

## DIAPHRAGM SENSING PRESSURE SUSTAINING VALVE

**PS 7**  
**DN 1/4" – 3/8"**

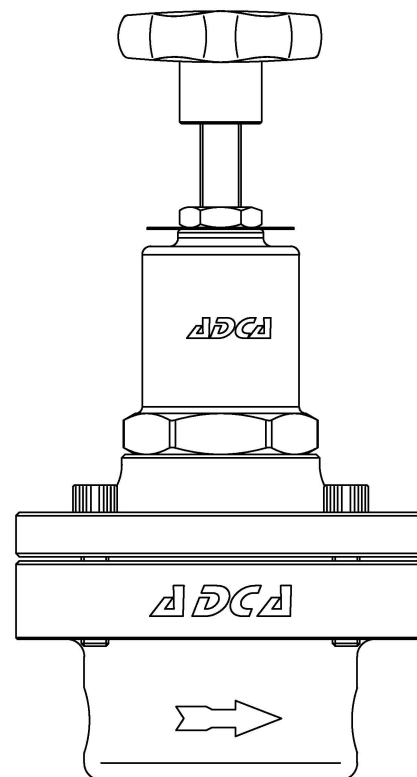
### DESCRIPTION

The ADCA PS7 series **direct acting, spring-loaded diaphragm sensing**, pressure sustaining valves, are designed for use on steam and compressed air and other gases compatible with the materials of construction.

They are suitable for pressure sustaining applications 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:**

- 1/4" gauge connection on body.
- Regulating screw with top cap.
- Internal sensing orifice
- Compressed air top for remote control
- Stainless steel construction

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

**AVAILABLE MODELS:**

- PS7S – Carbon steel construction
- PS7SS – Stainless steel construction

**SIZES:** DN 1/4" and DN 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
- Required opening pressure
- Capacity (maximum and minimum).

### CAPACITIES

Valve Size	1/4"	3/8"
KVs (m3/h)	1,6	1,7

### LIMITING CONDITIONS

Valve model	PS7
Body design conditions	PN 40
Max.upstream pressure	17 bar
Min.upstream pressure	0,35 bar *
Max.design temperature	300 °C

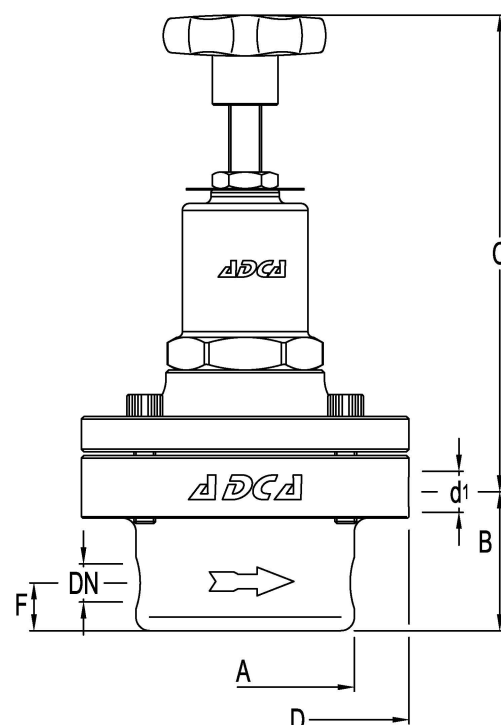
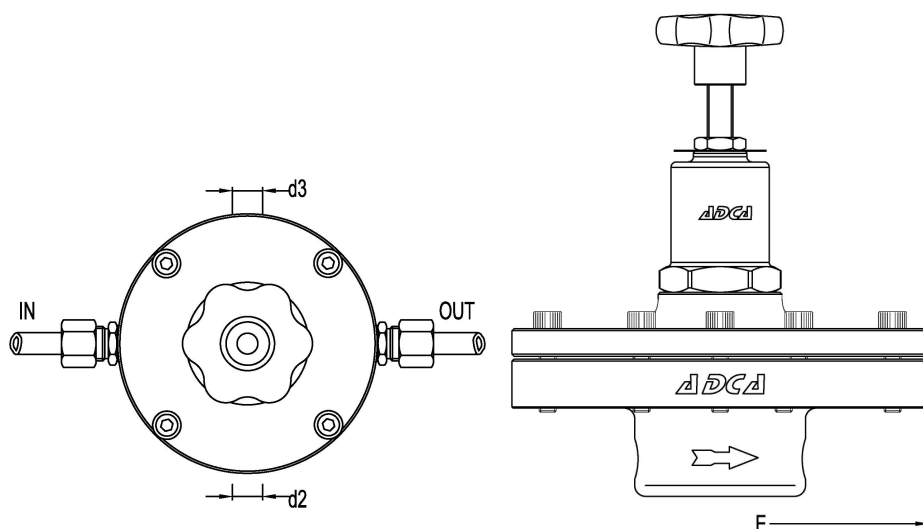
\* 0,07 bar with low pressure top (limited at 7 bar inlet).  
The low pressure diaphragm should be fitted for outlet pressures from 0,07 up to 0,5 bar.  
Pressure and temperature may change if soft seating is used.  
The balance pipe connection is recommended to enter upstream pipe at a minimum 1meter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

CE MARKING (PED - European Directive 97/23/EC)	
PN 16-PN63	Category
DN 08 to 10	SEP - art. 3, paragraph3

DIMENSIONS (mm)										
Screwed										
SIZE DN	A	B	C	D	E*	F	d1**	d2***	d3***	WGT. Kgs
1/4"	80	60	175	120	195	15	1/8"	1/8"	1/8"	4,8
3/8"	80	50	175	120	195	15	1/8"	1/8"	1/8"	4,8

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

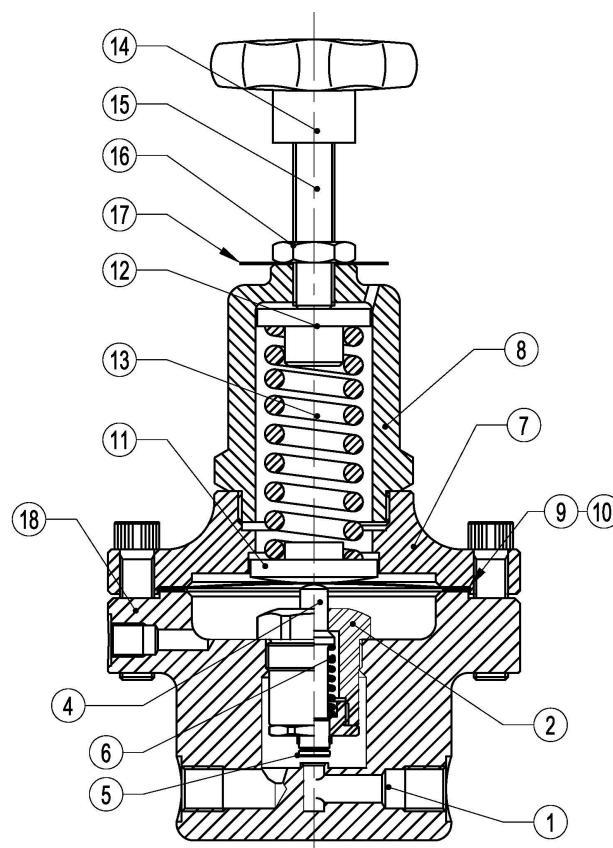
\*\*\* Optional (pressure gauge connections), can be used also as sensing line connections.



MATERIALS P7S		
POS.	DESIGNATION	MATERIAL
1	VALVE BODY	S355J2G3 / 1.0570
2	*PILOT VALVE BODY	CF8 / 1.4308
4	PUSHROD	AISI316 / 1.4401
5	*VALVE HEAD	AISI420-EPDM-PTFE,etc
6	*SPRING	AISI302 / 1.4300
7	TOP COVER	S355J2G3 / 1.0570
8	COVER NUT	S355J2G3 / 1.0570
9	* DIAPHRAGM	AISI301 / 1.4310
10	*GASKET	ST.ST. / GRAPHITE
11	LOWER SPRING CARRIER	BRASS
12	TOP SPRING CARRIER	BRASS
13	*ADJUSTMENT SPRING	SPRING STEEL
14	HANDWHEEL	PLASTIC
15	ADJUSTMENT SCREW	AISI304 / 1.4301
16	LOCKNUT	ST.STEEL A2-70
17	SPRING IDENT. PLATE	ALUMINIUM
18	BOLTS	STEEL 10.9

\* Available spare parts. \*\* Stainless steel 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.



ORDERING CODES PS7									
<b>Valve Model</b>	PS7S	.	1	S		S		.A	08
PS7S Carbon steel pilot regulator	PS7S								
PS7SS Stainless steel pilot regulator	PS7SS								
<b>Operating spring range (see table)</b>									
Green			1						
Black (fitted with two diaphragms)			2						
<b>Application</b>									
Steam				S					
Gases				G					
<b>Seal material</b>									
Metal to metal lapped					(1)				
EPDM					E				
PTFE					T				
FPM/VITON					V				
<b>Stainless steel diaphragm</b>									
Standard diaphragm (a)						S			
Low pressure diaphragm						L			
<b>Gauge port 1/8" *</b>									
Without gauge ports						(1)			
Gauge port on the left side (Related to the flow direction)						4			
Gauge port on the right side (Related to the flow direction)						3			
Gauge ports on both sides						2			
<b>Pipe connection</b>									
Threaded BSP ISO 7/1 Rp								A	
Threaded NPT ANSI B1.20.1								C	
<b>Size</b>									
DN 1/4"									08
DN 3/8"									10
<b>Special valves / Extras b)</b>									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

b) Full description or additional codes have to be added in case of non-standard combination.

PRESSURE RANGES IN bar		
SPRING COLOUR	GREEN W/1 Diaphragm	BLACK W/2 Diaphragms
Opening Pressure	0,07 to 0,5 bar *	2 to 17 bar **
Opening Pressure	0,35 to 4 bar **	/

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