

## Series HA and HB

### Cartridge cylinders, single acting

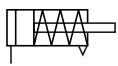
#### Technical details

<b>Operating pressure</b>	2 ... 10 bar	
<b>Temperature range</b>	-30°C* ... +80°C (* Ø6 mm: -20°C)	
<b>Medium</b>	Filtered, oil-free and dried compressed air according to ISO 8573-1:2010, Class 7:2:4, instrument air, free of aggressive additives. Alternatively the pressure dew point must be at least 10°C below lowest occurring ambient temperature.	
<b>Materials</b>	Body:	brass (nickel-plated)
	Piston rod:	stainless steel
	Seal:	PU



Single acting pneumatic cylinder with mechanical spring return.

#### Versions



HA, HB  
single acting, normally retracted

#### Order code

Series		H*--***--***		Stroke (mm)	
HA	piston rod threaded	XXX		5, 10, 15	
HB	piston rod unthreaded				
				Piston-Ø	
				06	6 mm
				10	10 mm
				16	16 mm

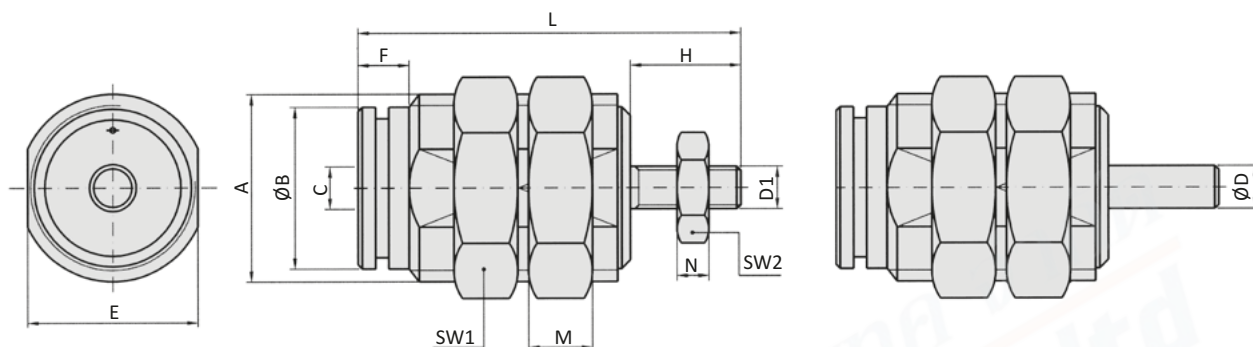
#### Technical data

Model-no.::		HA-06-...	HA-10-...	HA-16-...	HB-06-...	HB-10-...	HB-16-...
<b>Piston Ø (mm)</b>		6	10	16	6	10	16
<b>Force at 6 bar and 5 mm stroke (N)</b>	<b>Extension</b>	17	47	121	17	47	121
	<b>Retraction</b>	1,6 ... 3,7	7,4 ... 11,5	8,4 ... 9,5	1,6 ... 3,7	7,4 ... 11,5	8,4 ... 9,5
<b>Force at 6 bar and 10 mm stroke (N)</b>	<b>Extension</b>	17	47	121	17	47	121
	<b>Retraction</b>	1,6 ... 3,9	6 ... 12,5	8,4 ... 10,7	1,6 ... 3,9	6 ... 12,5	8,4 ... 10,7
<b>Force at 6 bar and 15 mm stroke (N)</b>	<b>Extension</b>	17	47	121	17	47	121
	<b>Retraction</b>	1,6 ... 3,9	6,8 ... 12,8	7,4 ... 10,7	1,6 ... 3,9	6,8 ... 12,8	7,4 ... 10,7
<b>Connection</b>		M5	M5	M5	M5	M5	M5
<b>Piston rod thread</b>		M3	M4	M5	-	-	-

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### Dimensions series HA and HB



Piston-Ø	A	B	C	ØD	D1	E	F	H	L <sub>5mm</sub>	L <sub>10mm</sub>	L <sub>15mm</sub>	M	N	SW1	SW2
6	M10 x 1	8,5	M5	3	M3	9	5	8	27,5	34,5	41,5	3	2,4	14	5,5
10	M15 x 1,5	12	M5	5	M4	14	7	10,5	33,5	40	47	4	2	19	7
16	M22 x 1,5	16	M5	5	M5	20	6	13	40	45	50	5	4	27	8