



3-way jaw thin chuck Double acting/single acting

CKA Series

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

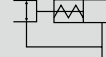
Double acting



Single acting (normally open)



Single acting (normally closed)



Specifications

| Item | CKA | | | | | | | |
|---|--|------|------|------|------|------|-------|-------|
| | 15CS | 20CS | 25CS | 30CS | 40CS | 50CS | 60CS | 70CS |
| Size | 15CS | 20CS | 25CS | 30CS | 40CS | 50CS | 60CS | 70CS |
| Bore size mm | ø16 | ø25 | ø32 | ø40 | ø50 | ø63 | ø80 | ø100 |
| Actuation | Double acting/single acting | | | | | | | |
| Working fluid | Compressed air | | | | | | | |
| Max. working pressure MPa | 0.7 (≈100 psi, 7 bar) | | | | | | | |
| Min. working pressure MPa | 0.3 (≈44 psi, 3 bar) | | | | | | | |
| Ambient temperature °C | 5 (41°F) to 60 (140°F) | | | | | | | |
| Port size | M5 | | | | | | Rc1/8 | |
| Operating stroke length mm | 6 | 5 | 7 | 9 | 20 | 25 | 30 | 38 |
| Rod diameter mm | ø9 | ø10 | ø14 | ø18 | ø20 | | ø24 | ø28 |
| Volumetric capacity (reciprocating) cm ³ | 1.0 | 2.2 | 5.1 | 10.1 | 36.1 | 76.9 | 148.8 | 294.0 |
| Repeatability mm | ±0.03 | | | | | | | |
| 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 if necessary for lubrication) | | | | | | | |

Switch specifications

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

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

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

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

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

How to order

Without switch (built-in magnet for switch)

CKA - 15CS - O

With switch (built-in magnet for switch)

CKA - 15CS - O - T2H - R

A Size

B Option
*1, *2

C Switch model No.
*3

D Switch quantity

⚠ Precautions for model No. selection

*1 : Y11 and Y21 are available for CKA-15CS, while Y12 and Y22 are available for CKA-20CS to 40CS, and Y11 and Y21 are available for CKA-50 to 70CS.

*2 : For the dimensions and compatible model of the attachment, refer to pages 1868 and 1869. When ordered as an option, three are attached at shipment.

*3 : As the switch groove of 50CS to 70CS has a different shape, a mounting bracket is required when ordering an individual switch.

[Example of model No.]

CKA-15CS-O-T2H-R

Model: Thin chuck

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

How to order switch

[T type switch]

SW - T2H

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

CKA-50CS to 70CS

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

CKA - T2H

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

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

CKA - T2V - *

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

CKA-50CS to 70CS

- Mounting bracket set

CKA - T

- Mounting bracket set

CKA - TV - *

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

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.

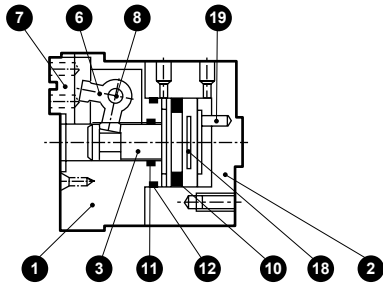
| Code | Description | | | | | |
|---------------------------|---|-----------|---------|----|---------|-----------|
| A Size | | | | | | |
| 15CS | | | | | | |
| 20CS | | | | | | |
| 25CS | | | | | | |
| 30CS | | | | | | |
| 40CS | | | | | | |
| 50CS | | | | | | |
| 60CS | | | | | | |
| 70CS | | | | | | |
| B Option | | | | | | |
| Blank | Standard (double acting) | | | | | |
| O | Single acting (normally open) | | | | | |
| C | Single acting (normally closed) | | | | | |
| Y11 | With attachment (Material S50C) Outer mount chuck (attachment No.: 510 to 540, 710 to 770) | | | | | |
| Y12 | With attachment (Material S50C) Inner mount chuck (attachment No.: 610 to 630) | | | | | |
| Y21 | With attachment (Material MC nylon) Outer mount chuck (attachment No.: 510 to 540, 710 to 770) | | | | | |
| Y22 | With attachment (Material MC nylon) Inner mount chuck (attachment No.: 610 to 630) | | | | | |
| C Switch model No. | | | | | | |
| Axial lead wire | Radial lead wire | Contact | Voltage | | Display | Lead wire |
| T2H* | T2V* | | AC | DC | | |
| T2H* | T2V* | Proximity | | ● | 1-color | 2-wire |
| T3H* | T3V* | | | ● | display | 3-wire |
| * Lead wire length | | | | | | |
| Blank | 1 m (standard) | | | | | |
| 3 | 3 m (option) | | | | | |
| 5 | 5 m (option) | | | | | |
| D Switch quantity | | | | | | |
| R | 1 on open side | | | | | |
| H | 1 on closed side | | | | | |
| D | 2 | | | | | |

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

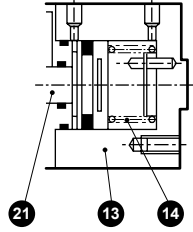
Internal structure and parts list

● CKA-15CS

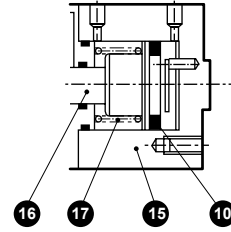
Standard (double acting)



O (normally open)

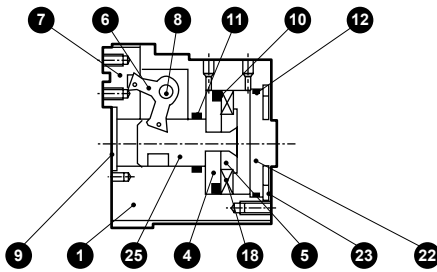


C (normally closed)

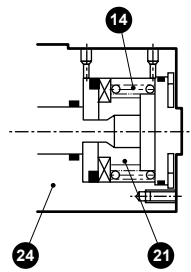


● CKA-20CS to 40CS

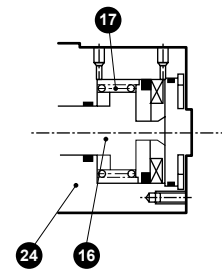
Standard (double acting)



O (normally open)

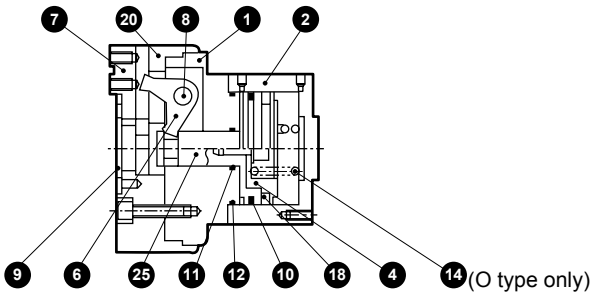


C (normally closed)

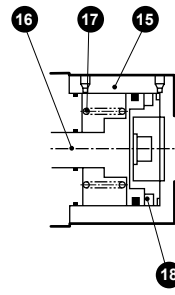


● CKA-50CS to 70CS

Standard (double acting)/O (normally open)



C (normally closed)



Cannot be disassembled

| No. | Part name | Material | No. | Part name | Material | No. | Part name | Material | No. | Part 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 | Nitrile rubber | 17 | C spring | Steel | 24 | O, C body | Aluminum alloy |
| 4 | Piston B | Aluminum alloy | 11 | Rod packing | Nitrile rubber | 18 | Magnet | Plastic magnet | 25 | Piston | Aluminum alloy |
| 5 | Piston C | Aluminum alloy | 12 | Cylinder gasket | Nitrile rubber | 19 | Rotation-stop pin | Stainless steel | | | |
| 6 | Arm | Steel | 13 | O cylinder | Aluminum alloy | 20 | Chuck cover | Aluminum alloy | | | |
| 7 | Finger | Steel | 14 | O spring | Steel | 21 | O piston B | Stainless steel | | | |

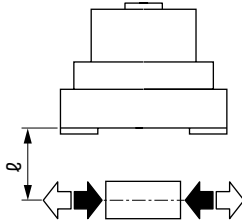
Note) Structures differ to some extent by model.

- 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

Gripping power performance data

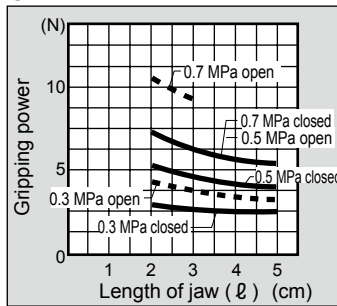
- Gripping power represents the thrust (per one finger) in the arrow direction shown in the figure.
- The gripping power in the opening/closing directions with jaw length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

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

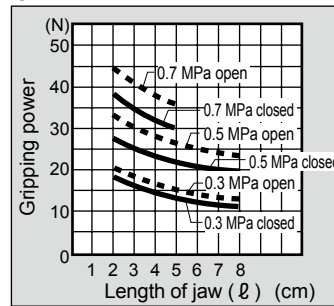


(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.
 C type gripping power decreases approximately 10 to 20% in the open direction compared to the double acting.
 When making a selection, read the precautions for design and selection on page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

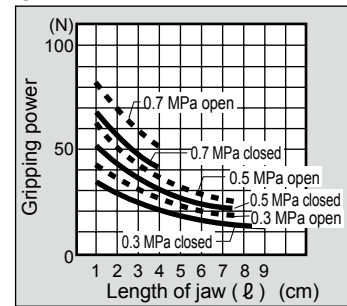
● CKA-15CS



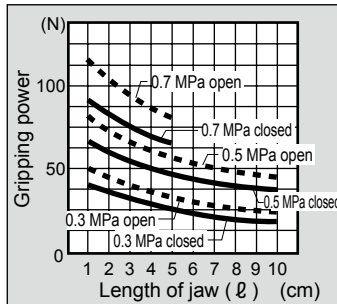
● CKA-20CS



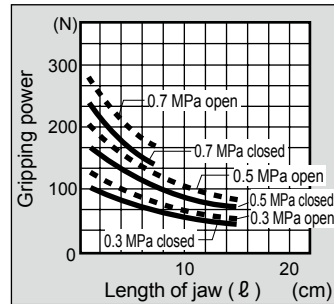
● CKA-25CS



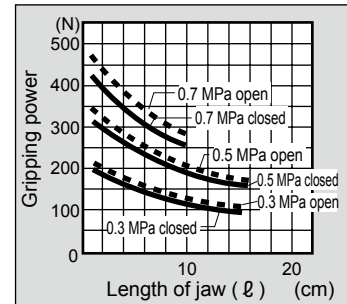
● CKA-30CS



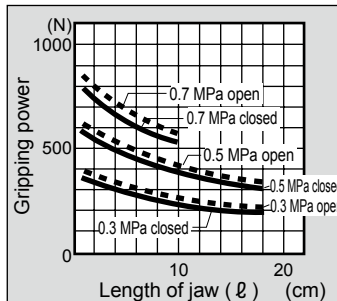
● CKA-40CS



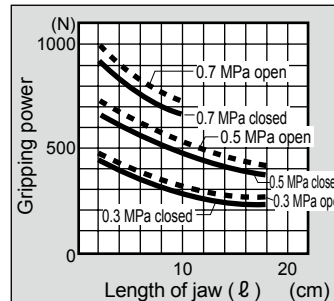
● CKA-50CS



● CKA-60CS



● CKA-70CS



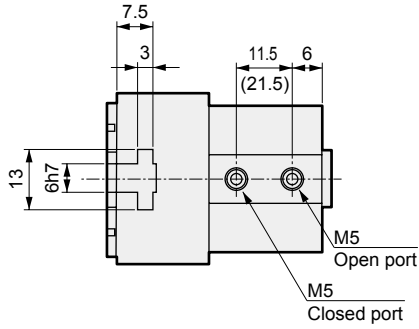
| |
|--------------|
| LCM |
| LCR |
| LCG |
| LCW |
| LCX |
| STM |
| STG |
| STS/STL |
| STR2 |
| UCA2 |
| ULK* |
| JSK/M2 |
| JSG |
| JSC3/JSC4 |
| USSD |
| UFCD |
| USC |
| UB |
| JSB3 |
| LMB |
| LML |
| HCM |
| HCA |
| LBC |
| CAC4 |
| UCAC2 |
| CAC-N |
| UCAC-N |
| RCS2 |
| RCC2 |
| PCC |
| SHC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

Dimensions

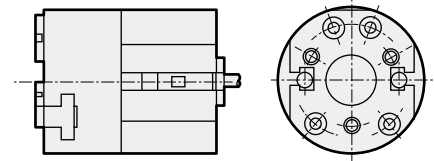
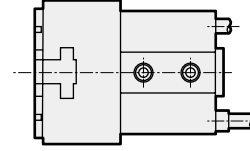


● CKA-15CS standard/O/C

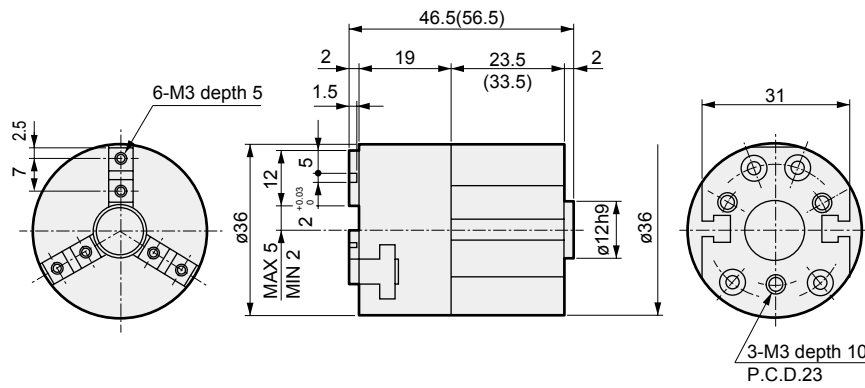
● Dimensions in () are for O [normally open] and C [normally closed] specifications.



● With switch

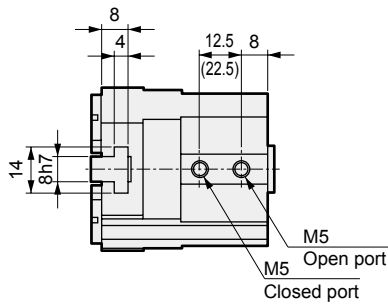


Note: When using T□H or T□V, the switches of both project from the end face of body head side.

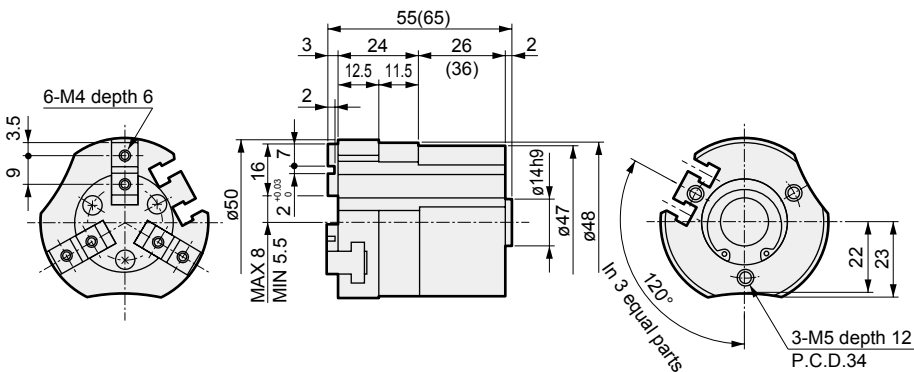
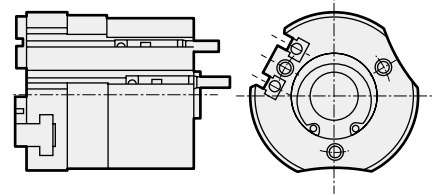


● CKA-20CS standard/O/C

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



● With switch



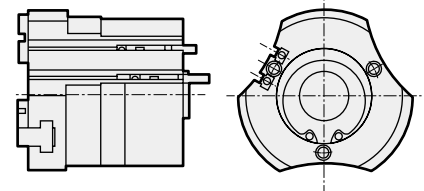
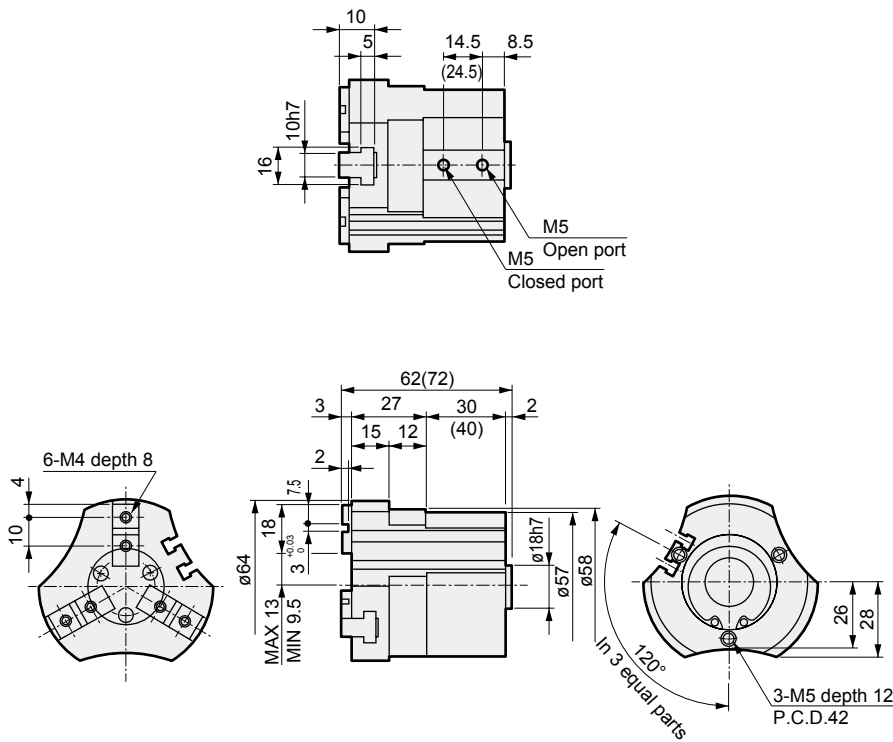
| |
|-------------|
| LCM |
| LCR |
| LCG |
| LCW |
| LCX |
| STM |
| STG |
| STS/STL |
| STR2 |
| UCA2 |
| ULK* |
| JSK/M2 |
| JSG |
| JSC3/JSC4 |
| USSD |
| UFCD |
| USC |
| UB |
| JSB3 |
| LMB |
| LML |
| HCM |
| HCA |
| LBC |
| CAC4 |
| UCAC2 |
| CAC-N |
| UCAC-N |
| RCS2 |
| RCC2 |
| PCC |
| SHC |
| 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 |

Dimensions

● CKA-25CS standard/O/C

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

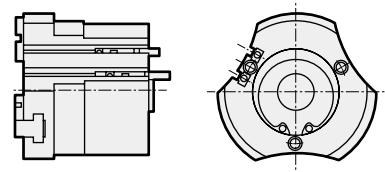
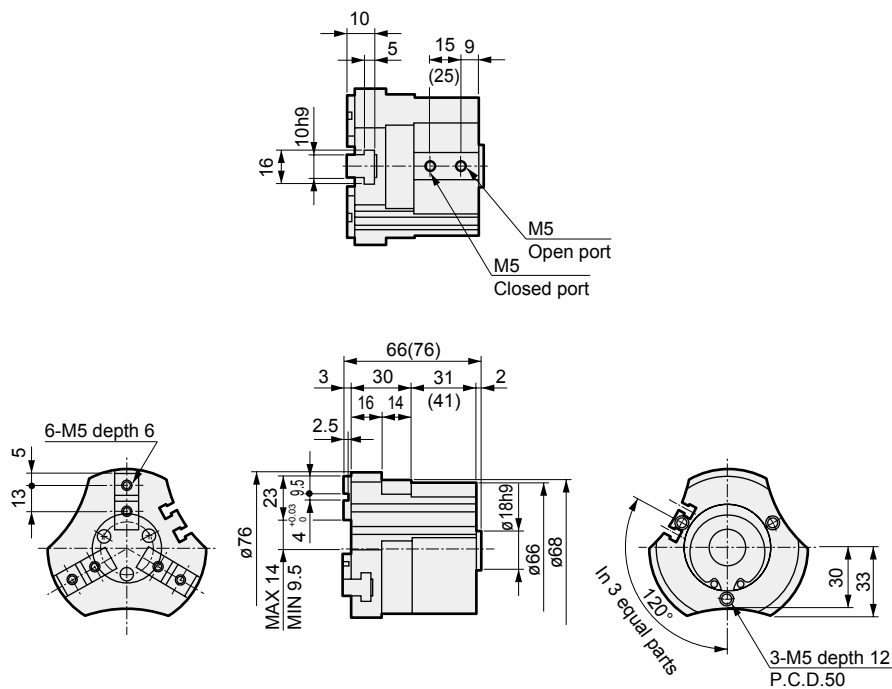
● With switch



● CKA-30CS standard/O/C

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

● 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 |
| PCC |
| SHC |
| MCP |
| GLC |
| MFC |
| BBS |
| RRC |
| GRC |
| RV3* |
| NHS |
| HRL |
| LN |
| Hand |
| Chuk |
| MechMtlChuk |
| ShkAbs |
| FJ |
| FK |
| SpdContr |
| Ending |
| CKL2 |
| CKLG2 |
| CKL2-HC |
| CKH2 |
| CKLB2 |
| CKG |
| CK |
| CKA |
| CKS |
| CKS-F |
| CKF |
| CKJ |
| CHC |

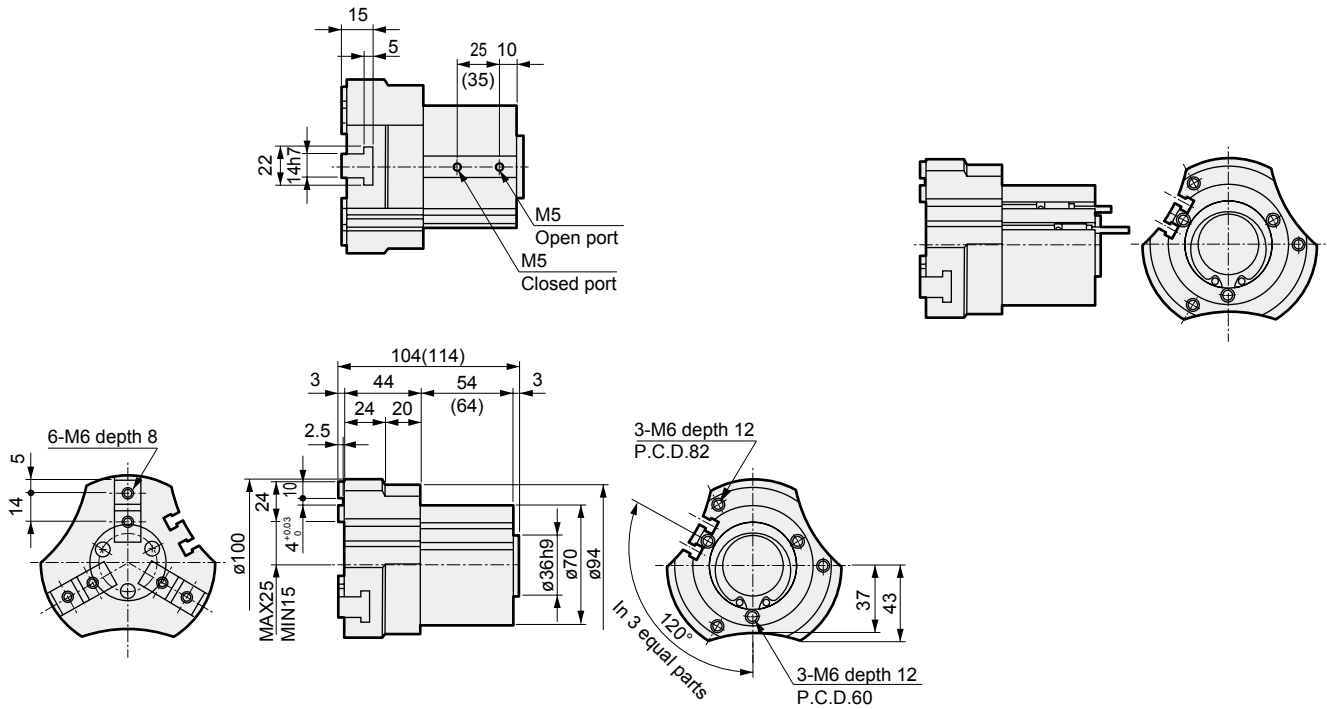
Dimensions



● CKA-40CS standard/O/C

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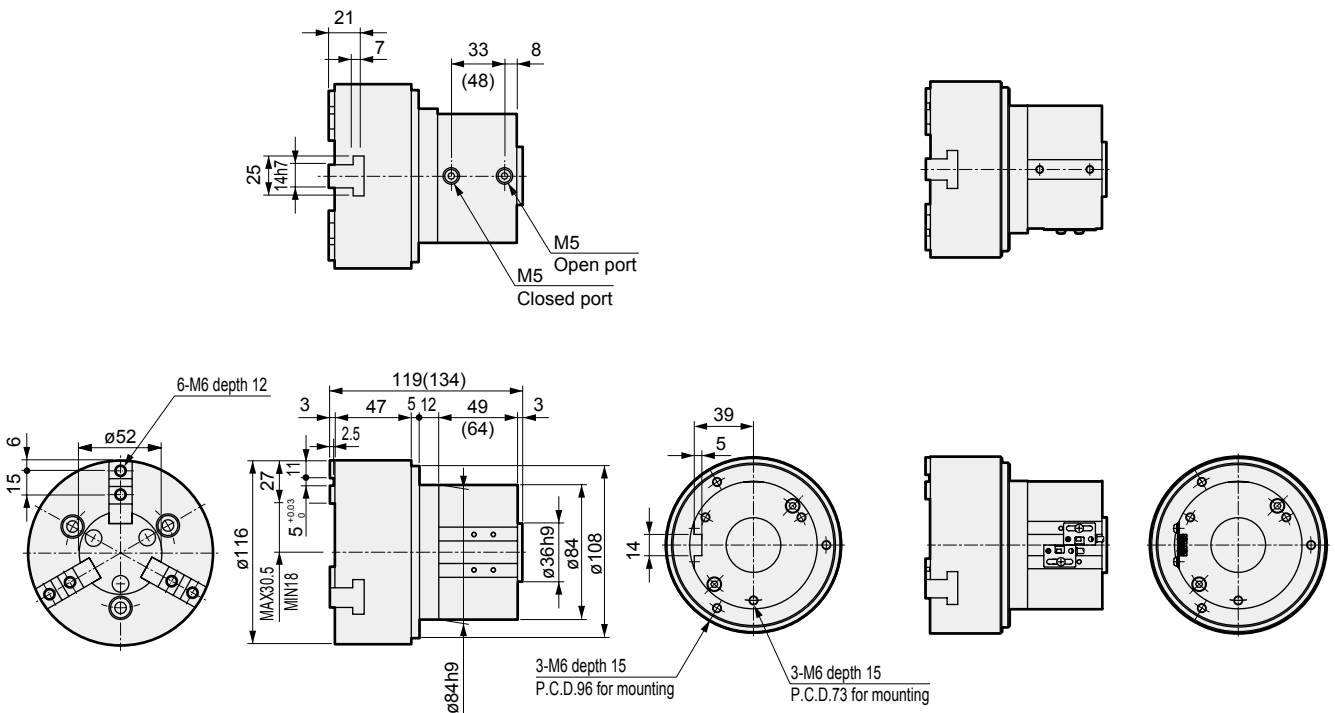
● With switch



● CKA-50CS standard/O/C

● Dimensions in () are for [normally closed] specifications.

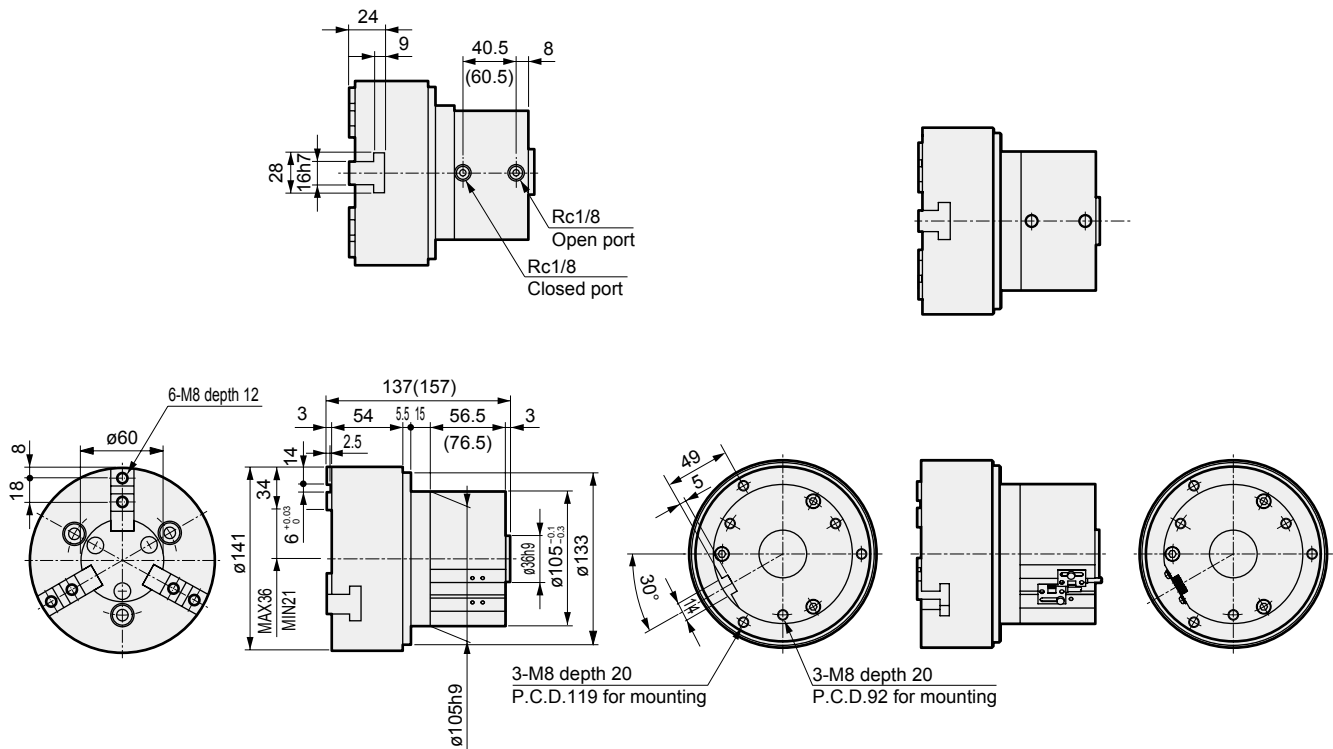
● With switch



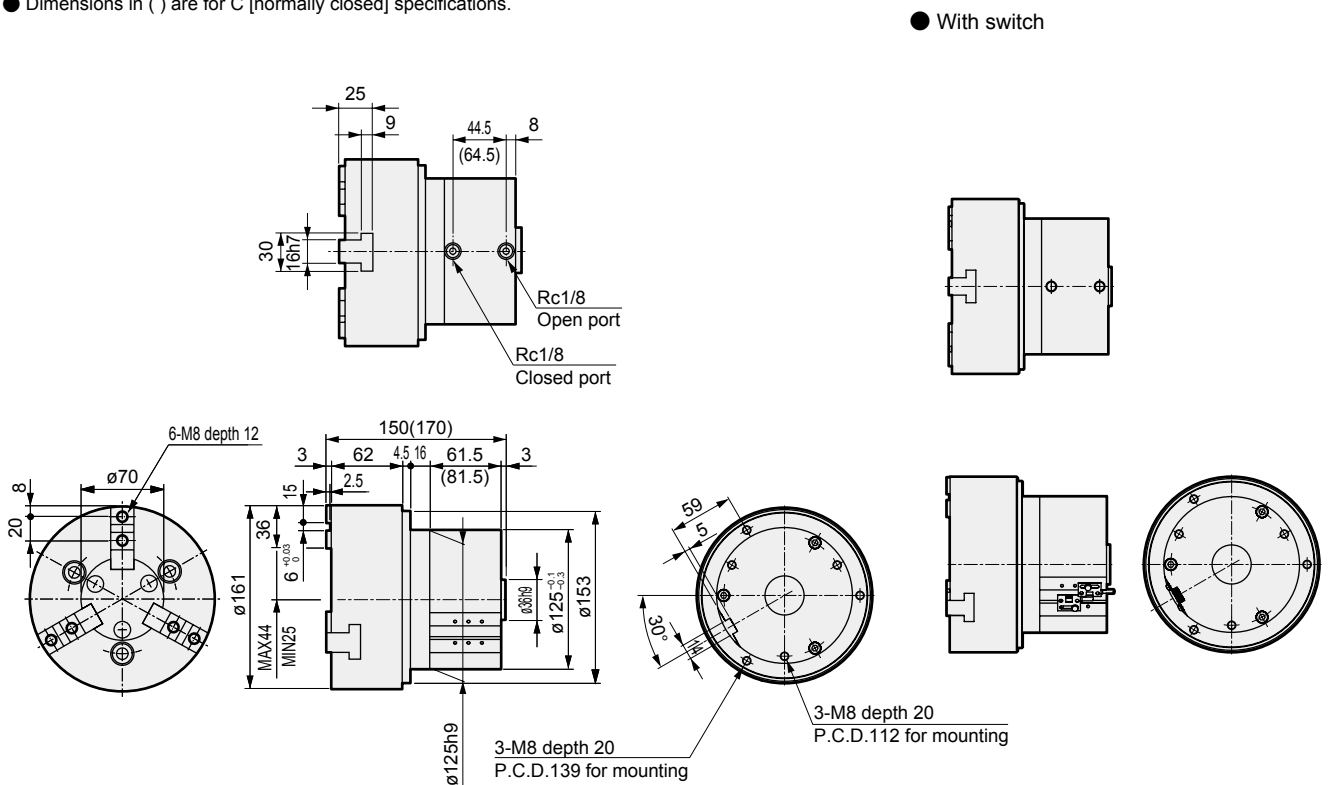
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|-------------|
| LCM |
| LCR |
| LCG |
| LCW |
| LX |
| STM |
| STG |
| STS/STL |
| STR2 |
| UCA2 |
| ULK* |
| JSK/M2 |
| JSG |
| JSC3/JSC4 |
| USSD |
| UFCD |
| USC |
| UB |
| JSB3 |
| LMB |
| LML |
| HCM |
| HCA |
| LBC |
| CAC4 |
| UCAC2 |
| CAC-N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

Dimensions

- CKA-60CS standard/O/C
- Dimensions in () are for C [normally closed] specifications.



- CKA-70CS standard/O/C
- Dimensions in () are for 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 |
| MechHnd/Chuk |
| ShkAbs |
| FJ |
| FK |
| SpdContr |
| Ending |
| CKL2 |
| CKLG2 |
| CKL2-HC |
| CKH2 |
| CKLB2 |
| CKG |
| CK |
| CKA |
| CKS |
| CKS-F |
| CKF |
| CKJ |
| CHC |