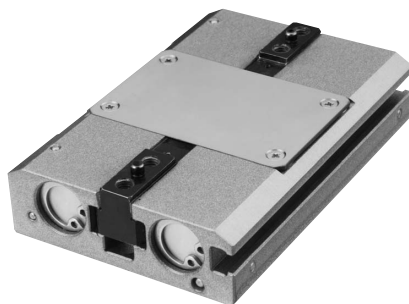


# HLD Series **Extra-Thin Parallel Hand**

Thinnest High Rigid Body and High Grip Force

## Key Features

- Extra-thin design via double-twin-cylinder
- 4 cylinders provide high grip force.
- T-jaw slot provides higher withstand load



HLD-12AS

## How To Order

Standard ----- **HLD-08AS**

Option ----- **HLD - 08AS - ET2S2 - Z**

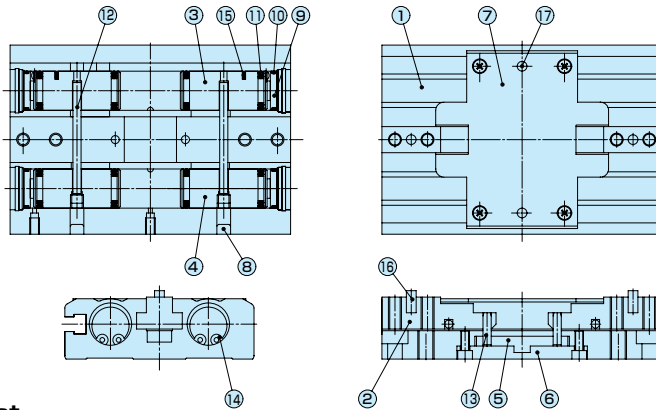
Size	Sensor, Quantity				Option
Symbol	Name	Symbol	Name	Symbol	Name
08AS					
12AS					
16AS					
20AS					
	ET3	Non-Contact 3-Lead	S1	1	Sensor
	ET3L	Non-Contact 3-Lead	S2	2	Sensors
	ET2	Non-Contact 2-Lead			
	ET2L	Non-Contact 2-Lead			
	Z				Special Type (Custom)

For sensor detail ▶277P

## Specification

Model	HLD-08AS	HLD-12AS	HLD-16AS	HLD-20AS
	For Layout Drawing ▶159P	For Layout Drawing ▶159P	For Layout Drawing ▶160P	For Layout Drawing ▶160P
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)	12	16	20	30
Cylinder Diameter (mm)	dia.8×4	dia.12×4	dia.16×4	dia.20×4
Internal Volume [Reciprocation] (cm <sup>3</sup> /time)	3.2	7.8	19.8	43.3
Repeatability (mm)	±0.01			
Weight (kg)	0.23	0.29	0.62	1.05

## Internal Structure / Parts & Seals



### Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	7	Top Cover	Stainless Steel	13	Operating Shaft B	Bearing Steel
2	Master(Base) Jaw	Carbon Steel	8	Cap	Aluminum	14	C-Type Snap Ring	Stainless Steel
3	Piston 1	Aluminum	9	Cylinder Cover	Aluminum	15	Magnet	
4	Piston 2	Aluminum	10	Cylinder Seal	Nitrile Rubber	16	Locating Pin 1	Bearing Steel
5	Cam	Carbon Steel	11	Piston Seal	Nitrile Rubber	17	Locating Pin 2	Bearing Steel
6	Guide Block	Aluminum	12	Operating Shaft A	Bearing Steel			

### Seals List

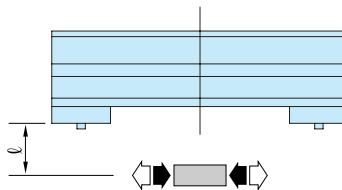
No.	HLD-08AS	HLD-12AS	HLD-16AS	HLD-20AS
12	PSD-8	PSD-12	PSD-16	PSD-20
13	dia.6×dia.1	dia.10×dia.1	dia.14×dia.1	dia.18×dia.1

## Performance Data

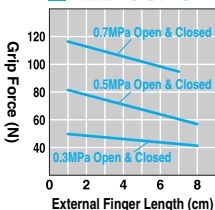
### Grip Force

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

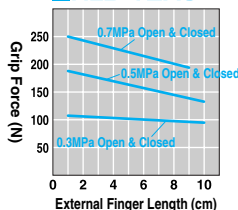
Open (⇐) ————  
 Closed (⇒) ————



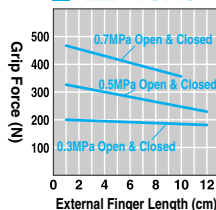
#### HLD-08AS



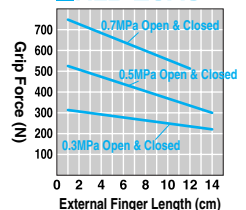
#### HLD-12AS



#### HLD-16AS



#### HLD-20AS



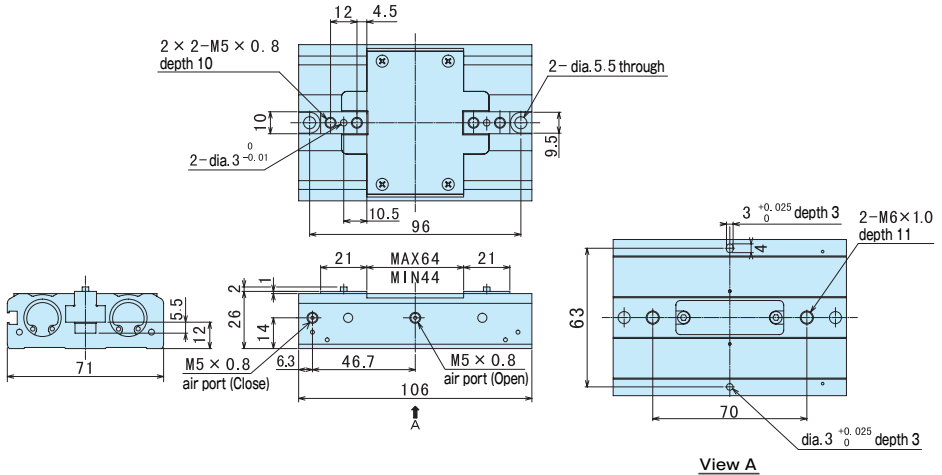


# HLD-08AS/12AS/16AS/20AS

For CAD data, please go to **▶518P**

## ■HLD-16AS (Optimal Grip Force 100N to 500N)

### HLD-16AS Standard



Hand  
(2-Jaw)

## ■HLD-20AS (Optimal Grip Force 200N to 800N)

### HLD-20AS Standard

