



Thin parallel hand (bush/bearing guide) Double acting

HLA/HLB Series

- Operational stroke length: HLA 15, 20, 25mm
HLB 13, 18, 23mm



Specifications

Descriptions	HLA			HLB		
	12CS	15CS	20CS	12CS	15CS	20CS
Size						
Cylinder bore size mm	φ 12	φ 15	φ 20	φ 12	φ 15	φ 20
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	0.7					
Min. working pressure MPa	0.3			0.1		
Ambient temperature °C	5 to 60					
Port size	M5					
Operational stroke length mm	15	20	25	13	18	23
Capacity of reciprocating cm ³	1.69	3.53	7.85	1.47	3.18	7.22
Repeatability mm	±0.03			±0.01		
Product weight kg	0.152	0.276	0.504	0.214	0.402	0.678
Lubrication	Not required (when lubricating, use turbine oil Class 1 ISO VG32)					

Switch specifications and variations

Descriptions	Proximity 2 wire	Proximity 3 wire
	K2H/K2V	K3H/K3V
Applications	Programmable controller	Programmable controller, relay
Output method	-	NPN output
Power voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA (Note 1)	30 VDC or less, 50mA or less
Light	LED (ON lighting)	
Leakage current	1mA or less	10μA or less
Maximum shock resistance	980m/s ²	

Descriptions	Reed 2 wire	
	K0H/K0V	K5H/K5V
Applications	Programmable controller, relay	Programmable controller, relay, IC circuit (w/o light), serial connection
Power voltage	-	
Load voltage/current	12/24 VDC, 5 to 50 mA 110 VAC, 7 to 20 mA	5/12/24 VDC, 50mA or less 110 VAC, 20mA or less
Light	LED (ON lighting)	None
Leakage current	0mA	
Maximum shock resistance	294m/s ²	

Note 1: Max. load current above: 20 mA at 25°C. The current will be lower than 20mA if ambient temperature around switch is higher than 25°C. (5 to 10mA with 60°C)

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Gerichtsstand: Landesgericht Wiener Neustadt * FN408097v * ATU68398511

How to order

Without switch

HLA - 12CS

With switch

HLA - 12CS - K2H - R

A Model no.

B Size

C Switch model no.
Note 1

D Switch quantity

Symbol	Descriptions			
A Model no.				
HLA	Bush guide			
HLB	Bearing guide			
B Size				
12CS				
15CS				
20CS				
C Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
K0H*	K0V*	Proximity Reed	1 color indicator type	2-wire
K5H*	K5V*		Without indicator light	
K2H*	K2V*	Proximity Reed	1 color indicator type	2-wire
K3H*	K3V*			3-wire
*Lead wire length				
Blank	1m (standard)			
3	3m (option)			
5	5m (option)			
D Switch quantity				
R	One on open side			
H	One on closed side			
D	Two			

Note on model no. selection

Note 1: Switches other than (C) switch model no. are available.
(Custom order) Refer to Ending 1 for details.

<Example of model number>

HLB-12CS-K2H-R

Model: Thin parallel hand

- A** Model no. : Bearing guide HLB
- B** Size : 12CS
- C** Switch model no. : Proximity K2H switch, lead wire 1m
- D** Switch quantity : One on open side

How to order switch

SW - K2H

Switch model no.
(Item above **C**)

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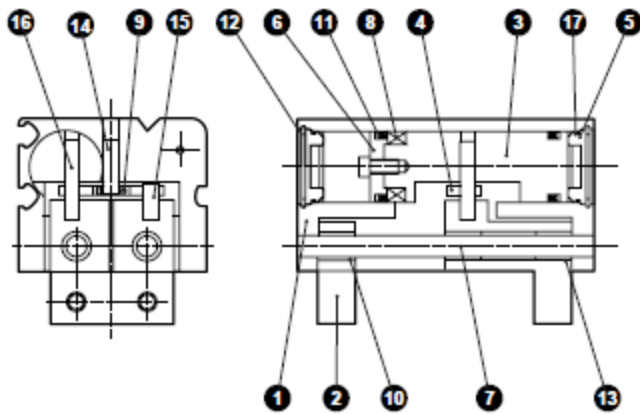
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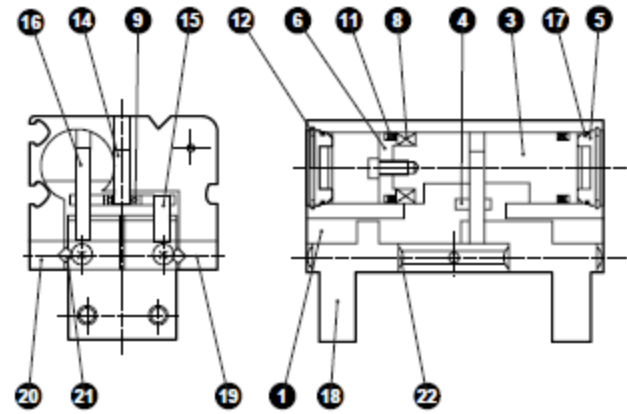
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Internal structure and parts list

● HLA-12CS to 20CS



● HLB-12CS to 20CS

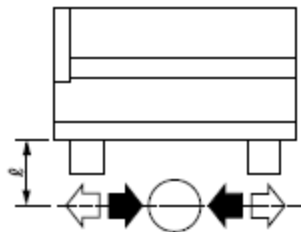


No.	Parts name	Material	Remarks	No.	Parts name	Material	Remarks
1	Body	Aluminum alloy		12	Snap ring	Stainless steel	
2	Master key	Aluminum alloy		13	Bush	Sintering oil impregnated alloy	
3	Piston	Stainless steel		14	Parallel pin	Steel	
4	Cam	Stainless steel		15	Needle roller A	Alloy steel	
5	Cylinder guard	Acetar resin		16	Needle roller B	Alloy steel	
6	Magnet holder	Aluminum alloy		17	Cylinder gasket	Nitrile rubber	
7	Guide rod	Alloy steel		18	Master key	Steel	
8	Magnet			19	Bearing guide A	Steel	
9	Small diameter sphere bearing	Alloy steel		20	Bearing guide B	Steel	
10	Bush	Sintering oil impregnated alloy		21	Cross roller	Alloy steel	
11	Piston packing seal	Nitrile rubber		22	Truss machine screw	Stainless steel	

Gripping power performance data

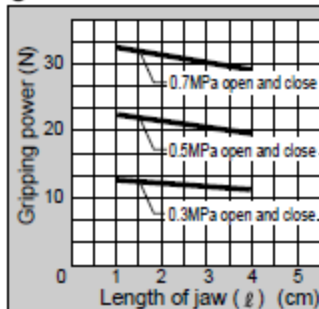
Gripping power that functions to open and closed directions with jaw length ℓ of hand at supply pressure 0.3, 0.5 and 0.7 MPa is shown.

- Both open direction (⇐) closed direction (⇒)
- (shown with continuous line)

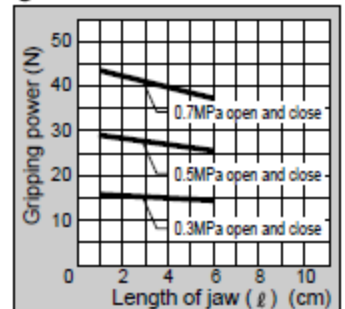


(Note) Grip performance data indicates the grip for one jaw. Since two jaws are used, double the grip in the graph when making a selection.

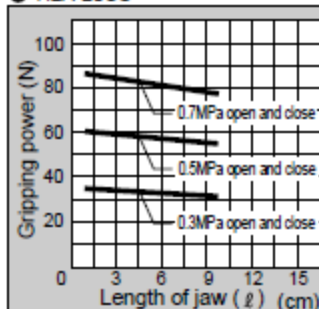
● HLA-12CS



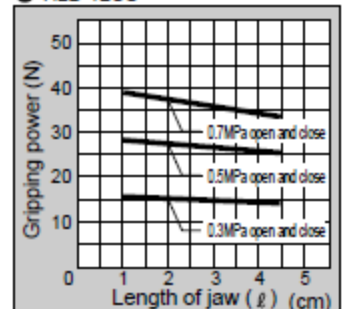
● HLA-15CS



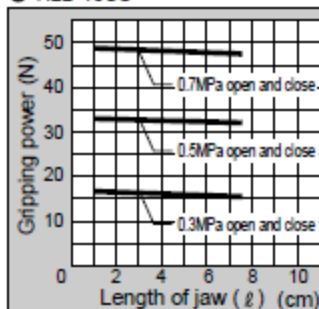
● HLA-20CS



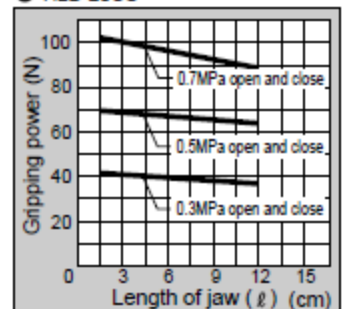
● HLB-12CS



● HLB-15CS

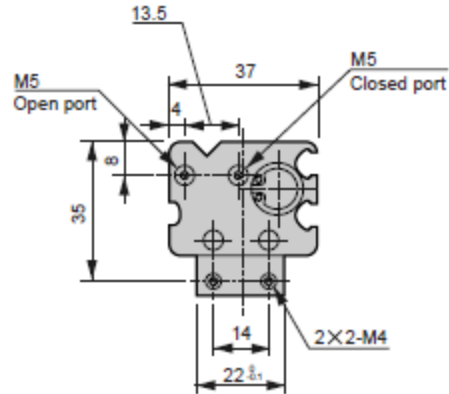
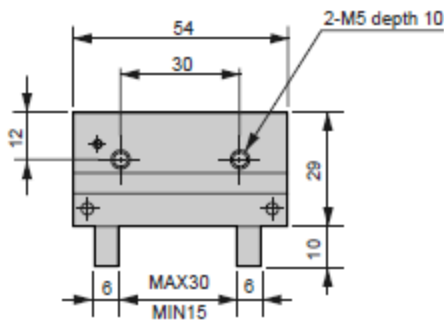
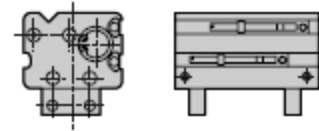
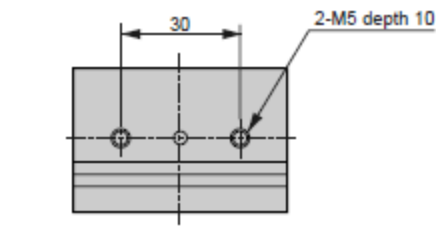


● HLB-20CS



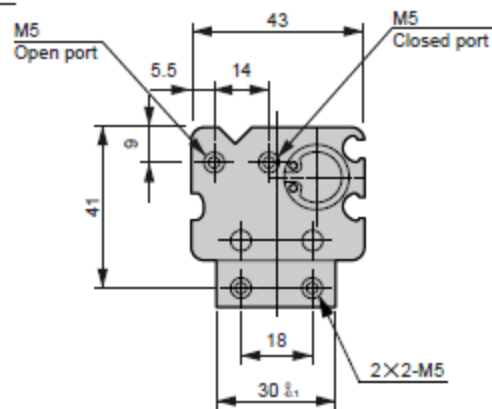
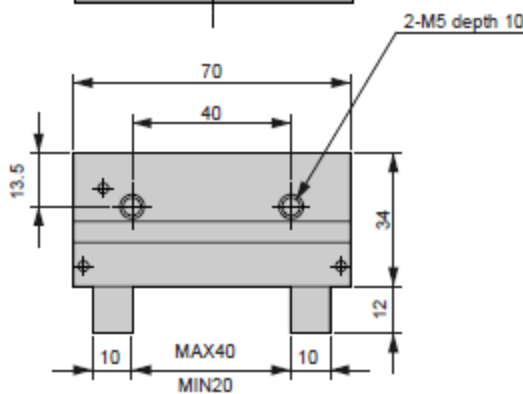
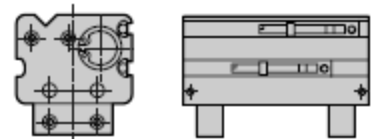
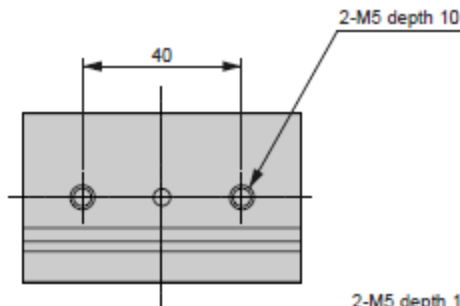
● HLA-12CS standard

● With switch



● HLA-15CS standard

● With switch



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