

CKS·CKSF Series Thin Chuck

"Wish the Body Was a Little Thinner..." Is Finally Responded

Key Features

Very thin body

Internal cylinders are located on the side toward workpiece, and which makes the motion of the cylinders parallel to jaw. These changes reduces thickness of the gripper by a half for use in confined spaces.

Simple structure

Direct drive mechanism to minimize hooking problem instead of worm drive mechanism. Motion failure caused by lack of grease can be also minimized.

Large body type and hollow body type available

Pushers (option)

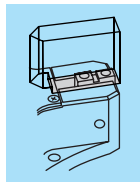
- Workpiece pushers can be additionally mounted (option)
- 3-point pusher for steady workpiece loading



CKS-20AS

How to design external fingers to maximize dust-resistance ability

- Please reduce the room between external finger and the gripper surface (as shown on the right)



How To Order

Standard

CKS-08AS

			08AS	12AS	16AS	20AS	25AS	32AS	50AS
Model	CKS	Normal	○	○	○	○	○	○	
	CKSF	Hollow			○	○	○	○	○
Option	CKS-□□-W	Spring Pusher	○	○	○	○	○	○	

Option

CKS - 08AS -

Sensor, Quantity

ET3S2 -

Option

W

CKS-08AS with 2 of ET3 non-contact reed switches and spring pusher (option)

Model	Symbol
CKS	
CKSF	

Size		Symbol
08AS	32AS	
12AS	50AS	
16AS		
20AS		
25AS		

Sensor, Quantity		Symbol	Name
ET3	Non-Contact 3-Lead	S2	2 Sensors
ET3L	Non-Contact 3-Lead		
ET2	Non-Contact 2-Lead		
ET2L	Non-Contact 2-Lead		
S1	1 Sensor		

Option		Symbol	Name
		W	Spring Pusher

For option detail ▶ 36P

For sensor detail ▶ 277P

For external finger detail ▶ 293P

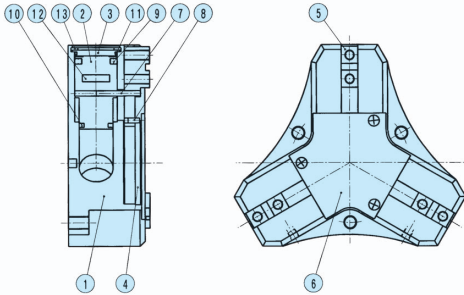
Specification

Model	CKS-08AS <small>For Layout Drawing ▶193P</small>	CKS-12AS <small>For Layout Drawing ▶193P</small>	CKS-16AS CKSF-16AS <small>For Layout Drawing ▶194P</small>	CKS-20AS CKSF-20AS <small>For Layout Drawing ▶195P</small>	CKS-25AS CKSF-25AS <small>For Layout Drawing ▶196P</small>	CKS-32AS CKSF-32AS <small>For Layout Drawing ▶197P</small>	CKSF-50AS <small>For Layout Drawing ▶198P</small>	
Working Pressure	Pneumatic: 0.2 to 0.7MPa							
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)							
Ambient Temperature (°C)	5 to 60							
Total Jaw Stroke (mm)	10	12	16	20	28	32	50	
Cylinder Diameter	Open (mm)	dia.6×3	dia.10×3	dia.12×3	dia.16×3	dia.20×3	dia.25×3	dia.40×3
	Closed (mm)	dia.8×3	dia.12×3	dia.16×3	dia.20×3	dia.25×3	dia.32×3	dia.50×3
Internal Volume [Reciprocation] (cm ³ /time)	1.2	3.5	7.6	15.5	33.8	62.2	242	
Repeatability (mm)	±0.01							
Weight (kg)	0.16	0.26	0.44	0.66	1.17	1.82	5.76	

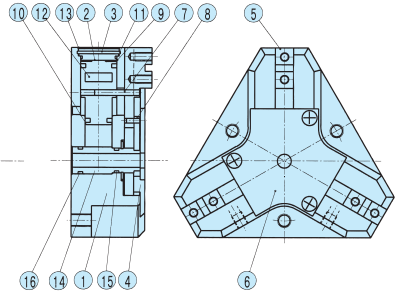
CKS-08AS/12AS/16AS/20AS/25AS/32AS CKSF-16AS/20AS/25AS/32AS/50AS

Internal Structure / Parts & Seals

■CKS-08 to 32AS



■CKSF-16 to 50AS



■Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	7	Operating Shaft A	Carbon Steel	13	Snap Ring	Stainless Steel
2	Piston	Stainless Steel	8	Operating Shaft B	Carbon Steel	14	Hollow Shaft	Stainless Steel
3	Cylinder Cover	Aluminum	9	Piston Seal A	Nitrile Rubber	15	Hollow Shaft Seal 1	Nitrile Rubber
4	Link	Carbon Steel	10	Piston Seal B	Nitrile Rubber	16	Hollow Shaft Seal 2	Nitrile Rubber
5	Master(Base) Jaw	Carbon Steel	11	Cylinder Seal	Nitrile Rubber			
6	Center Cover	Stainless Steel	12	Magnet				

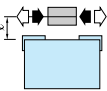
■Seals List

No.	CKS-08AS	CKS-12AS	CKS-16AS	CKSF-16AS	CKS-20AS	CKSF-20AS	CKS-25AS	CKSF-25AS	CKS-32AS	CKSF-32AS	CKSF-50AS
9	PSD-8	PSD-12	PSD-16	PSD-16	PSD-20	PSD-20	PSD-25	PSD-25	PSD-32	PSD-32	PSD-50
10	PSL-6	PSD-10	PSD-12	PSD-12	PSD-16	PSD-16	PSD-20	PSD-20	PSD-25	PSD-25	PSD-40
11	dia.6×dia.1	dia.10×dia.1	dia.14×dia.1	dia.14×dia.1	dia.17×dia.1	dia.17×dia.1	dia.22×dia.1.5	dia.22×dia.1.5	dia.30×dia.1	dia.30×dia.1	dia.30×dia.1
15				S-8		S-8		S-12		S-15	S-20
16				S-9		S-10		S-15		S-16	P-20

Performance Data

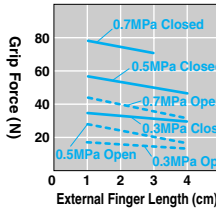
■Grip Force

The graph shows grip force in opening and closing with effective external finger lengths ℓ from gripper cover surface under different air pressure (MPa)

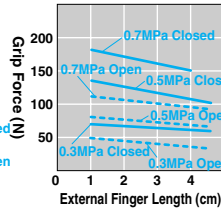


Open (⇐) ---
Closed (⇒) —

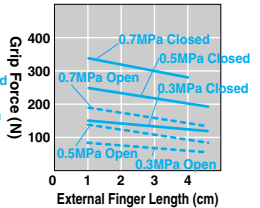
■CKS-08AS



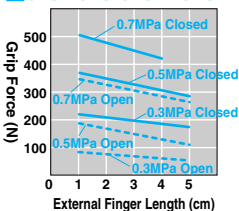
■CKS-12AS



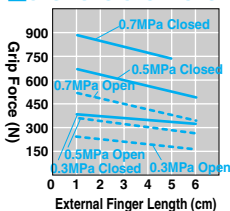
■CKS-16AS/CKSF-16AS



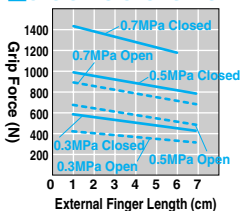
■CKS-20AS/CKSF-20AS



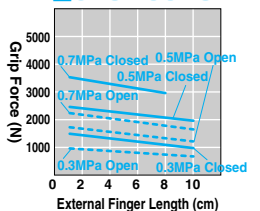
■CKS-25AS/CKSF-25AS



■CKS-32AS/CKSF-32AS



■CKSF-50AS

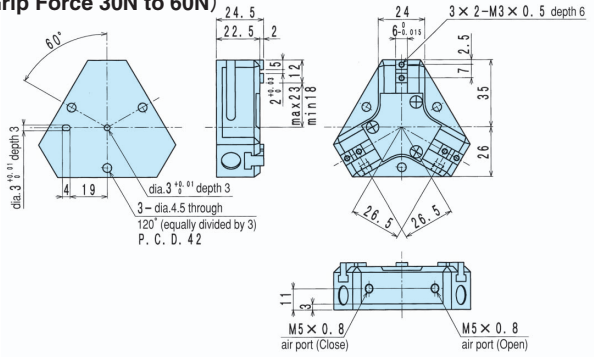


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Layout Drawing

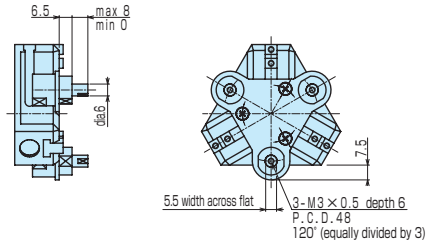
■CKS-08AS (Optimal Grip Force 30N to 60N)

CKS-08AS Standard



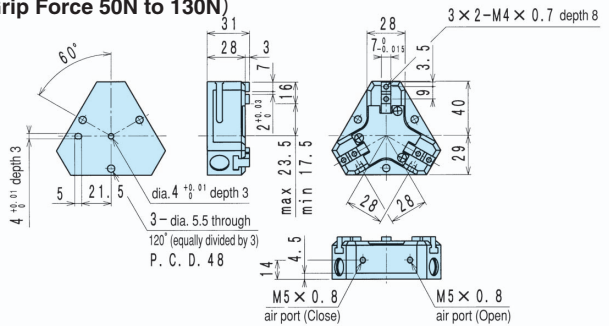
CKS-08AS-W

(Spring Force (3-Point) 2.1 to 4.8N)



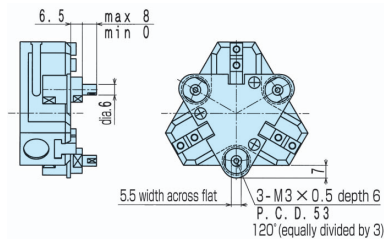
■CKS-12AS (Optimal Grip Force 50N to 130N)

CKS-12AS Standard



CKS-12AS-W

(Spring Force (3-Point) 4.5 to 11.4N)

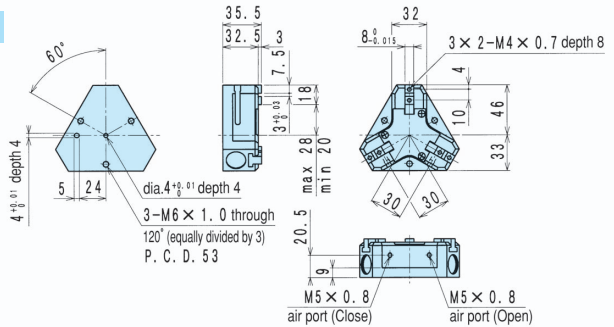


CKS-08AS/12AS/16AS/20AS/25AS/32AS CKSF-16AS/20AS/25AS/32AS/50AS

For CAD data, please go to **▶518P**

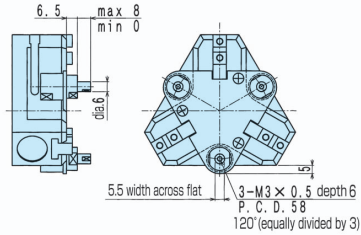
■CKS-16AS (Optimal Grip Force 100N to 250N)

CKS-16AS Standard



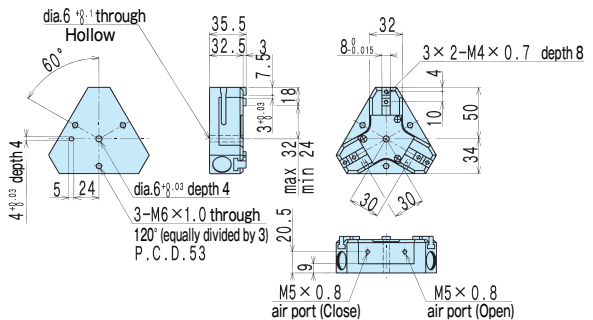
CKS-16AS-W

(Spring Force (3-Point) 7.2 to 19N)



■CKSF-16AS (Optimal Grip Force 100N to 250N)

CKSF-16AS Standard



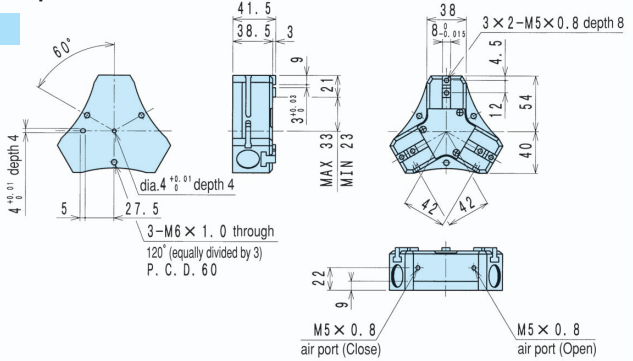
Chuck
(3-Jaw)

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Layout Drawing

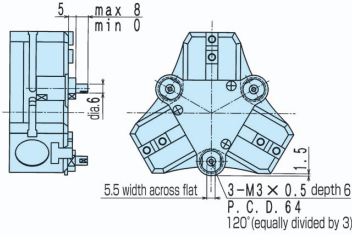
■CKS-20AS (Optimal Grip Force 150N to 350N)

CKS-20AS Standard



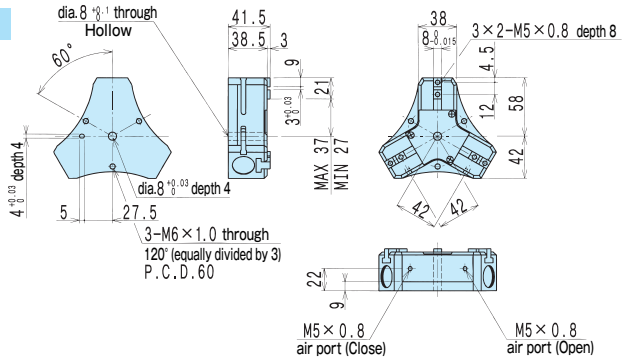
CKS-20AS-W

(Spring Force (3-Point) 7.5 to 28N)



■CKSF-20AS (Optimal Grip Force 150N to 350N)

CKSF-20AS Standard

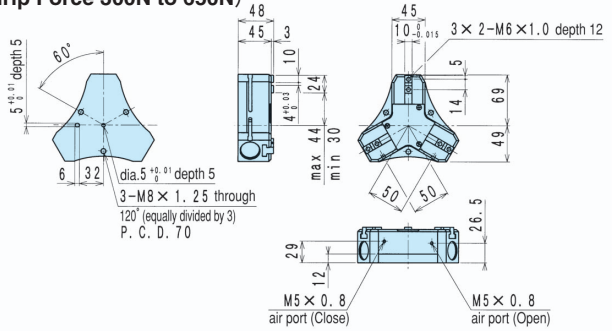


CKS-08AS/12AS/16AS/20AS/25AS/32AS CKSF-16AS/20AS/25AS/32AS/50AS

For CAD data, please go to **▶518P**

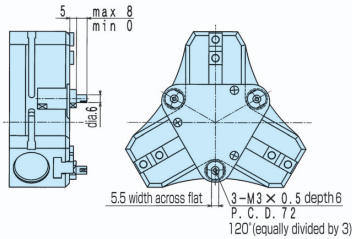
■CKS-25AS (Optimal Grip Force 300N to 650N)

CKS-25AS Standard



CKS-25AS-W

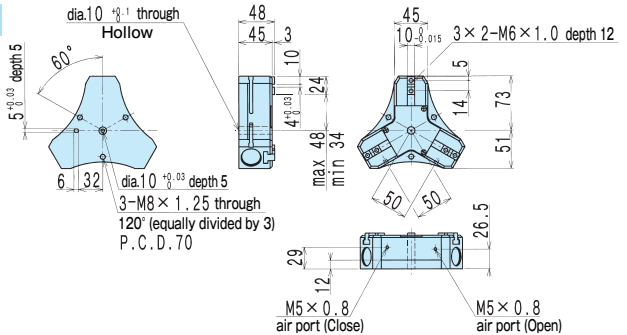
(Spring Force (3-Point) 15 to 39N)



Chuck
(3-Jaw)

■CKSF-25AS (Optimal Grip Force 300N to 650N)

CKSF-25AS Standard

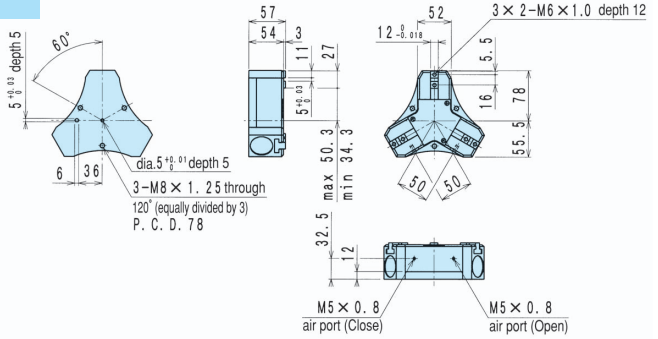


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Layout Drawing

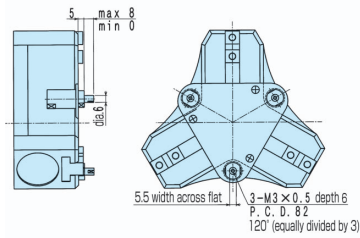
CKS-32AS (Optimal Grip Force 400N to 1000N)

CKS-32AS Standard



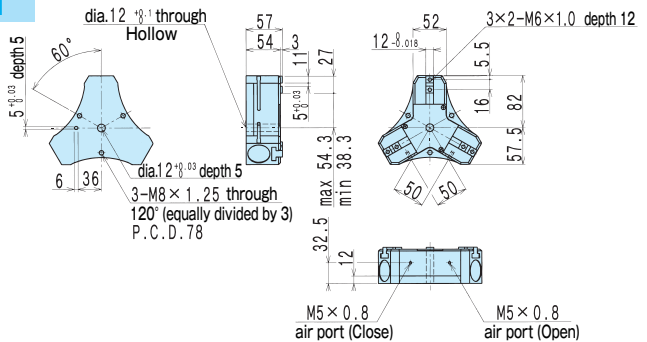
CKS-32AS-W

(Spring Force (3-Point) 26 to 67N)




CKSF-32AS (Optimal Grip Force 400N to 1000N)

CKSF-32AS Standard



CKS-08AS/12AS/16AS/20AS/25AS/32AS CKSF-16AS/20AS/25AS/32AS/50AS

 For CAD data, please go to **▶518P**

■CKSF-50AS (Optimal Grip Force 1000N to 2500N)

CKSF-50AS Standard

