

# Spring type Piston Actuator Piston motor

## Model PSA6 / PSA7

### OVERVIEW

Model PSA6/ PSA7 cylinders are spring type piston cylinder provided with higher supply air pressure and output force. It is generally used as an actuator in high pressure service.

### SPECIFICATIONS

#### Type

Spring type piston cylinder

#### Action

Reverse acting

#### Materials

	PSA6R	PSA7R
Cylinder	FCD450	
Piston	FCD450	SS400
Yoke	SCPH2	
Actuator rod	SUS304	
Sealing parts	O-ring (NBR) Wear ring (PTFE)	

#### Spring

##### PSA6R

100 to 180 kPa {1.0 to 1.8 kgf/cm<sup>2</sup>}  
200 to 340 kPa {2.0 to 3.5 kgf/cm<sup>2</sup>}  
200 to 390 kPa {2.0 to 4.0 kgf/cm<sup>2</sup>}

##### PSA7R

200 to 270 kPa {2.0 to 2.8 kgf/cm<sup>2</sup>}  
200 to 305 kPa {2.0 to 3.1 kgf/cm<sup>2</sup>}  
200 to 340 kPa {2.0 to 3.5 kgf/cm<sup>2</sup>}  
200 to 390 kPa {2.0 to 4.0 kgf/cm<sup>2</sup>}

#### Supply air pressure

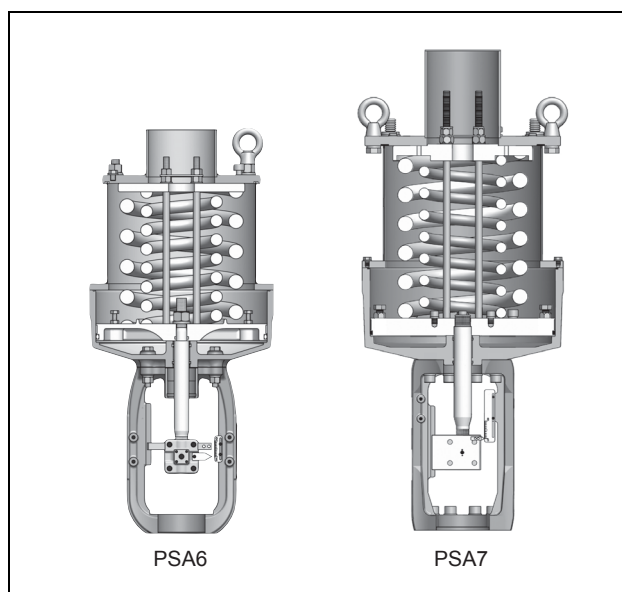
260 to 500 kPa {2.6 to 5.0 kgf/cm<sup>2</sup>}

#### Air connection

Rc1/4, Rc3/8,  
1/4NPT or 3/8NPT internal thread as option

#### Ambient temperature range

-30 to 70 °C



#### Optional accessories (provided upon request)

Positioner\*, pressure regulator with filter, Manual operating device\*, limit switch, solenoid valve, motion transmitter, booster relay, lock-up valve, and others.

*Note* Accessories with the asterisk mark (\*) are selected from the following types depending on the actuators to be combined.

Model number	Positioner		Manual operating device
	P/P	I/P	
PSA6R	HTP/ VPP08	AVP/HEP	Side mounted hand wheel
PSA7R	VPP08	AVP/HEP	Side mounted hydraulic operator

#### Performance (With positioner)

Output force : Refer to Table 1  
Hysteresis error: Within 2% F.S.  
Linearity : Within ± 2% F.S.

#### External dimensions

Refer to Figure 1, 2 and Table 2, 3.

#### Weight

Refer to Table 2 and 3.

#### Finish

Blue (Munsell 10B5/10), silver is also available as standard.

Table 1 Output force, stroke, etc.

Model No.	Maximum stroke (mm)	Nominal diaphragm area (cm <sup>2</sup> )	Internal capacity of the cylinder (l)	Output force
PSA6R	50	1,100	8.1	22,000 N {2,200 kgf}
	100		14.4	
PSA7R	50	2030	17.2	40,000 N {4,000 kgf}
	75		22.7	
	100		28.2	

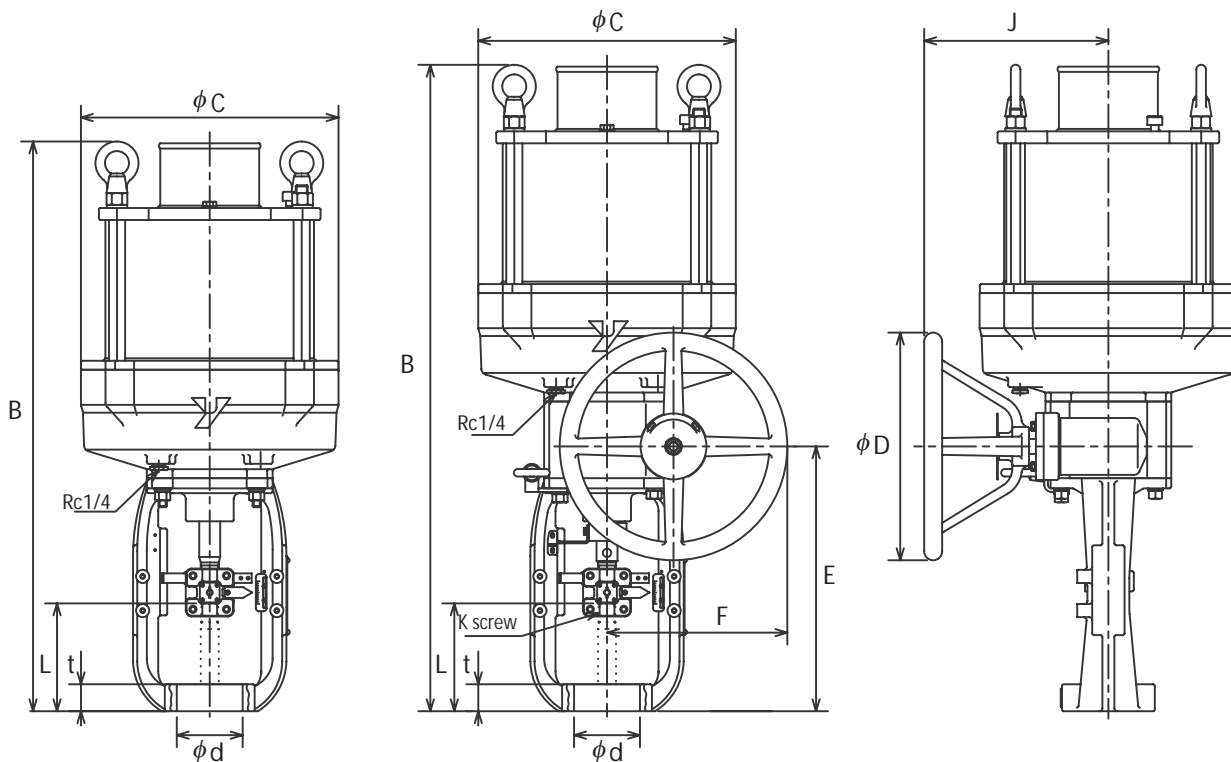


Fig.1-1 Without hand wheel

Fig.1-1 With hand wheel (front)

Fig.1-3 With hand wheel (side)

Figure 1 External dimensions of PSA6R

Table 2 External dimensions and weight of PSA6R

[unit : mm]

Model No.	Maximum stroke	Manual hand wheel	B	ϕC	L	K screw	t	ϕd	F	E	J	ϕD	Weight (kg)
PSA6R	50	Without	951	479	180	M28 × 1.5	45	110	-	-	-	-	165
		With	1,079						301	446	307	380	200
	100	Without	1,251						-	-	-	-	210
		With	1,430						301	492	307	380	250

Note) L dimensions are as measured when the piston is in the lower end position

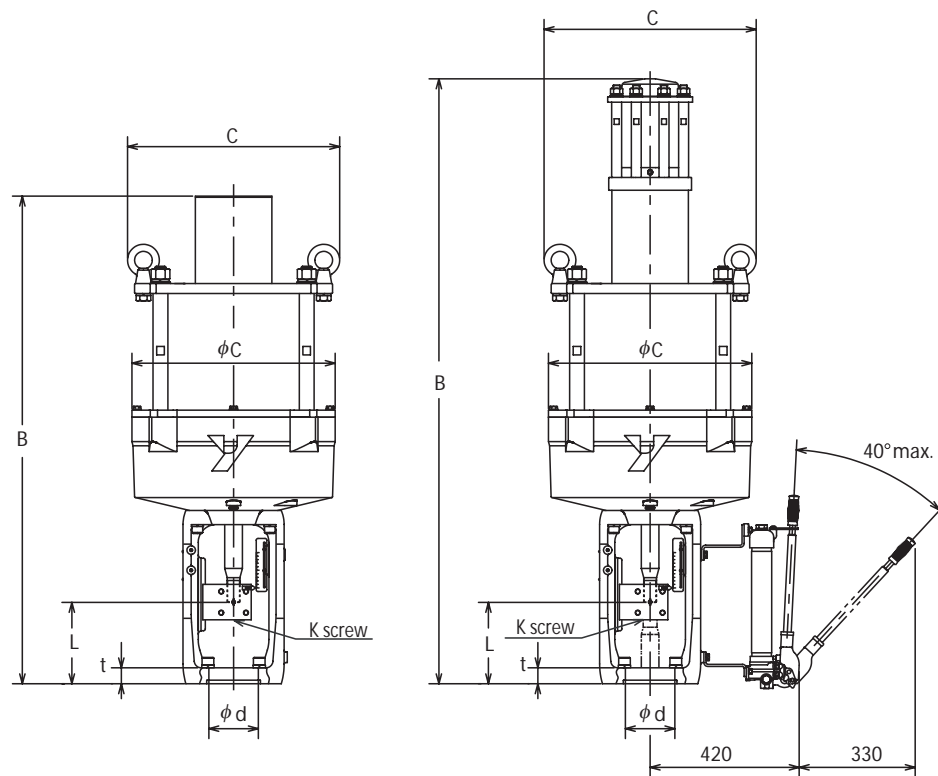


Fig.2-1 Without hand wheel

Fig.2-2 With Hydraulic hand wheel

Figure 2 External dimensions of PSA7R

Table 3 External dimensions and weight of PSA7R

[unit : mm]

Model No.	Maximum stroke	Manual hand wheel	B	C	φ C	L	K screw	t	φ d	Weight (kg)
PSA7R	100	Without	1380	600	650	230	M39 × 2	45	138	450
		Equiped (Hydraulic)	1715							550

L dimensions are as measured when the piston is in the lower end position

**Ordering Information**

When ordering, please specify;

- 1) Model Number: PSA6 / 7
- 2) Spring range
- 3) Stroke
- 4) Optional accessories

*Specifications are subject to change without notice.*

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