

DIAPHRAGM SENSING PRESSURE REDUCING VALVES P20DS

DESCRIPTION

The ADCA P20DS is a series of direct acting, spring loaded, diaphragm sensing balanced plug pressure reducing valves. These regulators are particularly suitable for general purpose applications where low flow and high temperatures are involved and have been specially designed for use with steam.

MAIN FEATURES

- Compact design.
- Robust stainless steel diaphragm.
- Non-rising adjustment knob.
- Balanced valve plug.
- Completely machined from solid bar stock material.

- OPTIONS:**
- Leakage line connection.
 - Gauge connection on body.
 - Different soft valves for liquids and gases.
 - Top cap (adjustment screw with cover).
 - Degreased for oxygen application.
 - Connection for external sensing line.
 - Panel mounting.

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

- AVAILABLE MODELS:** P20DS – stainless steel, diaphragm sensing.

- SIZES:** 1/4" to 1/2"; DN 15.

- CONNECTIONS:** Female threaded ISO 7 Rp, ISO 228 or NPT.
Flanged EN 1092-1 PN 40.
Flanged ASME B16.5 Class 150 or 300.

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

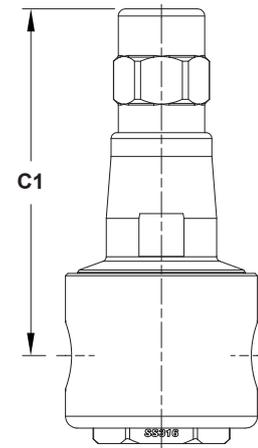
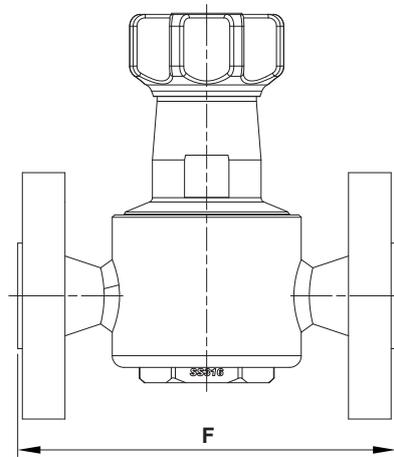
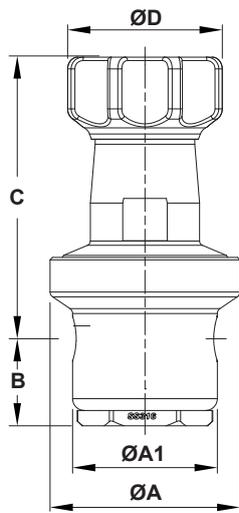


LIMITING CONDITIONS			
MODEL	P20DS		
Body design conditions	Class 150	Class 300	PN 40
Maximum upstream pressure	14 bar	14 bar	14 bar
Maximum downstream pressure	8 bar		
Minimum downstream pressure	0,2 bar		
Maximum design temperature	200 °C		
Maximum recommended reducing ratio	10:1		

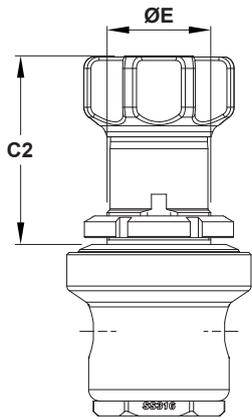
CE MARKING – GROUP 2 (PED – EUROPEAN DIRECTIVE)	
PN 25	CATEGORY
1/4" to 1/2" – DN 15	SEP

FLOW RATE COEFFICIENTS (m³/h)			
SIZE	1/4"	3/8"	1/2" – DN 15
Kvs	1,2	1,8	1,8

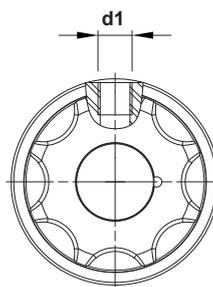
OPTIONS			
GAUGE CONNECTION	TOP CAP	LEAKAGE LINE CONNECTION	PANEL MOUNTING



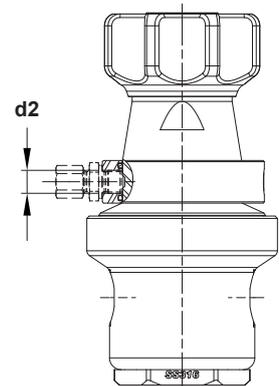
Optional top cap



Optional panel mounting



Optional gauge connection



Optional leakage line connection

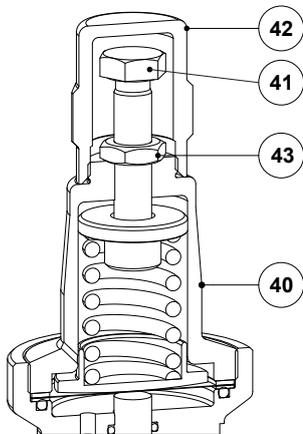
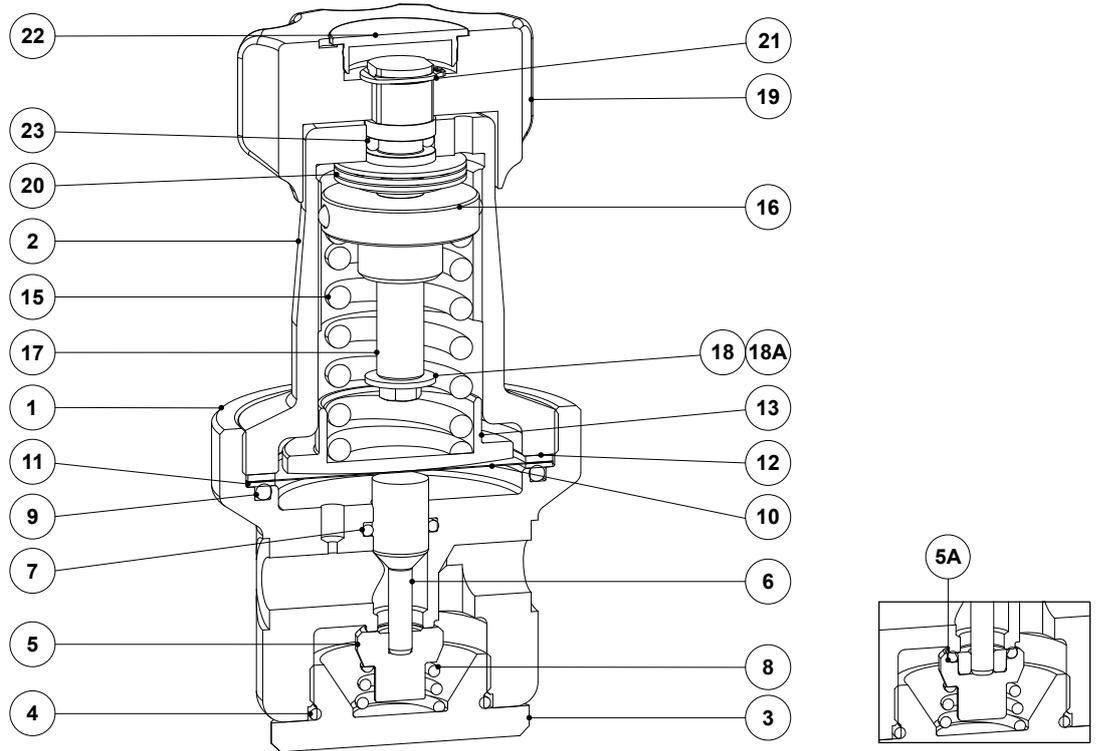
DIMENSIONS (mm)

SIZE	THREADED											PN 40		CLASS 150		CLASS 300	
	ØA	ØA1	B	C	C1	C2	ØD	d1	d2	ØE	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)
1/4"	80	61	37	120	146	83	69	1/4"	1/8"	45	2,3	-	-	-	-	-	-
3/8"	80	61	37	120	146	83	69	1/4"	1/8"	45	2,3	-	-	-	-	-	-
1/2" – DN 15	80	80	37	120	146	83	69	1/4"	1/8"	45	2,9	150	4,4	160	3,9	170	4,5

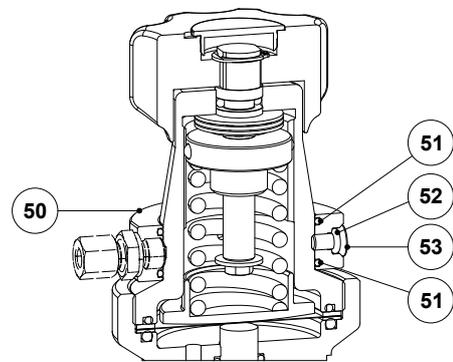
* Different face to face dimensions on request.

Remark: As standard, in versions manufactured with EN 1092-1 flanges or ISO 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.

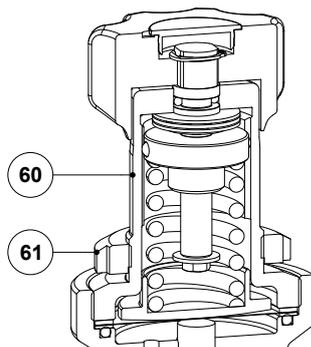
MATERIALS



Optional top cap



Optional leakage line connection



Optional panel mounting

MATERIALS

POS. No.	DESIGNATION	MATERIAL
1	Valve body	AISI 316 / 1.4401
2	Cover	AISI 316 / 1.4401
3	Bottom cover	A351 CF8M / 1.4408
5	* Valve head	AISI 316 / 1.4401
5A	* O-ring	** NBR; EPDM; PTFE; FPM
6	* Piston	AISI 316 / 1.4401
7	* Piston o-ring	** FPM
8	Valve spring	AISI 302 / 1.4300
10	* Diaphragm	AISI 301 / 1.4410
11	* O-ring	** FPM
12	Gasket	Aluminium
13	Spring plate	AISI 304 / 1.4301
15	* Adjustment spring	AISI 302 / 1.4300
16	Spring guide	AISI 316 / 1.4401
17	Adjustment screw	Brass
18	Washer	Stainless steel A2
18A	Bolt	Stainless steel A2-70
19	Adjustment knob	Painted aluminium
20	Bearing	Corrosion resistant steel
21	Shaft ring	Stainless steel
22	Cover nut	Plastic
23	* O-ring	NBR
40	Cover	AISI 316L / 1.4404
41	Adjustment screw	Stainless steel A2-70
42	Top cap	AISI 316L / 1.4404
43	Lock nut	Stainless steel A2
50	Leakage line ring	AISI 316L / 1.4404
51	O-ring	** NBR
52	O-ring	** FPM
53	Bolt	AISI 304 / 1.4301
54	O-ring	** FPM
60	Cover for panel mounting	AISI 316L / 1.4404
61	Panel mounting ring	A351 CF8 / 1.4308

* 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 P20DS											
VALVE MODEL	P20DS	.	1	S	N	S		.	B	08	
P20DS – Diaphragm sensing pressure reducing valve	P20DS										
REGULATING RANGE											
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								
APPLICATION											
Steam				S							
Gases				G							
Oxygen (degreased)				O							
VALVE SEALING (a)											
NBR					N						
EPDM					E						
PTFE					T						
FPM					V						
DIAPHRAGM											
Stainless steel						S					
GAUGE CONNECTIONS											
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 CONNECTIONS											
Female threaded ISO 7 Rp (non-standard)										A	
Female threaded ISO 228										B	
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	
SIZE											
1/4"											08
3/8"											10
1/2"											15
SPECIAL CONSTRUCTION / ADDITIONAL OPTIONS											
A full description must be provided and validated in case of a non-standard construction											E

(1) Omitted if a standard valve is requested.

(a) Valve head only. Remaining valve seals on request. Valve limited to the materials maximum operating temperature. Contact manufacturer for more details.

Remark: Options not mentioned in the ordering codes table must be requested separately, e.g.: P20DS.1SNS4.B08 with top cap and panel mounting.