



Low Profile Chuck

CKS Series

● Operating stroke: 10, 12, 16, 20, 28, 32 mm

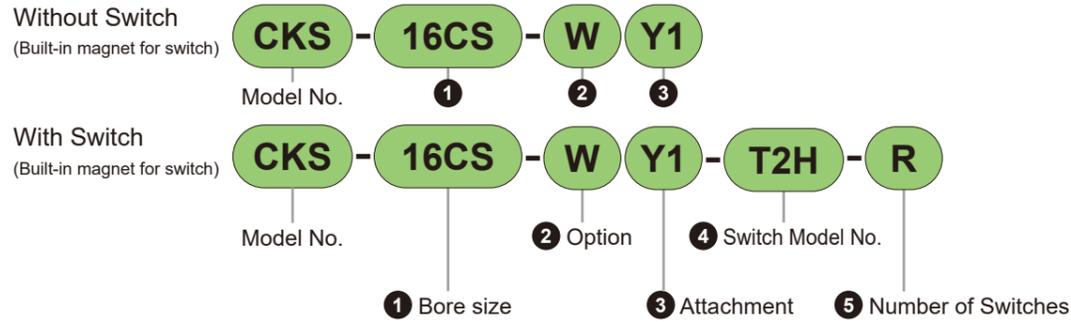
Double Acting



Specifications

Item	CKS					
	08CS	12CS	16CS	20CS	25CS	32CS
Size						
Actuation method	Double Acting					
Operating Fluid	Compressed Air					
Max. Working Pressure MPa	0.7					
Min. Operating Pressure MPa	0.2					
Ambient Temperature °C	5 to 60					
Port Size	M5					
Operating stroke mm	10	12	16	20	28	32
Bore size	Opening direction	ø6x3	ø10x3	ø12x3	ø16x3	ø20x3
	Closing direction	ø8x3	ø12x3	ø16x3	ø20x3	ø25x3
Internal volume (reciprocating) cm ³	1.2	3.5	7.6	15.5	33.8	62.2
Repeatability mm	±0.01					
Weight kg	0.16	0.26	0.40	0.63	1.14	1.8
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)					

Model No. Notation Method



1 Bore Size (mm)

Code	Content
08CS	Opening direction ø6
	Closing direction ø8
12CS	Opening direction ø10
	Closing direction ø12
16CS	Opening direction ø12
	Closing direction ø16
20CS	Opening direction ø16
	Closing direction ø20
25CS	Opening direction ø20
	Closing direction ø25
32CS	Opening direction ø25
	Closing direction ø32

2 Option

Code	Content
Blank	None
W	With Feather Key

3 Attachment

Code	Content
Blank	Without attachments
Y1	With attachment Material: S50C
Y2	With attachment Material: MC Nylon

Note) For the outline dimensions and compatible models of the attachments, refer to P. 486. When ordered as an option, it will be shipped included with a quantity of 3.

4 Switch Model No.

For switch details, please refer to P. 573. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead wire *1	
			AC	DC	AC	DC	Straight	L-shape
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20 *2	T2H□	T2V□
		3-wire (NPN)	-	30 or less	-	100 or less	T3H□	T3V□

*1: For "□" in the switch model number, enter the code selected from the "Lead wire length" table.

*2: Maximum load current value above: 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)

*3: Switches other than the switch model numbers are also available. (Custom Product) For details, see P. 573.

*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

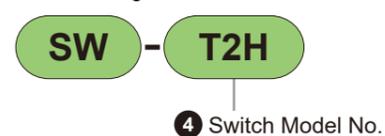
Example) Lead wire length
1 m T2H
3 m T2H³
5 m T2H⁵

5 Number of Switches

Code	Content
R	With 1 pc. on Open Side
H	With 1 pc. on Close Side
D	With 2 pcs

* When 2 switches are included, for models with a short operating stroke, both switches may turn ON depending on the size of the workpiece. Please be careful.

Switch Single Unit Model No. Notation Method



Check Valve

CKW-HP
CKL2
CKLG2
CKL2-□-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ

Check Valve

CKW-HP
CKL2
CKLG2
CKL2-□-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ

Cylinder Switch
Ending

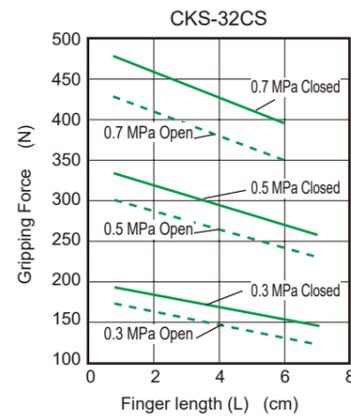
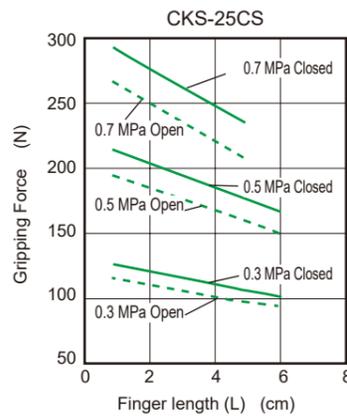
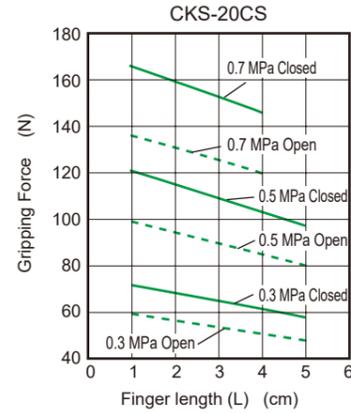
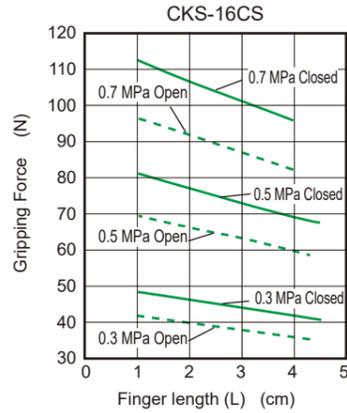
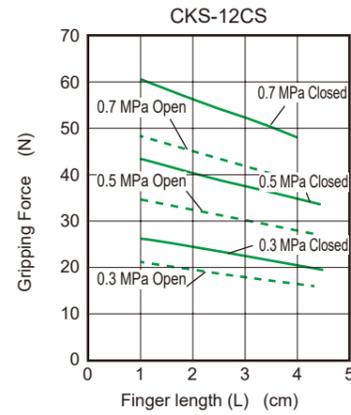
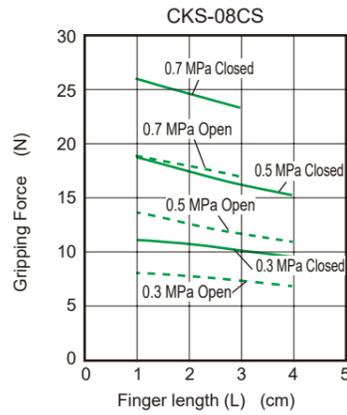
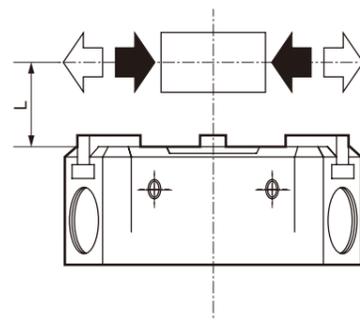
Cylinder Switch
Ending

Gripping Force Performance Datav

- Gripping force represents the thrust (for one finger) in the direction of the arrow shown in the figure.
- This represents the gripping force acting in the opening and closing directions at a gripper's finger length L when the supply pressure is 0.3, 0.5, and 0.7 MPa.

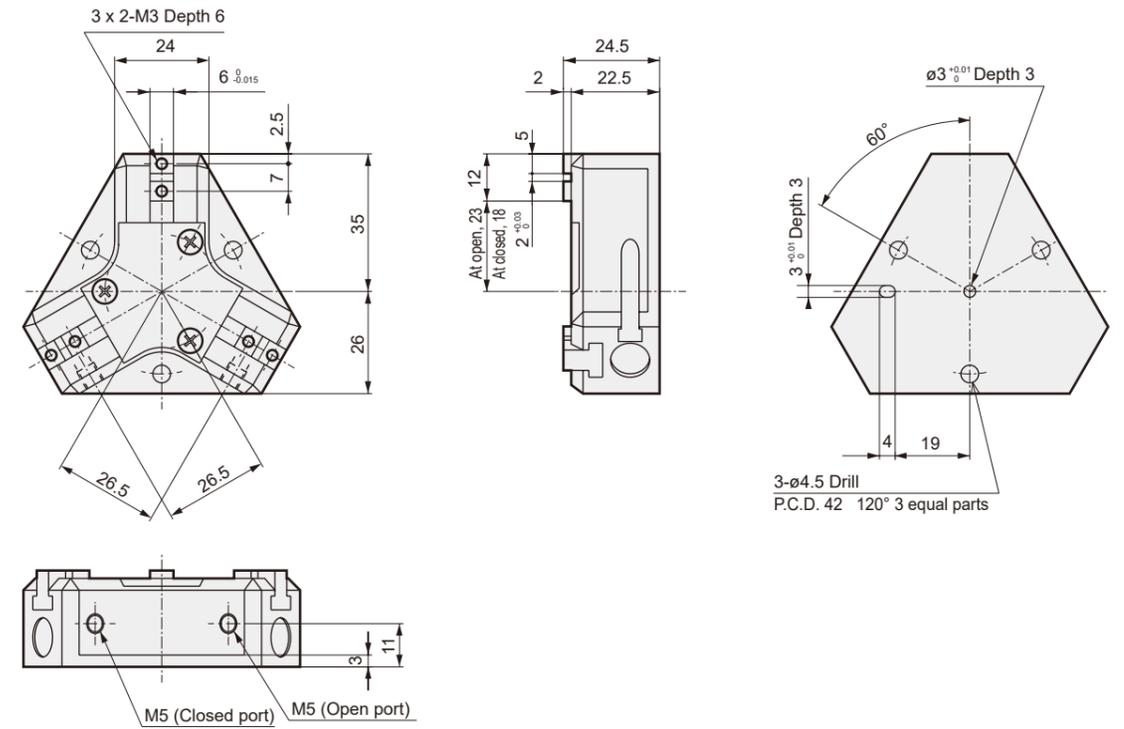
- Open direction (←) - - (broken line)
- Closing direction (→) - - (solid line)

Note) When selecting, check the design and selection precautions on P. 490.



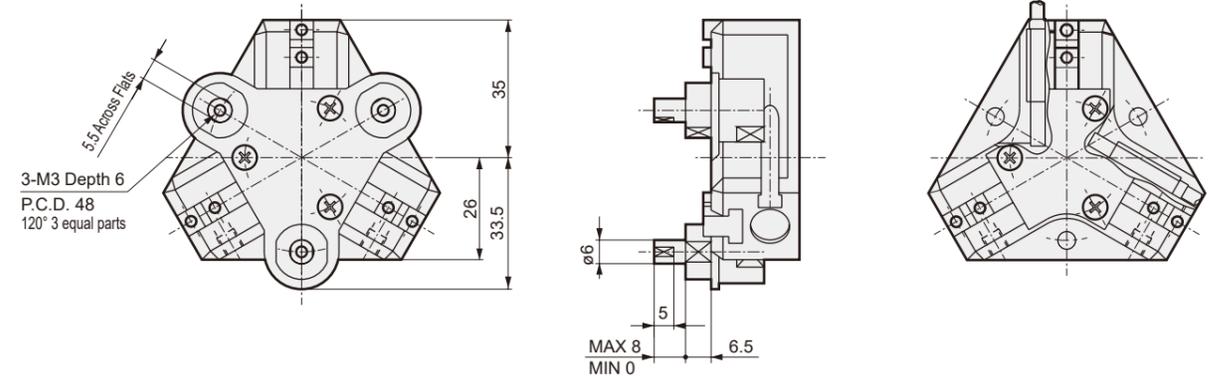
Outline Dimension Drawing

● CKS-08CS Standard



● CKS-08CS-W (With Feather Key) (Spring Force (3 pcs) 2.1 to 4.8N)

● With Switch



Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS**
- CKS-F
- CKF
- CKJ

Check Valve

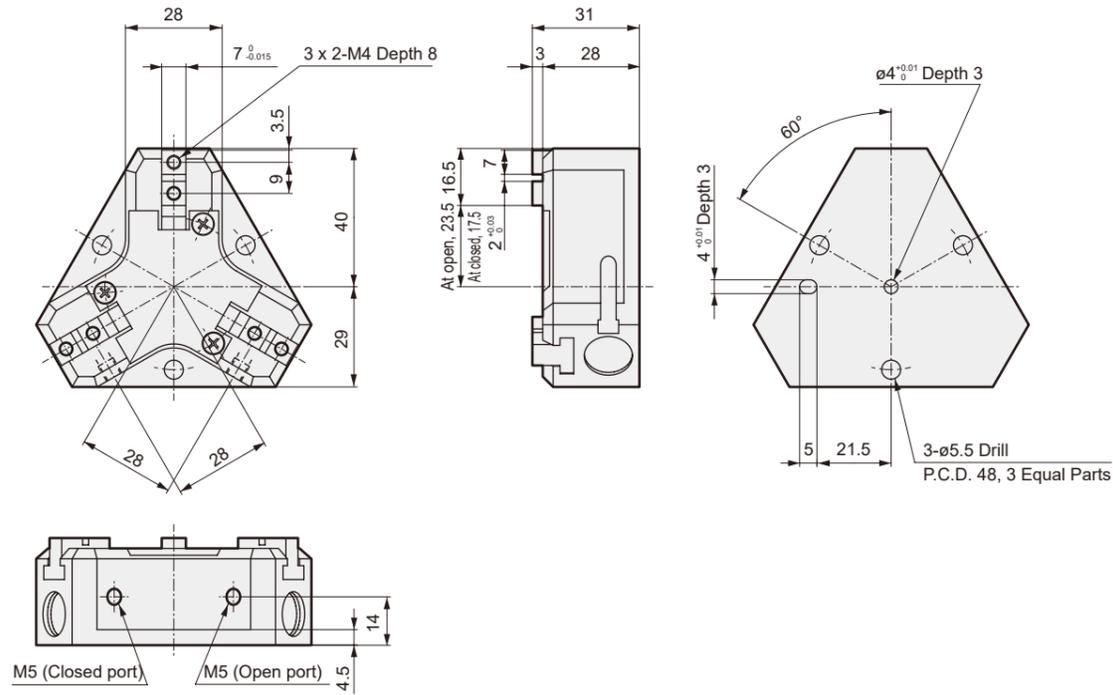
- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS**
- CKS-F
- CKF
- CKJ

Cylinder Switch
Ending

Cylinder Switch
Ending

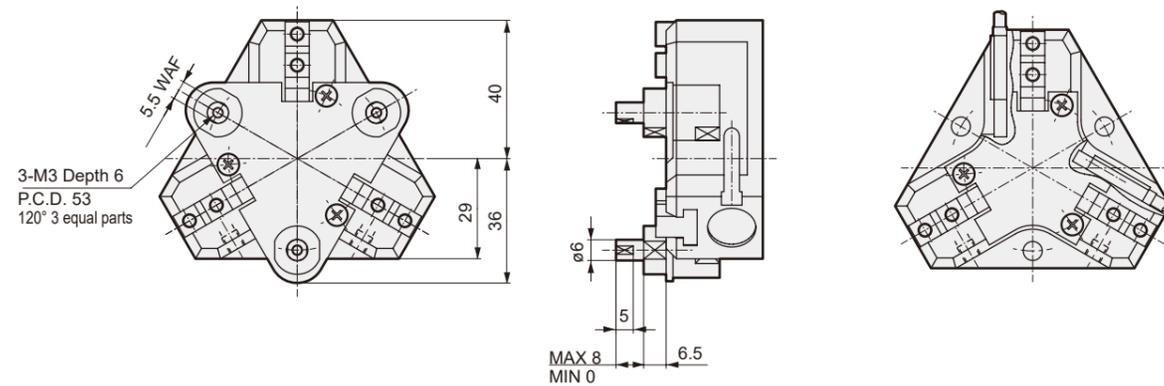
Outline Dimension Drawing

● CKS-12CS Standard



● CKS-12CS-W (With Feather Key) (Spring Force (3 pcs) 4.5 to 11.4N)

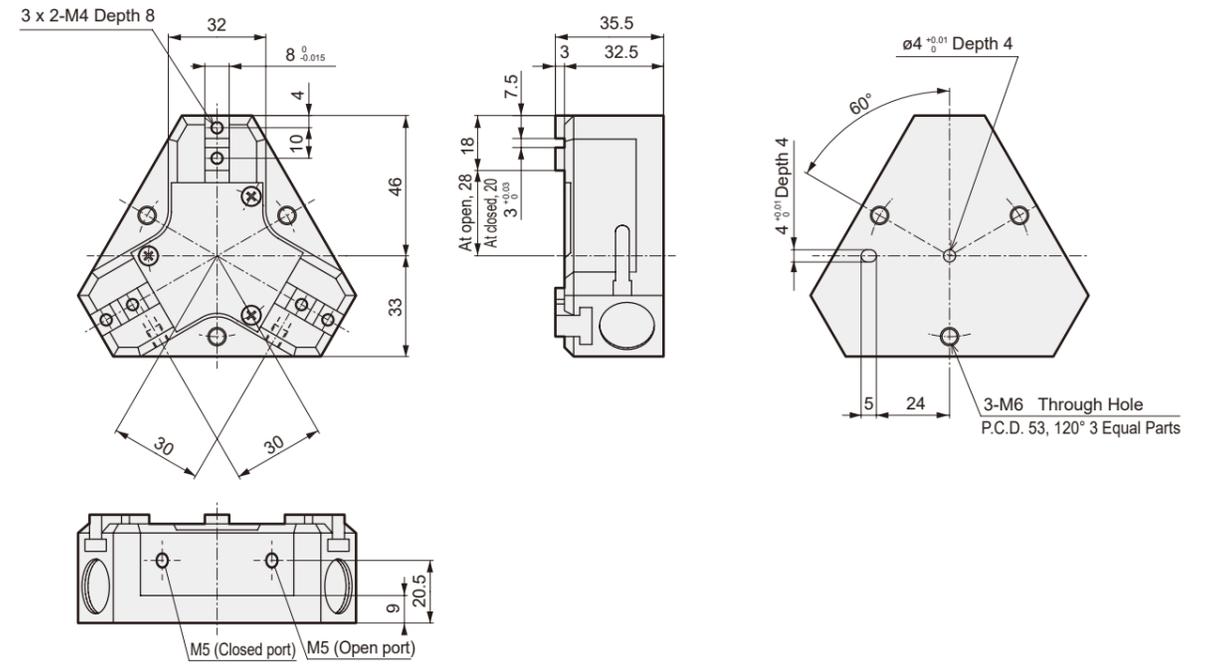
● With Switch



Outline Dimension Drawing

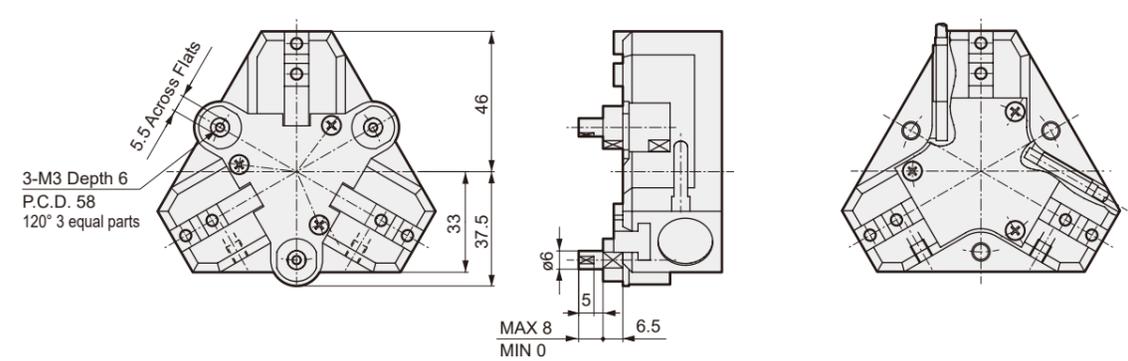
Outline Dimension Drawing

● CKS-16CS Standard



● CKS-16CS-W (With Feather Key) (Spring Force (3 pcs) 7.2 to 19N)

● With Switch



Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS**
- CKS-F
- CKF
- CKJ

Check Valve

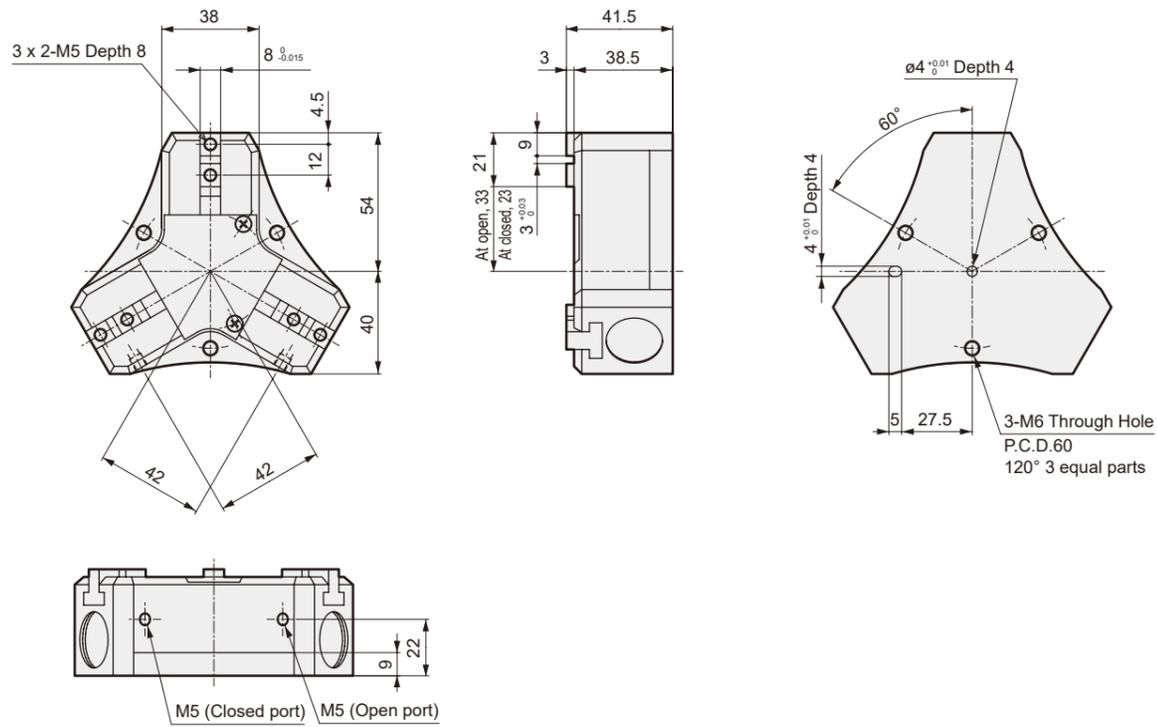
- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS**
- CKS-F
- CKF
- CKJ

Cylinder Switch Ending

Cylinder Switch Ending

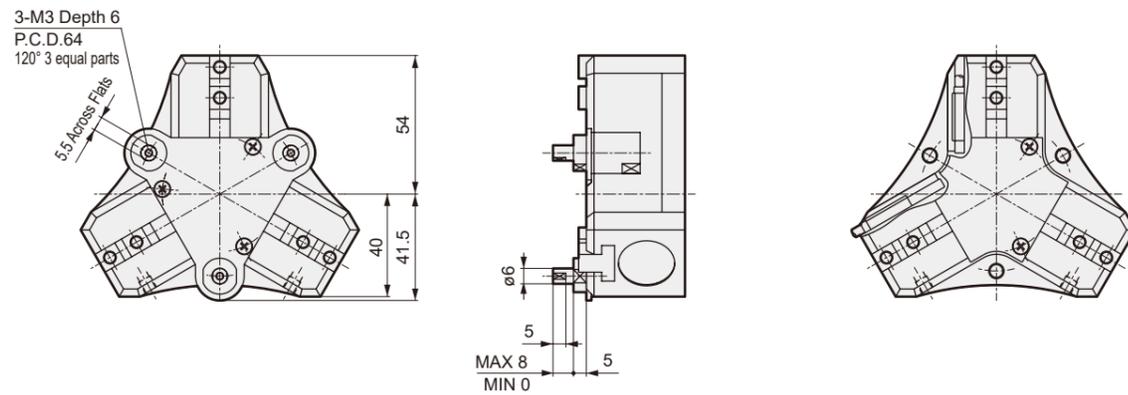
Outline Dimension Drawing

● CKS-20CS Standard



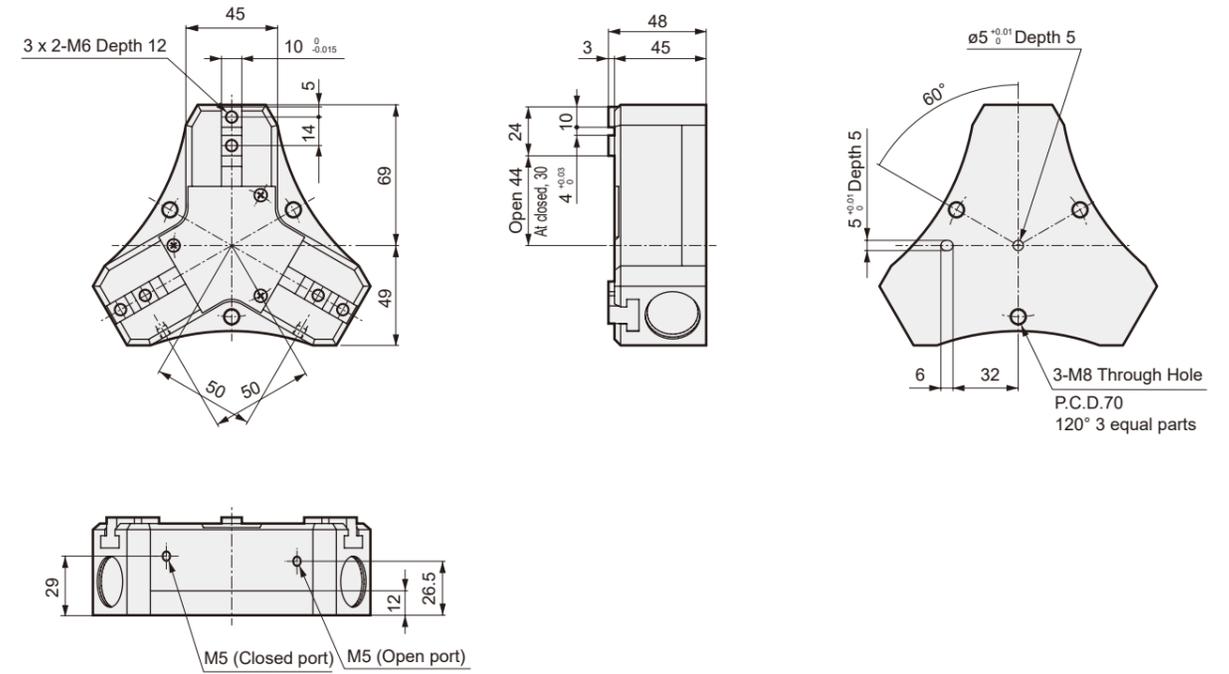
● CKS-20CS-W (With Feather Key) (Spring Force (3 pcs) 7.5 to 28N)

● With Switch



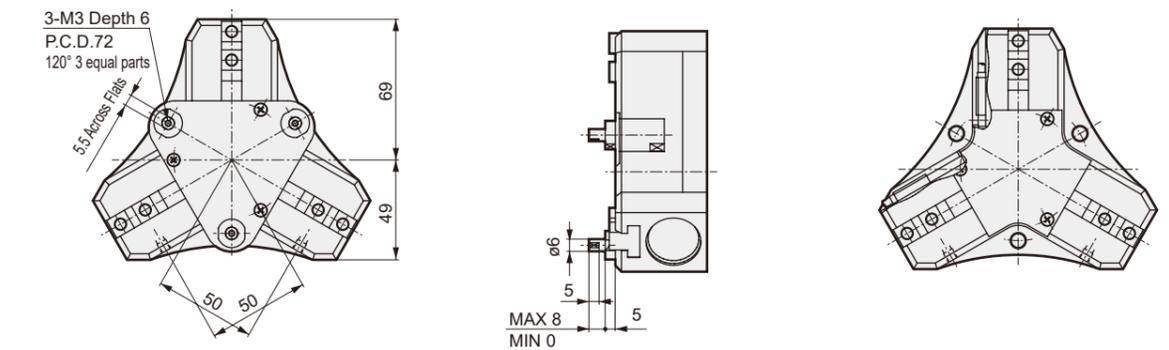
Outline Dimension Drawing

● CKS-25CS Standard



● CKS-25CS-W (With Feather Key) (Spring Force (3 pcs) 15 to 39N)

● With Switch



Check Valve

CKW-HP

CKL2

CKLG2

CKL2

-□-HC

CKH2

CKLB2

CKG

CK

CKA

CKS

CKS-F

CKF

CKJ

Cylinder

Switch

Ending

Outline Dimension Drawing

Check Valve

CKW-HP

CKL2

CKLG2

CKL2

-□-HC

CKH2

CKLB2

CKG

CK

CKA

CKS

CKS-F

CKF

CKJ

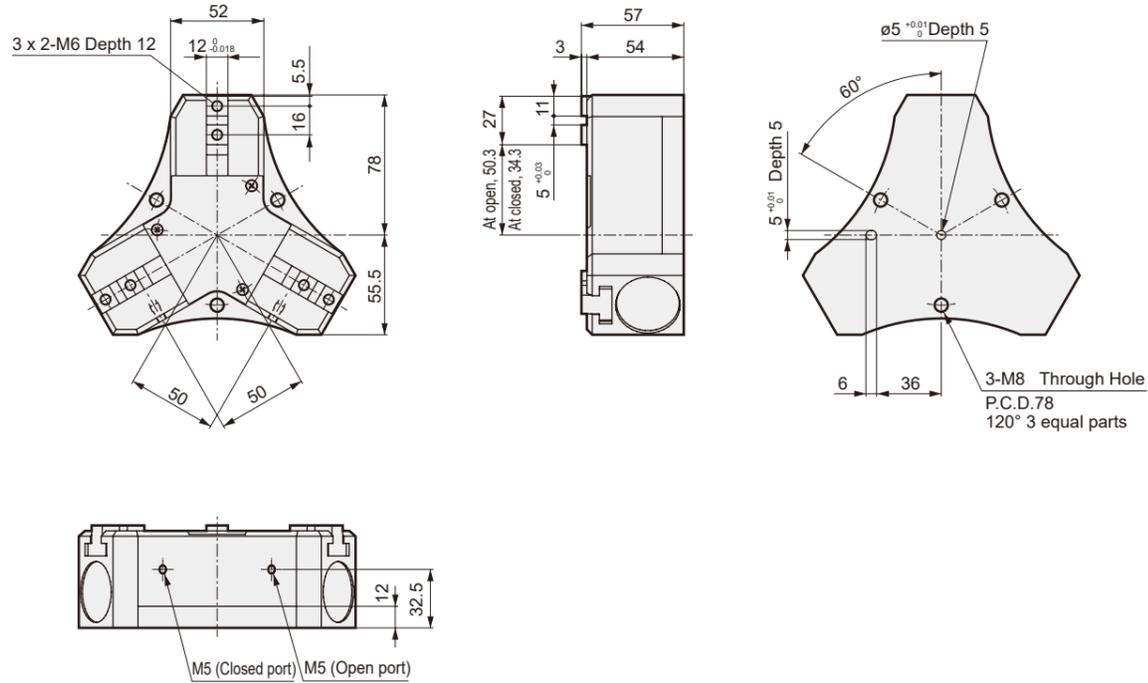
Cylinder

Switch

Ending

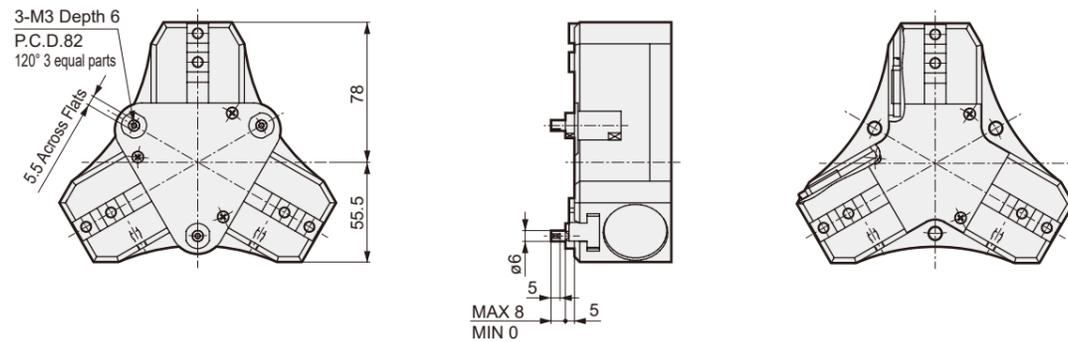
Outline Dimension Drawing

● CKS-32CS Standard



● CKS-32CS-W (With Feather Key) (Spring Force (3 pcs) 26 to 67N)

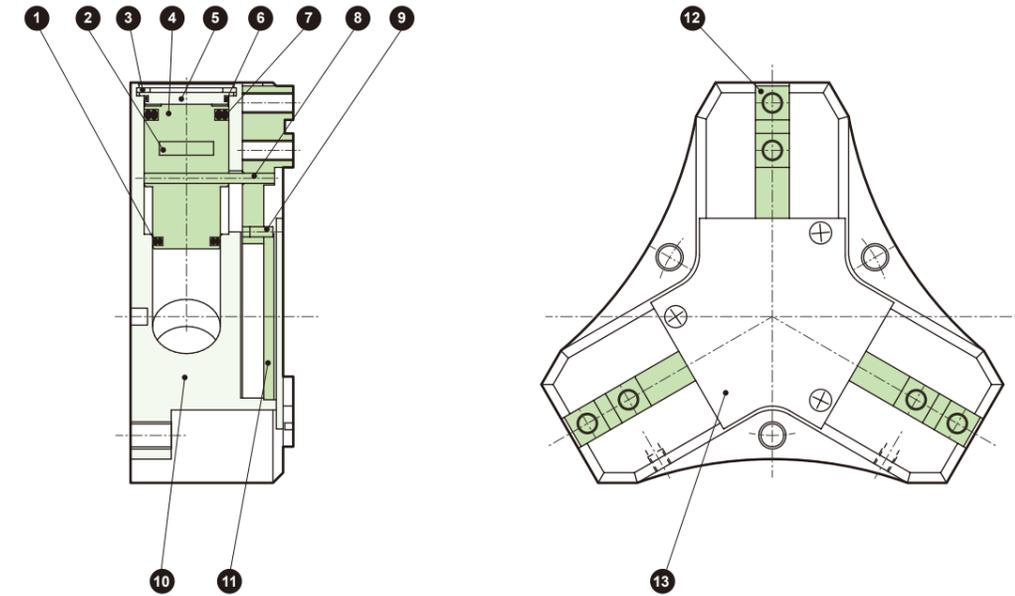
● With Switch



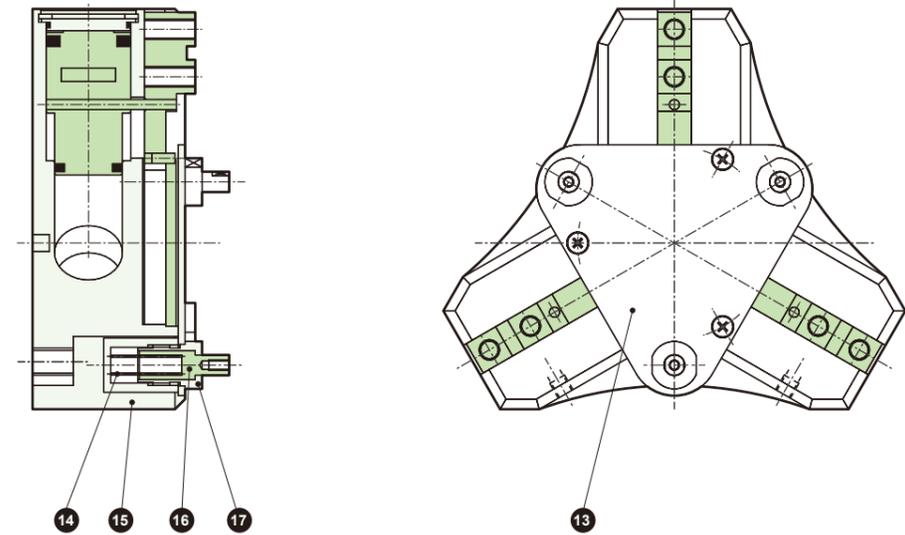
Internal Structure Diagram/Material

Internal Structure Diagram/Material

● CKS Standard



● W (With Feather Key)



Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Seal B	Nitrile Rubber		10	Body	Aluminum Alloy	
2	Magnet			11	Link	Steel	
3	C-type retaining ring	Stainless Steel		12	Finger	Steel	
4	Piston	Aluminum Alloy		13	Center cover	Stainless Steel	
5	Cover	Aluminum Alloy		14	Coil Spring	Steel	
6	Seal	Nitrile Rubber		15	Case	Stainless Steel	
7	Piston Seal A	Nitrile Rubber		16	Pin	Stainless Steel	
8	Actuating shaft A	Alloy Steel		17	Nut	Stainless Steel	
9	Actuating shaft B	Alloy Steel					

Check Valve

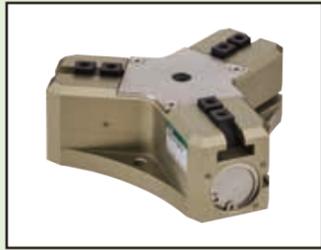
- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS**
- CKS-F
- CKF
- CKJ

Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS**
- CKS-F
- CKF
- CKJ

Cylinder Switch Ending

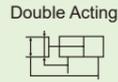
Cylinder Switch Ending



Low Profile Chuck (Hollow Type)

CKS-F Series

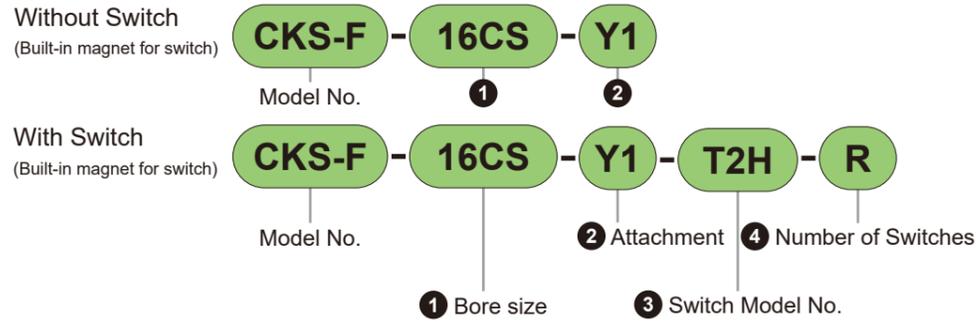
● Operating stroke: 16, 20, 28, 32, 50 mm



Specifications

Item	CKS-F					
	16CS	20CS	25CS	32CS	50CS	
Size						
Actuation method	Double Acting					
Operating Fluid	Compressed Air					
Max. Working Pressure	MPa 0.7					
Min. Operating Pressure	MPa 0.2					
Ambient Temperature	°C 5 to 60					
Port Size	M5					
Operating stroke	mm 16	20	28	32	50	
Bore size	Opening direction	ø12 x 3	ø16x3	ø20 x 3	ø25 x 3	ø40 x 3
	Closing direction	ø16 x 3	ø20 x 3	ø25 x 3	ø32 x 3	ø50 x 3
Internal volume (reciprocating)	cm ³ 7.6	15.5	33.8	62.2	242	
Repeatability	mm ±0.01					
Weight	kg 0.40	0.63	1.14	1.8	5.76	
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)					

Model No. Notation Method



1 Bore Size (mm)

Code	Content	
16CS	Opening direction	ø12
	Closing direction	ø16
20CS	Opening direction	ø16
	Closing direction	ø20
25CS	Opening direction	ø20
	Closing direction	ø25
32CS	Opening direction	ø25
	Closing direction	ø32
50CS	Opening direction	ø40
	Closing direction	ø50

2 Attachment

Code	Content
Blank	Without attachments
Y1	With attachment Material: S50C (16CS to 32CS only)
Y2	With attachment Material: MC nylon (16CS to 32CS only)

* Refer to P. 486, 487 for the external dimensions and compatible models of the attachments. When ordered as an option, it will be shipped included with a quantity of 3.

3 Switch model Nos.

Refer to P. 573 for switch details. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead wire *1	
			AC	DC	AC	DC	Straight	L-shape
Solid State	1-Color	2-wire	-	10 to 30	-	5 to 20 Note 2	T2H□	T2V□
		3-wire (NPN)	-	30 or less	-	100 or less	T3H□	T3V□

*1: For "□" in the switch model number, enter the code selected from the "Lead wire length" table.

*2: Maximum load current value above: 20 mA, is at 25 °C. If the switch operating ambient temperature is higher than 25 °C, it will be lower than 20 mA. (At 60 °C, it will be 5 to 10 mA.)

*3: Switches other than the switch model numbers are also available. (Custom Product) For details, see P. 573.

*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

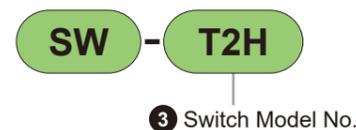
Example) Lead wire length
1 m T2H
3 m T2H³
5 m T2H⁵

4 Number of Switches

Code	Content
R	With 1 pc. on Open Side
H	With 1 pc. on Close Side
D	With 2 pcs

* When 2 switches are included, for models with a short operating stroke, both switches may turn ON depending on the size of the workpiece. Please be careful.

Switch Single Unit Model No. Notation Method



Check Valve

CKW-HP
CKL2
CKLG2
CKL2-□-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ

Check Valve

CKW-HP
CKL2
CKLG2
CKL2-□-HC
CKH2
CKLB2
CKG
CK
CKA
CKS
CKS-F
CKF
CKJ

Cylinder Switch
Ending

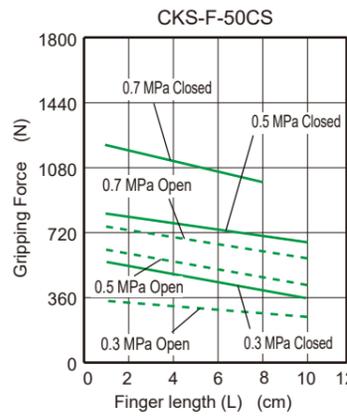
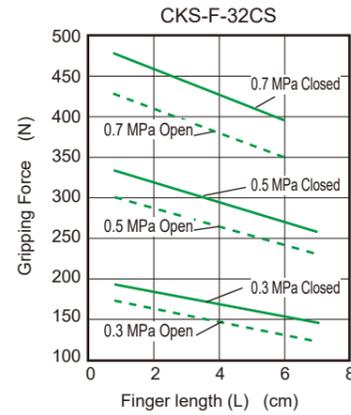
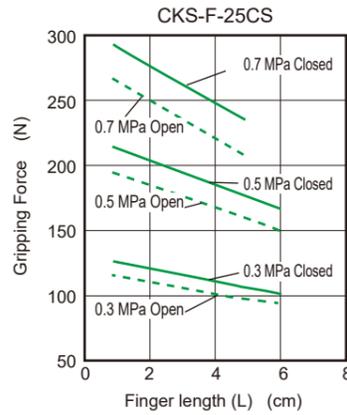
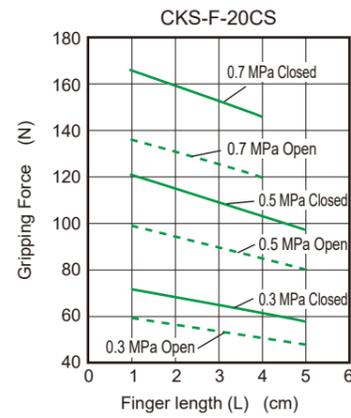
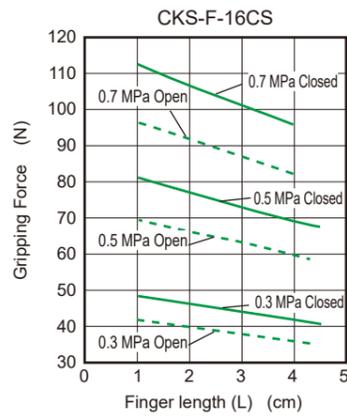
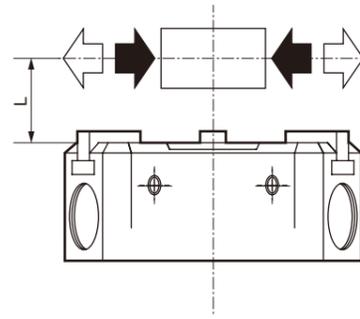
Cylinder Switch
Ending

Gripping Force Performance Data

- Gripping force represents the thrust (for one finger) in the direction of the arrow shown in the figure.
- Indicates the gripping force for one jaw of the hand with finger length L acting in the opening or closing directions when supplied with 0.3, 0.5, or 0.7 MPa pressure.

- Open direction (←) - - - (broken line)
- Closing direction (→) — (solid line)

Note) When selecting, check the design and selection precautions on P. 490.



MEMO

Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS
- CKS-F**
- CKF
- CKJ

Cylinder Switch
Ending

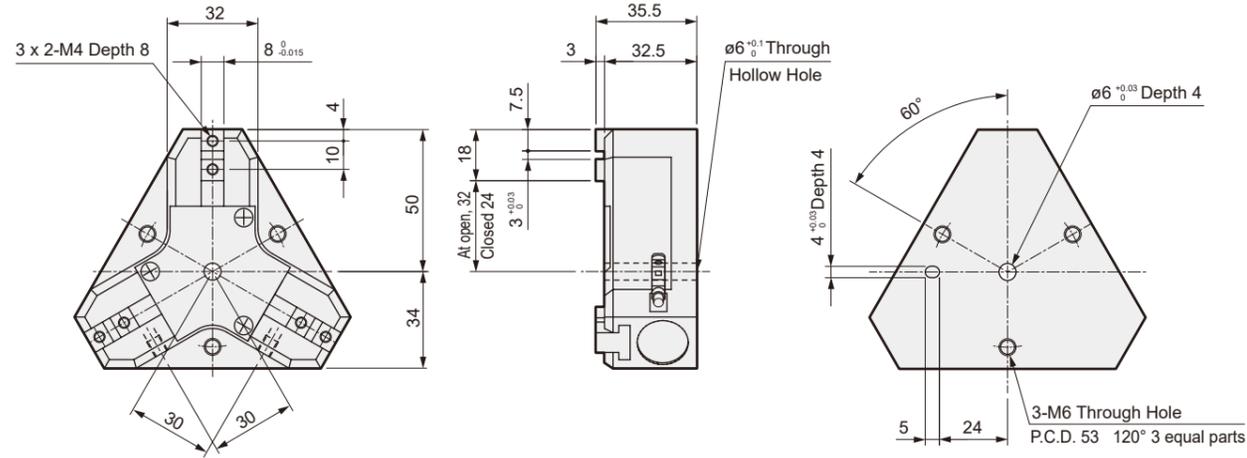
Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS
- CKS-F**
- CKF
- CKJ

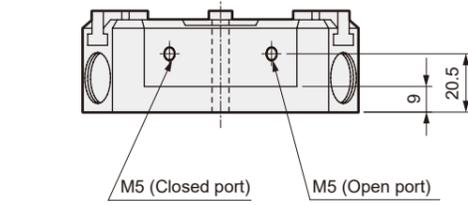
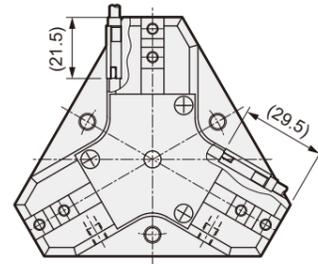
Cylinder Switch
Ending

Outline Dimension Drawing

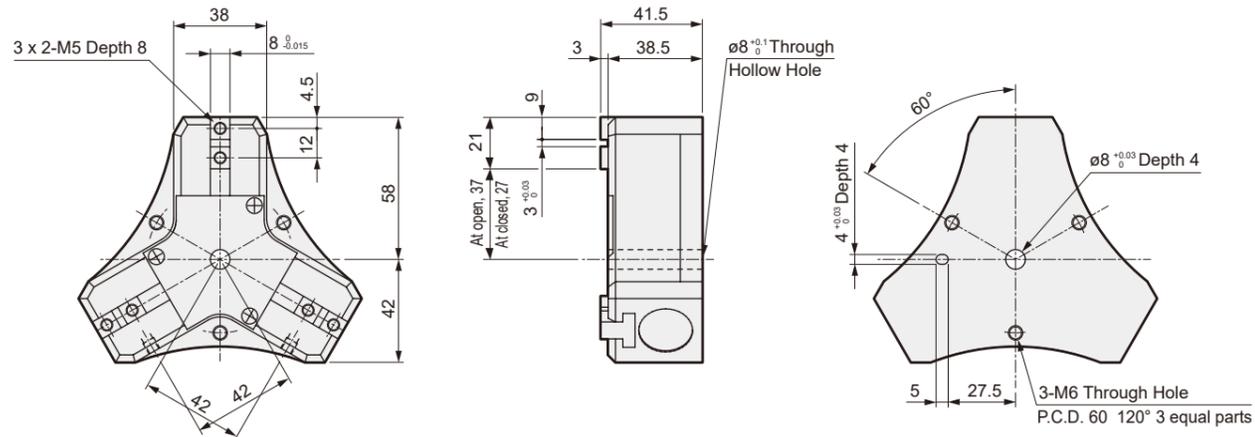
● CKS-F-16CS



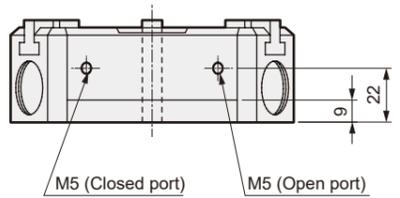
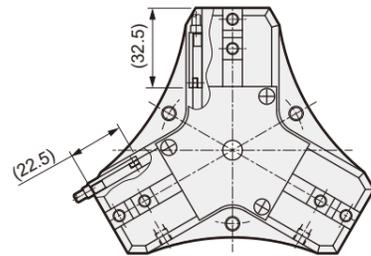
● With Switch



● CKS-F-20CS

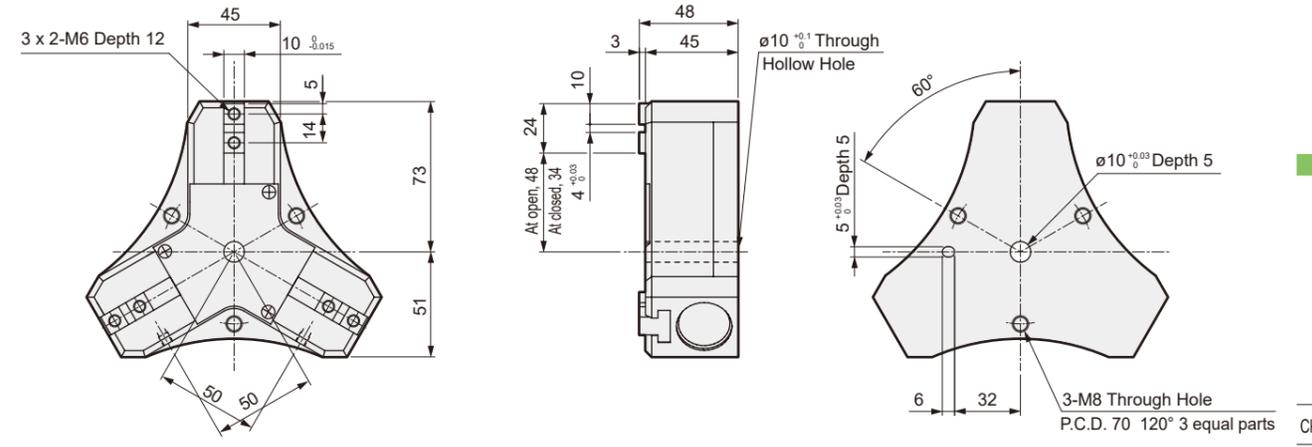


● With Switch

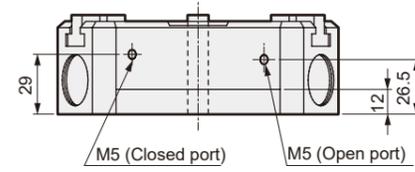
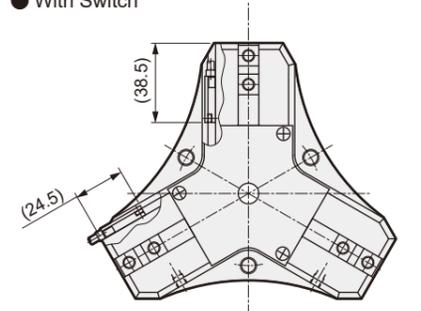


Outline Dimension Drawing

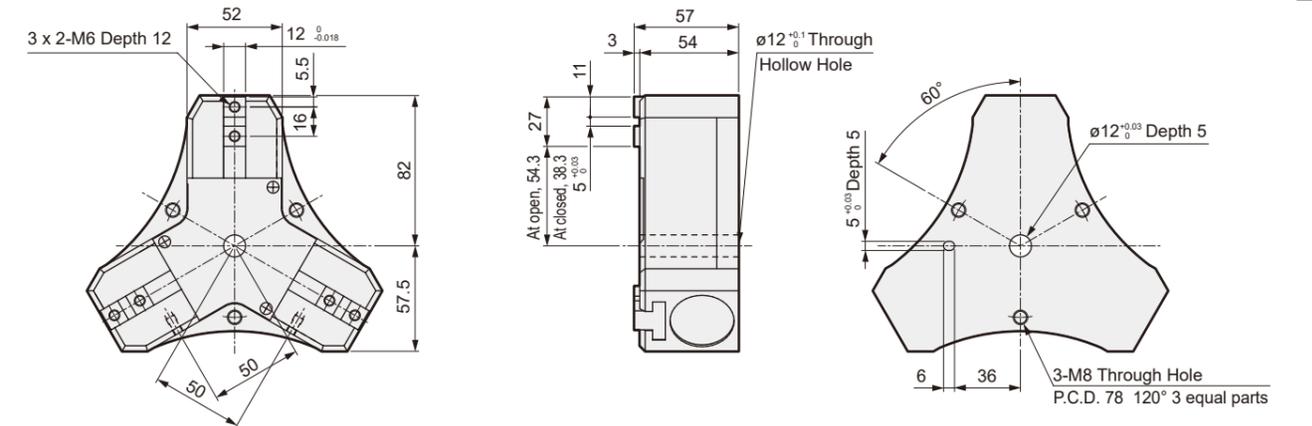
● CKS-F-25CS



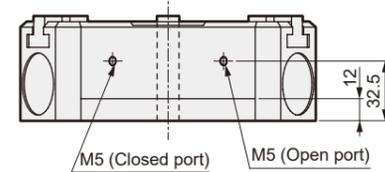
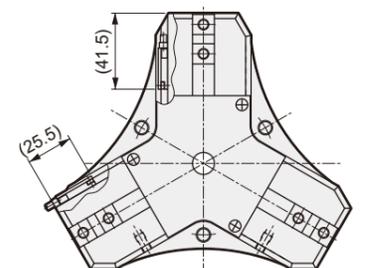
● With Switch



● CKS-F-32CS



● With Switch



Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS
- CKS-F**
- CKF
- CKJ

Check Valve

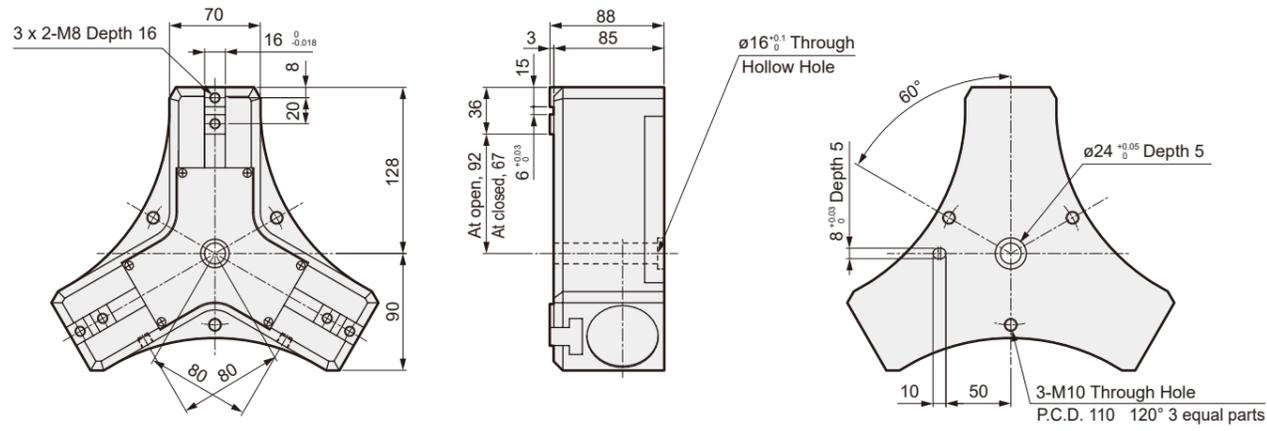
- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS
- CKS-F**
- CKF
- CKJ

Cylinder Switch
Ending

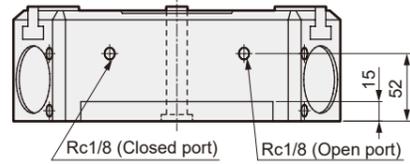
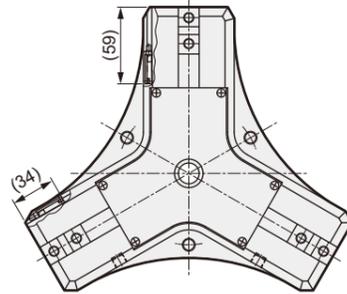
Cylinder Switch
Ending

Outline Dimension Drawing

● CKS-F-50CS

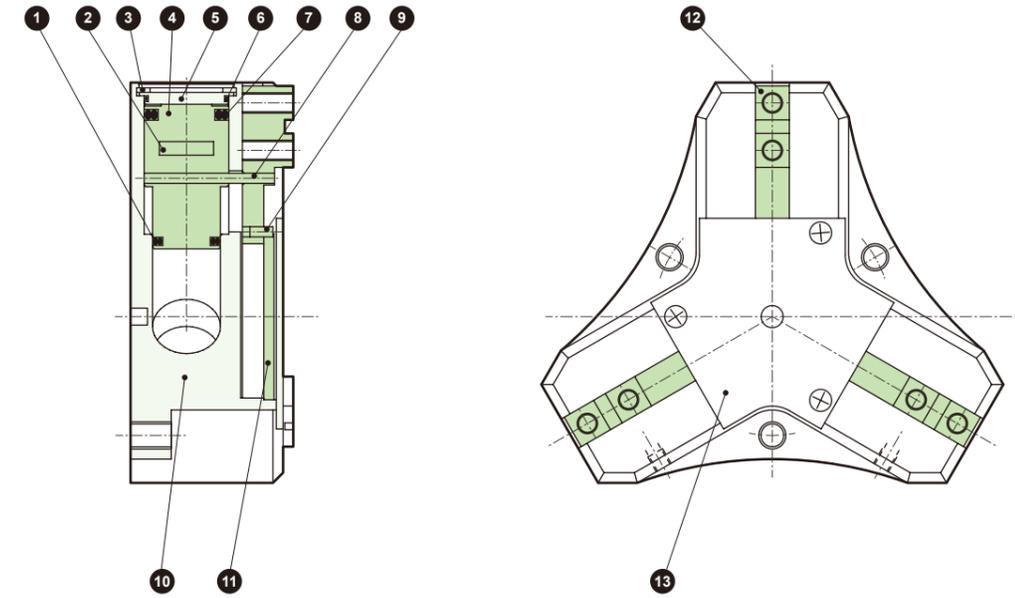


● With Switch



Internal Structure Diagram/Material

● CKS-F-16CS to 50CS



Do not disassemble

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Seal B	Nitrile Rubber		8	Actuating shaft A	Alloy Steel	
2	Magnet			9	Actuating shaft B	Alloy Steel	
3	C-type retaining ring	Stainless Steel		10	Body	Aluminum Alloy	
4	Piston	Aluminum Alloy		11	Link	Steel	
5	Cover	Aluminum Alloy		12	Finger	Steel	
6	Seal	Nitrile Rubber		13	Center cover	Stainless Steel	
7	Piston Seal A	Nitrile Rubber					

Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS
- CKS-F**
- CKF
- CKJ

Cylinder Switch
Ending

Check Valve

- CKW-HP
- CKL2
- CKLG2
- CKL2 -□-HC
- CKH2
- CKLB2
- CKG
- CK
- CKA
- CKS
- CKS-F**
- CKF
- CKJ

Cylinder Switch
Ending