

NB series Pin Cylinder

Product features, Code of order

CHELIC

Feature

- Built-in magnet for use with auto switches.
- Threaded rod at the front for easy installation.



Specification

Item	Bore size (mm)	Ø6	Ø10	Ø16
Action		Double acting		
Fluid		Air		
Pressure range	kgf / cm ² (kPa)	1 ~ 6 (100 ~ 600)		
Max. service pressure	kgf / cm ² (kPa)	7 (700)		
Ambient and fluid temperature	°C	0 ~ 60		
Operated speed	mm / s	50 ~ 500		
Sensing device		Standard: Without magnet/ S: With magnet		

Bore size and stroke

Bore size (mm)	Stroke (mm)
Ø6	5, 10, 15, 20, 25
Ø10	5, 10, 15, 20, 25, 30, 35, 40
Ø16	5, 10, 15, 20, 25, 30, 35, 40

Theoretical output

Bore size (mm)	Rod size (mm)	Acting	Piston area (cm ²)	Air pressure (kgf / cm ²)						
				1	2	3	4	5	6	7
Ø6	Ø3	Push	0.27	—	0.56	0.84	1.12	1.4	1.68	1.96
		Pull	0.21	—	0.42	0.63	0.84	1.05	1.26	1.47
Ø10	Ø4	Push	0.79	—	1.58	2.37	3.16	3.95	4.74	5.53
		Pull	0.53	—	1.06	1.59	2.12	2.65	3.18	3.71
Ø16	Ø6	Push	2.01	—	4.02	6.03	8.04	10.05	12.06	14.07
		Pull	1.73	—	3.46	5.19	6.92	8.65	10.38	12.11

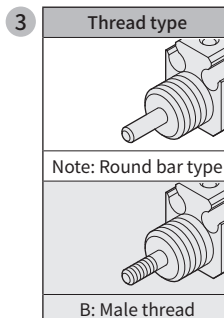
Note: All of above are theoretical data. Before actual adoption, the frictional resistance and mechanical efficiency shall be taken into consideration (about 70% ~ 80%).

Code of order NB 16 x 10 - B - S 8G 2



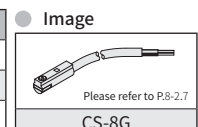
1	Mark	Bore size (mm)
	6	Ø6
	10	Ø10
	16	Ø16

2	Bore size (mm)	Stroke (mm)
	Ø6	5, 10, 15, 20, 25
	Ø10	5, 10, 15, 20, 25, 30, 35, 40
	Ø16	5, 10, 15, 20, 25, 30, 35, 40

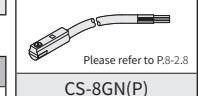


4	Mark	Magnet
	None	Without magnet
	S	With magnet

5	Mark	Sensor switch
	None	Without sensor switch
	8G	CS-8G
	8GP	CS-8GP
	8GN	CS-8GN



6	Mark	Sensor quantity
	1	1 Pc
	2	2 Pcs

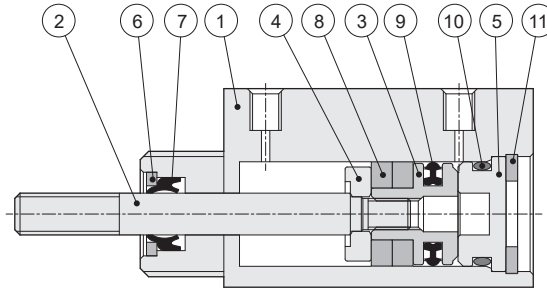


NB series Pin Cylinder

Product features

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Internal structure

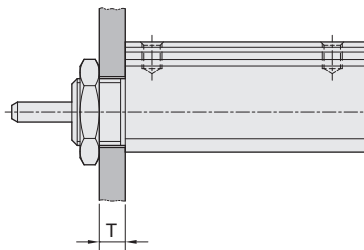


Components and material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	07	Shaft packing	NBR
02	Main shaft	Stainless steel	08	Magnet	Rare earth material
03	Piston	Stainless steel	09	Piston Packing	NBR
04	Magnet cap	Copper alloy	10	Rear cover O-ring	NBR
05	Rear cover	Aluminum alloy	11	Clip	Alloy steel
06	Packing plate	Aluminum alloy			

Note: The gripper body surface processed with anodizing.

Mounting type



Bore size(mm)	Thread specification	Maximum tightening torque (kg . cm)	Panel maximum thickness T(mm)
Ø6	M10×1.0P	1.2	4
Ø10	M12×1.0P	2.1	4
Ø16	M14×1.0P	3.4	5

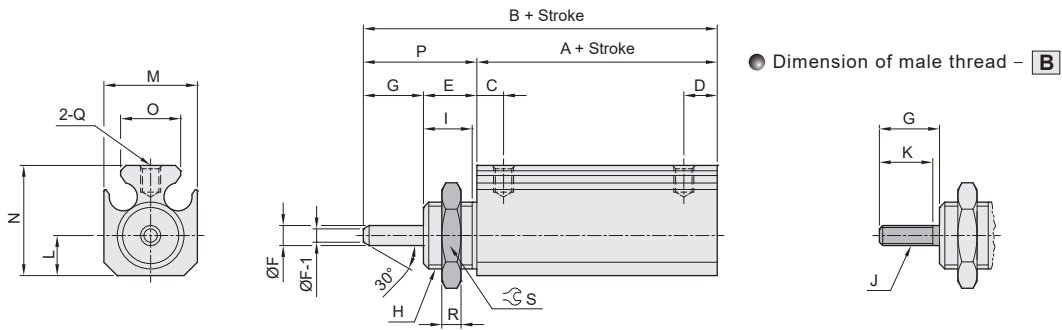
NB series Pin Cylinder

Dimension

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Standard type

● NB Ø6 ~ Ø16



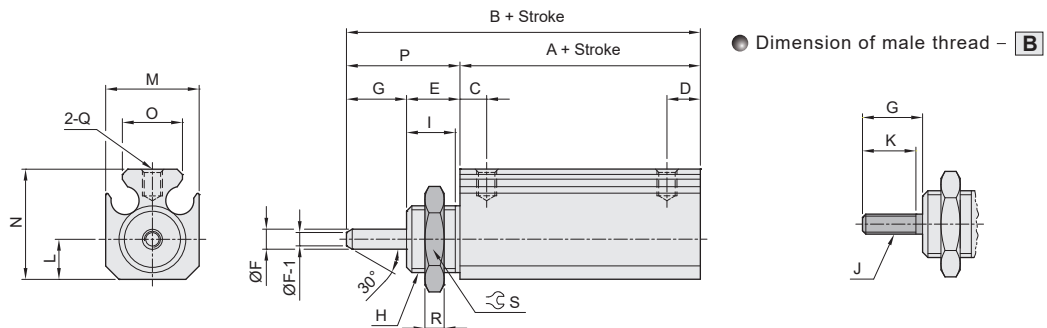
● Dimension of male thread - **B**

Unit: mm

Bore size	Mark	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Ø6		16	33	5	5	8	3	9	M10×1.0P	6.5	M3×0.5P	7	6	14	16.5	9	17	M3×0.5P	3	13
Ø10		19.5	39.5	5.5	7.1	8	4	12	M12×1.0P	6.5	M4×0.7P	10	7	15	19	9.6	20	M3×0.5P	3	14
Ø16		19.5	43.5	6	7	10	6	14	M14×1.0P	8.5	M5×0.8P	12	10	20	24.5	14	24	M5×0.8P	4	19

With magnet

● NB Ø6 ~ Ø16 - **S**



● Dimension of male thread - **B**

Unit: mm

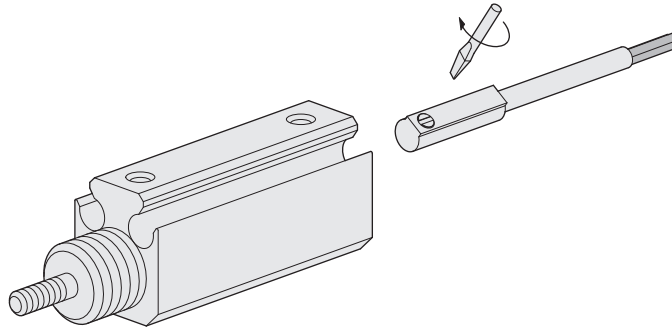
Bore size	Mark	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Ø6		21	38	5	5	8	3	9	M10×1.0P	6.5	M3×0.5P	7	6	14	16.5	9	17	M3×0.5P	3	13
Ø10		24.5	44.5	5.5	7.1	8	4	12	M12×1.0P	6.5	M4×0.7P	10	7	15	19	9.6	20	M3×0.5P	3	14
Ø16		24.5	48.5	6	7	10	6	14	M14×1.0P	8.5	M5×0.8P	12	10	20	24.5	14	24	M5×0.8P	4	19

NB series Pin Cylinder

Sensor switch operating range and the setting

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Sensor switch mounting type



Sensing range

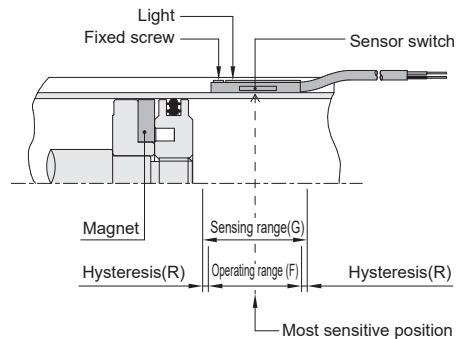
Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the Sensor switch when it enters the operating range. It has 0.5mm differential.

Operating range

When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below table)

Model	CS-8G	
Bore size	Operating range(F)	Hysteresis(R)
Ø6	2.5	1
Ø10	4	1
Ø16	6	1

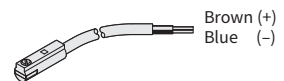
Sensor switch setting and operating range



Sensor switch introduction

CS-8G

Voltage: DC 5 ~ 30V



CS-8GN(P)

Voltage: DC 4.5 ~ 28V

