

## PNEUMATIC CONTROL VALVES PV928

( V928 hygienic angle valve with linear actuator PA series )

### DESCRIPTION

The PV928 are two or three way control valves with angle connections, specially designed for food, chemical pharmaceutical and cosmetic industries among others. The PA pneumatic actuator is rubber diaphragm and multi-springs. It's action can be DA - direct action (air to close) or RA-reverse action (air to open). The PV928 valves have been designed to assure an accurate control in any process condition and they have self draining design.

### MAIN FEATURES

Quick disassembling through clamp body bonnet coupling  
Completely made from solid bar stock material  
Valve bonnet permanently attached to the body, removal is unnecessary for replacing the actuator.  
Metal to metal or soft sealing.  
Self draining design.

### STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,5 micron Ra  
External : ≤ 0,8 micron Ra  
( 0,25 micron Ra and electro polished as option)  
Ultrasonic cleaning  
Actuator (stainless steel): satin bead blast finish 1,6 micron Ra  
Actuator (steel): Electrostatic painted

### OPTIONS:

Soft sealing  
Steam barrier  
Low noise and anti-cavitation plugs  
Positioners and position transmitters  
Air filter regulator

### USE:

Saturated steam, hot and superheated water  
Process fluids, liquids, air and gases compatible with the construction

### AVAILABLE MODELS:

PV928L-Two way angle valve  
PV928H-Two way horizontal valve  
PV928M-Three way mixing valve  
PV928D-Three way diverting valve

### VALVE SIZES:

DN15 to DN100

### CONNECTIONS:

DIN  
Tube weld, clamp ferrules and threads

### VALVE PORT:

Full port as standard  
Reduced or micro flow on request

### PLUG TYPES:

Equal percentage (EQP)  
Linear (PL)

### PACKAGING:

Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and vacuum sealed with recyclable plastic film to avoid contamination.



LIMITING CONDITIONS	
Valve model	V928
Body design conditions	PN 16
Maximum operating pressure	13 bar @ 38 °C
Max. operating steam pressure	6 bar
Max. oper. temperature steam and w ater	170 °C
Max.operating temperature with air	150 °C
Minimum operating temperature	- 10 °C

Higher and low er limits on request

CE MARKING (PED - European Directive 97/23/EC)	
PN 16	Category
DN15 to DN50	SEP - art. 3, paragraph3
DN65 to DN100	1 (CE Marked)

### PNEUMATIC

ACTUATORS: PA-205,PA-280,PA-340,PA-435

### ACTUATOR

CONNECTIONS: ¼" NPT-F

### CONTROL

SIGNAL: 0,4 – 1,2 bar; 0,4 – 2 bar

ELECTRIC ACT.: Consult IS EL20.00 E

MAX.AIR SUPPLY: 3,5 bar

### AMBIENT

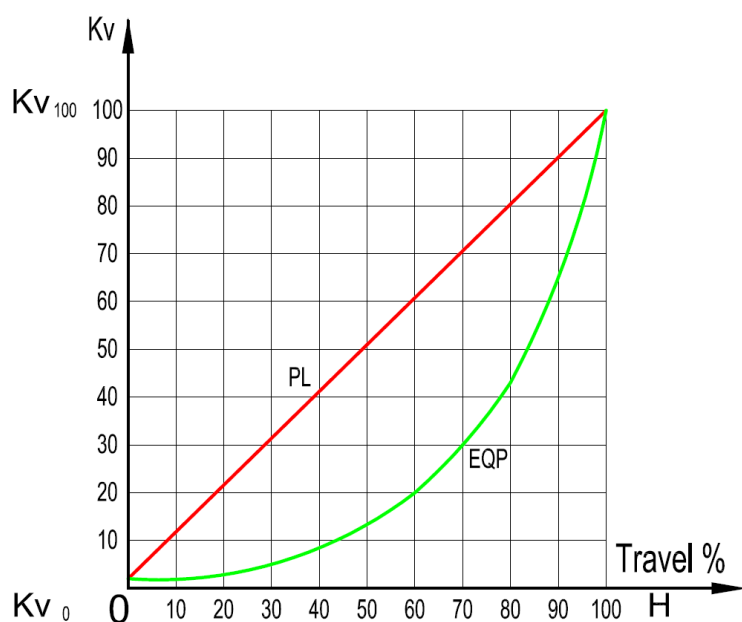
TEMPERATURE: -20°C ....+70°C

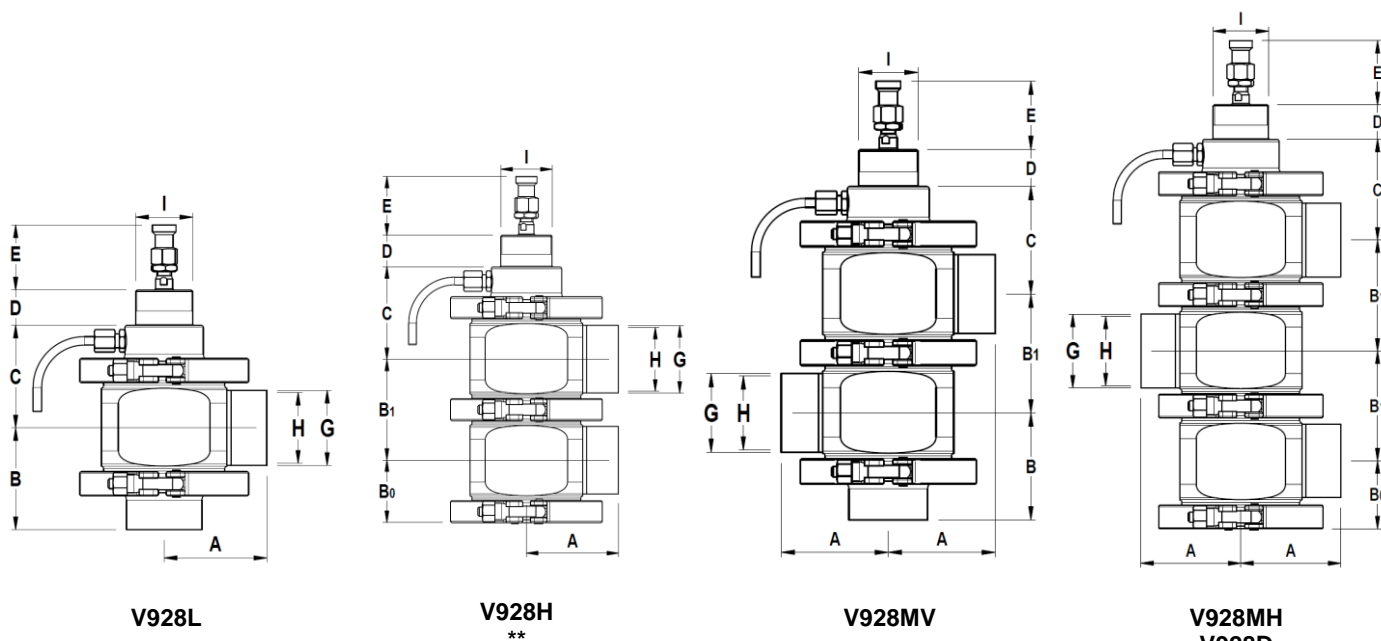
FLOWRATE COEFFICIENTS Kvs (m3/h)										
SEAT $\phi$ mm	VALVE STROKE mm	VALVE SIZES								
		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
4 *	20	0,1	—	—	—	—	—	—	—	—
4 *		0,25	—	—	—	—	—	—	—	—
4 *		0,5	—	—	—	—	—	—	—	—
8 *		1	—	—	—	—	—	—	—	—
8 *		1,5	—	—	—	—	—	—	—	—
8 *		2	2,4	—	—	—	—	—	—	—
12		2,3	2,8	3	—	—	—	—	—	—
12		2,9	3,7	4	4,3	—	—	—	—	—
15		4,2	5,2	6,5	7,8	8,4	—	—	—	—
19		7	8,7	9,8	11,2	12,3	—	—	—	—
25		12	14,7	18	21,1	23	—	—	—	—
32		—	—	—	17,8	21	25,4	31	34	—
38		—	—	—	—	22,2	27,7	34,6	40,8	44,7
50		—	—	—	—	—	40,1	49	61	68
65	30	—	—	—	—	—	63,4	79,2	91	
76		—	—	—	—	—	—	89,7	112,1	
96		—	—	—	—	—	—	—	136,7	

\* Microflow available only with contoured linear characteristic.

For conversion  $Kvs = Cv(US) \times 0,855$

HOW TO SELECT: Never size the valve seat according to the pipe diameter in which it has to be fitted, but according to the required actual fluid flow / Kvs. Refer to the valve calculation data sheet or consult the factory.





VALVE DIMENSIONS (mm)															
SIZE DN	A(1)	B(1)	A(2)	B(2)	A(3)	B(3)	B0	B1	C	D	E	G	H	I	WGT. Kgs *
15	45	45	57	65	70	78	34	50	56	25	45	19	16	M40x1,5	2,1
20	45	45	57	65	72	80	34	50	56	25	45	23	20	M40x1,5	2,3
25	55	55	55	66	63	84	36	55	59	25	45	29	26	M40x1,5	2,7
32	56	56	69	71	88	91	40	62	63	25	45	35	32	M40x1,5	3,8
40	64	64	77	74	74	97	45	73	69	25	45	41	38	M40x1,5	3,9
50	72	72	83	80	82	107	51	85	75	25	45	53	50	M40x1,5	5,1
65	86	86	92	99	124	130	64	110	92	25	45	70	66	M45x1.5	9,9
80	109	109	92	106	128	141	71	125	100	25	45	85	81	M45x1.5	10,8
100	119	119	98	116	134	151	80	144	109	25	45	104	100	M45x1.5	16,2

Face to face dimensions are not standardized. Different dimensions available on request.

Key: A(1)-B(1) - tube weld DIN-EN 10357 Series A (DIN 11850);

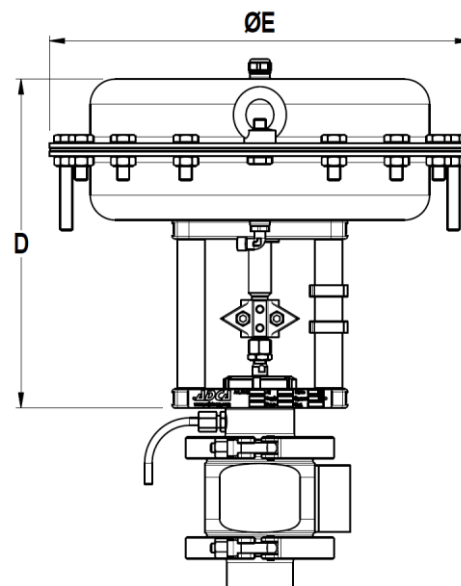
A(2)-B(2) - clamp ferrules DIN 32676 Series A; A(3)-B(3) - male thread DIN 11864T1 Form A

Other dimensions and standards on request.

\* Weight is based on the standard valve V928L with tube weld connections, for the other versions, please consult.

\*\* Configuration with overlapped connections only possible for tube weld design.

ACTUATOR DIMENSIONS			
ACTUATOR			
Type	D (mm)	E (mm)	WGT. Kgs
PA-205	235	210	5,7
PA-280	240	275	8,8
PA-340	265	335	14,3
PA-435	295	430	24,5

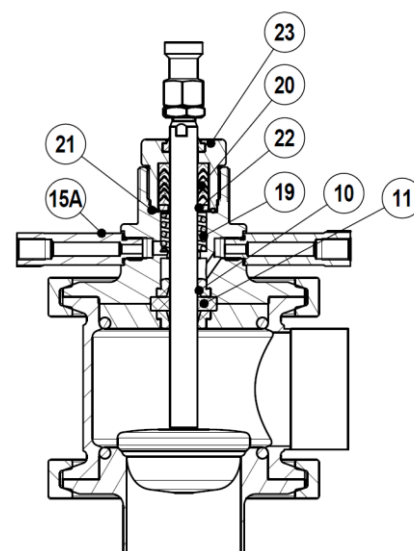
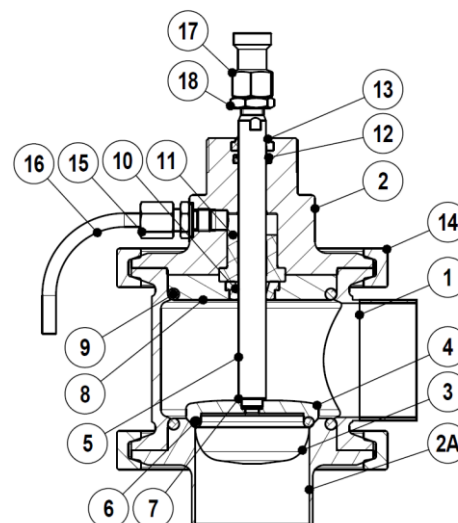


MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body	AISI316L / 1.4404
2	Bonnet	AISI316L / 1.4404
2A	Bottom cover/connection	AISI316L / 1.4404
3	* Valve plug	AISI316L / 1.4404
4	Plug disc	AISI316L / 1.4404
5	* Stem	AISI316L / 1.4404
6	Valve plug seal	High performance EPDM
7	O-ring	High performance EPDM
8	Centering ring	AISI316L / 1.4404
9	* O-ring	High performance EPDM
10	* Shaft seal	High performance EPDM
11	* Guide bushing	TFM 1600
12	* O-ring	EPDM
13	* Scraper ring	VITON
14	Clamp	AISI316 / 1.4401
15	Leak-off connection	AISI304 / 1.4301
15A	Nipple	AISI316L / 1.4404
16	Discharge pipe	AISI316 / 1.4401
17	Nut adapter	AISI316 / 1.4401
18	Lock nut	A2 - 70
19	Spring	AISI302 / 1.4300
20	*Packing (chevron rings)	PTFE
21	*O-ring	High performance EPDM
22	*Washer	AISI304 / 1.4301
23	Gland nut	AISI316L / 1.4404
50	Yoke (steel)	C45E / 1.1191
	Yoke (stainless steel)	AISI304 / 1.4301
51	Actuator (steel)	S235JRG2 / 1.0038
	Actuator (stainless steel)	AISI304 / 1.4301
52	* Diaphragm	NBR 70
53	Lock nut	CF8 / 1.4308
54	Coupling (travel indicator)	CF8 / 1.4308

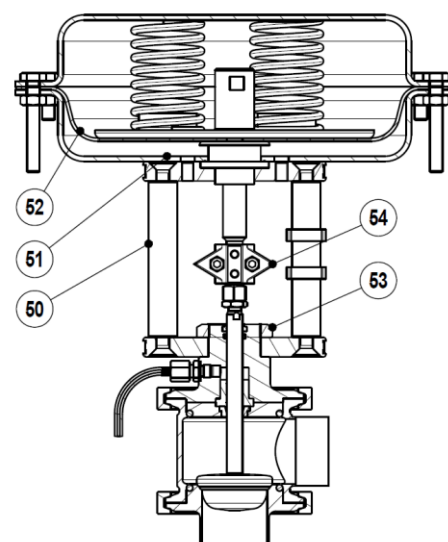
\* Available spare parts. \*\* On request

Remarks: FDA/USP Class VI seals certificate on request

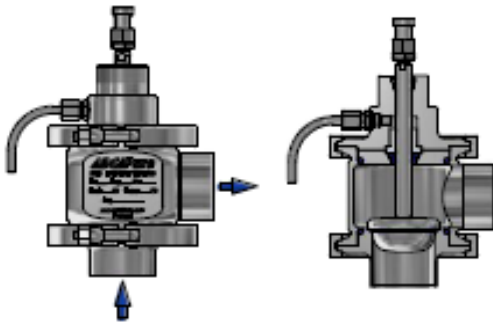
All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



Valve with steam barrier option

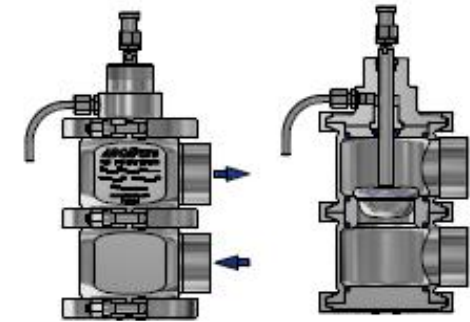


HOUSINGS DESIGNS AND CONNECTIONS



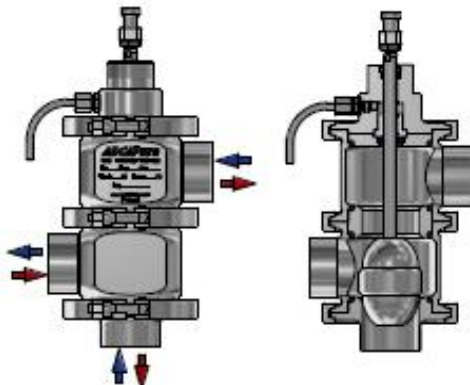
**V928 Type L**

Two way basic hygienic standard design with one angle main valve body type connection.  
The vertical valve inlet has the integrated valve seat.  
The flow connection should always be against the plug closing direction.



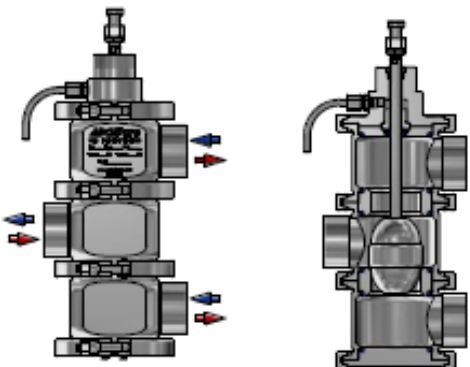
**V928 Type H**

Two way design with two main valve bodies each one with an horizontal connection.  
The valve seat is placed between the two main bodies.  
**Configuration with overlapped connections only possible for tube weld design.**



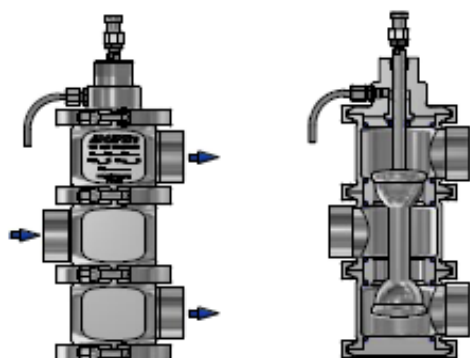
**V928 Type MV**

Three way valve design with two main valve bodies and with a bottom vertical connection.  
This valve can be used as mixing or diverting flow.



**V928 Type MH**

Three way valve design with three main bodies and all the connections on the horizontal plan.  
This valve can be used as mixing or diverting.



**V928 Type D**

Three way valve design with three main bodies and connection in an horizontal plan.  
This valve is designed for flow diverting.