

## 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 composed by a 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 allow 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 4-20mA.  
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 non-corrosive fluids.

**AVAILABLE MODELS:** PWV40I.

**VALVE SIZES:** DN 15 to DN 25.

**CONNECTIONS:** Sandwiched between flanges as per EN 1092-1 PN16/PN40.

**PNEUMATIC ACTUATORS:** PA205, PA280, PA340.

**ACTUATOR CONNECTION:** 1/4" NPT-F.

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

**MAX AIR SUPPLY:** 3,5 bar.

**AMBIENT TEMP.:** - 20 °C to 70 °C.

**BONNET:** Standard – up to 220 °C;  
Extended finned – above 220 °C.

**STEM SEALING:** PTFE/GR V-Rings – up to 220 °C.  
Graphite – up to 400 °C.

**PLUG CHARACT.:** PL – Linear.

**PLUG DESIGN:** Contoured;  
Microflow.

**PORT:** Reduced port.

**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 the valve calculation data sheet or consult the factory.

CE MARKING – GROUP 2 (PED – European Directive)	
PN40	Category
DN 15 to DN 25	SEP

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

Max. temp. limited to the valve packing selected;  
Valves with soft seat, max. allow. Temp.: 200 °C.

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

MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316 / 1.4401
2	Bonnet	AISI 316 / 1.4401
3	Actuator (Steel)	S235JRG2 / 1.0038
	Actuator (St. steel)	AISI 304 / 1.4301
4	*Diaphragm	NBR 70
5	Yoke (Steel)	C45E / 1.1191
	Yoke (Stainl. St.)	AISI 304 / 1.4301
6	Valve plug	PTFE/GR; St. steel
7	Standard packing	PTFE/GR

Remarks: For electric actuator, see IS EL 20.00 E.

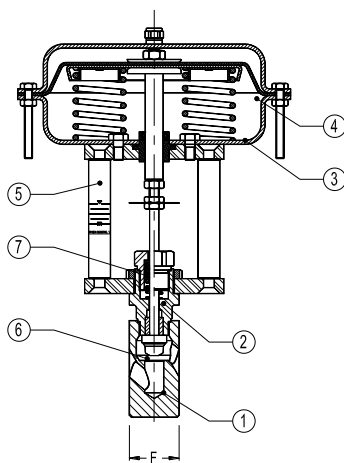
MAX. PERM. PRESS. DROP (bar) – N.C. (fluid to open) Reverse action actuator (air signal to open)				
ACTUATOR	CONTROL SIGNAL	SIZES		
		DN 15	DN 20	DN 25
PA205	0,2 ÷ 1 bar	8	8	7,5
	0,4 ÷ 1,2 bar	12	12	9
	0,4 ÷ 2 bar	14	14	11
PA280	0,2 ÷ 1 bar	32	27	18
	0,4 ÷ 1,2 bar	41	40	22
	0,4 ÷ 2 bar	52	47	27
PA340A	0,2 ÷ 1 bar	60	60	50
	0,4 ÷ 1,2 bar	80	80	60
	0,4 ÷ 2 bar	100	100	80

DIMENSIONS – PNEUMATIC ACTUATOR			
TYPE	E (mm)	D (mm)	WEIGHT (kg)
PA205	210	235	6
PA280	275	245	10
PA340	335	265	15

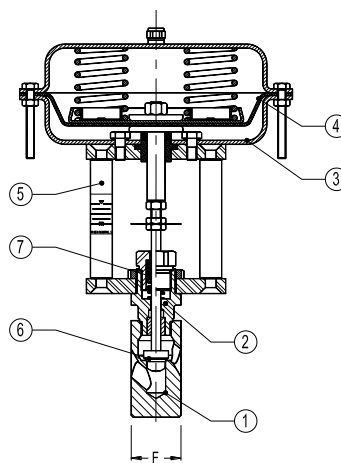
FLOW RATE COEFFICIENTS			
Kvs	SIZES		
	DN 15	DN 20	DN 25
	1,7	2,2	5,5

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

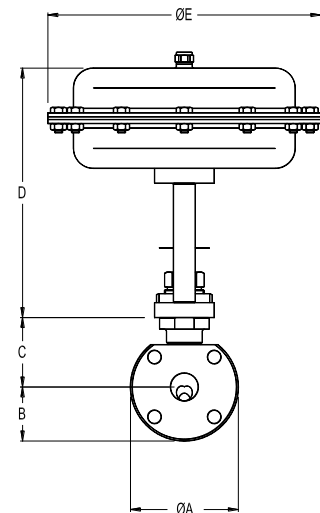
VALVE STROKE (mm)			
STROKE	SIZES		
	DN 15	DN 20	DN 25
	15	15	15



PWV401 DA - Direct action



PWV401 RA - Reverse action



PWV401 - Direct and reverse action from  
DN 15 to DN 25

ORDERING CODES VW40I										
VALVE CODES							P	WV	.40I	.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									.40I	
<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 AISI 316 / 1.4401										3
EQP (equal percentage) – Stellite										4
PL (linear) – Soft (PTFE/GR)										6
PL (linear) – Metal AISI 316 / 1.4401										7
<b>Pipe connection</b>										
Flanged EN 1092 PN40										N
<b>Size</b>										
DN 15										15
DN 20										20
DN 25										25
<b>Actuator</b>										(1)
<b>Extras</b>										
Full description or additional codes have to be added in case of non-standard combination										E

ACTUATOR CODES (pneumatic) *				P.	5	R	18
<b>Group designation</b>							
Multi-spring, pneumatic linear actuator				P.			
<b>Actuator size</b>							
205					1		
280					3		
340A – From DN 15 to DN 50					5		
<b>Actuator type</b>							
Direct action (air to close)						D	
Reverse action (air to open)						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, DN 25, complete with reverse action actuator signal 0,4 – 1,2 bar, size 340A steel:

Code: PWV.40I.11N25.5R18

REMARKS:

- (1) – Indicate actuator type.
- (2) – Omitted if the standard valve is selected.

ADCATrol control valves are identified by a serial number on a nameplate, located on the actuator yoke. When ordering spares, always use that serial number. If the valve has non-standard extras the serial number has also an E (extras).

\* For electric actuator ordering codes, consult our technical department.