

HLC Series Linear Guide Parallel Hand

Thin Design & Long Stroke via Linear Guide

Key Features

■ Thin body with long stroke

Thin design using 2 pistons to provide high torque

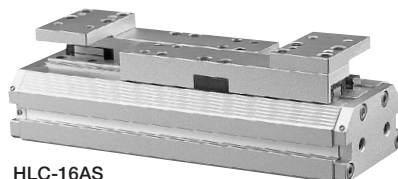
■ Linear guide improved durability

Long guide pitch of the linear guide improves rigidity

■ Various sizes available

6 sizes and 11 strokes available

■ Through hole on the front for easy mounting



HLC-16AS

How To Order

Standard ----- **HLC-08AS**

Option ----- **HLC - 12AS - L1 - ET3LS2** ----- HLC-12AS-L1 (HLC-12AS Long Stroke Type) with 2 of ET3 non-contact reed switches

Model		Size		Stroke		Sensor, Quantity			
Symbol	Name	Symbol		Symbol	Name	Symbol	Name	Symbol	Name
HLC	Normal	08AS	30AS	No symbol	Normal	ET3	Non-Contact 3-Lead	E24L ^{*2}	Contact 2-Lead
HLC-□□-L1 ^{*1}	Long Stroke Type	12AS		L1 ^{*1}	Long Stroke Type	ET3L	Non-Contact 3-Lead	E25 ^{*2}	Contact 2-Lead
		16AS				ET2	Non-Contact 2-Lead	E25L ^{*2}	Contact 2-Lead
		20AS				ET2L	Non-Contact 2-Lead	S1	1 Sensor
		25AS				E24 ^{*2}	Contact 2-Lead	S2	2 Sensors

^{*1} Except 08AS

^{*2} 30AS only

For sensor detail ▶277P

Specification

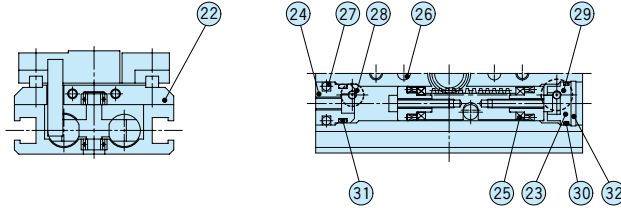
Model	HLC-08AS For Layout Drawing ▶90P	HLC-12AS For Layout Drawing ▶90P	HLC-16AS For Layout Drawing ▶91P	HLC-20AS For Layout Drawing ▶91P	HLC-25AS For Layout Drawing ▶92P	HLC-30AS For Layout Drawing ▶92P
	Standard	Standard	L1	Standard	L1	Standard
Working Pressure	Pneumatic: 0.2 to 0.7MPa					
Lubrication	Not Required or Turbine Oil Class 1 (ISOVG32)					
Ambient Temperature (°C)	5 to 60					
Total Jaw Stroke (mm)	20	30	60	40	80	50
Cylinder Diameter (mm)	dia.8×2	dia.12×2	dia.16×2	dia.20×2	dia.25×2	dia.30×2
Internal Volume [Reciprocation] (cm ³ /time)	2.0	6.8	13.6	16.1	32.2	31.4
Repeatability (mm)	±0.03					
Weight (kg)	0.14	0.29	0.44	0.71	0.85	1.03

HLC-08AS/12AS/16AS/20AS/25AS/30AS

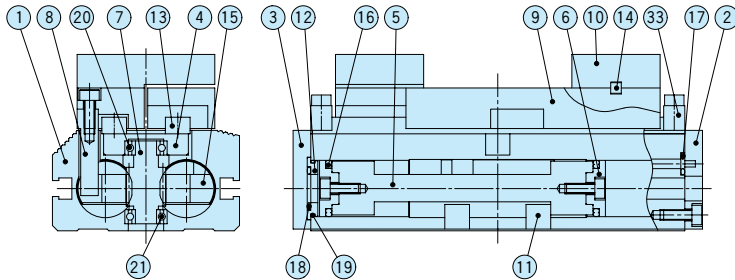
HLC-12AS-L1/16AS-L1/20AS-L1/25AS-L1/30AS-L1

Internal Structure / Parts & Seals

■ HLC-08AS



■ HLC-12AS to 30AS



■ Parts List

No.	Name	Material	No.	Name	Material	No.	Name	Material
1	Body	Aluminum	12	Cylinder Cover	Aluminum	23	Cylinder Cover 1	Resin
2	Side Plate 1 *4	Aluminum	13	LM Guide		24	Cylinder Cover 2	Aluminum
3	Side Plate 2 *4	Aluminum	14	Key *5		25	Magnet	
4	Bearing Holder *4	Aluminum	15	Half Moon shape Magnet *2		26	Locating Pin	Bearing Steel
5	Rack	Stainless Steel	16	Piston Seal		27	Anti-Rotation Pin	Bearing Steel
6	Piston	Resin	17	Gasket		28	Gasket 1	
7	Pinion	Stainless Steel	18	Cylinder Seal 1		29	Gasket 2	
8	Rack Joint	Carbon Steel	19	Cylinder Seal 2		30	Cylinder Seal 1	
9	LM Plate *5	Aluminum	20	Single Row Deep Groove Ball Bearing		31	Cylinder Seal 2	
10	Master(Base) Jaw	Aluminum	21	Single Row Deep Groove Ball Bearing		32	C-Type Snap Ring	Stainless Steel
11	Key *5	*1	22	Linear Guide Mounting Base	Aluminum	33	Bracket *3	Stainless Steel

*1 Carbon Steel for 16AS to 25AS and Stainless Steel for 30AS

*4 Not available for 08AS

*2 2 pieces for 30AS (Standard Stroke)

*5 Not available for 08AS and 12 AS

*3 Mounted on 16AS and 20AS only

■ Seals List

No.	HLC-08AS	No.	HLC-12AS	HLC-16AS	HLC-20AS	HLC-25AS	HLC-30AS
16	MYA-5	16	MYA-9	PSD-16	PSD-20	PSD-25	PSD-30
28	S-3	17	S-3	S-4	S-4	S-4	S-4
29	S-5	18	dia.6×dia.1	S-10	S-14	S-18	S-22
30	dia.8×dia.1	19	dia.10×dia.1	dia.13×dia.1	dia.18×dia.1	dia.22.3×dia.1.02	dia.28×dia.1
31	S-7						

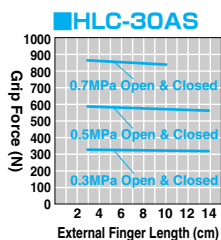
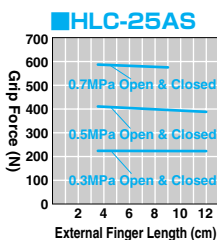
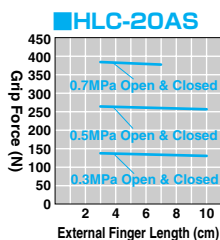
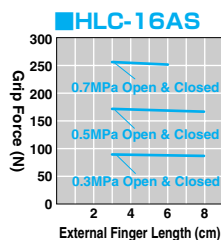
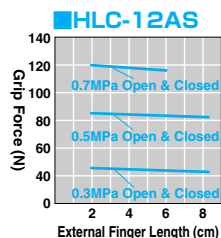
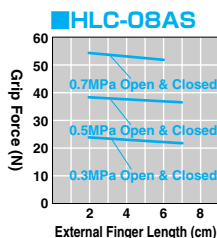
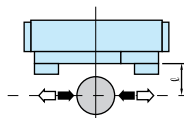
Performance Data

■ Grip Force

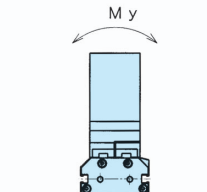
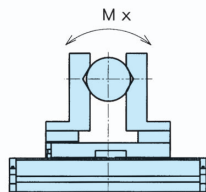
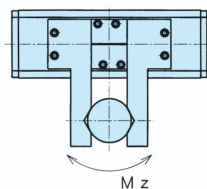
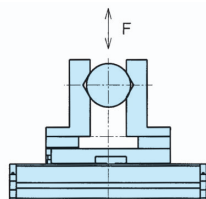
The graph shows grip force in opening and closing with effective external finger lengths ℓ from gripper cover surface under different air pressure (MPa)

Open (↔) _____

Closed (→) _____



■ Allowable Load & Moment



Model	Load and Moment	F N	Mx N·m	Mz N·m	My N·m
HLC-08AS		102	10	8.5	1.6
HLC-12AS		151	11.9	8.2	4.68
HLC-12AS-L1		151	11.9	8.2	4.68
HLC-16AS		325	27.5	25.6	7.96
HLC-16AS-L1		325	27.5	25.6	10.6
HLC-20AS		306	29.9	27	10.6
HLC-20AS-L1		306	29.9	27	11.2
HLC-25AS		423	105.1	96.4	19.7
HLC-25AS-L1		423	105.1	96.4	19.7
HLC-30AS		694	109.3	116.5	33.3
HLC-30AS-L1		694	109.3	116.5	43.1

* Values above for are static load and not impact load

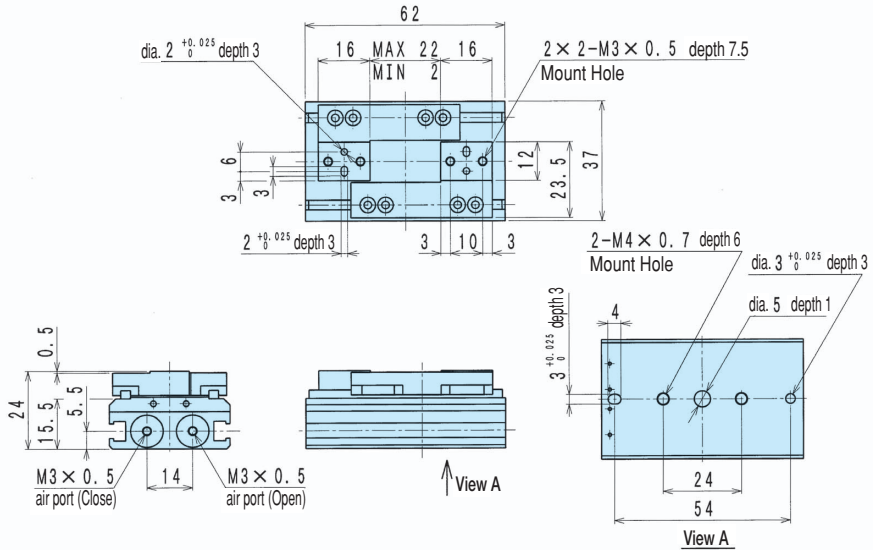
HLC-08AS/12AS/16AS/20AS/25AS/30AS HLC-12AS-L1/16AS-L1/20AS-L1/25AS-L1/30AS-L1

Layout Drawing

For CAD data, please go to **▶518P**

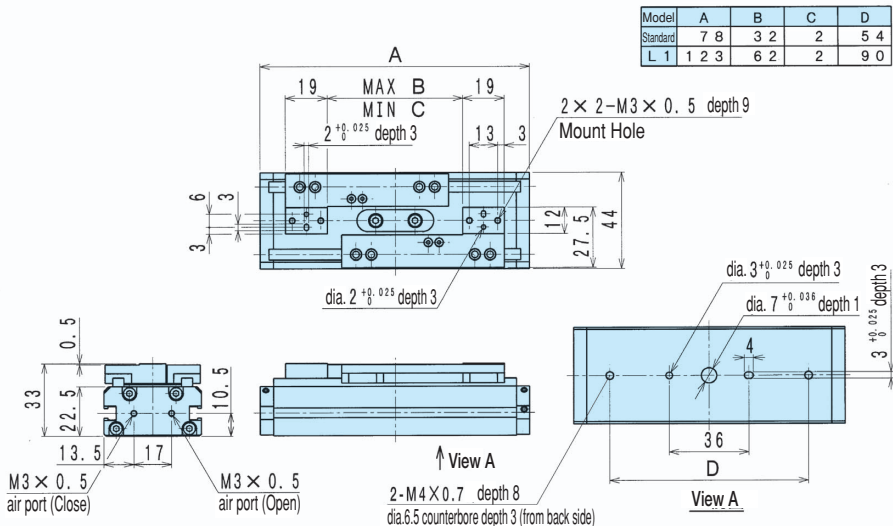
■HLC-08AS (Optimal Grip Force 20N to 35N)

HLC-08AS Standard



■HLC-12AS (Optimal Grip Force 40N to 80N)

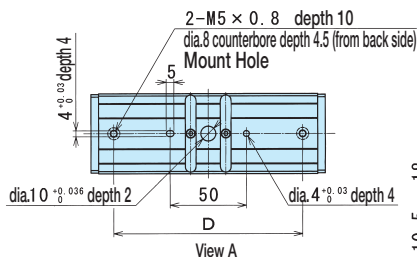
HLC-12AS Standard • L1



Layout Drawing

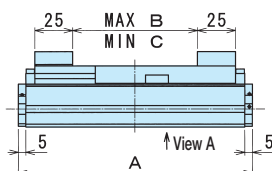
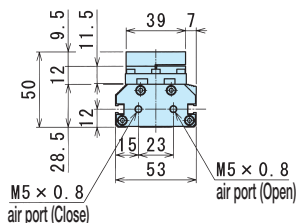
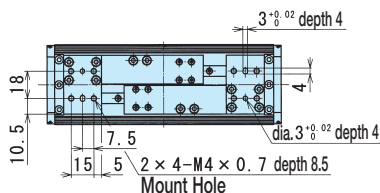
■HLC-16AS (Optimal Grip Force 80N to 160N)

HLC-16AS Standard • L1



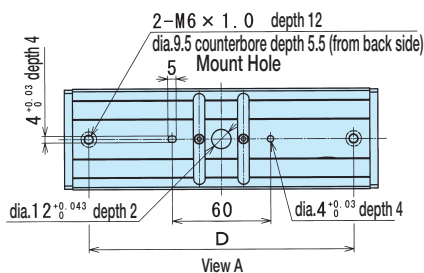
HLC-16AS

Model	A	B	C	D
Standard	116	42	2	86
L1	154	82	2	124



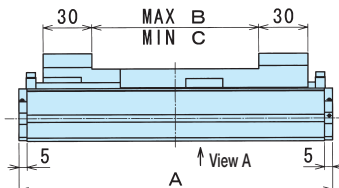
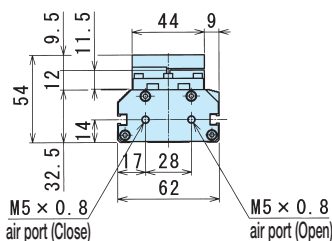
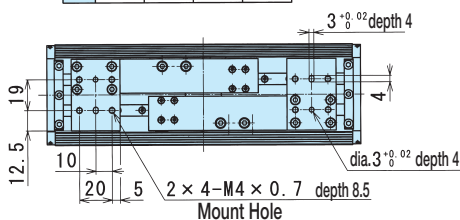
■HLC-20AS (Optimal Grip Force 130N to 250N)

HLC-20AS Standard • L1



HLC-20AS

Model	A	B	C	D
Standard	132	52	2	102
L1	192	102	2	162

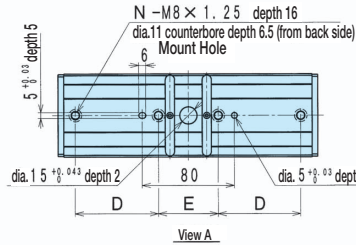


HLC-08AS/12AS/16AS/20AS/25AS/30AS HLC-12AS-L1/16AS-L1/20AS-L1/25AS-L1/30AS-L1

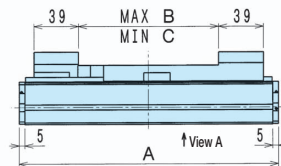
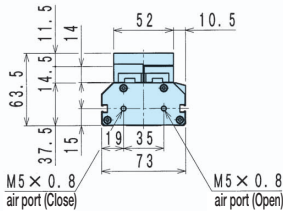
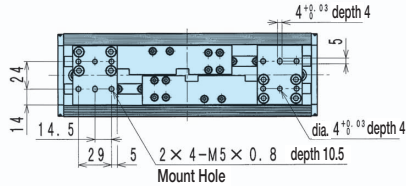
For CAD data, please go to **▶518P**

■HLC-25AS (Optimal Grip Force 200N to 350N)

HLC-25AS Standard • L1

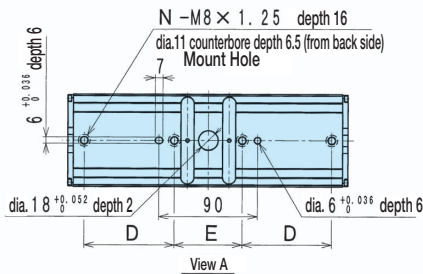


Model	A	B	C	D	E	N
Standard	1 5 2	6 2	2	0	1 2 2	2
L 1	2 2 6	1 2 2	2	7 2	5 2	4



■HLC-30AS (Optimal Grip Force 300N to 550N)

HLC-30AS Standard • L1



Model	A	B	C	D	E	N
Standard	1 7 4	7 2	2	0	1 4 4	2
L 1	2 5 6	1 4 2	2	8 2	6 2	4

