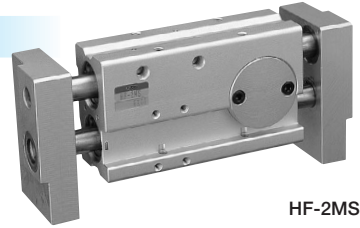


HF Series Wide Opening Parallel Hand

Compact Design and No Adjustment for Multi-Purpose Application

Key Features

- **High grip force to body weight ratio**
Very efficient design using 2 cylinders
- **Easy mounting**
3 gripper mounting and 2 jaw mounting surfaces offering flexible layout
- **No adjustment for multi-purpose application**
Long jaw stroke and parallel clamping (centripetal motion) eliminates hassle and time-consuming adjustment
- **Slide bearing (option)**
Ideal for use in fixtures that require locating and parallel accuracy
- **Switch slots available for sensing jaw position (open or closed)**
All the sizes available for direct switch mount (up to 2 switches)



HF-2MS

Hand (2-Jaw)

How To Order

Standard ----- **HF-2MS**

Option ----- **HF - 2MS - ET3S2 - B** ----- Slide Bearing type HF-2MS with 2 of ET3 non-contact reed switches

Size	
Symbol	
2MS	
3MS	
4MS	
5MS	

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
B	Bearing		
SU	*Stainless Steel for Iron Material		
T	Heat-Proof		

For sensor detail ▶277P

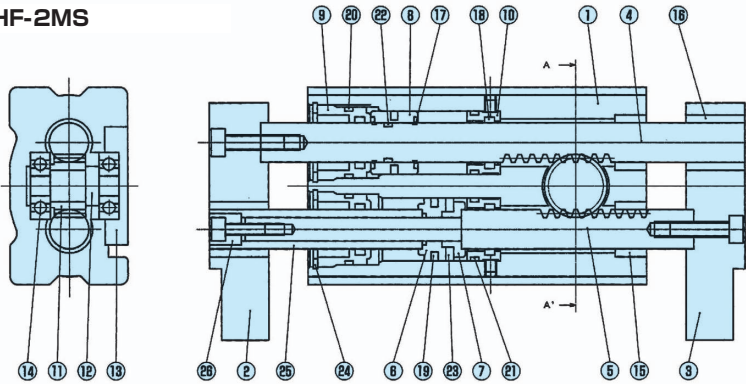
For option detail ▶36P

Specification

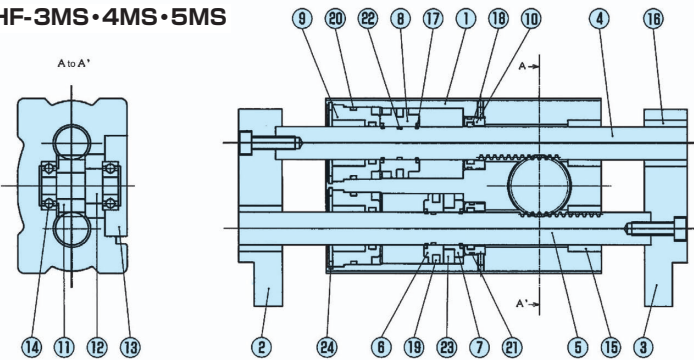
Model	HF-2MS For Layout Drawing ▶108P	HF-3MS For Layout Drawing ▶109P	HF-4MS For Layout Drawing ▶110P	HF-5MS For Layout Drawing ▶111P
Working Pressure	Pneumatic: 0.3 to 0.7MPa			
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)			
Ambient Temperature (°C)	5 to 60			
Total Jaw Stroke (mm)	20	30	40	60
Cylinder Diameter (mm)	dia.16×2	dia.25×2	dia.32×2	dia.40×2
Rod Diameter (mm)	dia.10	dia.12	dia.15	dia.18
Internal Volume [Reciprocation] (cm ³ /time)	4.9	22.7	50.2	120.3
Repeatability (mm)	±0.03			
Weight (kg)	0.59	1.10	2.07	3.90

Internal Structure / Parts & Seals

HF-2MS



HF-3MS • 4MS • 5MS



Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	10	Gasket Housing B	Aluminum	19	Piston Seal	
2	Master(Base) Jaw R	Aluminum	11	Pinion Gear	Carbon Steel	20	Side Seal A	
3	Master(Base) Jaw L	Aluminum	12	Pinion Gear Shaft	Carbon Steel	21	Side Seal B	
4	Piston Rod A	Stainless Steel	13	Bearing Cover	Aluminum	22	Seal	
5	Piston Rod B	Stainless Steel	14	Bearing		23	Magnet	
6	Piston A	Aluminum	15	Bush A		24	Snap Ring	Stainless Steel
7	Piston B	Aluminum	16	Bush B		25	Sleeve B	Stainless Steel
8	Piston C	Aluminum	17	Piston Mount Spring	Stainless Steel	26	Washer	Stainless Steel
9	Gasket Housing A	Aluminum	18	Rod Seal				

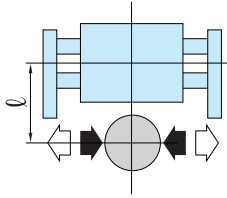
Seals List

No.	HF-2MS	HF-3MS	HF-4MS	HF-5MS
18	MYA-10	MYA-12	MYA-15	MYA-18
19	PSD-16	PSD-25	PSD-32	PSD-40
20	S-16	S-24	S-30	S-38
21	MYA-12	S-16	S-20	S-24
22	S-6	S-8	S-12	S-15

Performance Data

■ Grip Force

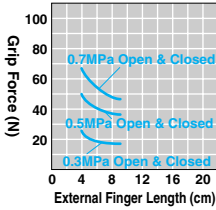
The graph shows grip force in opening and closing with effective external finger lengths ℓ from gripper cover surface under different air pressure (MPa)



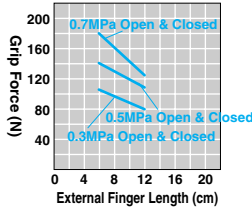
Open (↔) ————
 Closed (→) ————

Hand (2-Jaw)

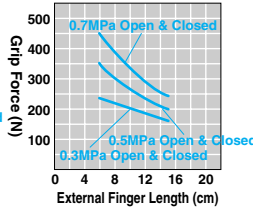
■ HF-2MS



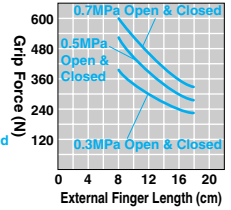
■ HF-3MS



■ HF-4MS



■ HF-5MS

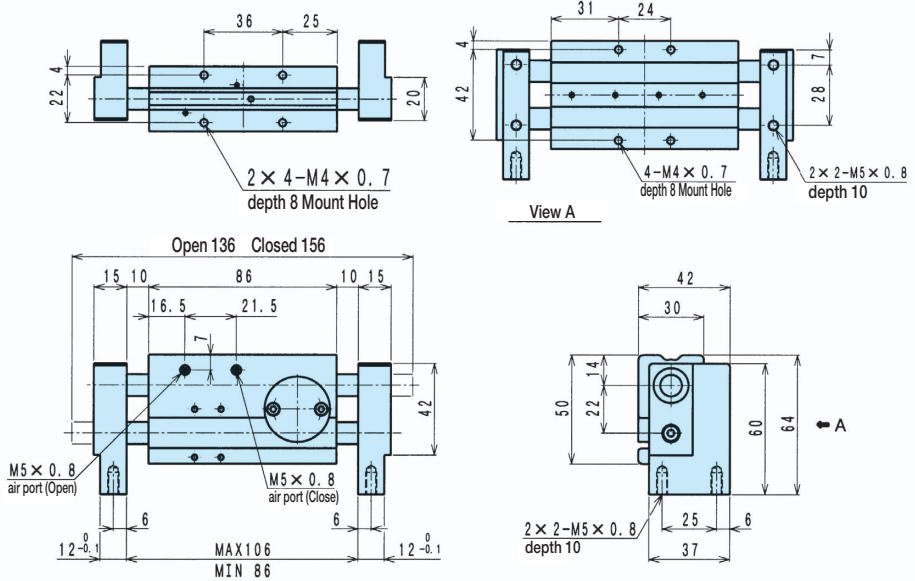


Layout Drawing

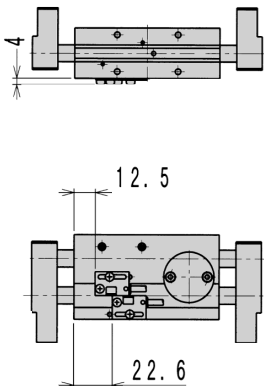
For CAD data, please go to **▶518P**

HF-2MS (Optimal Grip Force 40N to 70N)

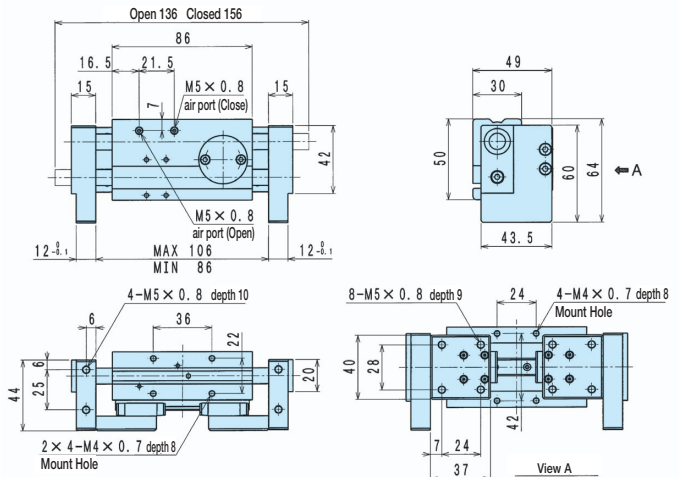
HF-2MS Standard



HF-2MS-E □ S □



HF-2MS-B

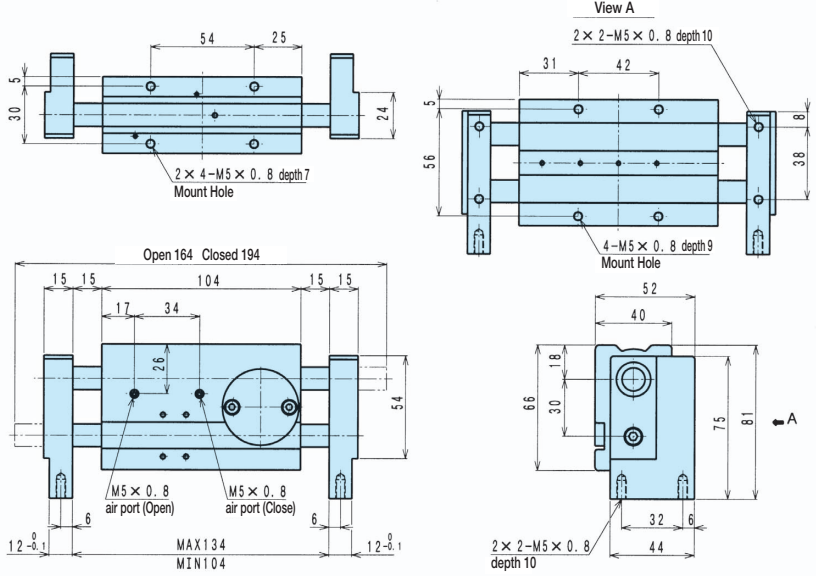


HF Series Wide Opening Parallel Hand

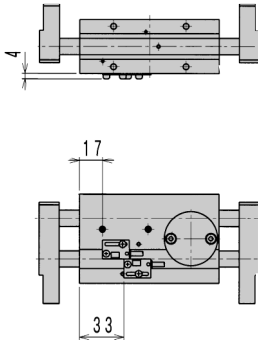
Layout Drawing

HF-3MS (Optimal Grip Force 60N to 170N)

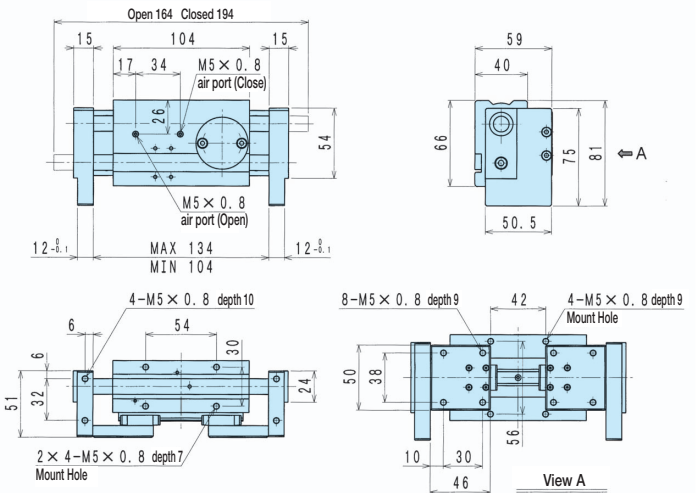
HF-3MS Standard



HF-3MS-E □ □ □



HF-3MS-B

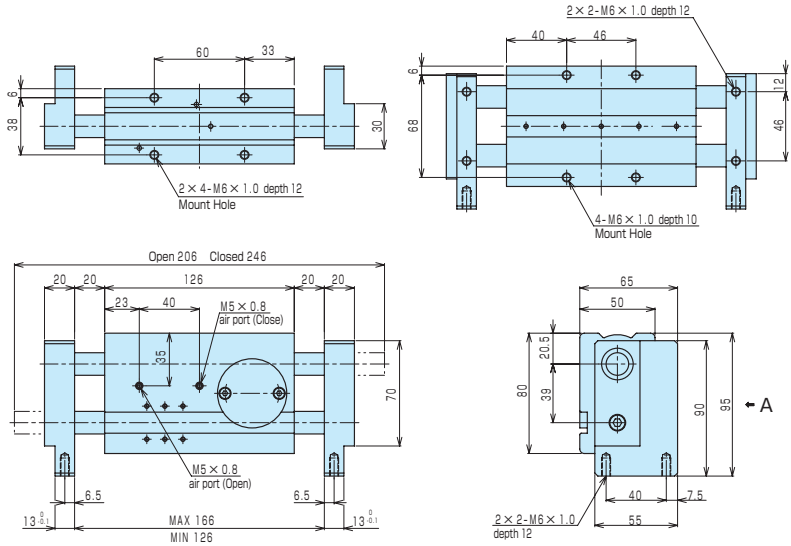


HF-2MS/3MS/4MS/5MS

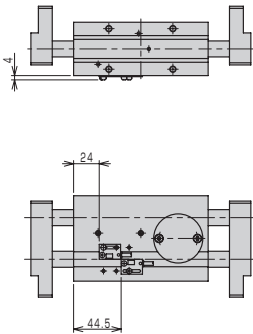
For CAD data, please go to **▶518P**

HF-4MS (Optimal Grip Force 120N to 300N)

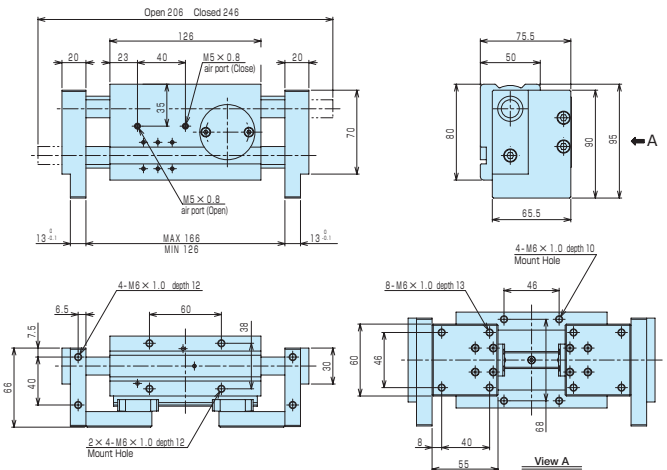
HF-4MS Standard



HF-4MS-E S



HF-4MS-B



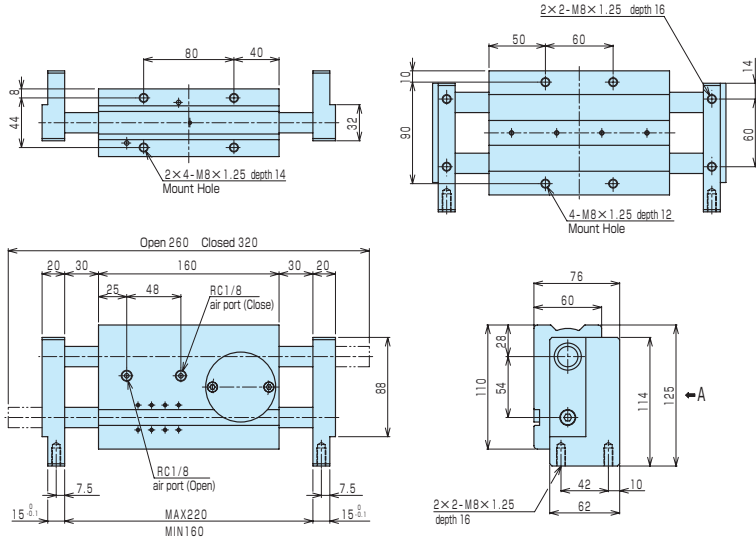
HF Series Wide Opening Parallel Hand

Layout Drawing

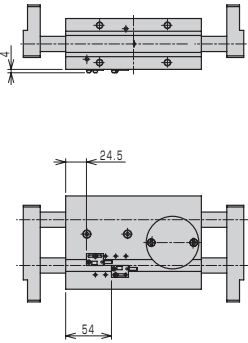
HF-5MS (Optimal Grip Force 200N to 700N)

HF-5MS Standard

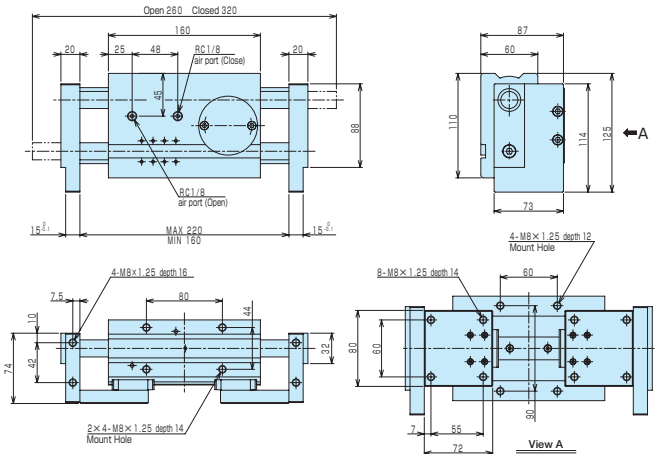
Hand
(2-law)




HF-5MS-E S



HF-5MS-B



HF-2MS/3MS/4MS/5MS

 For CAD data, please go to **▶518P**