

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending
CKL2
CKLG2
CKL2-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ
CHC



Powerful chuck

CKL2 Series

● Operational stroke length: 5, 6, 8, 10, 12, 16, 20, 23, 30, 40 mm

Double acting



Single acting (normally open)



Single acting (normally closed)



Specifications

Item	CKL2								
Size	16CS	20CS	25CS	32CS	40CS	50CS	63CS	80CS	100CS
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Working fluid	Compressed air								
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)								
Min. working pressure MPa	0.3 (≈44 psi, 3 bar)								
Ambient temperature °C	5 (41°F) to 60 (140°F)								
Port size	M3	M5						Rc1/8	
Operating stroke length mm	5		6	8	10	12 (30)	16 (30)	20 (40)	23 (40)
Rod diameter mm	ø6		ø8	ø10	ø12	ø14	ø16		ø20
Volumetric capacity (reciprocating) cm ³	1.2	1.8	3.3	7.7	15.6	28.3	60.3	118.2	215.5
Repeatability mm	±0.01								
Weight kg	0.07	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 if necessary for lubrication)								

*1 : Values in () are for long stroke (option code L1).

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire	Proximity 3-wire
	T2H/T2V	T3H/T3V	F2H/F2V	F3H/F3V
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller	For programmable controller, relay
Output method	—	NPN output	—	NPN output
Power supply voltage	—	10 to 28 VDC	—	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA (*1)	30 VDC or less, 100 mA or less	10 to 30 VDC, 5 to 20 mA	30 VDC, 50 mA or less
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	
Leakage current	1 mA or less	10 µA or less	1 mA or less	10 µA or less
Weight	1 m:18 g 3 m:49 g 5 m:80 g		1 m:10 g 3 m:29 g	

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

*2 : The F type switch uses a bend-resistant lead wire.

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

How to order

Without switch (built-in magnet for switch)

CKL2 - **20CS** - **O**

With switch (built-in magnet for switch)

CKL2 - **20CS** - **O** - **T2H** - **R**

A Size

B Option
*1, *2

C Switch model No.
*3

D Switch quantity

Code	Description					
A Size						
16CS						
20CS						
25CS						
32CS						
40CS						
50CS						
63CS						
80CS						
100CS						
B Option						
Blank	Standard (double acting)					
O	Single acting (normally open)					
C	Single acting (normally closed)					
L1	Long stroke					
Y1	With attachment (Material S50C)					
Y2	With attachment (Material MC nylon)					
C Switch model No.						
Axial lead wire	Radial lead wire	Contact Proximity	Voltage		Display 1-color display	Lead wire 2-wire 3-wire 2-wire 3-wire
			AC	DC		
F2H*	F2V*			●		
F3H*	F3V*			●		
T2H*	T2V*			●		
T3H*	T3V*		●			
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
D Switch quantity						
R	1 on open side					
H	1 on closed side					
D	2					

⚠ Precautions for model No. selection

- *1 : Single acting (O, C) and long stroke (L1) cannot be selected together.
- *2 : For long stroke (L1), only **A** Size 50CS, 63CS, 80CS, or 100CS can be selected.
- *3 : For single acting (O, C) and with attachment (Y1, Y2), **A** Size 16CS cannot be selected.
- *4 : Attachment is commonly used for inner and outer chuck.
- *5 : Refer to pages 1868 and 1869 for the dimensions and compatible model of the attachment.
When ordered as an option, three are attached at shipment.
- *6 : F type switch can be selected only for **A** Size 16CS.
- *7 : T type switch can be selected for **A** Size 20CS to 100CS.
- *8 : F type switch cannot be selected.

[Example of model No.]

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 1 m
- D** Switch quantity : 1 on open side

Specifications for rechargeable battery

(Catalog No. CC-1226A)

CKL2 - ... - **P4*** ● Design compatible with rechargeable battery manufacturing process.

* Contact CKD for details.

How to order switch

SW - **T2H**

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

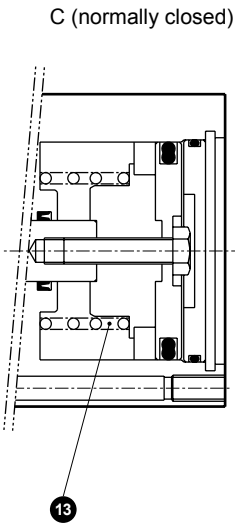
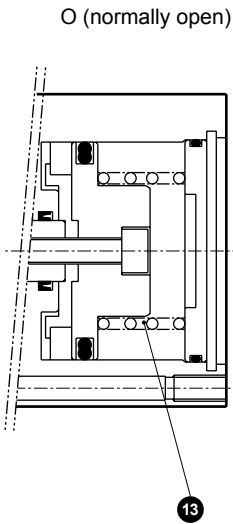
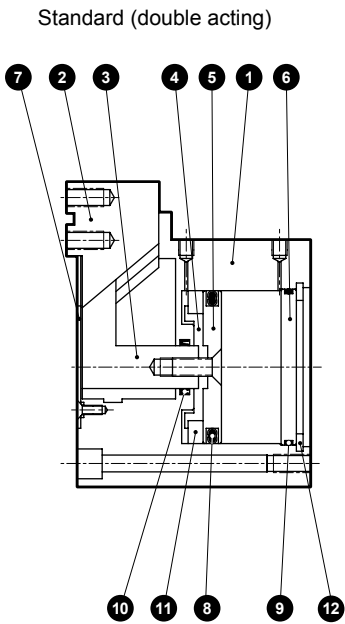
Note) When the type with two switches is selected, if the model has a short operational stroke length, both switches may turn ON depending on the workpiece size.

LCM
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STR2
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ULK*
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JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
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ShkAbs
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Ending
CKL2
CKLG2
CKL2-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ
CHC

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

Internal structure and parts list

● CKL2-16CS to 100CS



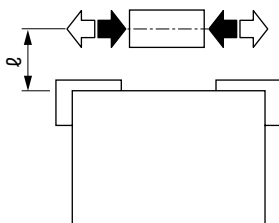
Cannot be disassembled

Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Body	Aluminum alloy		10	Rod packing	Nitrile rubber	
2	Finger	Steel		11	Magnet		
3	Piston A	Stainless steel (16 to 32CS), steel (40 to 100CS)		12	Snap ring	Stainless steel (16 to 63CS), steel (80CS, 100CS)	
4	Piston B	Aluminum alloy		13	Spring	Stainless steel	
5	Piston C	Aluminum alloy					
6	Cylinder guard	Aluminum alloy					
7	Center guard	Stainless steel					
8	Piston packing	Nitrile rubber					
9	Cylinder gasket	Nitrile rubber					

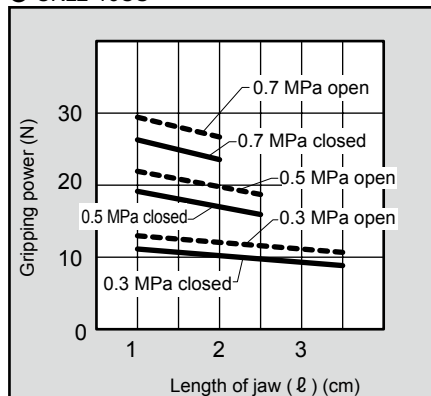
Gripping power performance data

- Gripping power represents the thrust (per one finger) in the arrow direction shown in the figure.
- The gripping power in the opening/closing directions with jaw length ℓ of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.
 - Open direction (◁) - - - (shown with broken line)
 - Closed direction (➡) ——— (shown with continuous line)

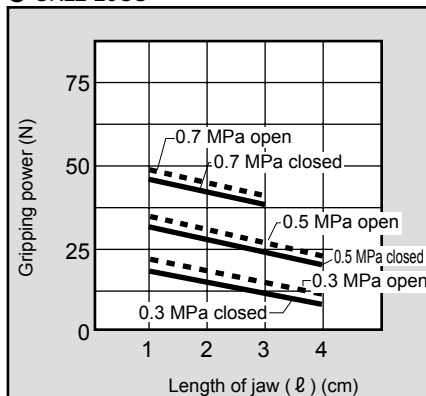


(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.
C type gripping power decreases approximately 10 to 20% in the open direction compared to the double acting.
When making a selection, read the precautions for design and selection on page 1872.

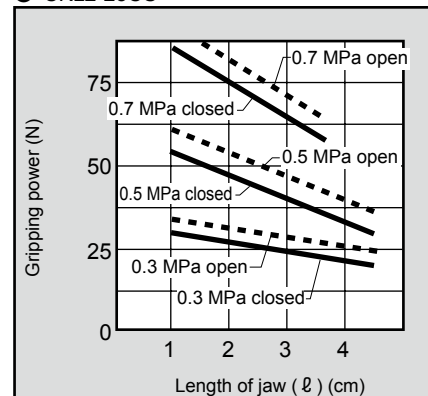
● CKL2-16CS



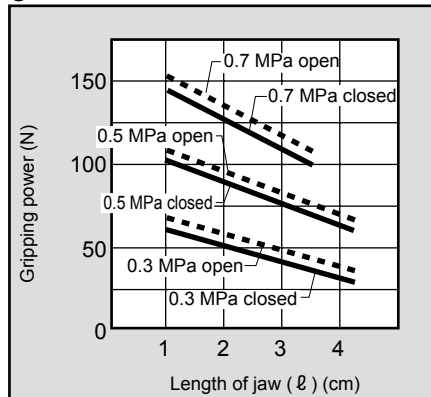
● CKL2-20CS



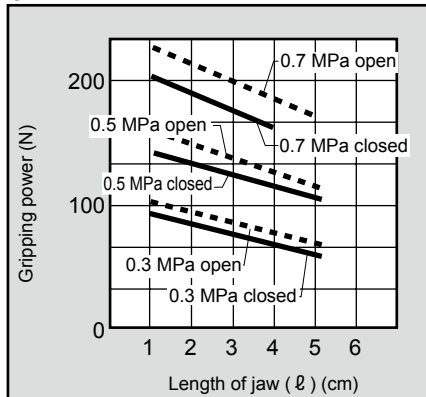
● CKL2-25CS



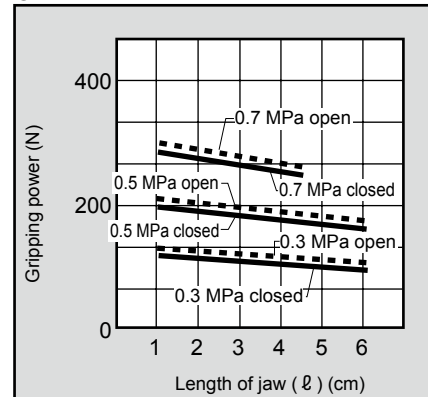
● CKL2-32CS



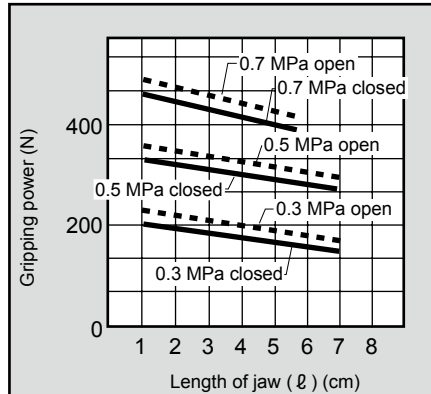
● CKL2-40CS



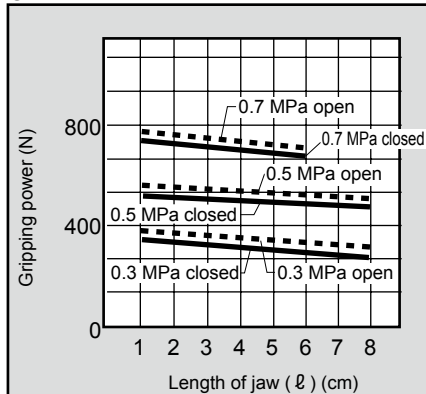
● CKL2-50CS



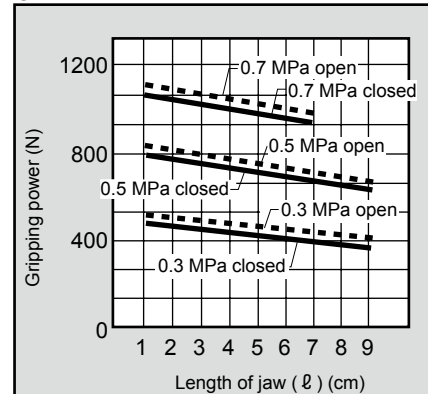
● CKL2-63CS



● CKL2-80CS



● CKL2-100CS



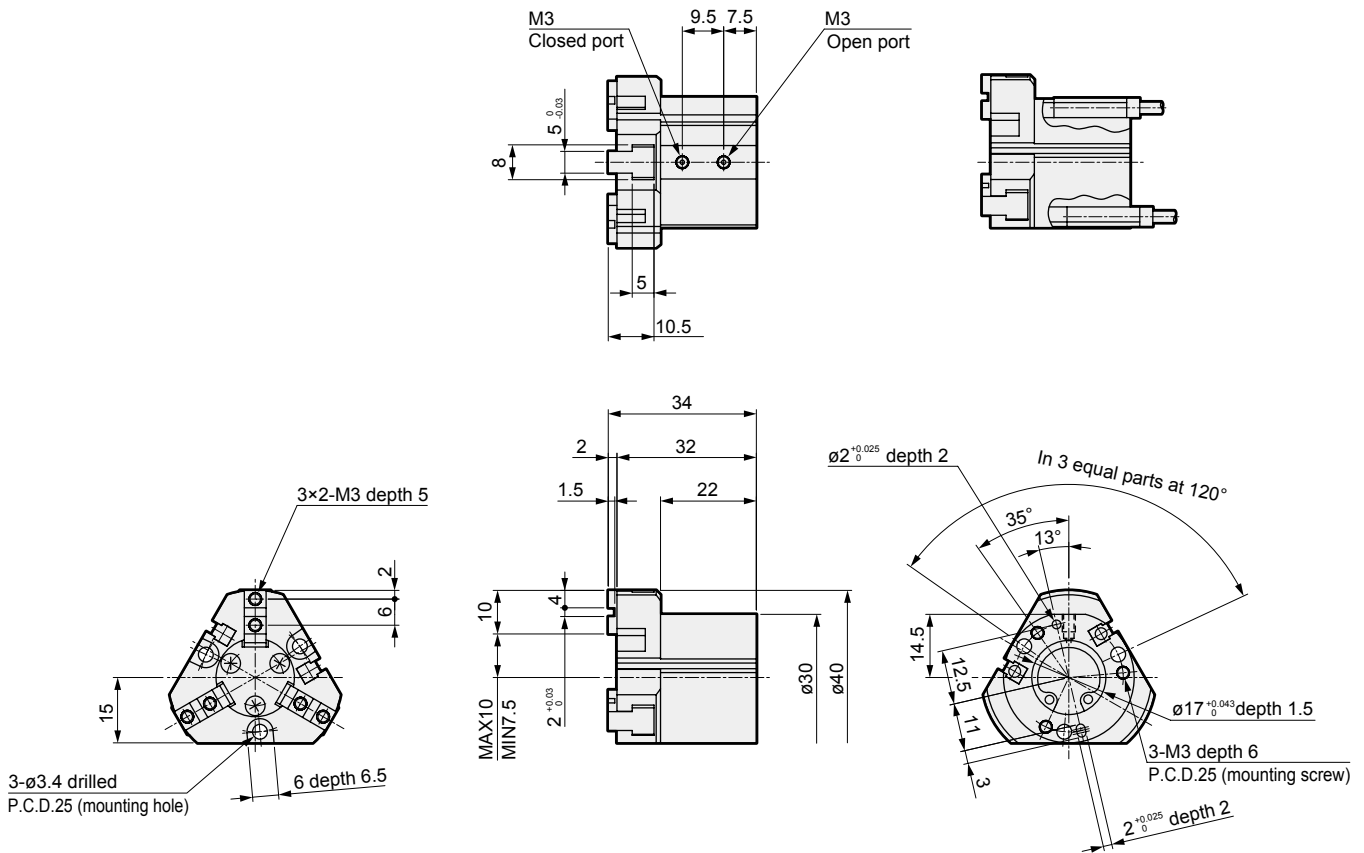
LCM
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LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
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UCAC-N
RCS2
RCC2
PCC
SHC
MCP
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ShkAbs
FJ
FK
SpdContr
Ending
CKL2
CKLG2
CKL2-HC
CKH2
CKLB2
CKG
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CKS
CKS-F
CKF
CKJ
CHC

Dimensions



● CKL2-16CS standard

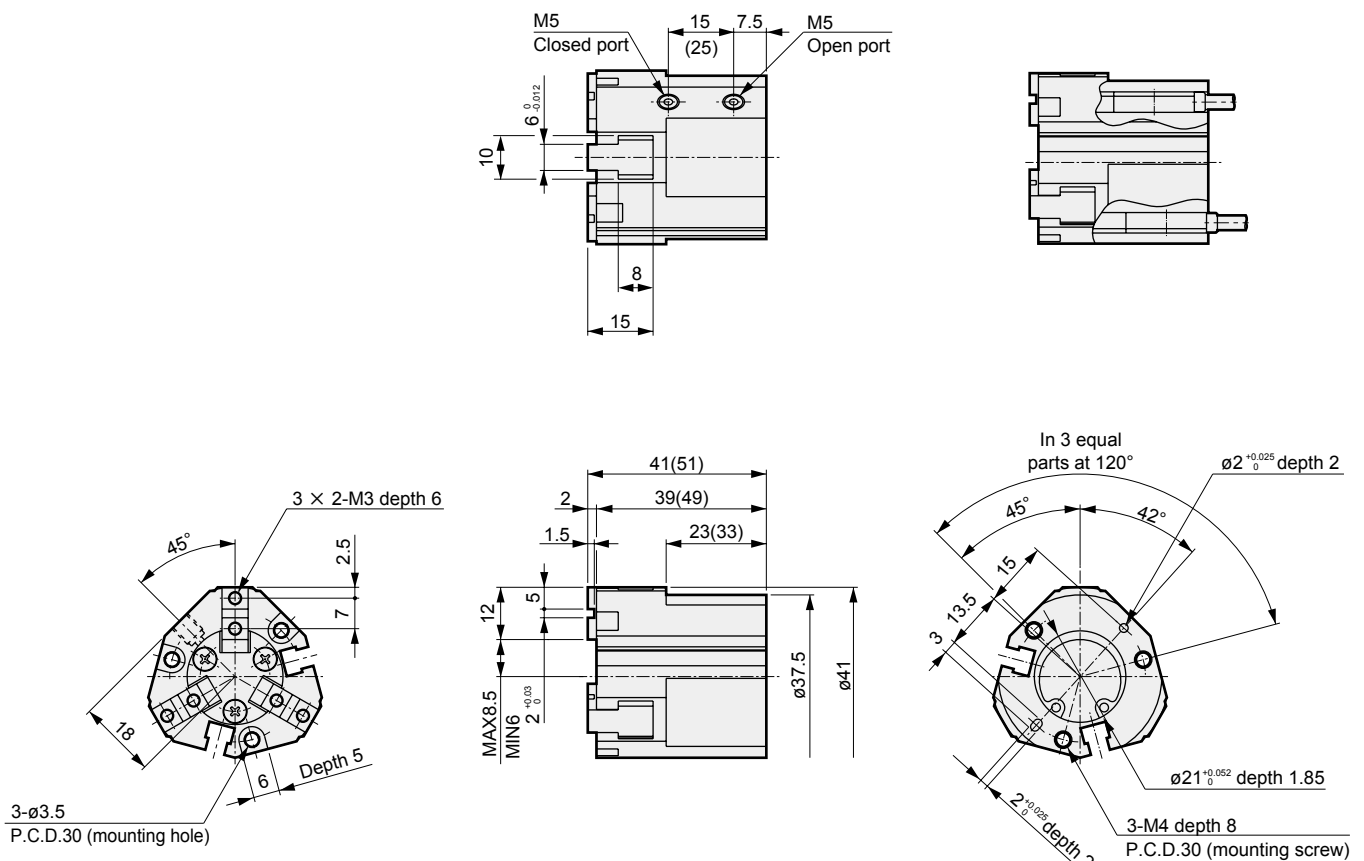
● With switch



● CKL2-20CS standard/O/C

● With switch

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

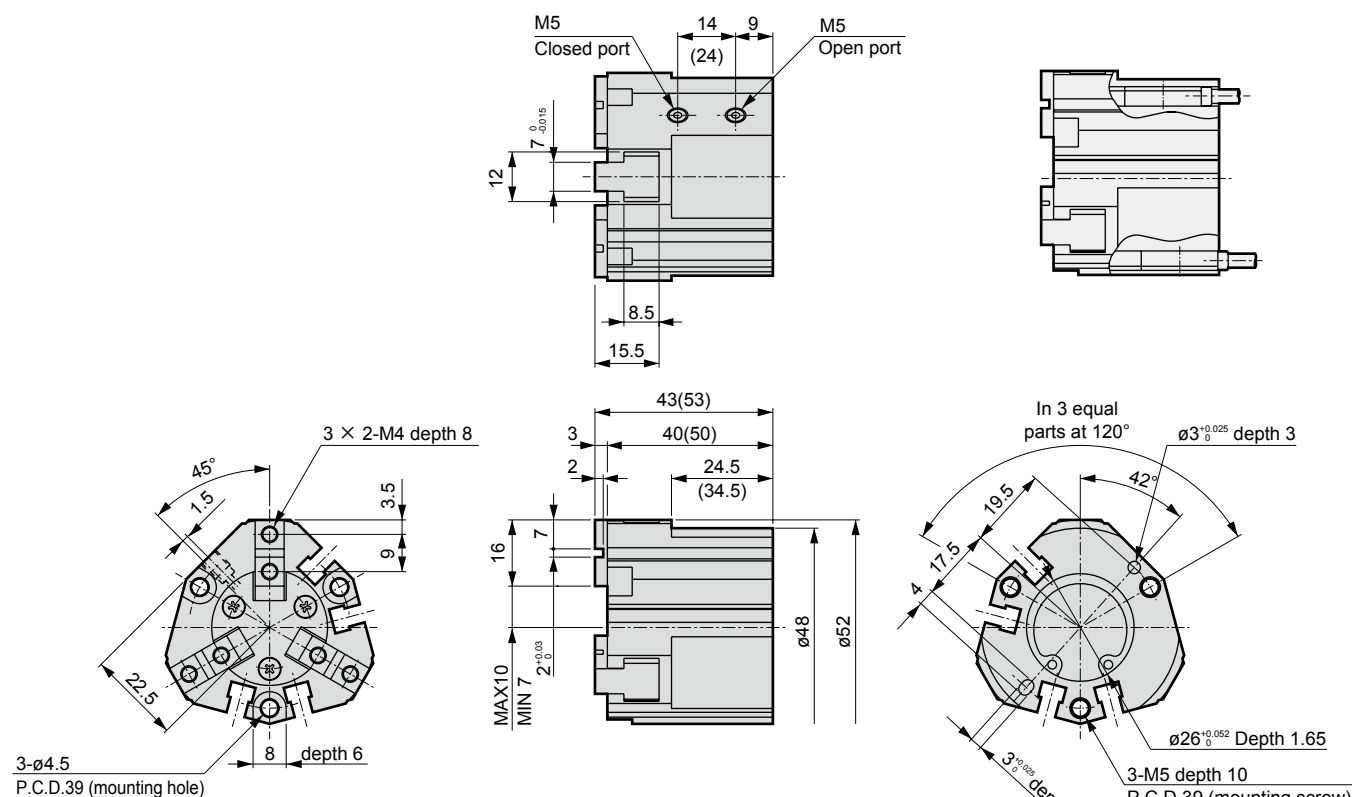


Dimensions



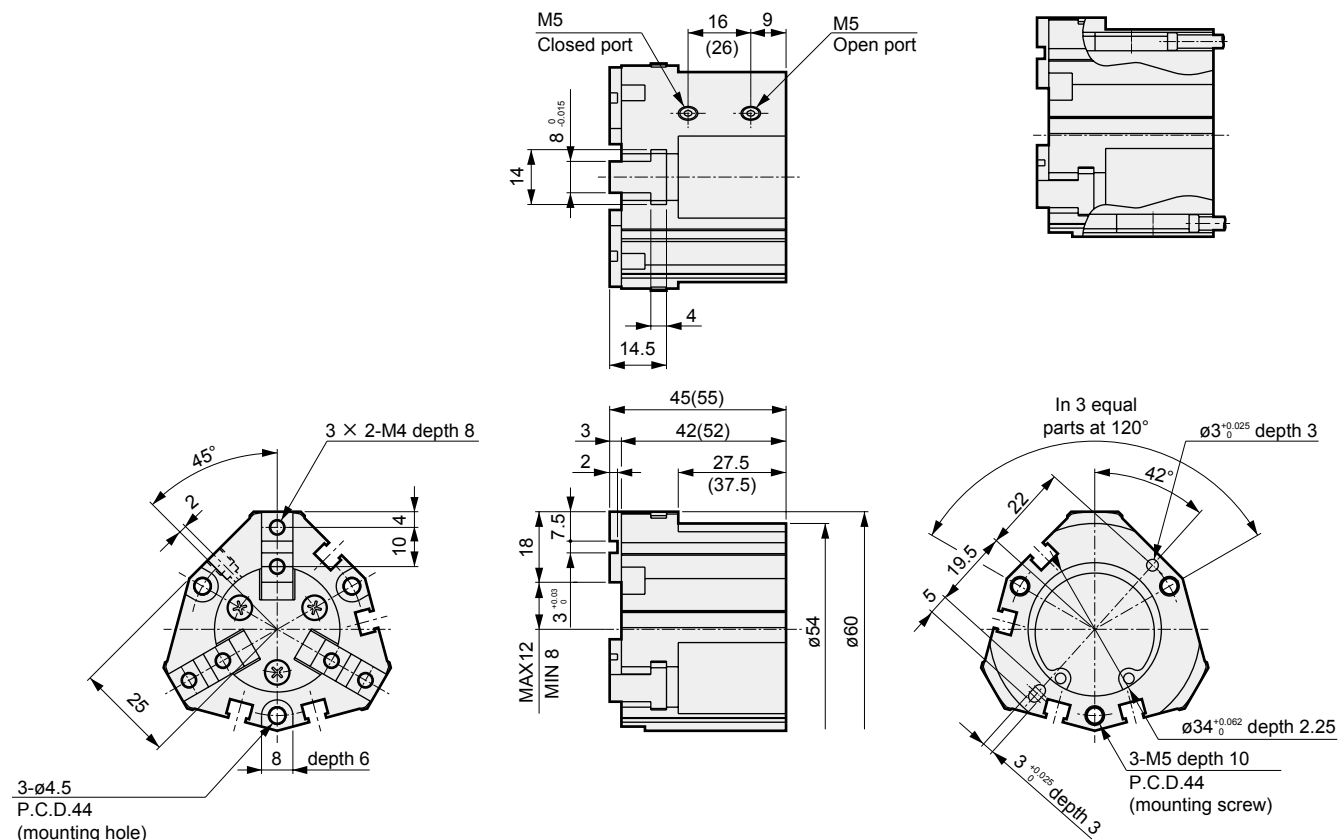
● CKL2-25CS standard/O/C

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



● CKL2-32CS standard/O/C

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



LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHndChuk
ShkAbs
FJ
FK
SpdContr
Ending
CKL2
CKLG2
CKL2-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ
CHC

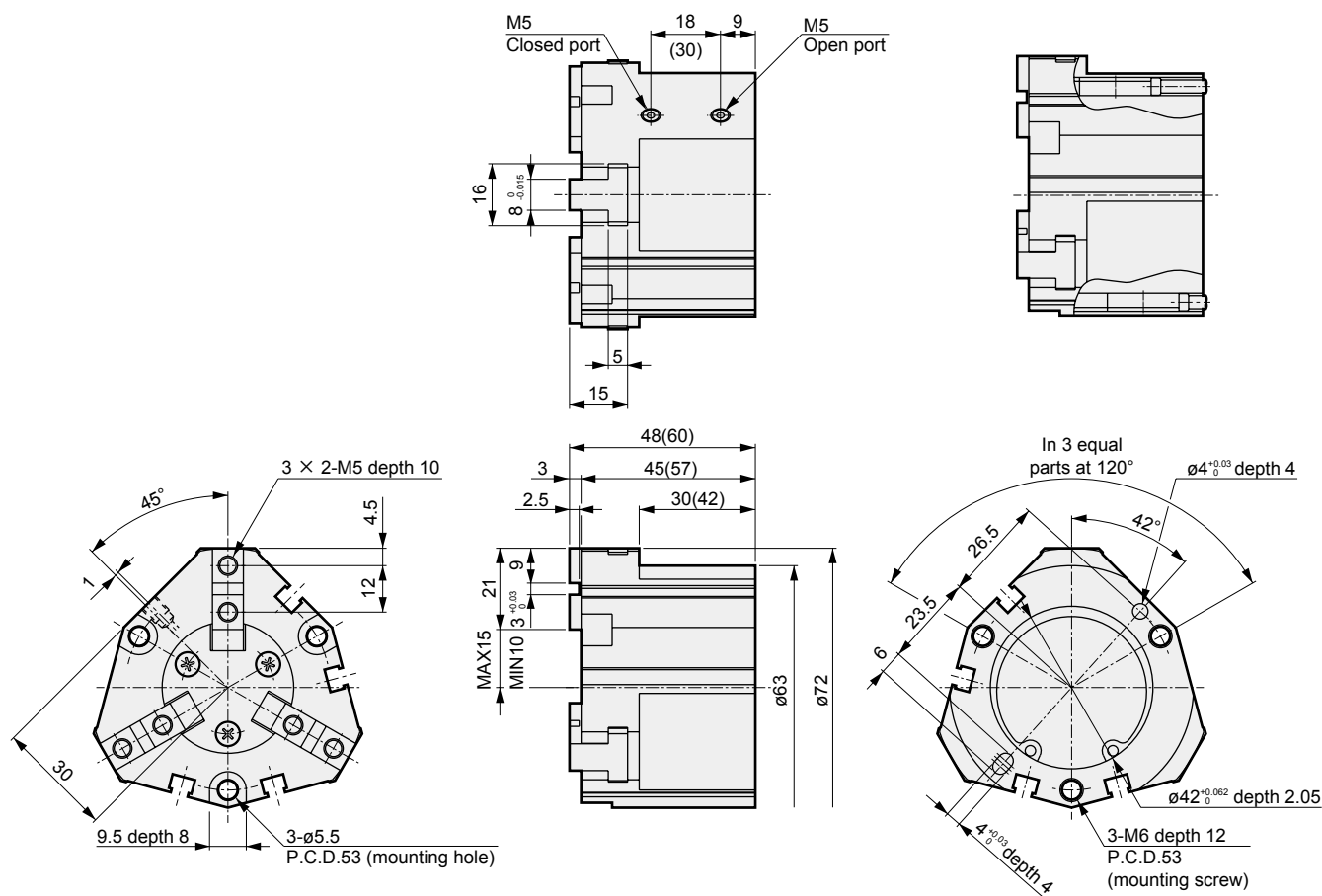
Dimensions



● CKL2-40CS standard/O/C

● With switch

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



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

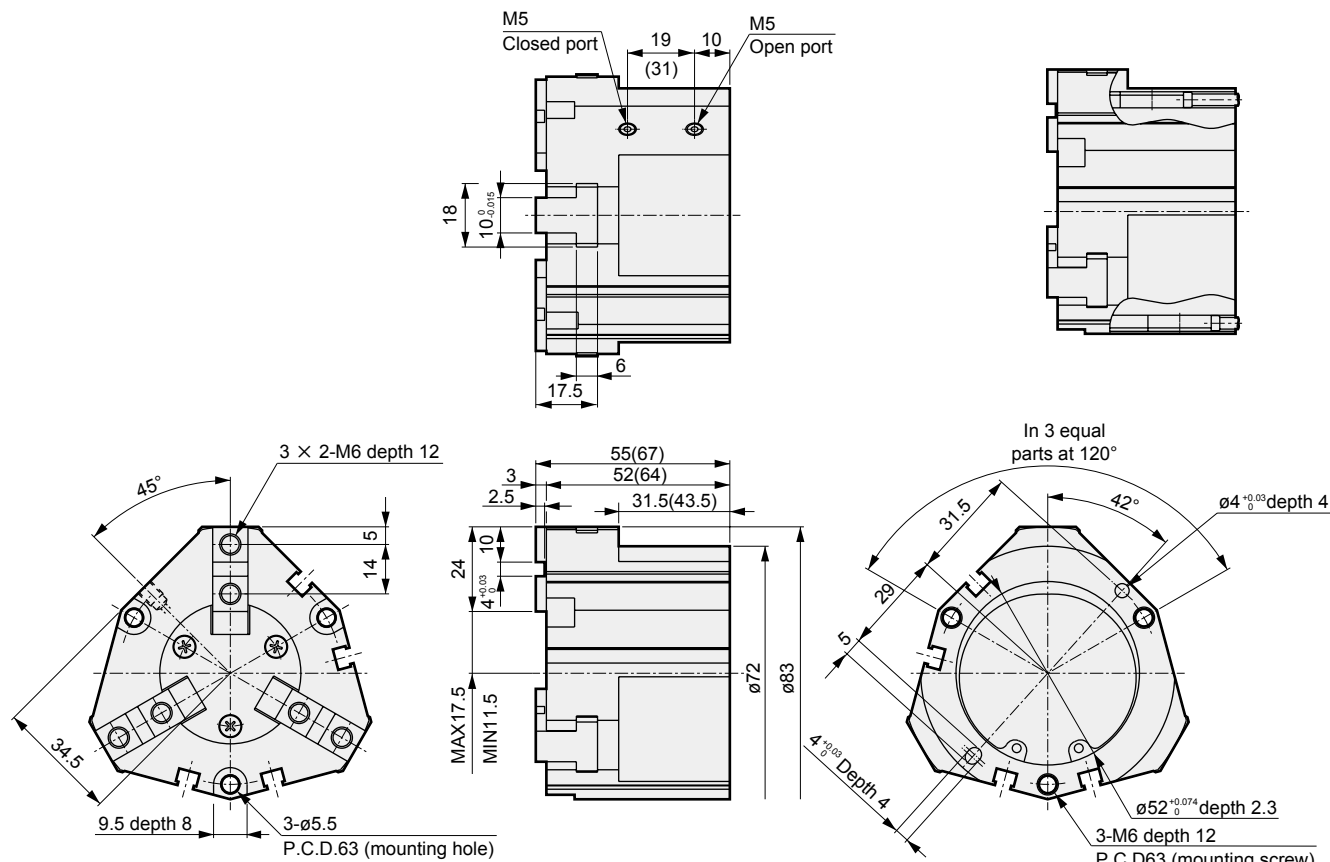
CKL2
CKLG2
CKL2-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ
CHC

Dimensions



● CKL2-50CS standard/O/C

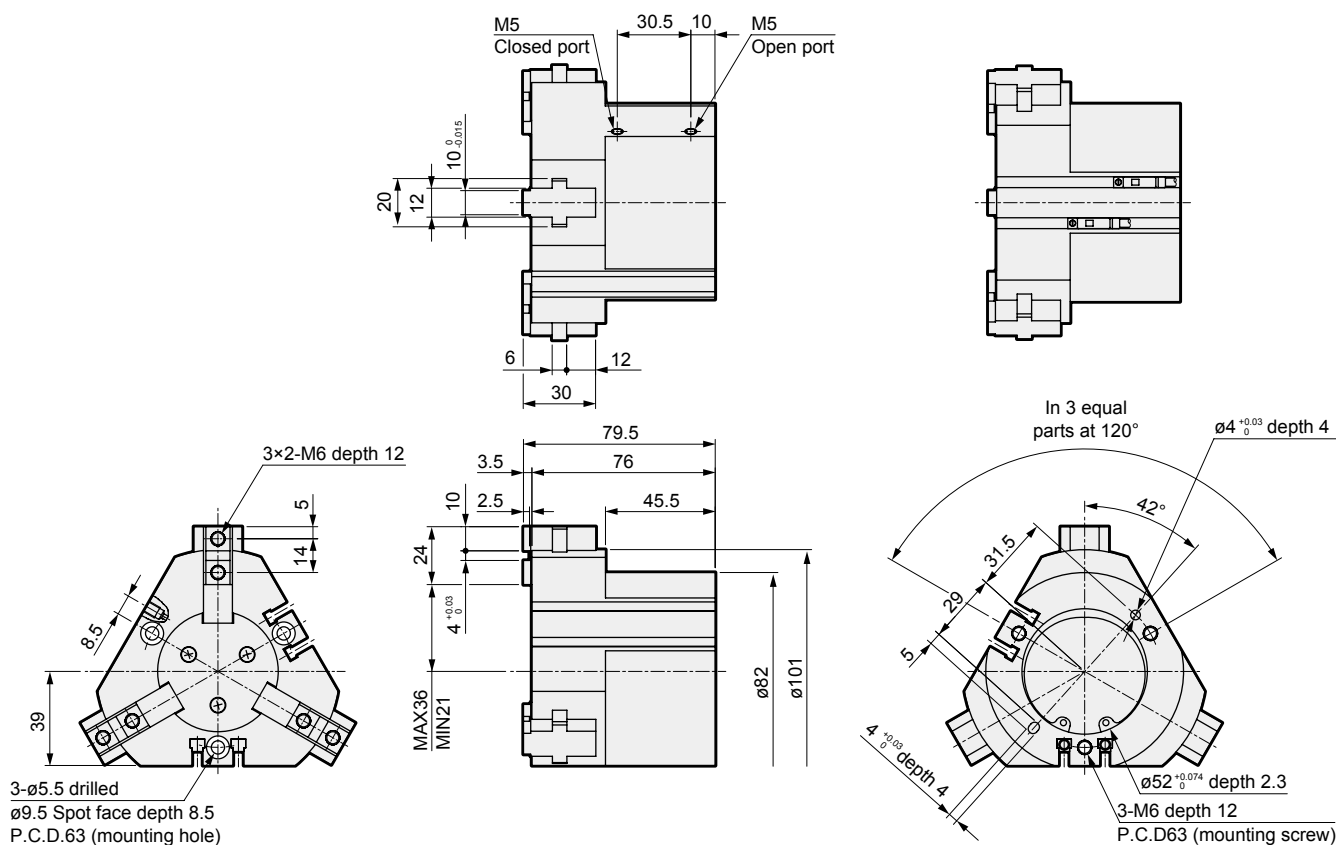
· Dimensions in () are for O [normally open] and C [normally closed] specifications.



● CKL2-50CS-L1

● With switch

● With switch



LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
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SHC
MCP
GLC
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BBS
RRC
GRC
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ShkAbs
FJ
FK
SpdContr
Ending
CKL2
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CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ
CHC

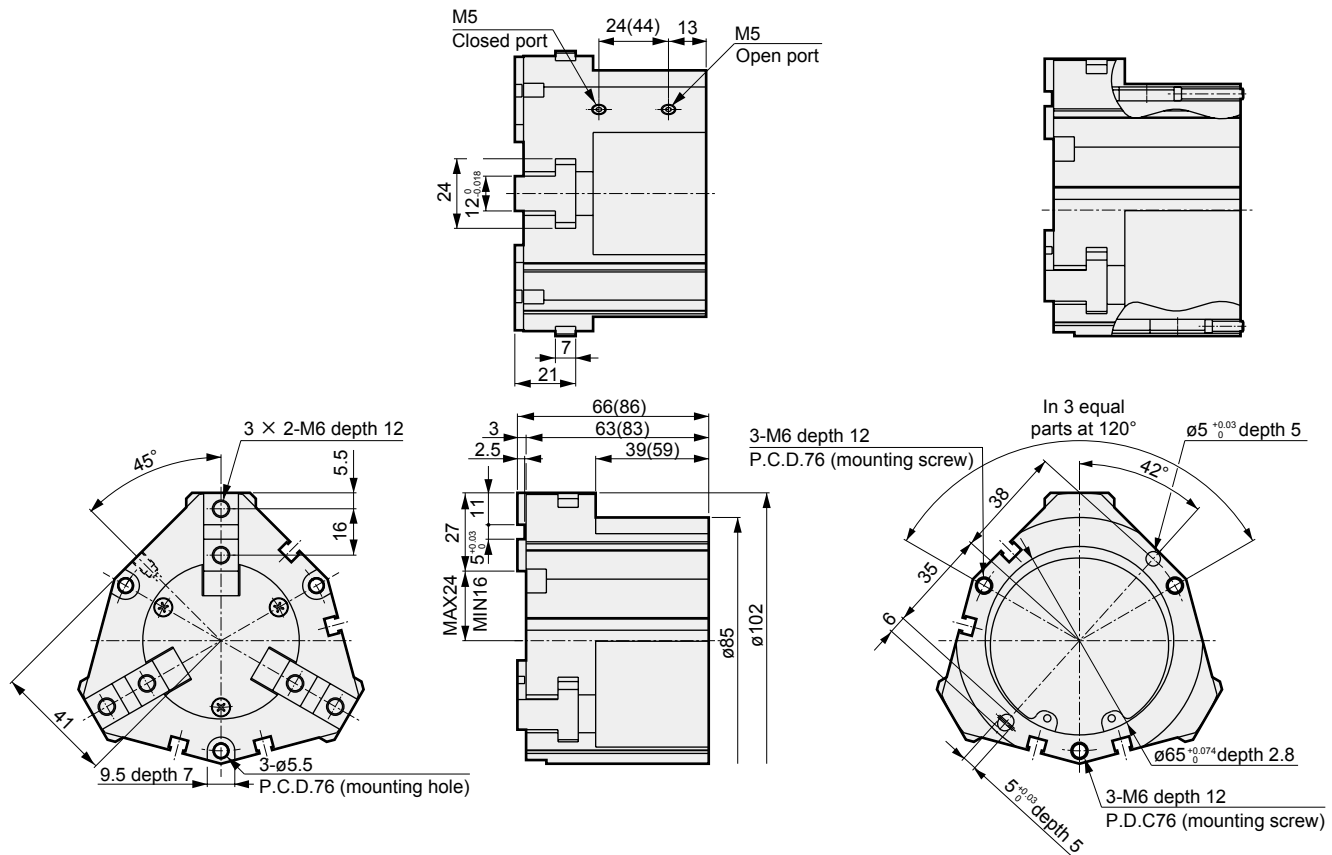
Dimensions



● CKL2-63CS standard/O/C

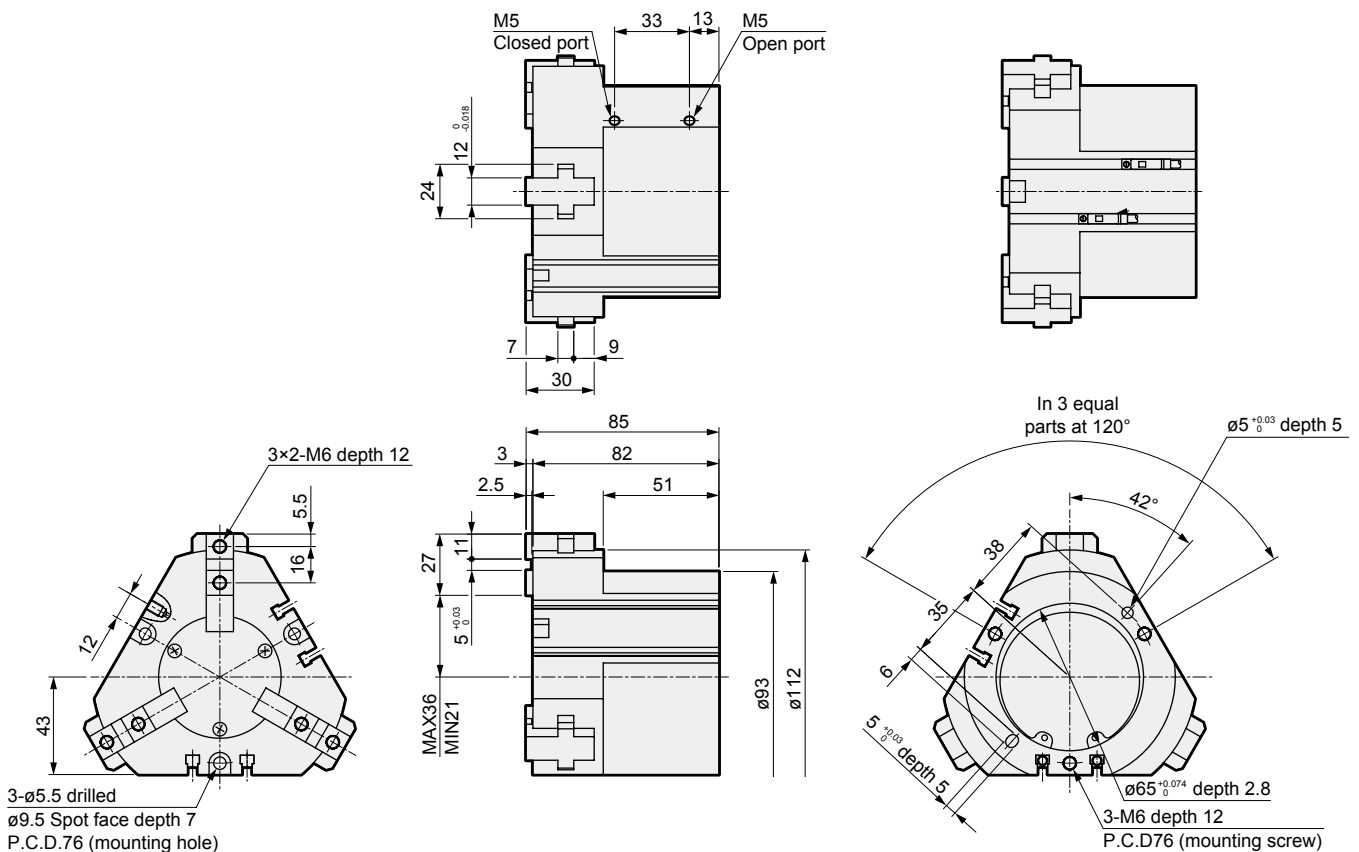
· Dimensions in () are for O [normally open] and C [normally closed] specifications.

● With switch



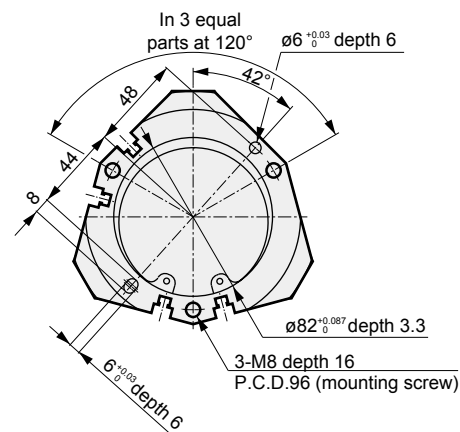
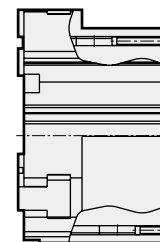
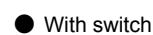
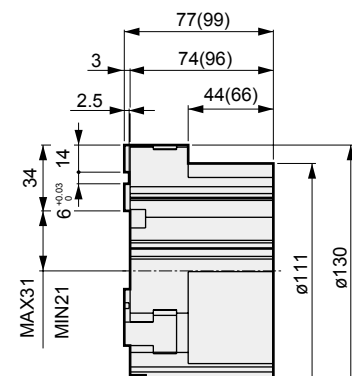
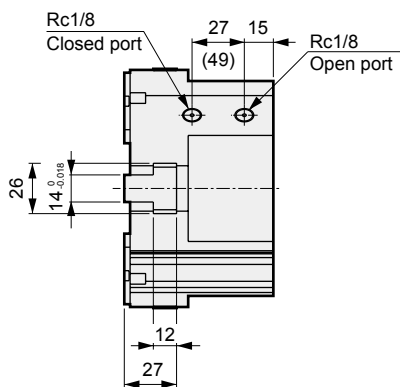
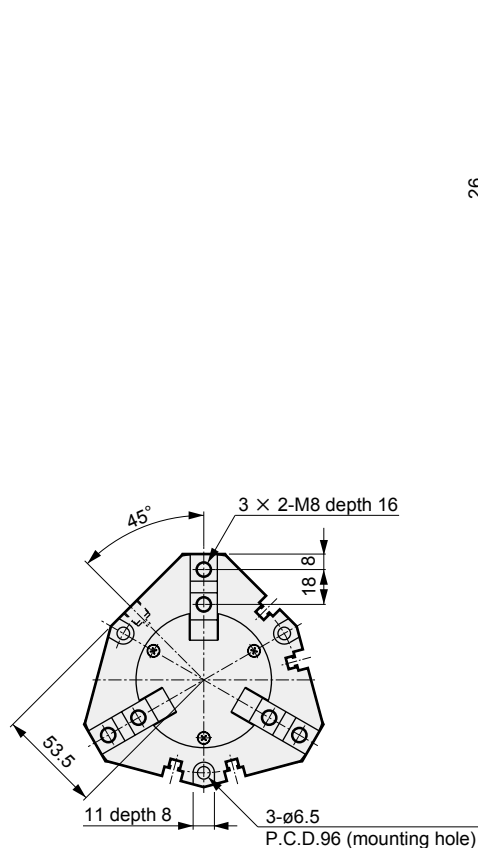
● CKL2-63CS-L1

● With switch

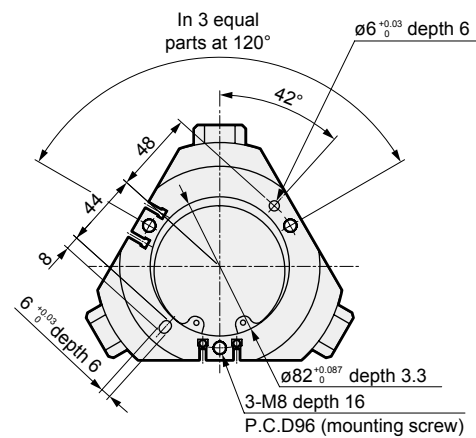
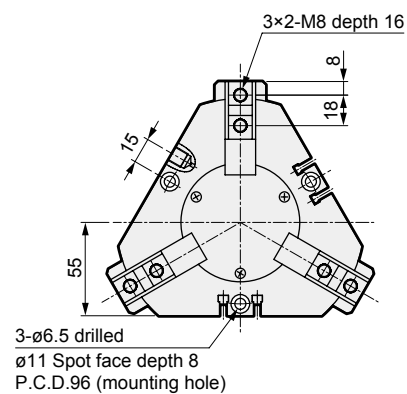
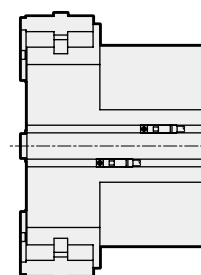
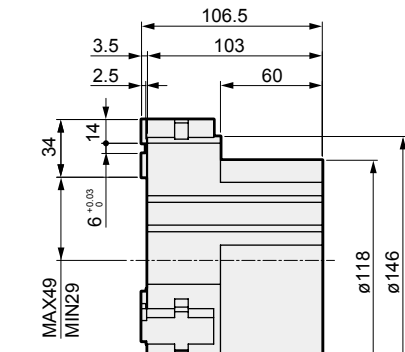
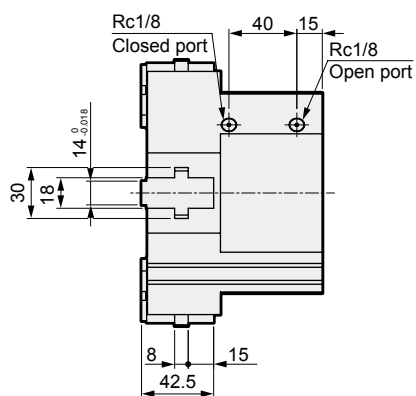


● CKL2-80CS standard/O/C

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



● CKL2-80CS-L1



LCM
LCR
LCG
LCW
LCX
STM
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STS/STL
STR2
UCA2
ULK*
JSK/IM2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
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CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecFind/Chuk
ShkAbs
FJ
FK
SpdContr
Ending
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CKG
CK
CKA
CKS
CKS-F
CKF
CKJ
CHC

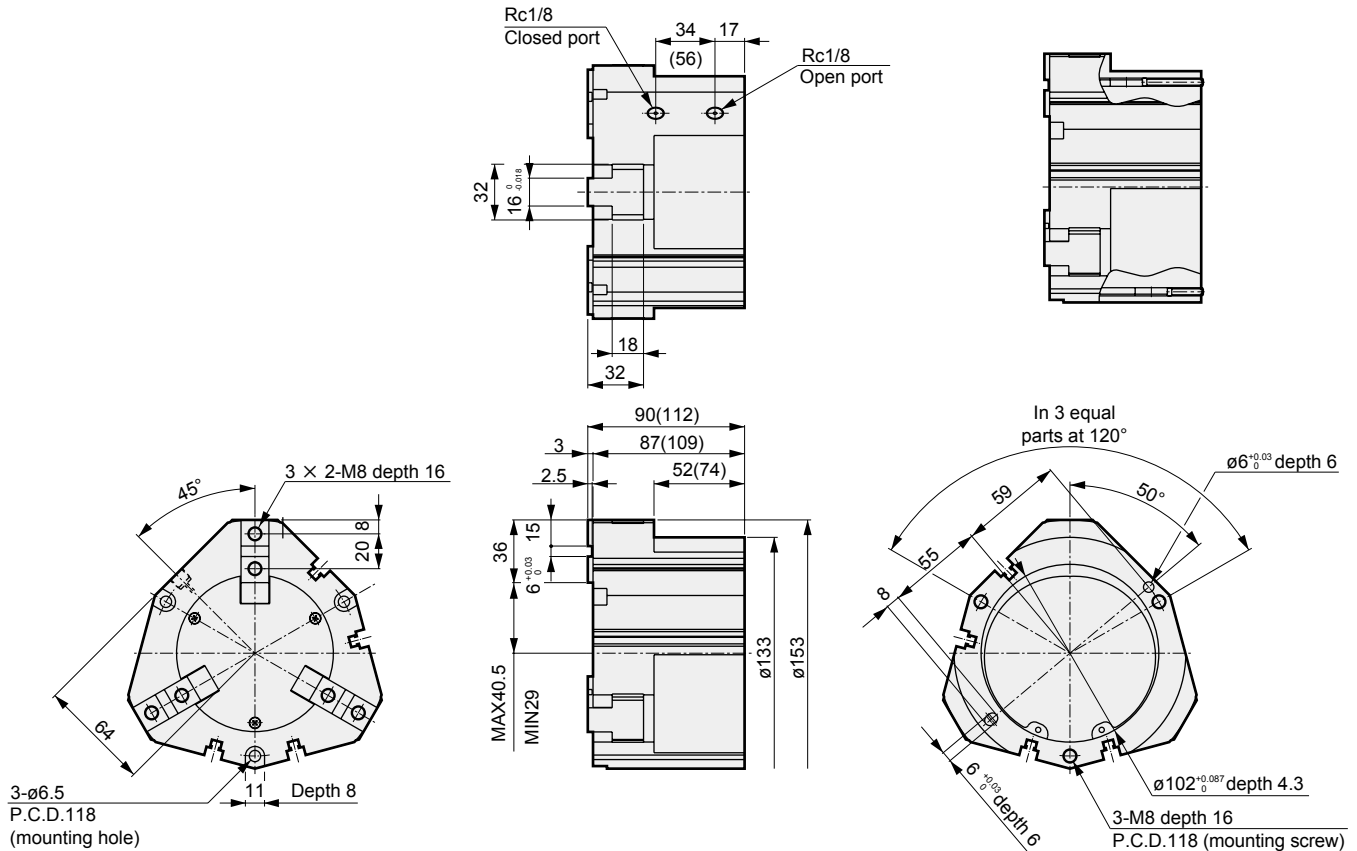
Dimensions



● CKL2-100CS standard/O/C

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

● With switch



● CKL2-100CS-L1

● With switch

