

Compact Design and No Adjustment for Multi-Purpose Application

Key Features

- **No adjustment for multi-purpose application**
Long jaw stroke and parallel clamping (centripetal motion) eliminates hassle and time-consuming adjustment
- **Easy mounting**
The gripper can be mounted and operated in any orientation via 3 mounting surfaces
- **Light-weight and compact design**
Light-weight compact body with high grip force
- **Switch slots available for sensing jaw position (open or closed)**
2 switches can be mounted.



HA-2MS

How To Order

Standard ----- **HA-2MS**

Option ----- **HA - 2MS - ET3S2 - FE** ----- HA-2MS-FE (HA-2MS of which aluminum body replaced with iron) with 2 of ET3 non-contact reed switch

Size	
Symbol	
2MS	
3MS	
4MS	

Sensor, Quantity			
Symbol	Name	Symbol	Name
ET3	* Non-Contact 3-Lead		
ET2	* Non-Contact 2-Lead		
S1	1 Sensor		* Bracket is required for mounting this switch
S2	2 Sensors		

Option			
Symbol	Name	Symbol	Name
NO	Normally Open	H	Low Pressure Hydraulic
NC	Normally Closed	T	Heat-Proof
SU	Stainless Steel for Iron Material		
SUA	All Stainless Steel		
FE	Iron Body		

For sensor detail ▶ 277P

* Except 2MS

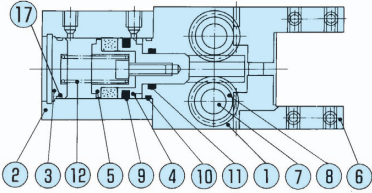
For option detail ▶ 36P

Specification

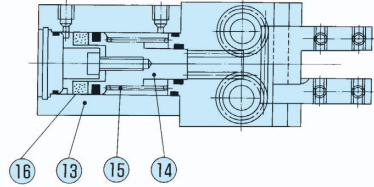
Model	HA-2MS	HA-3MS	HA-4MS
	For Layout Drawing ▶ 81P	For Layout Drawing ▶ 81P	For Layout Drawing ▶ 82P
Working Pressure	Pneumatic: 0.3 to 0.7MPa		
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)		
Ambient Temperature (°C)	5 to 60		
Total Jaw Stroke (mm)	16	26	41
Cylinder Diameter (mm)	dia.20	dia.25	dia.40
Rod Diameter (mm)	dia.10	dia.14	dia.16
Internal Volume [Reciprocation] (cm ³ /time)	4.4	10.8	47.4
Repeatability (mm)	±0.03		
Weight (kg)	0.28	0.58	1.52

Internal Structure / Parts & Seals

Standard (Double-Acting) & NO(Single Acting -Normally Open)



NC(Single Acting -Normally Closed)



Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	8	Pinion Gear	Carbon Steel	15	NC Spring	Stainless Steel Wire
2	Cylinder	Aluminum	9	Piston Seal		16	Magnet	
3	Cylinder Cover	Resin	10	Cylinder Seal A		17	Cylinder Seal B	
4	Piston A	Stainless Steel	11	Rod Seal				
5	Piston B	Resin	12	NO Spring	Stainless Steel Wire			
6	Master(Base) Jaw	Carbon Steel	13	NC Cylinder	Aluminum			
7	Pinion Gear Shaft	Carbon Steel	14	NC Piston	Stainless Steel			

Seals List

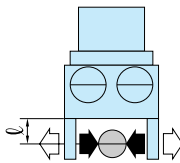
No.	HA-2MS	HA-3MS	HA-4MS
9	PSD-20	PSD-25	PSD-40
10	S-18	S-22	S-36
11	MYA-10	MYA-14	MYA-16
17	S-18	P-21	S-36

Performance Data

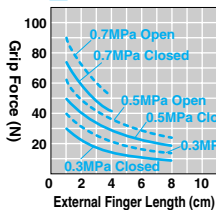
Grip Force

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

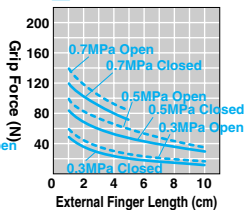
Open (⇐) ---
 Closed (⇒) —



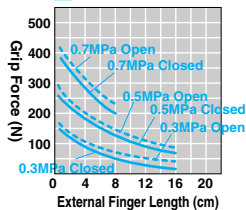
HA-2MS



HA-3MS



HA-4MS

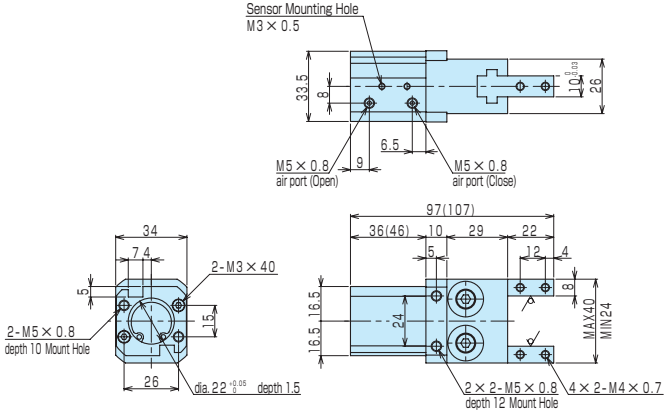


Layout Drawing

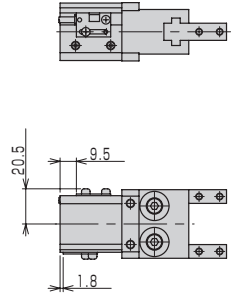
HA-2MS (Optimal Grip Force 30N to 70N)

HA-2MS Standard • NO • NC

*Values inside () are for NC (Normally Closed) type



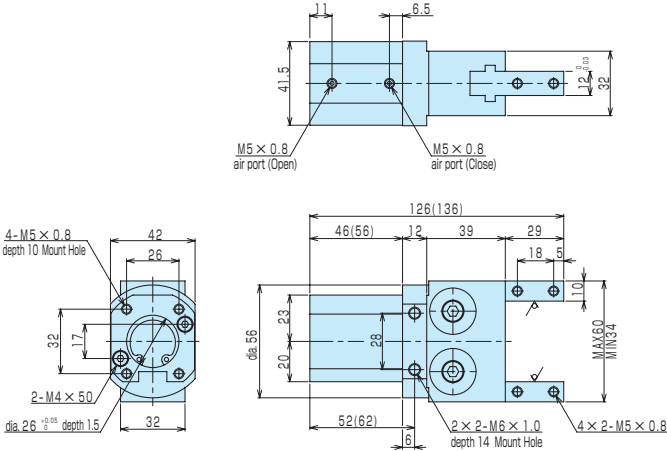
HA-2MS-E□S□



HA-3MS (Optimal Grip Force 50N to 100N)

HA-3MS Standard • NO • NC

*Values inside () are for NC (Normally Closed) type



HA-3MS-E□S□

