



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	$\phi 6 \times 3$	$\phi 10 \times 3$	$\phi 12 \times 3$	$\phi 16 \times 3$	$\phi 20 \times 3$	$\phi 25 \times 3$
	Closed direction	$\phi 8 \times 3$	$\phi 12 \times 3$	$\phi 16 \times 3$	$\phi 20 \times 3$	$\phi 25 \times 3$	$\phi 32 \times 3$
Capacity of reciprocating cm <sup>3</sup>		1.2	3.5	7.6	15.5	33.8	62.2
Repeatability mm		$\pm 0.01$					
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	10 $\mu$ A or less
Maximum shock resistance	980m/s <sup>2</sup>	
Lead wire	Standard 1m (oil resistant vinyl cable 2-conductor 0.2mm <sup>2</sup> )	Standard 1m (oil resistant vinyl cable 3-conductor 0.2mm <sup>2</sup> )

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

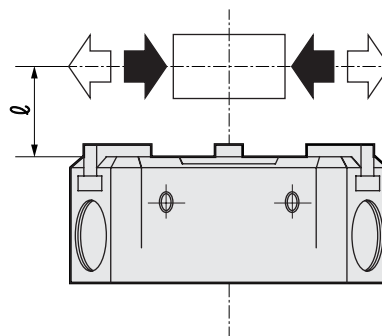
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
<b>CKS</b>
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck  
Chuck

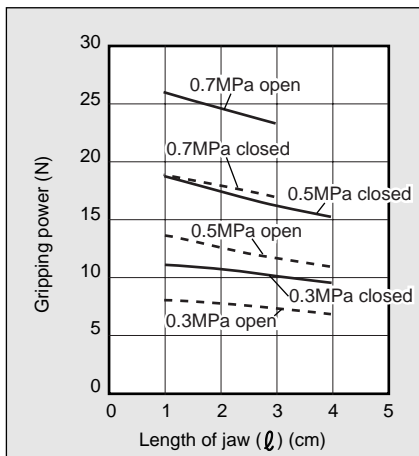
### Gripping performance data

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

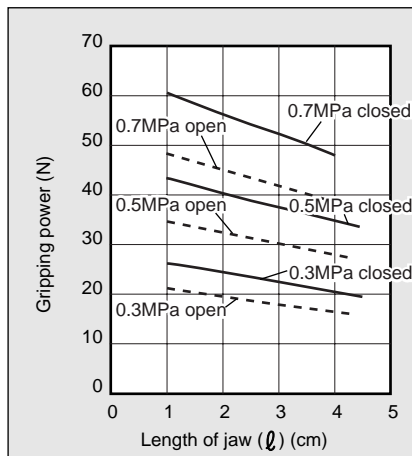
- Open direction (  ) (shown with broken line)
- Closed direction (  ) (shown with continuous line)



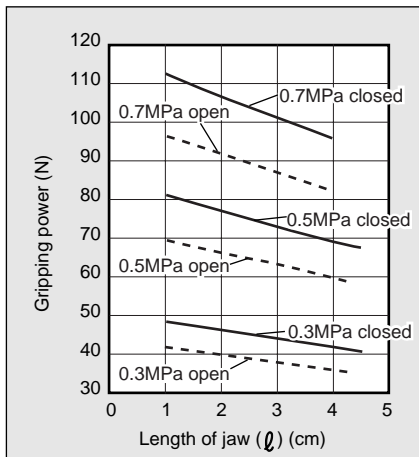
● CKS-08CS



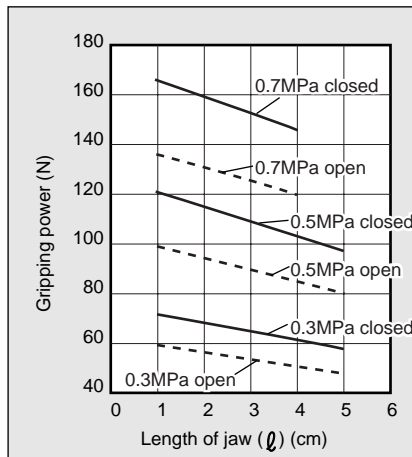
● CKS-12CS



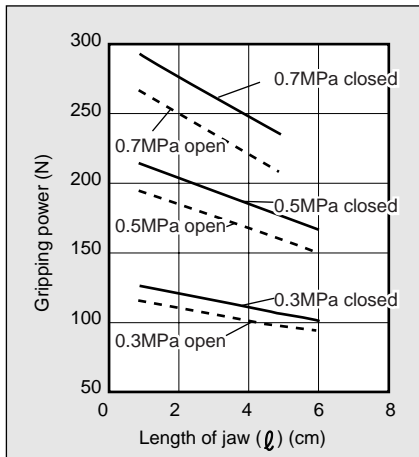
● CKS-16CS



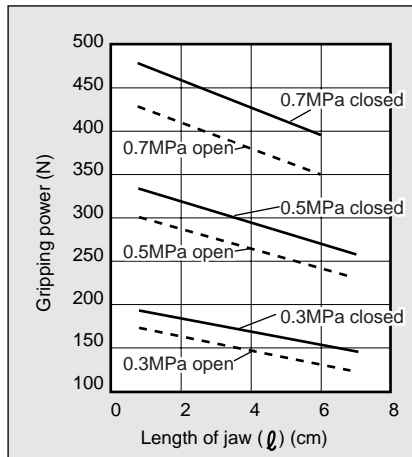
● CKS-20CS



● 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.

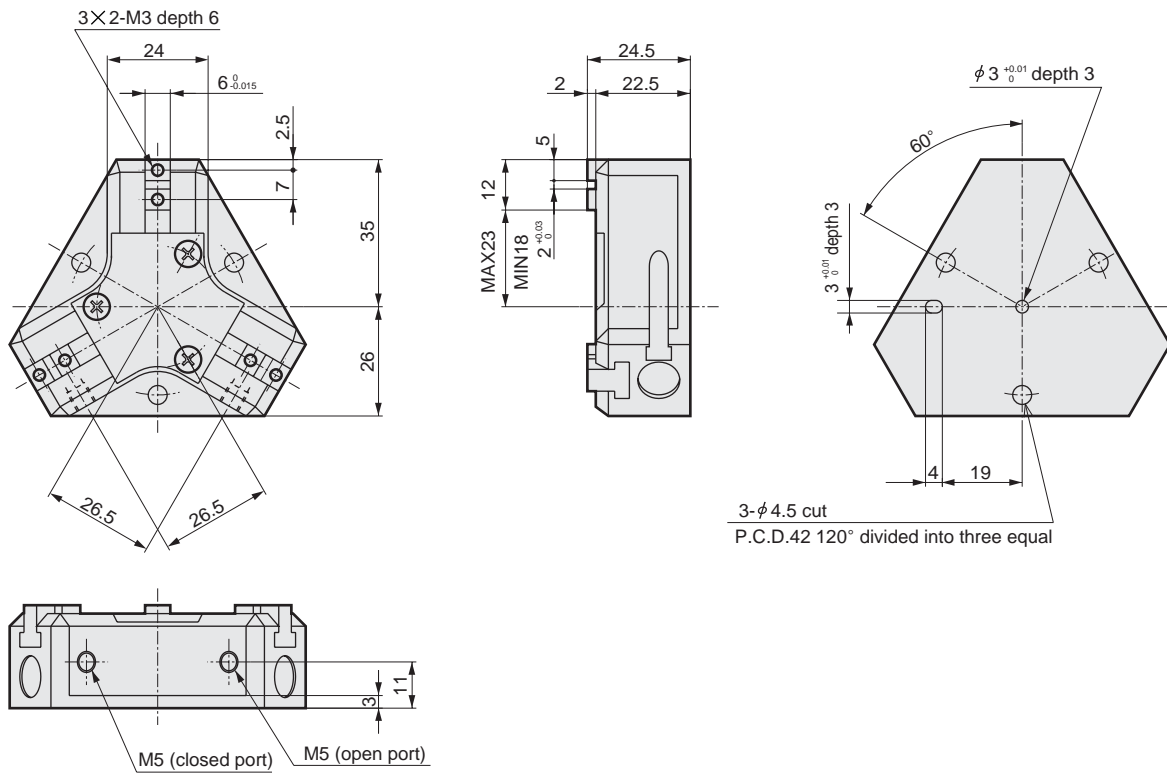
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
<b>CKS</b>
CKF
CKJ
CKL2
CKL2*-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

Thin chuck  
Chuck

## Dimensions

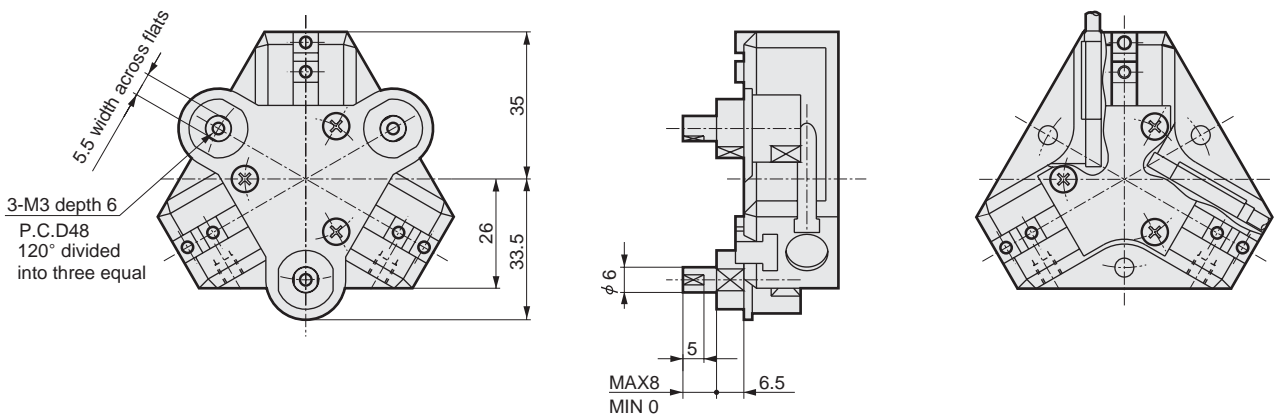
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/BHG
LHA
LHAG
HKP
HLA/HLB
HLAG/HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJL
BHE
CKG
CK
CKA
<b>CKS</b>
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/SCK/FCK
FJ
FK
Ending

### ● CKS-08CS standard



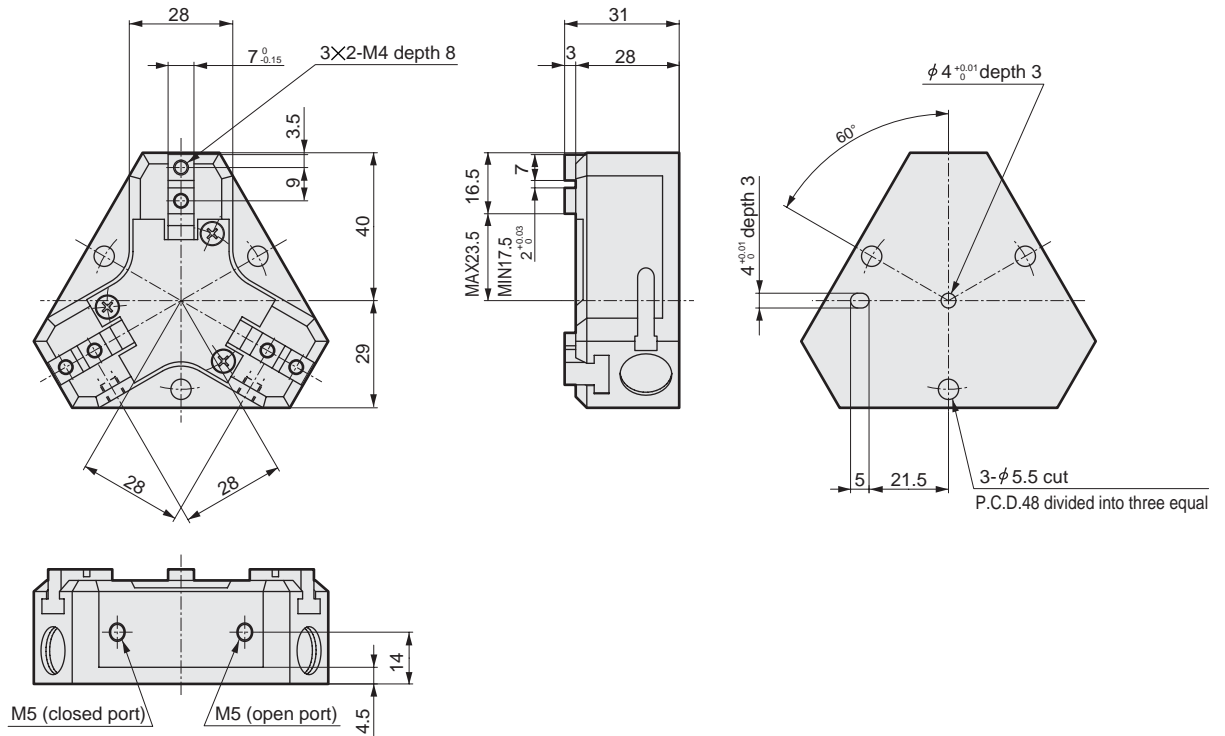
### ● CKS-08CS-W (with spring) (spring force (3 pcs.) 2.1 to 4.8N)

### ● With switch



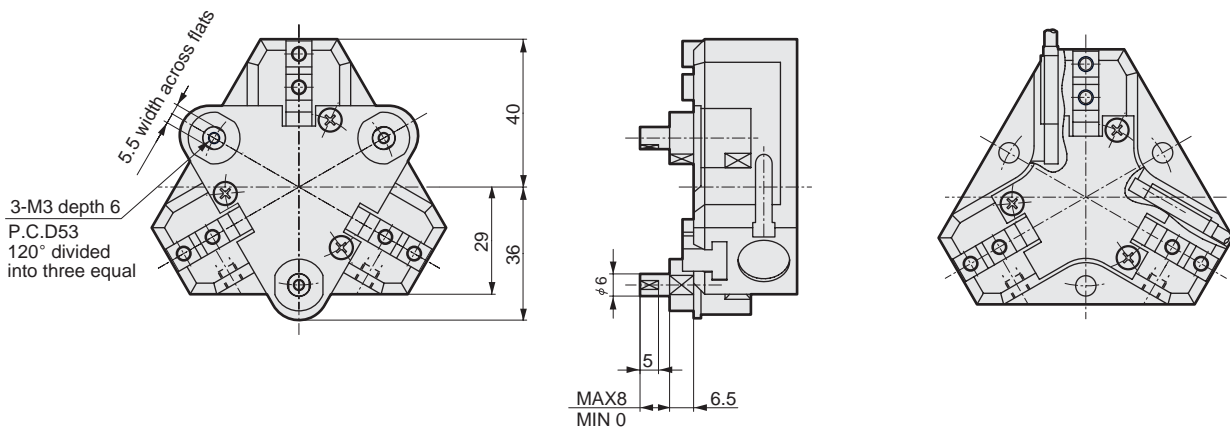
## Dimensions

- CKS-12CS standard



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

- With switch



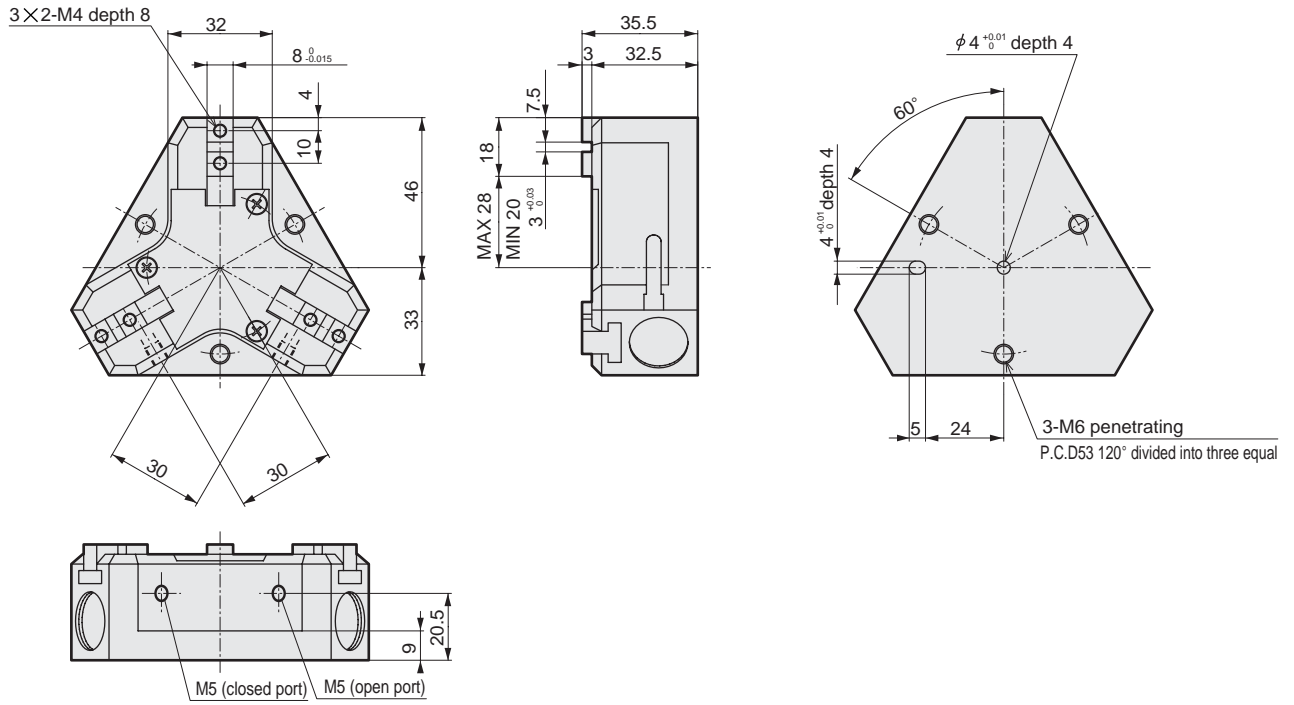
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
<b>CKS</b>
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck  
Chuck

## Dimensions

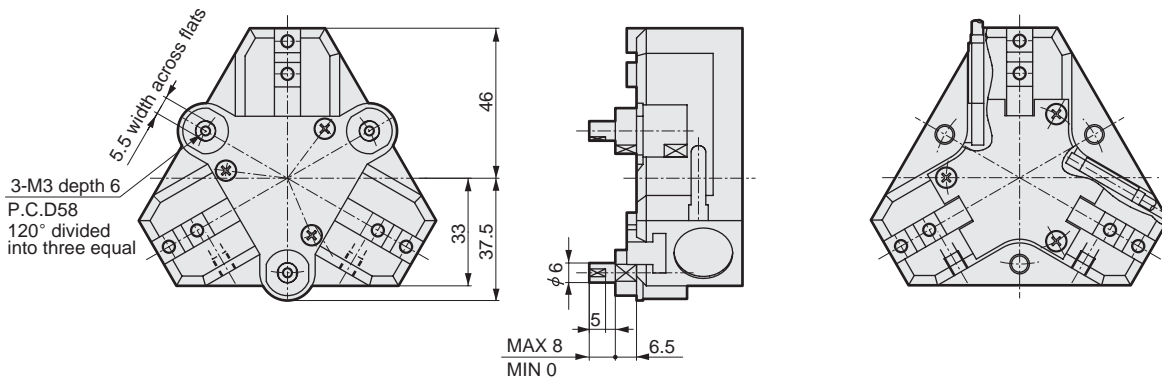


### ● CKS-16CS standard



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

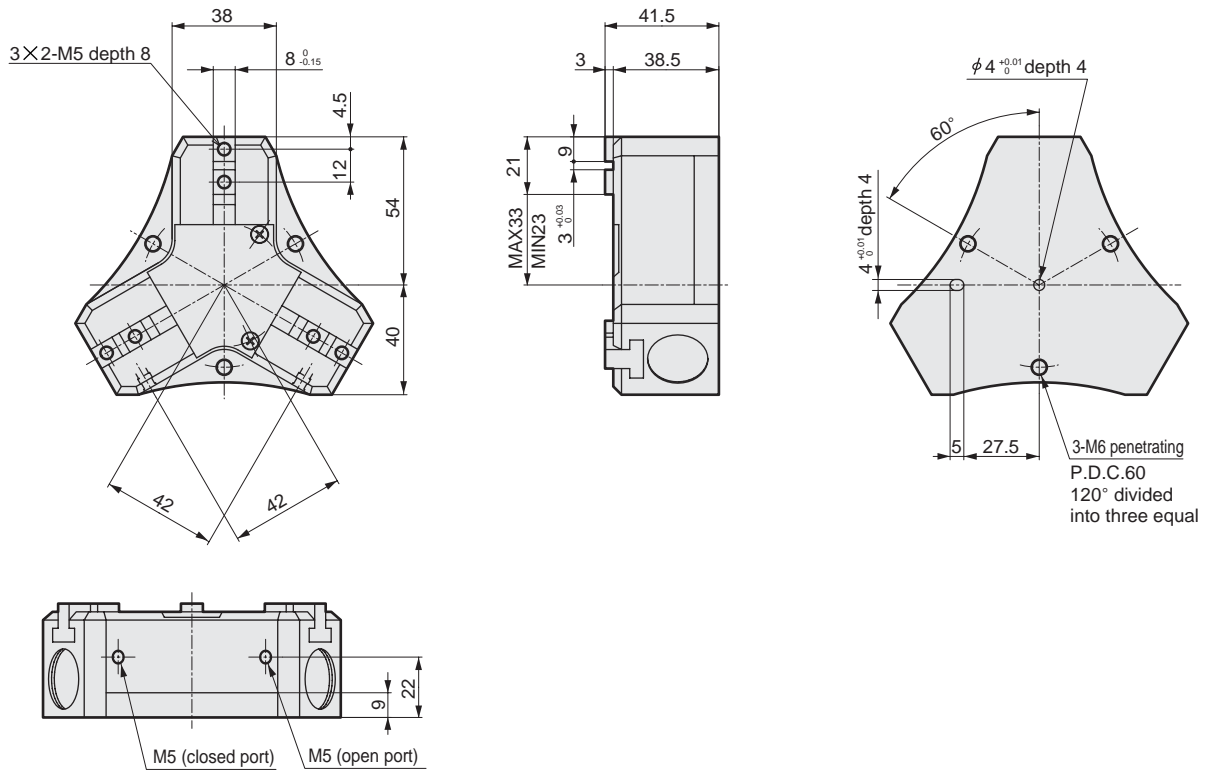
### ● With switch



- 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

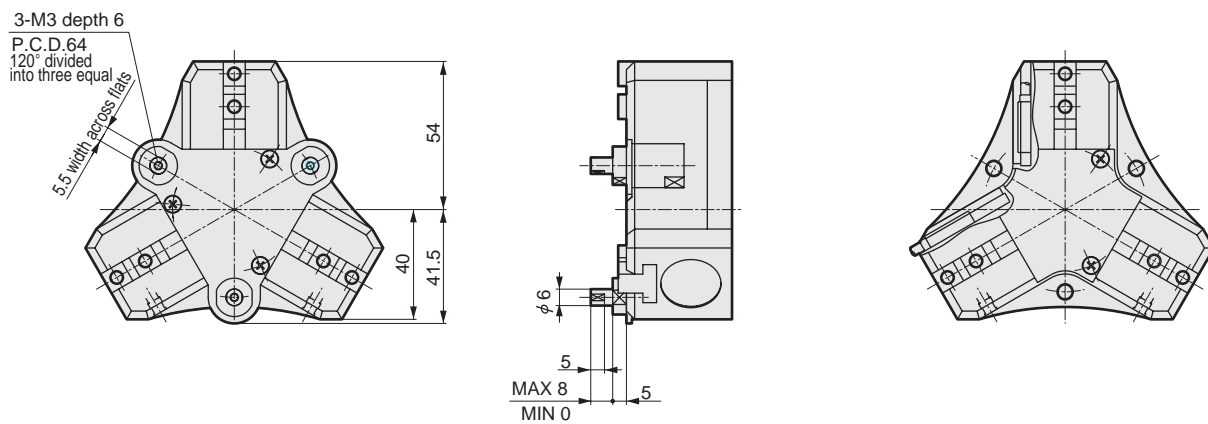
## Dimensions

- CKS-20CS standard



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

- With switch



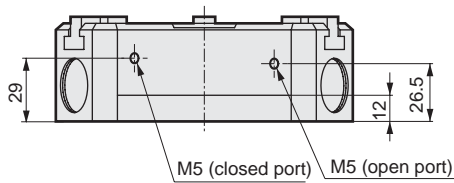
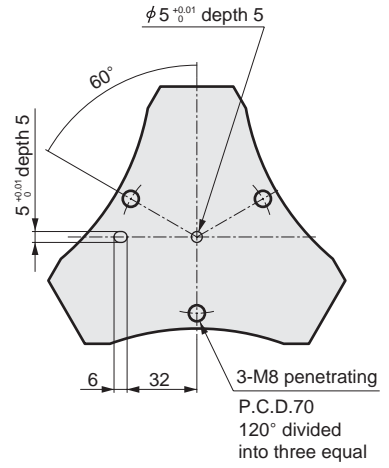
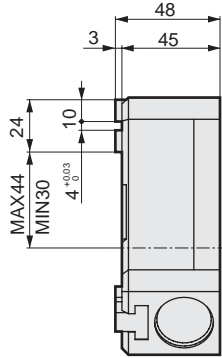
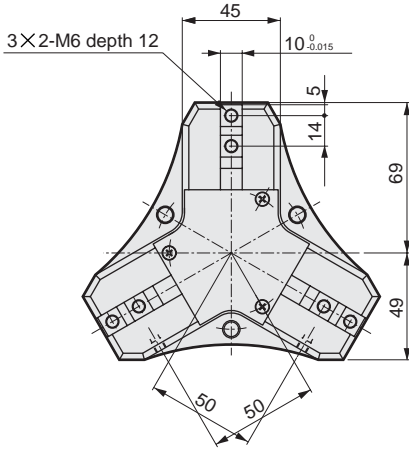
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
<b>CKS</b>
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck  
Chuck

## Dimensions

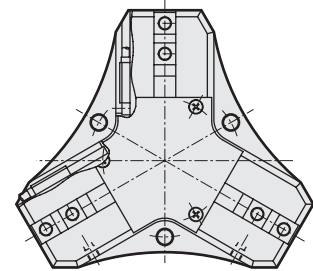
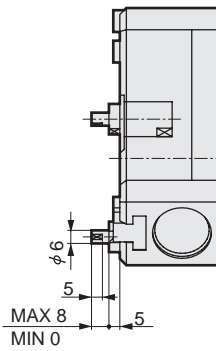
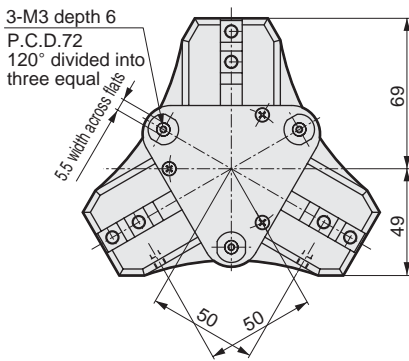


### ● CKS-25CS standard



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

### ● With switch

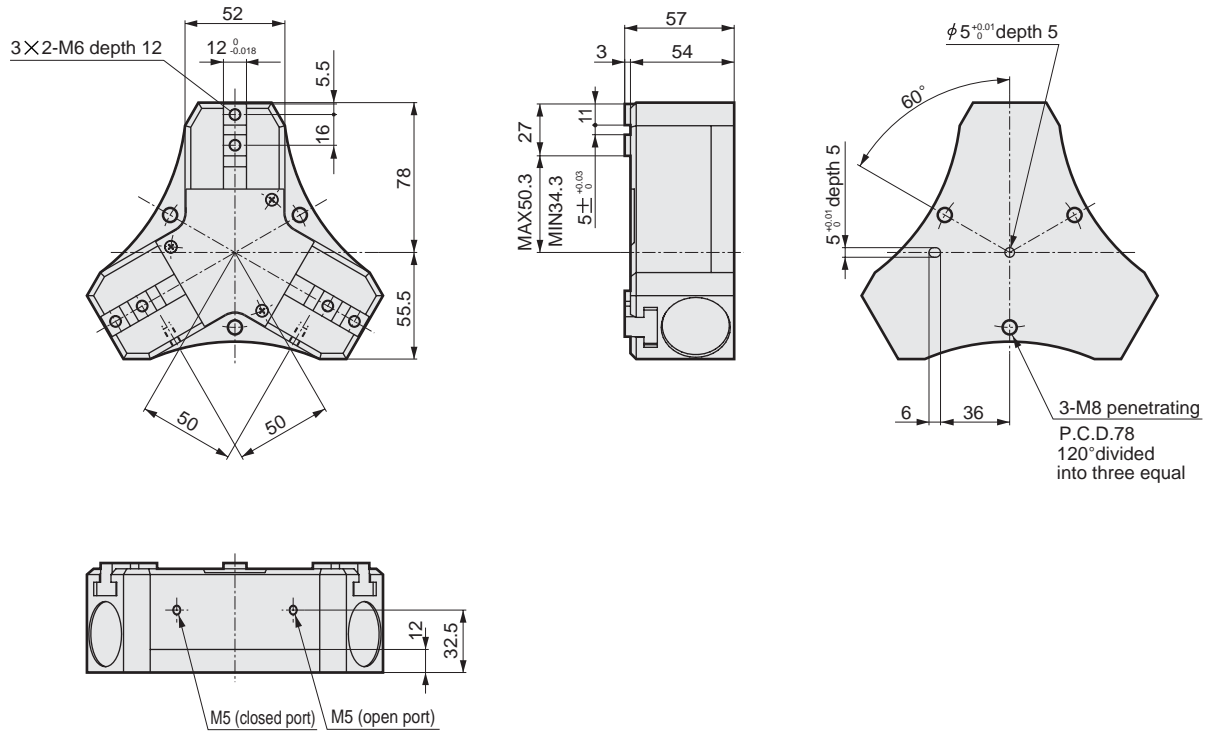


- RRC
- GRC
- RV3\*
- NHS
- HR
- LN
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HEP
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJL
- BHE
- CKG
- CK
- CKA
- CKS**
- CKF
- CKJ
- CKL2
- CKL2 \*-HC
- CKH2
- CKLB2
- NCK/SCK/FCK
- FJ
- FK
- Ending



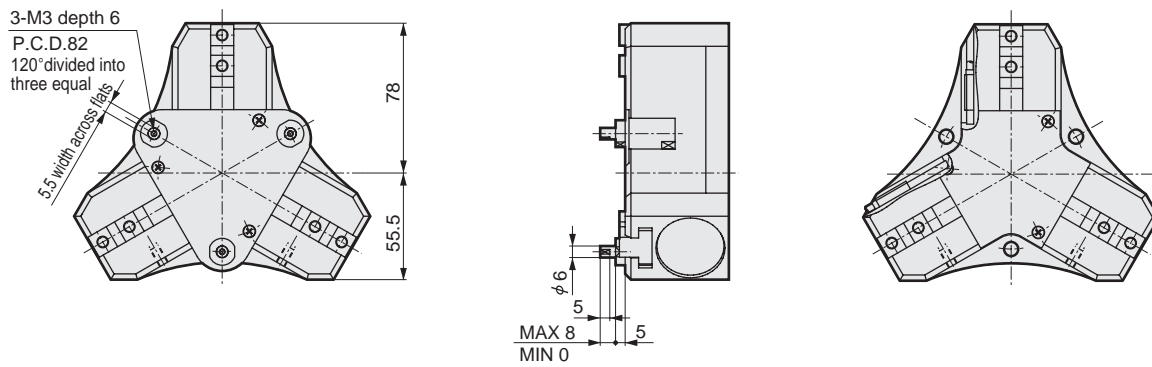
## Dimensions

● CKS-32CS standard



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

● With switch



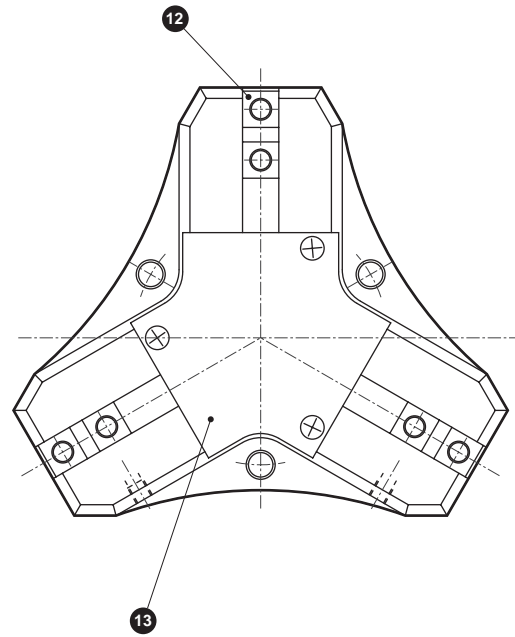
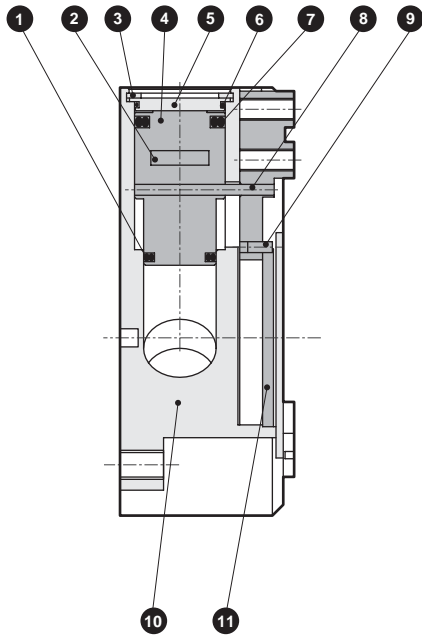
RRC
GRC
RV3*
NHS
HR
LN
FH100
HAP
BSA2
BHA/ BHG
LHA
LHAG
HKP
HLA/ HLB
HLAG/ HLBG
HEP
HCP
HMF
HMFB
HFP
HLC
HGP
FH500
HLB
HDL
HMD
HJL
BHE
CKG
CK
CKA
<b>CKS</b>
CKF
CKJ
CKL2
CKL2 *-HC
CKH2
CKLB2
NCK/ SCK/FCK
FJ
FK
Ending

Thin chuck  
Chuck

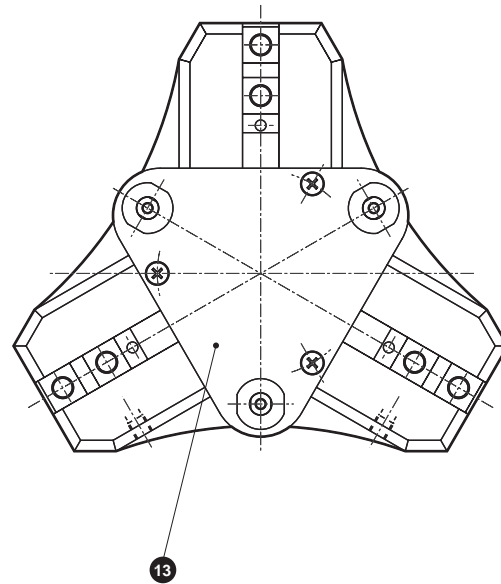
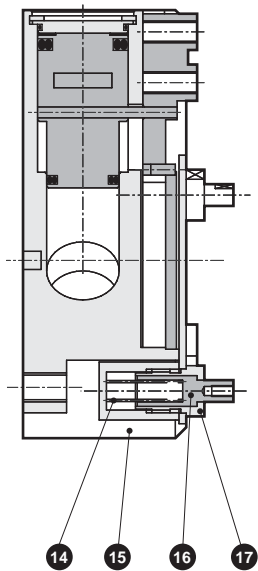
## Internal structure and parts list

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
<b>CKS</b>
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					