

## TWO-WAY HYGIENIC CONTROL VALVES V928

### DESCRIPTION

The ADCAPure V928 is a series of two or three-way hygienic control valves with angle or horizontal connections. These valves are designed to regulate and accurately control flow of liquids and gases and are suitable for hygienic applications found in the pharmaceutical, cosmetic, fine chemical and food & beverage industries. The V928 can be assembled with pneumatic, hydraulic or electric actuators, for modulating and shut-off control tasks.

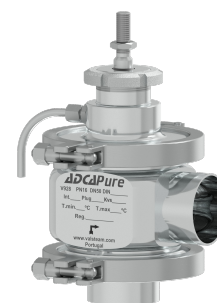
### MAIN FEATURES

Completely manufactured from bar stock material.  
Body and bonnet are connected by a clamp connection, allowing fast and easy maintenance procedures.  
Cavity-free with no air trap locations.  
Metal to metal or soft sealing.

### STANDARD SURFACE FINISH

Internal wetted parts:  $\leq 0,51 \mu\text{m Ra} - \text{SF1}$ .  
External:  $\leq 0,76 \mu\text{m Ra} - \text{SF3}$ .  
Other surface conditions see TIS.GIA – General information ADCAPure.  
Ultrasonic cleaning.

OPTIONS:	Soft valve sealing. Reduced bore trims. Steam barrier.
USE:	Saturated steam, hot and superheated water. Process fluids, liquids, air and gases compatible with the construction.
AVAILABLE MODELS:	V928L – two-way angle design. V928H – two-way horizontal design.
SIZES:	DN 15 to DN 100.
CONNECTIONS:	DIN threads, clamp ferrules or tube weld (ETO) ends. Others on request.
PACKAGING:	Assembling and packaging in a clean room certified according to ISO 14644-1. The product is end capped and sealed with recyclable thermo-shrinkable plastic film, to avoid contamination.
INSTALLATION:	Horizontal installation. See IMI - Installation and maintenance instructions.





CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	Category
DN 15 to 50	SEP
DN 65 to 100	1 (CE Marked)

LIMITING CONDITIONS *	
Maximum allowable pressure	16 bar @ 20 °C
Maximum operating pressure	10 bar
Maximum operating pressure (steam)	6 bar
Maximum operating temperature	150 °C
Maximum operating temperature (steam and water) **	170 °C
Minimum operating temperature	-10 °C

\* Other limits on request. Maximum operating conditions may be limited by the valve end connections due to normative restrictions.

\*\* With EPDM seals.

PLUG DESIGN

PARABOLIC		PARABOLIC (SOFT SEALING)	
	<b>Sealing:</b>	Metal to metal	
	<b>Characteristic:</b>	Equal percentage (EQP) or linear (PL)	
	<b>Flow direction:</b>	From below	
	<b>Rangeability:</b>	50:1 (EQP) or 30:1 (PL)	
	<b>Leakage:</b>	Class IV, acc. to IEC 60534-4	
	<b>Sealing:</b>	EPDM, PTFE or FPM	
	<b>Characteristic:</b>	Equal percentage (EQP) or linear (PL)	
	<b>Flow direction:</b>	From below	
	<b>Rangeability:</b>	50:1 (EQP) or 30:1 (PL)	
	<b>Leakage:</b>	Class VI, acc. to IEC 60534-4	

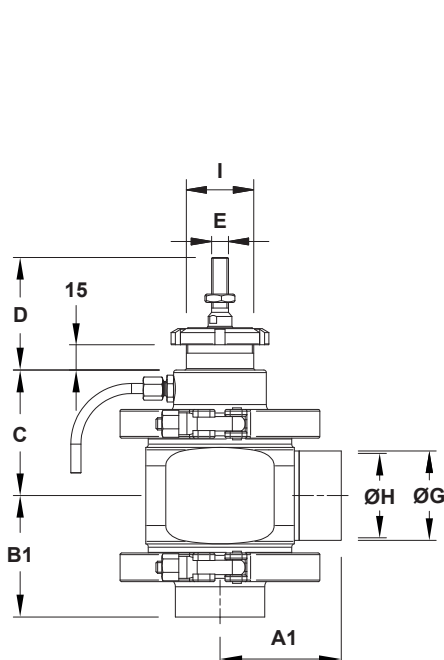
FLOW RATE COEFFICIENTS – PARABOLIC PL AND EQP PLUGS

SIZE	Kvs (m³/h)																	
	0,1 *	0,25 *	0,5 *	1	1,5	2	2,3	2,9	4	6,3	10	16	25	40	63	100	160	
DN 15	●	●	●	●	●	●	●	●	●									
DN 20							●	●	●	●								
DN 25							●	●	●	●	●							
DN 32								●	●	●	●	●						
DN 40									●	●	●	●	●					
DN 50										●	●	●	●	●				
DN 65											●	●	●	●	●			
DN 80												●	●	●	●	●		
DN 100													●	●	●	●	●	
SEAT Ø (mm)	4			8			12			15	19,2	25	32	38	50	65	76	96
STROKE (mm)	20															30		

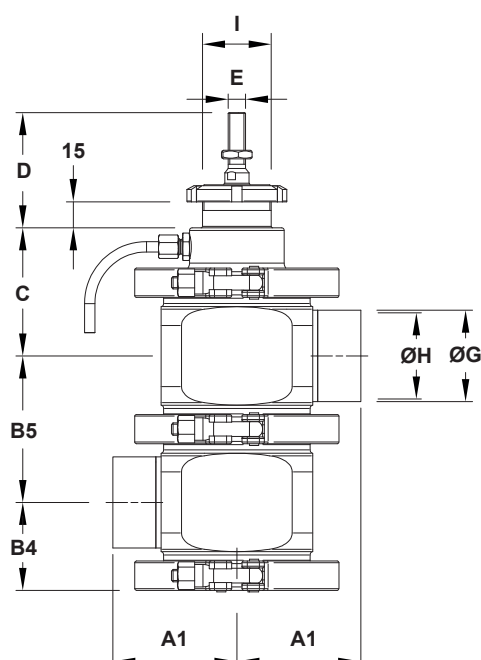
\* Microflow is only available with linear characteristic and metal to metal sealing.

For conversion Kvs = Cv (US) x 0,865.

DIMENSIONS



V928L



V928H

DIMENSIONS (mm)									
DIMENSION	SIZE								
	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
A1	49	49	55	64	64	72	84	92	119
B1	45	45	55	62	64	72	86	109	119
B4	34	36	36	43	45	51	64	71	84
B5	51	55	55	68	73	85	110	125	144
C	57	59	59	66	69	75	91	99	108
D	67 / 77 *						70 / 77 *		
E	M10 / M10 x 1 *								
F	34	34	50,5	50,5	50,5	64	91	106	119
ØG	19	23	29	35	41	53	70	85	104
ØH	16	20	26	32	38	50	66	81	100
I	M40 x 1,5						M45 x 1,5		
WGT. (kg) **	2,4	2,5	2,6	4,3	4,4	4,7	10,8	11,8	17,1

Remarks: Face to face dimensions are not standardized. Other dimensions and standards on request.

Configurations with overlapped connections are only possible for tube weld (ETO) versions.

A1 and B1 – Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

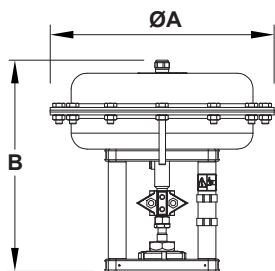
A2, B2 and F – Clamp ferrules according to DIN (DIN 32676-A). Dimension "F" refers to the ferrule flange diameter.

A3 and B3 – Hygienic male threads according to DIN (DIN 11851) for pipes according to DIN 11866-A (DIN 11850-2).

Alternative: Aseptic male threads according to DIN (DIN 11864 -1 Form A) for pipes according to DIN 11866-A (DIN 11850-2).

\* When ordering without actuator specify the preferred dimension, if any.

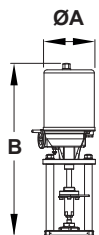
\*\* Based on the standard valve V928L with tube weld (ETO) connections. For other versions, consult manufacturer.



DIMENSIONS – PA SERIES PNEUMATIC ACTUATORS (mm)								
DIMENSION	PA10	PA206	PA25	PA281	PA40	PA341	PA436	PA80
<b>ØA</b>	170	209	250	275	300	336	430	405
<b>B</b>	251	236	260	243	325	288	316 / 336 *	505
<b>WEIGHT (kg)</b>	6,3	6,2	10,1	9,6	18,7	14,3	24,4 / 28 *	50,4

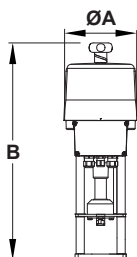
\* For actuators with spring ranges 1 - 2 bar; 1,5 - 3 bar and 2 - 4 bar.

For more information, please consult IS PA.100 and IS PA.140 – PA Linear pneumatic actuators.



DIMENSIONS – EL SERIES ELECTRIC ACTUATORS (mm)					
DIMENSION	EL12	EL20	EL45	EL80	EL120
<b>ØA</b>	129	148	148	188	188
<b>B</b>	333	485	485	587	587
<b>WEIGHT (kg)</b>	2,1	8	8	13	13

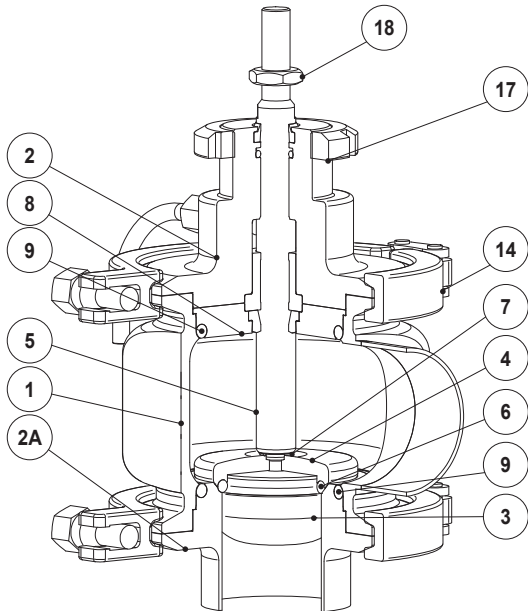
For more information, please consult IS EL.012 – EL Linear electric actuators.



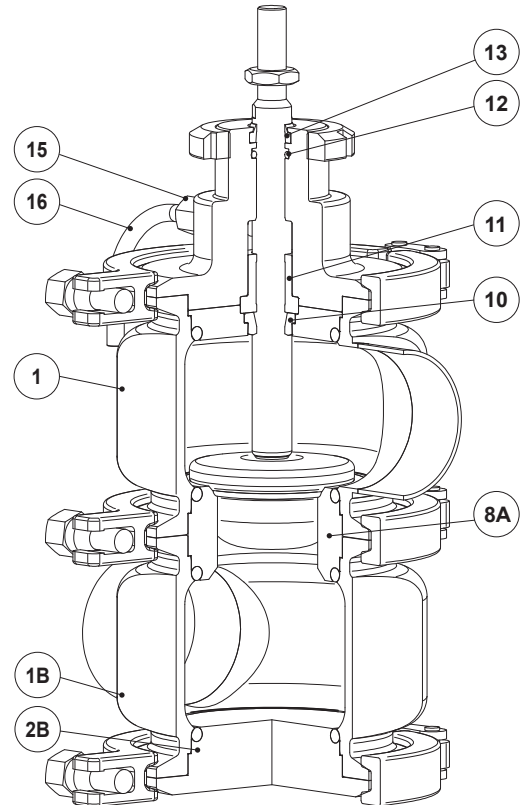
DIMENSIONS – ELS SERIES ELECTRIC ACTUATORS (mm)				
DIMENSION	ELS20	ELS45	ELS80	ELS100
<b>ØA</b>	180	180	180	180
<b>B</b>	518	518	555	555
<b>WEIGHT (kg)</b>	4,5	4,5	7,2	7,2

For more information, please consult IS ELS.020 – ELS Intelligent linear electric actuators.

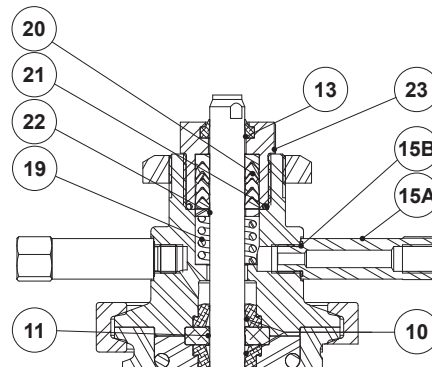
## MATERIALS



V928L



V928H



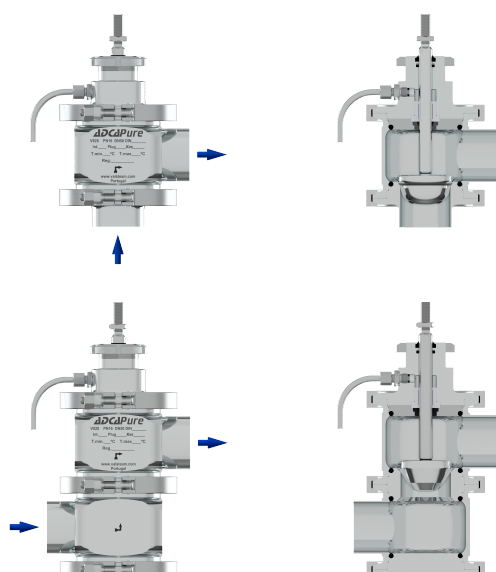
*Optional steam barrier*

MATERIALS		
POS. N°	DESIGNATION	MATERIAL
1	Upper valve body	AISI 316L / 1.4404
1B	Lower valve body	AISI 316L / 1.4404
2	Bonnet	AISI 316L / 1.4404
2A	Bottom connection	AISI 316L / 1.4404
2B	Bottom cover	AISI 316L / 1.4404
3	* Valve plug	AISI 316L / 1.4404
4	* Plug disc	AISI 316L / 1.4404
5	* Stem	AISI 316L / 1.4404
6	* Valve plug seal	** EPDM; PTFE; FPM
7	* O-ring	EPDM
8	Centering ring	AISI 316L / 1.4404
8A	Seat retainer	AISI 316L / 1.4404
9	* O-ring	** EPDM; PTFE; FPM
10	* Shaft seal	** EPDM; PTFE; FPM
11	* Guide bushing	PTFE
12	* O-ring	EPDM; FPM
13	* Scraper ring	FPM; NBR
14	Clamp	AISI 316 / 1.4401
15	Compression fitting	AISI 304 / 1.4301
15A	Nipple	AISI 316L / 1.4404
15B	* O-ring	FPM
16	Discharge pipe	AISI 316 / 1.4401
17	Lock nut	CF8 / 1.4308
18	Lock nut	Stainless steel A2-70
19	* Spring	AISI 302 / 1.4310
20	* Chevron packing set	PTFE
21	* O-ring	EPDM
22	* Washer	AISI 304 / 1.4301
23	Packing nut	AISI 316L / 1.4404

\* Available spare parts; \*\* Others 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.



#### V928L

Two-way angle design with one valve body, a vertical inlet and an horizontal outlet connection.

The vertical inlet connection has an integrated valve seat.

#### V928H

Two-way horizontal design with two valve bodies (upper and lower) and all the connections in the horizontal plain.

The valve seat is placed between the two main valve bodies.

Remark: Configurations with overlapped connections are only possible for tube weld (ETO) versions.

ORDERING CODES V928 a)																	
<b>Valve model</b>	V8L	1	S	U	E	M	E	FD	X	FX	015						
V928L - AISI 316L hygienic control valve, two-way, angle	V8L																
V928H - AISI 316L hygienic control valve, two-way, horizontal	V8H																
<b>Valve series</b>																	
Series 1		1															
<b>Bonnet design</b>																	
Standard			S														
With steam barrier			B														
<b>Flow direction</b>																	
Flow under the plug				U													
<b>Stem and body sealing b)</b>																	
EPDM					E												
PTFE					T												
FPM / Viton (USP Class VI on request)					V												
<b>Valve sealing</b>																	
Metal to metal (class IV)					M												
Soft sealed with EPDM (class VI)					E												
Soft sealed with PTFE (class VI)					T												
Soft sealed with FPM/Viton (USP Class VI on request) (class VI)					V												
<b>Characteristic</b>																	
Equal percentage (EQP)						E											
Linear (PL)						L											
<b>Flow rate coefficient</b>																	
Kvs 4												FD					
See table below for other Kvs value codes																	
<b>Surface finish c)</b>																	
Standard surface finish															X		
Mirror mechanical polished external surfaces (SF1)															P		
Electropolished internal wetted parts (SF5)															E		
<b>Pipe connection</b>																	
Clamp ferrule DIN (DIN 32676-A)																FX	
Hygienic male threads DIN (DIN 11851)																G1	
Aseptic male threads DIN (DIN 11864-1 Form A)																G2	
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)																FI	
<b>Size</b>																	
DN 15																	015
DN 20																	020
...																	
<b>Special construction / Additional options</b>																	
Full description or additional codes have to be added in case of a non-standard combination																	E

a) Codification for valve only. For actuator codes, refer to the appropriate information sheet. b) When the bonnet with heating chamber is selected the stem sealing is achieved through a PTFE V-Rings/chevron packing set. In which case this field only specifies the body sealing material. c) Consult TIS.GIA – General information ADCAPure – for further details and other surface finish options.

FLOW RATE COEFFICIENT CODES																	
Kvs	0,1	0,25	0,5	1	1,5	2	2,3	2,9	4	6,3	10	16	25	40	63	100	160
Code	M4	M2	M1	R4	R3	R2	R1	R0	FD	FE	FF	FG	FH	FI	FJ	FL	FM