

PISTON SENSING PRESSURE SUSTAINING VALVE PS31

DESCRIPTION

The ADCA PS31 series direct acting, spring-loaded piston sensing pressure sustaining valves are designed for use on compressed air, water, and other gases or liquids compatible with the materials of the construction.

They are suitable for pressure sustaining applications where low capacity is required.

This valve main purpose is to maintain the upstream pressure under control.

MAIN FEATURES

Compact design.

Machined from bar stock materials or investment casting.

OPTIONS: Different soft valves for water and gases.
 1/4" gauge connection on body.
 Top cap (adjustment screw with cover).

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

AVAILABLE MODELS:

PS31SS – stainless steel, piston sensing.

SIZES: 1/2" to 2"; DN 15 to DN 50.

CONNECTIONS: Female threaded ISO 7 Rp or NPT.
 Flanged EN 1092-1 PN 40 or PN 63.

INSTALLATION: Horizontal installation.
 A "Y" strainer should be installed upstream of the valve.
 See IMI – Installation and maintenance instructions.



PS31SS 1/2" – DN 15

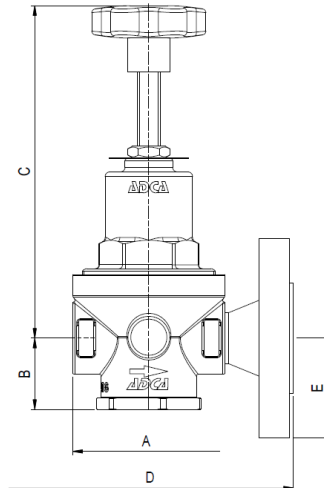
CE MARKING – GROUP 2 (PED – European Directive)	
PN 63	Category
1/2" to 1 1/4" – DN 15 to 32	SEP
1 1/2" to 2" – DN 40 to 50	1 (CE marked)

FLOW RATE COEFFICIENTS (m ³ /h)						
SIZE (DN)	15	20	25	32	40	50
Kvs	3	3,5	7,5	8,2	14,4	15,4

LIMITING CONDITIONS	
Valve model	PS31SS
Body design conditions	PN 63
Maximum upstream pressure	50 bar
Minimum upstream pressure	3 bar
Maximum design temperature *	80 °C

* Others on request.

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



DIMENSIONS (mm)											
THREADED				PN 40				PN 63			
SIZE	A	B	C	WEIGHT (kg)	D *	E	WEIGHT (kg)	D *	E PN 63	E PN 100	WEIGHT (kg)
1/2" – DN 15	80	38	175	2,6	150	47,5	4	210	52,5	52,5	4,9
3/4" – DN 20	80	38	175	2,6	150	52,5	4,7	230	70	70	6,9
1" – DN 25	105	66	320	8,6	160 (230)	57,5	10,7 (12,4)	230	70	70	15,1
1 1/4" – DN 32	125	66	320	9,7	260	70	13,5	260	77,5	77,5	16,5
1 1/2" – DN 40	205	86	305	14,8	200	75	18,1	260	85	85	22,1
2" – DN 50	205	80	305	15,1	** 230	82,5	20,3	300	90	97,5	24,6

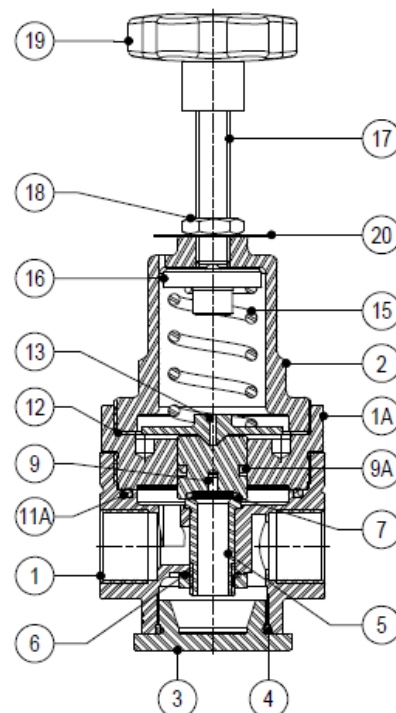
* Different lengths and ASME flanges available on request;

** Only available with flat flanges EN 1092-1 type 01 A. Welding neck type 11 B flanges as option with 300 mm minimum face to face dimensions.

() : Alternative.

MATERIALS		
POS.	DESIGNATION	MATERIAL
1	Valve body a)	A351 CF8M / 1.4408 (AISI 316 / 1.4401)
1A	Piston sleeve	AISI 316 / 1.4401
2	Top cover b)	A351 CF8M / 1.4408 (AISI 316 / 1.4401)
3	Seat cover a)	A351 CF8M / 1.4408 (AISI 316 / 1.4401)
4	* O-ring	NBR
5	Valve seat	AISI 316 / 1.4401
6	Sealing	NBR
7	* O-ring	NBR; EPDM; PTFE, etc.
9	Piston	AISI 316 / 1.4401
9A	* O-ring	NBR; EPDM; PTFE, etc.
11A	* O-ring	NBR; EPDM; PTFE, etc.
12	Gasket	Aluminium
13	Spring plate	AISI 304 / 1.4301
15	* Adjustment spring	Spring steel
16	Top spring plate	Brass
17	Adjustment screw	AISI 304 / 1.4301
18	Locknut	Stainless steel A2-70
19	Handwheel	Plastic
20	Spring Id. plate	Aluminium

* 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.

a) Bar stock execution on request (standard for sizes DN 32 to DN 50).

b) Bar stock execution on request.

ORDERING CODES PS31												
Valve model	PS31	.	5	W	N	C	4	.			A	15
PS31SS – piston sensing pressure sustaining valve	PS31											
Regulating range												
N° 5 – 3 to 30 bar			5									
N° 6 – 5 to 50 bar			6									
Application												
Water				W								
Gases				G								
Oxygen (degreased)				O								
Seal material a)												
NBR					N							
EPDM					E							
PTFE b)					T							
FPM / Viton					V							
Maximum inlet pressure												
30 bar						C						
50 bar						D						
Gauge port 1/4" c)												
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			
Relieving												
Non-relieving										(1)		
Pipe connection												
Female threaded ISO 7 Rp											A	
Female threaded NPT ASME B1.20.1											C	
Socket weld (SW) ASME B16.11											H	
Butt weld (BW) ASME B16.25											I	
Flanged EN 1092-1 PN 40											N	
Flanged EN 1092-1 PN 63											O	
Flanged ASME B16.5 Class 150											U	
Flanged ASME B16.5 Class 300											V	
Flanged ASME B16.5 Class 600											W	
Size												
1/2" or DN 15												15
3/4" or DN 20												20
...												
Special valves / Extras												
Full description or additional codes have to be added in case of non-standard combination.												E

(1) Omitted if a standard valve is requested.

a) Valve limited to the materials maximum operating temperature. Consult manufacturer for more details.

b) Valve seal only, other seals in Viton.

c) Gauge port can also be used as external sensing line.