

## PNEUMATIC CONTROL VALVES

### PWV40I

(WV40I globe valves series with linear actuators PA series)

#### DESCRIPTION

The PWV40I control valves are single seated, two-way body constructed with in-line straight connections. The PA pneumatic actuator is rubber diaphragm and multi-springs. Its action can be DA -direct action (air to close) or RA-reverse action (air to open). The PWV40I valves have been designed to assure an accurate control in any process condition. Their wide application ranges allows the use of this valve with the most common process fluids such as water, superheated water, steam, air, gas and other non corrosive fluids.

#### MAIN FEATURES

Single seated, two ways, direct or reverse action valve.  
Valve top flange permanently attached to the body, removal is unnecessary for replacing the actuator.  
Stainless steel construction and soft sealing as standard.

**OPTIONS:**

- Position transmitter 4-20 mA
- Pneumatic pilot positioner
- Electropneumatic pilot positioner
- Air filter regulator
- Top-work manual handwheel

**USE:**

- Saturated and superheated steam.
- Hot and superheated water.
- Air, gases and other noncorrosive fluids.

**AVAILABLE MODELS:** PWV40I

**VALVE SIZES:** DN15 to DN25

**CONNECTIONS:** Sandwiched between flanges as per EN 1092-1 PN16/40

**ACTUATORS:** PA-205; PA-280; PA-340.

**ACTUATOR CONN:** 1/4" NPT-F

**CONTROL SIGNAL:** 0,2 - 1 bar ; 0,4 - 1,2 bar ; 0,4 - 2 bar .

**HOW TO SELECT:** Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow of steam or water. Refer to valve calculation data sheet or consult the factory.



VALVE LIMITING CONDITIONS	
PRESSURE / TEMPERATURE	
40 bar	-10/100°C
33,7 bar	200 °C
31,8 bar	250 °C
29,7 bar	300 °C

Maximum temperature limited to the valve packing selected.

Valves with soft seating: max.temperature 200°C

#### MAX. AIR SUPPLY

**PRESSURE:** 3,5 bar

#### AMBIENT

**TEMPERATURE:** -20°C ...+70°C

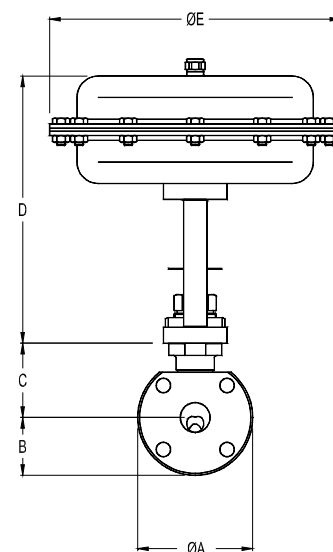
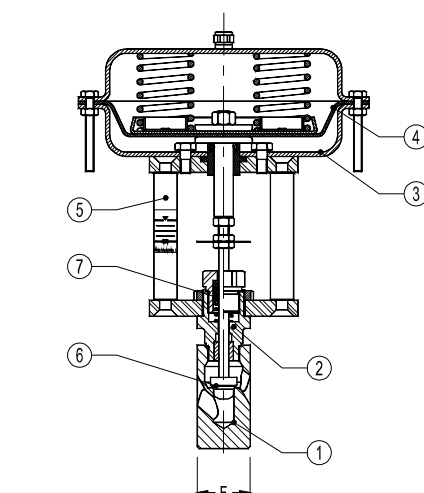
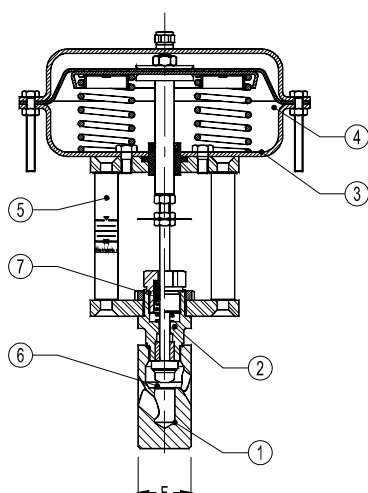
**BONNET :** From -5°C to +200°C (standard)  
Finned for temperature >200°C

**STEM SEALING:** PTFE/GR V-Rings - up to 220°C (Standard bonnet)  
Graphite - up to 300°C (Finned bonnet)

**PLUG CHARACT.:** PL - Linear

**PLUG DESIGN:** Contoured  
Microflow

**PORT:** Reduced port



PWV40I DA - Direct action

PWV40I RA - Reverse action

PWV40I - Direct and reverse action from DN15 to DN25

DIMENSIONS - VALVE BODY					
DN	A (mm)	B (mm)	F (mm)	C (mm) BONNET	
				STANDARD	EXTENDED
15	99	45	38	70	140
20	99	45	38	70	140
25	109	55	50	70	140

DIMENSIONS - ACTUATOR			
Type	ø E (mm)	D (mm)	WEIGHT Kgs
		DN15-25 DA/RA	
PA-205	210	235	5,7
PA-280	275	240	8,8
PA-340	335	265	14,3

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve Body	AISI 316 / 1.4401
2	Bonnet	AISI316 / 1.4401
3	* Actuator (Steel)	S235JRG2 / 1.0038
	* Actuator (St. steel)	AISI304 / 1.4301
4	Diaphragm	NBR70
5	Yoke (steel)	C45E / 1.1191
	Yoke (st. steel)	AISI304 / 1.4301
6	Valve plug	St. Steel - PTFE/GR
7	Standard packing	PTFE/GR

\* Electric actuator : see IS EL20.00 E

ACTUATOR STROKE IN mm			
	SIZES		
	DN15	DN20	DN25
Stroke	15	15	15

FLOW RATE COEFFICIENTS			
	SIZES		
	DN15	DN20	DN25
Kvs	1,7	2,2	5,5

 Kvs in m<sup>3</sup>/h , see data sheet IS PV10.00 E ;  
 For conversion Kvs = Cv(US) x 0,855

MAX. PRESSURE DROPS IN BAR (Fluid Open)				
ACTUATOR	CONTROL SIGNAL	SIZES		
		DN15	DN20	DN25
PA-205	0,2 ÷ 1 bar	8	8	7,5
	0,4 ÷ 1,2 bar	12	12	9
	0,4 ÷ 2 bar	14	14	11
PA-280	0,2 ÷ 1 bar	32	27	18
	0,4 ÷ 1,2 bar	41	40	22
	0,4 ÷ 2 bar	52	47	27
PA-340	0,2 ÷ 1 bar	60	60	50
	0,4 ÷ 1,2 bar	80	80	60
	0,4 ÷ 2 bar	100	100	80



ORDERING CODES WV40I									
<b>VALVE CODES</b>		WV	.40	I					.X.
<b>Actuator Type (1)</b>									
Pneumatic Actuator	P								
Electric Actuator	E								
<b>Group Designation</b>									
Globe valve, two way, straight body, wafer type	WV								
<b>Valve Model</b>									
PN40, two way, complete stainless steel valve		.40	I						
<b>Stem Sealing</b>									
PTFE/GR-V-Rings / Standard bonnet									1
Virgin PTFE V-Rings / Standard bonnet									2
Graphite / Standard bonnet									3
Graphite / Finned bonnet									4
<b>Valve Plug</b>									
EQP (equal percentage) - Soft (PTFE-GR)									1
EQP (equal percentage) - Metal AISI316 / 1.4401									3
EQP (equal percentage) - Stellite									4
PL (linear) - Soft (PTFE/GR)									6
PL (linear) - Metal AISI316 / 1.4401									7
<b>Pipe Connection</b>									
Flanged EN 1092-1 PN40									N
<b>Size</b>									
DN 15									15
DN 20									20
DN 25									25
<b>Actuator</b>									(1)
<b>Extras (3)</b>									
E									
<b>ACTUATOR CODES ( pneumatic )</b>									
P.									
<b>Group Designation</b>									
Multi-spring , pneumatic linear actuator	P.								
<b>Actuator Size</b>									
205									1
280									3
340 A - From DN15 to DN25									5
<b>Actuator</b>									
Direct Action									D
Reverse Action									R
<b>Actuator Construction</b>									
Steel construction (painted) - standard									(2)
Stainless steel construction									I
<b>Control Signal</b>									
0,2 - 1 bar (3/15 psi)									15
0,4 - 1,2 bar (6/18 psi)									18
0,4 - 2 bar (6/30 psi)									30

To be introduced on ".X.", if supplied in combination with the valve.

Example:

WV40I valve model EQP soft plug, PTFE/GR stem sealing DN25 complete with reverse action actuator signal 0,4-1,2bar, size340A steel.

Code: PWV40I.11N25.5R18

REMARKS:

- (1)- Indicate actuator type.
- (2)- Omitted if the standard actuator is selected.
- (3)- To be used only when a non-standard combination valve is supplied.

ADCATROL control valves are identified by a serial number on a nameplate, located on the actuator yoke.

Always order spares by using that serial number. If the valve has non-standard extras the serial number has also an E (extras).