

# Springless type Piston Cylinder Piston Motor

## Model DAP560/ 1000/ 1500

### OVERVIEW

Piston motor (model DAP) is a sturdy double acting cylinder which operates on an operating air pressure higher than that for the G-O-Motor and which provides a high power output which usually is used to actuate a high pressure control valve. For proportional action control, AVP30X with reversing relay, VPP02/ 03, or HEP25/ 26 double-acting positioner is used.

### SPECIFICATIONS

#### Types

Springless type piston cylinder

#### Action

Direct or Reverse action

#### Materials

- Cylinder, Yoke : Carbon steel (SCPH2)
- Piston rod : Stainless steel (SUS304)
- Guide bushing : Bronze (BC6)

#### Supply pressure

200 to 700 kPa {2 to 7 kgf/cm<sup>2</sup>}

#### Air connection

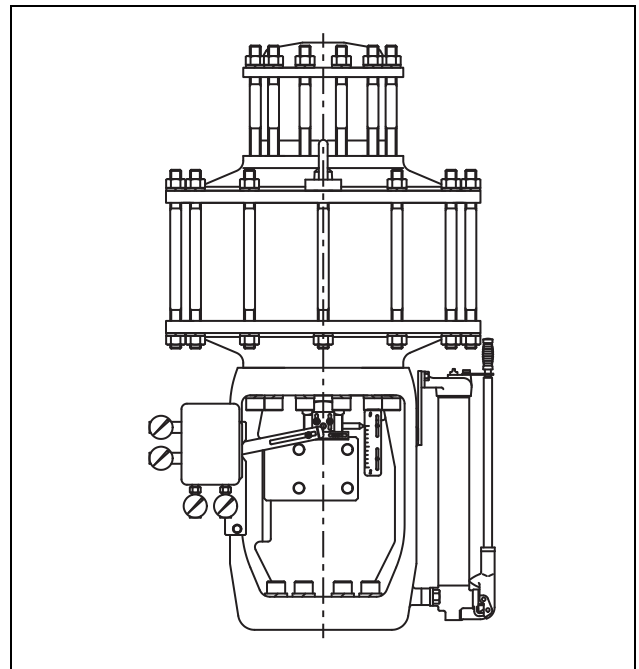
Rc 1/4, Rc 3/8, Rc 1/2, 1/4NPT, 3/8NPT

#### Ambient temperature

-30°C to +70°C

#### Optional accessories

Positioner (AVP30X with reversing relay, VPP02/ 03, HEP25/ 26), pressure regulator with filter, manual handle



(hydraulic), limit switch, solenoid valve, motion transmitter, air fail back-up system, air fail lock system and others.

*Note) For the specifications of optional items, refer to the specification sheet or installation drawings of respective accessories.*

#### Performance

##### Hysteresis error

With positioner : Within 1% F.S.

##### Linearity

With positioner : Within  $\pm$  1% F.S.

Table 1 Output Force and Stroke

Unit: kN {kgf/cm<sup>2</sup>}

Item	Maximum Stroke (mmm)	Cylinder Dia. (mm)	Output Force (According to supply air press. kPa {kgf/cm <sup>2</sup> })					
			200 {2.0}	300 {3.0}	400 {4.0}	500 {5.0}	600 {6.0}	700 {7.0}
DAP560	100	300	11.2 {1,100}	16.8 {1,700}	22.4 {2,200}	28.0 {2,800}	33.6 {3,400}	39.2 {3,900}
DAP1000		390	20.0 {1,900}	30.0 {2,900}	40.0 {3,800}	50.0 {4,800}	60.0 {5,700}	70.0 {6,700}
DAP1500		484	30.0 {2,900}	45.0 {4,400}	60.0 {5,800}	75.0 {7,300}	90.0 {8,800}	105.0 {10,200}

*Note) When the control end device is under an adverse condition (such that the stability is poor), it is recommended to select the output at 50 to 70% of the values indicated in the table.*

**DIMENSIONS**

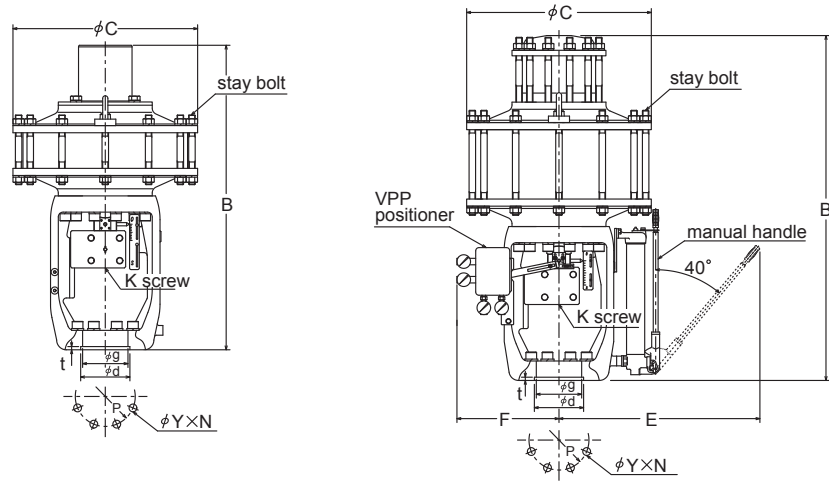


Figure 1 External dimensions (w/ manual handle)

Table 2

Unit: mm

Model	Handle	E	Stroke	B	φC	K screw	t	φg	φd	F	p <sup>pc</sup>	Y	N	Stay bolt
DAP560	With	640	50	910	380	380	4	110	120	265	-	-	-	φ20 x 4
			100	1010										
			150	1120										
	Without	-	50	880										
			100	980										
			150	1090										
DAP1000	With	640	50	925	470	470	10	140	152	265	185	24	8	φ20 x 8
			100	1125										
			150	1205										
	Without	-	50	895										
			100	995										
			150	1105										
DAP1500	With	665	50	960	570	570	10	140	152	260	185	24	8	φ20 x 12
			100	1060										
			150	1295										
	Without	-	50	940										
			100	1040										
			150	1275										

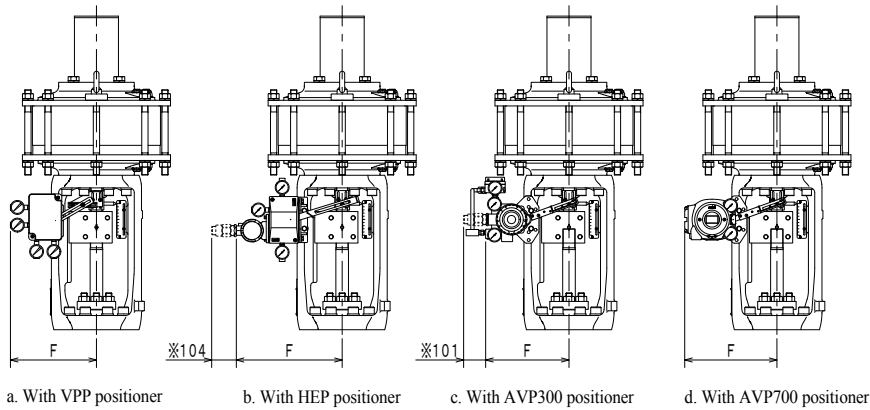


Figure 2 Dimensios of actuator with positioner

Table 3

Unit: mm

Model No.	Manual handle	Stroke	VPP	HEP	AVP300	AVP700
<b>DAP560</b>	With	50	275	336	265	293
	Without	100				
	With	50				
	Without	100				
<b>DAP1000</b>	With	50	275	336	265	293
	Without	100				
	With	50				
	Without	100				
<b>DAP1500</b>	With	50	265	380	301	329
	Without	100				
	With	50				
	Without	100				

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*Specifications are subject to change without notice.*

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