

## Specifications

Bore size (mm)		4	6	8	10
Action		Double acting/Single acting, Spring return			
Fluid		Air			
Proof pressure		1.05 MPa			
Minimum operating pressure	Double acting	0.15 MPa			0.1 MPa
	Single acting, Spring return	0.35 MPa	0.3 MPa	0.2 MPa	
Maximum operating pressure		0.7 MPa			
Ambient and fluid temperature		Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)			
Cushion		None			
Lubrication		Non-lube			
Piston speed		50 to 500 mm/s			
Thread tolerance		JIS Class 2			
Stroke length tolerance		+0.5 0			
Mounting		Through-hole			

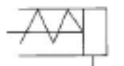


### JIS Symbol

Double acting,  
Single rod type



Single acting,  
Spring return



## Theoretical Output/Double Acting



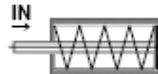
Bore size (mm)	Rod size (mm)	Operating direction	Piston area (mm <sup>2</sup> )	Operating pressure (MPa)		
				0.3	0.5	0.7
4	2	OUT	12.6	3.76	6.28	8.79
		IN	9.4	2.82	4.71	6.59
6	4	OUT	28.3	8.48	14.13	19.79
		IN	15.7	4.71	7.85	10.99
8	5	OUT	50.3	15.07	25.13	35.18
		IN	30.6	9.18	15.31	21.44
10	6	OUT	78.5	23.56	39.26	54.97
		IN	50.3	15.07	25.13	35.18

## Standard Stroke

Action	Bore size (mm)	Standard stroke (mm)
Double acting	4	4, 6, 8, 10
	6	4, 6, 8, 10, 15
	8, 10	4, 6, 8, 10, 15, 20
Single acting, Spring return	4	4, 6
	6	4, 6, 8
	8, 10	4, 6, 8, 10

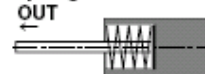
## Spring Reaction Force/Single Acting

### Spring in pre-loaded condition



When the spring is set in the cylinder

### Spring in loaded condition



When the spring is contracted by applying air (N)

Bore size (mm)	Spring condition	Stroke (mm)			
		4	6	8	10
4	Pre-loaded	1.70	1.27	—	—
	Loaded	2.55	2.55	—	—
6	Pre-loaded	2.45	2.01	1.57	—
	Loaded	3.33	3.33	3.33	—
8	Pre-loaded	4.67	3.76	2.86	1.96
	Loaded	6.47	6.47	6.47	6.47
10	Pre-loaded	5.04	4.18	3.31	2.45
	Loaded	6.77	6.77	6.77	6.77

## Weight/Double Acting

Bore size (mm)	Standard stroke (mm)						Additional weight (g)	
	4	6	8	10	15	20	With magnet	Rod end male thread
	7.2	7.9	8.6	9.3	—	—	—	0.4
	12.4	13.6	14.8	16.0	18.9	—	2.7	0.8
	15.6	17.0	18.4	19.7	23.0	26.4	3.0	1.5
	17.9	19.4	20.8	22.3	25.9	29.5	3.2	2.6

## Weight/Single Acting

Bore size (mm)	Standard stroke (mm)				Additional weight (g)	
	4	6	8	10	With magnet	Rod end male thread
	7.2	7.9	—	—	—	0.4
	12.8	14.0	15.2	—	2.4	0.8
	15.8	17.2	18.6	19.9	2.5	1.5
	17.9	19.4	20.8	22.3	2.4	2.6

Length is shortened by approx. 64% max.  
Volume is reduced by approx. 70% max.

## Dimensions (Without magnet)

Bore size (mm)	A(a)	B(b)	C(c)
4	10(—)	15(—)	13(—)
6	13(13)	19(22)	13(33)
8	13(—)	21(—)	13(—)
10	13.5(15)	22(24)	13(36)