

## SANITARY PRESSURE REDUCING VALVE P160 (3/4" – 2")

### DESCRIPTION

The ADCA P160 series direct acting, spring-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 barstock material, no castings or forgings are used on the standard version.  
No rising stem.

### 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 1/8" (captured vent).  
Different soft valves for liquids and gases.  
Lock system, allows clean-in-place (CIP) and sterilization-in-place (SIP) operations with valve in line.  
Gauge connection on body.  
Adjusting screw with top cap.

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

**AVAILABLE MODELS:** P160.

**SIZES:** 3/4", 1", 1 1/2", 2".  
**OUTLET SPRING RANGES:** 0,8 – 1,5 bar; 1 – 3 bar; 1,5 – 5 bar.

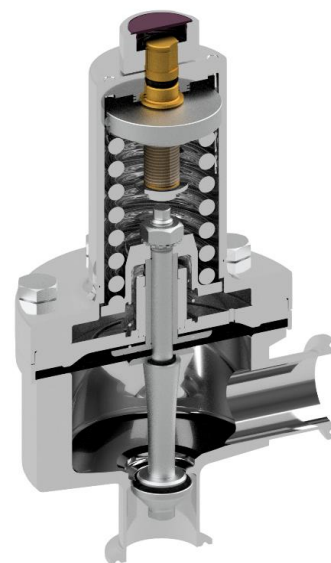
**CONNECTIONS:** ASME BPE.  
Clamp ferrules or others on request.

**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 IMI.

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

CE MARKING – GROUP 2 (PED – European Directive)	
PN16	Category
3/4" to 2"	SEP



### LIMITING CONDITIONS

Valve model	P160
Body design conditions	PN16
Max. upstream pressure	8 bar 4 bar *
Max. downstream pressure	5 bar
Min. downstream pressure **	0,8 bar
Max. design temperature ***	150 °C

\* See capacities table.

\*\* For tight shut off, with regulating spring relaxed, ensure a minimum 0,2 bar downstream pressure.

\*\*\* Others on request.

DIMENSIONS (mm) ASME BPE										
SIZE	A	B	C	D	d1 *	d2 *	E *	F	H	WGT. (kg)
3/4"	85	56	192	130	25	15,75	89	25	15,8	6,7
1"	85	55	192	130	25	15,75	89	50,5	22,1	6,8
1 1/2"	85	65	199	130	25	15,75	89	50,5	34,8	7,6
2"	85	69	205	130	25	15,75	89	64	47,5	7,8

\* Optional.

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

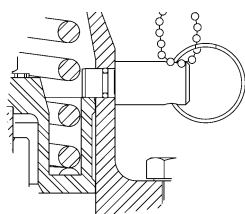
\* Limited to a maximum 4 bar inlet pressure.

MATERIALS		
POS. N°	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	* 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	Adjusting 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

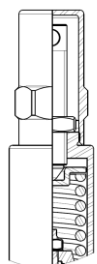
\* Available spare parts.; \*\* Others according to fluid.

FDA / USP Class VI seals certificate on request.

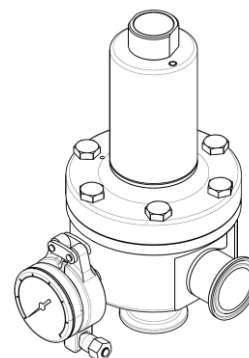
All valves have a serial number. In case of non-standard valves this number must be supplied if spare parts are ordered.



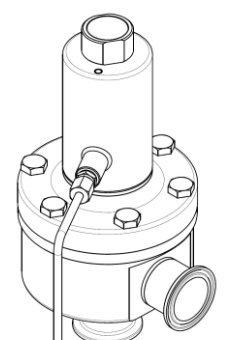
Optional special cover with lock system.



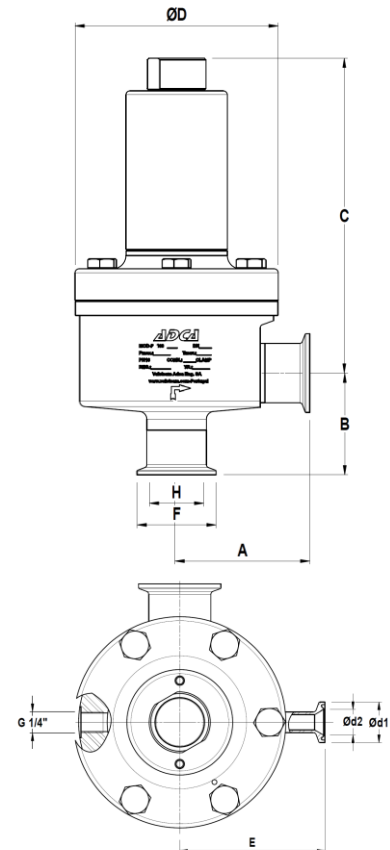
Optional top cap adjusting screw sealing



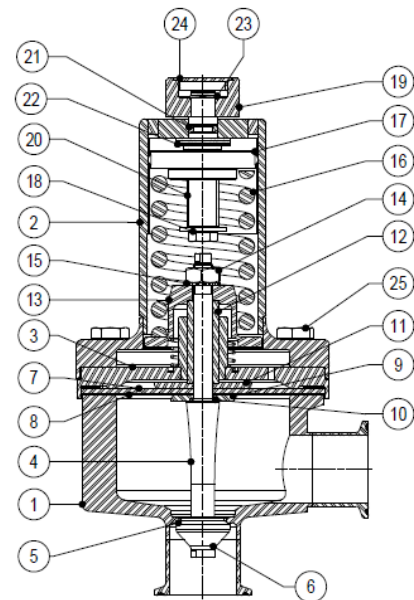
Optional gauge connection



Optional leakage line connection



Optional pressure gauge connections.



We reserve the right to change the design and material of this product without notice.

ORDERING CODES P160

Valve model	P16	4	1	T	M	I	X	X	X	D	20	E
P160 – AISI 316L / 1.4404 Diaphragm sensing pressure reducing valve	P16											
<b>Outlet spring range</b>												
0,8 to 1,5 bar		4										
1 to 3 bar		5										
1,5 to 5 bar		6										
<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									
<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>Regulating knob, top cap and captured vent</b>												
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						
<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							4					
Threaded gauge port on the right side (rel. to the flow direction) – downstream pressure							3					
Threaded gauge port on both sides – downstream pressure							2					
<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			
CIP / SIP lock system (not available for PS version)									C			
<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