

HK Series Cross Roller Parallel Hand

Smooth Motion via Bearings

Key Features

High accuracy and smooth operation with cross roller guide

Cross roller bearing used in the sliding material provides high accuracy and smooth motion

Compact body and high rigidity

Telescopic slides and bearing retainers to provide high moments to size ratio

Protective rubber cover (option) for use in dusty and harsh environments

Rubber cover for harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism

Oil-resistant sensors (option)

Oil-resistant sensors available (option) for HK-50AS1, 63AS1, and 80AS



HK-40MS

How To Order

Standard ----- **HK-32MS**

Option ----- **HK - 32MS - ET3 S2 - G** ----- HK-32MS with Rubber cover and 2 of ET3 non-contact reed switches

Size
Symbol
32MS
40MS
50AS1 ^{*5}
63AS1 ^{*5}
80AS ^{*3}

Sensor			
Symbol	Name	Symbol	Name
ET3 ^{*1}	Non-Contact 3-Lead	E25 ^{*4}	Contact 2-Lead
ET3L ^{*4}	Non-Contact 3-Lead	E25L ^{*4}	Contact 2-Lead
ET2 ^{*1}	Non-Contact 2-Lead	E40 ^{*4}	Non-Contact 3-Lead
ET2L ^{*4}	Non-Contact 2-Lead	E40L ^{*4}	Non-Contact 3-Lead
E24 ^{*4}	Contact 2-Lead	E41 ^{*4}	Non-Contact 2-Lead
E24L ^{*4}	Contact 2-Lead	E41L ^{*4}	Non-Contact 2-Lead

Quantity	
Symbol	Name
S1	1 Sensor
S2	2 Sensors

Option	
Symbol	Name
NO ^{*2}	Normally Open
NC ^{*2}	Normally Closed
G	Rubber Cover
GH	Oil (Fluororubber) Cover
GT	Heat (Silicon Rubber) Cover

For sensor detail
▶ 277P

For option detail ▶ 36P

^{*1} Bracket is required to mount this switch (except HK-50AS1, 63AS1, and 80AS)

^{*2} Except HK-80AS

^{*3} There is no 80AS1. HK-80AS is correct model number

^{*4} Available only for HK-50AS1, 63AS1, 80AS

^{*5} There is no 50AS and 63AS. HK-50AS1 and 63AS1 are correct model number

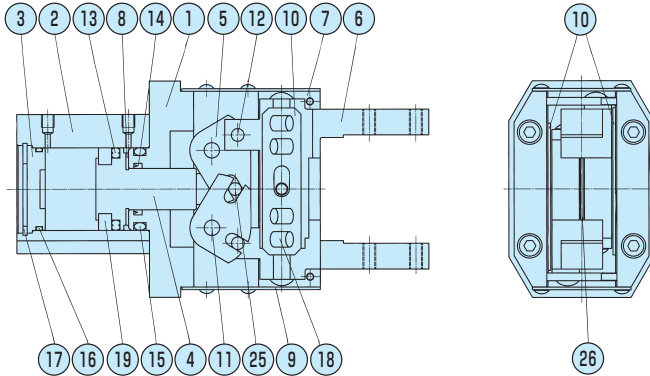
Specification

Model	HK-32MS For Layout Drawing ▶ 120P	HK-40MS For Layout Drawing ▶ 121P	HK-50AS1 For Layout Drawing ▶ 122P	HK-63AS1 For Layout Drawing ▶ 123P	HK-80AS For Layout Drawing ▶ 124P
Working Pressure	Pneumatic: 0.1 to 0.7 MPa (0.3 to 0.7 MPa for NO & NC types)				Pneumatic: 0.3 to 0.7 MPa
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)				
Ambient Temperature (°C)	5 to 60				
Total Jaw Stroke (mm)	24	30	36	40	60
Cylinder Diameter (mm)	dia.32	dia.40	dia.50	dia.63	dia.80
Rod Diameter (mm)	dia.16	dia.20	dia.28	dia.32	dia.16
Internal Volume [Reciprocation] (cm ³ /time)	25.3	49.5	89.4	162.9	354.5
Repeatability (mm)	±0.01				
Weight (kg)	1.36	1.95	4.2	5.4	10.6

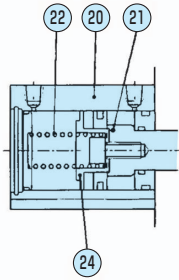
HK-32MS/40MS/50AS1/63AS1/80AS

Internal Structure / Parts & Seals

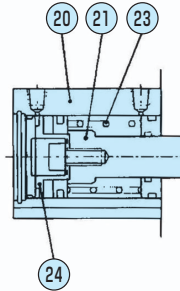
Standard



NO (Single Acting - Normally Open)



NC (Single Acting - Normally Closed)



Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	10	Retainer A	Stainless Steel	19	Magnet	
2	Cylinder	Aluminum	11	Fulcrum Shaft	Carbon Steel	20	NO & NC Cylinder	Aluminum
3	Cylinder Cover *	Resin	12	Operating Shaft B	Carbon Steel	21	NO & NC Piston A	Stainless Steel
4	Piston	Aluminum & Stainless Steel	13	Piston Seal		22	NO Spring	Stainless Steel Wire
5	Arm	Carbon Steel	14	Rod Seal		23	NC Spring	Stainless Steel Wire
6	Master(Base) Jaw	Carbon Steel	15	Cylinder Seal A		24	NO & NC Piston B	Aluminum
7	Bearing Guide	Carbon Steel	16	Cylinder Seal B		25	Operating Shaft A	Carbon Steel
8	Cushion	Resin	17	Snap Ring	Stainless Steel	26	Retainer B	Stainless Steel
9	Side Cover	Stainless Steel	18	Roller	High-Carbon Chromium Bearing Steel			

*Aluminum for 50AS1 and 63AS1

Seals List

No.	HK-32MS	HK-40MS	HK-50AS1	HK-63AS1	HK-80AS
13	PSD-32	PSD-40	PSD-50	PSD-63	PSD-80
14	MYA-16	MYA-20	PNY-28	PNY-32	MYA-16
15	P-26	G-35	G-45	G-60	G-75
16	S-29	S-36	S-46	S-60	

HK Series Cross Roller Parallel Hand

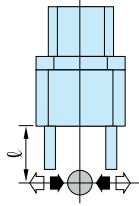
Some of the model numbers have been changed from MS to AS1

Performance Data

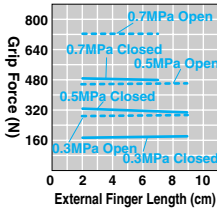
■ Grip Force

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

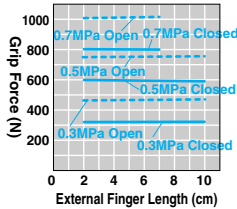
Open (⇐) - - - - -
 Closed (⇒) ————



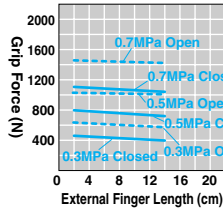
■ HK-32MS



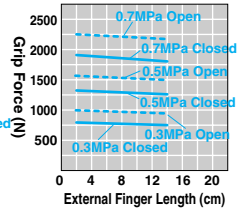
■ HK-40MS



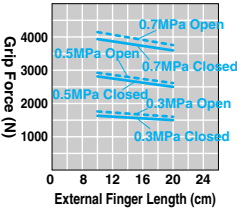
■ HK-50AS1



■ HK-63AS1



■ HK-80AS



Hand (2-law)

HK-32MS/40MS/50AS1/63AS1/80AS

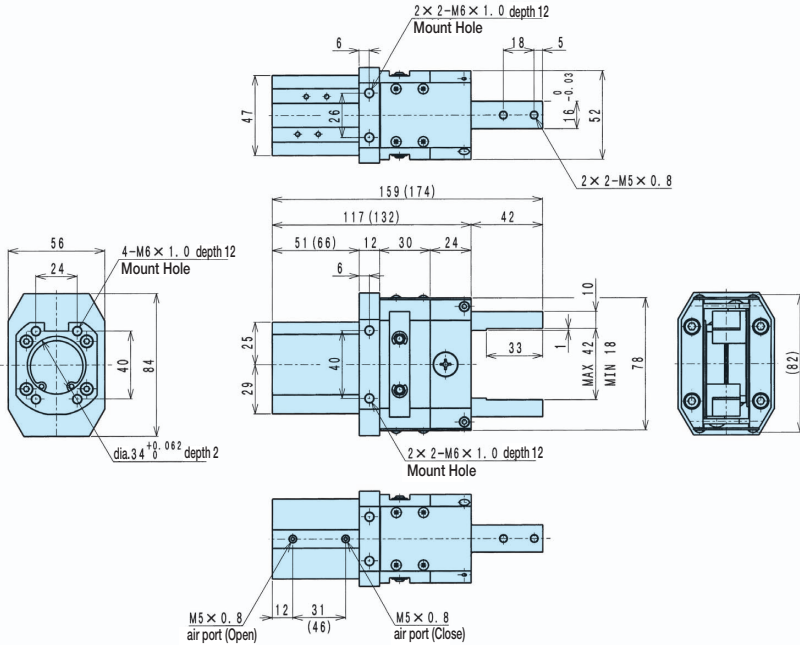
Layout Drawing

For CAD data, please go to **▶518P**

HK-32MS (Optimal Grip Force 200N to 350N)

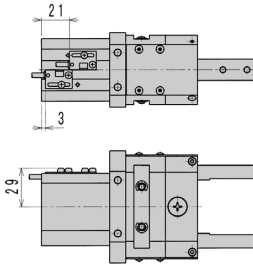
HK-32MS Standard • NO • NC

*Values inside () are for NO (Normally Open) and NC (Normally Closed) type

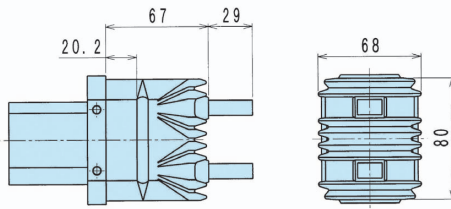


Hand
(2-Jaw)

HK-32MS-E S



HK-32MS-G



HK Series Cross Roller Parallel Hand

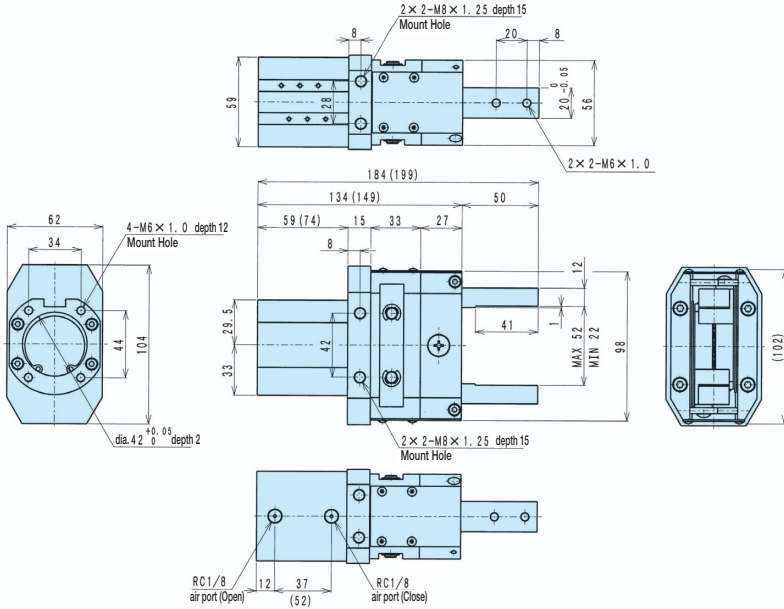
Some of the model numbers have been changed from MS to AS1

Layout Drawing

HK-40MS (Optimal Grip Force 350N to 600N)

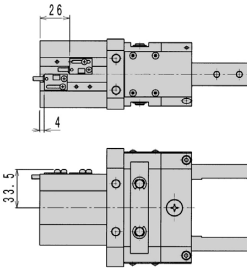
HK-40MS Standard · NO · NC

*Values inside () are for NO (Normally Open) and NC (Normally Closed) type

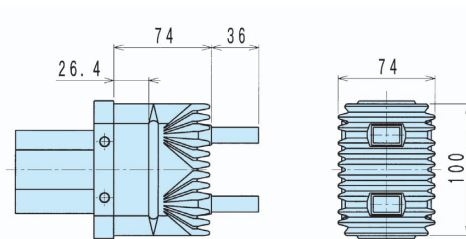


Hand
(2-law)


HK-40MS-E □ □ □



HK-40MS-G



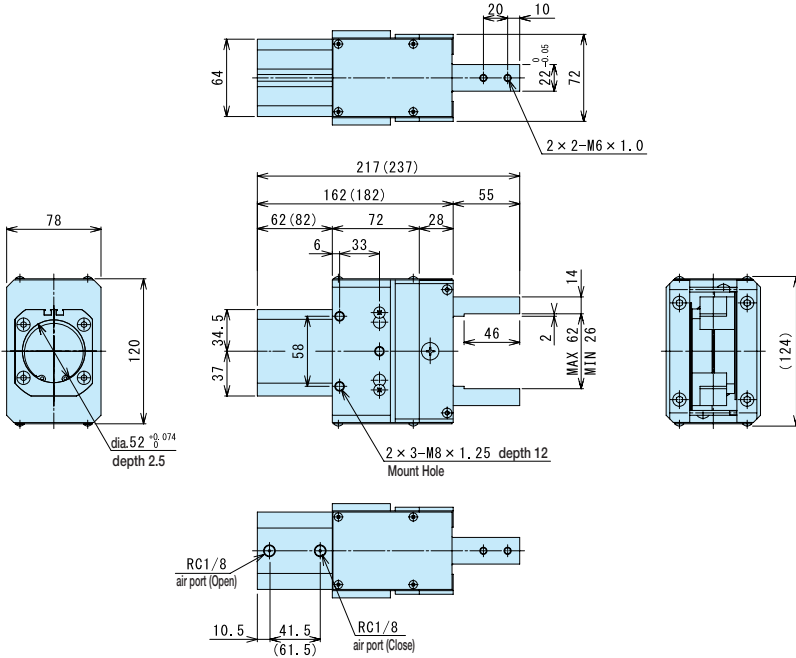
HK-32MS/40MS/50AS1/63AS1/80AS

 For CAD data, please go to **▶518P**

■HK-50AS1 (Optimal Grip Force 500N to 800N)

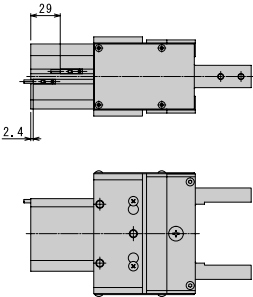
HK-50AS1 Standard • NO • NC

*Values inside () are for NO (Normally Open) and NC (Normally Closed) type

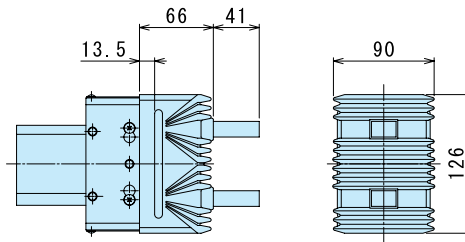


Hand
(2-Jaw)

HK-50AS1-E □ S □



HK-50AS1-G



HK Series Cross Roller Parallel Hand

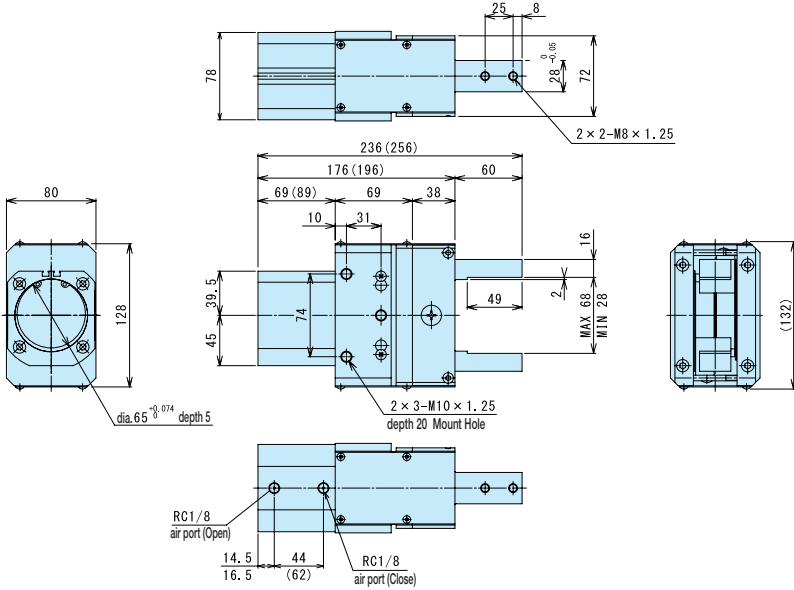
Some of the model numbers have been changed from MS to AS1

Layout Drawing

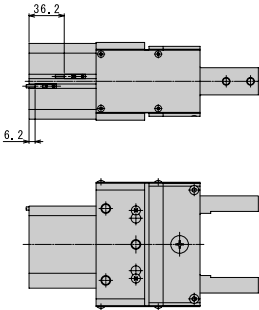
HK-63AS1 (Optimal Grip Force 800N to 1400N)

HK-63AS1 Standard • NO • NC

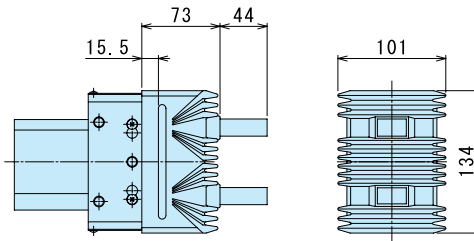
*Values inside () are for NO (Normally Open) and NC (Normally Closed) type




HK-63AS1-E □ S □



HK-63AS1-G



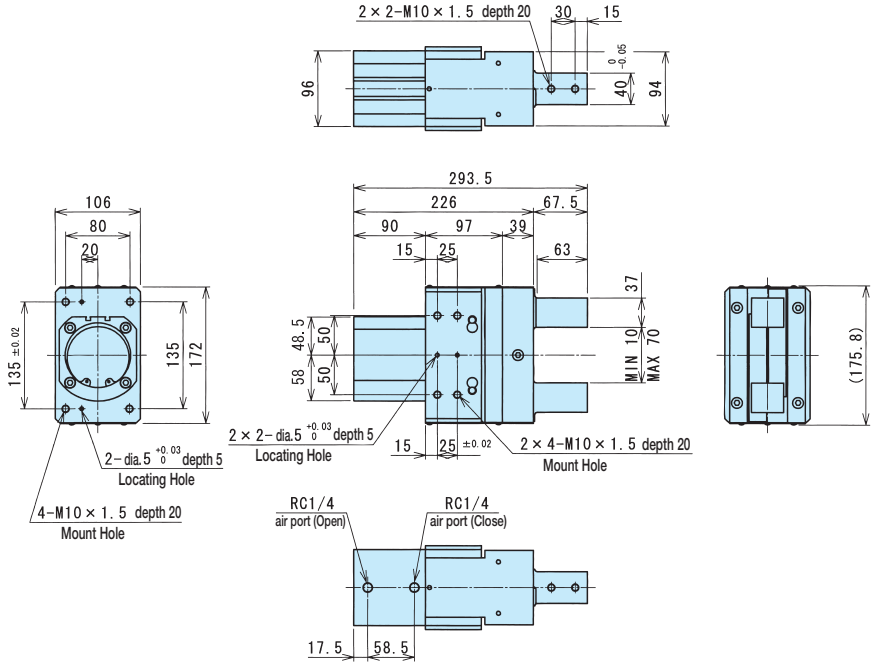
HK-32MS/40MS/50AS1/63AS1/80AS

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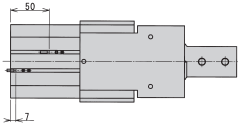
HK-80AS (Optimal Grip Force 2000N to 3000N)

HK-80AS Standard

Hand
(2-Jaw)



HK-80AS-E□S□



HK-80AS-G

