

## DIAPHRAGM SENSING PRESSURE REDUCING VALVE P7

### DESCRIPTION

The ADCA P7 series direct acting, spring-loaded diaphragm sensing pressure reducing valves, are designed for use with steam, compressed air and other gases compatible with the materials of construction. They are suitable for pressure reducing stations where very small loads are involved. They are also specifically recommended to operate as pilot valves in combination with other pressure regulators.

### MAIN FEATURES

Compact design.  
Stainless steel diaphragm.

**OPTIONS:** Outlet 1/4" gauge connection on body.  
Regulating screw with top cap.  
Internal sensing orifice.  
Compressed air top for remote control.  
Bar stock stainless steel construction.

**USE:** Steam, compressed air and other gases compatible with the construction.

**AVAILABLE MODELS:** P7SS – Stainless steel construction.

**SIZES:** 1/4" and 3/8".

**CONNECTIONS:** Female screwed ISO7/1Rp (BS 21) or NPT.

**INSTALLATION:** Horizontal installation.  
A strainer should be provided upstream the valve.  
See IMI – Installation and maintenance instructions.

**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 - PN40	Category
1/4" to 3/8"	SEP

CAPACITIES		
Valve size	1/4"	3/8"
Kvs (m <sup>3</sup> /h)	1	1,1

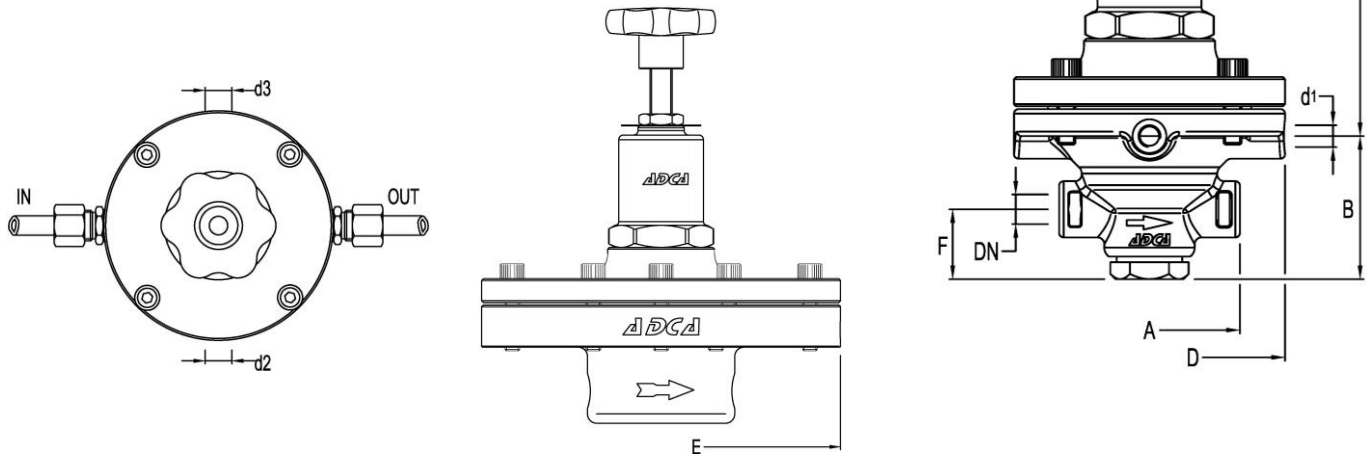
LIMITING CONDITIONS	
Valve model	P7
Body design conditions	PN40
Max. upstream pressure (steam)	25 bar
Max. upstream pressure (gases)	31 bar
Max. downstream pressure	17 bar
Min. downstream pressure	0,35 bar *
Max. design temperature	300 °C

\* 0,07 bar with low pressure top (limited at 7 bar inlet).  
The low pressure diaphragm should be fitted for outlet pressures from 0,07 to 0,5 bar.  
Pressure and temperature may change if soft seating is used.  
The balance pipe connection is recommended to enter the pipe downstream at, at least, 1 meter from valve, for higher accuracy. The valve can also be supplied with an internal sensing orifice instead of external.

DIMENSIONS (mm)										
SIZE	A	B	C	D	E	F	d1 **	d2 **	d3 ***	WGT. (kg)
1/4"	80	63,5	185	120	195	31	1/8"	1/4"	1/4"	4,8
3/8"	80	63,5	185	120	195	31	1/8"	1/4"	1/4"	4,8

\* Low pressure diaphragm; \*\* Sensing line connection.

\*\*\* Optional – pressure gauge connection (can also be used as sensing line connection).

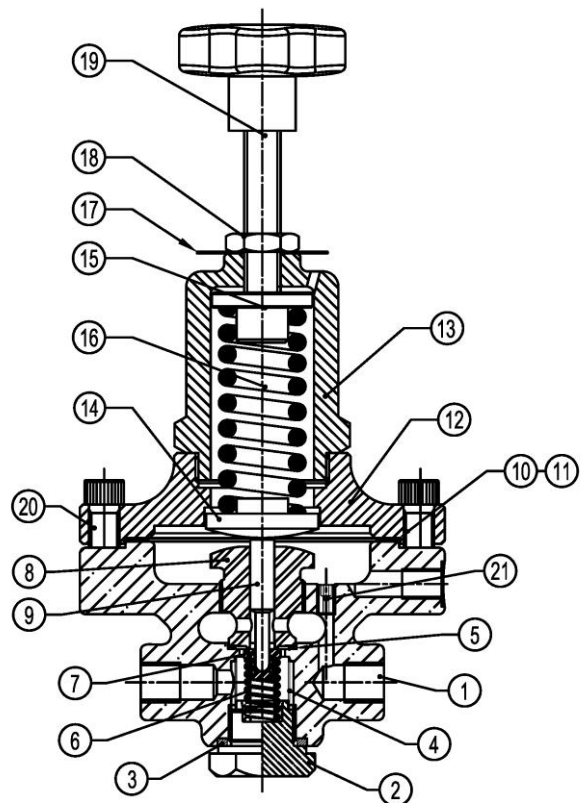


Version with low pressure diaphragm is made from barstock

MATERIALS		
POS. Nº	DESIGNATION	MATERIAL
1	Valve body	AISI 316 / 1.4401 ; CF8M / 1.4408
2	Plug	AISI 316 / 1.4401
3	*Gasket	Stainless steel / Graphite
4	*Strainer screen	AISI 304 / 1.4301
5	Gasket	Copper
6	*Spring	AISI 302 / 1.4300
7	*Valve head	AISI 420-EPDM-PTFE, etc.
8	*Pilot valve body	AISI 316 / 1.4401
9	*Pushrod	AISI 316 / 1.4401
10	*Diaphragm	AISI 301 / 1.4310
11	*Gasket	Stainless steel / Graphite
12	Top cover	CF8 / 1.4308
13	Cover spring	CF8 / 1.4308
14	Lower spring carrier	Brass
15	Top spring carrier	Brass
16	*Adjustment spring	Spring steel
17	Spring id. plate	Aluminium
18	Locknut	Stainless steel A2-70
19	Handwheel	Plastic
20	Bolts	Stainless steel A2-70
21	Restrictor	Stainless steel A2-70

\* Available spare parts.

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



ORDERING CODES P7									
Valve model	P7SS	.	1	S		S		.A	08
P7SS Stainless steel pilot regulator	P7SS								
Outlet spring range (see table)									
Green			1						
Blue			2						
Red (fitted with two diaphragms)			3						
Black (fitted with two diaphragms)			4						
Application									
Steam				S					
Gases				G					
Seal material									
Metal to metal lapped					(1)				
EPDM					E				
PTFE					T				
FPM / Viton					V				
Stainless steel diaphragm									
Standard diaphragm a)						S			
Low pressure diaphragm						L			
Gauge port 1/4"									
Without gauge ports							(1)		
Gauge port on the left side (relative to the flow direction)								4	
Gauge port on the right side (relative to the flow direction)									3
Gauge ports on both sides									2
Pipe connection									
Threaded BSP ISO 7/1 Rp									A
Threaded NPT ANSI B1.20.1									C
Size									
1/4"									08
3/8"									10
Special valves / Extras									
Full description or additional codes have to be added in case of non-standard combination.									E

\*Gauge port can also be used as external sensing line.

(1) Omitted if a standard valve is requested.

a) Two diaphragms will be fitted with black spring.

PRESSURE RANGES (bar)				
SPRING COLOUR	GREEN w/ 1 diaphragm	BLUE w/ 1 diaphragm	RED with 2 diaphragms	BLACK with 2 diaphragms
Red. Pressure	0,07 to 0,5 *	1,5 to 5,5 **	3,5 to 8,5 **	7 to 17 **
Red. Pressure	0,35 to 2 **	/	/	/

\*With low pressure top; \*\*Standard diaphragm.