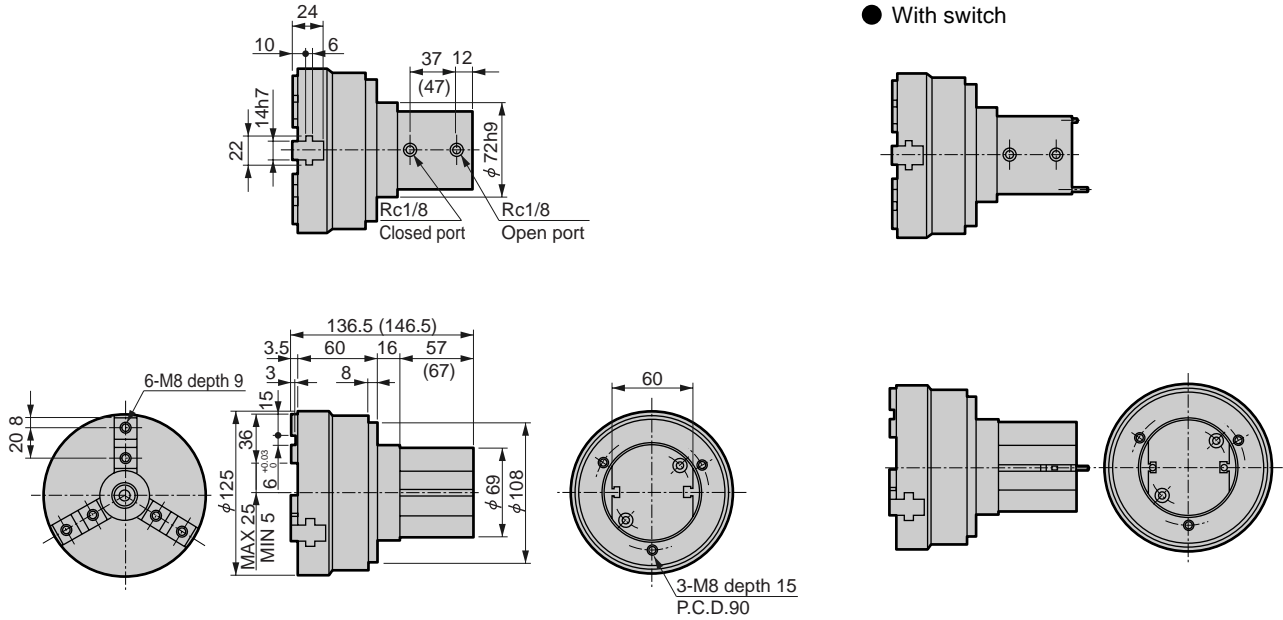
Dimensions



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 -*-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

● CK-2CS standard/O/C

● Dimension in () for C [normally closed] specifications





3-way jaw thin chuck double acting/single acting

CKA Series

● Operational stroke length: 5, 6, 7, 9, 20, 25, 30, 38mm



Specifications

Descriptions	CKA							
	15CS	20CS	25CS	30CS	40CS	50CS	60CS	70CS
Size								
Cylinder bore size mm	φ 16	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Operating method	Double acting/single acting							
Working fluid	Compressed air							
Max. working pressure MPa	0.7							
Min. working pressure MPa	0.3							
Ambient temperature °C	5 to 60							
Port size	M5					Rc1/8		
Operational stroke length mm	6	5	7	9	20	25	30	38
Rod diameter mm	φ 9	φ 10	φ 14	φ 18	φ 20		φ 24	φ 28
Capacity of reciprocating cm ³	1.0	2.2	5.1	10.1	36.1	76.9	148.8	294.0
Repeatability mm	± 0.03							
Product weight kg	0.11	0.25	0.42	0.61	1.41	2.6	4.5	6.4
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)							

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less

If switch ambient temperature is higher than 25 °C, 5 to 10mA at 60°C for T2 type, while 5 to 15mA at 60°C for S2 type.

Note 1: The maximum load current above is the value at 25°C.

(Note) Refer to Ending 1 for the specifications details of the switch.

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
-*.HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending

How to order

Without switch

CKA - **15CS** - **○**

With switch

CKA - **15CS** - **○** - **T2H** - **R**

A Size

B Option
Note 1, Note 2

C Switch model no.
Note 3
* indicates lead wire length.

D Switch quantity

⚠ Note on model no. selection

Note 1: Y11 and Y12 are available for CKA-15CS, while Y11, Y12 and Y21 are available for CKA-20CS to 40CS, and Y11 and Y21 are available for CKA-50CS.

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw. When ordering as option, 3 pieces are provided.

Note 3: Switches other than **○** switch model no. are available. (Custom order) Refer to Ending 1 for details.

Symbol	Descriptions				
A Size					
15CS					
20CS					
25CS					
30CS					
40CS					
50CS					
60CS					
70CS					
B Option					
Blank	Standard (double acting)				
O	Single acting (normally open)				
C	Single acting (normally closed)				
Y11	With small jaw material (S50C) Outer mount chuck (small jaw No.: 510 to 540, 710 to 770)				
Y12	With small jaw material (S50C) Inner mount chuck (small jaw No.: 610 to 630)				
Y21	With small jaw material (MC nylon) Outer mount chuck (small jaw No.: 510 to 540, 710 to 770)				
Y22	With small jaw material (MC nylon) Inner mount chuck (small jaw No.: 610 to 630)				
C Switch model no.					
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire	
T2H*	T2V*	Proximity	1 color indicator type	2-wire	
T3H*	T3V*			3-wire	
*Lead wire length					
Blank	1m (standard)				
3	3m (option)				
5	5m (option)				
D Switch quantity					
R	One on open side				
H	One on closed side				
D	Two				

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK

Ending

3-way jaw thin chuck
Chuck

<Example of model number>

CKA-15CS-O-T2H-R

Model: Thin chuck

- A** Size : 15CS
- B** Option : Single acting, normally open type
- C** Switch model no. : Proximity T2H switch, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

(T type switch)

SW - **T2H**

Switch model no.
(Item above **○**)

CKA-40CS to 70CS

- For switch T*H*
- Switch body + mounting bracket

CKA - **T2H**

Switch model no.
(Item above **○**)

- For switch T*V*
- Switch body + mounting bracket

CKA - **T2V** - *

Switch model no.
(Item above **○**)

CKA-40CS to 70CS

- Mounting bracket

CKA - **T**

- Mounting bracket

CKA - **TV** - *

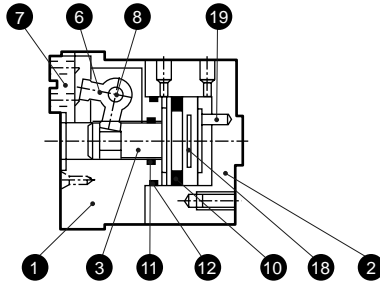
(Select either R (open) or H (closed) for sections marked with an asterisk (*).)

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

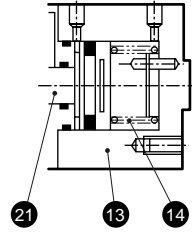
Internal structure and parts list

● CKA-15CS

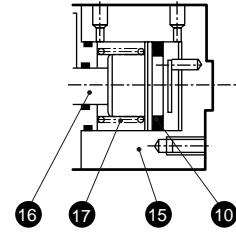
Standard (double acting) type



O (normally open) type

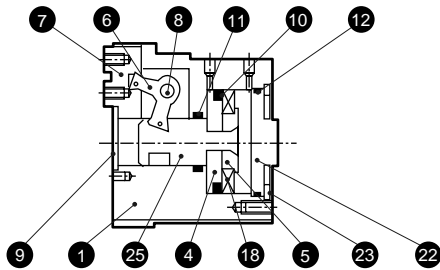


C (normally closed) type

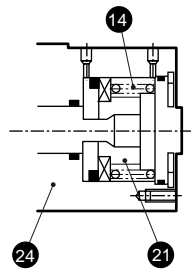


● CKA-20CS to 40CS

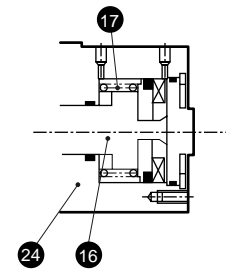
Standard (double acting) type



O (normally open) type

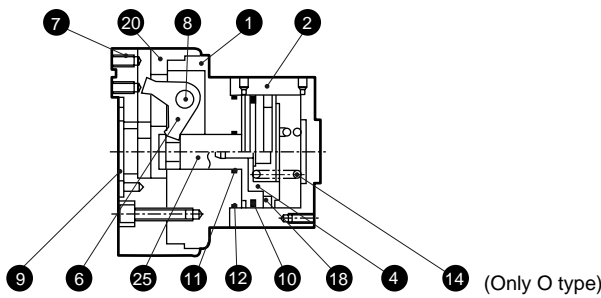


C (normally closed) type

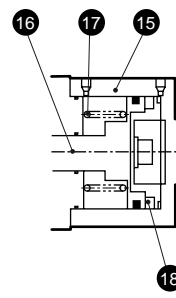


● CKA-50CS to 70CS

Standard (double acting) / O (normally open) type



C (normally closed) type



No.	Parts name	Material	No.	Parts name	Material	No.	Parts name	Material	No.	Parts name	Material
1	Body	Aluminum alloy	8	Fulcrum axis	Steel	15	C cylinder	Aluminum alloy	22	Cylinder guard	Aluminum alloy
2	Cylinder	Aluminum alloy	9	Center guard	Stainless steel	16	C piston rod	Stainless steel	23	Snap ring	Stainless steel
3	Piston A	Stainless steel	10	Piston packing seal	Nitrile rubber	17	C spring	Steel	24	O, C body	Aluminum alloy
4	Piston B	Aluminum alloy	11	Rod packing seal	Nitrile rubber	18	Magnet	Plastic magnet	25	Piston	Aluminum alloy
5	Piston C	Aluminum alloy	12	Cylinder gasket	Nitrile rubber	19	Stopper pin	Stainless steel			
6	Arm	Steel	13	O cylinder	Aluminum alloy	20	Chuck guard	Aluminum alloy			
7	Master key	Steel	14	O spring	Steel	21	O piston B	Stainless steel			

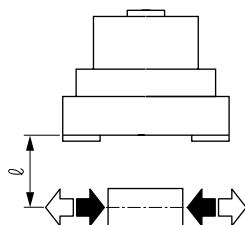
Note) Structures are slightly different depending on the model.

- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA**
- CKS
- CKF
- CKJ
- CKL2
- CKL2-*.HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

Gripping performance data

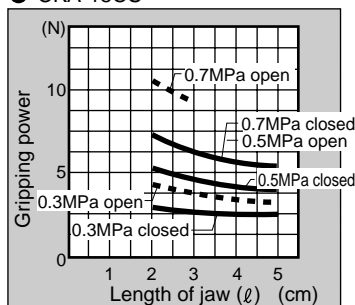
The Tables show the gripping power to open/closed direction of a jaw with length "ℓ" at supply pressure 0.3, 0.5, 0.7 MPa.

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

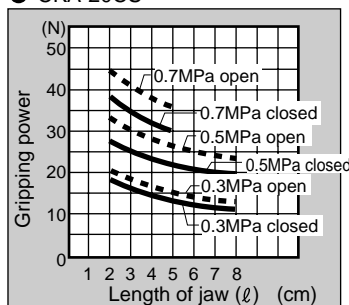


(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.
 C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction.
 Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

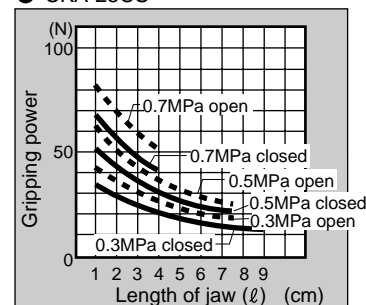
● CKA-15CS



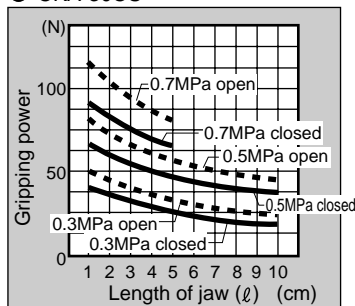
● CKA-20CS



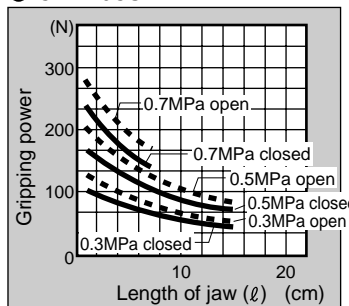
● CKA-25CS



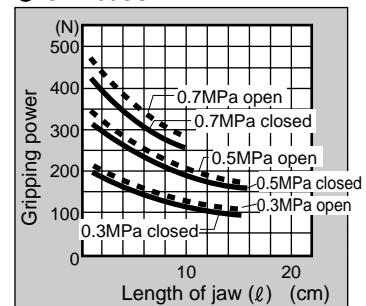
● CKA-30CS



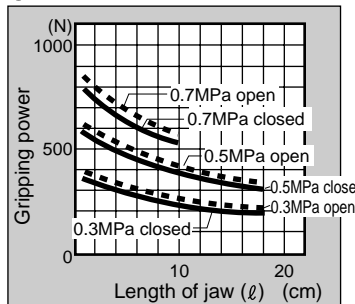
● CKA-40CS



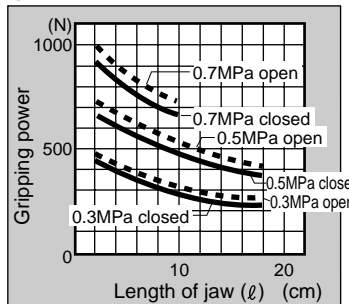
● CKA-50CS



● CKA-60CS



● CKA-70CS



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

3-way jaw thin chuck
Chuck

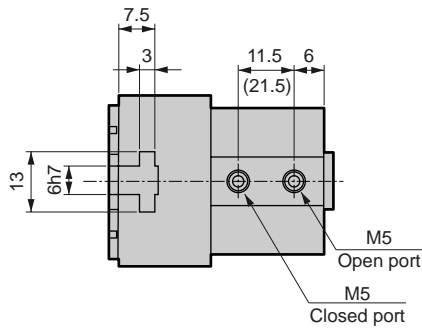


Dimensions

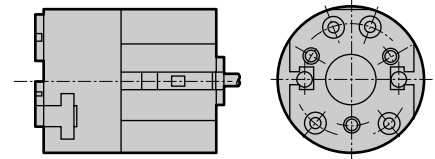
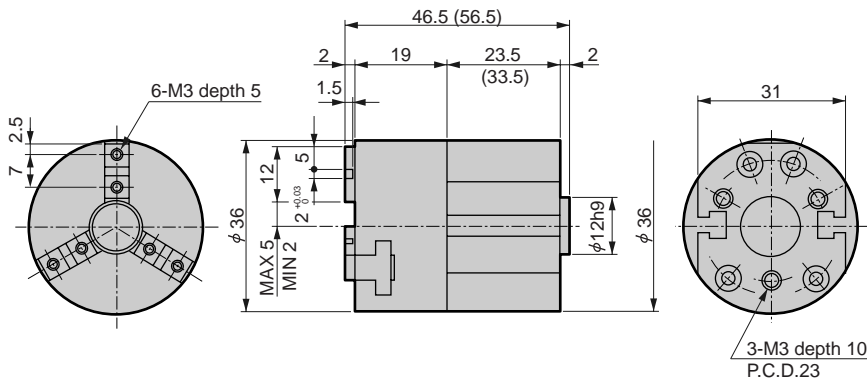
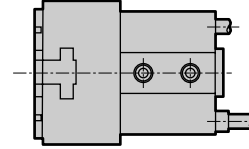
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

● CKA-15CS standard/O/C

● Dimension in () for O [normally open] and C [normally closed] specifications

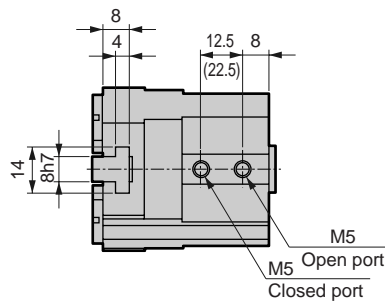


● With switch

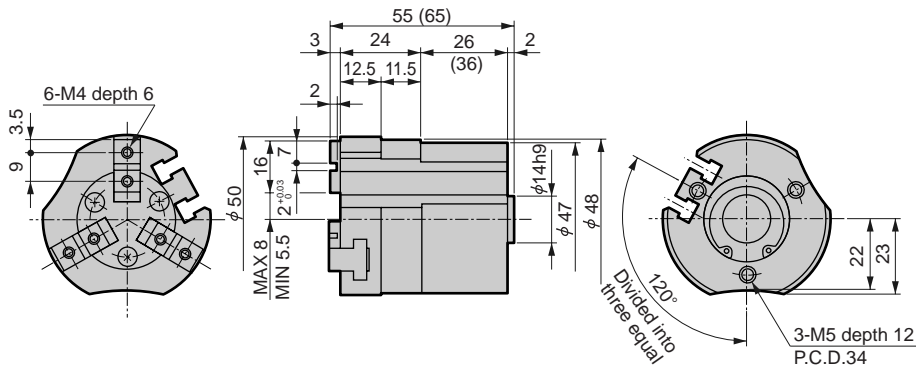
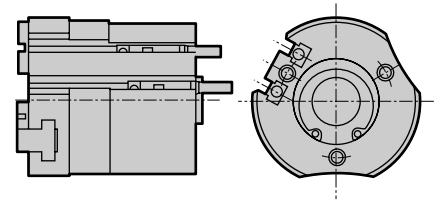


● CKA-20CS standard/O/C

● Dimension in () for O [normally open] and C [normally closed] specifications



● With switch

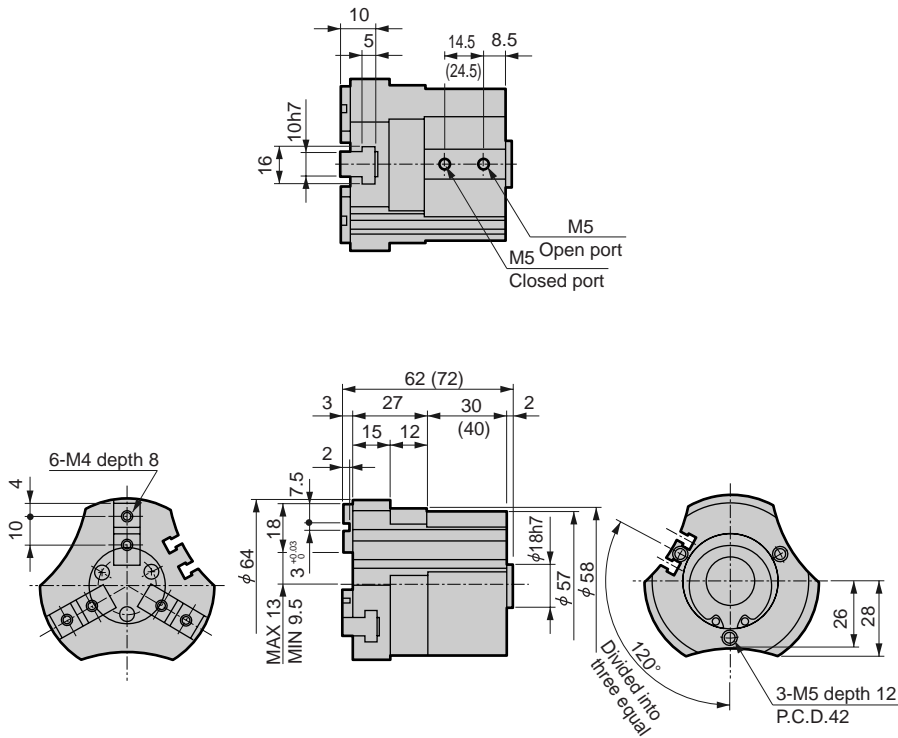


Dimensions

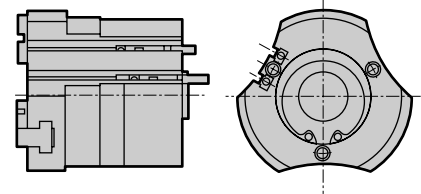


● CKA-25CS standard/O/C

- Dimension in () for O [normally open] and C [normally closed] specifications

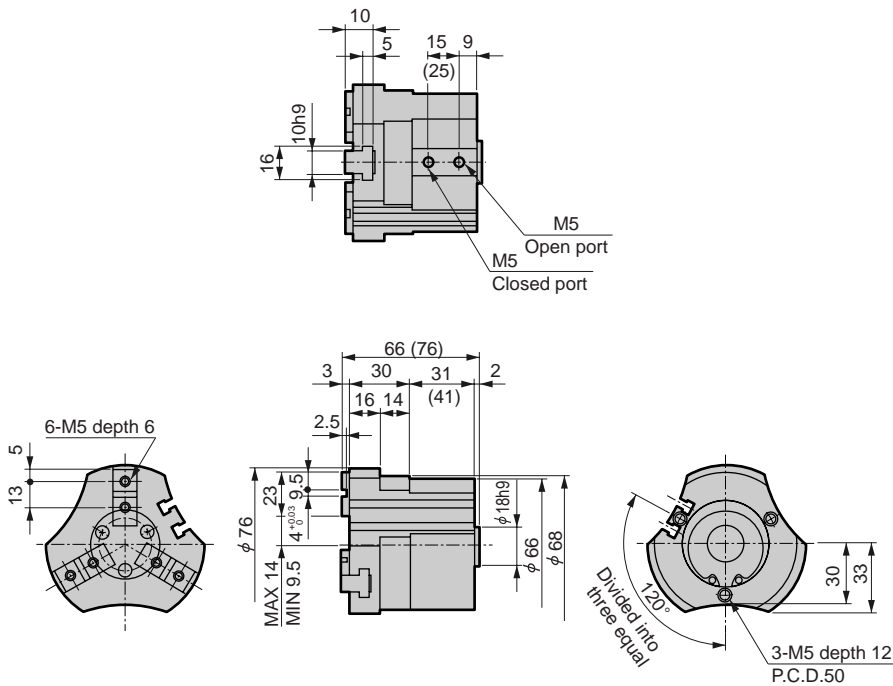


● With switch

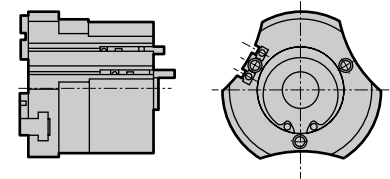


● CKA-30CS standard/O/C

- Dimension in () for O [normally open] and C [normally closed] specifications



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

3-way jaw thin chuck
Chuck

Dimensions

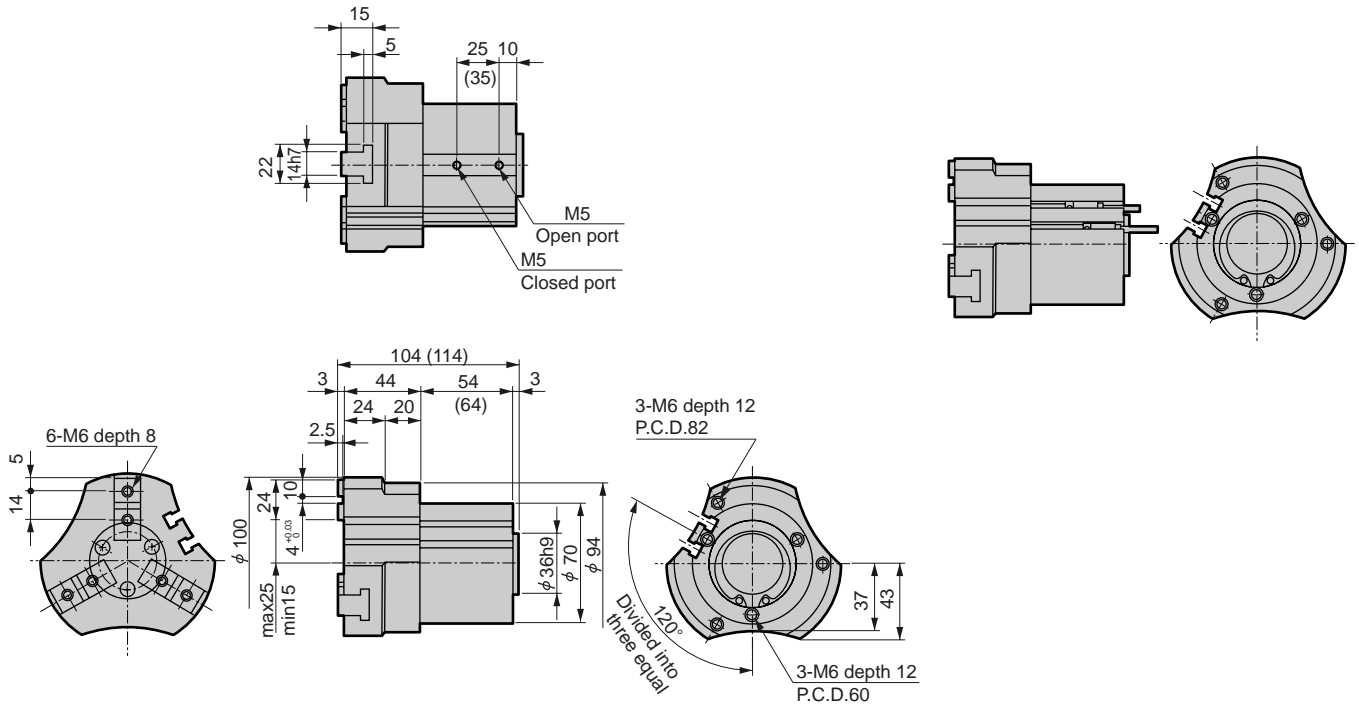


RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

● CKA-40CS standard/O/C

● Dimension in () for O [normally open] and C [normally closed] specifications

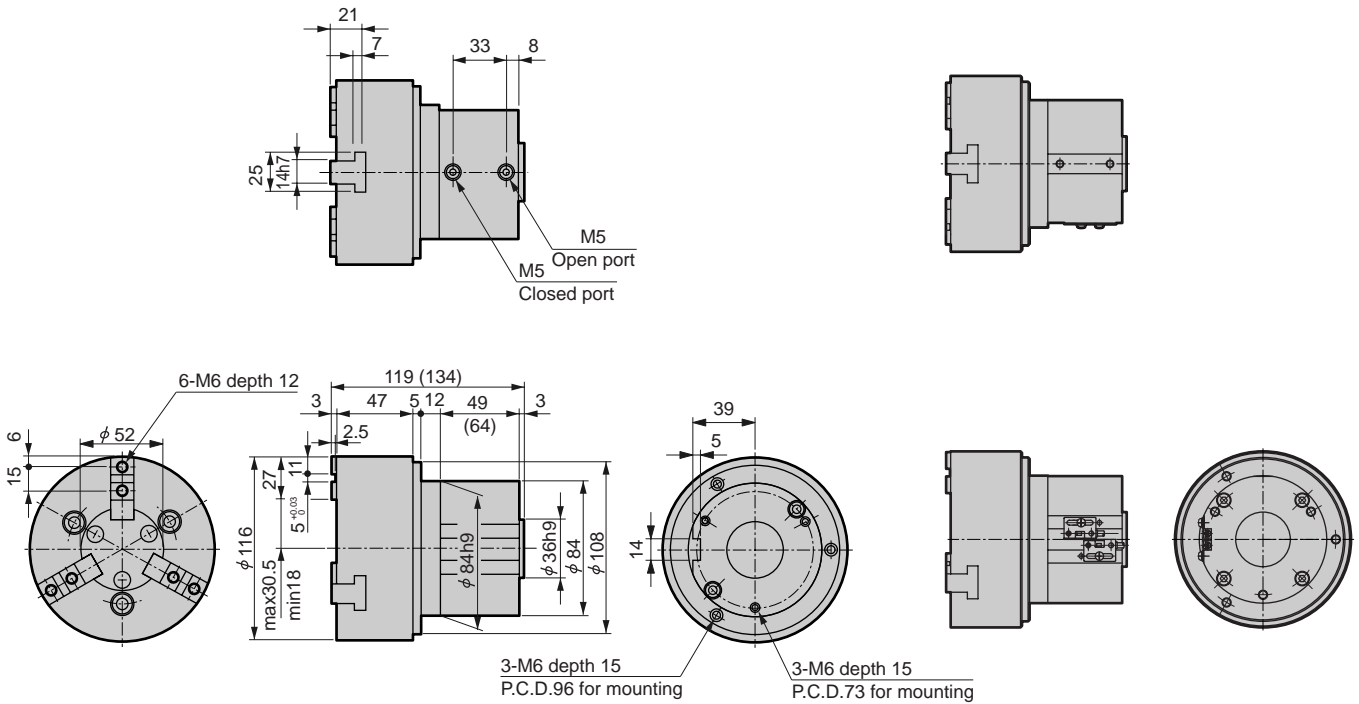
● With switch



● CKA-50CS standard/O/C

● Dimension in () for [normally closed] specifications

● With switch

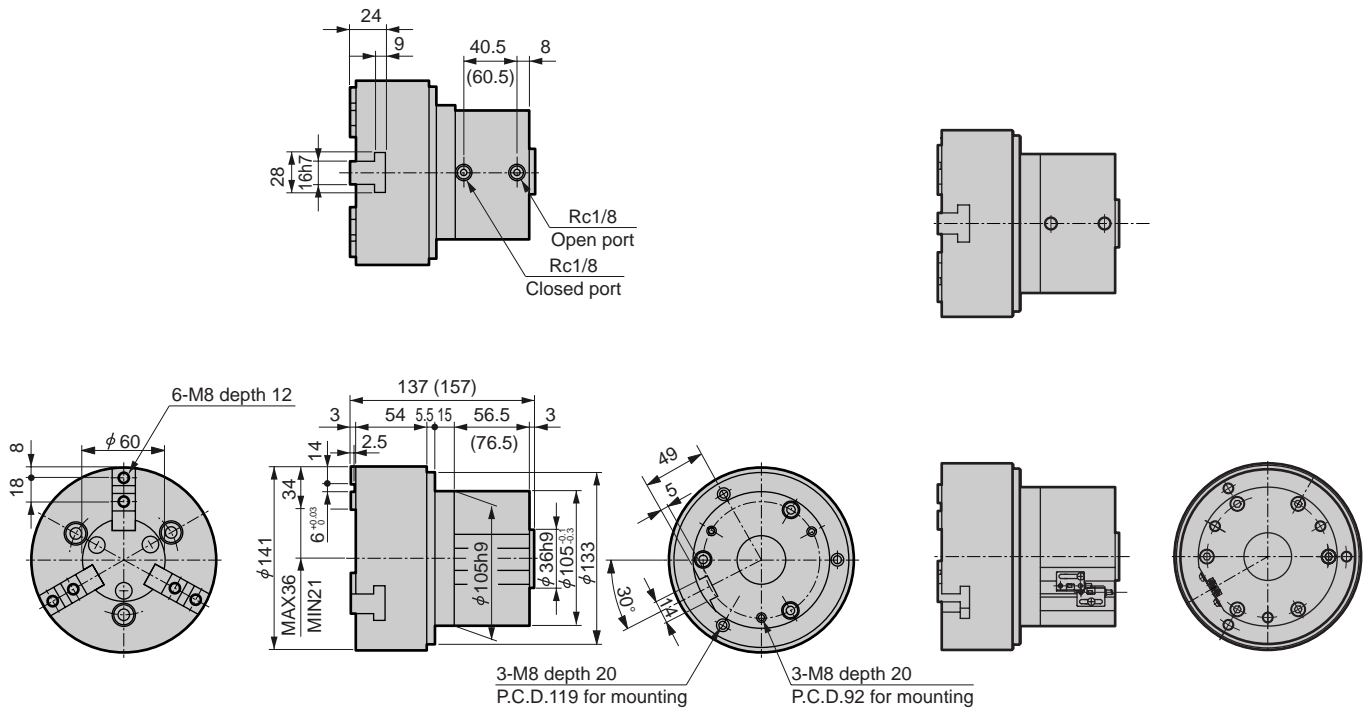


Dimensions

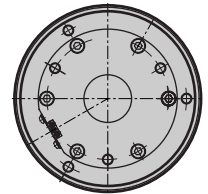
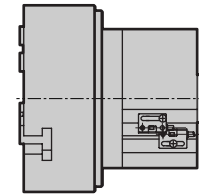
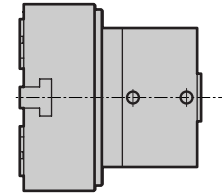


● CKA-60CS standard/O/C

- Dimension in () for C [normally closed] specifications

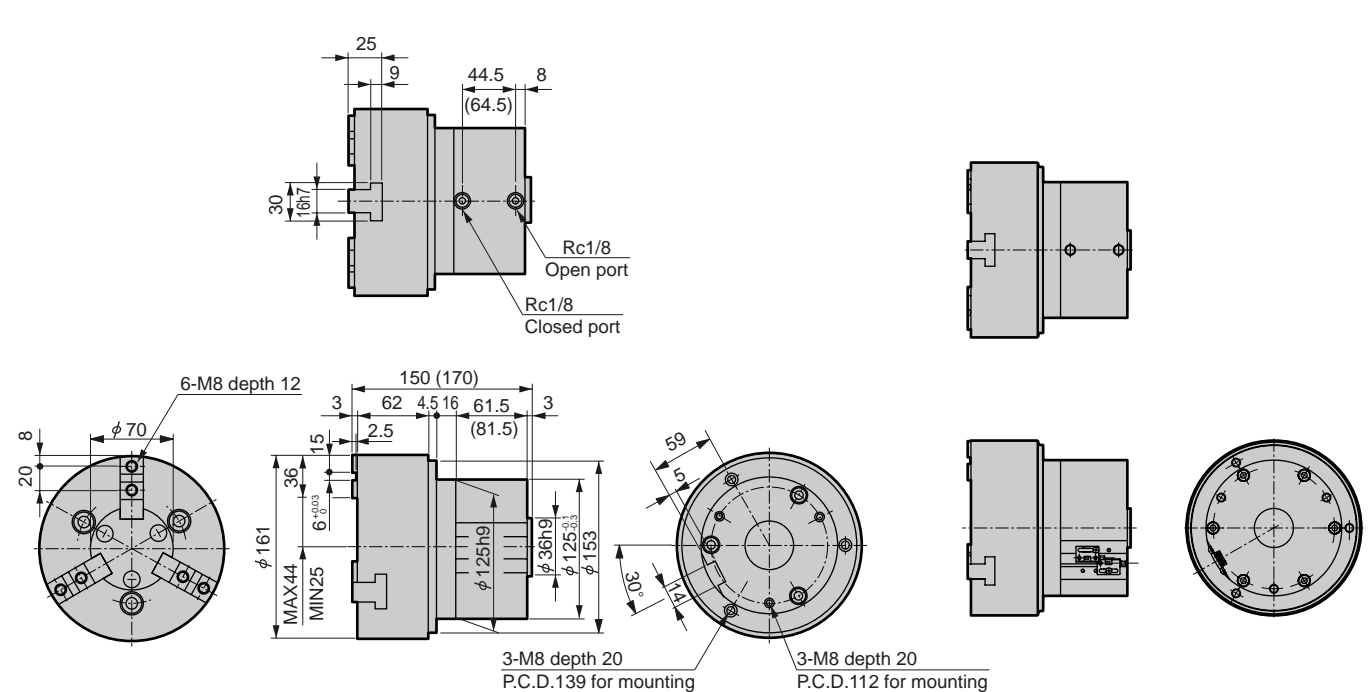


● With switch

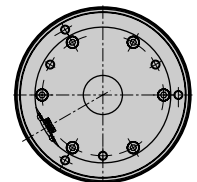
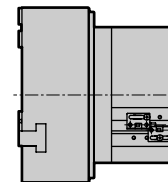
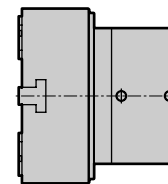


● CKA-70CS standard/O/C

- Dimension in () for C [normally closed] specifications



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

3-way jaw thin chuck
Chuck



Thin chuck

CKS Series

- Operational stroke length: 10, 12, 16, 20, 28, 32mm



Specifications

Descriptions		CKS					
Size		08CS	12CS	16CS	20CS	25CS	32CS
Actuation		Double acting					
Working fluid		Compressed air					
Max. working pressure MPa		0.7					
Min. working pressure MPa		0.2					
Ambient temperature °C		5 to 60					
Port size		M5					
Operational stroke length mm		10	12	16	20	28	32
Cylinder diameter	Open direction	φ 6×3	φ 10×3	φ 12×3	φ 16×3	φ 20×3	φ 25×3
	Closed direction	φ 8×3	φ 12×3	φ 16×3	φ 20×3	φ 25×3	φ 32×3
Capacity of reciprocating cm ³		1.2	3.5	7.6	15.5	33.8	62.2
Repeatability mm		± 0.01					
Product weight kg		0.16	0.26	0.40	0.63	1.14	1.8
Lubrication		Not required (use turbine oil Class 1 ISO VG32 for lubrication)					

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/T2V	T3H/T3V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less
Maximum shock resistance	980m/s ²	
Lead wire	Standard 1m (oil resistant vinyl cable 2-conductor 0.2mm ²)	Standard 1m (oil resistant vinyl cable 3-conductor 0.2mm ²)

Note 1: Maximum load current above: 20mA applies at 25°C.

The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA with 60°C)

How to order

Without switch

CKS - **16CS** - **Y1**

With switch

CKS - **16CS** - **Y1** - **T2H** - **R**

Model no.

A Size

B Option
Note 1

C Switch model no.

* indicates lead wire length.

D Switch quantity

Symbol	Descriptions			
A Size				
08CS				
12CS				
16CS				
20CS				
25CS				
32CS				
B Option				
Blank	Standard (double acting)			
W	With spring			
Y1	With small jaw material: S50C			
Y2	With small jaw material: MC nylon			
C Switch model no.				
Radial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

Note 1: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw.
When ordering as option, 3 pieces are provided.

<Example of model number>

CKS-16CS-Y1-T2H-R

Thin chuck

- A** Size: 16CS
- B** Option: With small jaw Material: S50C
- C** Switch model no.: Proximity T2H switch, lead wire 1m
- D** Switch quantity: One on open side

How to order switch

SW - **T2H***

Switch model no.
(Item above **C**)

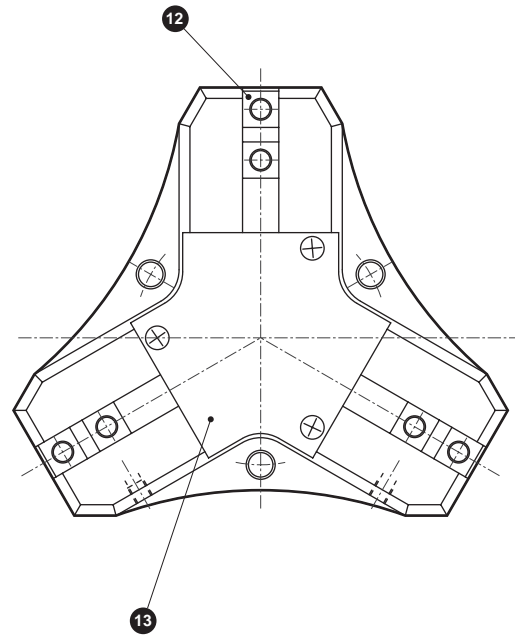
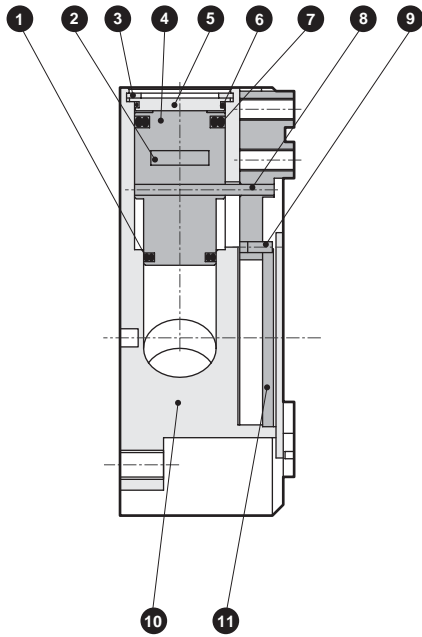
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck
Chuck

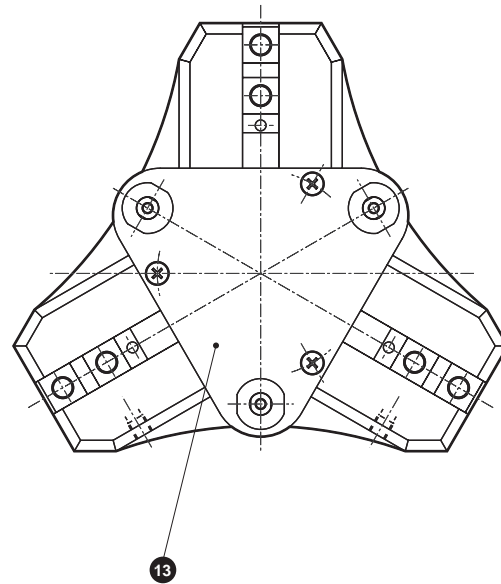
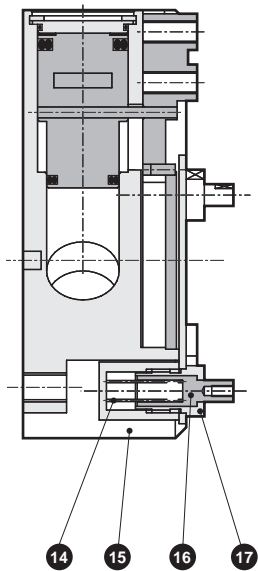
Internal structure and parts list

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

● CKS standard



● W (with spring)

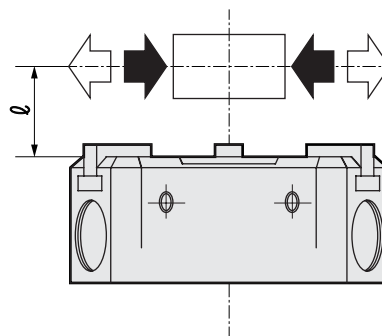


No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Piston seal B	Nitrile rubber		10	Body	Aluminum alloy	
2	Magnet			11	Link	Steel	
3	C type snap ring	Stainless steel		12	Master key	Steel	
4	Piston	Aluminum alloy		13	Center guard	Stainless steel	
5	Cylinder guard	Aluminum alloy		14	Spring	Steel	
6	Cylinder sealant	Nitrile rubber		15	Case	Stainless steel	
7	Piston seal A	Nitrile rubber		16	Pin	Stainless steel	
8	Operation axis A	Alloy steel		17	Nut	Stainless steel	
9	Operation axis B	Alloy steel					

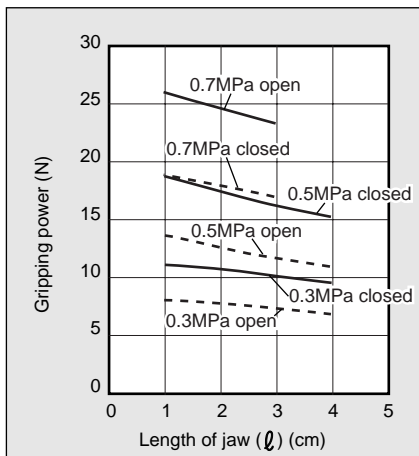
Gripping performance data

Gripping power which functions to open direction and closed direction with length ℓ of hand jaw at supply pressure 0.3, 0.5, 0.7 MPa is shown.

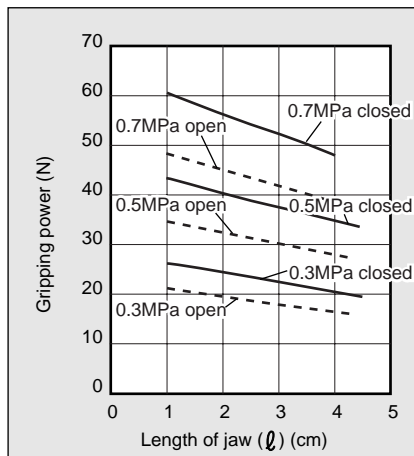
- Open direction (←) - - - - - (shown with broken line)
- Closed direction (→) - - - - - (shown with continuous line)



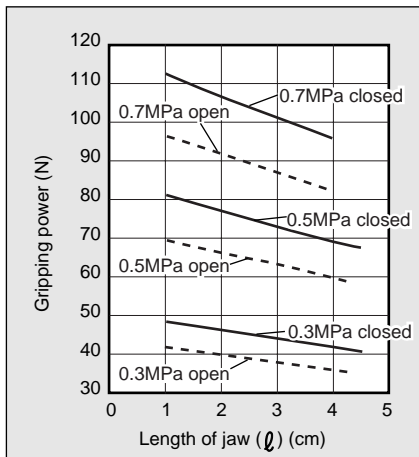
● CKS-08CS



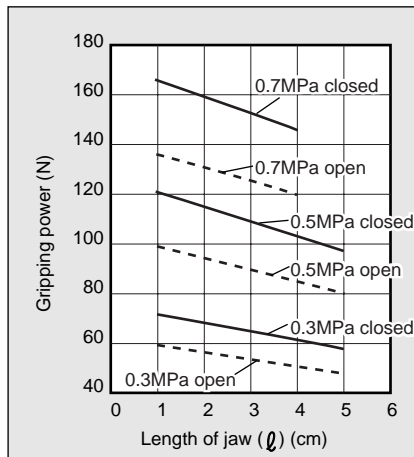
● CKS-12CS



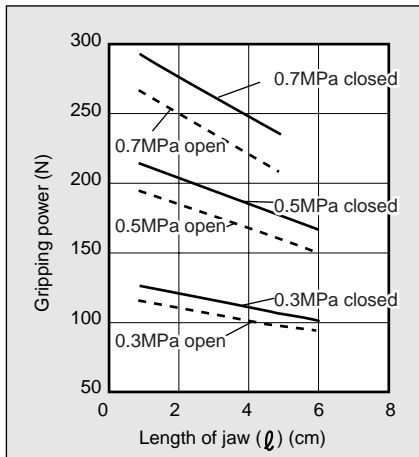
● CKS-16CS



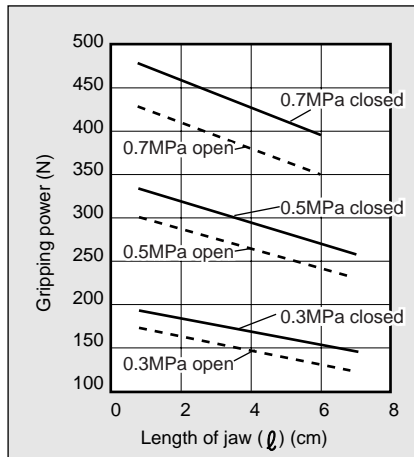
● CKS-20CS



● CKS-25CS



● CKS-32CS



(Note) Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

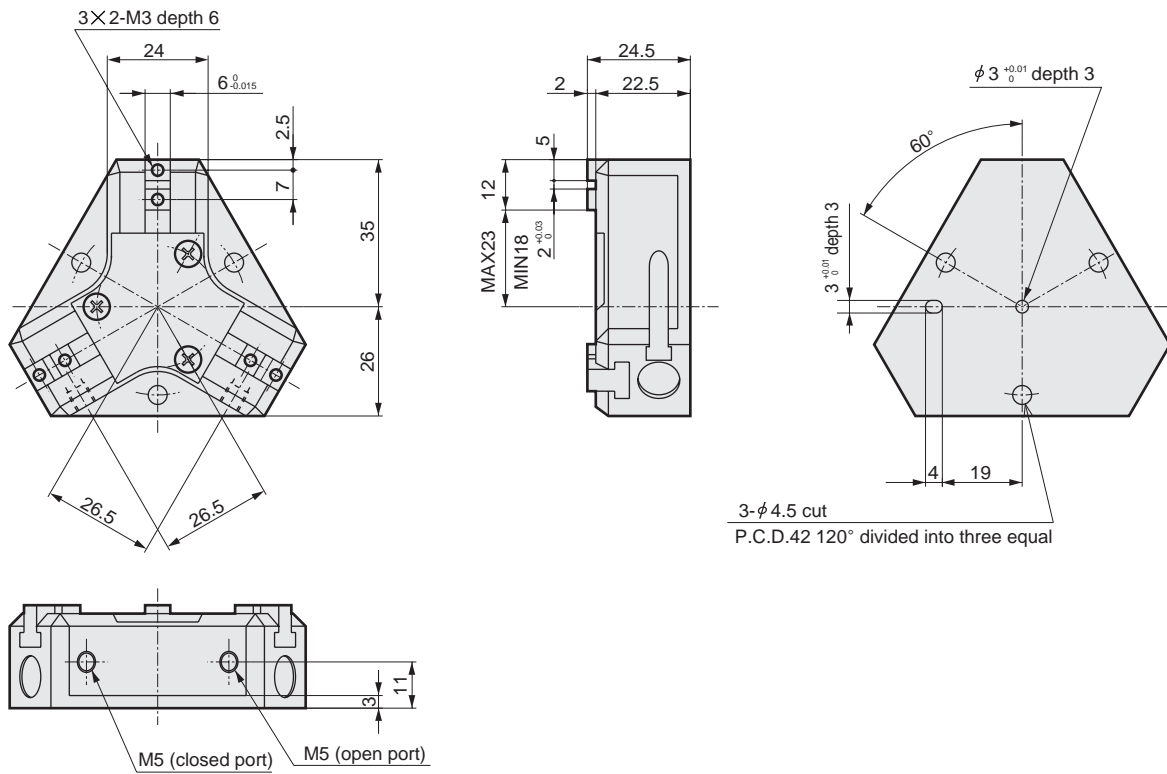
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Thin chuck
Chuck

Dimensions

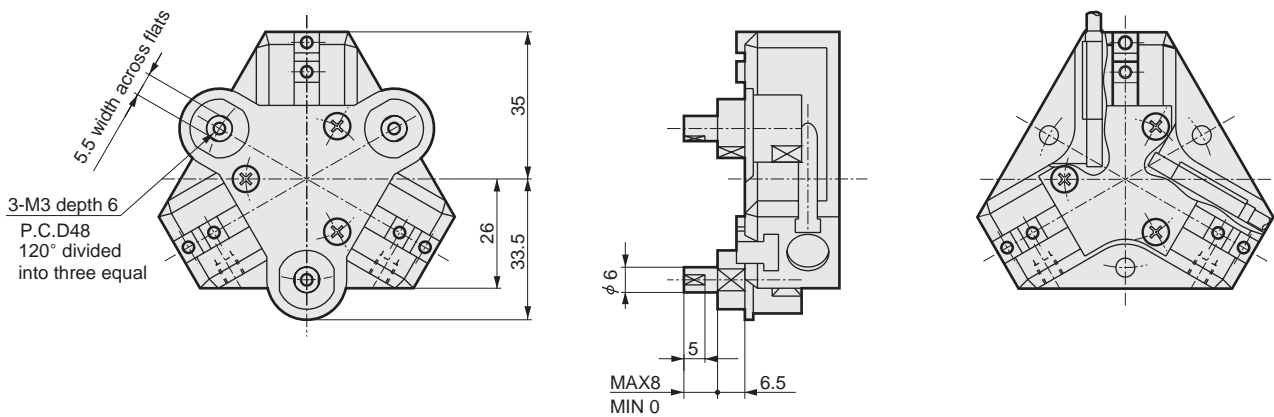


● CKS-08CS standard



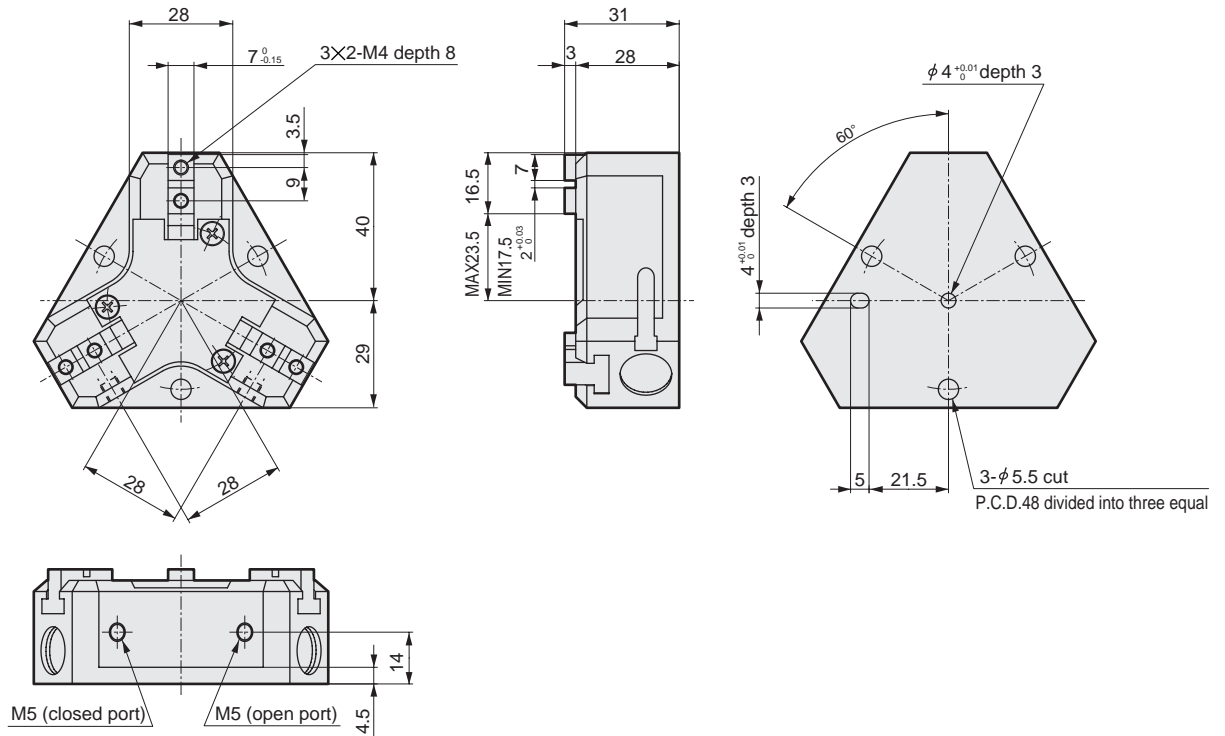
● CKS-08CS-W (with spring) (spring force (3 pcs.) 2.1 to 4.8N)

● With switch



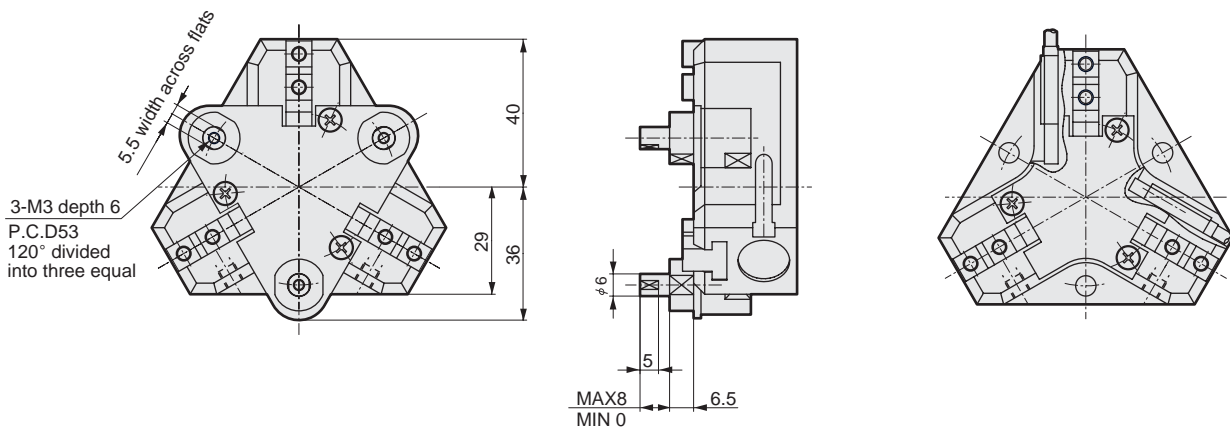
Dimensions

- CKS-12CS standard



- CKS-12CS-W (with spring) (spring force (3 pcs.) 4.5 to 11.4N)

- With switch



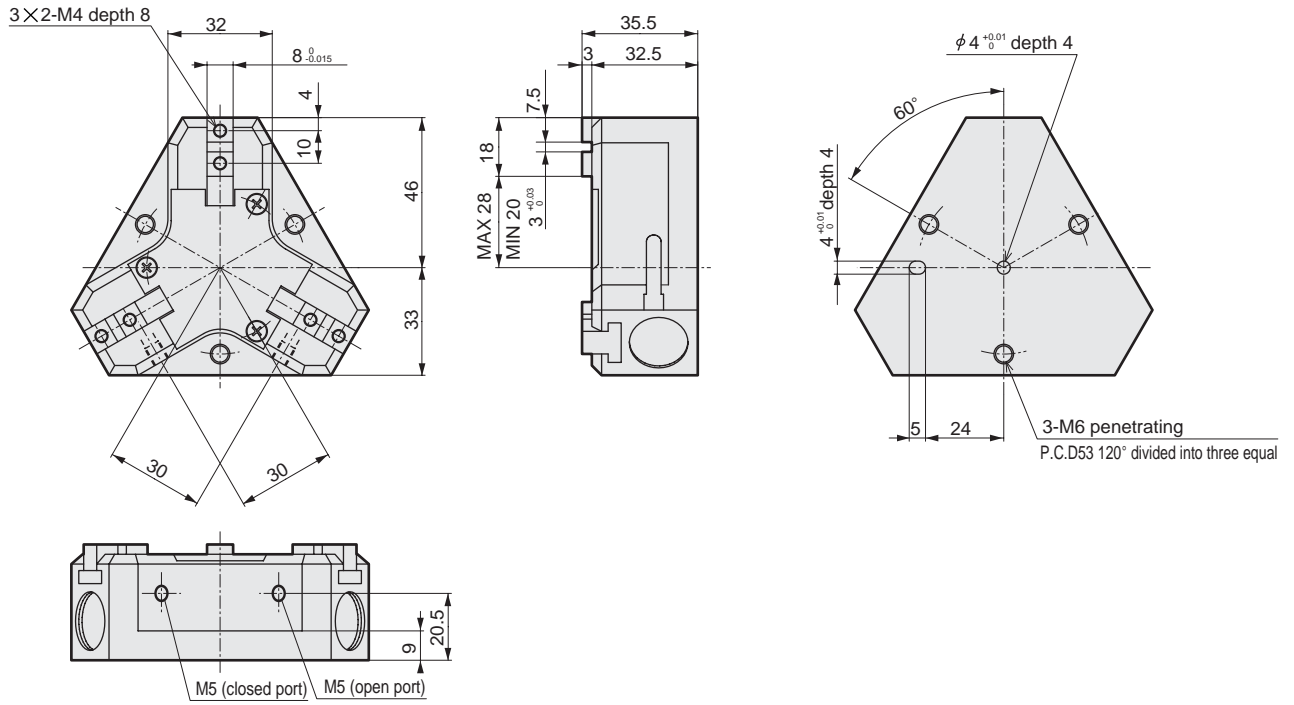
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck
Chuck

Dimensions

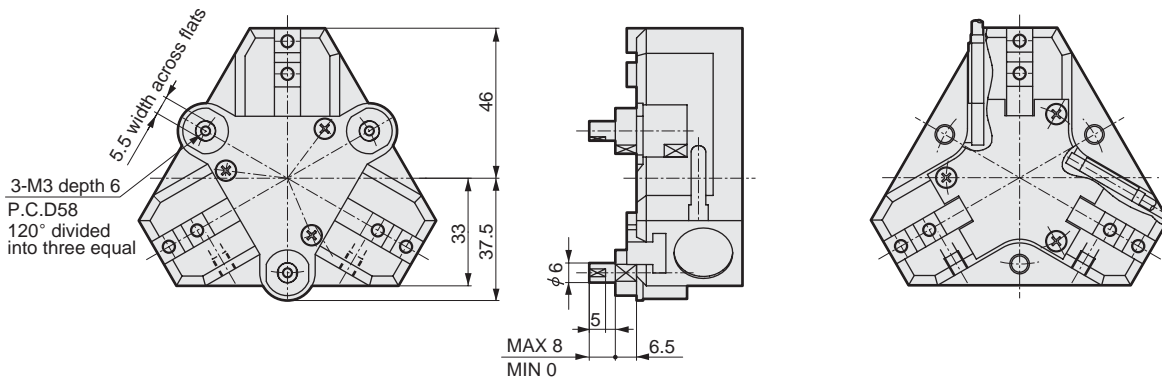


● CKS-16CS standard



● CKS-16CS-W (with spring) (spring force (3 pcs.) 7.2 to 19N)

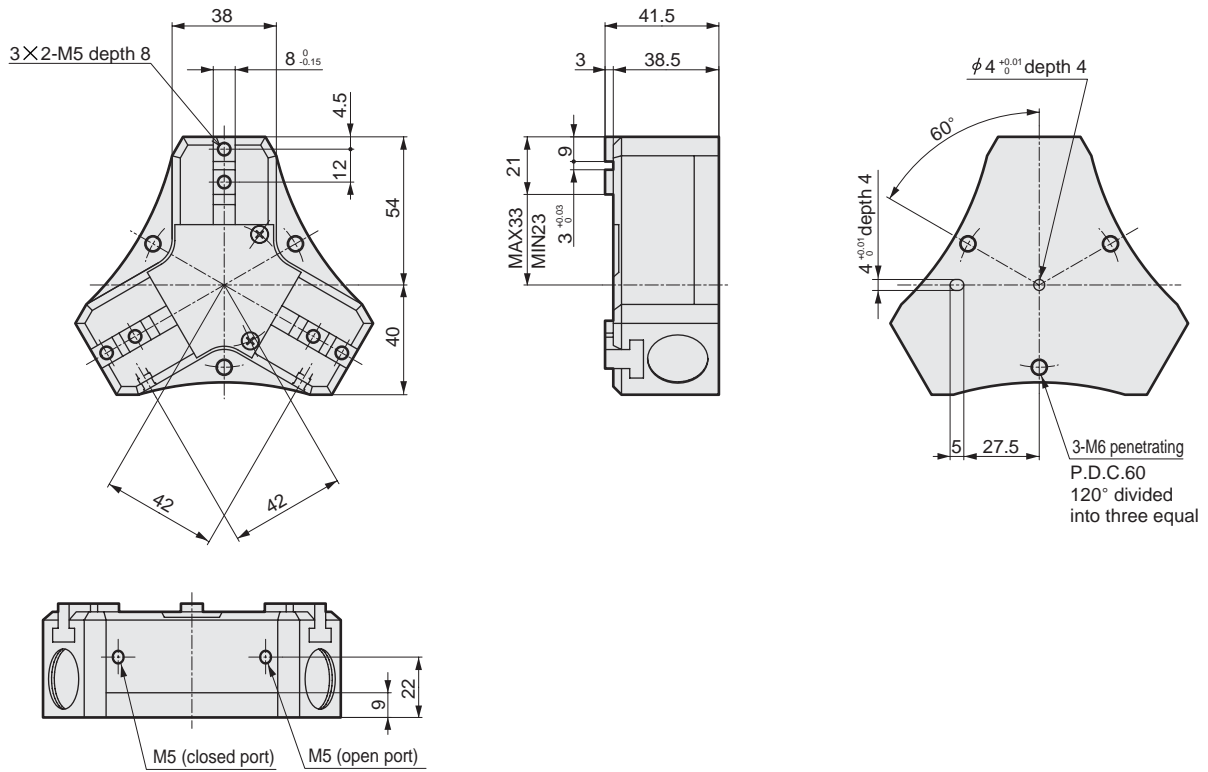
● With switch



- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS**
- CKF
- CKJ
- CKL2
- CKL2 *-HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

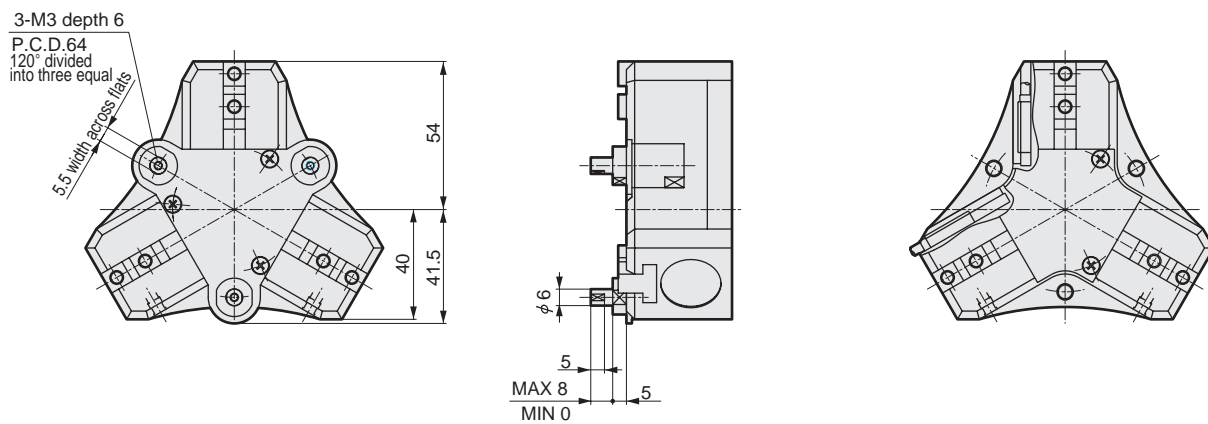
Dimensions

- CKS-20CS standard



- CKS-20CS-W (with spring) (spring force (3 pcs.) 7.5 to 28N)

- With switch



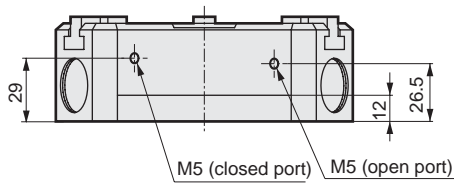
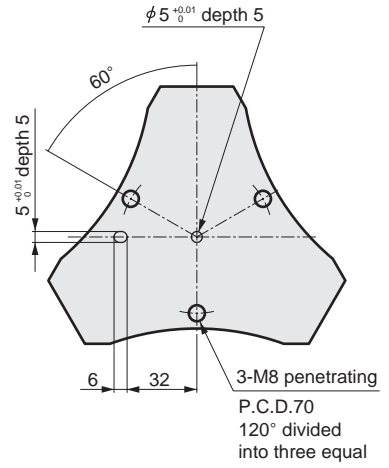
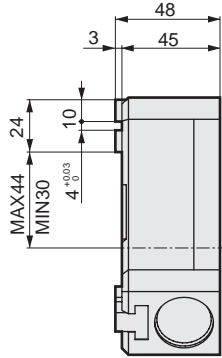
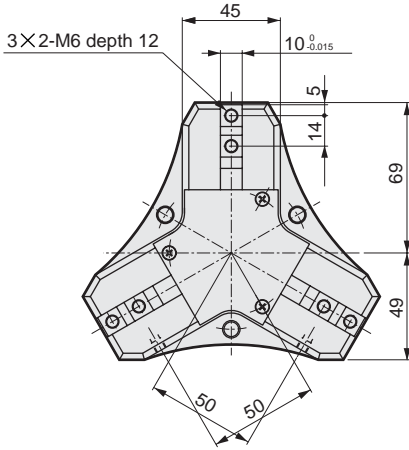
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck
Chuck

Dimensions

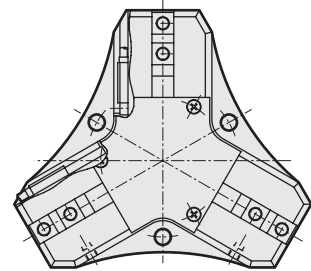
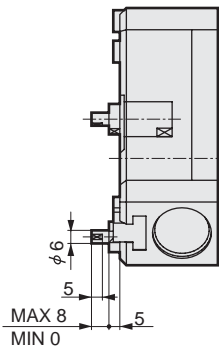
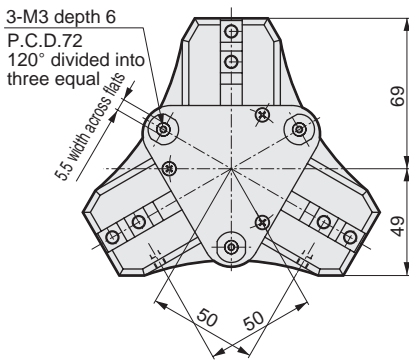


● CKS-25CS standard



● CKS-25CS-W (with spring) (spring force (3 pcs.) 15 to 39N)

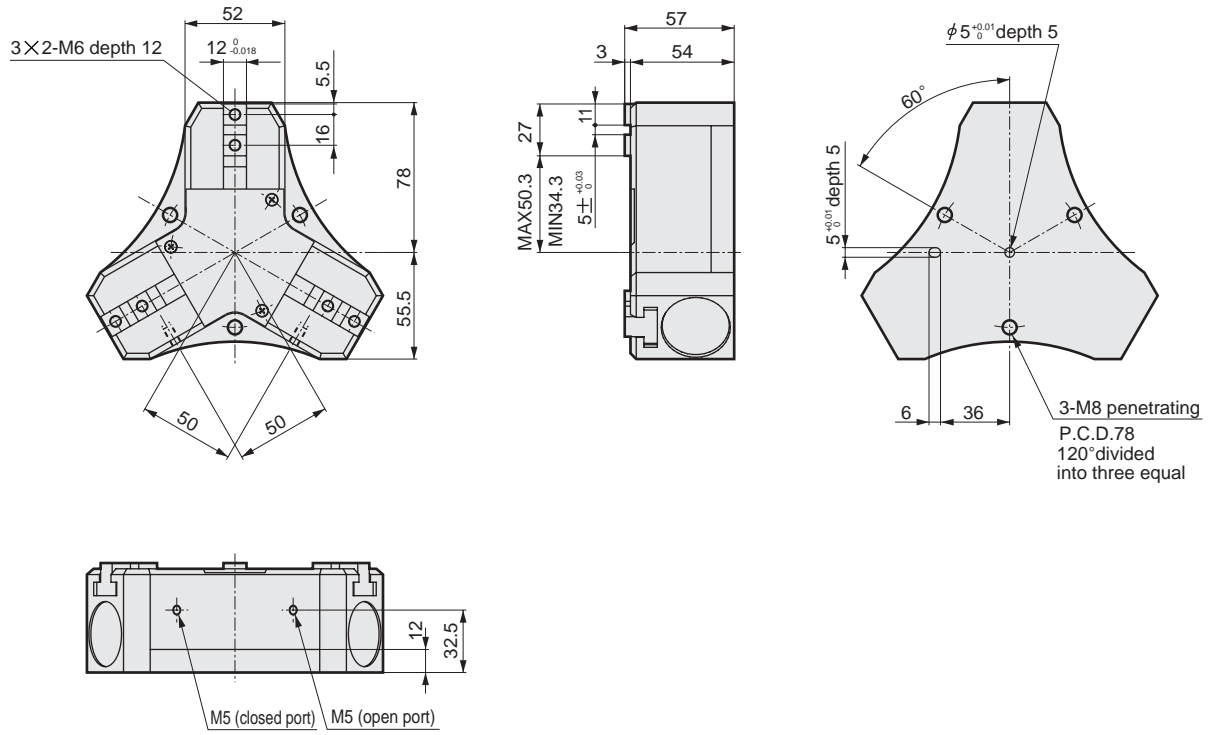
● With switch



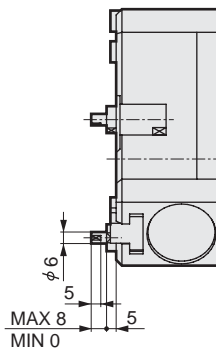
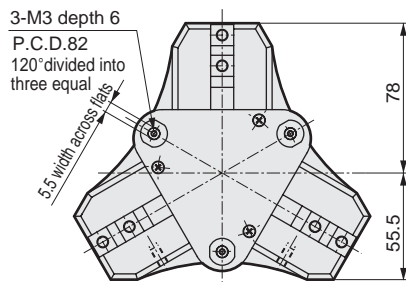
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/
BHG
- LHA
- LHAG
- HKP
- HLA/
HLB
- HLAG/
HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS**
- CKF
- CKJ
- CKL2
- CKL2
-*-HC
- CKH2
- CKLB2
- NCK/
SCK/FCK
- FJ
- FK
- Ending

Dimensions

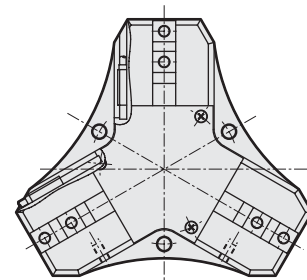
● CKS-32CS standard



● CKS-32CS-W (with spring) (spring force (3 pcs.) 26 to 67N)



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck
Chuck



Hollow chuck double acting/single acting

CKF Series

- Operational stroke length: 5, 7, 8, 16mm



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
*-HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending

Specifications

Descriptions	CKF				
	15CS	20CS	25CS	30CS	40CS
Size					
Cylinder bore size mm	φ 30		φ 40	φ 50	φ 80
Actuation	Double acting/single acting				
Working fluid	Compressed air				
Max. working pressure MPa	0.7				
Min. working pressure MPa	0.3				
Ambient temperature °C	5 to 60				
Port size	M5				
Operational stroke length mm	5		7	8	16
Rod diameter mm	φ 16		φ 24	φ 28	φ 34
Capacity of reciprocating cm ³	2.5	5.2	7.3	13.3	73.2
Hollow diameter mm	φ 5.5	φ 8.4	φ 10.4	φ 12	φ 16
Repeatability mm	± 0.03				
Product weight kg	0.29	0.43	0.63	1.2	2.3
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)				

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10 ^μ A or less

Note 1: Max. load current above: 20 mA at 25°C. If ambient temperature around switch is higher than 25°C, 5 to 10mA at 60°C for T2 type, while 5 to 15mA at 60°C for S2 type.

How to order

Without switch

CKF - 15CS - O

With switch

CKF - 15CS - O - T2H - R

A Size

B Option
Note 1, Note 2

C Switch model no.
Note 3

D Switch quantity

⚠ Note on model no. selection

Note 1: Y11 and Y12 are available for CKF-15CS, while Y11, Y12 and Y21 are available for CKF-20CS to 30CS, and Y11 and Y21 are available for CKF-40CS.

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw. When ordering as option, 3 pieces are provided.

Note 3: Switches other than C switch model no. are available. (Custom order) Refer to Ending 1 for details.

Symbol	Descriptions			
A Size				
15CS				
20CS				
25CS				
30CS				
40CS				
B Option				
Blank	Standard (double acting)			
O	Single acting (normally open)			
C	Single acting (normally closed)			
Y11	With small jaw material (S50C) Outer mount chuck (small jaw No.: 510 to 540,710)			
Y12	With small jaw material (S50C) Inner mount chuck (small jaw No.: 610 to 630)			
Y21	With small jaw material (MC nylon) Outer mount chuck (small jaw No.: 510 to 540,710)			
Y22	With small jaw material (MC nylon) Inner mount chuck (small jaw No.: 610 to 630)			
C Switch model no.				
Axial lead wire	Radial lead wire	Proximity Contact	Indicator	Lead wire
T2H*	T2V*	1 color indicator type		2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

<Example of model number>

CKF-15CS-O-T2H-R

Model: Hollow chuck

- A Size : 15CS
- B Option : Single acting, normally open type
- C Switch model no.: Proximity T2H switch, lead wire 1m
- D Switch quantity : One on open side

How to order switch

SW - T2H

Switch model no.
(Item above C)

CKF-30CS, 40CS

- For switch T*H*
- Switch body + mounting bracket

CKF - T2H

Switch model no.
(Item above C)

- For switch T*V*
- Switch body + mounting bracket

CKF - T2V - *

Switch model no.
(Item above C)

(Select either R (open) or H (closed) for sections marked with an asterisk (*).)

CKF-30CS, 40CS

- Mounting bracket

CKF - T

- Mounting bracket

CKF - TV - *

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

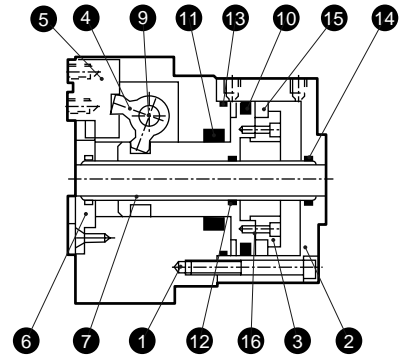
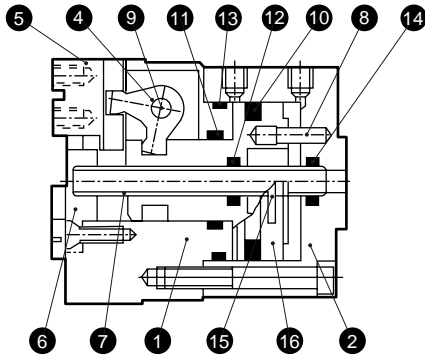
Hollow chuck
Chuck

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

Internal structure and parts list

● CKF-15CS to 25CS

● CKF-30CS to 40CS

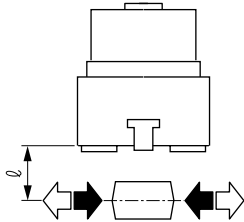


No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Body	Aluminum alloy		9	Fulcrum axis	Steel	
2	Cylinder	Aluminum alloy		10	Piston packing seal	Nitrile rubber	
3	Piston B	Stainless steel		11	Rod packing seal	Nitrile rubber	
4	Arm	Steel		12	Guide rod packing seal	Nitrile rubber	
5	Master key	Steel		13	Cylinder gasket	Nitrile rubber	
6	Center guard	Aluminum alloy		14	Pipe fixing gasket	Nitrile rubber	
7	Guide pipe	Stainless steel		15	Magnet		
8	Stopper pin	Stainless steel		16	Piston A	Stainless steel	

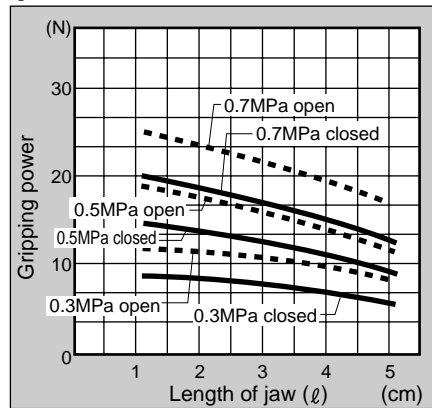
Gripping performance data

Gripping power which functions to open direction and closed direction with length ℓ of hand jaw at supply pressure 0.3, 0.5, 0.7 MPa is shown.

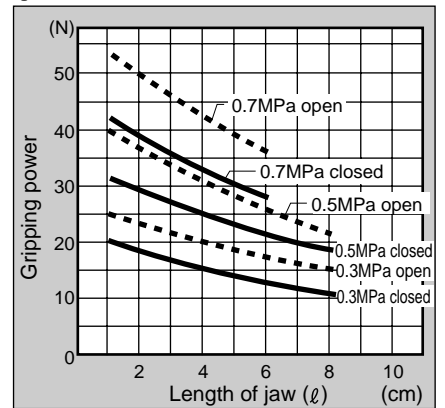
- Open direction (←) (shown with broken line)
- Closed direction (→) ——— (shown with continuous line)



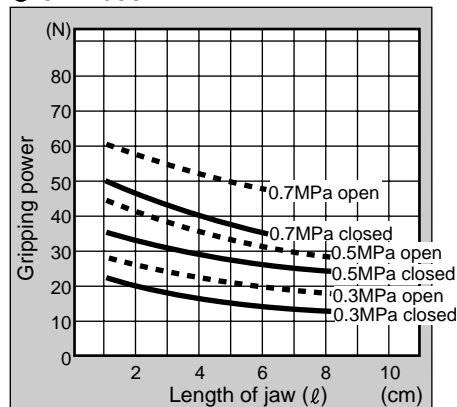
● CKF-15CS



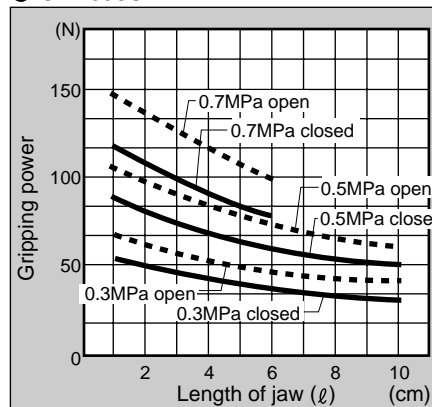
● CKF-20CS



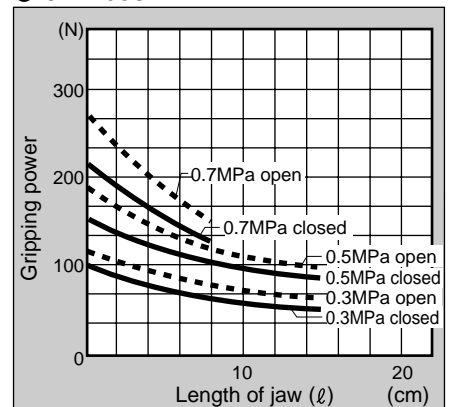
● CKF-25CS



● CKF-30CS



● CKF-40CS



(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.
 C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction.
 Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

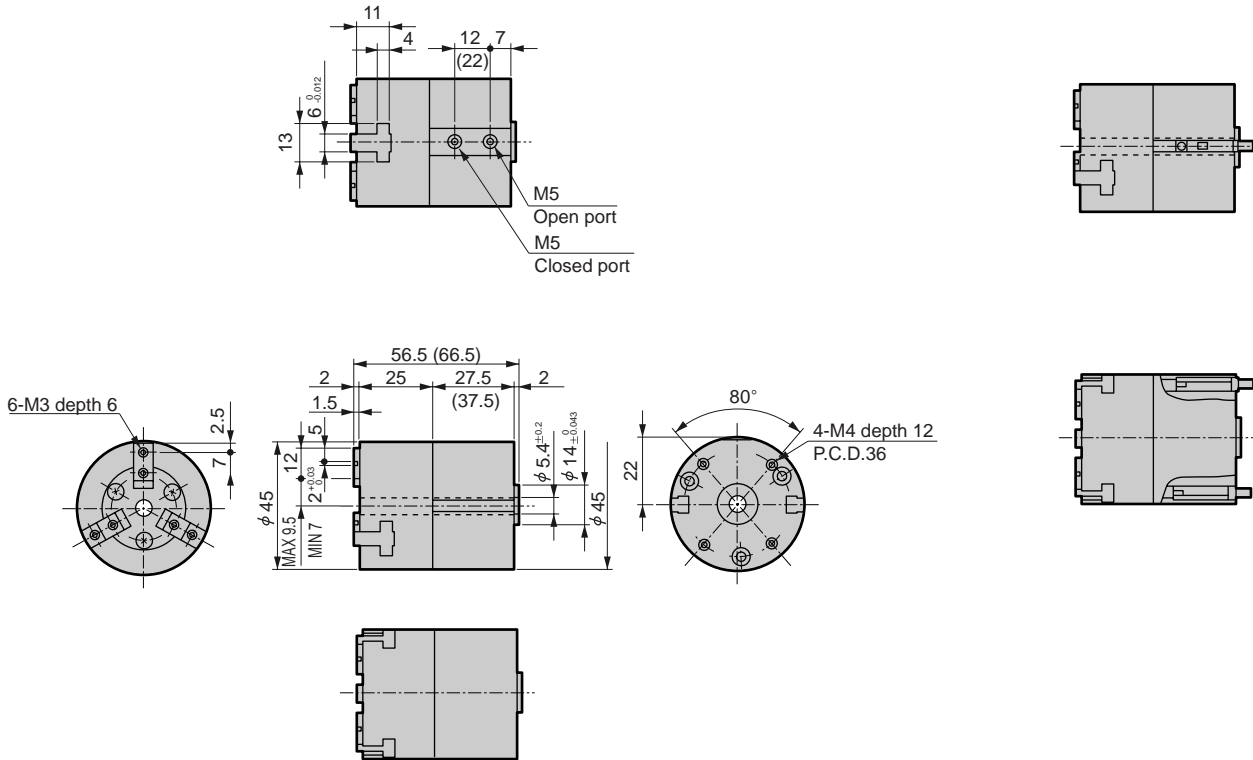
Dimensions



● CKF-15CS standard/O/C

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

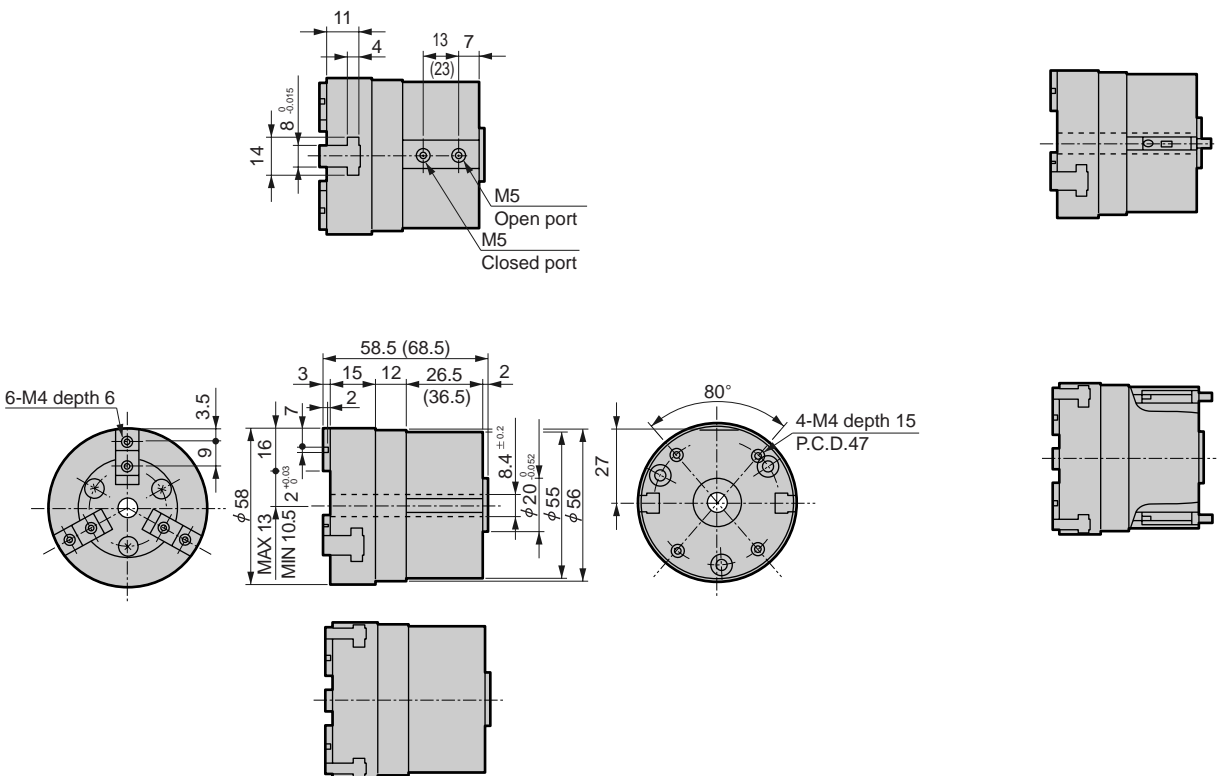
● With switch



● CKF-20CS standard/O/C

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

● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Hollow chuck
Chuck

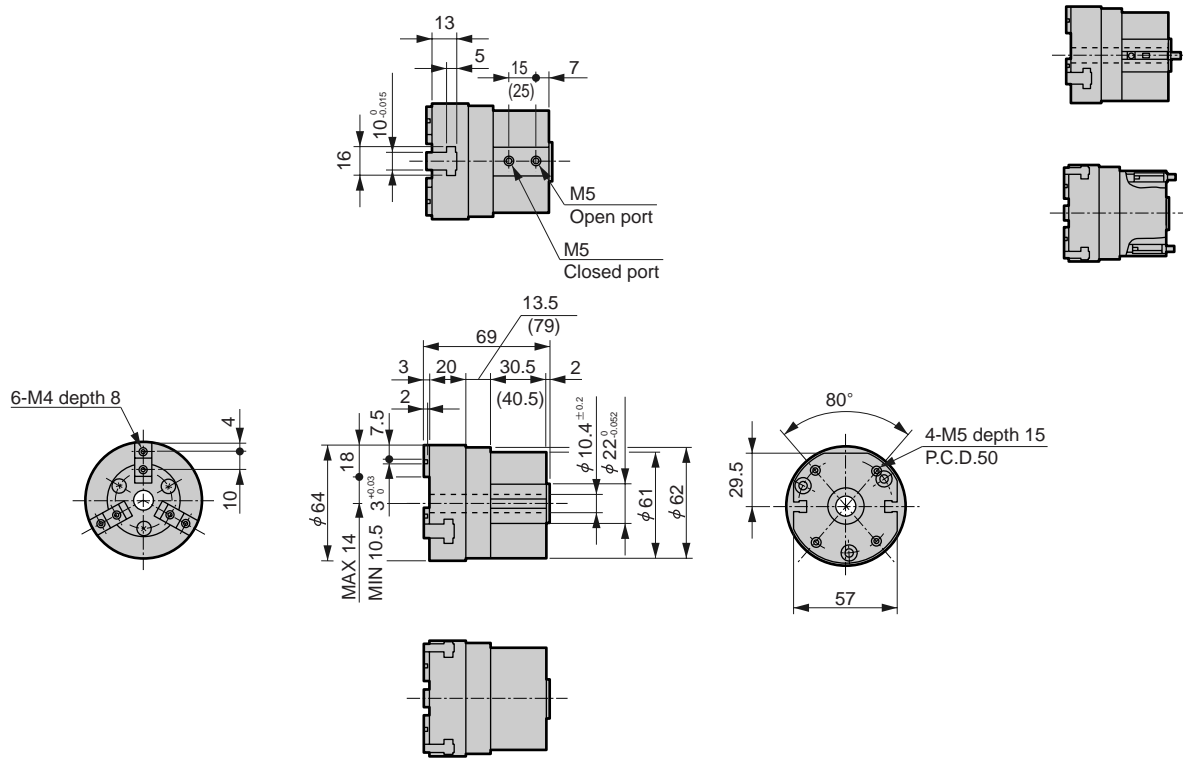
Dimensions



● CKF-25CS standard/O/C

● With switch

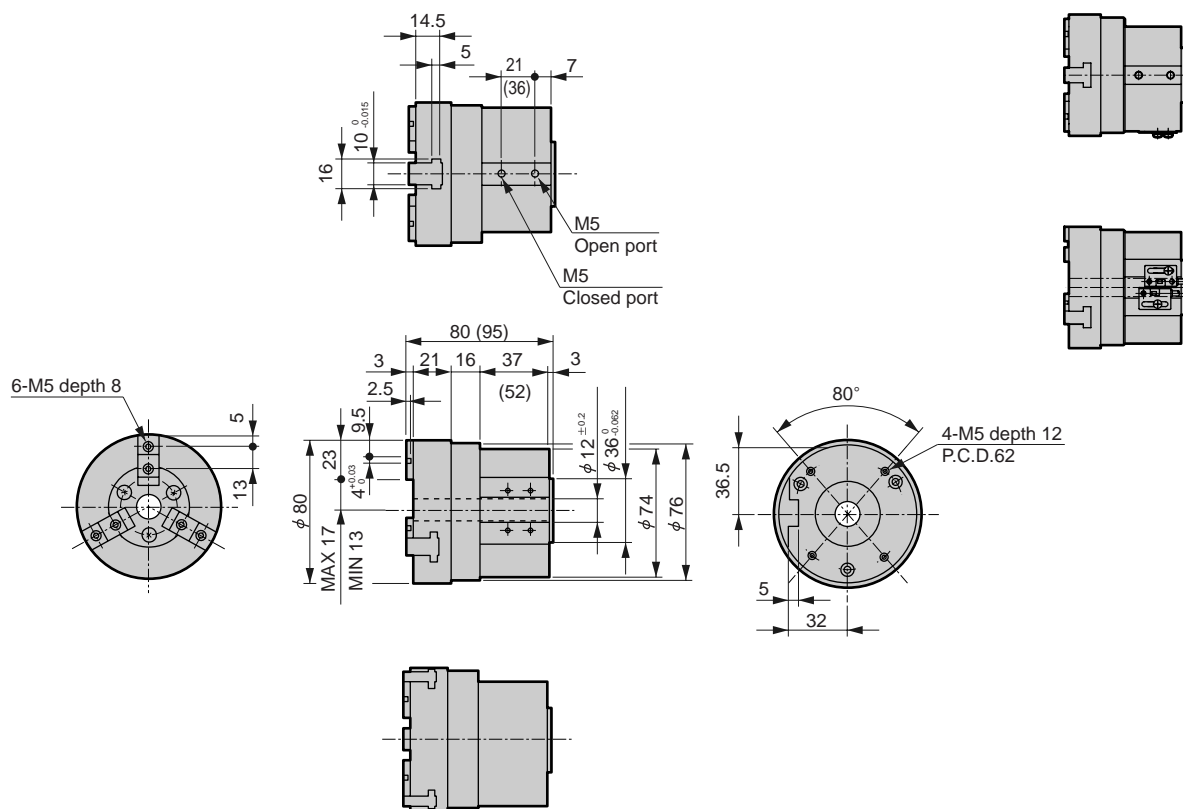
· Dimension in () for O [normally open] and C [normally closed] specifications.



● CKF-30CS standard/O/C

● With switch

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



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2-*.HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

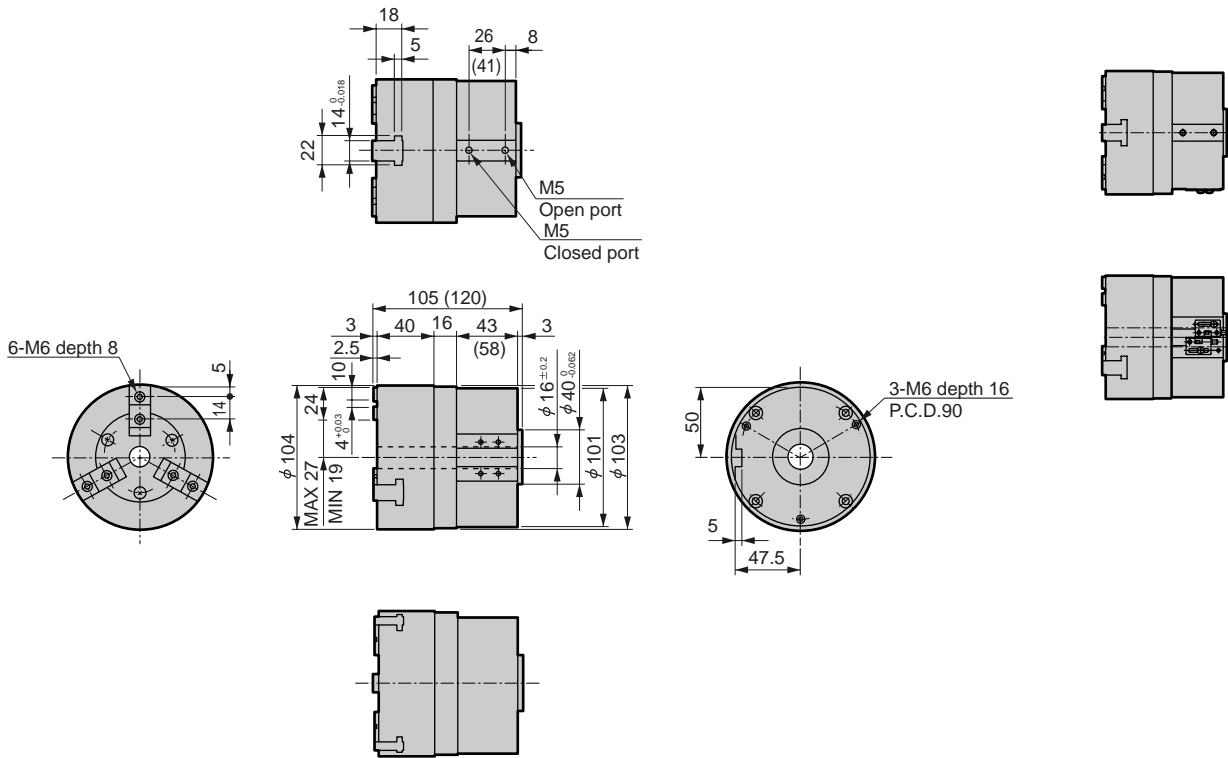
Dimensions



● CKF-40CS standard/O/C

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

● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Hollow chuck
Chuck



Ultra long stroke chuck double acting
(Standard/short stroke)

CKJ Series

- Operational stroke length: Standard 80,130mm
Short stroke 40, 65mm



Specifications

Descriptions	CKJ					
	16CS		40CS		63CS	
Size	Standard	S1	Standard	S1	Standard	S1
Cylinder bore size mm	$\phi 12 \times 6$		$\phi 32 \times 6$		$\phi 50 \times 6$	
Working fluid	Compressed air					
Max. working pressure MPa	0.7					
Min. working pressure MPa	0.3					
Ambient temperature °C	5 to 60					
Port size	M5				Rc1/8	
Operational stroke length mm	80	40	80	40	130	65
Rod diameter mm	$\phi 6$		$\phi 12$		$\phi 14$	
Capacity of reciprocating cm ³	47.4	24.0	358.8	179.4	1471.2	735.6
Repeatability mm	± 0.1					
Product weight kg	2.38	1.35	5.6	4.2	18.5	13
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)					

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/T2V	T3H/T3V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC, 100mA or less
Light	LED (ON lighting)	
Maximum shock resistance	980m/s ²	
Leakage current	1mA or less	10 μ A or less

Note 1: Maximum load current above: 20mA applies at 25°C.

If switch ambient temperature is higher than 25°C, value is lower than 20mA. (5 to 10mA with 60°C)

- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS
- CKF
- CKJ**
- CKL2
- CKL2-*.HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

How to order

CKJ - **16CS** - **S1** - **T2H** - **R**

A Size

B Option

C Switch model no.
* indicates lead wire length.

D Switch quantity

Symbol	Descriptions			
A Size				
16CS				
40CS				
63CS				
B Option				
Blank	Standard			
S1	Short stroke			
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

<Example of model number>

CKJ-16CS-S1-T2H-R

Model: Ultra long stroke chuck

- A** Size : 16CS
- B** Stroke length : Short stroke
- C** Switch model no. : Proximity T2H switch, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

SW - **T2H**

Switch model no.
(Item above **C**)

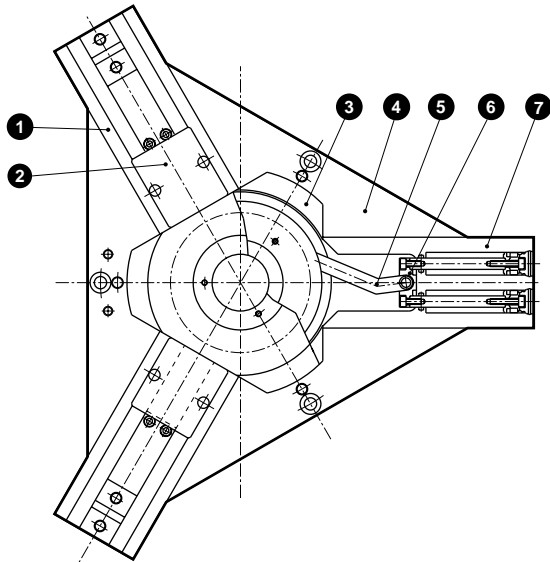
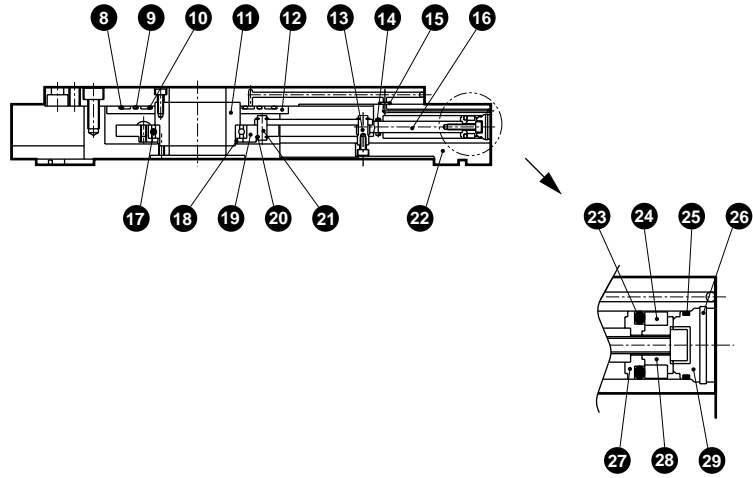
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Ultra long stroke chuck
Chuck

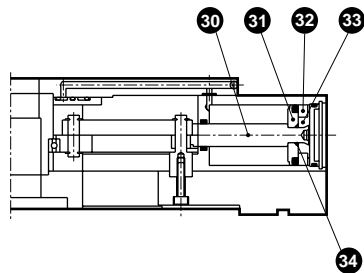
Internal structure and parts list

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 -*.HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

● CKJ-16CS

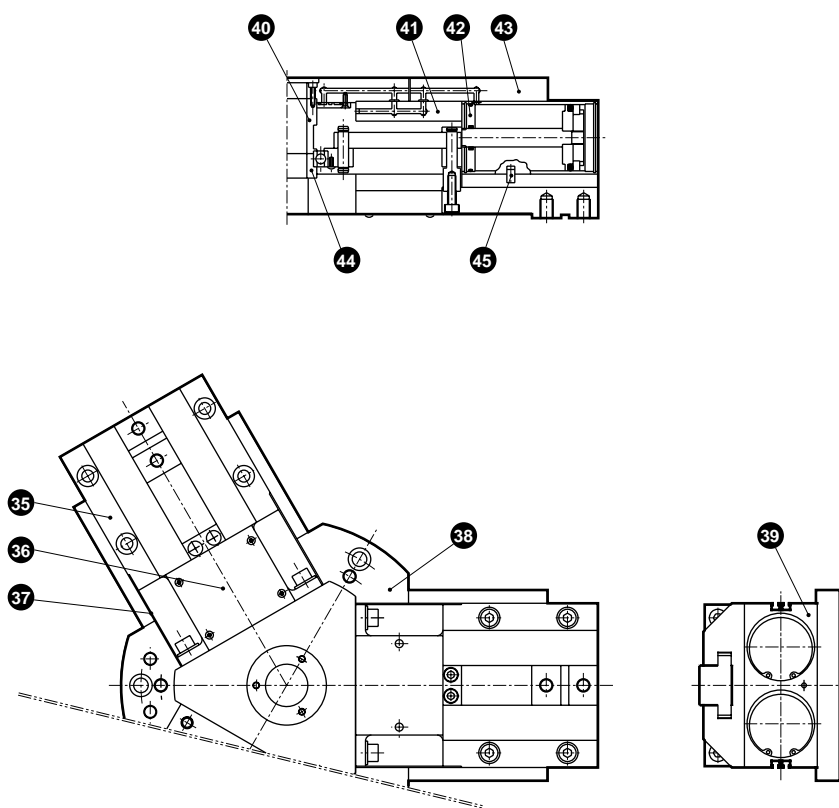


● CKJ-40CS



Internal structure and parts list

● CKJ-63CS



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Cylinder body B	Aluminum alloy		24	Magnet		
2	Guard	Stainless steel		25	Cylinder sealant	Nitrile rubber	
3	Center block	Aluminum alloy		26	C type snap ring	Carbon steel	
4	Base	Aluminum alloy		27	Piston A	Aluminum alloy	
5	Link	Stainless steel	63CS is carbon steel	28	Piston B	Aluminum alloy	63CS is stainless steel
6	Connection block	Stainless steel	63CS is carbon steel	29	Cylinder guard	Acetar resin	63CS is aluminum alloy
7	Cylinder body A	Aluminum alloy		30	Piston rod	Stainless steel	
8	O ring	Nitrile rubber		31	Piston A	Aluminum alloy	
9	O ring	Nitrile rubber		32	Magnet		
10	O ring	Nitrile rubber		33	Piston B	Aluminum alloy	
11	Hollow ring	Aluminum alloy		34	O ring	Nitrile rubber	
12	Piping plate	Aluminum alloy		35	Body	Aluminum alloy	
13	Operation pin	Stainless steel	63CS is carbon steel	36	Front cover	Stainless steel	
14	Rod sealant	Nitrile rubber		37	Side cover	Stainless steel	
15	O ring	Nitrile rubber		38	Base 1	Aluminum alloy	
16	Piston rod	Stainless steel		39	Cylinder	Aluminum alloy	
17	Bearing			40	Hollow ring 1	Aluminum alloy	
18	Collar	Carbon steel		41	Base 3	Aluminum alloy	
19	Link ring	Aluminum alloy		42	Rod cover	Aluminum alloy	
20	E type snap ring	Carbon steel		43	Base 2	Aluminum alloy	
21	Fulcrum axis	Stainless steel	63CS is carbon steel	44	Hollow ring 2	Aluminum alloy	
22	Master key	Carbon steel		45	Parallel pin	Stainless steel	
23	Piston seal	Nitrile rubber					

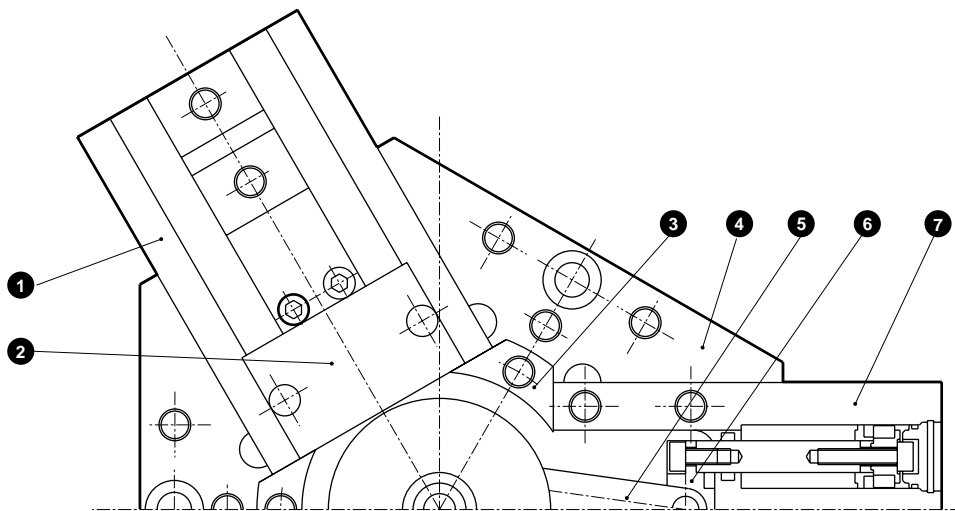
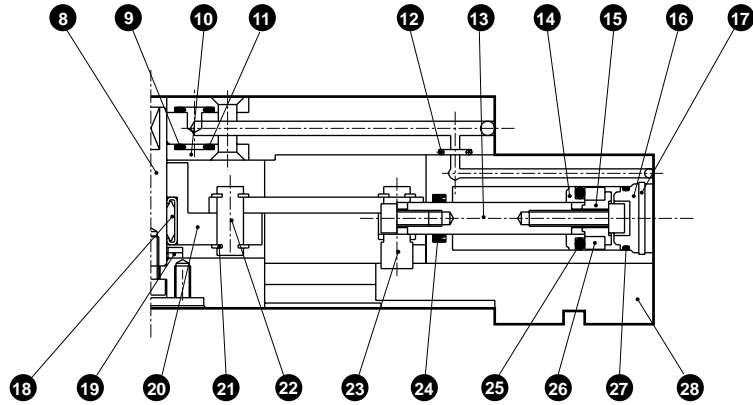
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
*-HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK

Ending
Ultra long stroke chuck
Chuck

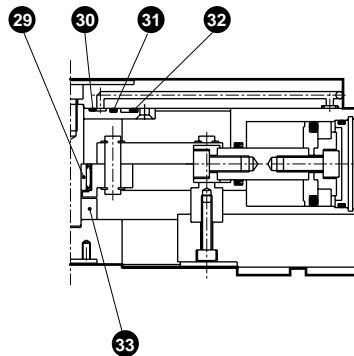
Internal structure and parts list

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 -*.HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

●CKJ-16CS-S1

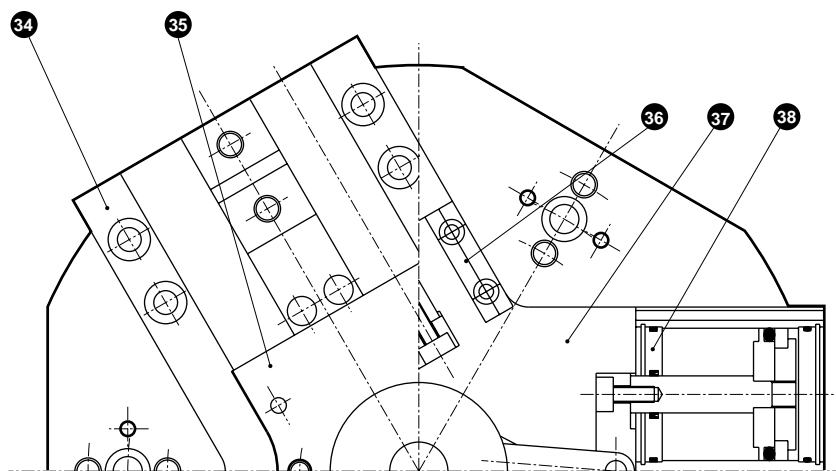
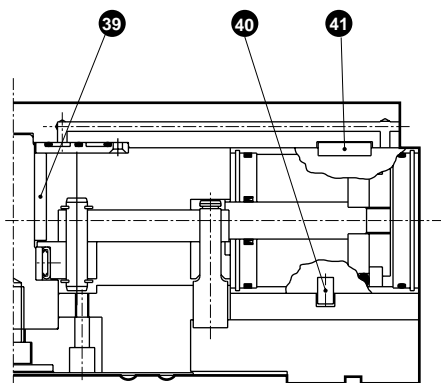


●CKJ-40CS-S1



Internal structure and parts list

● CKJ-63CS-S1



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK

Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Cylinder body B	Aluminum alloy		22	Fulcrum axis	Stainless steel	63CS is carbon steel
2	Guard	Stainless steel		23	Operation pin	Stainless steel	63CS is carbon steel
3	Center block	Aluminum alloy	63CS is carbon steel	24	Rod sealant	Nitrile rubber	
4	Base	Aluminum alloy		25	Piston seal	Nitrile rubber	
5	Link	Stainless steel	63CS is carbon steel	26	Magnet		
6	Connection block	Stainless steel	63CS is carbon steel	27	Cylinder sealant	Nitrile rubber	
7	Cylinder body A	Aluminum alloy		28	Master key	Carbon steel	
8	Axis	Carbon steel	63CS is aluminum alloy	29	Inner ring		
9	O ring	Nitrile rubber		30	O ring	Nitrile rubber	
10	Piping plate	Aluminum alloy		31	O ring	Nitrile rubber	
11	O ring	Nitrile rubber		32	O ring	Nitrile rubber	
12	O ring	Nitrile rubber		33	Collar	Acetar resin	
13	Piston rod	Stainless steel		34	Body	Aluminum alloy	
14	Piston A	Aluminum alloy		35	Front cover	Stainless steel	
15	Piston B	Aluminum alloy	63CS is stainless steel	36	Side cover	Aluminum alloy	
16	Cylinder guard	Acetar resin	63CS is aluminum alloy	37	Cylinder	Aluminum alloy	
17	C type snap ring	Carbon steel		38	Rod cover	Aluminum alloy	
18	Needle rolling bearing			39	Metal collar	Carbon steel	
19	Washer			40	Parallel pin	Stainless steel	
20	Link ring	Aluminum alloy		41	Double round key	Carbon steel	
21	E type snap ring	Carbon steel					

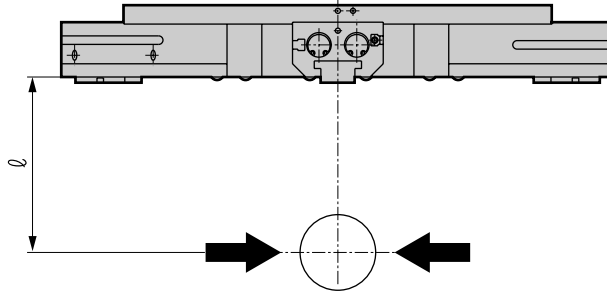
Ending

Ultra long stroke chuck
Chuck

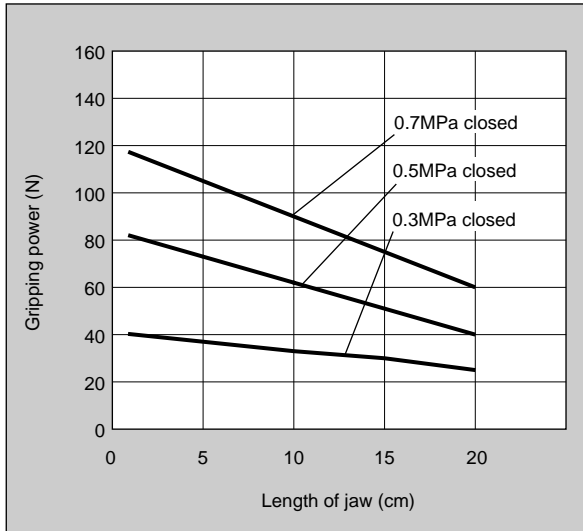
Gripping performance data

Gripping power with length ℓ of hand jaw at supply pressure 0.3, 0.5 or 0.7 MPa is shown.

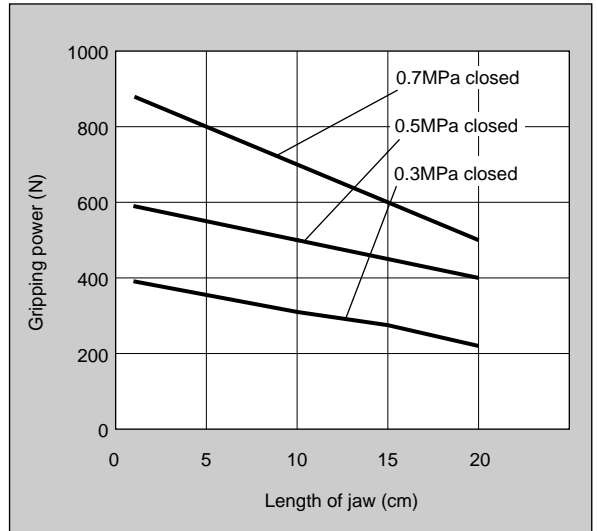
· Closed direction (\blackrightarrow) \longrightarrow (shown with continuous line)



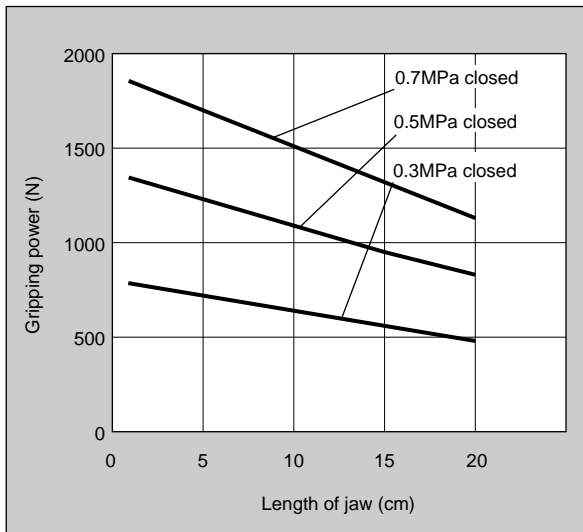
● CKJ-16CS



● CKJ-40CS



● CKJ-63CS



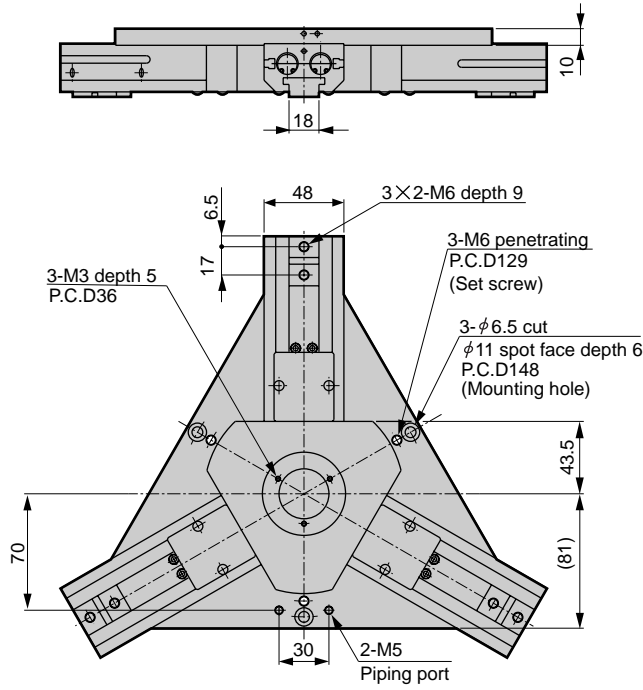
(Note) Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2-*.HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

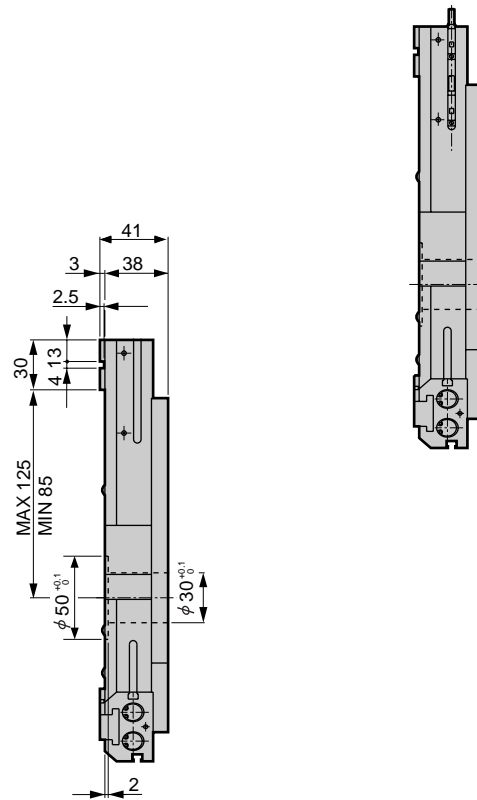
Dimensions



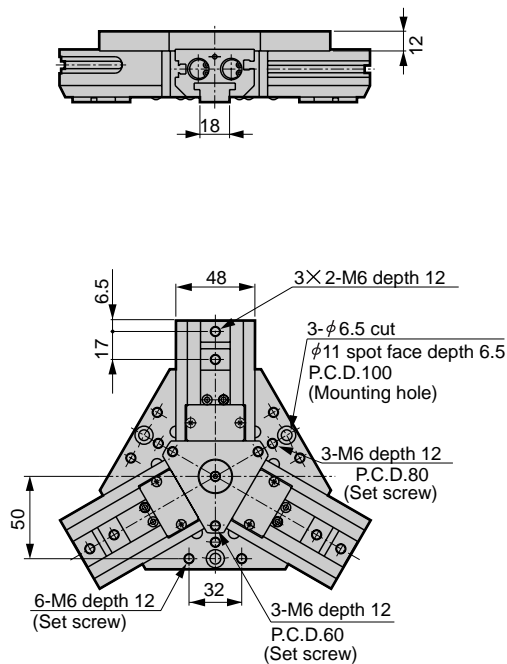
● CKJ-16CS standard



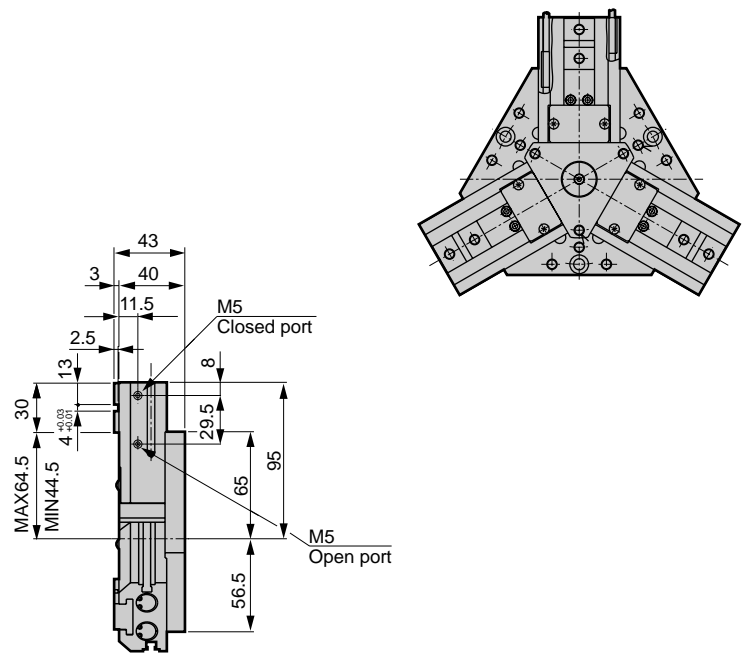
● With switch



● CKJ-16CS-S1



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Ultra long stroke chuck
Chuck

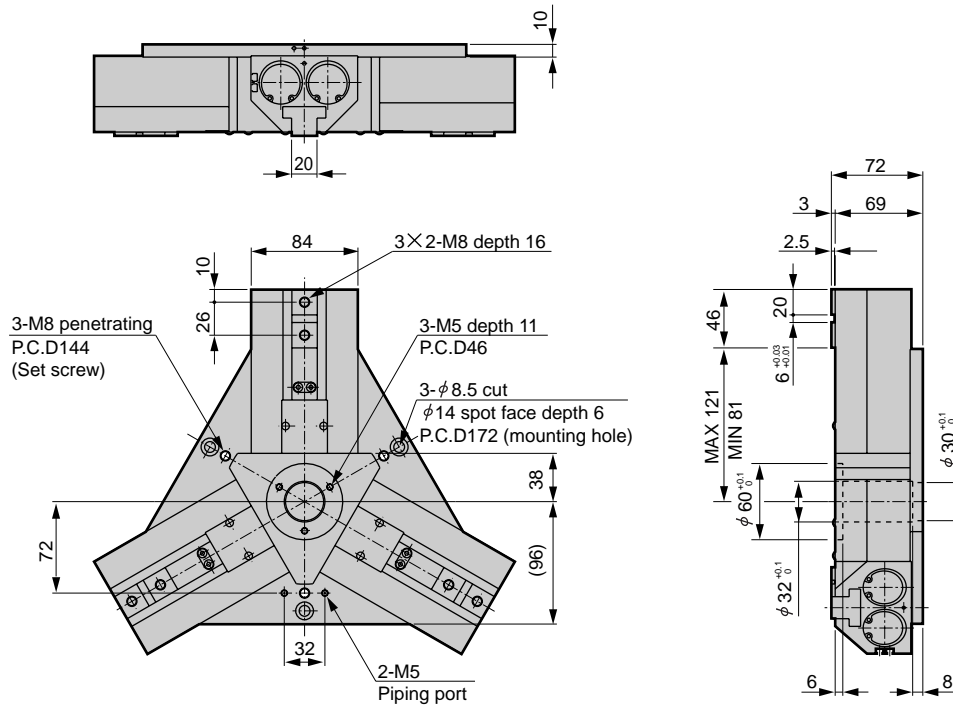
Dimensions



- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS
- CKF
- CKJ**
- CKL2
- CKL2-*.HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

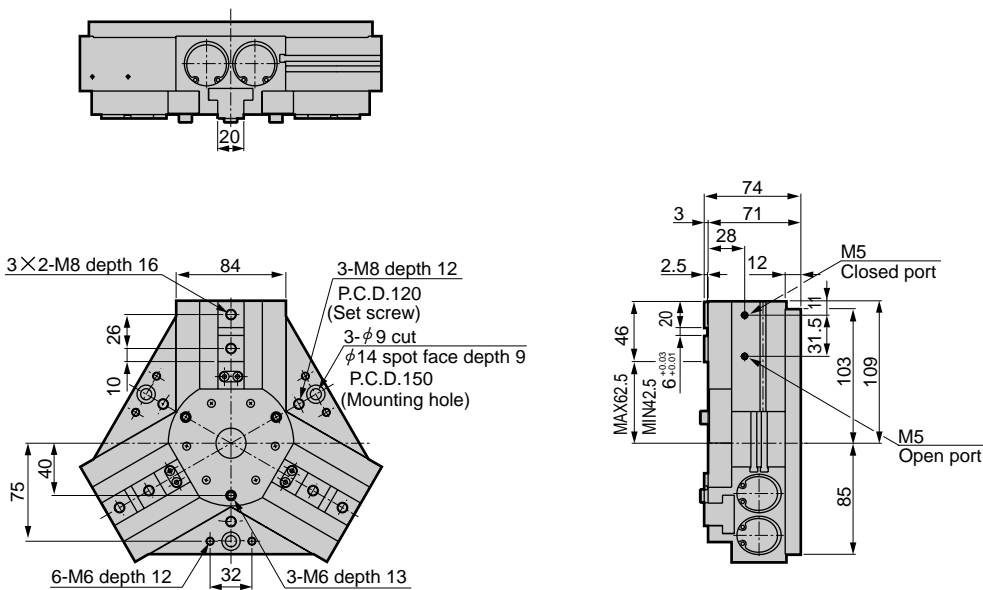
● CKJ-40CS standard

● With switch



● CKJ-40CS-S1

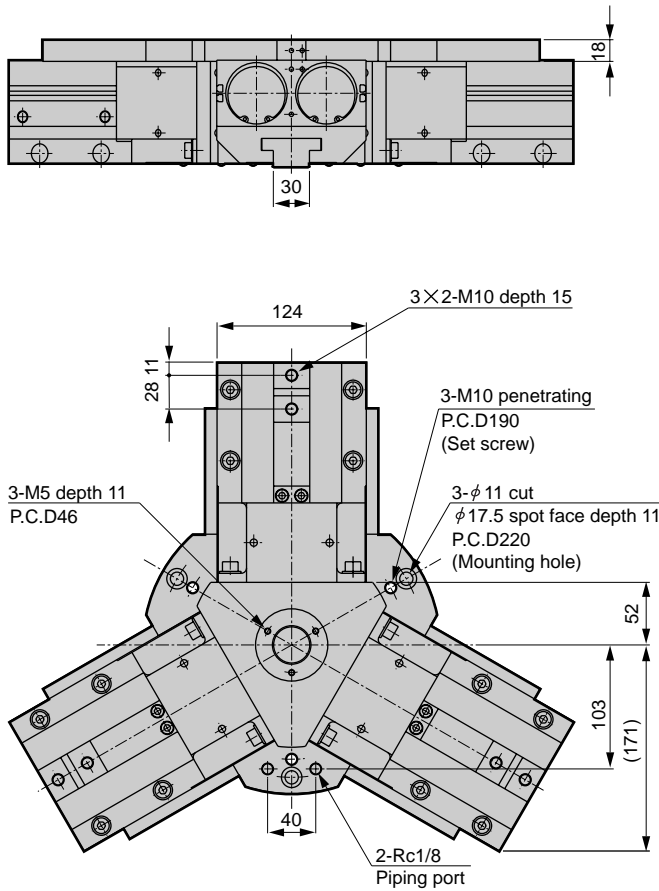
● With switch



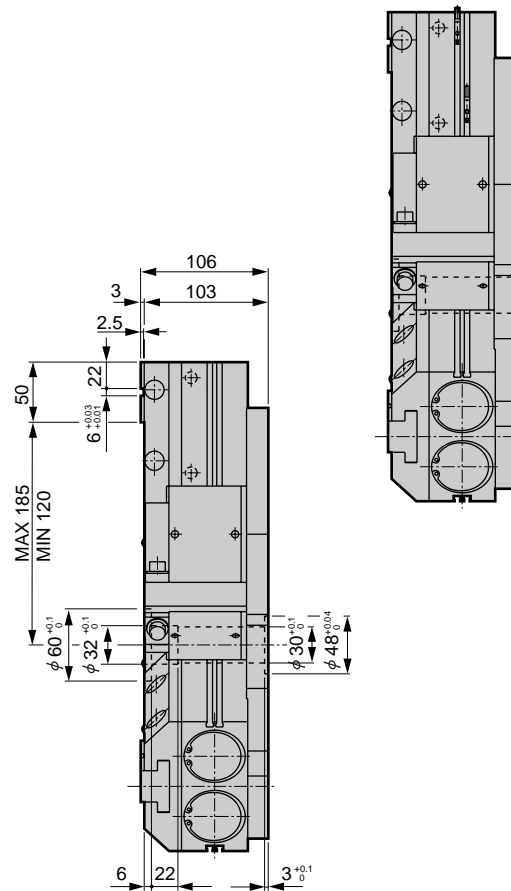
Dimensions



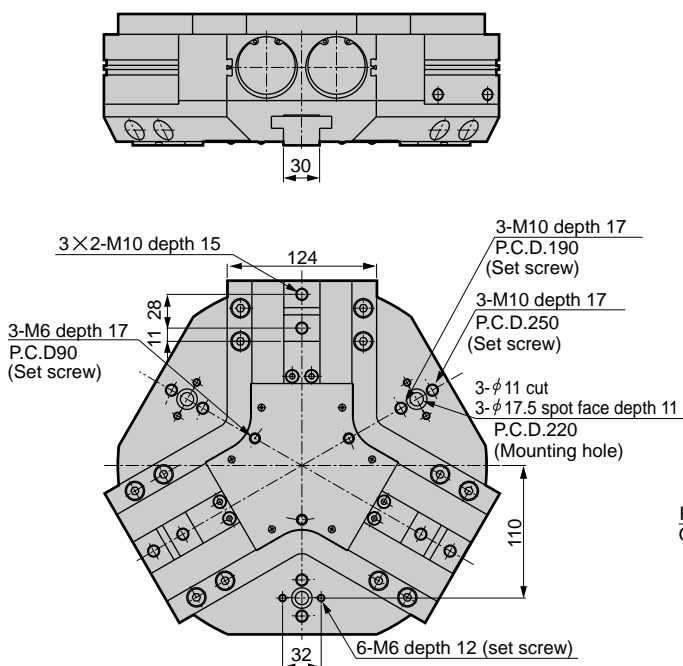
● CKJ-63CS standard



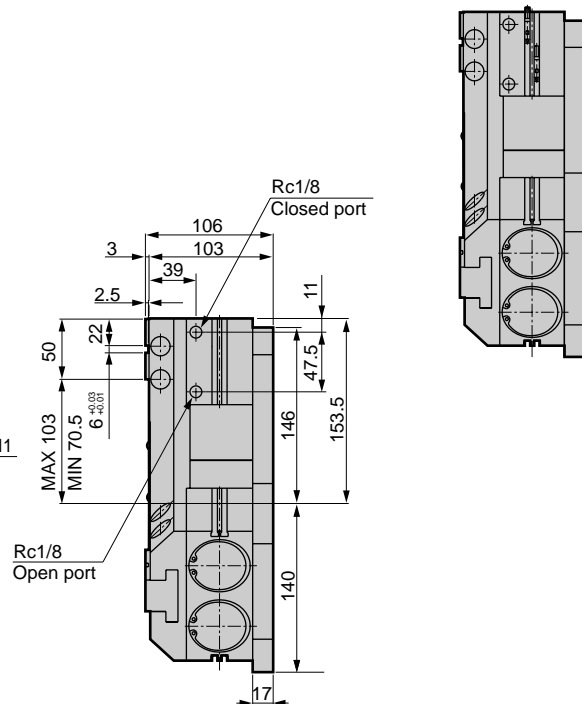
● With switch



● CKJ-63CS-S1



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Ultra long stroke chuck
Chuck



Powerful chuck

CKL2 Series

- Operational stroke length: 5, 6, 8, 10, 12, 16, 20, 23mm



Specifications

Descriptions	CKL2							
Size	20CS	25CS	32CS	40CS	50CS	63CS	80CS	100CS
Cylinder bore size mm	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Working fluid	Compressed air							
Max. working pressure MPa	0.7							
Min. working pressure MPa	0.3							
Ambient temperature °C	5 to 60							
Port size	M5					Rc1/8		
Operational stroke length mm	5	6	8	10	12	16	20	23
Rod diameter mm	φ 6	φ 8	φ 10	φ 12	φ 14	φ 16		φ 20
Capacity of reciprocating cm ³	1.8	3.3	7.7	15.6	28.3	60.3	118.2	215.5
Repeatability mm	± 0.01							
Product weight Kg	0.12	0.19	0.26	0.38	0.59	1.02	2.02	3.45
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)							

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 2)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10 μA or less

Note 1: Maximum load current above: 20mA applies at 25°C. If switch ambient temperature is higher than 25 °C, value is lower than 20mA. (5 to 10mA at 60°C)

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
*-HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending

How to order

Without switch

CKL2 - 20CS - O

With switch

CKL2 - 20CS - O - T2H - R

A Size

B Option
Note 1, Note 2

C Switch model no.
Note 3

D Switch quantity

Symbol	Descriptions			
A Size				
20CS				
25CS				
32CS				
40CS				
50CS				
63CS				
80CS				
100CS				
B Option				
Blank	Standard (double acting)			
O	Single acting (normally open)			
C	Single acting (normally closed)			
Y1	With small jaw material (S50C)			
Y2	With small jaw material (MC nylon)			
C Switch model no.				
Axial lead wire	Radial lead wire	Proximity Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

Note 1: Small jaw is commonly used for inner and outer chuck.

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw.
When ordering as option, 3 pieces are provided.

<Example of model number>

CKL2-20CS-O-T2H-R

Model: Powerful chuck

- A** Size : 20CS
- B** Option : Single acting, normally open type
- C** Switch model no. : Proximity T2H switch, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

SW - T2H

Switch model no.
(Item above **C**)

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

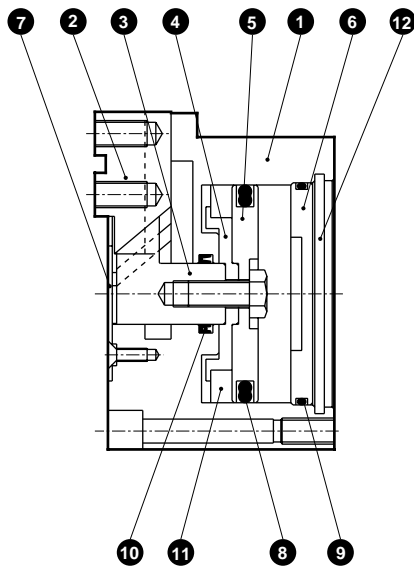
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Powerful chuck
Chuck

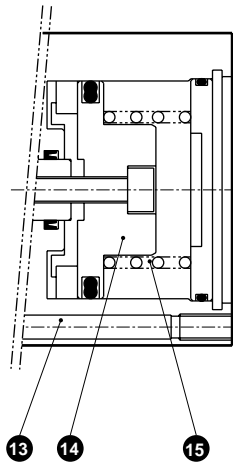
Internal structure and parts list

● CKL2-20CS to 100CS

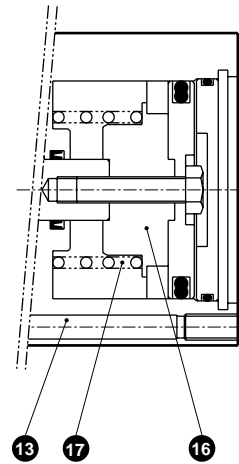
Standard (double acting) type



O (normally open) type



C (normally closed) type



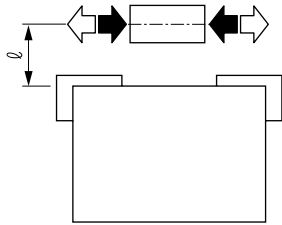
Parts list

No	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Body	Aluminum alloy		10	Rod packing seal	Nitrile rubber	
2	Master key	Steel		11	Magnet		
3	Piston A	Stainless steel (20 to 32CS), Steel (40 to 100CS)		12	Snap ring	Stainless steel	Steel (80, 100CS)
4	Piston B	Aluminum alloy		13	O, C body	Aluminum alloy	
5	Piston C	Aluminum alloy		14	O piston C	Aluminum alloy	
6	Cylinder guard	Aluminum alloy		15	O spring	Stainless steel	
7	Center cover	Stainless steel		16	C piston B	Aluminum alloy	
8	Piston packing seal	Nitrile rubber		17	C spring	Stainless steel	
9	Cylinder gasket	Nitrile rubber					

Gripping performance data

Gripping power which functions to open direction and closed direction with length ℓ of hand jaw at supply pressure 0.3, 0.5, 0.7 MPa is shown.

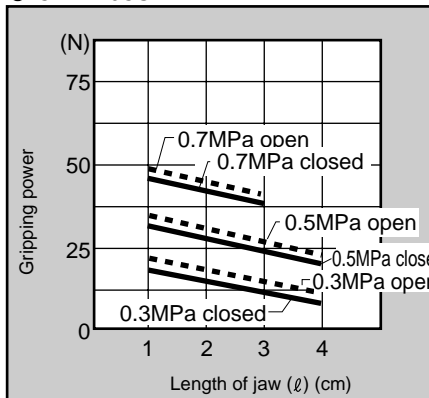
- Open direction (◁) - - - - (shown with broken line)
- Closed direction (➡) - - - - (shown with continuous line)



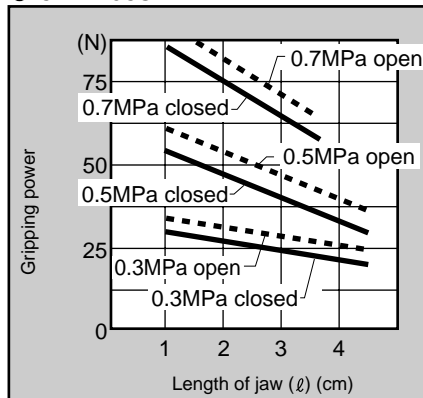
(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.

C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction. Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

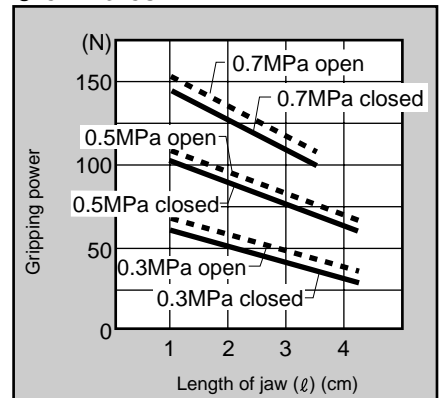
● CKL2-20CS



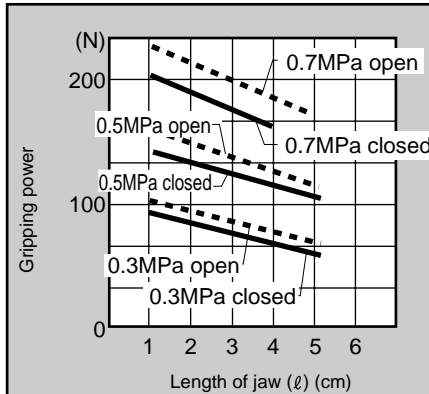
● CKL2-25CS



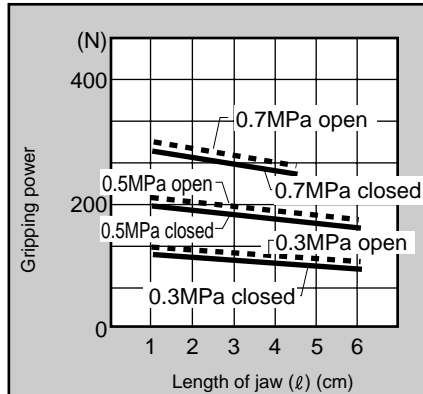
● CKL2-32CS



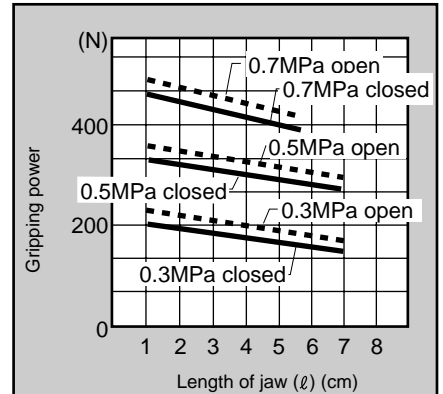
● CKL2-40CS



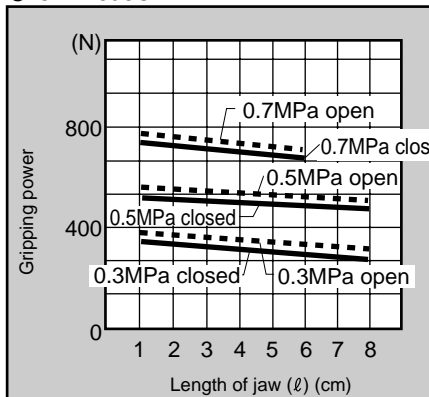
● CKL2-50CS



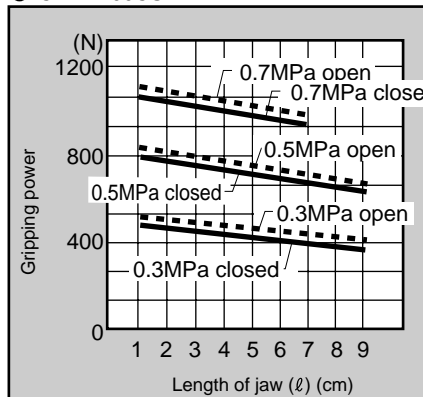
● CKL2-63CS



● CKL2-80CS



● CKL2-100CS



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Powerful chuck
Chuck

Dimensions

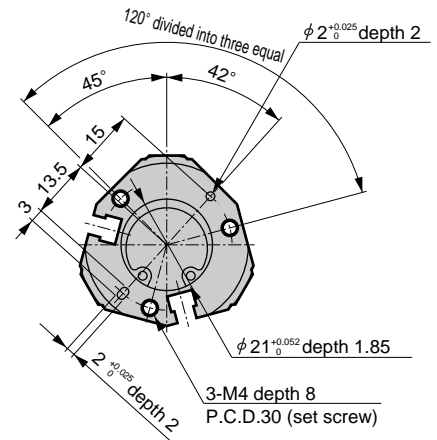
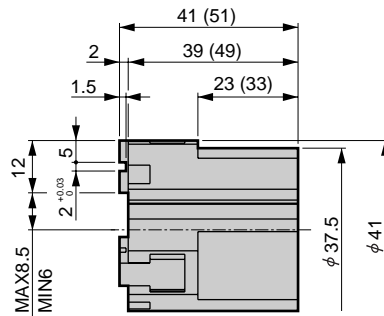
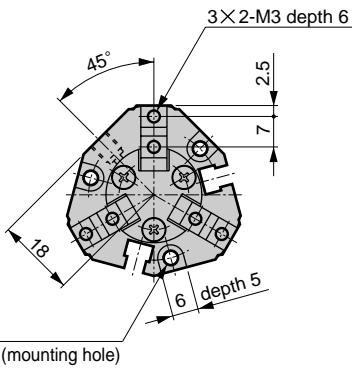
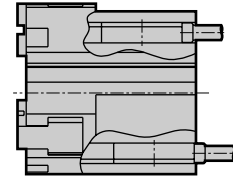
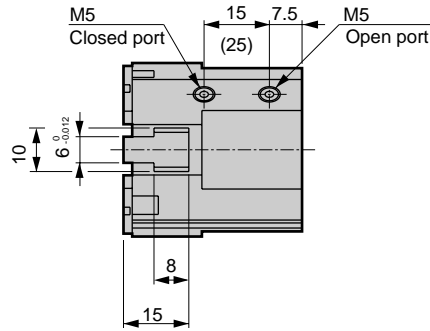


RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2-*.HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

● CKL2-20CS standard/O/C

● With switch

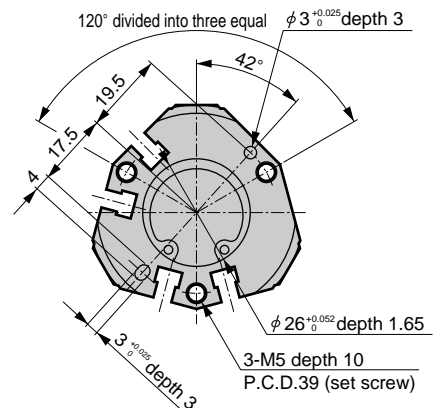
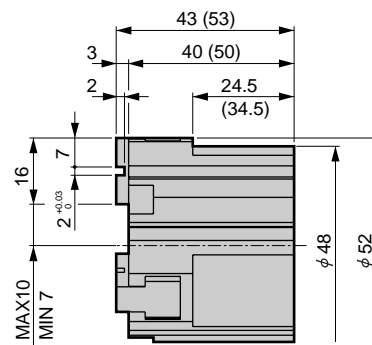
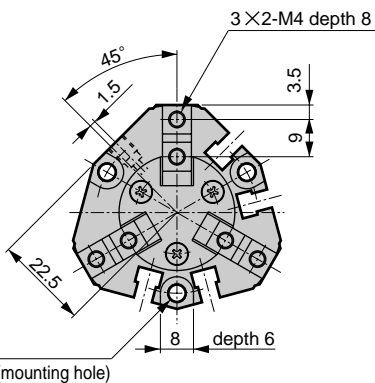
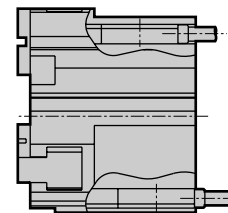
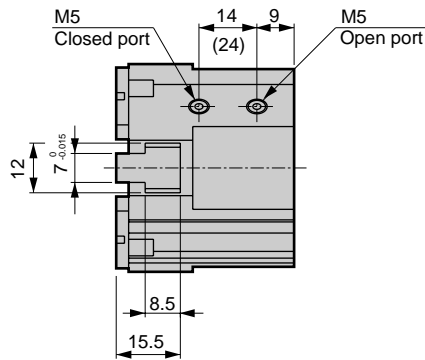
· Dimension in () for O [normally open] and C [normally closed] specifications.



● CKL2-25CS standard/O/C

● With switch

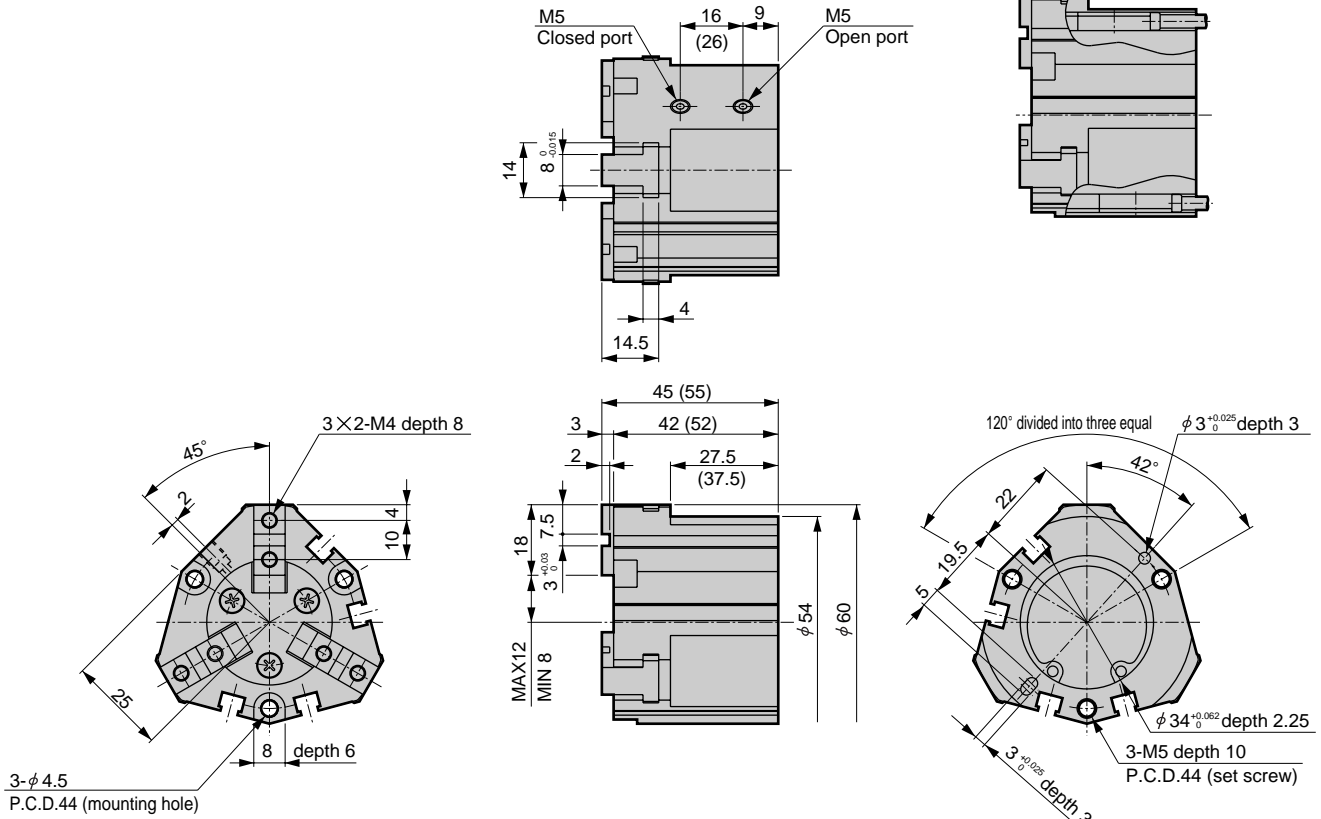
· Dimension in () for O [normally open] and C [normally closed] specifications.



Dimensions

● CKL2-32CS standard/O/C

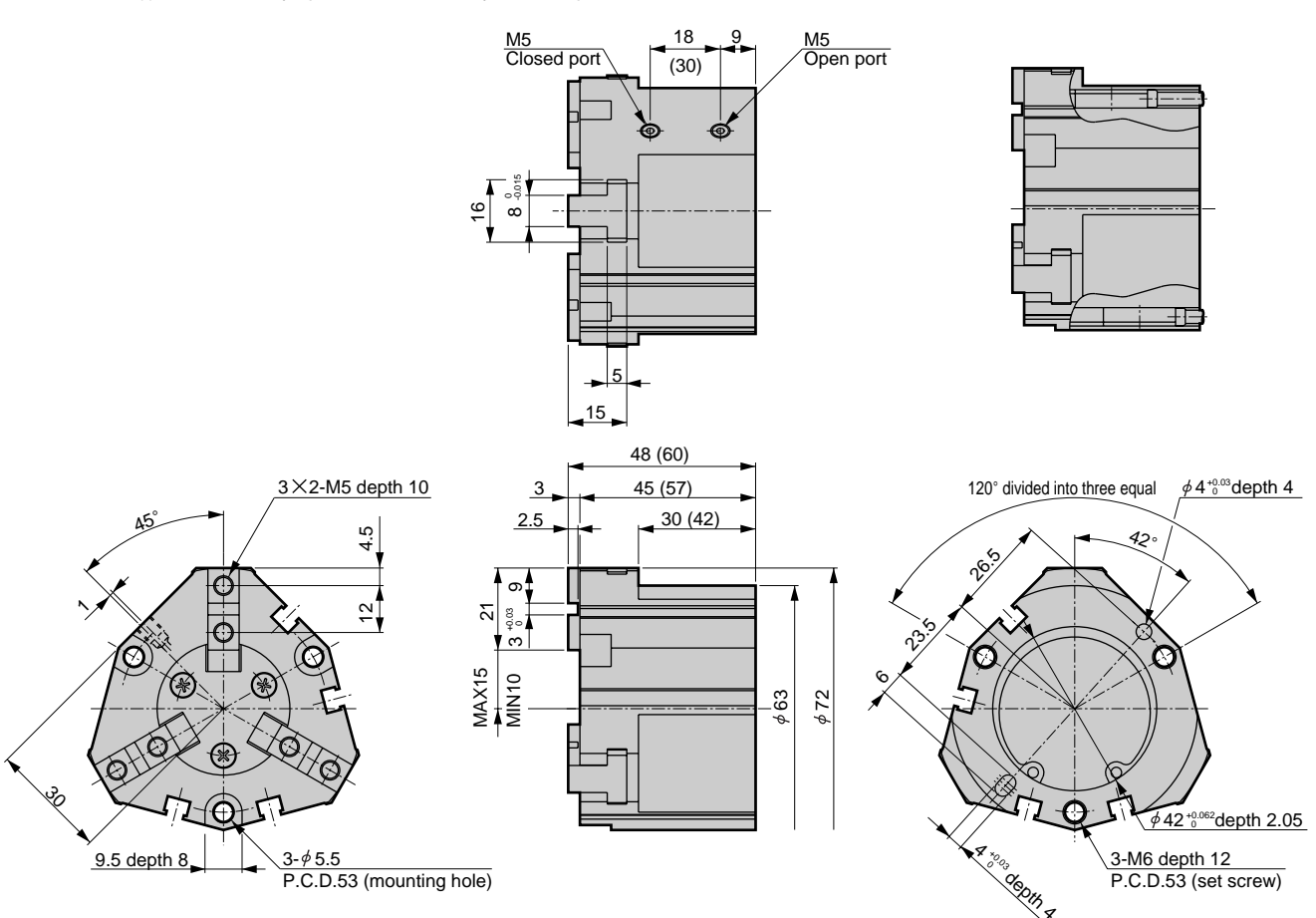
· Dimension in () for O [normally open] and C [normally closed] specifications.



● With switch

● CKL2-40CS standard/O/C

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



● With switch

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Powerful chuck
Chuck

Dimensions

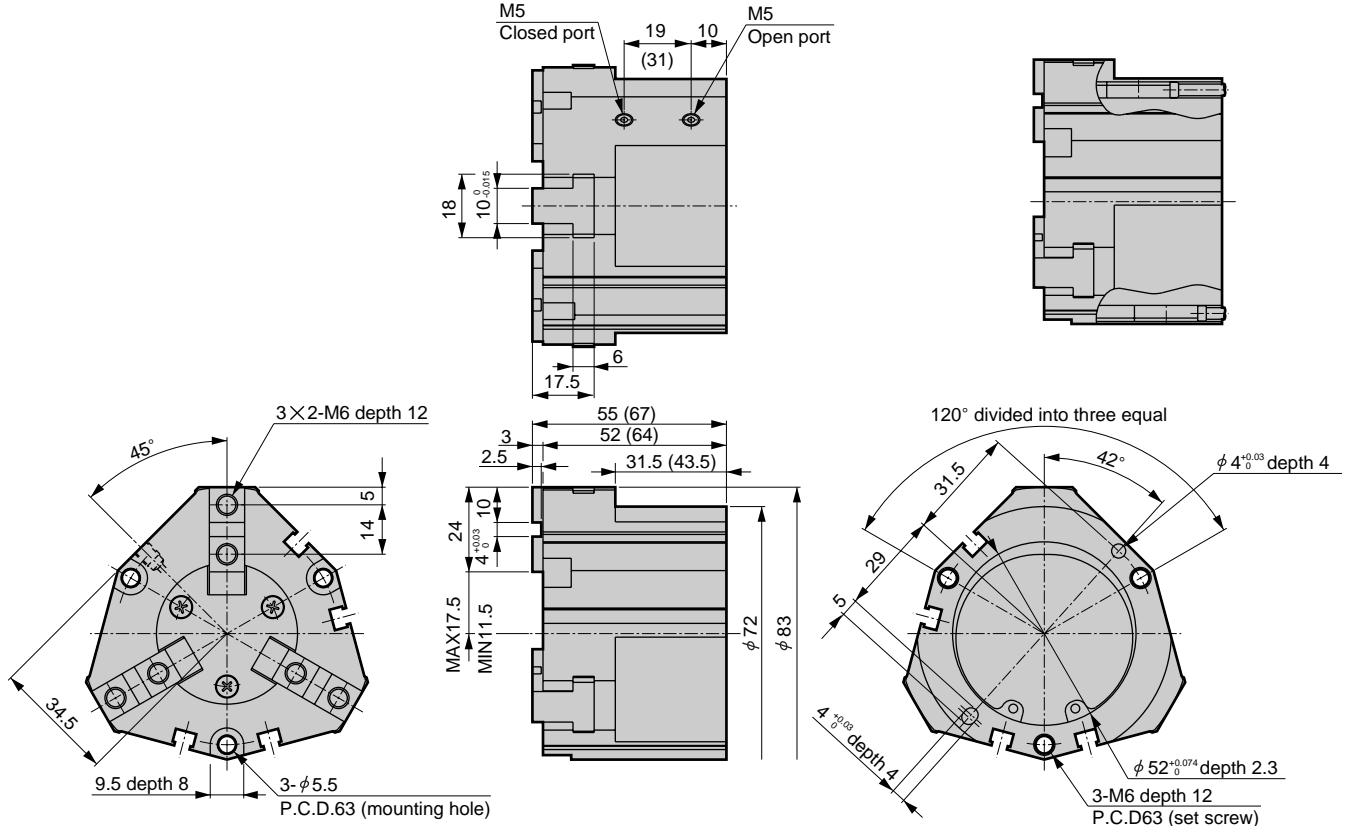


RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 -*HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

● CKL2-50CS standard/O/C

● With switch

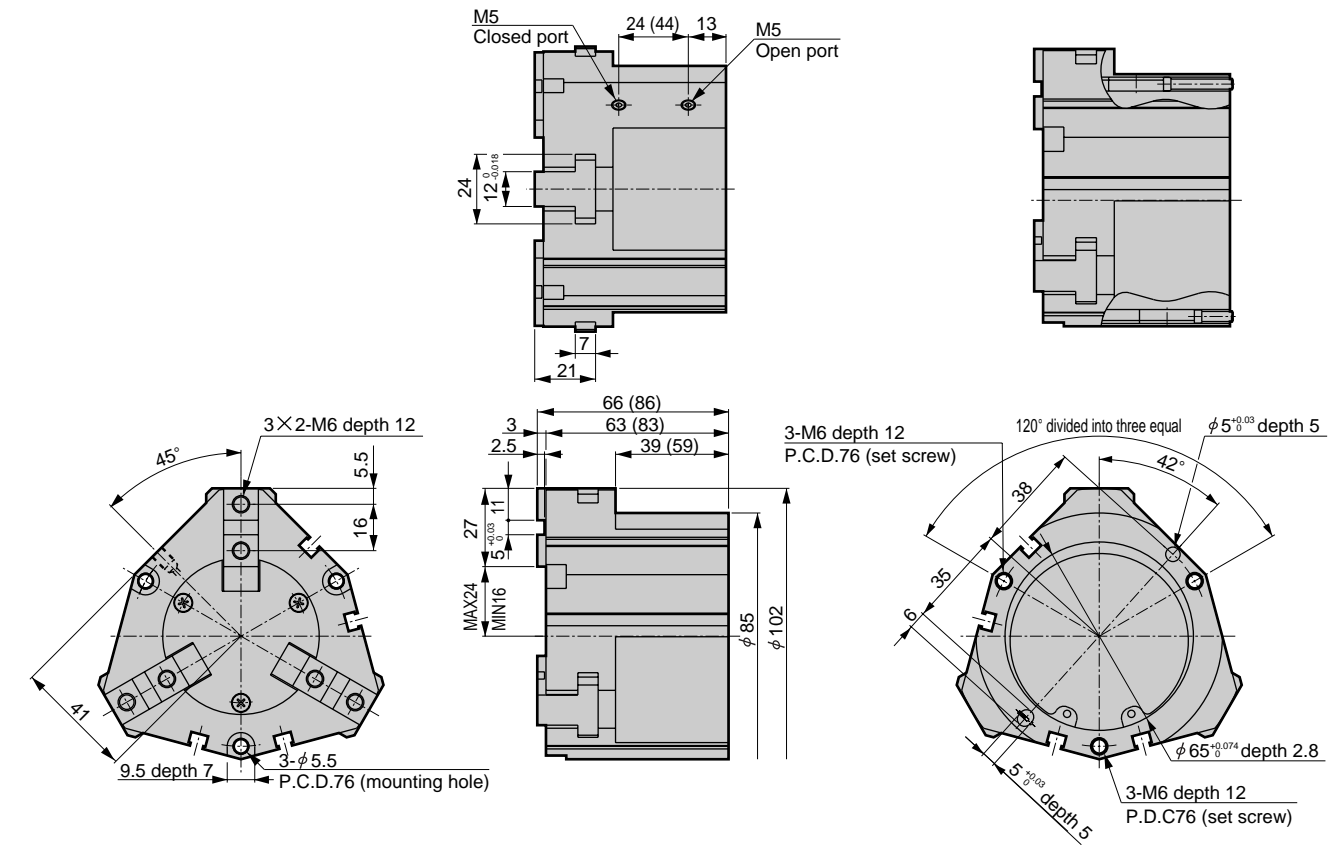
· Dimension in () for O [normally open] and C [normally closed] specifications.



● CKL2-63CS standard/O/C

● With switch

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

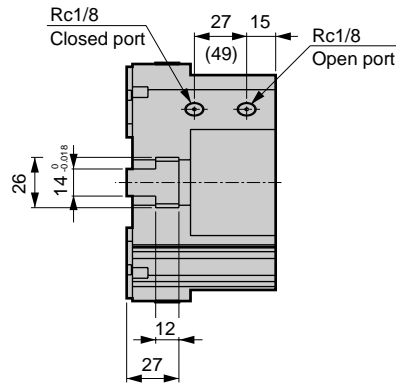
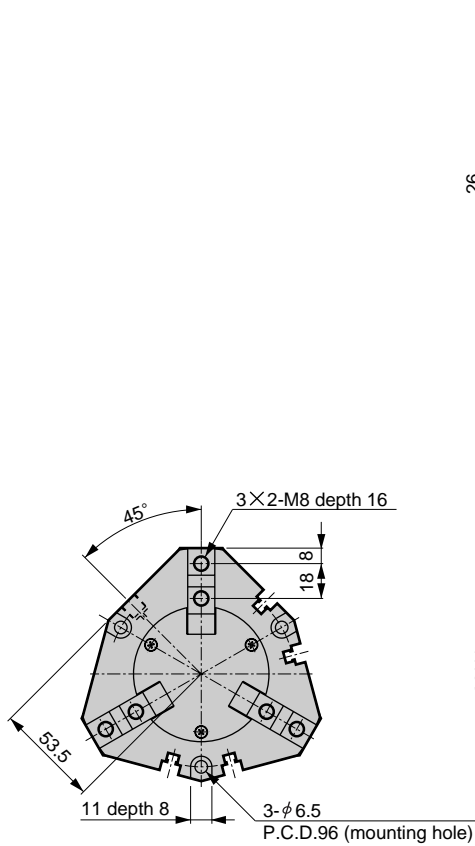


Dimensions

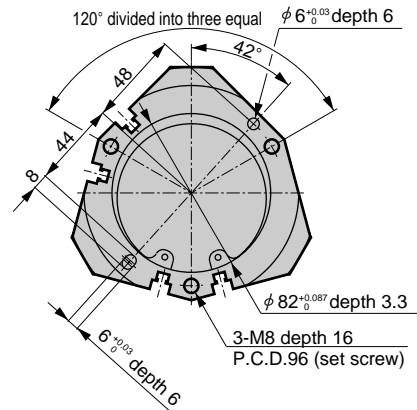
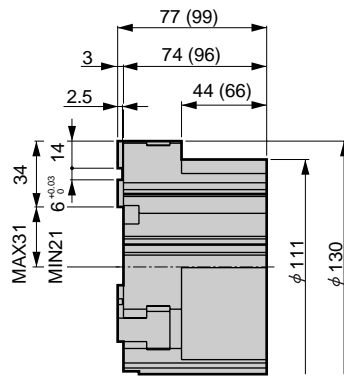
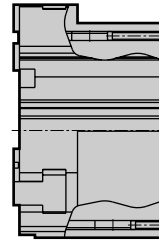


● CKL2-80CS standard/O/C

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

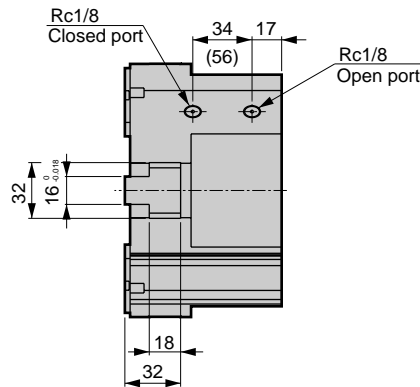
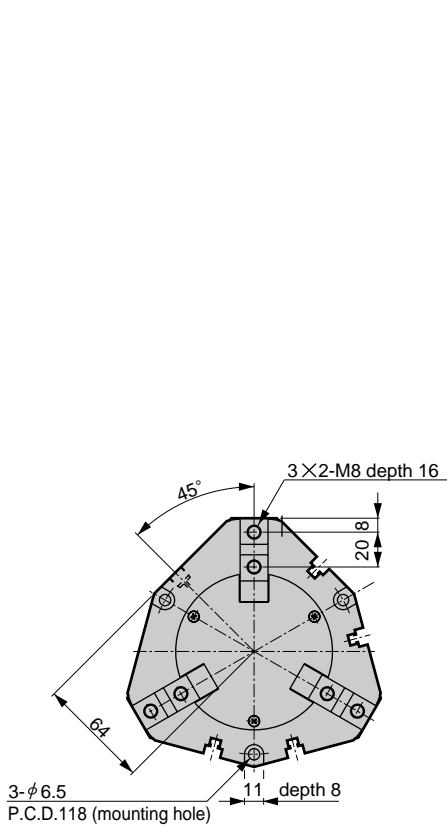


● With switch

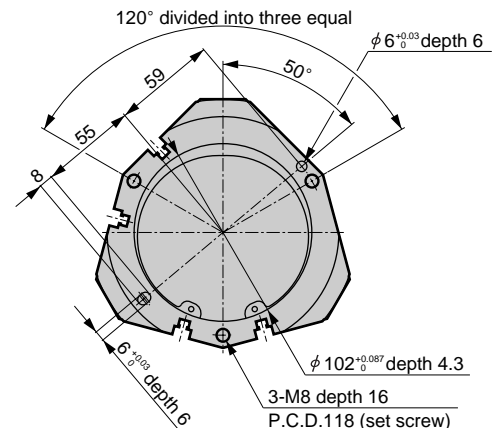
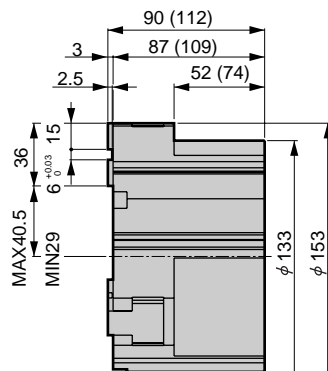
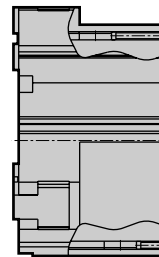


● CKL2-100CS standard/O/C

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



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK

Ending

Powerful chuck
Chuck



Position locking powerful chuck

CKL2-*HC Series

● Operational stroke length: 8, 10, 12, 16, 20mm



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
*HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending

Specifications

Descriptions	CKL2-32CS-HC	CKL2-40CS-HC	CKL2-50CS-HC	CKL2-63CS-HC	CKL2-80CS-HC
Cylinder bore size mm	φ32	φ40	φ50	φ63	φ80
Working fluid	Compressed air				
Max. working pressure MPa	0.7				
Min. working pressure MPa	0.4				
Ambient temperature °C	5 to 60				
Port size	M5				Rc1/8
Operational stroke length mm	8	10	12	16	20
Rod diameter mm	φ10	φ12	φ14	φ16	φ16
Capacity of reciprocating cm ³	7.7	15.6	28.3	60.3	118.2
Repeatability mm	±0.01				
Product weight kg	0.42	0.60	0.82	1.66	3.20
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)				

Note 1: Use port only, since spring clamp method is used.

Do not supply compressed air from closed port, or may cause damage.

Note 2: Do not plug closed port.

Note 3: When using at poor environment, sucked foreign matters from closed port may cause air leakage.

In that case, use a filter to prevent foreign matters from entering.

Note 4: Consider safety factors carefully for selection, since gripping power differs depending on clamp position

(open end, intermediate position or closed end) and clamp distance (jaw length).

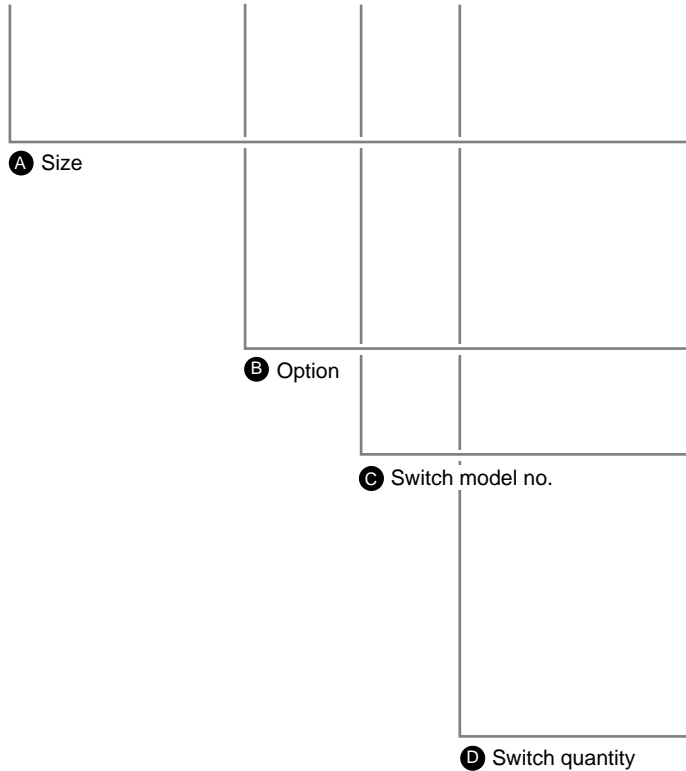
Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less

Note 1: Maximum load current above: 20mA applies at 25°C. If switch ambient temperature is higher than 25°C, value is lower than 20mA.
(5 to 10mA with 60°C)

How to order

CKL2 - **32CS** - **HC** - **Y1** - **T2H** - **R**



Symbol	Descriptions			
A Size				
32CS				
40CS				
50CS				
63CS				
80CS				
B Option				
Y1	With small jaw material: S45C			
Y2	With small jaw material: MC nylon			
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

Note 1: Small jaw is commonly used for inner and outer chuck.

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw.
When ordering as option, 3 pieces are provided.

<Example of model number>

CKL2-32CS-HC-Y1-T2H-R

- A** Size : 32CS
- B** Option : With small jaw Material: S45C
- C** Switch model no. : Proximity T2H, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

SW - **T2H**

↓
Switch model no.
(Item above **C**)

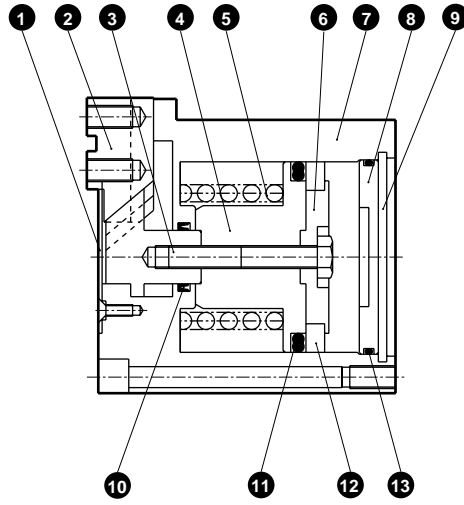
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Position locking powerful chuck
Chuck

CKL2-*⁻-HC Series

Internal structure and parts list

● CKL2-32CS to 80CS-HC



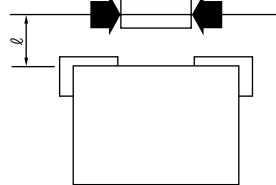
Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Center cover	Stainless steel		7	Body	Aluminum alloy	
2	Master key	Carbon steel		8	Cylinder guard	Aluminum alloy	
3	Piston A	32CS: Stainless steel 40CS to 80CS: Carbon steel		9	Snap ring	Stainless steel	Steel (40, 80CS)
4	Piston B	Aluminum alloy		10	Rod packing seal	Nitrile rubber	
5	Spring	Stainless steel		11	Magnet		
6	Piston C	Aluminum alloy		12	Piston packing seal	Nitrile rubber	
				13	Cylinder gasket	Nitrile rubber	

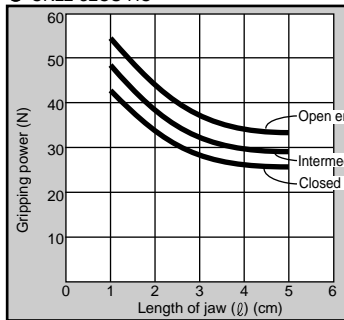
Gripping performance data

Gripping power which functions to closed direction with hand jaw length ℓ is shown.

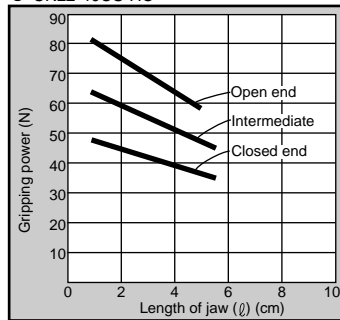
· Closed direction (■) (shown with continuous line)



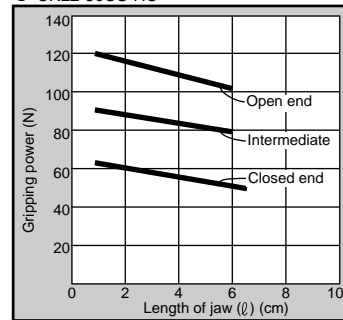
● CKL2-32CS-HC



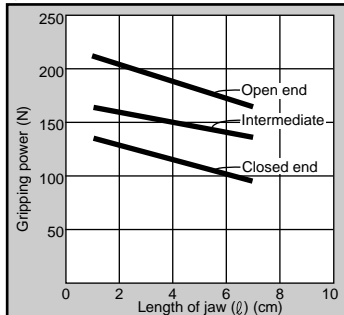
● CKL2-40CS-HC



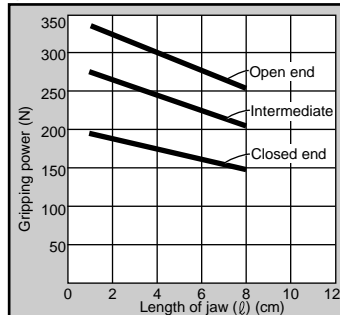
● CKL2-50CS-HC



● CKL2-63CS-HC



● CKL2-80CS-HC

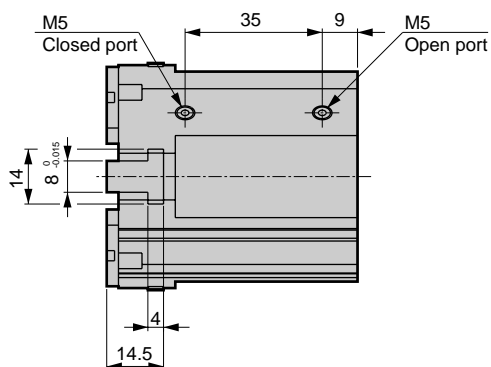
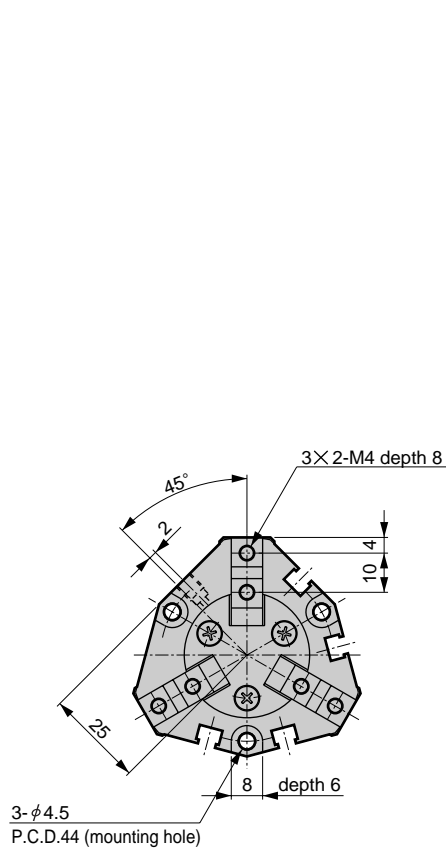


(Note) Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.

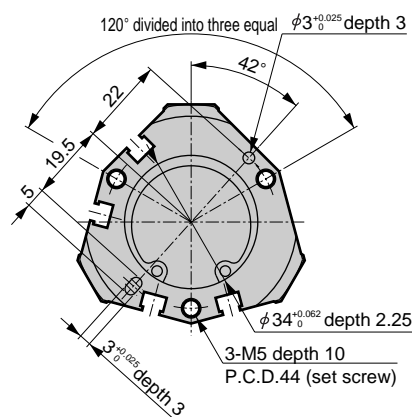
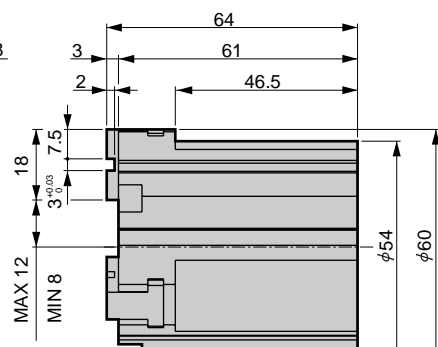
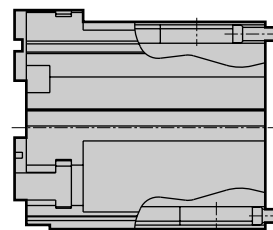
Dimensions



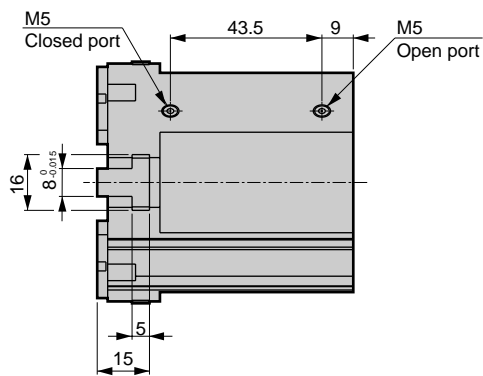
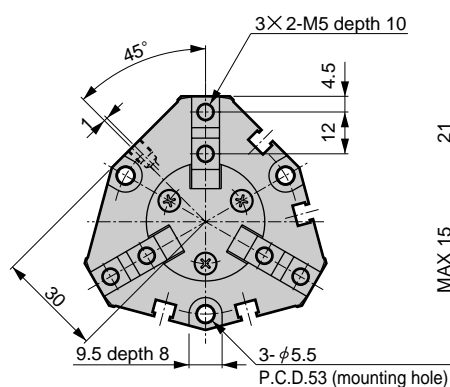
● CKL2-32CS-HC standard



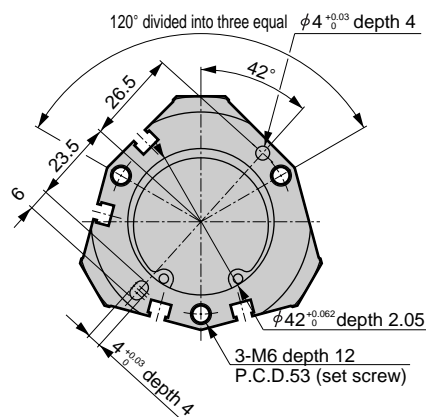
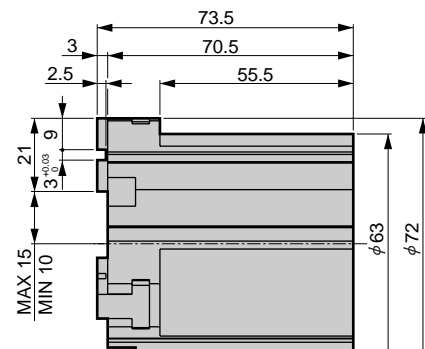
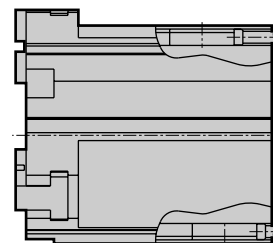
● With switch



● CKL2-40CS-HC standard



● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2⁻HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Position locking powerful chuck
Chuck

CKL2-*--HC Series

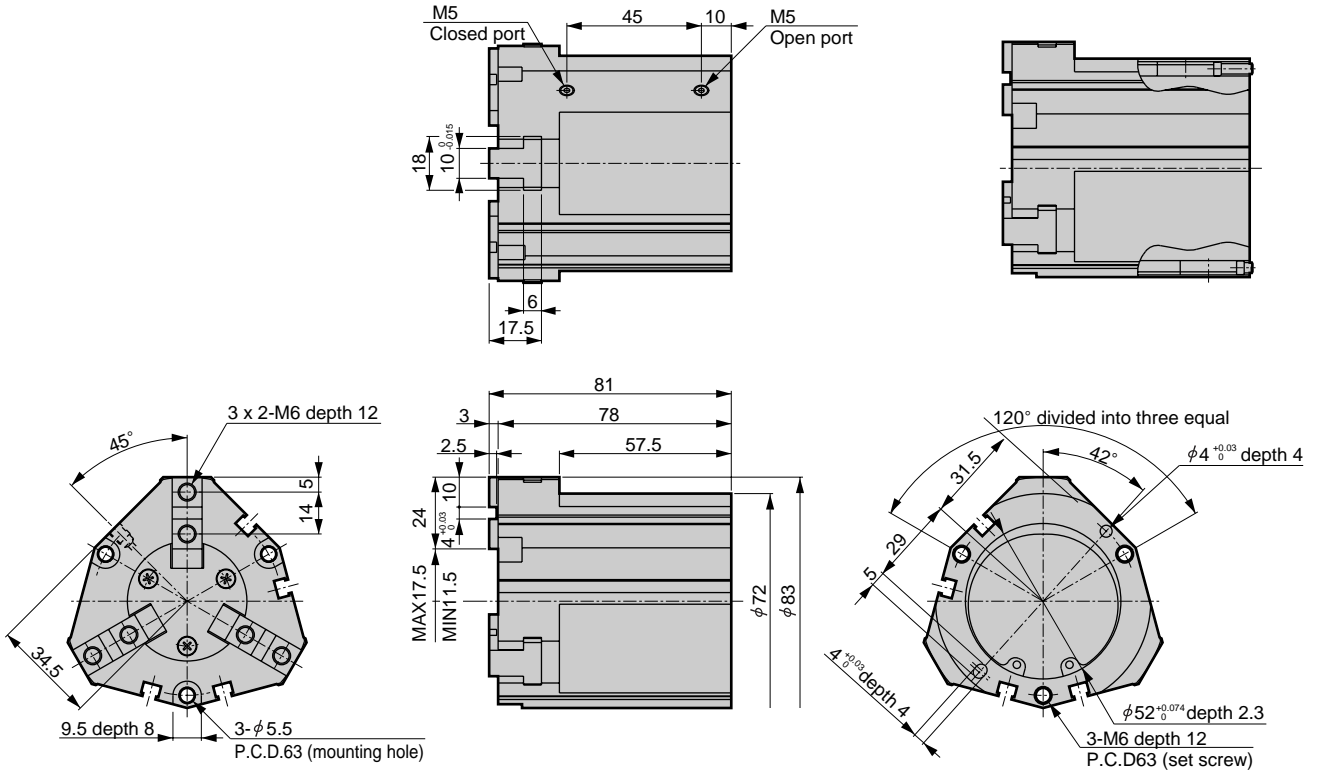
Dimensions



- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS
- CKF
- CKJ
- CKL2
- CKL2-*--HC**
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

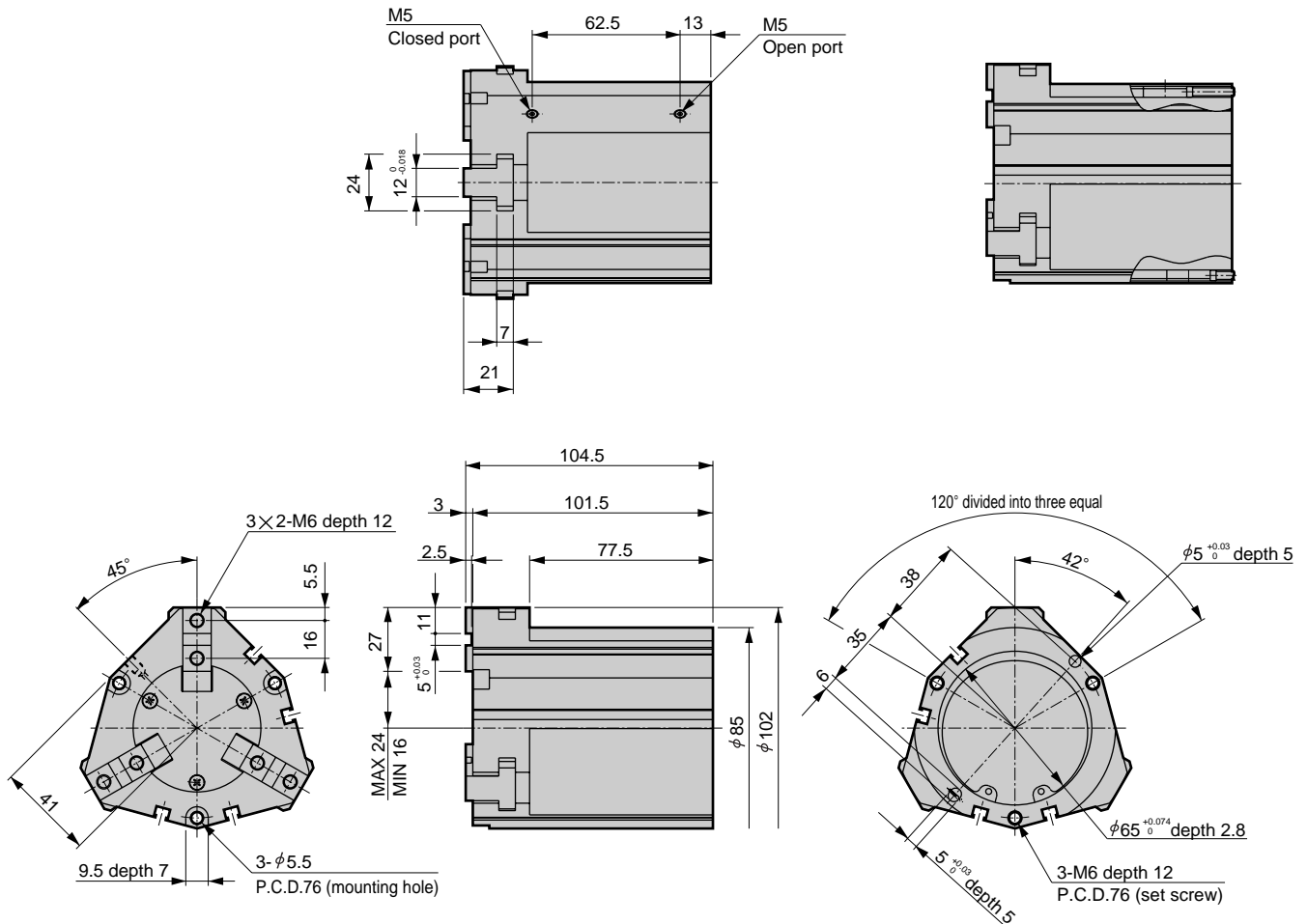
● CKL2-50CS-HC standard

● With switch



● CKL2-63CS-HC standard

● With switch



CKL2-*⁻HC Series

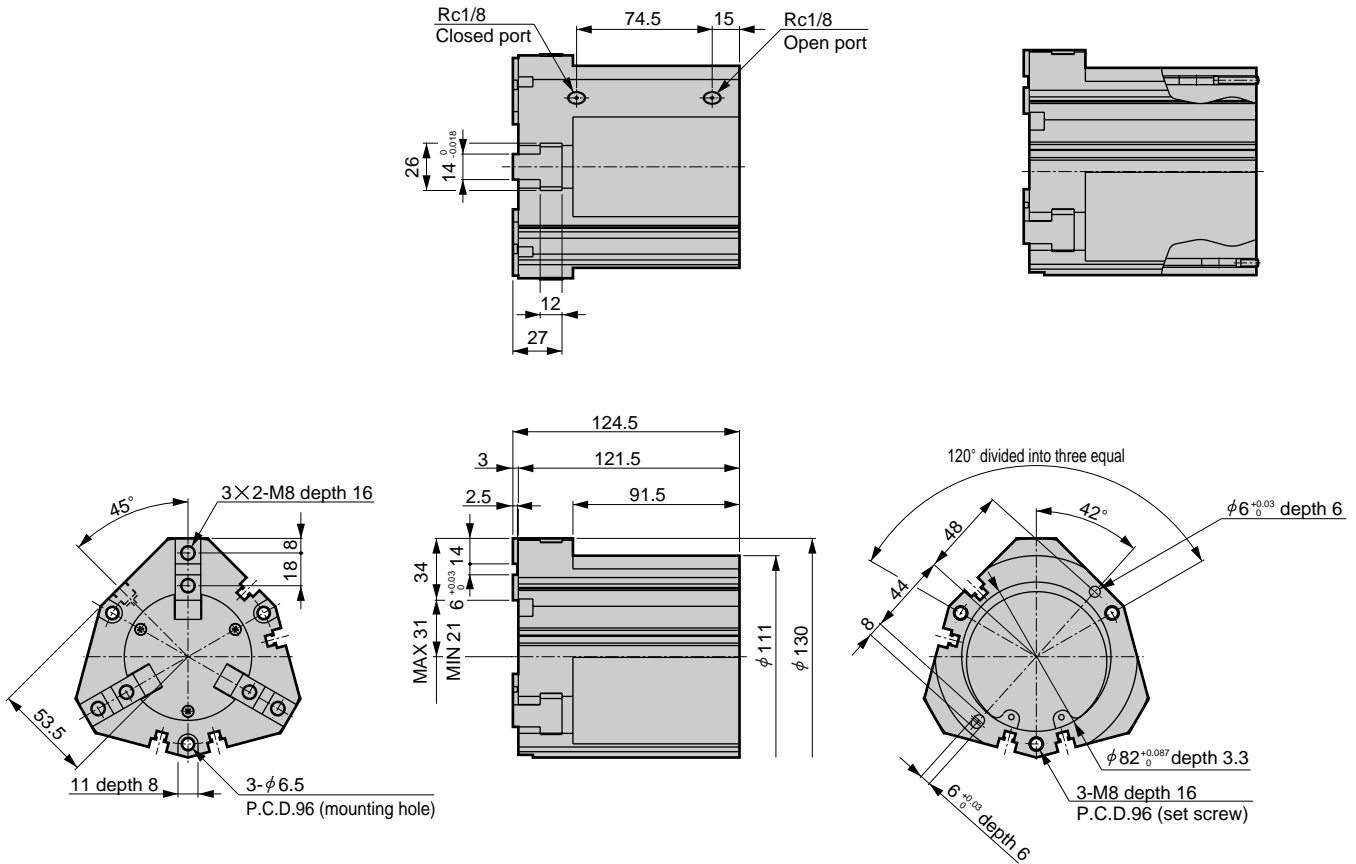
Position locking powerful chuck

Dimensions



● CKL2-80CS-HC standard

● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *⁻HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Position locking powerful chuck
Chuck



High gripping power powerful chuck

CKH2 Series

- Operational stroke length: 6, 8, 10, 12mm



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
-*HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending

Specifications

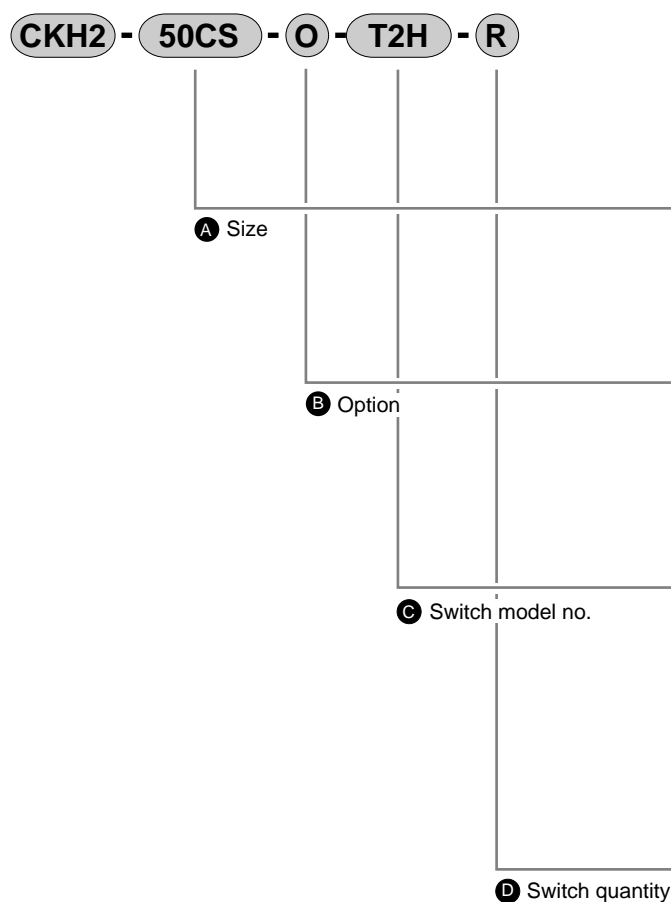
Descriptions	CKH2-50CS	CKH2-63CS	CKH2-80CS	CKH2-100CS
Cylinder bore size mm	φ50	φ63	φ80	φ100
Working fluid	Compressed air			
Max. working pressure MPa	0.7			
Min. working pressure MPa	0.3			
Ambient temperature °C	5 to 60			
Port size	M5		Rc1/8	
Operational stroke length mm	6	8	10	12
Rod diameter mm	φ14	φ16	φ16	φ20
Capacity of reciprocating cm ³	28.3	60.3	118.2	215.5
Repeatability mm	±0.01			
Product weight kg	0.59	1.02	2.02	3.45
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)			

Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less

Note 1: Maximum load current above: 20mA applies at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA with 60°C)

How to order



Symbol	Descriptions			
A Size				
50CS				
63CS				
80CS				
100CS				
B 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			
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

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

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw.

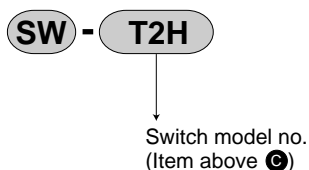
When ordering as option, 3 pieces are provided.

<Example of model number>

CKH2-50CS-O-T2H-R

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

How to order switch



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

- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/
BHG
- LHA
- LHAG
- HKP
- HLA/
HLB
- HLAG/
HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS
- CKF
- CKJ
- CKL2
- CKL2
*-HC
- CKH2**
- CKLB2
- NCK/
SCK/FCK
- FJ
- FK
- Ending

High gripping power powerful chuck
Chuck

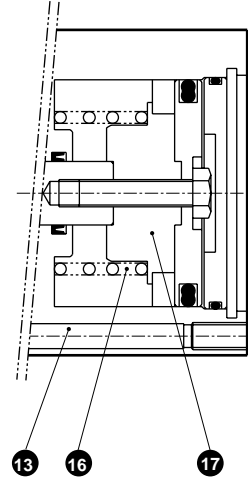
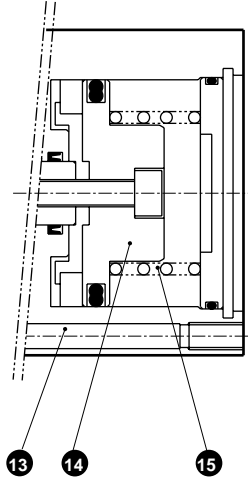
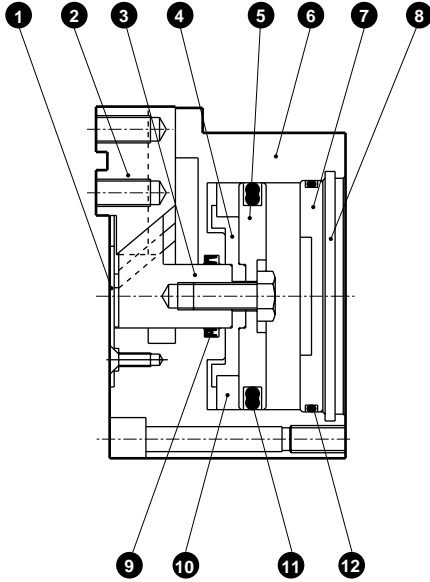
Internal structure and parts list

● CKH2-50CS to 100CS

Standard (double acting) type

O (normally open) type

C (normally closed) type



Parts list

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

Gripping performance data

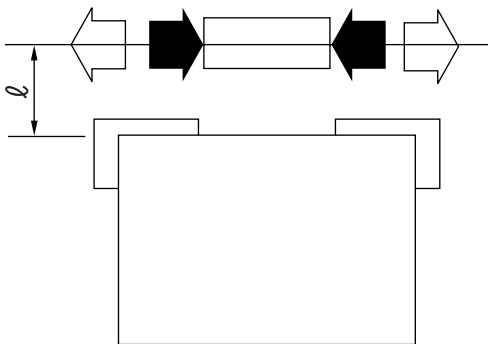
Gripping power which functions to open direction and closed direction with length ℓ of hand jaw at supply pressure 0.3, 0.5, 0.7 MPa is shown.

- Open direction (◀) - - - - (shown with broken line)
- Closed direction (▶) - - - - (shown with continuous line)

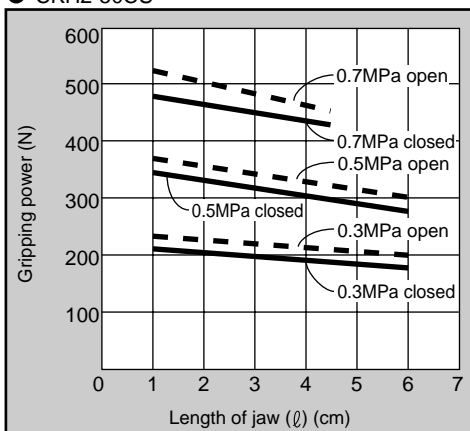
(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.

C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction.

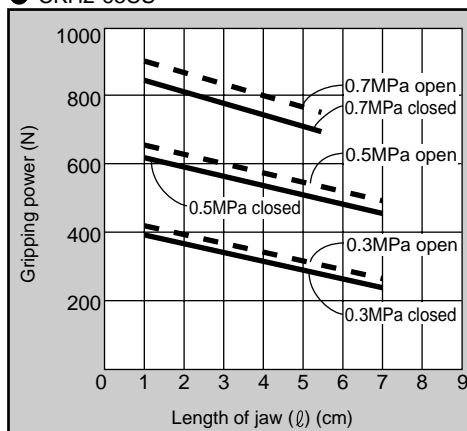
Grip performance data indicates the grip for one jaw. There are three jaws, so multiply the holding force in the graph by three when making a selection.



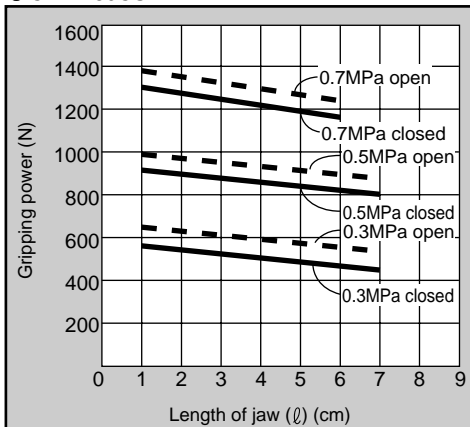
● CKH2-50CS



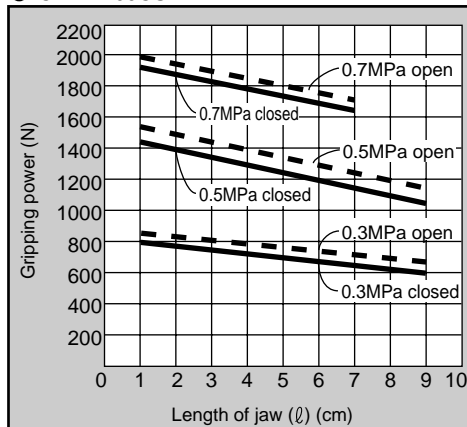
● CKH2-63CS



● CKH2-80CS



● CKH2-100CS



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

High gripping power powerful chuck
Chuck



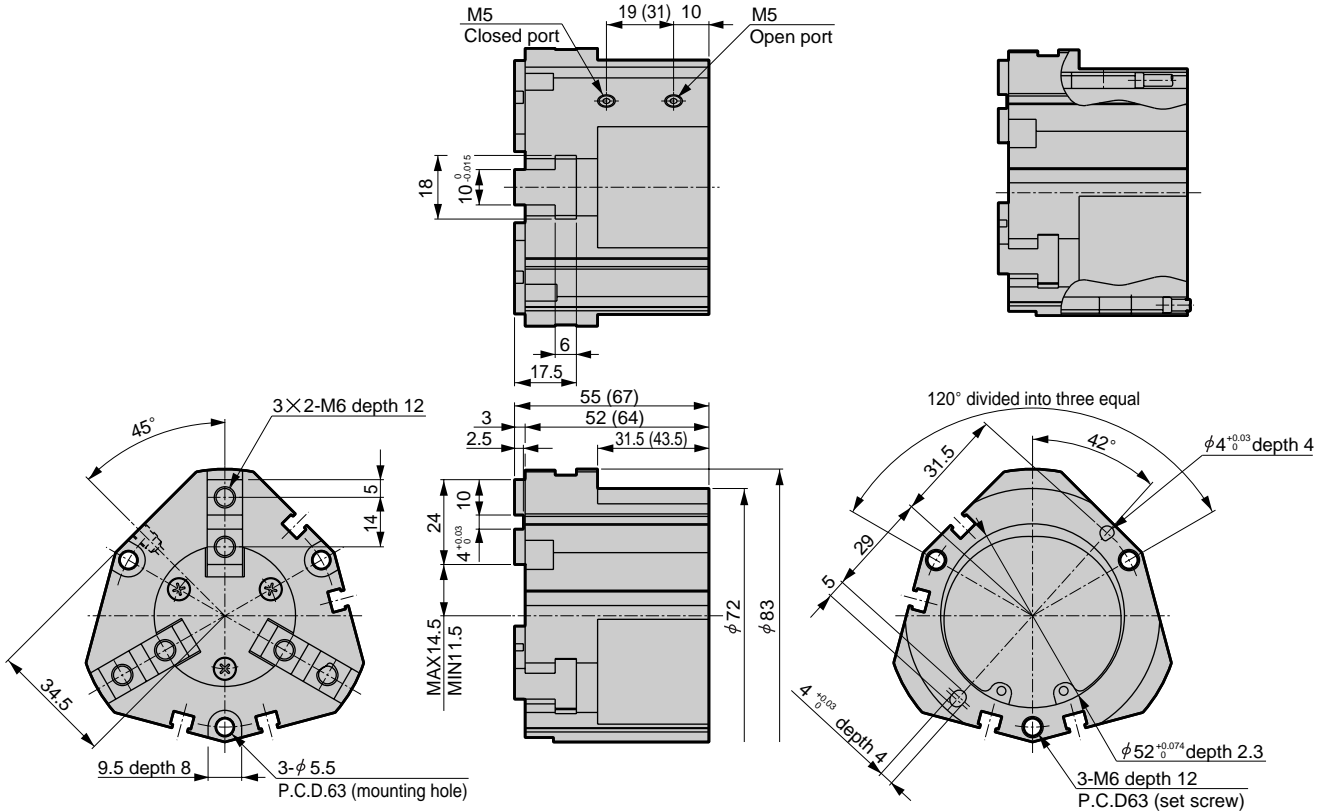
Dimensions

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

● CKH2-50CS standard/O/C

● With switch

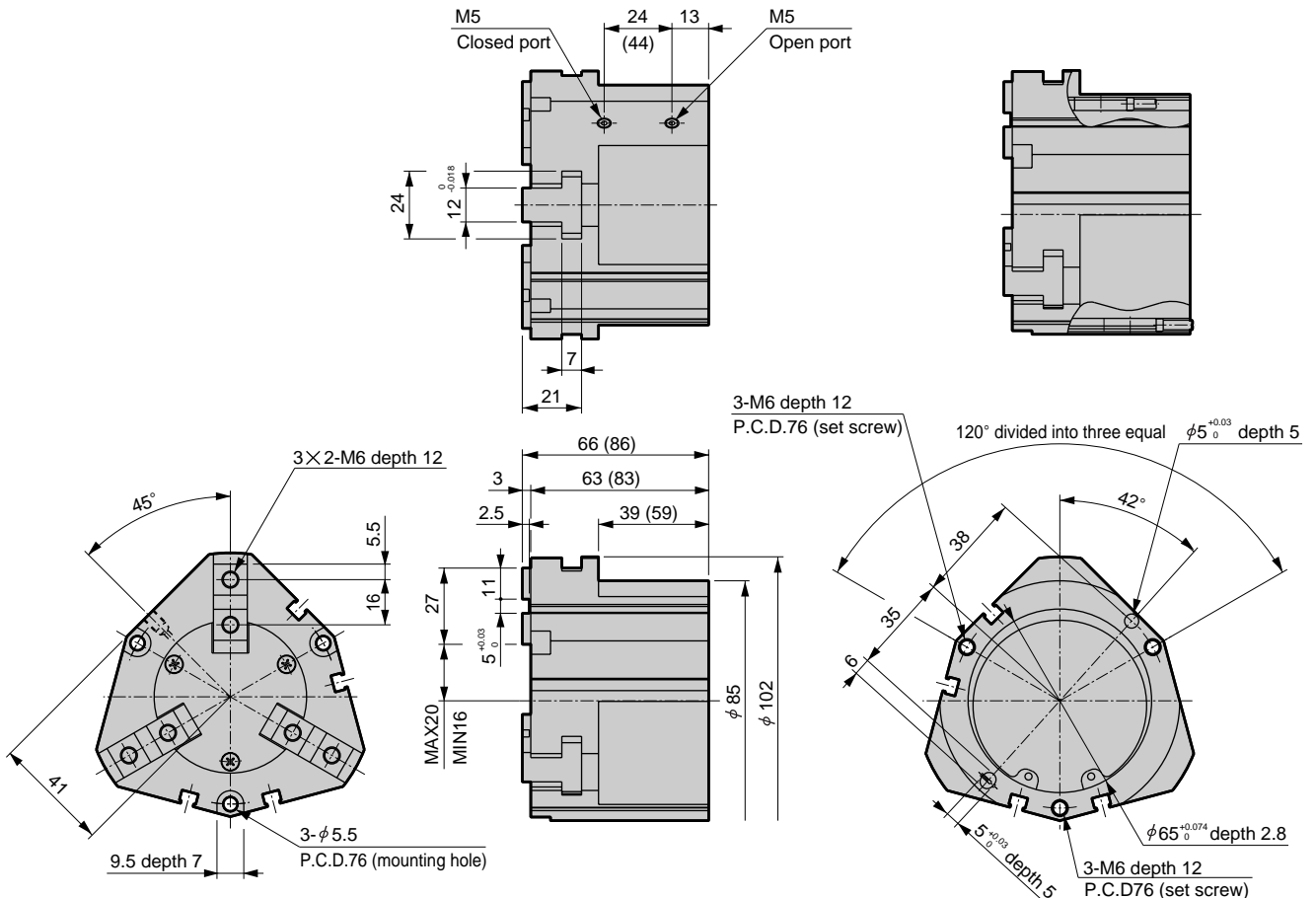
· Dimension in () for O [normally open] and C [normally closed] specifications.



● CKH2-63CS standard/O/C

● With switch

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

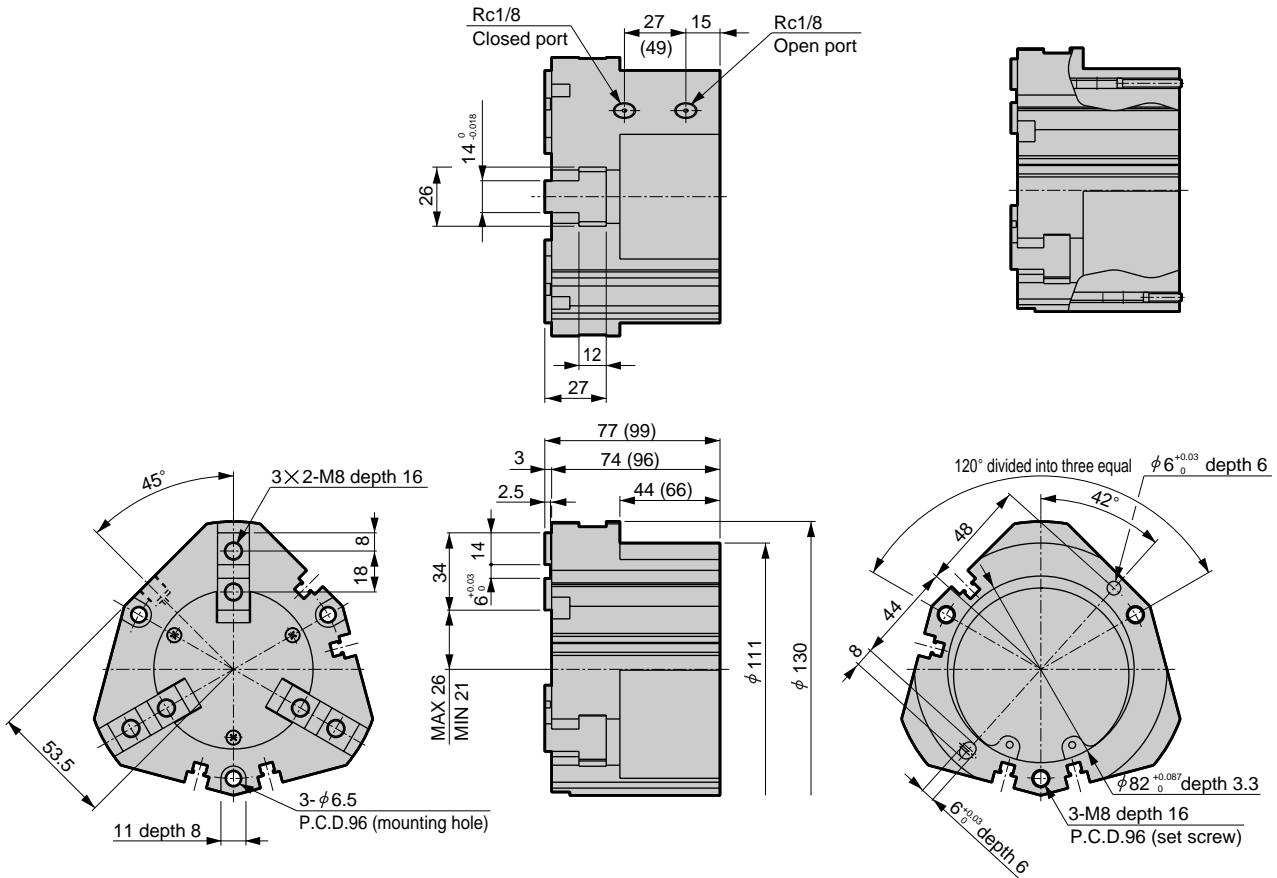


Dimensions



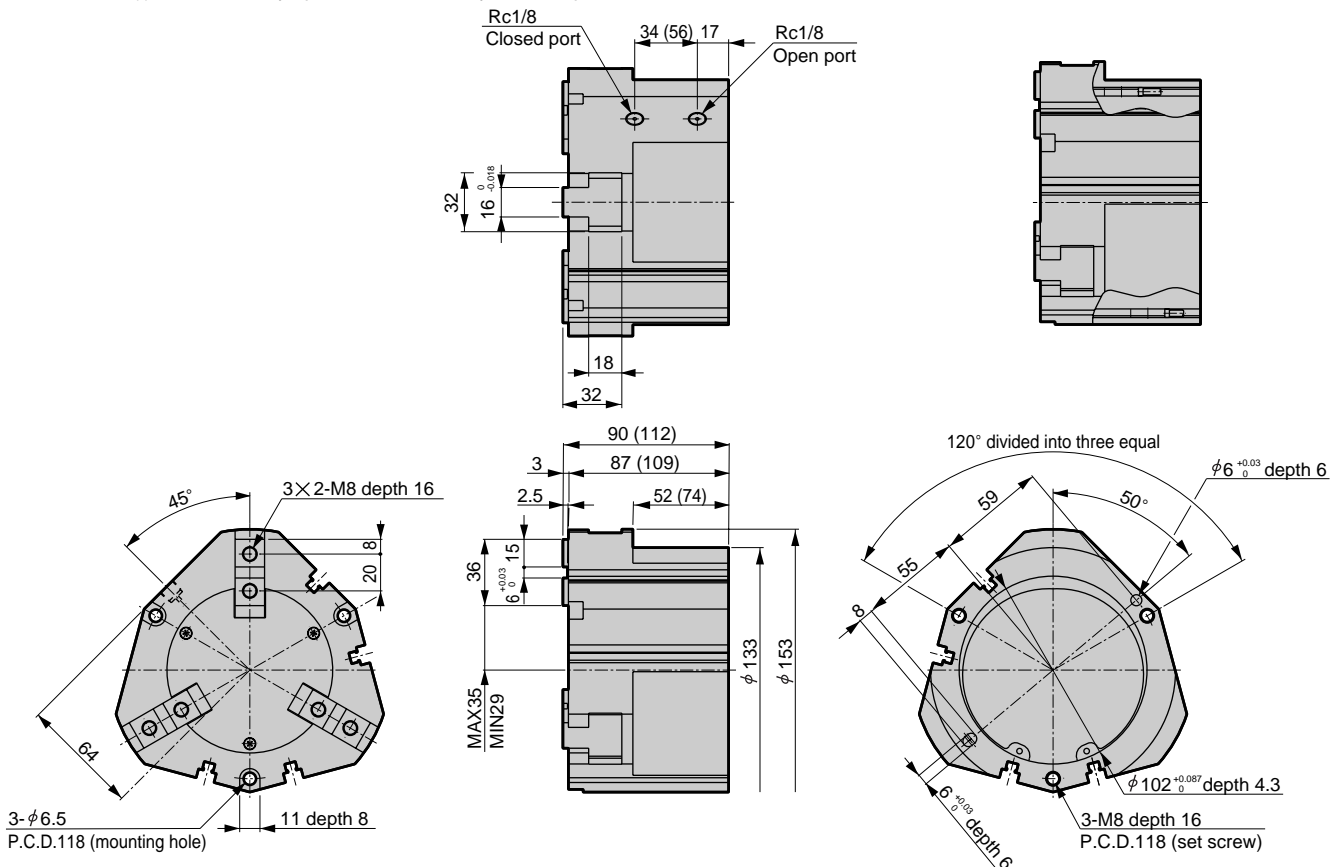
● CKH2-80CS standard/O/C

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



● CKH2-100CS standard/O/C

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



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

High gripping power powerful chuck
Chuck



Bi-directional powerful chuck

CKLB2 Series

- Operational stroke length: 5, 6, 8, 10, 12, 16, 20, 23mm



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
-*HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending

Specifications

Descriptions	CKLB2-20CS	CKLB2-25CS	CKLB2-32CS	CKLB2-40CS	CKLB2-50CS	CKLB2-63CS	CKLB2-80CS	CKLB2-100CS
Cylinder bore size mm	φ20	φ25	φ32	φ40	φ50	φ63	φ80	φ100
Working fluid	Compressed air							
Max. working pressure MPa	0.7							
Min. working pressure MPa	0.3							
Ambient temperature °C	5 to 60							
Port size	M5						Rc1/8	
Operational stroke length mm	5	6	8	10	12	16	20	23
Rod diameter mm	φ6	φ8	φ10	φ12	φ14	φ16	φ16	φ20
Capacity of reciprocating cm ³	1.8	3.3	7.7	15.6	28.3	60.3	118.2	215.5
Repeatability mm	±0.01							
Product weight kg	0.13	0.20	0.32	0.38	0.58	1.00	2.00	3.53
Lubrication	Not required (use turbine oil Class 1 ISO VG32 for lubrication)							

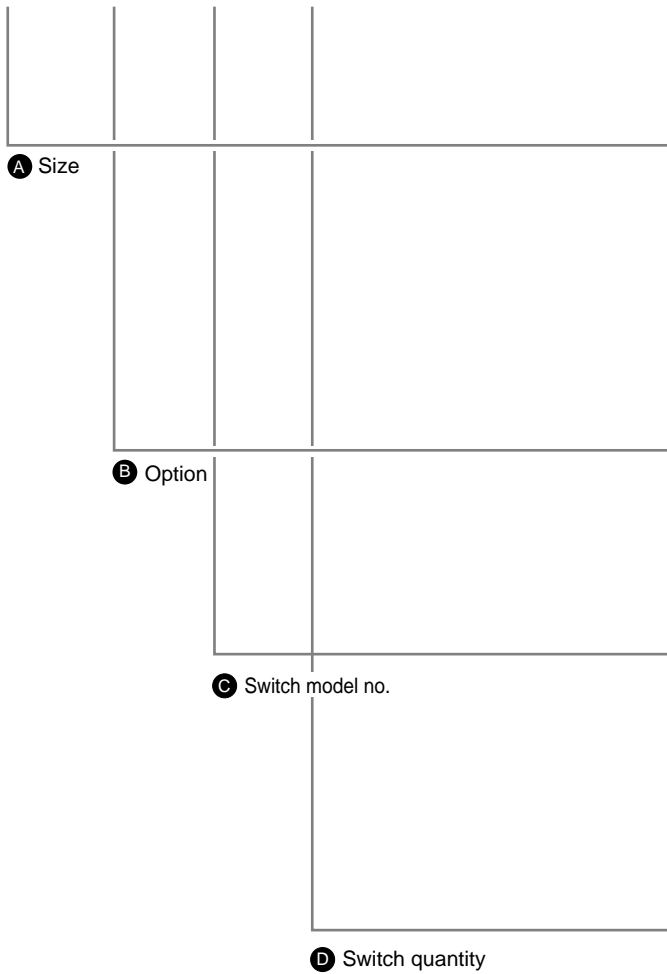
Switch specifications

Descriptions	Proximity 2 wire	Proximity 3 wire
	T2H/V	T3H/V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20mA (Note 1)	30 VDC or less, 100mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less

Note 1: Maximum load current above: 20mA applies at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA with 60°C)

How to order

CKLB2 - 20CS - O - T2H - R



Symbol	Descriptions			
A Size				
20CS				
25CS				
32CS				
40CS				
50CS				
63CS				
80CS				
100CS				
B 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			
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T2H*	T2V*	Proximity	1 color indicator type	2-wire
T3H*	T3V*		3-wire	
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

⚠ Note on model no. selection

Note 1: Small jaw is commonly used for inner and outer chuck.

Note 2: Refer to pages 494 to 497 for the dimensions and applicable model of the small jaw.
When ordering as option, 2 pieces are provided.

<Example of model number>

CKLB2-20CS-0-T2H-R

- A** Size : 20CS
- B** Option : Single acting (normally open)
- C** Switch model no. : Proximity T2H, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

SW - T2H

↓
Switch model no.
(Item above **C**)

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

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Bi-directional powerful chuck
Chuck

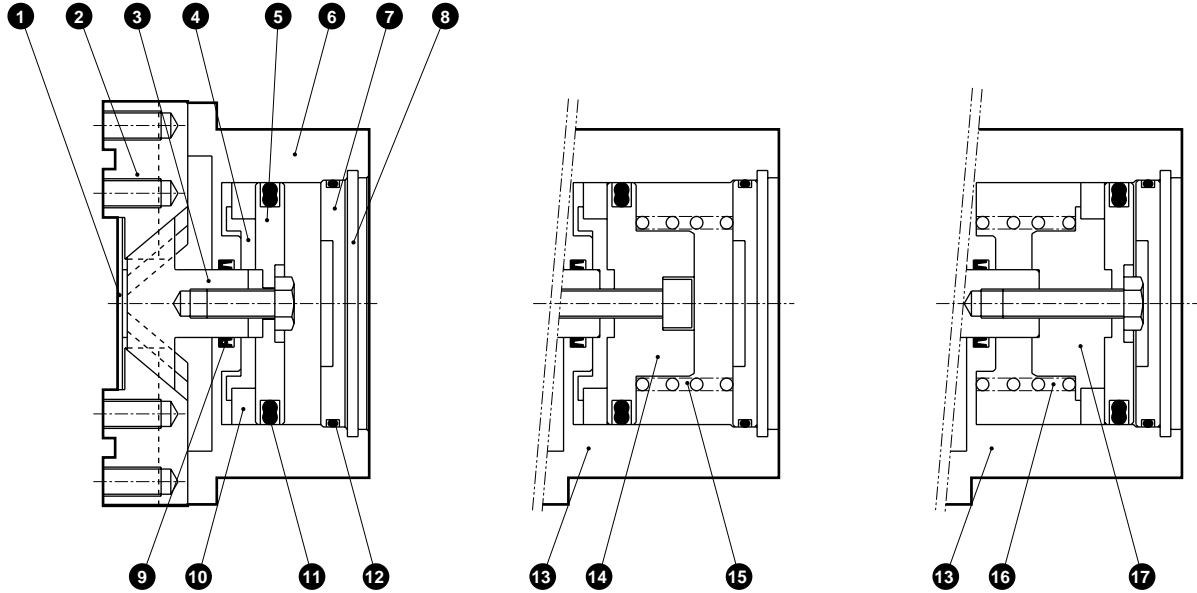
Internal structure and parts list

● CKLB2-20CS to 100CS

Standard (double acting) type

O (normally open) type

C (normally closed) type



Parts list

No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Center cover	Stainless steel		9	Rod packing seal	Nitrile rubber	
2	Master key	Carbon steel		10	Magnet		
3	Piston A	20CS to 32CS: Stainless steel 40CS to 100CS: Carbon steel		11	Piston packing seal	Nitrile rubber	
4	Piston B	Aluminum alloy		12	Cylinder gasket	Nitrile rubber	
5	Piston C	Aluminum alloy		13	O, C body	Aluminum alloy	
6	Body	Aluminum alloy		14	O piston C	Aluminum alloy	
7	Cylinder guard	Aluminum alloy		15	O spring	Stainless steel	
8	Snap ring	Stainless steel	Steel (80, 100CS)	16	C spring	Stainless steel	
				17	C piston B	Aluminum alloy	

Note) *1 20CS to 32CS are stainless steel and 40CS to 100CS are carbon steel.

Gripping performance data

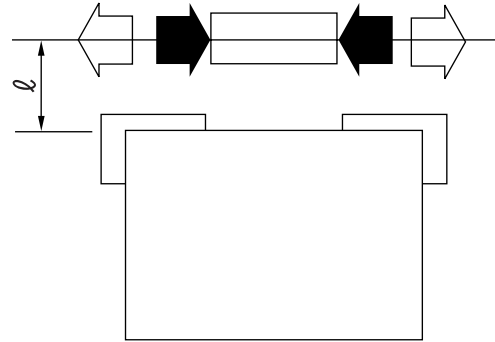
Gripping power which functions to open direction and closed direction with length ℓ of hand jaw at supply pressure 0.3, 0.5, 0.7 MPa is shown.

- Open direction (◀) - - - - (shown with broken line)
- Closed direction (▶) - - - - (shown with continuous line)

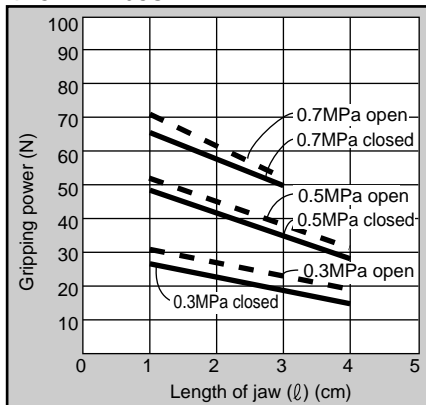
(Note) O type gripping power decreases approximate 20 to 30 % comparing to double acting type to closed direction.

C type gripping power decreases approximate 10 to 20 % comparing to double acting type to open direction.

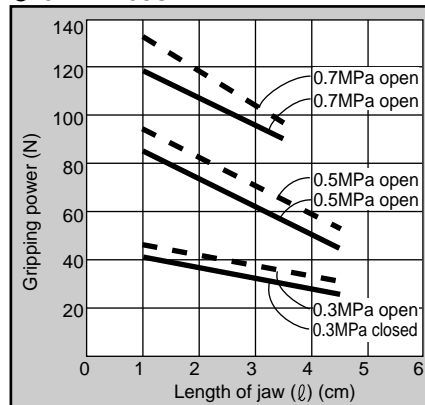
Grip performance data indicates the grip for one jaw. Since two jaws are used, double the grip in the graph when making a selection.



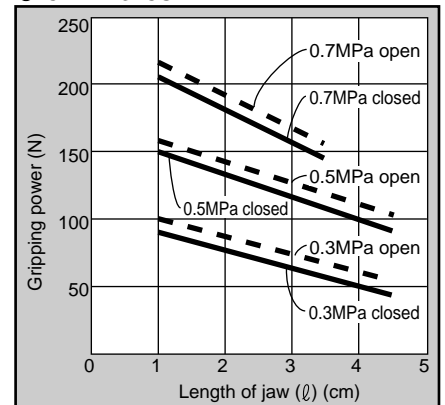
● CKLB2-20CS



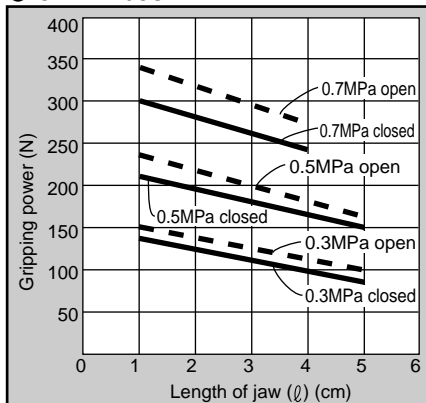
● CKLB2-25CS



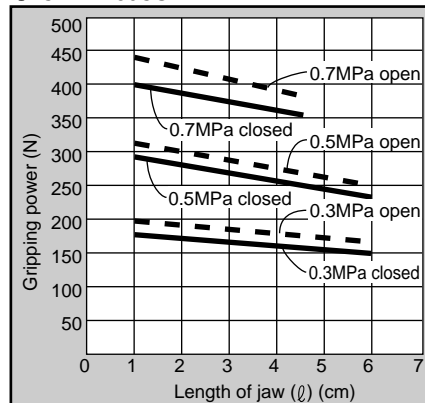
● CKLB2-32CS



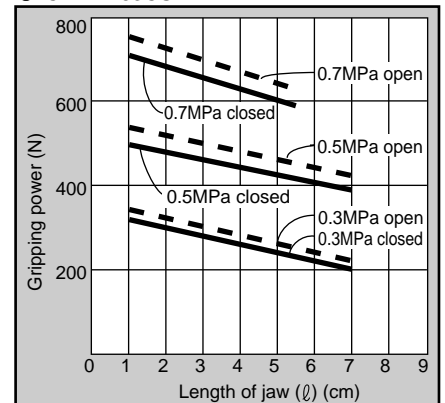
● CKLB2-40CS



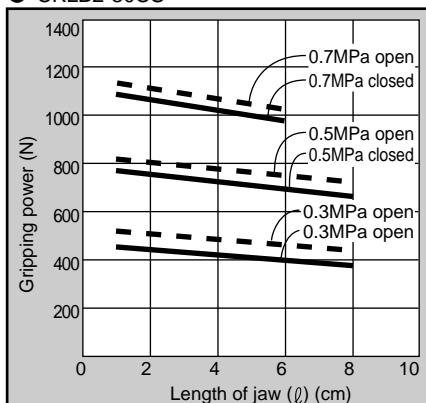
● CKLB2-50CS



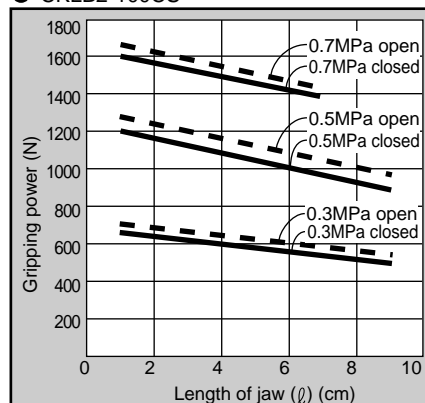
● CKLB2-63CS



● CKLB2-80CS



● CKLB2-100CS



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Bi-directional powerful chuck
Chuck

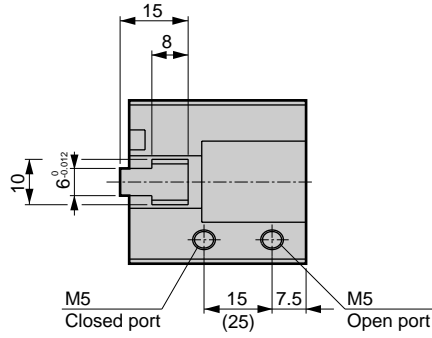


Dimensions

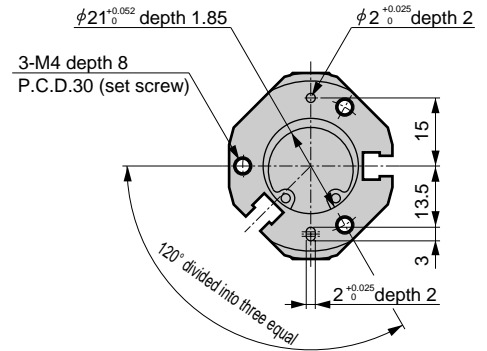
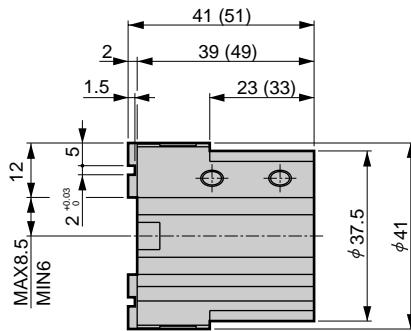
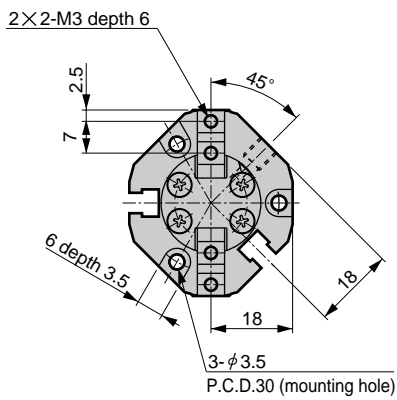
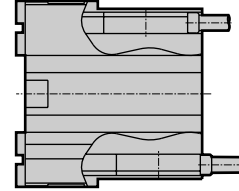
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

● CKLB2-20CS standard/O/C

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

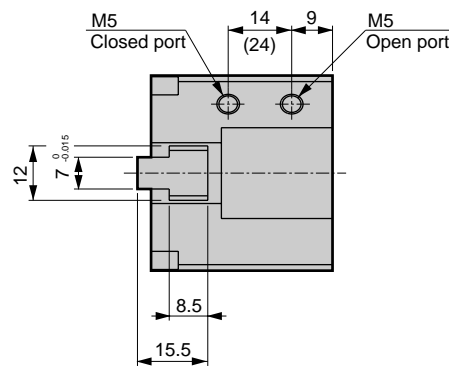


● With switch

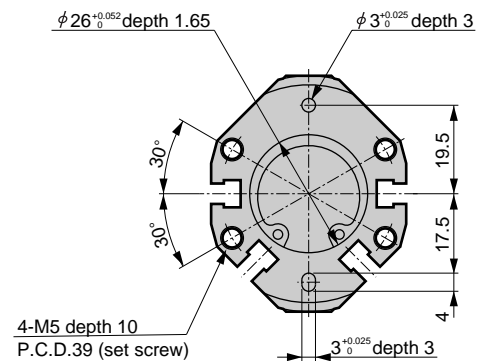
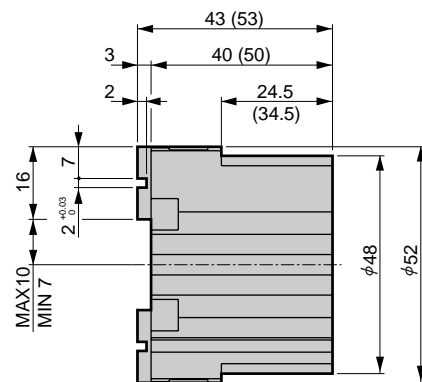
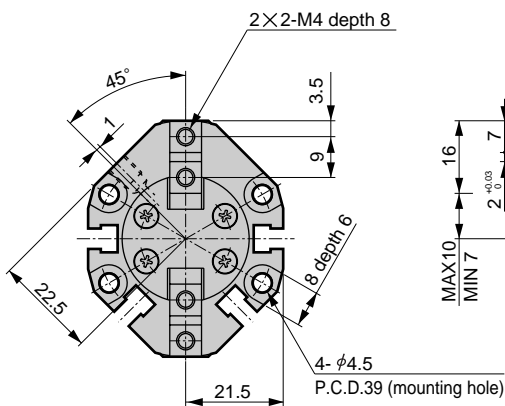
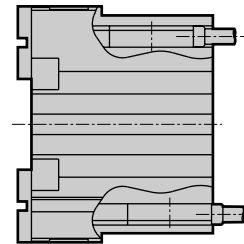


● CKLB2-25CS standard/O/C

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



● With switch

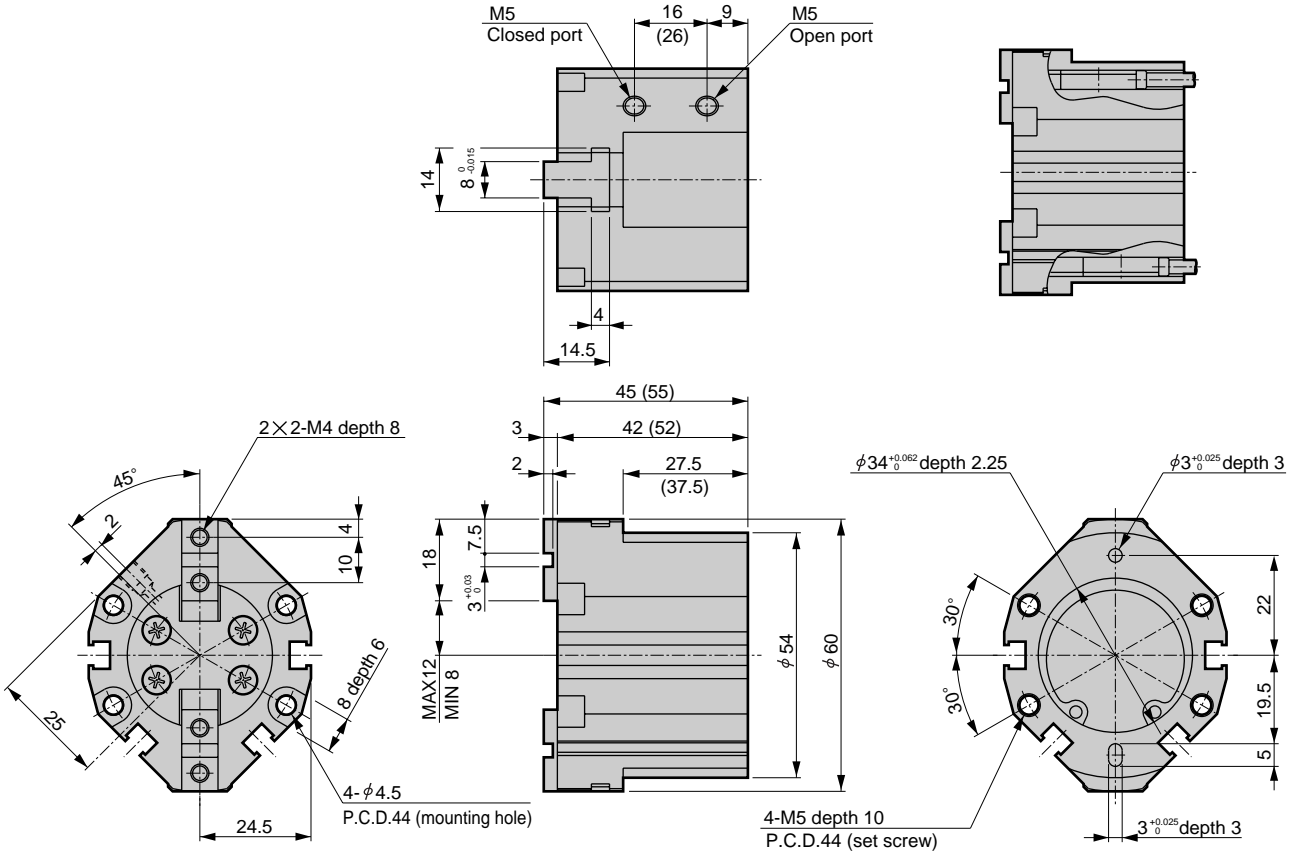


Dimensions



● CKLB2-32CS standard/O/C

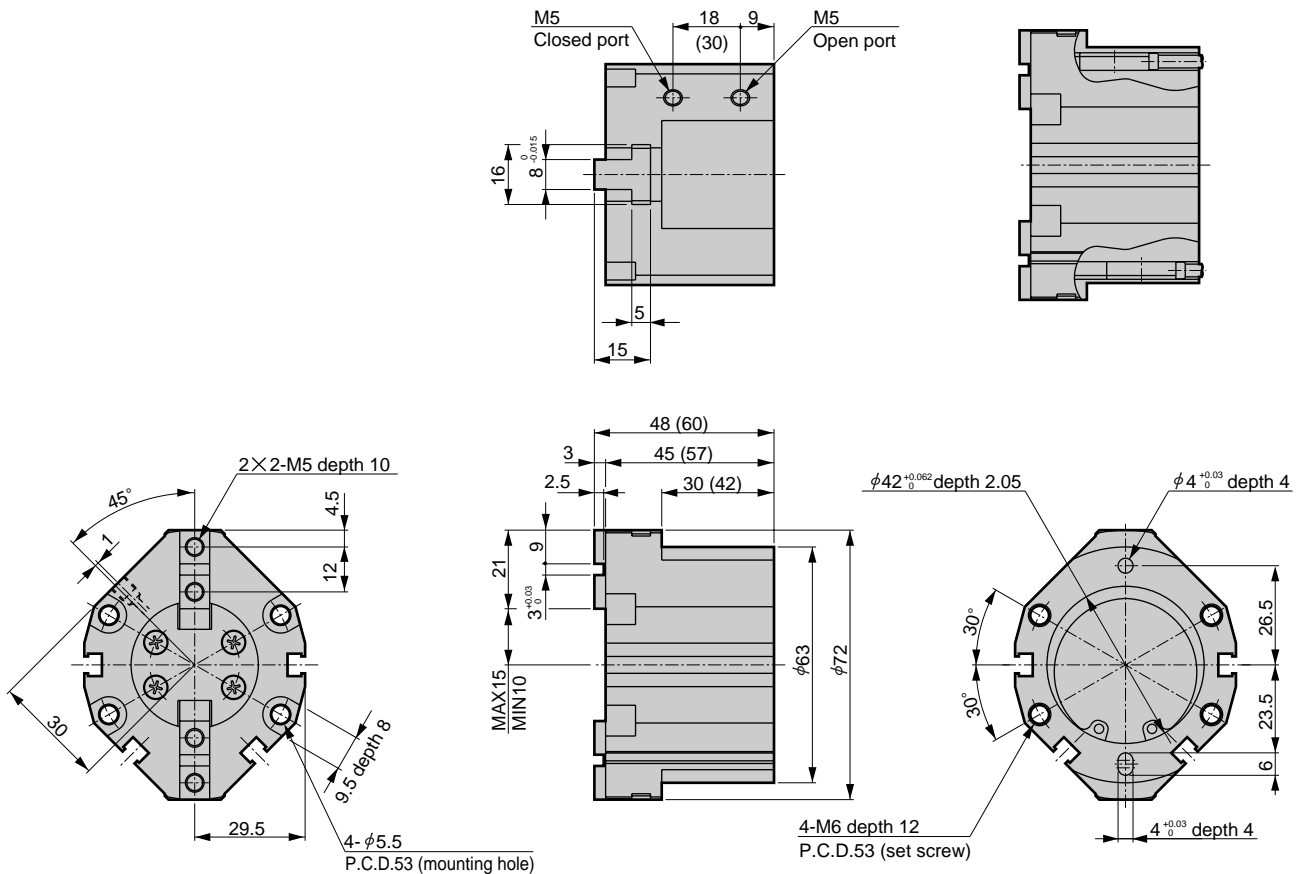
· Dimension in () for O [normally open] and C [normally closed] specifications.



● With switch

● CKLB2-40CS standard/O/C

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



● With switch

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Bi-directional powerful chuck
Chuck



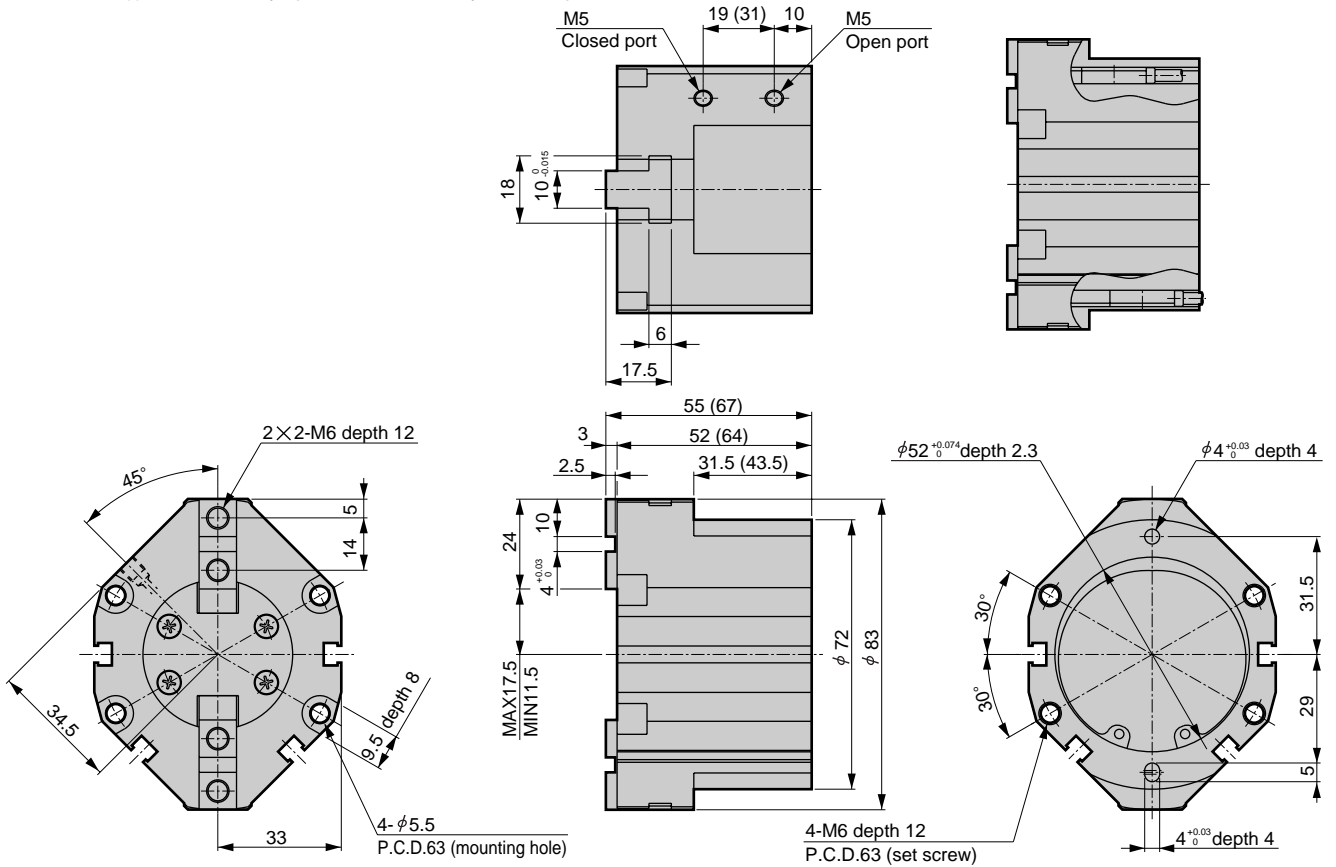
Dimensions

RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 -*.HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

● CKLB2-50CS standard/O/C

● With switch

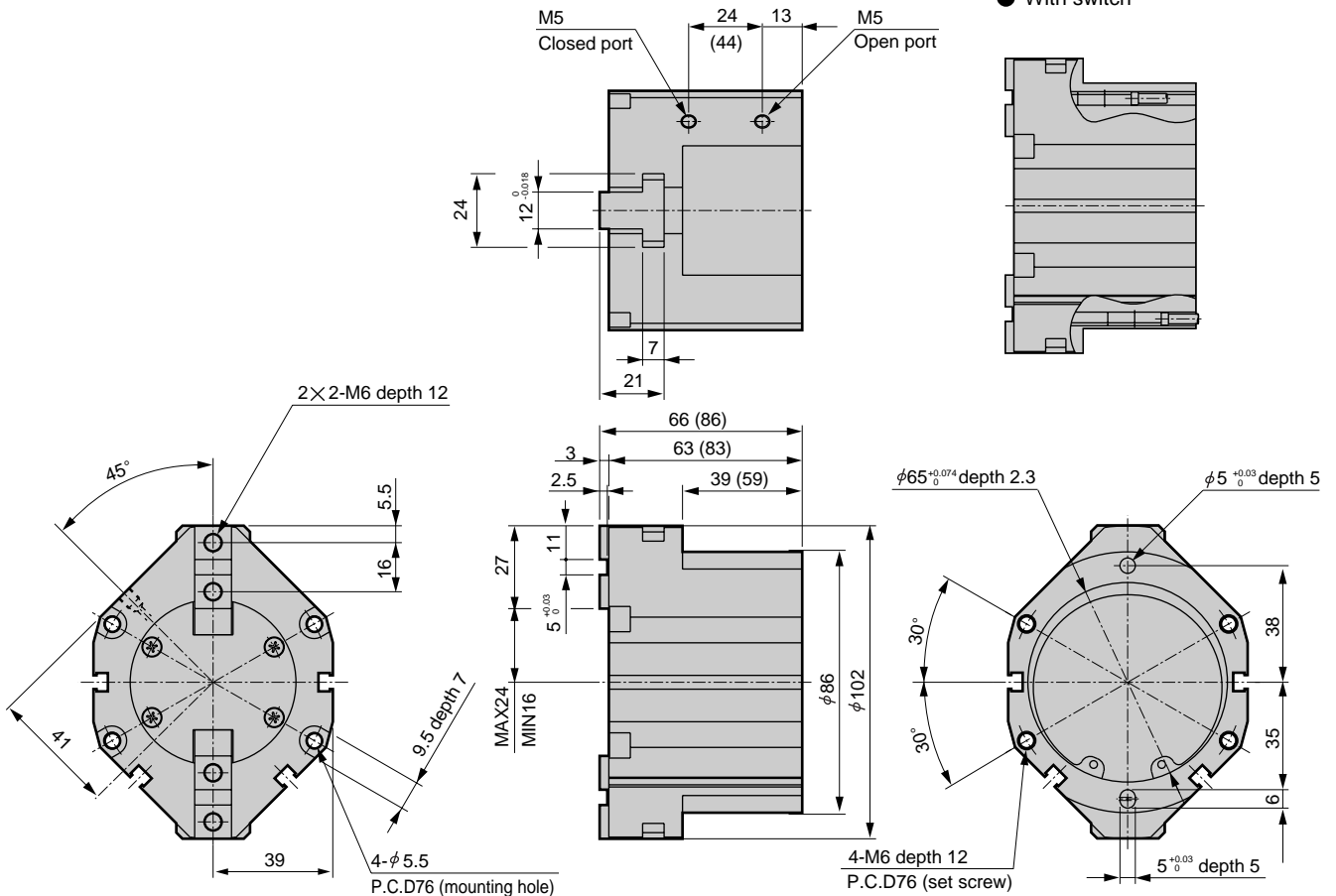
· Dimension in () for O [normally open] and C [normally closed] specifications.



● CKLB2-63CS standard/O/C

● With switch

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



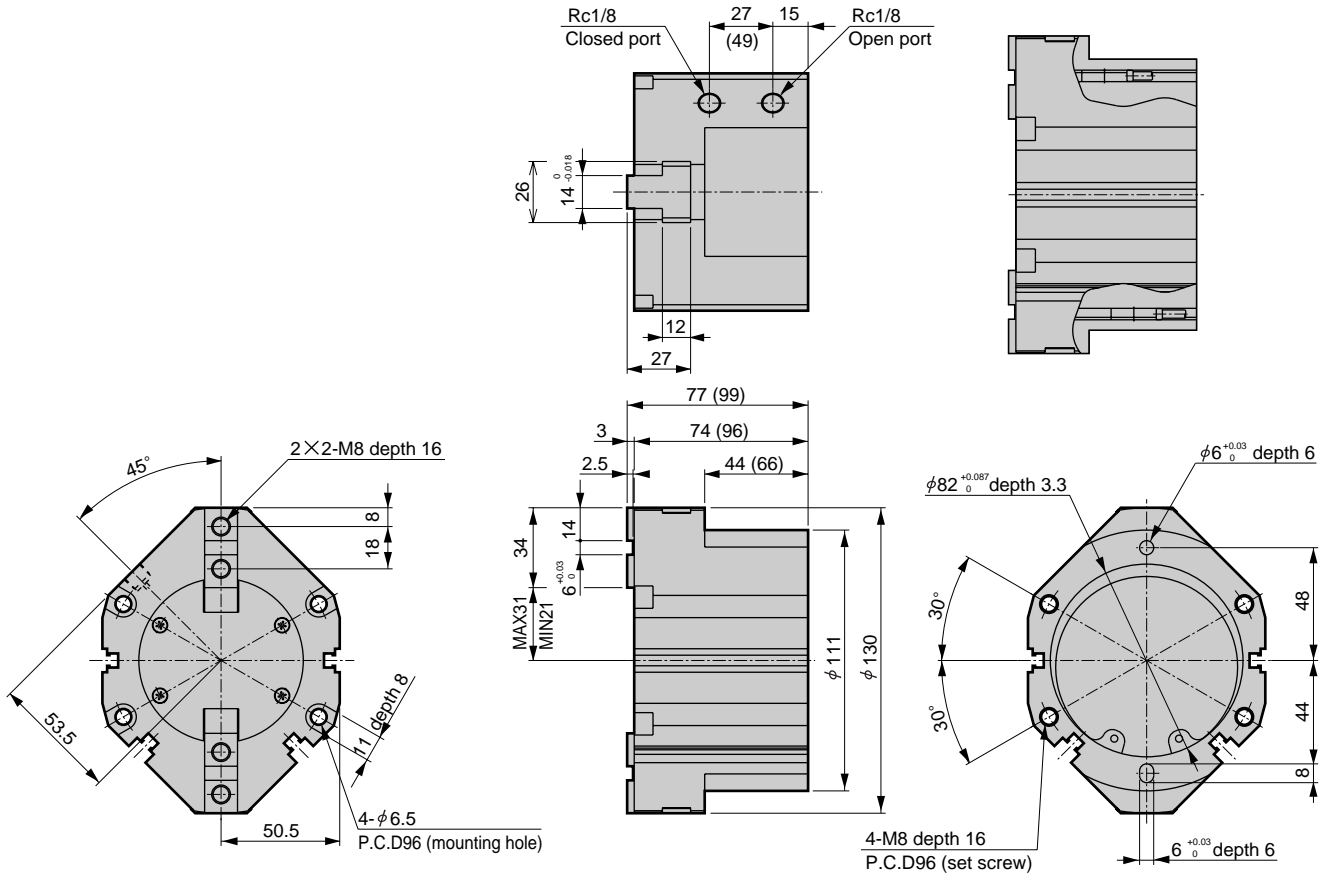
Dimensions



● CKLB2-80CS standard/O/C

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

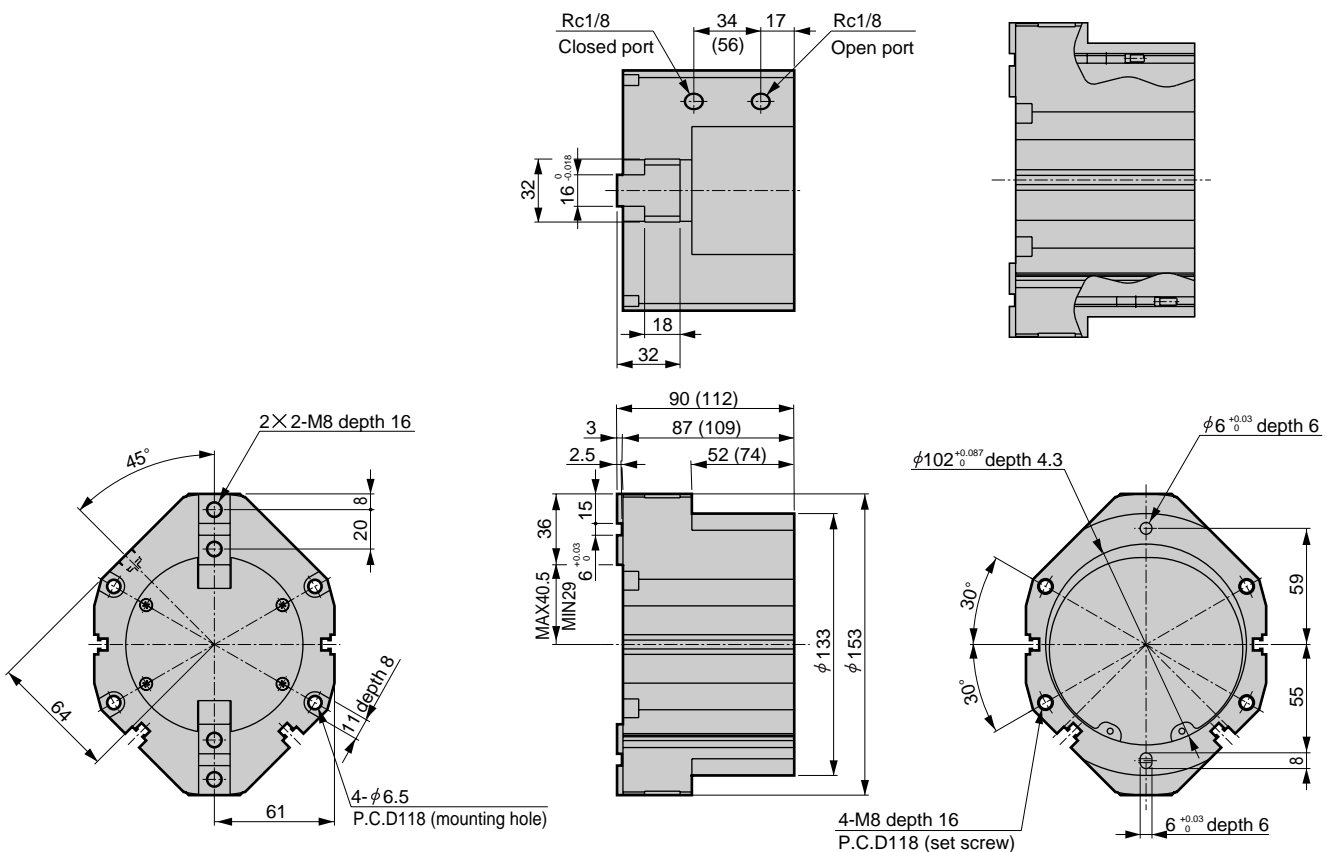
● With switch



● CKLB2-100CS standard/O/C

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

● With switch



RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFb
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Bi-directional powerful chuck
Chuck



Small jaw

● Material: Iron, engineering plastic



Features

A variety of small jaws is available to match user machining needs.

● **Socket and spigot section machined**

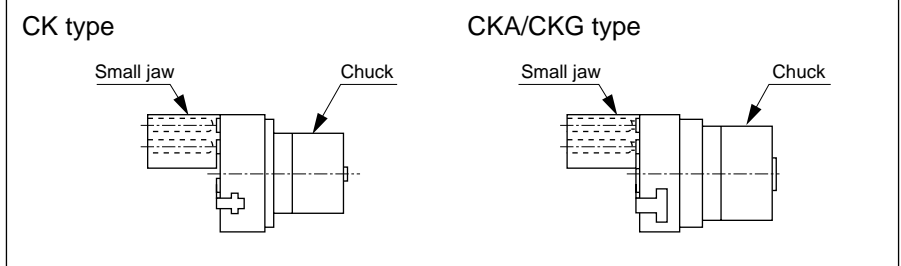
Standard section (socket and spigot section) machined.

Wide series variation to select according to workpiece shape and dimension.

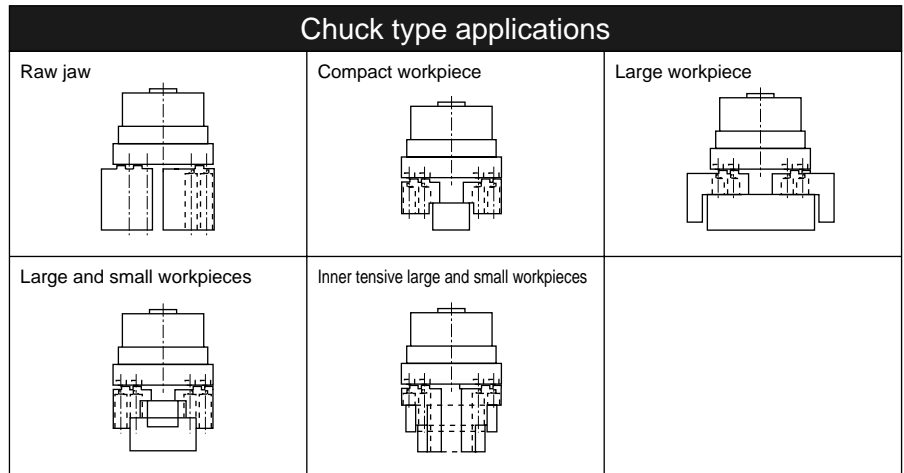
● **2 types of materials for small jaw**

Iron (S50C) and engineering plastic (MC nylon) are available to select the best one according to material and working condition of workpiece.

Applicable model for standard small jaw



Small jaw applications



How to order (Note: When ordering repair parts, 1 pc. is provided.)

CKA - **Y1** - **610**

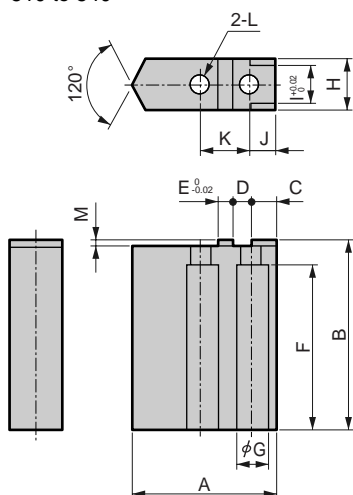
A Model
B Material
C Small jaw No.

A Model		B Material		C Small jaw No.	
Symbol	Descriptions	Symbol	Descriptions	Symbol	Applicable model
CKG	3-way jaw bearing chuck	Y1	Material S50C	510	CKG-16S, CKA-15CS, CKF-15CS
CK	3-way jaw long stroke chuck	Y2	Material MC nylon	520	CKG-25S, CKA-20CS, CKF-20CS
CKA	3-way jaw thin chuck			530	CKG-32CS, CKA-25CS, CKF-25CS
CKF	Hollow chuck			540	CKG-40CS, CKA-30CS, CKF-30CS
				610	CKG-25S, CKA-20CS, CKF-20CS
				620	CKG-32CS, CKA-25CS, CKF-25CS
				630	CKG-40CS, CKA-30CS, CKF-30CS
				710	CKG-50CS, CKA-40CS, CKF-40CS
				720	CK-1CS
				730	CK-1.5CS
				740	CK-2CS
				750	CKA-50CS
				760	CKA-60CS
				770	CKA-70CS

Dimensions



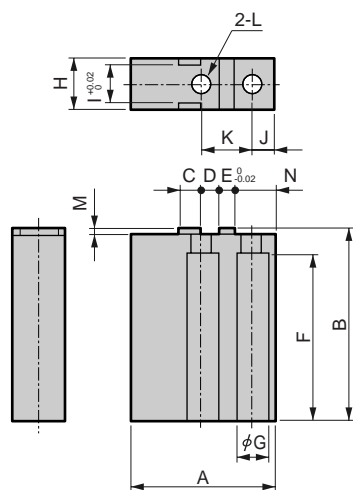
● 510 to 540



*1 Y1: Material S50C
*2 Y2: Material MC nylon

Symbol	Small jaw No.	Applicable model	A	B	C	D	E	F	φG	H	I	J	K	φL	M	Weight (g)	
																Y1 *1	Y2 *2
	510	CKA-15CS CKG-16CS CKF-15CS	17.5	25	3.5	2.5	2	20	6	8	6	3.5	7	3.5	1	17	5
	520	CKA-20CS CKG-25CS CKF-20CS	24	30	4.5	3.5	2	24.5	8	12	8	4.5	9	4.5	1.5	45	11
	530	CKA-25CS CKG-32CS CKF-25CS	31	40	4.5	3.5	3	34.5	8	14	10	4.5	10	4.5	1.5	103	21
	540	CKA-30CS CKG-40CS CKF-30CS	37	50	6	4.5	4	43	9.5	14	10	6	13	5.5	2	136	30

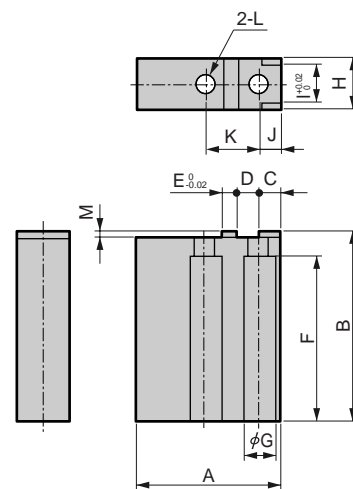
● 610 to 630



*1 Y1: Material S50C
*2 Y2: Material MC nylon

Symbol	Small jaw No.	Applicable model	A	B	C	D	E	F	φG	H	I	J	K	φL	M	N	Weight (g)	
																	Y1 *1	Y2 *2
	610	CKA-20CS CKG-25CS CKF-20CS	30	30	4.5	3.5	2	24.5	8	12	8	4.5	9	4.5	1.5	8	65	10
	620	CKA-25CS CKG-32CS CKF-25CS	35	40	4.5	3.5	3	24.5	8	14	10	4.5	10	4.5	1.5	8	126	19
	630	CKA-30CS CKG-40CS CKF-30CS	45	50	6	4.5	4	43	9.5	14	10	6	13	5.5	2	10.5	188	28

● 710 to 770



*1 Y1: Material S50C
*2 Y2: Material MC nylon

Symbol	Small jaw No.	Applicable model	A	B	C	D	E	F	φG	H	I	J	K	φL	M	Weight (g)	
																Y1 *1	Y2 *2
	710	CKA-40CS CKG-50CS CKF-40CS	44.5	60	6	5	4	52	11	18	14	6	14	6.5	2	285	43
	720	CK-1CS	33.5	50	6	5	4	43	9.5	14	10	6	14	5.5	2	128	19
	730	CK-1.5CS	43.5	65	7	6.5	5	56	11	18	14	7	18	6.5	2	302	45
	740	CK-2CS	55.5	80	8	7	6	71	14	19	14	8	20	8.5	2	471	70
	750	CKA-50CS	51.5	70	6	5	5	58	11	18	14	6	15	6.5	2	402	62
	760	CKA-60CS	64	80	8	6	6	68	14	20	16	8	18	9	2	608	94
	770	CKA-70CS	74	100	8	7	6	88	14	20	16	8	20	9	2	913	140

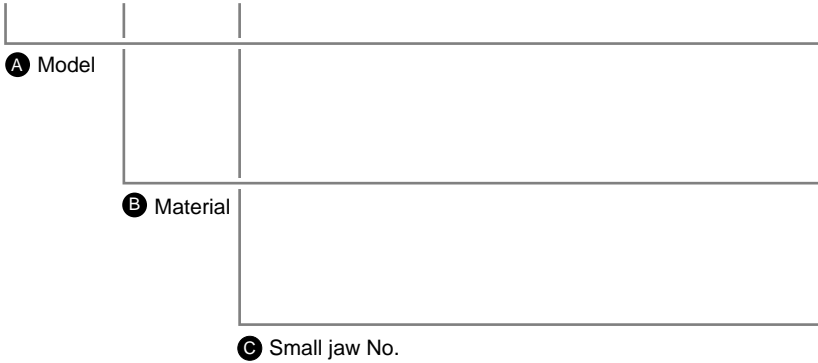
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/
BHG
LHA
LHAG
HKP
HLA/
HLB
HLAG/
HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
CKS
CKF
CKJ
CKL2
CKL2
*-HC
CKH2
CKLB2
NCK/
SCK/FCK
FJ
FK
Ending
Small jaw
Chuck

Small jaw

How to order small jaw and dimensions

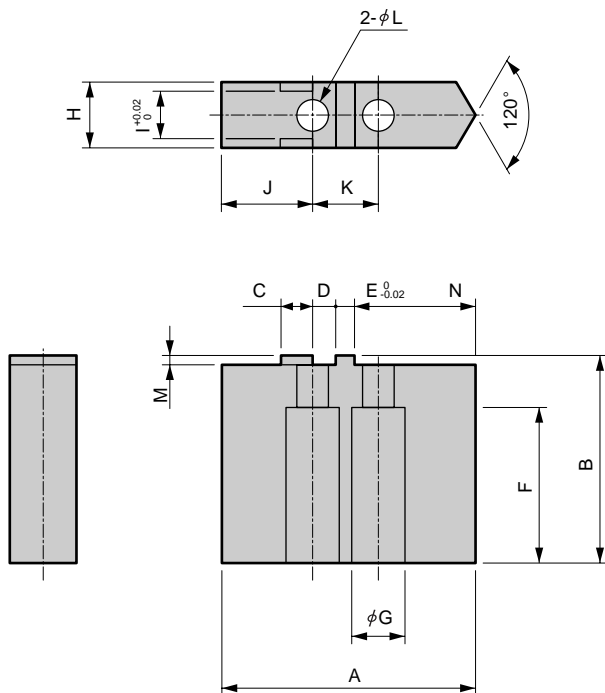
How to order (Note: When ordering repair parts, 1 pc. is provided.)

CKL2 - Y1 - 810



Symbol	Descriptions
A Model	
CKL2	High gripping power powerful chuck
CKH2	High gripping power powerful chuck
CKLB2	Bi-directional powerful chuck
B Material	
Y1	Material S50C
Y2	Material MC nylon
Symbol	Applicable model
C Small jaw No.	
810	CKLB2-20CS
820	CKLB2-25CS
830	CKL2-32CS, CKLB2-32CS
840	CKL2-40CS, CKLB2-40CS
850	CKL2-50CS, CKH2-50CS, CKLB2-50CS
860	CKL2-63CS, CKH2-63CS, CKLB2-63CS
870	CKL2-80CS, CKH2-80CS, CKLB2-80CS
880	CKL2-100CS, CKH2-100CS, CKLB2-100CS

Dimensions



Symbol Small jaw No.	A	B	C	D	E	F	ϕG	H	I	J	K	ϕL	M	N	Weight (g)	
															Y1	Y2
810	29.5	29	3.5	2.5	2	23	6.5	10	6	12	7	3.5	1	13	64	10
820	34.5	33.5	4.5	3.5	2	24	8	10	7	12.5	9	4.5	1.5	16.5	86	13
830	39.5	33.5	4.5	3.5	3	24	8	12	8	14	10	4.5	1.5	19	118	18
840	49.5	39	6	4.5	3	31	9	12	8	18.5	12	5.5	2	23.5	171	26
850	54.5	44	6	5	4	33	11	14	10	18.5	14	6.5	2	27	250	37
860	69.5	49	8	5	5	38	11	16	12	24.5	16	6.5	2	34.5	408	61
870	84.5	59	10	6	6	47	14	18	14	28	18	9	2	44.5	676	101
880	99.5	64	10	7	6	52	14	20	16	31.5	20	9	2	55	962	144

How to order small jaw and dimensions

How to order (Note: When ordering repair parts, 1 pc. is provided.)

CKS - **Y1** - **910**

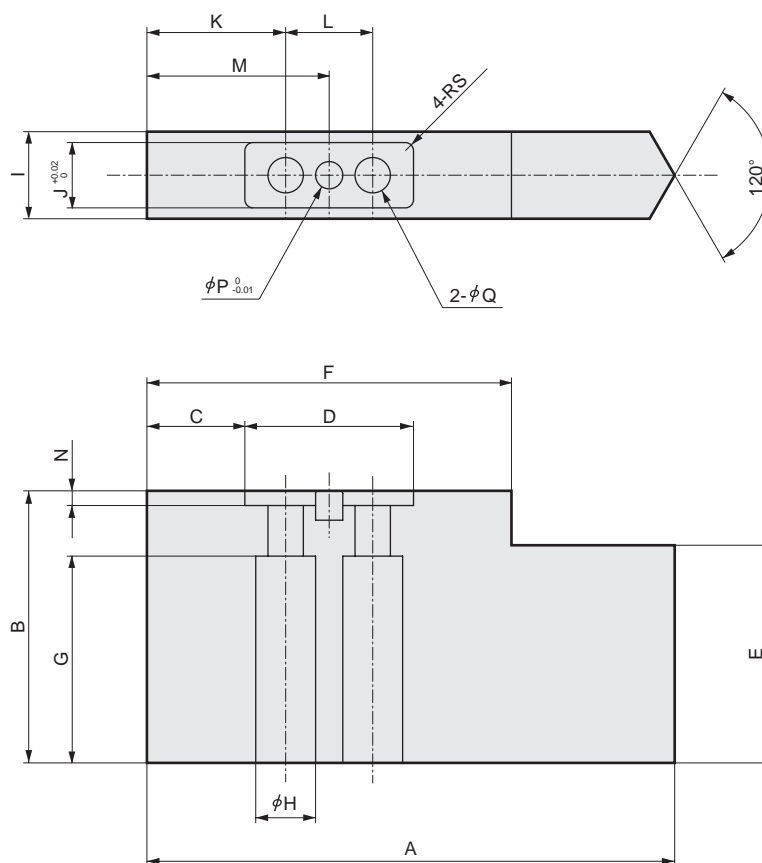
Model

A Material

B Small jaw No.

Symbol	Descriptions
A Material	
Y1	Material S50C
Y2	Material MC nylon
Symbol	Applicable model
B Small jaw No.	
910	CKS-08CS
920	CKS-12CS
930	CKS-16CS
940	CKS-20CS
950	CKS-25CS
960	CKS-32CS

Dimensions



Symbol		A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	S	Weight (g)	
Small jaw No.	Applicable model																		Y1	Y2
910	CKS-08CS	42.5	30	6.5	15	20	27.5	23	6.5	10	6	10.5	7	14	1.7	2	3.5	1	74	12
920	CKS-12CS	48	35	7.5	19	25	34	27	8	11	7	12.5	9	17	2.7	2	4.5	1	108	17
930	CKS-16CS	56.5	35	9.5	21	25	40.5	27	8	12	8	15	10	20	2.7	3	4.5	1	145	23
940	CKS-20CS	66.5	40	11	25	30	48	32	9.5	12	8	17.5	12	23.5	2.7	3	5.5	1.5	192	31
950	CKS-25CS	85.5	45	16	28	35	60	33	11	14	10	23	14	30	2.7	4	6.5	1.5	335	53
960	CKS-32CS	97	50	18	31	40	67	38	11	16	12	25.5	16	33.5	2.7	5	6.5	1.5	500	79

- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFb
- HFP
- HLC
- HGP
- FH500
- HLB
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS
- CKF
- CKJ
- CKL2
- CKL2*-HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending

Small jaw
Chuck