

## SANITARY PRESSURE REDUCING VALVE P160A (Air loaded)

### DESCRIPTION

The ADCA P160A series direct acting, air loaded, diaphragm sensing pressure reducing 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.  
Set point can be adjusted remotely using a relieving gas pressure regulator or through an I-P converter.  
Ease operation during the sterilization or cleaning process (SIP – CIP), by remotely increasing the set point, ensures that the valve stays totally open during the process.

### 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:** Different soft valves for liquids and gases.  
Gauge connection on body.

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

**AVAILABLE MODELS:** P160A.

**SIZES:** 3/4", 1", 1 1/2", 2".

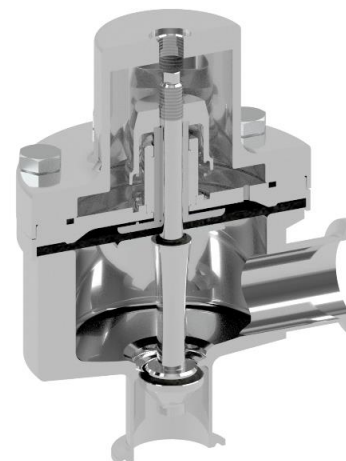
**OUTLET RANGE:** 0,8 – 6 bar. The loading pressure must be slightly above the outlet pressure (+/- 0,2 bar), to overcome the diaphragm return spring.

**CONNECTIONS:** ASME BPE.  
Clamp ferrules 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. Inlet vertical and horizontal outlet angle connection. See IML.

**ORDER REQUIREMENTS:** Type of fluid.  
Maximum operating temperature.  
Inlet pressure and required outlet pressure.  
Capacity (maximum and minimum).



#### LIMITING CONDITIONS

Valve model	P160A
Body design conditions	PN16
Max. upstream pressure	8 bar
Max. downstream pressure	6 bar
Min. downstream pressure	0,8 bar
Max. design temperature *	150 °C

\* Others on request.

#### CE MARKING – GROUP 2 (PED – European Directive)

PN16	Category
3/4" to 2"	SEP

**DIMENSIONS (mm) ASME BPE**

SIZE	A	B	C	D	d1	d2 *	d3 *	d4 *	E *	F	H	WGT. (kg)
3/4"	85	56	116	130	1/4"	25	15,75	1/4"	89	25	15,75	5,5
1"	85	55	117	130	1/4"	25	15,75	1/4"	89	50,5	22,1	5,5
1 1/2"	85	65	124	130	1/4"	25	15,75	1/4"	89	50,5	34,8	5,8
2"	85	70	130	130	1/4"	25	15,75	1/4"	89	64	47,5	6,4

\* Optional.

Consult factory for certified dimensions.  
Dimensions subject to change without notice.

**CAPACITIES**

Valve size	3/4"	1"	1 1/2"	2"
Kvs	1,3	3,5	5,5	8,5

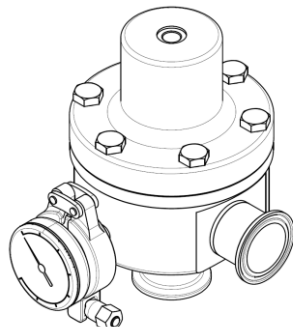
**MATERIALS**

POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316L / 1.4404
2	Cover	AISI 316L / 1.4404
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	Spring	AISI 302 / 1.4300
17	O-ring	EPDM
18	Bolts	Stainless steel A2-70

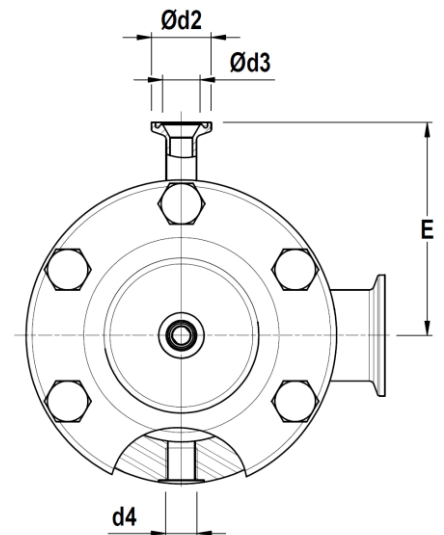
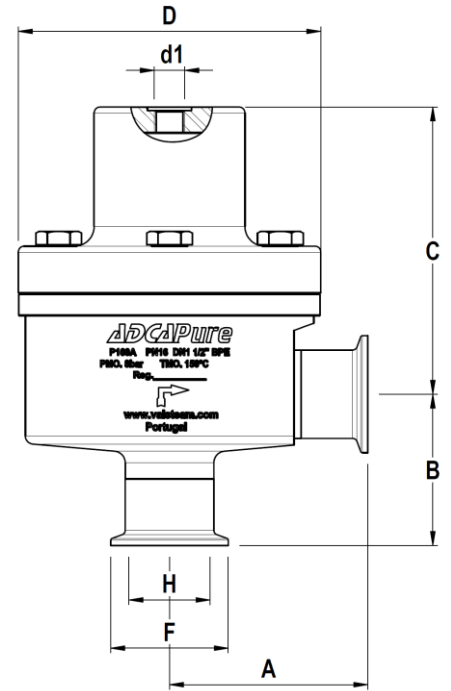
\* Available spare parts.; \*\* Others according to fluid.

FDA / USP Class VI seals certificate on request.

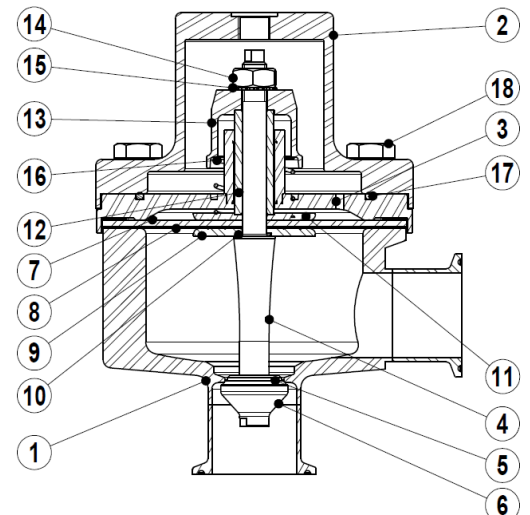
Remarks: All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



Optional pressure gauge connection



Optional pressure gauge connections



ORDERING CODES P160A															
Valve model	P16	A	1	T	M	1	X	X	X	X	D	20	E		
P160A – AISI 316L / 1.4404 diaphragm sensing pressure reducing valve	P16														
<b>Outlet spring range</b>															
0,8 to 6 bar (dome loaded)		A													
<b>Flow capacity</b>															
Kvs – 1,3 (3/4")			1												
Kvs – 3,5 (1")			3												
Kvs – 5,5 (1 1/2" – 2")			4												
Kvs – 8,5 (2" limited to max. 4 bar inlet pressure.)			6												
Kvs – 19,6 bar (2 1/2" – 3")			9												
<b>Diaphragm material</b>															
PTFE (Gylon)				T											
<b>Valve head</b>															
Metal to metal (non standard)					M										
EPDM					E										
PTFE					T										
FPM / Viton					V										
<b>Dome connection</b>															
Female threaded ISO 7/1 Rp 1/4"						1									
Female threaded 1/4" NPT						2									
<b>Dome options</b>															
Standard dome								X							
I/P converter 0,2 to 8 bar output								C							
<b>Gauge port options</b>															
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 – 1/4" ISO 7/1 Rp													4		
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure – 1/4" ISO 7/1 Rp														3	
Threaded gauge port on both sides – downstream pressure – 1/4" ISO 7/1 Rp															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
<b>Surface finish, special services and options</b>															
None (fine machined)												X			
Mechanical polishing													P		
Electropolishing													E		
<b>Special features</b>															
None													X		
Degreased for oxygen													O		
<b>Pipe connections</b>															
Clamp ferrule ASME BPE													D		
ETO according to ASME BPE													DI		
<b>Size</b>															
3/4"													20		
1"													25		
1 1/2"													40		
2"													50		
<b>Special valves / Extras</b>															
Full description or additional codes have to be added in case of a non-standard combination												E			