

HMA Series Miniature Parallel Hand

Light Weight Compact Size

Key Features

■ Integral compact body

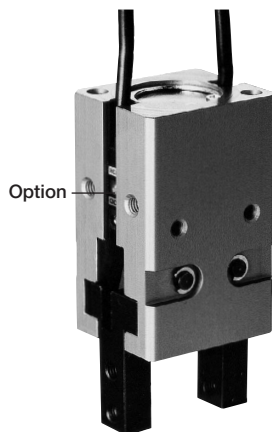
Simple design and low cost via cylinder integrated structure

■ Various sizes

HMA series offer total 5 sizes (dia.10, dia.12, dia.16, dia.20, dia.25 in cylinder diameter) for numerous areas of application.

■ Various options

Switch slots available for sensing jaw position (open or closed)



HMA-04AS

How To Order

Standard ----- HMA-01AS

Option ----- HMA - **01AS** - **ET3S2** - **SU**

HMA-01AS-SU (HMA-01AS, of which iron material is replaced with stainless steel) with 2 of ET3 non-contact reed switches

Size	
Symbol	
01AS	
02AS	
03AS	
04AS	
05AS	

Sensor, Quantity			
Symbol	Name	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	Symbol	Name
NO	Normally Open		
NC	Normally Closed		
SU	Stainless Steel for Iron Material		
PF	Air Port Position Change		

For sensor detail ▶ 277P

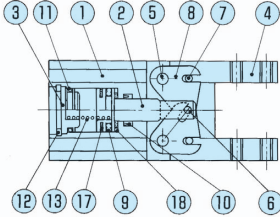
For option detail ▶ 36P

Specification

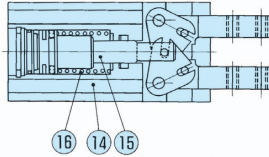
Model	HMA-01AS For Layout Drawing ▶ 71P	HMA-02AS For Layout Drawing ▶ 71P	HMA-03AS For Layout Drawing ▶ 72P	HMA-04AS For Layout Drawing ▶ 72P	HMA-05AS For Layout Drawing ▶ 73P
Working Pressure	Pneumatic: 0.3 to 0.7MPa				
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)				
Ambient Temperature (°C)	5 to 60				
Total Jaw Stroke (mm)	5	7	9	11	15
Cylinder Diameter (mm)	dia.10	dia.12	dia.16	dia.20	dia.25
Rod Diameter (mm)	dia.5	dia.6	dia.8	dia.10	dia.12
Internal Volume [Reciprocation] (cm ³ /time)	0.32	0.69	1.58	2.89	6.32
Repeatability (mm)	±0.03				
Weight (g)	75	100	140	175	300

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	Arm	Stainless Steel	15	NC Piston	Stainless Steel
2	Piston	Stainless Steel	9	Piston Seal		16	NC Spring	Stainless Steel Wire
3	Cylinder Cover	Resin	10	Rod Seal		17	Magnet	
4	Master(Base) Jaw	Carbon Steel	11	Cylinder Seal		18	Cushion	
5	Fulcrum Shaft	Carbon Steel	12	Snap Ring				
6	Operating Shaft A	Carbon Steel	13	NO Spring	Stainless Steel Wire			
7	Operating Shaft B	Carbon Steel	14	NC Body	Aluminum			

■ Seals List

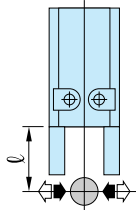
No.	HMA-01AS	HMA-02AS	HMA-03AS	HMA-04AS	HMA-05AS
9	PSD-10	PSD-12	PSD-16	PSD-20	PSD-25
10	MYA-5	MYA-6	MYA-8	MYA-10	MYA-12
11	dia.8×dia.1	dia.10×dia.1	dia.14×dia.1	dia.18×dia.1	dia.22.33×dia.1.02

Performance Data

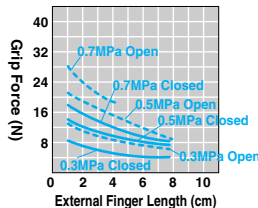
■ Grip Force

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

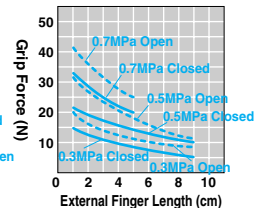
Open (⇐) ---
 Closed (⇒) ———



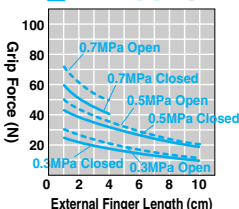
■ HMA-01AS



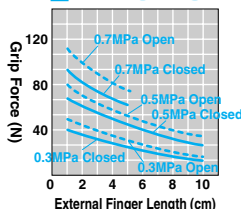
■ HMA-02AS



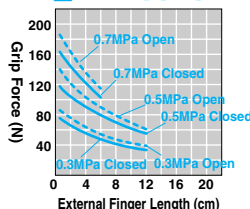
■ HMA-03AS



■ HMA-04AS



■ HMA-05AS



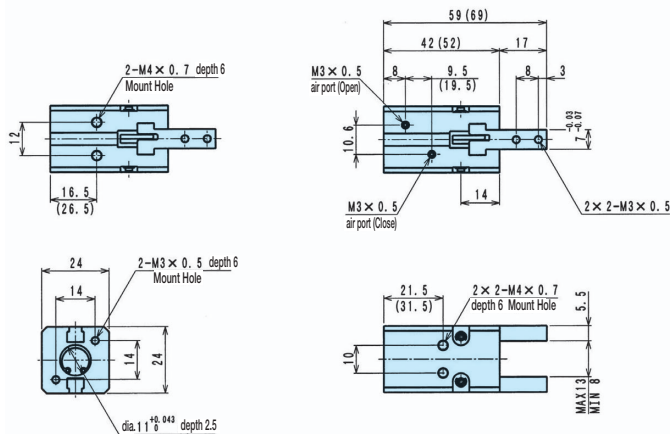
HMA Series Miniature Parallel Hand

Layout Drawing

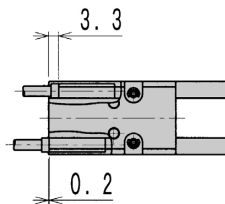
■HMA-01AS (Optimal Grip Force 5N to 15N)

HMA-01AS Standard • NO • NC

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



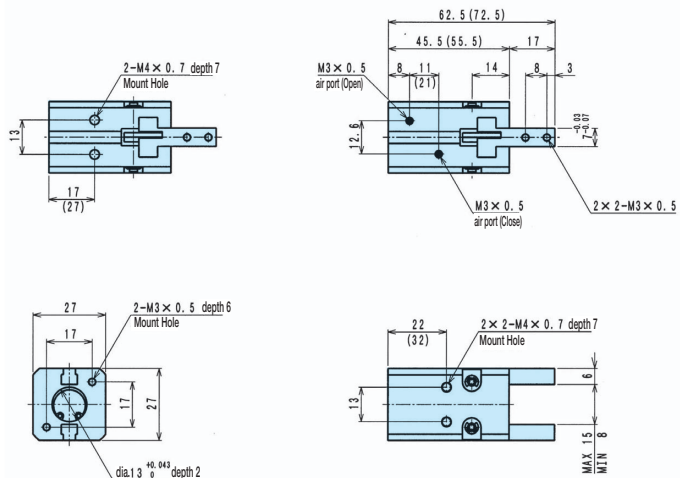
HMA-01AS-E□S□



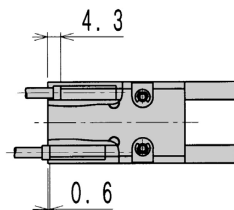
■HMA-02AS (Optimal Grip Force 12N to 25N)

HMA-02AS Standard • NO • NC

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



HMA-02AS-E□S□



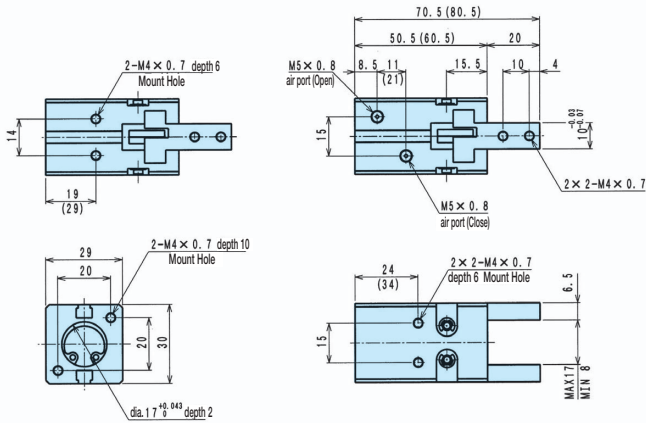
HMA-01AS/02AS/03AS/04AS/05AS

For CAD data, please go to **▶518P**

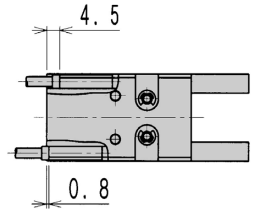
■HMA-03AS (Optimal Grip Force 20N to 50N)

HMA-03AS Standard • NO • NC

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



HMA-03AS-E□S□

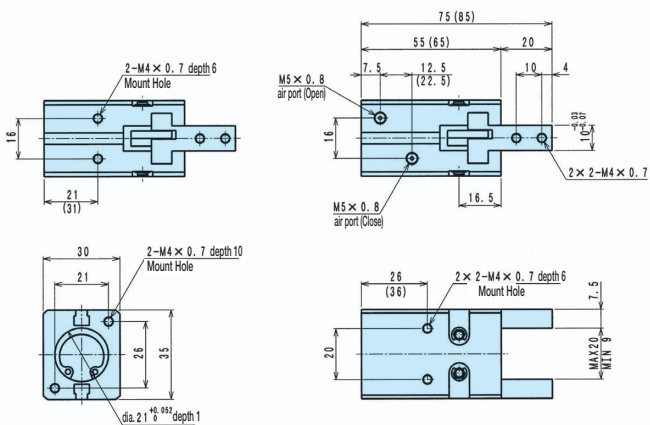


Hand
(2-Jaw)

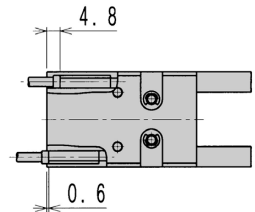
■HMA-04AS (Optimal Grip Force 50N to 80N)

HMA-04AS Standard • NO • NC

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



HMA-04AS-E□S□



HMA Series Miniature Parallel Hand

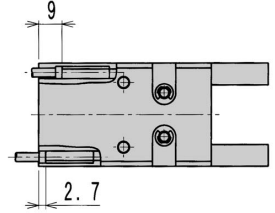
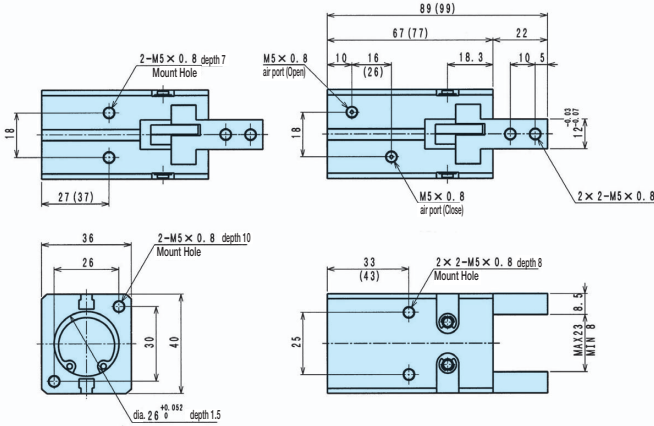
Layout Drawing

■ HMA-05AS (Optimal Grip Force 60N to 140N)

HMA-05AS Standard • NO • NC


HMA-05AS-E□S□

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



Hand
(2-law)

HMA-01AS/02AS/03AS/04AS/05AS

 For CAD data, please go to **▶518P**