LRQA CERTIFIED ISO 9001

Valsteam ADCA is an EHEDG Member

SANITARY PRESSURE SUSTAINING VALVE
PS161

DESCRIPTION

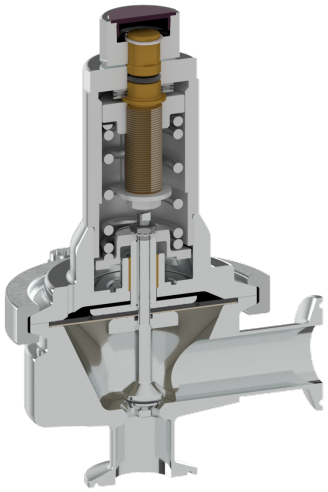
The ADCAPure PS161 is a series of angle design direct acting diaphragm sensing pressure sustaining valves.
These regulators, available with spring or dome-loading, are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials and valve design.

MAIN FEATURES

Spring or dome-loaded.
Non-rising adjustment knob.
Compact design with clamped body.
Available with low pressure diaphragm.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

Internal wetted parts: ≤ 0,51 micron Ra – SF1.
External: ≤ 0,76 micron Ra – SF3.
Other surface conditions see IS PV20.00 E – Technical information.
Ultrasonic cleaning.

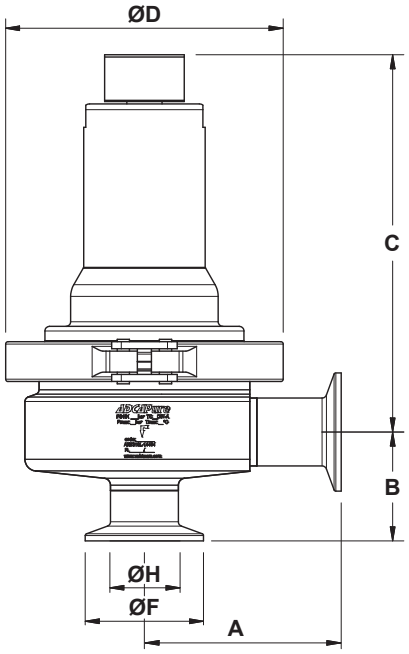


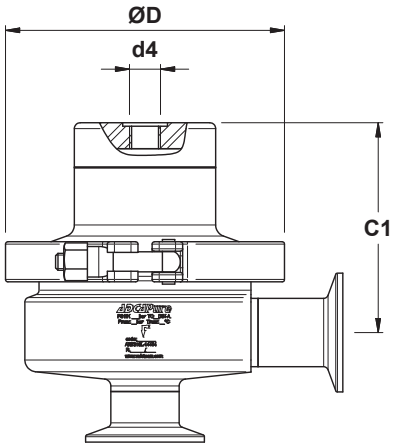
OPTIONS:	Leakage line connection (1/4"). Different soft sealings for liquids and gases. Gauge connection on body. Top cap (adjustment screw with cover). Dome-loaded version.
USE:	Clean steam, compressed air, water and other gases and liquids compatible with the construction.
AVAILABLE MODELS:	PS161.
SIZES:	1/2" to 2"; DN 15 to 50.
REGULATING RANGES:	0,8 to 1,5 bar; 1 to 3 bar; 1,5 to 8 bar.
CONNECTIONS:	ASME BPE, DIN and ISO 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. Horizontal inlet and vertical outlet. See IMI – Installation and maintenance instructions.

LIMITING CONDITIONS	
Valve model	**PS161**
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Minimum upstream pressure	0,8 bar
Maximum operating temperature *	180 ºC

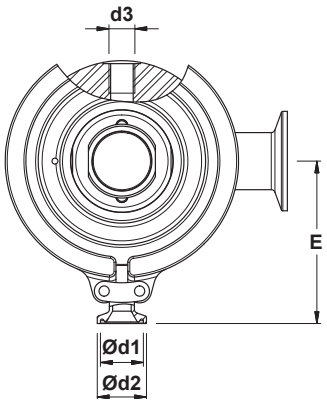
* With PTFE diaphragm and seals. Consult the manufacturer in case of other elastomer materials.

CE MARKING – GROUP 2 (PED – European Directive)	
PN 16	**Category**
1/2" to 2" – DN 15 to 50	SEP





Optional dome-loaded version



Optional pressure gauge connections

DIMENSIONS (mm) ASME BPE

SIZE	A	B	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	WGT. (kg)
1/2"	77	53	156	84	119	25	15,75	1/4"	1/4"	83	25	9,4	4,1
3/4"	77	56	160	88	119	25	15,75	1/4"	1/4"	83	25	15,75	4,4
1"	77	52	163	91	119	25	15,75	1/4"	1/4"	83	50,5	22,1	4,6
11/2"	85	61	204	124	134	25	15,75	1/4"	1/4"	96	50,5	34,8	8
2"	85	67	207	127	134	25	15,75	1/4"	1/4"	96	64	47,5	8,6

DIMENSIONS (mm) DIN

SIZE	A	B	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	WGT. (kg)
DN 15	77	45	160	88	119	25	15,75	1/4"	1/4"	83	34	16	4,4
DN 20	77	40	158	86	119	25	15,75	1/4"	1/4"	83	34	20	4,3
DN 25	84	47	161	89	119	25	15,75	1/4"	1/4"	83	50,5	26	4,6
DN 32	84	50	163	91	119	25	15,75	1/4"	1/4"	83	50,5	32	4,8
DN 40	93	69	202	122	134	25	15,75	1/4"	1/4"	96	50,5	38	8
DN 50	93	75	206	126	134	25	15,75	1/4"	1/4"	96	64	50	8,6

Remarks: Clamp ferrules according to DIN 32676-A; Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS (mm) ISO

SIZE	A	B	C	C1	ØD	Ød1	Ød2	d3 *	d4 *	E	ØF	ØH	WGT. (kg)
DN 15	84	43	159	87	119	25	15,75	1/4"	1/4"	83	50,5	18,1	4,4
DN 20	84	46	162	90	119	25	15,75	1/4"	1/4"	83	50,5	23,7	4,6
DN 25	84	49	164	92	119	25	15,75	1/4"	1/4"	83	50,5	29,7	4,8
DN 32	93	70	202	122	134	25	15,75	1/4"	1/4"	96	64	38,4	8,2
DN 40	93	75	206	126	134	25	15,75	1/4"	1/4"	96	64	44,3	8,8

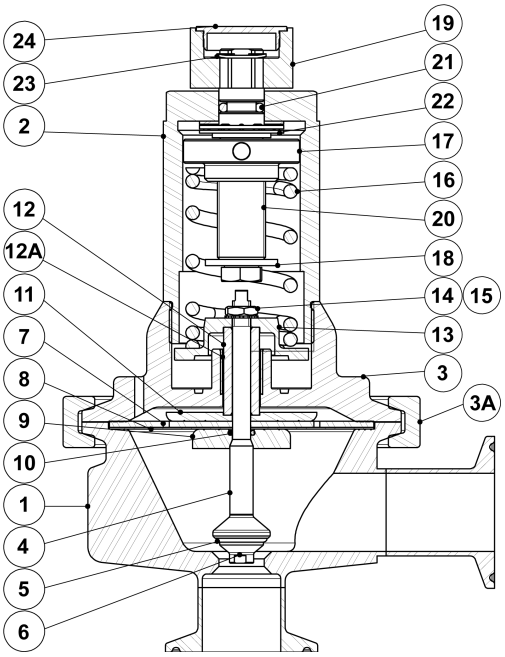
Remarks: Clamp ferrules according to DIN 32676-B; Tube weld (ETO) according to DIN 11866-B (ISO 1127).
* As standard, connections d3 and d4 are female threaded ISO 7 Rp.

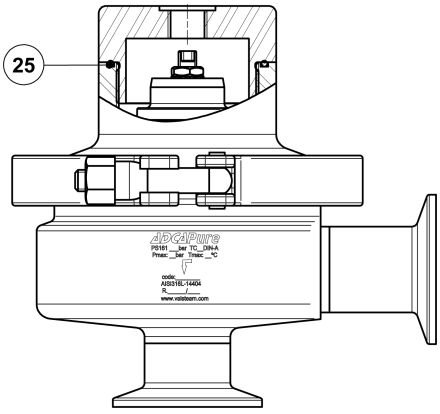
FLOW RATE COEFFICIENTS (m³/h)																
	ASME BPE					DIN						ISO				
SIZE	1/2"	3/4"	1"	11/2"	2"	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 15	DN 20	DN 25	DN 32	DN 40
Kvs	1,3	3	4,2	7	13	2,1	3	4,2	4,2	7	13	2,1	4,2	4,2	7	7

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

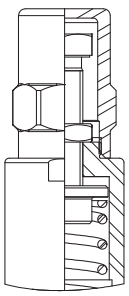
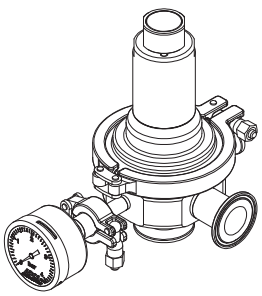
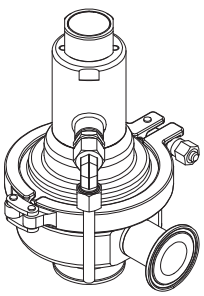
MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
3	Intermediate flange	AISI 316L / 1.4404
3A	Clamp	AISI 316 / 1.4401
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	** EPDM; PTFE; FPM
6	* Valve plug	AISI 316L / 1.4404
7	* Upper diaphragm	EPDM
8	* Lower diaphragm	PTFE (Gylon)
9	Diaphragm plate	AISI 316L / 1.4404
10	* O-ring	EPDM
11	Diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316L / 1.4404
12A	Plain bearing	Bronze
13	Spring plate	AISI 316L / 1.4404
14	Nut	AISI 304 / 1.4301
15	Washer	AISI 304 / 1.4301
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316L / 1.4404
18	Retaining washer	Stainless steel A2-70
19	Adjustment nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Shaft ring	Stainless steel
24	Cover nut	Plastic
25	* O-ring	NBR

* 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.





Optional dome-loaded version (1/4")

OPTIONS		
ADJUSTMENT SCREW WITH TOP CAP	PRESSURE GAUGE CONNECTION	LEAKAGE LINE CONNECTION
		

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ORDERING CODES PS161

Valve model	PS16	1	4	1	T	M	I	X	X	X	DI	15	E
PS161 – AISI 316L / 1.4404 diaphragm sensing pressure sustaining valve	**PS16**												
Valve series													
Series 1		**1**											
Regulating range													
0,8 to 1,5 bar			**4**										
1 to 3 bar			**5**										
1,5 to 8 bar			**6**										
0,8 to 8 bar (dome-loaded) **a)**			**A**										
Flow rate coefficient													
Kvs 1,3 (only applicable to ASME BPE 1/2" size)				**1**									
Kvs 2,1 (applicable to sizes DIN DN 15 and ISO DN 15)				**2**									
Kvs 3 (applicable to sizes ASME BPE 3/4" and DIN DN 20)				**3**									
Kvs 4,2 (applicable to sizes ASME BPE 1", DIN DN 25 to DN 32 and ISO DN 20 to DN 25)				**4**									
Kvs 7 (applicable to sizes ASME BPE 11/2", DIN DN 40 and ISO DN 32 to DN 40)				**6**									
Kvs 13 (applicable to sizes ASME BPE 2" and DIN DN 50)				**8**									
Diaphragm													
PTFE (Gylon)					**T**								
EPDM (non-standard)					**E**								
Seat material b)													
Metal to metal (non-standard, except in ASME BPE 1/2" size)						**M**							
EPDM						**E**							
PTFE						**T**							
FPM / Viton (FDA approval only)						**V**							
Adjustment knob, top cap and leakage line connection													
Stainless steel adjustment knob							**I**						
Top cap (adjustment screw with cover)							**T**						
Stainless steel adjustment knob w/ diaphragm cover leakage connection in case of diaphragm failure							**L**						
Top cap (adjustment screw with cover) w/ diaphragm cover leakage connection in case of diaphragm failure							**U**						
Dome-loaded top **c)**							**X**						
Gauge port options													
Without gauge ports								**X**					
Tri-clamp gauge port on the left side (rel. to the flow direction) – upstream pressure								**7**					
Tri-clamp gauge port on the right side (rel. to the flow direction) – upstream pressure								**6**					
Tri-clamp gauge port on both sides – upstream pressure								**5**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4"								**4**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – ISO 7 Rp 1/4"								**3**					
Threaded gauge port on both sides – upstream pressure – ISO 7 Rp 1/4"								**2**					
Threaded gauge port on the left side (rel. to the flow direction) – upstream pressure – 1/4" NPT								**W**					
Threaded gauge port on the right side (rel. to the flow direction) – upstream pressure – 1/4" NPT								**Y**					
Threaded gauge port on both sides – upstream pressure – 1/4" NPT								**Z**					
Surface finish d)													
Standard surface finish									**X**				
Mirror mechanical polished external surfaces (SF1)									**P**				
Electropolished internal wetted parts (SF5)									**E**				
Special features													
None										**X**			
Degreased for oxygen										**O**			
Pipe connections													
Clamp ferrule ASME BPE											**D**		
Clamp ferrule DIN (DIN 32676-A)											**F**		
Clamp ferrule ISO (DIN 32676-B)											**E**		
Tube weld (ETO) according to ASME BPE											**DI**		
Tube weld (ETO) according to DIN 11866-A (DIN 11850-2)											**FI**		
Tube weld (ETO) according to DIN 11866-B (ISO 1127)											**EI**		
Size													
1/2" or DN 15												**15**	
3/4" or DN 20												**20**	
1" or DN 25												**25**	
DN 32												**32**	
11/2" or DN 40												**40**	
2" or DN 50												**50**	
Special valves / Extras													
Full description or additional codes have to be added in case of a non-standard combination													**E**

a) The loading control pressure can be up to a maximum of 0,2 bar above the required upstream pressure; **b)** ASME BPE 1/2" size is only available with metal to metal sealing; **c)** Must be chosen in case of dome-loaded version; **d)** Consult IS PV20.00 – Technical information – for further details and other surface finish options.