

## DIAPHRAGM SENSING PRESSURE SUSTAINING VALVES PS30SS (1/2" to 1" – DN 15 to DN 25)

### DESCRIPTION

The ADCA PS30SS is a series of direct acting, spring-loaded, diaphragm sensing pressure sustaining valves. These regulators are designed for use with compressed air, water and other gases and liquids compatible with the construction materials and valve design. They are suitable for pressure sustaining applications at the point of use in laundry and dyeing machines, food industries, sterilizers, etc.

### MAIN FEATURES

Compact design.  
Full stainless steel construction.  
Various sealing options to meet compatibility requirements.

**OPTIONS:** Gauge connection on body.  
Different soft sealings for liquids and gases.  
Dome-loading.  
Top cap (adjustment screw with cover).  
Degreased for oxygen application.

**USE:** Compressed air, water and other gases and liquids compatible with the construction.

**AVAILABLE MODELS:** PS30SS – stainless steel, diaphragm sensing.

**SIZES:** 1/2" to 1"; DN 15 to DN 25.

**CONNECTIONS:** Female threaded ISO 7 Rp or NPT.  
Flanged EN 1092-1 PN 40.  
Flanged ASME B16.5 Class 150 or 300.

**INSTALLATION:** Horizontal installation.  
See IMI – Installation and maintenance instructions.



1/2" to 3/4" – DN 15 to DN 20



1" – DN 25



1/2" to 3/4"  
DN 15 to DN 20

1" – DN 25

LIMITING CONDITIONS				
VALVE MODEL	PS30SS			
Body design conditions	Class 150	Class 300	PN 40	PN 63 *
Maximum upstream pressure	15 bar			
Minimum upstream pressure	0,2 bar			
Maximum design temperature	80 °C			
Maximum dome-loading pressure	15 bar			

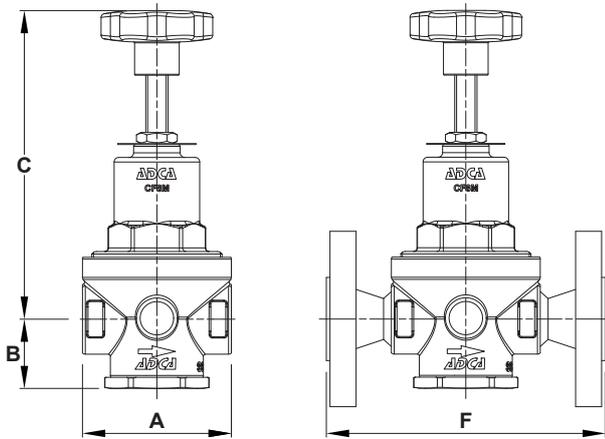
\* Rating PN 63 for threaded versions.

**Warning: A pressure sustaining valve is not a safety relief valve and must not be used for that purpose!**

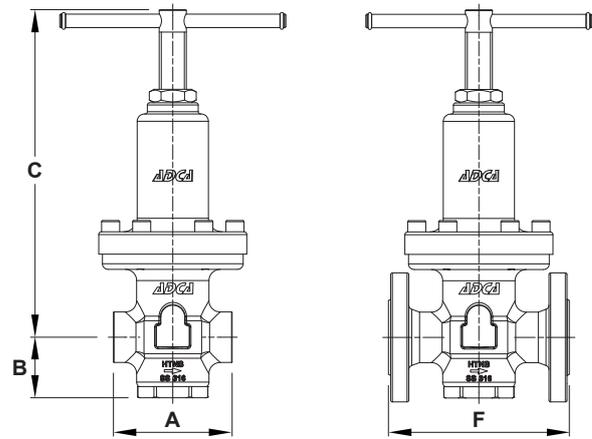
FLOW RATE COEFFICIENTS (m³/h)			
SIZE	1/2" – DN 15	3/4" – DN 20	1" – DN 25
Kvs	2,1	2,4	6,5

CE MARKING – GROUP 2 (PED – EUROPEAN DIRECTIVE)	
PN 63	CATEGORY
1/2" to 1" – DN 15 to 25	SEP

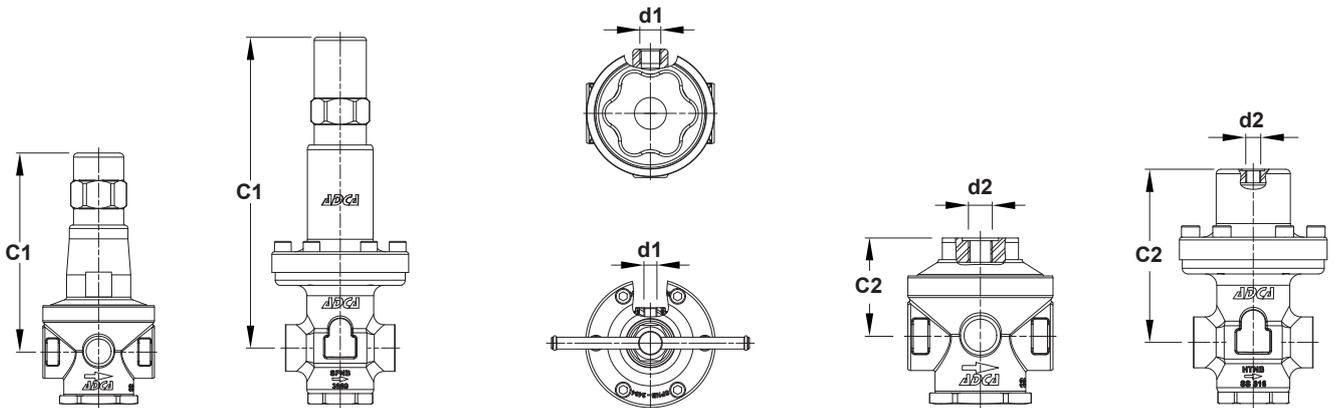
OPTIONS		
GAUGE CONNECTION	TOP CAP	DOME-LOADING



1/2" and 3/4" – DN 15 and DN 20



1" – DN 25



Optional top cap

Optional gauge connection

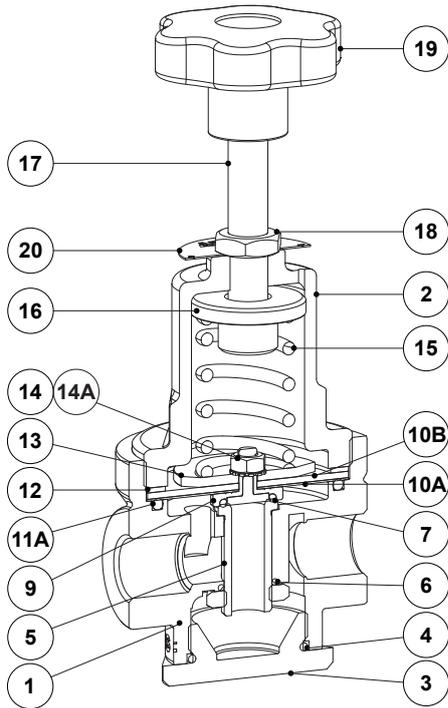
Optional dome-loading

DIMENSIONS (mm)															
SIZE	THREADED								PN 40		CLASS 150		CLASS 300		
	A	B	C	C1	C2	d1	d2	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)	
1/2" – DN 15	80	38	167	145	55	1/4"	1/4"	2,1	150	3,6	150	2,9	150	3,9	
3/4" – DN 20	80	38	167	145	55	1/4"	1/4"	2	150	4,1	150	3,3	150	4,3	
1" – DN 25	105	54	292	300	153	1/4"	1/4"	6,6	160	9,3	230	8,5	230	9,7	

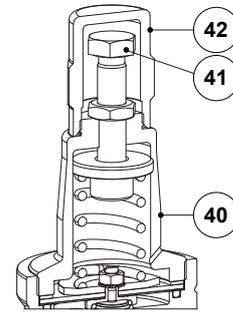
\* Different face to face dimensions on request.

Remarks: As standard, in versions manufactured with EN 1092-1 flanges or ISO 7 Rp threads, connections d1 and d2 are female threaded ISO 228. In versions with ASME B16.5 flanges or NPT threads, these connections are female threaded NPT.

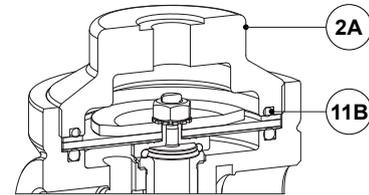
MATERIALS



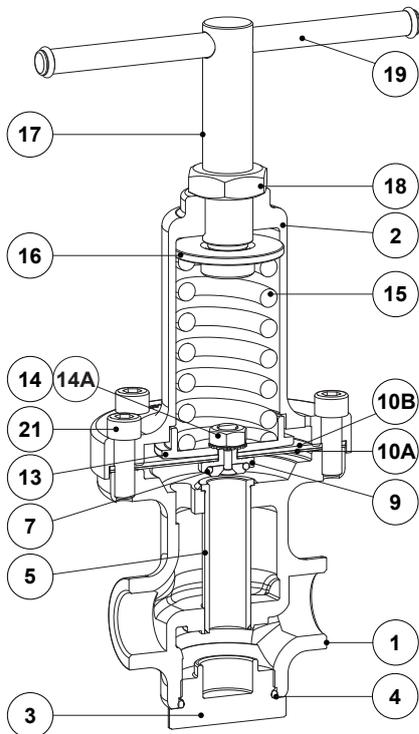
1/2" and 3/4" – DN 15 and DN 20



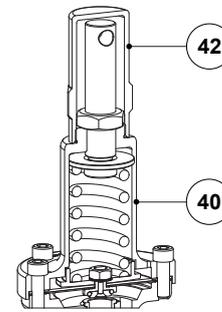
Optional top cap



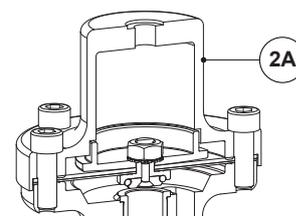
Optional dome-loading



1" – DN 25



Optional top cap



Optional dome-loading

**MATERIALS**

POS. No.	DESIGNATION	MATERIAL
1	Valve body	A351 CF8M / 1.4408
2	Spring cover	A351 CF8M / 1.4408
2A	Cover	AISI 316L / 1.4404
3	Bottom cover	A351 CF8M / 1.4408
4	* O-ring	** NBR; EPDM; PTFE; FPM
5	Valve seat	AISI 316 / 1.4401
6	* O-ring	** NBR; EPDM; PTFE; FPM
7	Valve seal	** NBR; EPDM; PTFE; FPM
9	Pusher disc	AISI 316 / 1.4401
10A	* Lower diaphragm	** PTFE
10B	* Upper diaphragm	** NBR
11A	* O-ring	** NBR; EPDM; PTFE; FPM
11B	* O-ring	** NBR; EPDM; PTFE; FPM
12	Gasket	Aluminium
13	Spring plate	AISI 304 / 1.4301
14	Nut	Stainless steel A2-70
14A	* Serrated washer	AISI 304 / 1.4301
15	* Adjustment spring	AISI 302 / 1.4300
16	Top spring plate	Brass; AISI 316 / 1.4401
17	Adjustment stem	AISI 304 / 1.4301
18	Lock nut	Stainless steel A2-70
19	Adjustment knob	Plastic; AISI 304 / 1.4301
20	Spring identification plate	Aluminium
21	Bolt	Stainless steel A2-70
40	Cover	A351 CF8M / 1.4408; AISI 316L / 1.4404
41	Adjustment screw	Stainless steel A2-70
42	Top cap	AISI 316L / 1.4404

\* Available spare parts. \*\* Others on request.

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

ORDERING CODES PS30SS												
VALVE MODEL	PS30	.	1	W	N	C	R			.	A	15
PS30SS – Diaphragm sensing pressure sustaining valve	PS30											
<b>REGULATING RANGE</b>												
No. 1 – 0,2 to 1,5 bar			1									
No. 2 – 0,3 to 3 bar			2									
No. 3 – 0,8 to 8 bar			3									
No. 4 – 1,5 to 15 bar			4									
0,2 to 15 bar (dome-loading) (a)			A									
<b>APPLICATION</b>												
Water				W								
Gases				G								
Oxygen (degreased)				O								
<b>VALVE SEALING</b>												
NBR					N							
EPDM					E							
PTFE (b)					T							
FPM					V							
<b>MAXIMUM INLET PRESSURE</b>												
15 bar						C						
<b>DIAPHRAGM</b>												
NBR / PTFE (only NBR in case of dome-loading)							R					
<b>GAUGE CONNECTIONS</b>												
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		
<b>TOP CAP AND RELIEVING</b>												
Non-relieving											(1)	
Non-relieving with top cap (adjustment screw with cover)											T	
Dome-loading top (c)											X	
<b>PIPE CONNECTIONS</b>												
Female threaded ISO 7 Rp												A
Female threaded NPT ASME B1.20.1												C
Flanged EN 1092-1 PN 40												N
Flanged ASME B16.5 Class 150												U
Flanged ASME B16.5 Class 300												V
<b>SIZE</b>												
1/2" or DN 15												15
3/4" or DN 20												20
1" or DN 25												25
<b>SPECIAL CONSTRUCTION / ADDITIONAL OPTIONS</b>												
A full description must to be provided and validated in case of a non-standard construction												E

(1) Omitted if a standard valve is requested.

(a) The loading control pressure can be up to a maximum of 1,2 bar above the required downstream pressure.

(b) All seals except piston o-ring, which is supplied in FPM or others on request.

(c) This option must be chosen in case of dome-loading.