

DIAPHRAGM SENSING PRESSURE REDUCING VALVES P20D

DESCRIPTION

The ADCA P20D is a series of direct acting, spring-loaded, diaphragm sensing and balanced plug pressure reducing 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 reducing applications at the point of use in laundry and dyeing machines, food industries, sterilizers, etc.

MAIN FEATURES

- Compact design.
- Non-rising adjustment knob.
- Balanced valve plug.
- Completely machined from solid bar stock material.
- Ultrasonically cleaned.

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

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

AVAILABLE MODELS: P20D – 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	P20D			
	Class 150	Class 300	PN 40	PN 63 *
Body design conditions	16 bar	40 bar	40 bar	50 bar
Maximum upstream pressure	16 bar	40 bar	40 bar	50 bar
Maximum downstream pressure	15 bar			
Minimum downstream pressure	0,2 bar			
Maximum design temperature	80 °C			
Maximum recommended reducing ratio	40:1			

* Rating PN 63 for threaded versions.

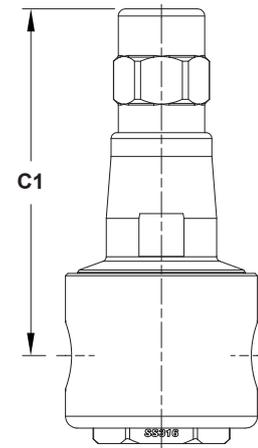
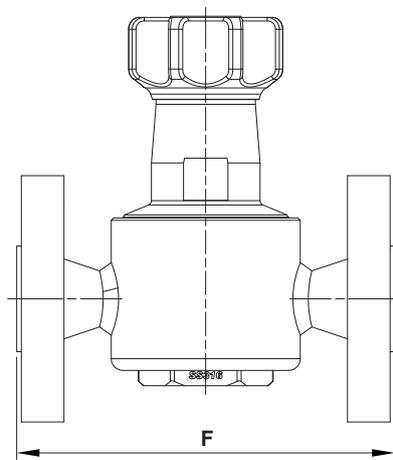
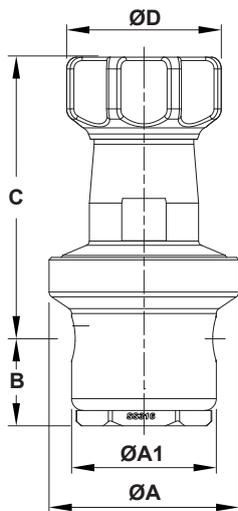
CE MARKING – GROUP 2 (PED – EUROPEAN DIRECTIVE)

PN 40	CATEGORY
1/4" to 1/2" – DN 15	SEP

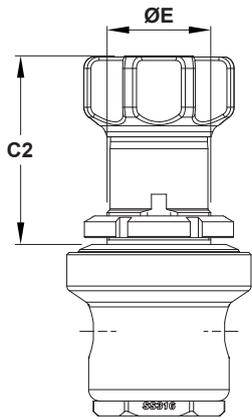
FLOW RATE COEFFICIENTS (m³/h)

SIZE	1/4"	3/8"	1/2" – DN 15
Kvs	1,2	1,8	1,8

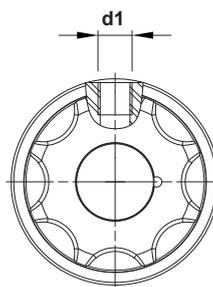
OPTIONS			
GAUGE CONNECTION	TOP CAP	LEAKAGE LINE CONNECTION	PANEL MOUNTING



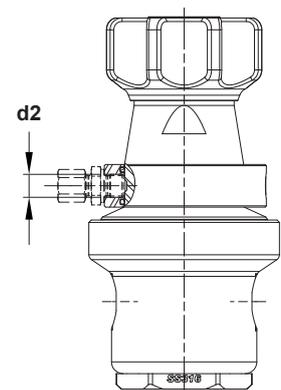
Optional top cap



Optional panel mounting



Optional gauge connection



Optional leakage line connection

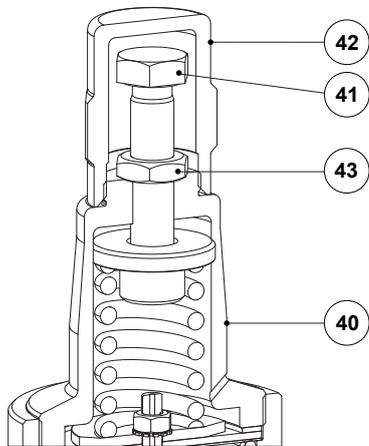
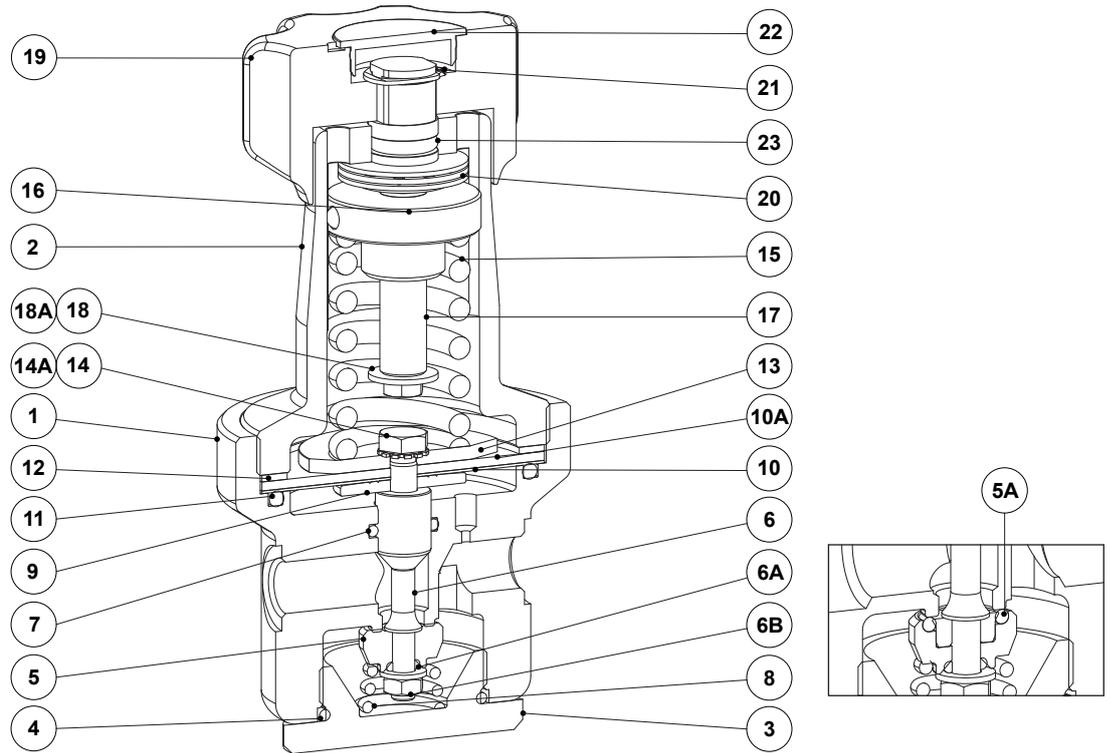
DIMENSIONS (mm)

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

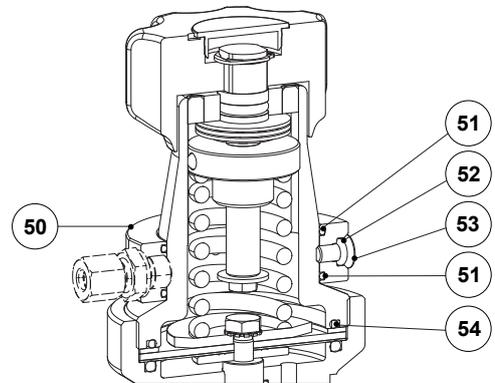
* Different face to face dimensions on request.

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.

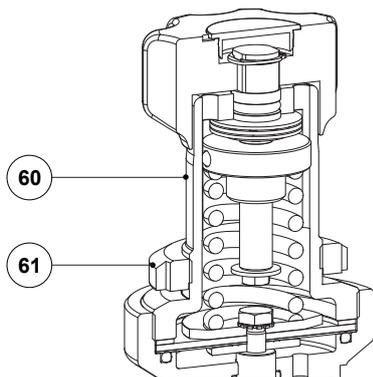
MATERIALS



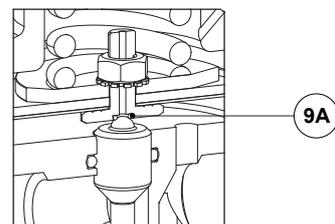
Optional top cap



Optional leakage line connection



Optional panel mounting



Optional relieving

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
4	* O-ring	** NBR
5	* Valve head	AISI 316 / 1.4401
5A	* O-ring	** NBR; EPDM; PTFE; FPM
6	* Piston	AISI 316 / 1.4401
6A	* O-ring	** NBR
6B	Nut	Stainless steel A2
7	* Piston o-ring	** NBR; EPDM; FPM
8	Valve spring	AISI 302 / 1.4300
9	Pusher disc	AISI 316 / 1.4401
9A	* O-ring	** NBR
10	* Lower diaphragm	** PTFE
10A	* Upper diaphragm	** NBR
11	* O-ring	** NBR
12	Gasket	Aluminium
13	Spring plate	AISI 304 / 1.4301
14	Nut	Stainless steel A2
14A	* Serrated washer	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	** NBR
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 P20D												
VALVE MODEL	P20	.	1	W	N	D	R			.	B	08
P20D – Diaphragm sensing pressure reducing valve	P20											
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									
No. 4 – 1,5 to 15 bar			4									
APPLICATION												
Water				W								
Gases				G								
Oxygen (degreased)				O								
VALVE SEALING (a)												
NBR					N							
EPDM					E							
PTFE					T							
FPM					V							
MAXIMUM INLET PRESSURE												
50 bar						D						
DIAPHRAGM												
NBR / PTFE							R					
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				
TOP CAP, RELIEVING, LEAKAGE LINE CONNECTION AND PANEL MOUNTING												
Non-relieving								(1)				
Relieving (only for non-dangerous gases)								R				
Relieving with leakage line connection								L				
Non-relieving with top cap (adjustment screw with cover)								T				
Relieving with top cap (adjustment screw with cover, only for non-dangerous gases)								V				
Panel mounting version, non-relieving								P				
Panel mounting version with relieving (only for non-dangerous gases)								Q				
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" or DN 15												15
SPECIAL CONSTRUCTION / ADDITIONAL OPTIONS												
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) Valve head only. Remaining valve seals on request.