

SANITARY PRESSURE SUSTAINING VALVE In-line design PS173

DESCRIPTION

The ADCA PS173 series direct acting, spring-loaded diaphragm sensing, pressure sustaining valves are designed for use with clean steam, compressed air, water and other gases or liquids compatible with the construction materials.

MAIN FEATURES

Compact design.
Completely machined from bar stock material, no castings or forgings are used on the standard version.
No rising stem.

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 1/8" (captured vent).
Different soft valves for liquids and gases.
Gauge connection on body.
With or without bottom drain connection.

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

AVAILABLE MODELS: PS173

SIZES: 1 1/2"; 2"; DN 32 to 50.
SPRING RANGES: 0,8 – 1,5 bar; 1 – 3 bar; 1,5 – 8 bar.

CONNECTIONS: Sanitary clamps or 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.

ORDER REQUIREMENTS:

Type of fluid.
Maximum operating temperature.
Maximum inlet pressure and required open pressure.
Capacity (maximum and minimum).



CE MARKING (PED – European Directive)	
PN16	Category
1 1/2"; 2"; DN 32 to DN 50	SEP

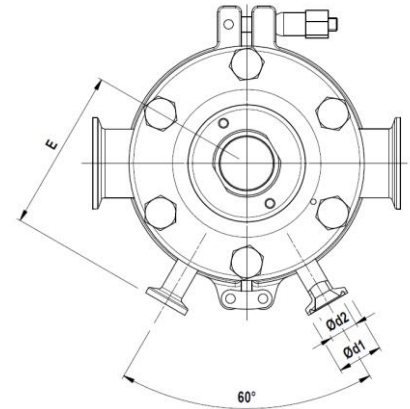
LIMITING CONDITIONS	
Valve model	PS173
Body design conditions	PN16
Max. upstream pressure	8 bar
Min. upstream pressure	0,8 bar
Max. design temperature *	150 °C

* Other on request.

CAPACITIES						
	BPE		DIN		ISO	
Valve size	11/2"	2"	40	50	32	40
Kvs	5,5	8,5	5,5	8,5	5,5	8,5

DIMENSIONS (mm) ASME BPE											
SIZE	A *	B	B1	C	D	d1	d2	E	F	H	WGT. (kg)
11/2"	170	113	76	199	130	25	15,75	90	50,5	34,8	9
2"	170	119	82	205	130	25	15,75	90	64	47,5	9,3

DIMENSIONS (mm) DIN											
SIZE DN	A *	B	B1	C	D	d1	d2	E	F	H	WGT. (kg)
40	170	113	76	199	130	25	15,75	90	50,5	38	8,9
50	170	119	82	205	130	25	15,75	90	64	50	9,2



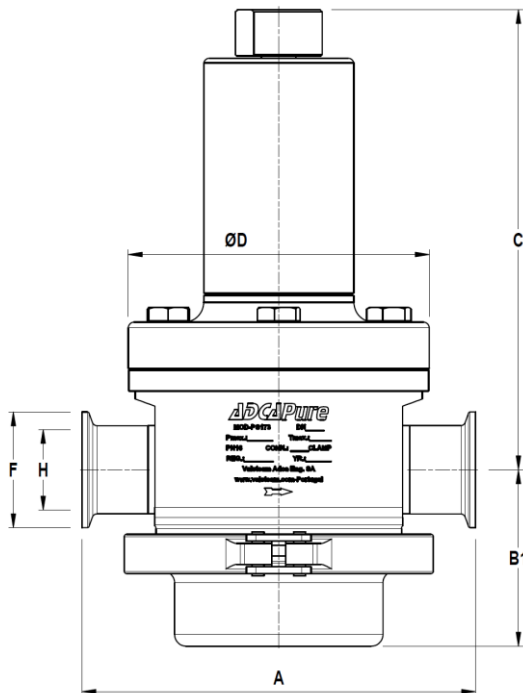
Pressure gauge connections. (Optional)

Clamp ferrules DIN 32676 Series A; Tube weld DIN 11866 Series A (DIN 11850 Series 2).

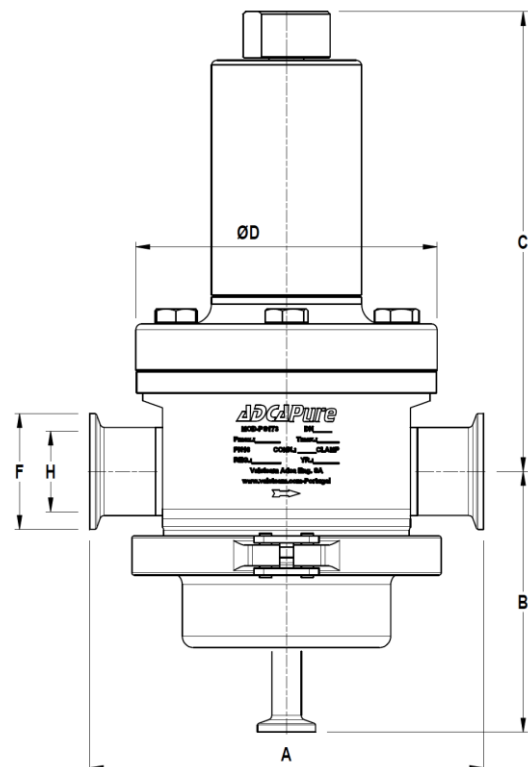
DIMENSIONS (mm) ISO											
SIZE DN	A *	B	B1	C	D	d1	d2	E	F	H	WGT. (kg)
32	170	113	76	199	130	25	15,75	90	64	38,4	8,9
40	170	119	82	205	130	25	15,75	90	64	44,3	9,2

Clamp ferrules DIN 32676 Series B; Tube weld DIN 11866 Series B (ISO 1127 Series 1).

* Special versions or non-standard sanitary clamp ferrules are available on request, both for the inlet/outlet and pressure gauge connection.



Without bottom connection.

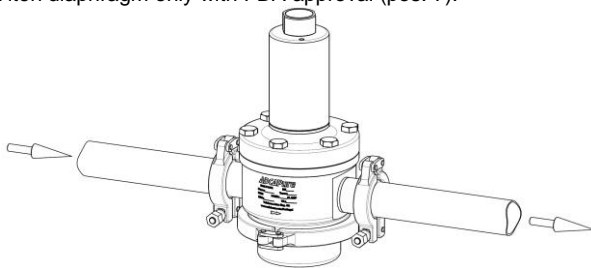
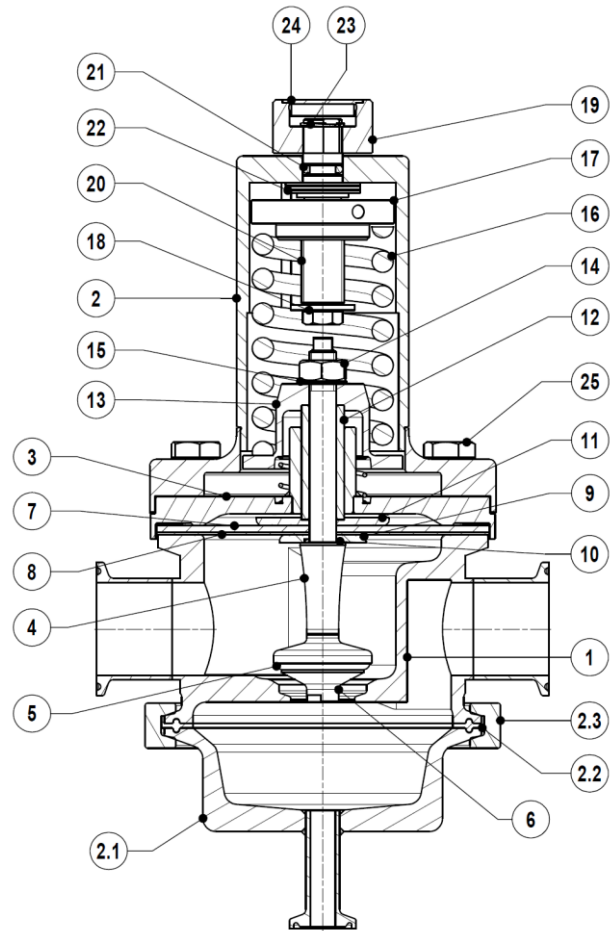


With bottom connection for condensate drainage.

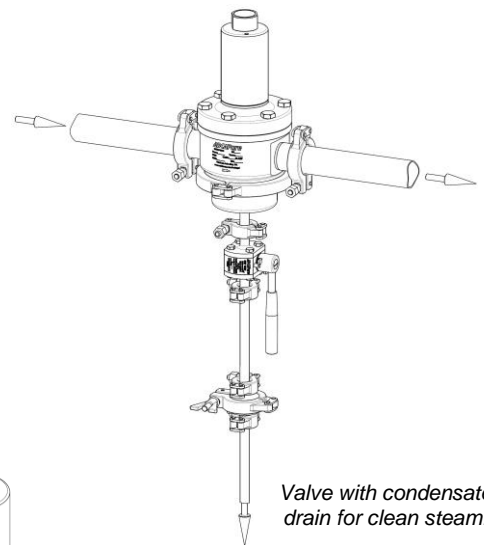
MATERIALS

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
2.1	Bottom cover	AISI 316L / 1.4404
2.2	Gasket	PTFE / TFM® Envelope gasket
2.3	Safety clamp	AISI 316 / 1.4401
3	Centering plate	AISI 316L / 1.4404
4	* Valve stem	AISI 316L / 1.4404
5	* Soft plug	EPDM; PTFE **
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 316 / 1.4401
13	Spring plate	AISI 316 / 1.4401
14	Nut	Stainless steel A2-70
15	Washer	AISI 316 / 1.4401
16	* Adjustment spring	AISI 302 / 1.4300
17	Top spring plate	AISI 316 / 1.4401
18	Retaining washer	Stainless steel A2-70
19	Regulating nut	AISI 316L / 1.4404
20	Adjustment screw	Brass
21	O-ring	NBR
22	Bearing	Corrosion resistant steel
23	Ext. bowed shaft ring	Stainless steel
24	Cover nut	Plastic
25	Bolts	A2

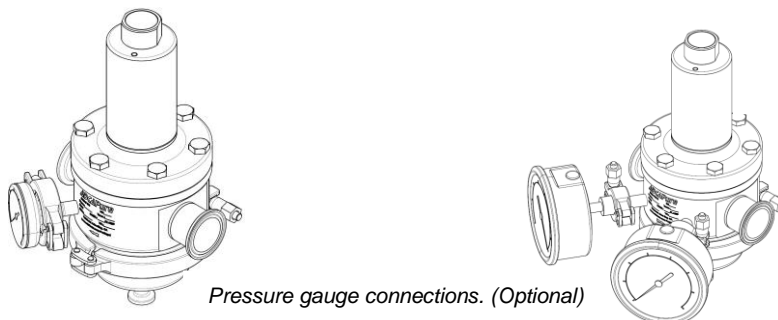
* Available spare parts; ** Others according to fluid.
 FDA / USP Class VI seals certificate on request.
 Viton diaphragm only with FDA approval (pos. 7).



Valve without bottom drain, for clean gases.



Valve with condensate drain for clean steam.



Pressure gauge connections. (Optional)

ORDERING CODES PS173

Valve model	PS17D	4	4	T	M	I	X	X	X	D	32	E
PS173 – AISI 316L / 1.4404 Diaph. pressure sustaining valve with drain	PS17D											
PS173 – AISI 316L / 1.4404 Diaph. press. sustain. valve without drain	PS17											
Outlet spring range												
0,8 to 1,5 bar		4										
1 to 3 bar		5										
1,5 to 8 bar		7										
Flow capacity												
Kvs – 5,5 (BPE 11/2", DIN DN 40 and ISO DN 32)		4										
Kvs – 8,5 (BPE 2", DIN DN 50 and ISO DN 40)		6										
Diaphragm material												
PTFE (Gylon)				T								
Valve head												
Metal to metal (non standard)					M							
EPDM					E							
PTFE					T							
FPM / Viton					V							
Regulating knob, top cap and captured vent												
Stainless steel regulating knob						I						
Top cap (adjusting screw sealing)						T						
Stainless steel regulating knob w/ diaphragm cover leakage connection in case of diaphragm failure						L						
Top cap (adjusting screw sealing) w/ diaphragm cover leakage connection in case of diaphragm failure						U						
Gauge port options												
Without gauge ports							X					
Tri-clamp gauge port on the left side (rel. to the flow direction) – Upstream pressure – 1 connection							7					
Tri-clamp gauge port on the right side (rel. to the flow direction) – Upstream pressure – 1 connection							6					
Tri-clamp gauge port on the left side (rel. to the flow direction) – Upstream and downstream press. – 2 conn. a)							9					
Tri-clamp gauge port on the right side (rel. to the flow direct.) – Upstream and downstream press. – 2 conn. a)							8					
Tri-clamp gauge port on both sides (only upstream pressure) – 2 connections							5					
Threaded gauge port on the left side (rel. to the flow direction) – Upstream pressure – 1 connection							4					
Threaded gauge port on the right side (rel. to the flow direction) – Upstream pressure – 1 connection							3					
Threaded gauge port on the left side (rel. to the flow direction) – Upstream/downstream pressure – 2 conn.							1					
Threaded gauge port on the right side (rel. to the flow direction) – Upstream/downstream pressure – 2 conn.							0					
Threaded gauge port on both sides (only upstream pressure) – 2 connections							2					
Surface finish, special services and options												
None (fine machined)								X				
Mechanical polishing								P				
Electropolishing								E				
Special features												
None									X			
Degreased for oxygen									O			
Pipe connections												
Clamp ferrule ASME BPE										D		
Clamp ferrule DIN (DIN32676-A)										F		
Clamp ferrule ISO (DIN32676-B)										E		
ETO according to ASME BPE										DI		
ETO according to DIN11966-A (DIN11850-2)										FI		
ETO according to ISO 1127-1										EI		
Size												
DN 32 (available with ISO connections only)											32	
11/2" or DN 40											40	
2" or DN 50 (not available with ISO connections)											50	
Special valves / Extras												
Full description or additional codes have to be added in case of a non standard combination												E

a) Under special request and after approval of technical solution.