



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

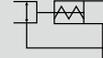
# CK Series

● Operating stroke length: 20, 40 mm

Double acting

Single acting (normally open)

Single acting (normally closed)



## Specifications

Item	CK		
	1CS	1.5CS	2CS
Size	1CS	1.5CS	2CS
Bore size mm	ø25	ø44	
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	20		40
Rod diameter mm	ø12	ø16	
Volumetric capacity (reciprocating) cm <sup>3</sup>	7.9	26.4	52.8
Repeatability mm	±0.03		
Weight kg	0.85	1.90	2.90
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	

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

\*2 : Refer to Ending Page 1 for 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**  
MechHnd/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)

**CK - 1CS - O**

With switch (built-in magnet for switch)

**CK - 1CS - O - T3H - R**

**A** Size

**B** Option  
\*1

**C** Switch model No.

**D** Switch quantity

Code	Description					
<b>A Size</b>						
1CS						
1.5CS						
2CS						
<b>B Option</b>						
Blank	Standard (double acting)					
O	Single acting (normally open)					
C	Single acting (normally closed)					
Y1	With attachment (Material S50C)					
Y2	With attachment (Material MC nylon)					
<b>C Switch model No.</b>						
Axial lead wire	Radial lead wire	Contact	Voltage	Display	Lead wire	
			AC	DC		
T2H*	T2V*	Proximity		●	1-color	2-wire
T3H*	T3V*			●	display	3-wire
<b>* Lead wire length</b>						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
<b>D Switch quantity</b>						
R	1 on open side					
H	1 on closed side					
D	2					

### ⚠ Precautions for model No. selection

\*1: 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.

[Example of model No.]

**CK-1CS-O-T3H-R**

Model: Long stroke chuck

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

## How to order switch

**SW - T2H**

↓  
Switch model No.  
(Item C above)

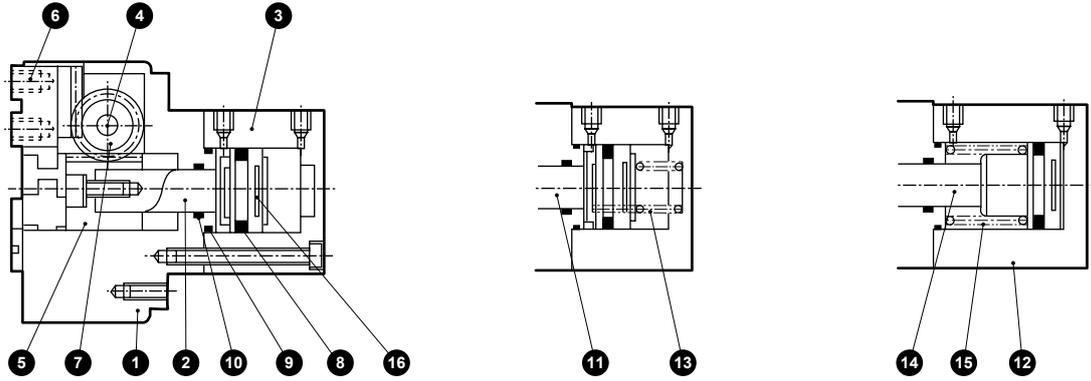
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
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Ending
CKL2
CKLG2
CKL2-HC
CKH2
CKLB2
CKG
<b>CK</b>
CKA
CKS
CKS-F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

## Internal structure and parts list

● Standard (double acting)

● O (normally open)

● C (normally closed)



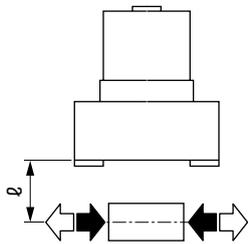
**Cannot be disassembled**

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

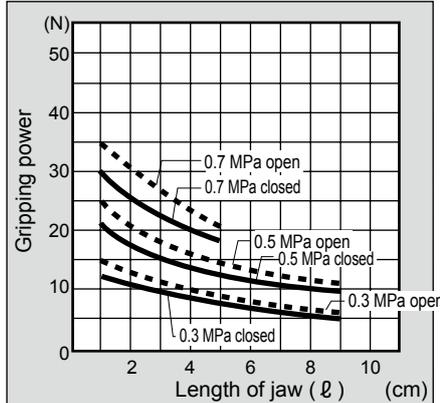
## Gripping power performance data

- 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.

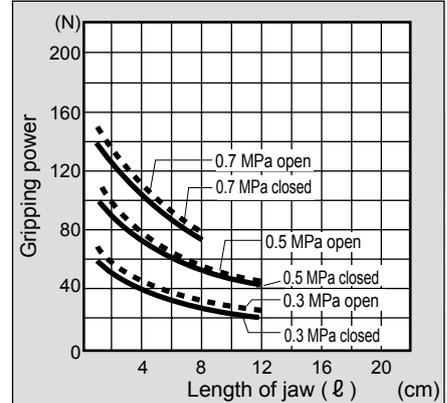
- Open direction (←) - - - - (shown with broken line)
- Closed direction (→) ——— (shown with continuous line)



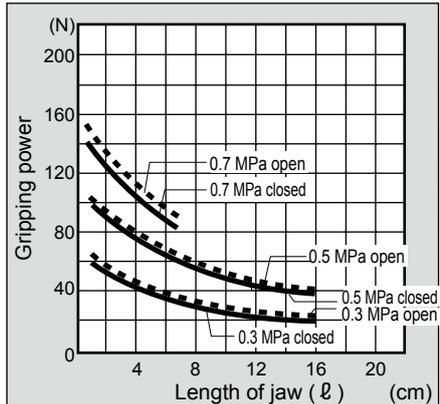
● CK-1CS



● CK-1.5CS



● CK-2CS



(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.

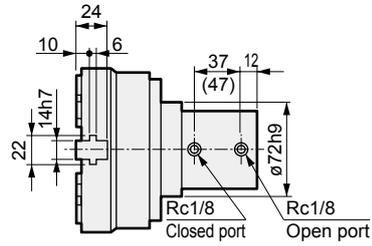


## Dimensions

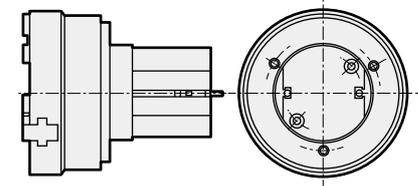
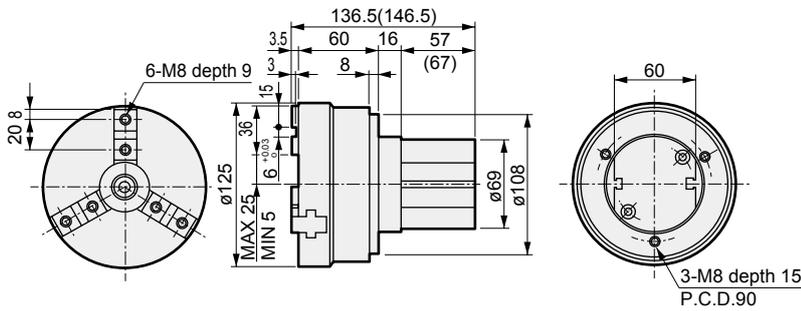
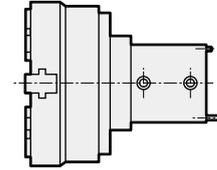


### ● CK-2CS standard/O/C

● Dimensions in ( ) are for 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