CKA-15CS SERIAL=1608 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**

LCW

LCG

LCX

LCM

STM STG STS/STL STR2

UCA2 ULK\* JSK/M2 JSG JSC3/JSC4 USSD UFCD USC LMB LMLHCM **HCA** LBC CAC4 UCAC2 CAC-N UCAC-N RCC2 RCS PCC SHC MCP GLC

opeomediene										
Descriptions	CKA									
Size	15CS	20CS	25CS	30CS	40CS	50CS	60CS	70CS		
Bore size mm	φ16	φ25	φ32	φ40	φ50	φ63	φ80	φ100		
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						1/8			
Operating stroke length mm	6	5	7	9	20	25	30	38		
Rod diameter mm	φ9	φ10	φ14	φ18	φί	20	φ24	φ28		
Volumetric capacity (reciprocating) cm <sup>3</sup>	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

Descriptions	Proximity 2-wire	Proximity 3-wire			
Descriptions	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 v	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 *3			

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

- \*1 : The above max. load current is the value at 25  $^{\circ}\text{C}.$
- \*2 : Refer to Ending Page 1 for other switch specifications.
- Ending \*3 : The weight of switch mounting bracket is 1.5 g.

MFC BBS RRC GRC RV3\*

 ${\sf HR}$ LN Hand Chuk ShkAbs

FK

SpdContr



LCW LCR

LCG LCX

LCM

STM STG

STS/STI STR2 UCA2 UI K\*

JSK/M2 JSG JSC3/JSC4

USSD UFCD

USC JSB3 LMB LML НСМ HCA LBC CAC4 UCAC2 CAC-N

UCAC-N

RCC2

**RCS** 

PCC SHC

MCP

GLC

MFC

BBS

RRC

GRC

RV3

NHS

HR

LN Hand

Chuk

ShkAbs

SpdConti

Ending

CKG

CKS

CKF CKJ

CKL2

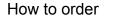
CKL2-\*-HC

CKH2 CKLB2

CHC

CK CKA

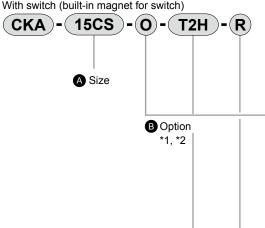
FJ FK



Without switch (built-in magnet for switch)

(CKA)-(15CS)-(O)

With switch (built-in magnet for switch)



C Switch model No. \*3. \*4 \* indicates the lead wire length.

## 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 small jaw, refer to pages 1718 to 1719. When ordered as an option, three are attached at shipment.
- \*3 : Switches other than © Switch model No. are available. (Custom order)
- Refer to Ending Page 1 for details.

  \*4 : As the switch groove of 50CS to 70CS has a different shape, a mounting bracket is required when ordering an individual switch.

Code	Content
	Content
A Size	
15CS	
20CS	
25CS	
30CS	
40CS	
50CS	
60CS	
70CS	
<b>A A</b> 11	

<b>B</b> Option								
Blank	Standard (double acting)							
O Single acting (normally open)								
С	Single acting (normally closed)							
Y11	With small jaw (Material S50C)							
111	Outer mount chuck (small jaw No.: 510 to 540, 710 to 770)							
Y12	With small jaw (Material S50C)							
1 12	Inner mount chuck (small jaw No.: 610 to 630)							
Y21	With small jaw (Material MC nylon)							
121	Outer mount chuck (small jaw No.: 510 to 540, 710 to 770)							
Y22	With small jaw (Material MC nylon)							
1 22	Inner mount chuck (small jaw No.: 610 to 630)							

Switch model No.									
Axial lead wire		Radial	Contact	Voltage		Diamlass	Land wine		
		lead wire		AC	DC	Display	Lead wire		
T2H*		T2V*	Proximity		•	1-color	2-wire		
T3H*		T3V*	Prox		•	display	3-wire		
* Lead wire length									
Blank	1 m	(standard)							
3	3 m	(option)							
5	5 m	(option)							

_	D Swite	ch quantity						
R 1 on open side								
	Н	1 on closed side						
	D	2						

#### [Example of model No.]

#### CKA-15CS-O-T2H-R

Model: Thin chuck

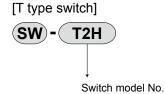
**A** Size :15CS

**B** Option : Single acting, normally open Switch model No.: Proximity T2H switch, lead wire 1 m

Switch quantity : 1 on open side

(Item © above)

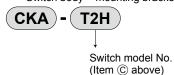
### How to order switch



CKA-50CS to 70CS

■ For switch T\*H\*

Switch body + mounting bracket set



Switch quantity

CKA-50CS to 70CS

·Mounting bracket set

CKA)-T

For switch T\*V\*

Switch body + mounting bracket set

Switch model No. (Item © above)

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

·Mounting bracket set



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

# **CKA** Series

### Internal structure and parts list

● CKA-15CS

LCW

LCR LCG

LCX

LCM STM STG STS/STL STR2 UCA2 ULK\* JSK/M2 JSG JSC3/JSC4 USSD UFCD USC JSB3 LMB LML

HCM

HCA LBC CAC4 UCAC2 CAC-N UCAC-N RCC2 RCS PCC SHC MCP GLC MFC BBS RRC GRC

RV3\*

NHS  ${\sf HR}$ LN Hand Chuk ShkAbs

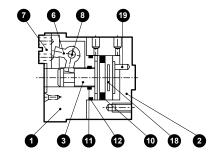
FK SpdContr

CKG CK

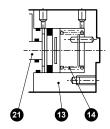
CKA CKS CKF

CKJ CKL2 CKL2-\*-HC CKH2 CKLB2 CHC

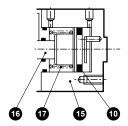
Standard (double acting)



O (normally open)

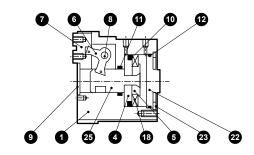


C (normally closed)

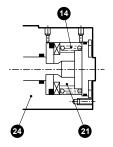


CKA-20CS to 40CS

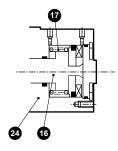
Standard (double acting)



O (normally open)



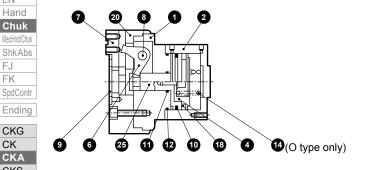
C (normally closed)

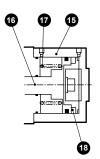


● CKA-50CS to 70CS

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	Master key	Steel	14	O spring	Steel	21	O piston B	Stainless steel			

Note) Structures differ to some extent by model.

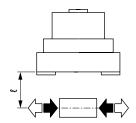


#### Gripping power performance data

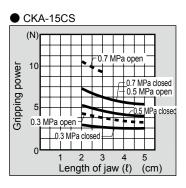
### Gripping power performance data

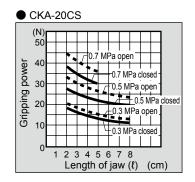
The gripping power in the opening/closing directions with jaw length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown

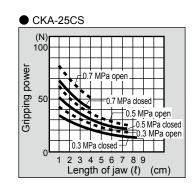
Open direction (□) ------(shown with broken line)
 Closed direction(□) (shown with continuous line)

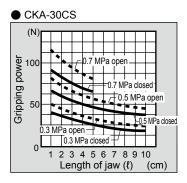


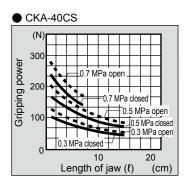
(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.
 C type gripping power decreases approximately 10 to 20% in the open direction compared to the double acting.
 When making a selection, read the precautions for design and selection on page 1722.

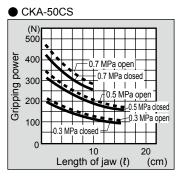


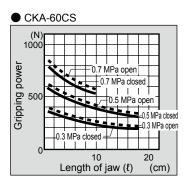


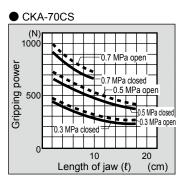












LCG LCX LCM STM STG STS/STI STR2 UCA2 UIK\* JSK/M2 JSG JSC3/JSC4 USSD UFCD USC JSB3 LMB LML **HCM HCA** LBC CAC4 UCAC2 CAC-N UCAC-N RCC2 **RCS** PCC SHC MCP GLC MFC BBS RRC GRC RV3 NHS HR LN Hand Chuk ShkAbs FK SpdContr Ending CKG

CK

CKA CKS

**CKF** 

CKJ

CKL2

CKL2-\*-HC

CKH2

CKLB2 CHC

LCW LCR

# **CKA** Series

#### **Dimensions**

LCW

LCR LCG

LCX

LCM

STM STG STS/STL

STR2

UCA2 ULK\* JSK/M2

JSG JSC3/JSC4 USSD UFCD

USC JSB3

LMB

GRC

RV3\*

HR

LN Hand Chuk

ShkAbs
FJ
FK
SpdContr
Ending
CKG

CK

CKA CKS CKF

CKJ

CKL2

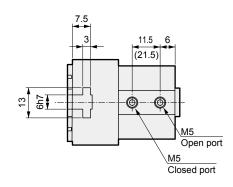
CKL2-\*-HC

CKH2 CKLB2

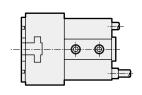
CHC

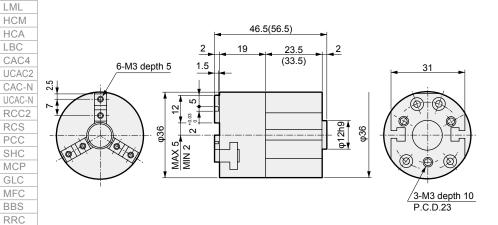


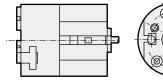
- CKA-15CS standard/O/C
- Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.



With switch



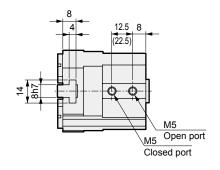




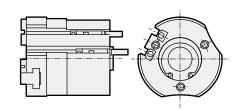
Note: When using T□H or T□V, the switches of both project from the end face of body head side.

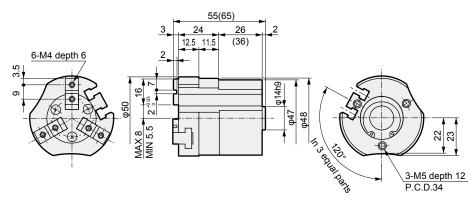
#### CKA-20CS standard/O/C

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



With switch





1660



LCW

LCR LCG

LCX

LCM

STM STG STS/STL STR2

UCA2 ULK\* JSK/M2 JSG JSC3/JSC4 USSD UFCD

USC

JSB3 LMB LML HCM

HCA

LBC

CAC4

UCAC2 CAC-N UCAC-N RCC2 RCS

PCC

SHC MCP

GLC MFC BBS RRC GRC

RV3 NHS

HR

LN Hand Chuk

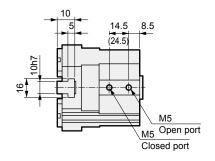
### 3-way jaw thin chuck

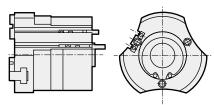
#### CAD **Dimensions**

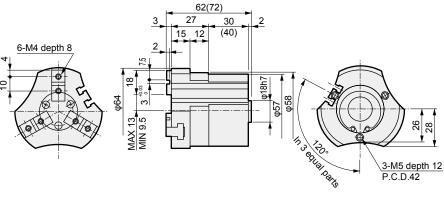
CKA-25CS standard/O/C

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

With switch



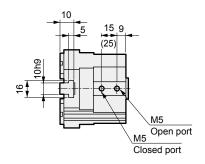


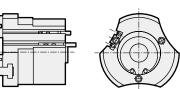


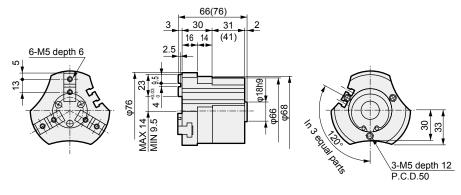
CKA-30CS standard/O/C

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

With switch







ShkAbs FK SpdContr Ending CKG CK CKA CKF CKJ CKL2

CKL2-\*-HC CKH2 CKLB2 CHC

# CKA Series

#### **Dimensions**

LCW

LCR LCG

LCX

LCM

STM STG STS/STL STR2

UCA2

ULK\*
JSK/M2
JSG
JSC3/JSC4
USSD

UFCD

USC

JSB3

LMB LML HCM

**HCA** 

LBC

CAC4

UCAC2 CAC-N UCAC-N RCC2

RCS

PCC SHC MCP GLC

MFC

BBS RRC GRC

RV3\* NHS

HR

LN Hand Chuk

ShkAbs FJ FK SpdContr Ending

CK

CKA CKS CKF

CKJ

CKL2

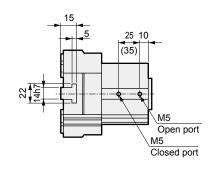
CKL2-\*-HC CKH2 CKLB2

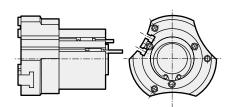
CHC

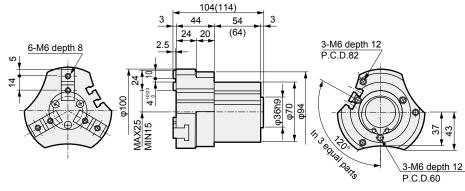


- CKA-40CS standard/O/C
- Dimensions in ( ) are for O [normally open] and C [normally closed] specifications.

With switch



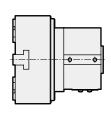


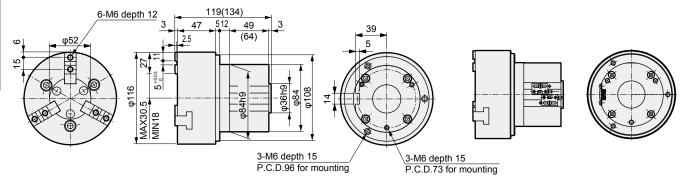


- CKA-50CS standard/O/C
  - Dimensions in ( ) are for [normally closed] specifications.

21 7 33 8 (48) M5 Open port Closed port





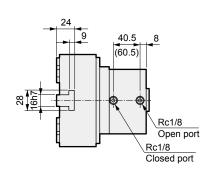




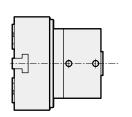
# 3-way jaw thin chuck

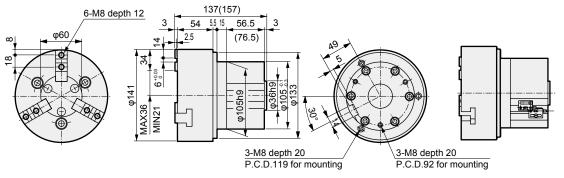
# Dimensions

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





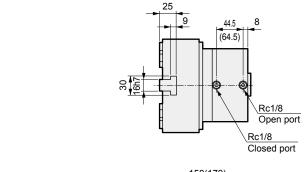


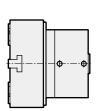


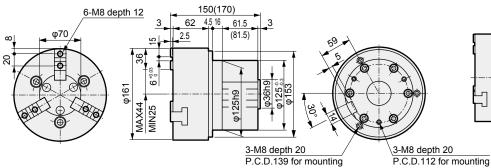


- CKA-70CS standard/O/C
- Dimensions in ( ) are for C [normally closed] specifications.

With switch











LCM STM STG STS/STL STR2 UCA2 ULK\* JSK/M2 JSG JSC3/JSC4 USSD UFCD USC JSB3 LMB LML НСМ HCA LBC CAC4 UCAC2 CAC-N UCAC-N RCC2 RCS PCC SHC MCP GLC MFC BBS RRC GRC RV3 NHS HR LN Hand Chuk ShkAbs FK SpdContr Ending CKG CK CKA CKS CKF CKJ

LCW LCR LCG

LCX

CKL2

CKL2-\*-HC CKH2

CKLB2

CHC