

SANITARY PRESSURE SUSTAINING VALVES PS163

DESCRIPTION

The ADCAPure PS163 is a series of inline 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-loading.
Non-rising adjustment knob.
Compact inline design with clamped body.
FDA / USP Class VI compliant seals.
Completely machined from bar stock material, no castings or forgings are used.

STANDARD SURFACE FINISH

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

OPTIONS:

- Leakage line connection.
- Dome-loading.
- Top cap (adjustment screw with cover).
- Gauge connection on body.
- Bottom cover with drain connection.
- Different soft sealings for liquids and gases.
- Degreased for oxygen application.

USE: Clean steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PS163.

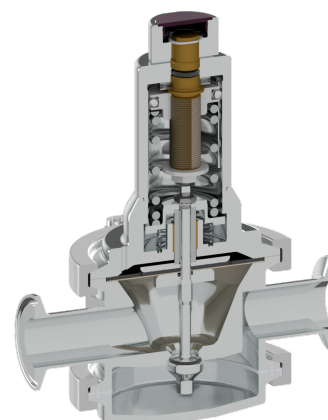
SIZES: 1/2" to 2"; DN 15 to 50.

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. See IMI – Installation and maintenance instructions.



LIMITING CONDITIONS

Valve model	PS163
Body design conditions	PN 16
Maximum upstream pressure	8 bar
Minimum upstream pressure	0,8 bar
Maximum operating temperature *	180 °C

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

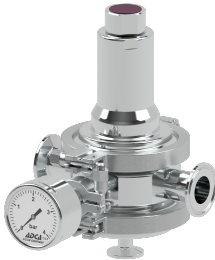
CE MARKING – GROUP 2 (PED – European Directive)

PN 16	Category
All sizes	SEP

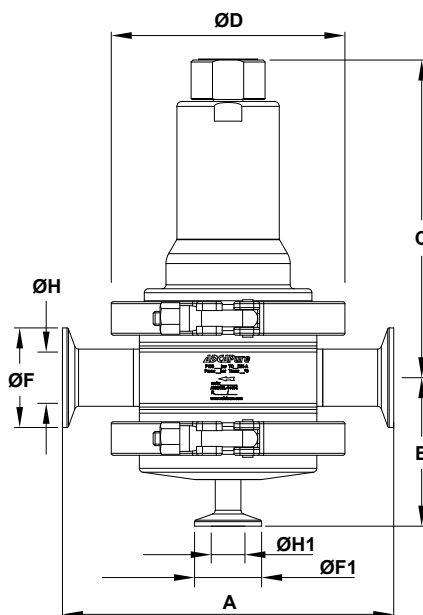
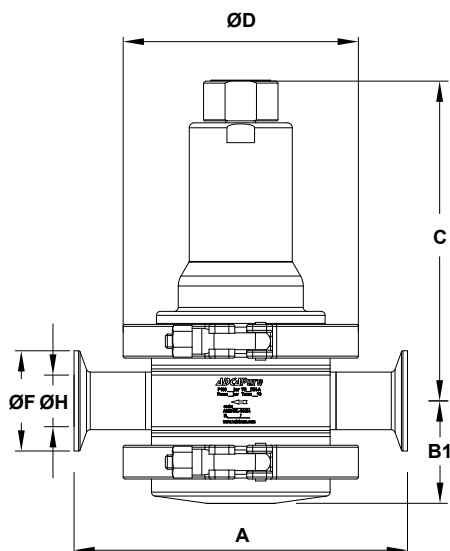
FLOW RATE COEFFICIENTS (m³/h)

	ASME BPE					DIN						ISO				
SIZE	1/2"	3/4"	1"	1 1/2"	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

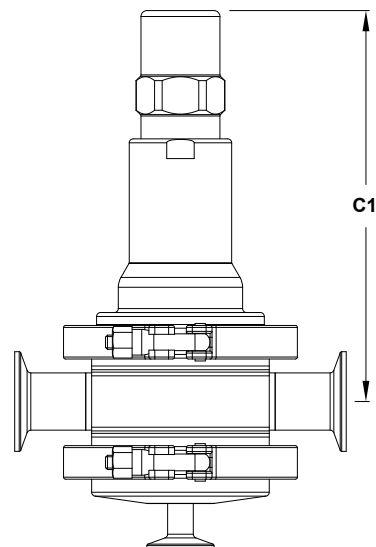
OPTIONS

LEAKAGE LINE CONNECTION	DOME-LOADING	TOP CAP	PRESSURE GAUGE CONNECTION	BOTTOM COVER WITH DRAIN CONNECTION
				

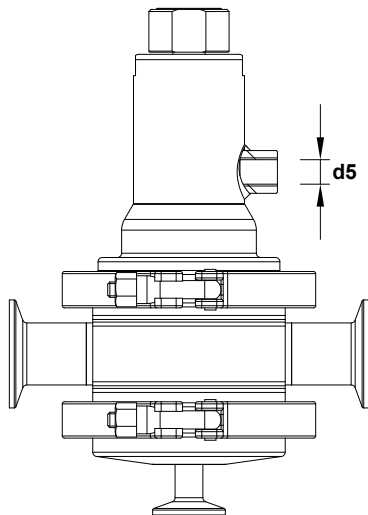
DIMENSIONS



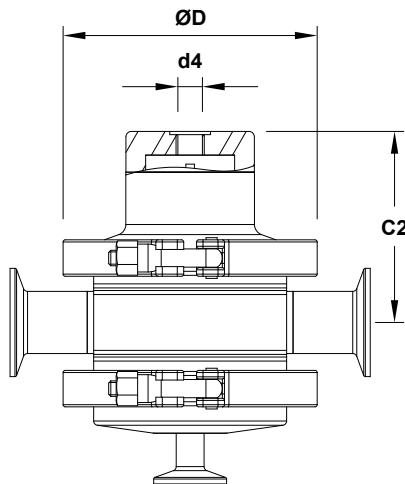
Optional bottom cover
with drain connection



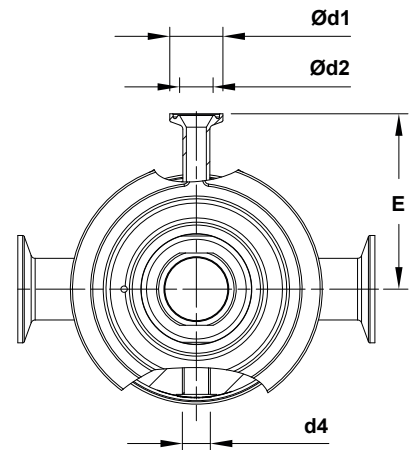
Optional top cap



*Optional leakage
line connection*



Optional dome loading



Optional gauge connection

DIMENSIONS – ASME BPE (mm)

SIZE	A	B	B1	C	C1	C2	ØD	Ød1	Ød2	d3	d4	d5	E	ØF	ØF1	ØH	ØH1	WGT. (kg)
1/2"	153	70	47	156	193	84	119	25	15,75	1/4"	1/4"	1/4"	83	25	25	9,4	9,4	5
3/4"	153	74	51	160	197	88	119	25	15,75	1/4"	1/4"	1/4"	83	25	25	15,75	9,4	5,6
1"	153	77	54	163	200	91	119	25	15,75	1/4"	1/4"	1/4"	83	50,5	25	22,1	9,4	5,7
1 1/2"	170	95	71	204	247	124	134	25	15,75	1/4"	1/4"	1/4"	96	50,5	25	34,8	9,4	9,8
2"	170	99	74	207	244	127	134	25	15,75	1/4"	1/4"	1/4"	96	64	25	47,5	9,4	9,8

DIMENSIONS – DIN (mm)

SIZE	A	B	B1	C	C1	C2	ØD	Ød1	Ød2	d3	d4	d5	E	ØF	ØF1	ØH	ØH1	WGT. (kg)
DN 15	153	74	51	160	197	88	119	25	15,75	1/4"	1/4"	1/4"	83	34	34	16	10	5,6
DN 20	153	72	49	158	195	86	119	25	15,75	1/4"	1/4"	1/4"	83	34	34	20	10	5,3
DN 25	168	75	52	161	198	89	119	25	15,75	1/4"	1/4"	1/4"	83	50,5	34	26	10	5,6
DN 32	168	77	54	163	200	91	119	25	15,75	1/4"	1/4"	1/4"	83	50,5	34	32	10	5,8
DN 40	185	94	70	202	239	122	134	25	15,75	1/4"	1/4"	1/4"	96	50,5	34	38	10	9,5
DN 50	185	98	74	206	243	126	134	25	15,75	1/4"	1/4"	1/4"	96	64	34	50	10	9,8

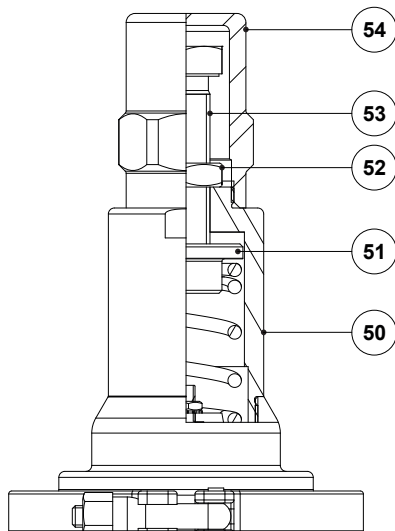
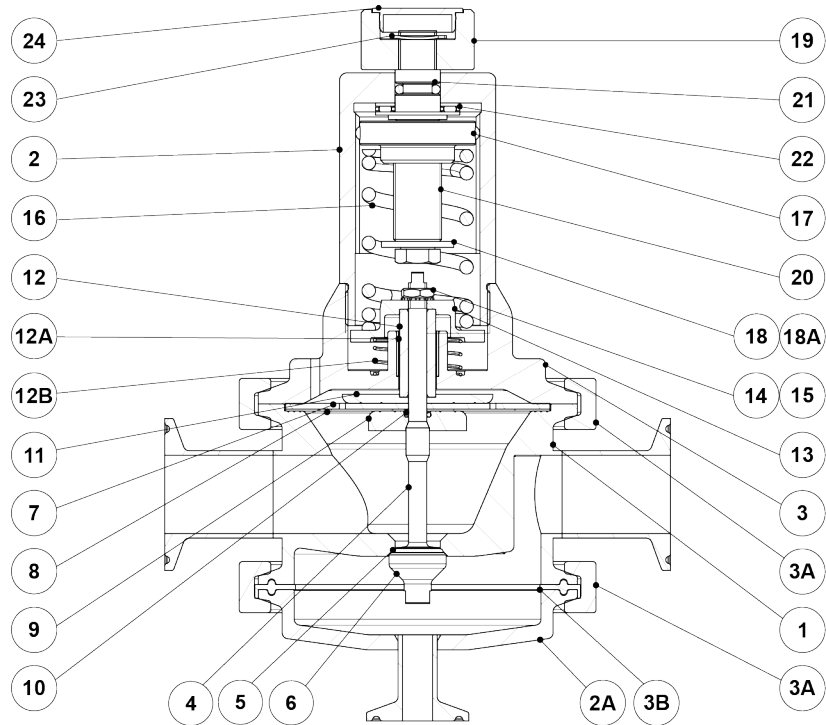
Remarks: Clamp ferrules according to DIN 32676-A. Tube weld (ETO) according to DIN 11866-A (DIN 11850-2).

DIMENSIONS – ISO (mm)

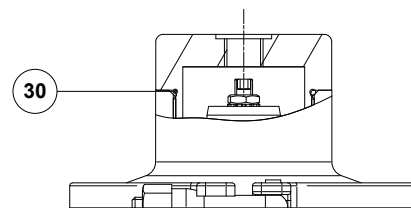
SIZE	A	B	B1	C	C1	C2	ØD	Ød1	Ød2	d3	d4	d5	E	ØF	ØF1	ØH	ØH1	WGT. (kg)
DN 15	168	73	50	159	196	87	119	25	15,75	1/4"	1/4"	1/4"	83	50,5	25	18,1	10,3	5,4
DN 20	168	76	53	162	199	90	119	25	15,75	1/4"	1/4"	1/4"	83	50,5	25	23,7	10,3	5,6
DN 25	168	78	55	164	201	92	119	25	15,75	1/4"	1/4"	1/4"	83	50,5	25	29,7	10,3	6
DN 32	185	93	69	202	239	122	134	25	15,75	1/4"	1/4"	1/4"	96	64	25	38,4	10,3	9,6
DN 40	185	100	76	206	243	126	134	25	15,75	1/4"	1/4"	1/4"	96	64	25	44,3	10,3	10

Remarks: Clamp ferrules according to DIN 32676-B. Tube weld (ETO) according to DIN 11866-B (ISO 1127).

MATERIALS



Optional top cap



Optional dome-loading

MATERIALS

POS. N°	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2A	Bottom cover	AISI 316L / 1.4404
3	Intermediate flange	AISI 316L / 1.4404
3A	Clamp	AISI 316 / 1.4401
3B	* Gasket	** PTFE / FPM Envelope
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	Lower diaphragm plate	AISI 316L / 1.4404
10	* O-ring	** EPDM
11	Upper diaphragm plate	AISI 316L / 1.4404
12	Stem guide	AISI 316L / 1.4404
12A	Plain bearing	Bronze
12B	Spring	AISI 302 / 1.4300
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	Washer	Stainless steel A2
18A	Bolt	Stainless steel A2-70
19	Adjustment knob	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
30	* O-ring	EPDM
50	Cover	AISI 316L / 1.4404
51	Spring guide	Brass
52	Lock nut	Stainless steel A2-70
53	Adjustment screw	Stainless steel A2-70
54	Top cap	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.

ORDERING CODES PS163

Valve model	PS63	1	4	1	T	M	I	X	X	X	DI	15	E
PS163 – AISI 316L / 1.4404 diaphragm sensing press. sustaining valve without drain	PS63												
PS163 – AISI 316L / 1.4404 diaphragm sensing press. sustaining valve with drain	PS6D												
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 1 1/2", 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 (USP Class VI on request)	V												
Adjustment knob, top cap and leakage line connection options													
Stainless steel adjustment knob	I												
Top cap (adjustment screw with cover)	T												
Stainless steel adjustment knob w/ ISO 228 G 1/4" leakage line connection	L												
Stainless steel adjustment knob w/ 1/4" NPT leakage line connection	M												
Top cap (adjustment screw with cover) w/ ISO 228 G 1/4" leakage line connection	U												
Top cap (adjustment screw with cover) w/ 1/4" NPT leakage line connection	V												
Dome-loading – ISO 228 G 1/4" c)	X												
Dome-loading – 1/4" NPT c)	C												
Gauge ports													
Without gauge ports	X												
Tri-clamp gauge port on the left side (rel. to the flow direction) – downstream pressure	7												
Tri-clamp gauge port on the right side (rel. to the flow direction) – downstream pressure	6												
Tri-clamp gauge port on both sides – downstream pressure	5												
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – ISO 228 G 1/4"	4												
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – ISO 228 G 1/4"	3												
Threaded gauge port on both sides – downstream pressure – ISO 228 G 1/4"	2												
Threaded gauge port on the left side (rel. to the flow direction) – downstream pressure – 1/4" NPT	W												
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" NPT	Y												
Threaded gauge port on both sides – downstream 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												
1 1/2" 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) Mandatory in case of dome-loading. d) Consult IS PV20.00 – Technical information – for further details and other surface finish options.