

PRESSURE REDUCING VALVE PRV25

DESCRIPTION

The ADCA PRV25 is a series of direct acting pressure reducing valves designed for use on steam, compressed air, water and other gases and liquids. These regulators are suitable for reducing steam pressure at the point of use on laundry machines, dyeing, food industries, sterilizers, etc.

MAIN FEATURES

Compact design.
Bellows specially designed for high durability.
Non-rising adjustment knob.
Lockable knob system.
Built-in strainer.

OPTIONS: Rising adjustment knob with lock nut.
Top cap (adjustment screw with cover).
Spring and dome load version.
Gauge connection on body.

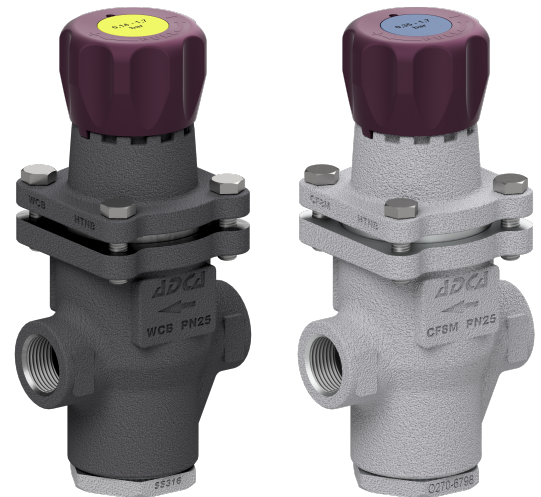
USE: Saturated steam, compressed air, water and other gases and liquids compatible with the construction.

AVAILABLE MODELS: PRV25/2S and PRV25/2SG – carbon steel.
PRW25/2S – carbon steel, balanced soft sealing.
PRV25i and PRV25iG – stainless steel.
PRW25i – stainless steel, balanced soft sealing.
Suffix G: soft sealed with PTFE/GR.

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

CONNECTIONS: Female threaded ISO 7 Rp or NPT.
Flanged EN 1092-1 PN 25.
Flanged ASME B16.5 Class 150 or 300.

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



CE MARKING – GROUP 2 (PED – European Directive)

PN 25	Category
DN 15 to 25	SEP

LIMITING CONDITIONS

Valve model	PRV25/2S PRV25i	PRV25/2SG PRV25iG	PRW25/2S PRW25i
Body design conditions	PN 25	PN 25	PN 25
Maximum upstream pressure	17 bar	17 bar	14 bar
Maximum downstream pressure	8,6 bar	8,6 bar	8,6 bar
Minimum downstream pressure	0,14 bar	0,14 bar	0,35 bar
Maximum design temperature	210 °C	200 °C	80 °C
Maximum recommended reducing ratio	10:1	10:1	10:1
Maximum dome loading pressure	8,6 bar	8,6 bar	8,6 bar

FLOW RATE COEFFICIENTS (m³/h)

SIZE	1/2" – DN 15	3/4" – DN 20	1" – DN 25
Kvs	1,7	2,6	3,1

REGULATING RANGES

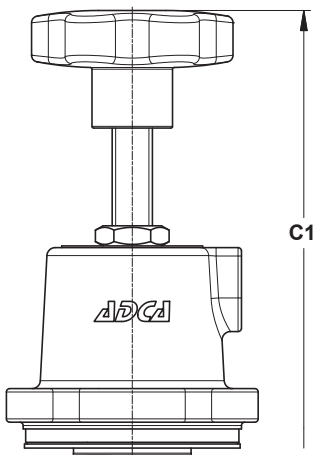
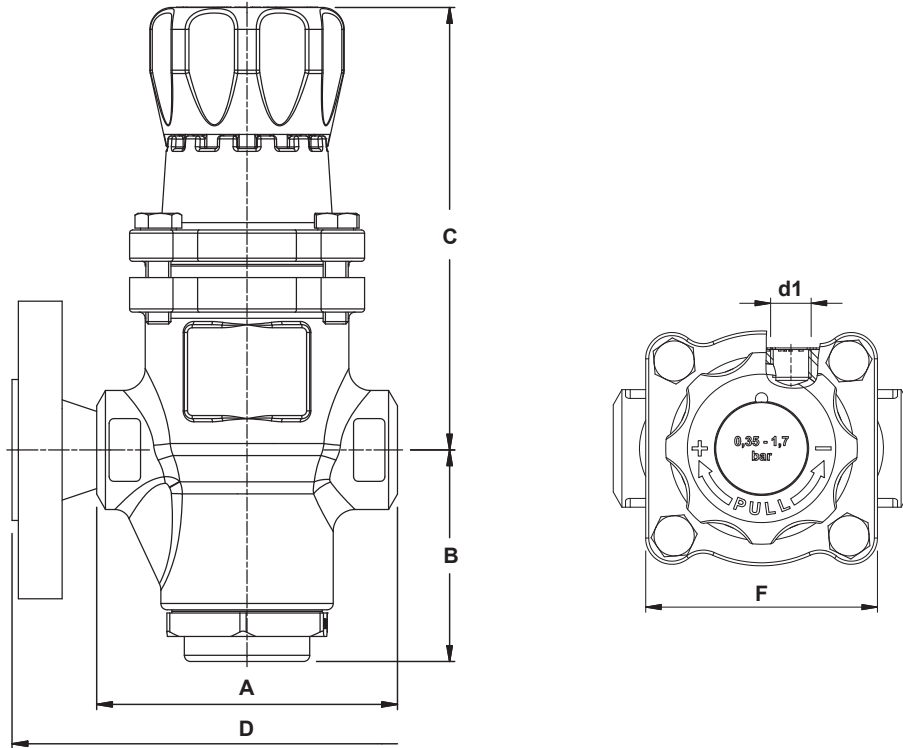
SPRING COLOUR	BLUE *	YELLOW **	GREEN	RED
Spring loaded	0,35 to 1,7 bar	0,14 to 1,7 bar	1,4 to 4 bar	3,5 to 8,6 bar
Spring and dome loaded ***	–	0,14 to 1,2 bar	1 to 3,5 bar	–

* Only applicable to PRW models; ** Only applicable to PRV models.

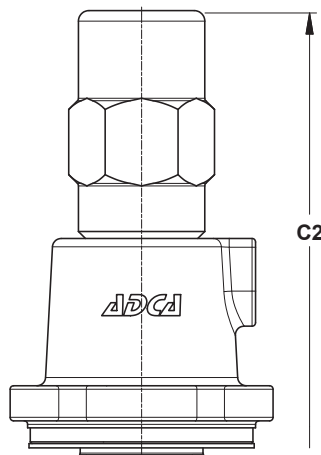
*** Ranges shown are related to adjustment spring loading forces. Total downstream pressure will correspond to the sum of the pressure resulting from the adjusted spring force and the loading pressure provided by the dome. Not applicable to PRW models.

PRV25 OPTIONAL COVERS

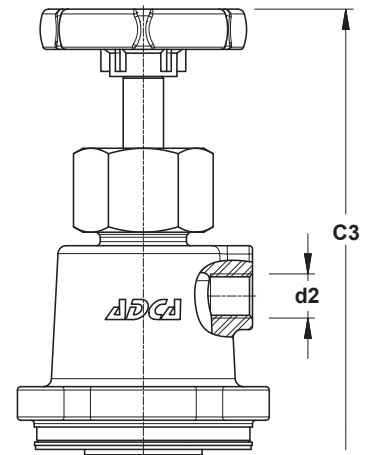
RISING ADJUSTMENT KNOB WITH LOCK NUT	TOP CAP	SPRING AND DOME LOADED



Optional rising adjustment knob



Optional top cap



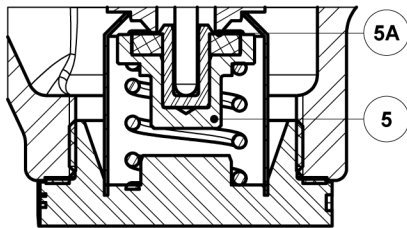
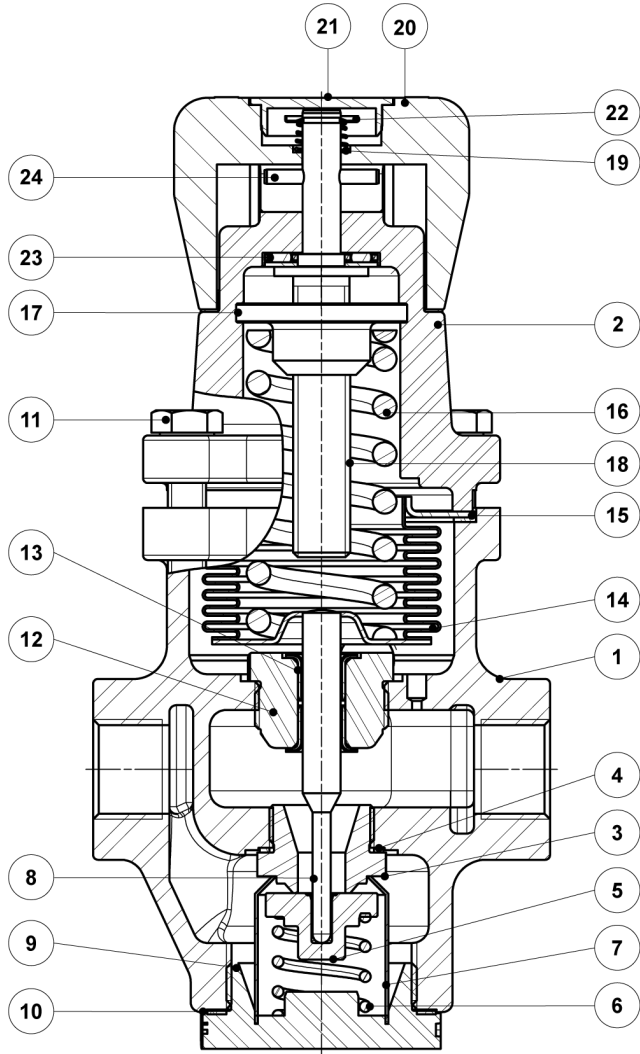
Optional spring and dome loaded version

DIMENSIONS (mm)

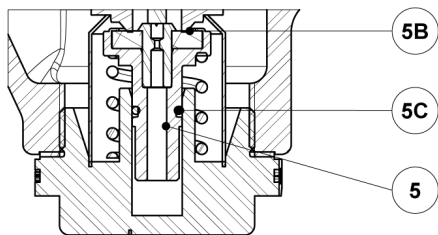
SIZE	THREADED									PN 25		CLASS 150		CLASS 300		
	A	B	C	C1	C2	C3	d1 *	d2 **	F	WGT. (kg)	D	WGT. (kg)	D	WGT. (kg)	D	WGT. (kg)
1/2" – DN 15	96	68,5	141	242	237	243	1/4"	1/4"	74	3	150	4,4	150	4	150	4,4
3/4" – DN 20	96	68,5	141	242	237	243	1/4"	1/4"	74	3	150	5	150	4,4	150	5,3
1" – DN 25	96	68,5	141	242	237	243	1/4"	1/4"	74	2,9	160	5,5	160	5,1	160	5,9

* Optional gauge connection; ** Loading gas dome connection.

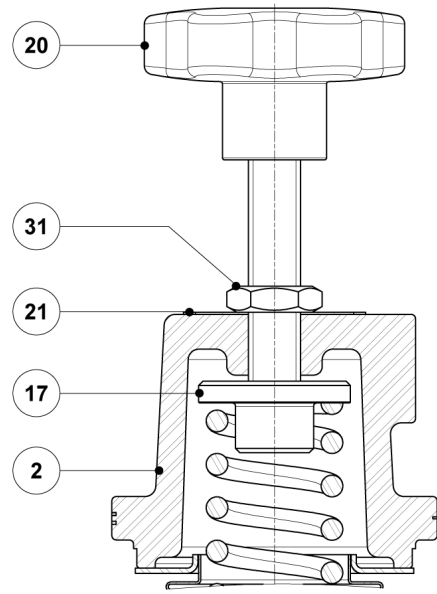
Remarks: As standard, in versions manufactured with EN 1092-1 PN 16 flanges or ISO Rp threads, connections d1 and d2 are female threaded ISO 7 Rp. In versions with ASME B16.5 flanges or NPT threads, these connections are female threaded NPT.



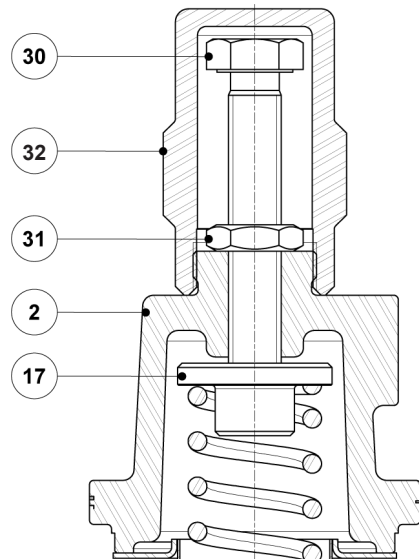
Soft sealing



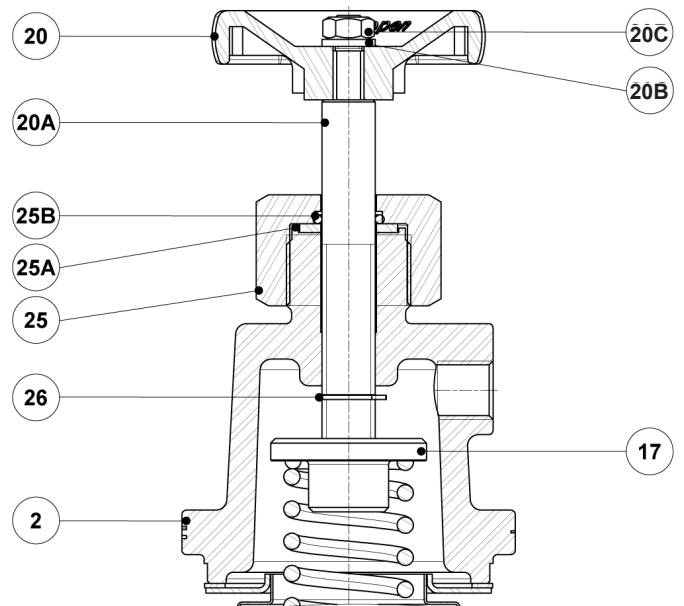
Balanced soft sealing (PRW)



Optional rising adjustment knob



Optional top cap



Optional spring and dome loaded version

MATERIALS

POS. N°	DESIGNATION	MATERIAL
1	Body (PRV25/2S and PRW25/2S)	A216 WCB / 1.0619
	Body (PRV25i and PRW25i)	A351 CF8M / 1.4408
2	Cover (PRV25/2S and PRW25/2S)	A216 WCB / 1.0619
	Cover (PRV25i and PRW25i)	A351 CF8M / 1.4408
3	* Seat	AISI 316 / 1.4401
4	* Gasket	Copper
5	* Valve plug	Hardened stainless steel
5A	* Valve head	Graphite filled PTFE
5B	* Valve head	NBR
5C	* O-ring	NBR
6	* Valve spring	AISI 302 / 1.4300
7	* Strainer screen	AISI 304 / 1.4301
8	Pushrod	AISI 316 / 1.4401
9	Bottom cover	A351 CF8M / 1.4408
10	* Gasket	Stainless steel / Graphite
11	Bolts (PRV25/2S and PRW25/2S)	Steel 8.8
	Bolts (PRV25i and PRW25i)	Stainless steel A2-70
12	* Guide bush	AISI 316 / 1.4401
13	* Plain bearing	Bronze filled PTFE
14	* Bellows	AISI 316 Ti / 1.4571
15	* Bellows gasket	Stainless steel / Graphite
16	* Adjustment spring	Steel
17	Top spring plate	Brass
18	Adjustment screw	AISI 304 / 1.4301
19	Spring	AISI 302 / 1.4300
20	Adjustment knob	Nylon
20A	Adjustment stem	AISI 304 / 1.4301
20B	Washer	Stainless steel
20C	Nut	Stainless steel A2-70
21	Spring identification plate	Plastic; Aluminium
22	Retaining washer	AISI 302 / 1.4300
23	Bearing	Steel
24	Pin	AISI 304 / 1.4301
25	Cover nut	AISI 303 / 1.4305
25A	* Gasket	PTFE
25B	* O-ring	EPDM
26	Retaining ring	Stainless steel A2-70
30	Adjustment screw	Stainless steel A2-70
31	Nut	Stainless steel A2-70
32	Top cap	AISI 303 / 1.4305

* Available spare parts.

CAPACITY TABLE

SATURATED STEAM (kg/h)					COMPRESSED AIR (Nm ³ /h – 0 °C – 1,013 bar)					WATER (m ³ /h)					
INLET (bar)	OUTLET (bar)	SIZE			INLET (bar)	OUTLET (bar)	SIZE			D.P (bar)	SIZE				
		DN 15	DN 20	DN 25			DN 15	DN 20	DN 25		DN 15	DN 20	DN 25		
2	0,2 – 1	75	110	132	2	0,2 – 1	120	126	147	1,5	2,10	3,21	3,83		
	1,8	68	102	125		1,8	109	112	135		2	2,43	3,70	4,42	
3	0,3 – 1,5	104	148	177	3	0,3 – 1,5	157	169	195	3	2,95	4,54	5,41		
	2	97	141	170		2	150	162	187		4	3,43	5,24	6,25	
	2,6	90	134	162		2,6	142	153	178			5	3,78	5,78	6,90
4	0,4 – 2	125	180	210	4	0,4 – 2	196	203	243	6	4,16	6,25	7,45		
	2,5	118	171	201		2,5	188	196	235		7	4,37	6,68	7,96	
	3,6	107	158	190		3,6	170	181	219			8	4,63	7,08	8,45
5	0,5 – 2,5	137	192	230	5	0,5 – 2,5	208	222	253	9	4,88	7,47	8,90		
	3	134	189	222		3	202	211	242		10	5,12	7,83	9,34	
	4,5	128	183	213		4,5	197	203	235			12	5,56	8,51	10,15
6	0,6 – 3	166	221	266	6	0,6 – 3	240	251	298	7	0,7 – 3,5	175	250	300	
	4	154	212	256		4	232	244	286		4,5	168	242	290	
	5,5	138	200	242		5,5	225	230	266			5,5	157	228	270
7	0,7 – 3,5	175	250	300	7	0,7 – 3,5	269	282	337	6,3	148	216	253		
	4,5	168	242	290		4,5	260	270	321		8	0,8 – 4	222	300	357
	5,5	157	228	270		5,5	245	255	300			5	208	290	350
	6,3	148	216	253		6,3	233	244	284				6	189	271
8	0,8 – 4	222	300	357	8	0,8 – 4	323	339	396	7,2	170	240	286		
	5	208	290	350		5	315	330	383		9	0,9 – 4,5	230	321	382
	6	189	271	330		6	290	306	361			6	209	300	363
	7,2	170	240	286		7,2	258	270	318				7	192	271
9	0,9 – 4,5	230	321	382	9	0,9 – 4,5	347	363	424	8	172	241	285		
	6	209	300	363		6	322	340	400		10	1 – 5	238	341	408
	7	192	271	324		7	293	309	364			6	230	330	397
	8	172	241	285		8	264	279	328				7	215	307
10	1 – 5	238	341	408	10	1 – 5	372	388	453	8,6	177	260	312		
	6	230	330	397		6	354	375	438		11	1,1 – 5,5	250	358	427
	7	215	307	363		7	328	348	410			6	244	348	415
	8,6	177	260	312		8,6	280	296	348				7	237	337
11	1,1 – 5,5	250	358	427	11	1,1 – 5,5	387	404	474	8,6	206	296	356		
	6	244	348	415		6	375	394	463		12	1,2 – 6	265	375	449
	7	237	337	402		7	362	383	451			7	260	370	444
	8,6	206	296	356		8,6	319	338	398				8	246	350
12	1,2 – 6	265	375	449	12	1,2 – 6	404	423	500	8,6	236	333	400		
	7	260	370	444		7	398	418	492		13	1,3 – 6,5	281	398	476
	8	246	350	421		8	375	400	469			7	279	391	470
	8,6	236	333	400		8,6	358	380	448				8	266	381
13	1,3 – 6,5	281	398	476	13	1,3 – 6,5	428	447	530	8,6	257	367	440		
	7	279	391	470		7	420	440	522		15	1,5 – 7,5	300	424	508
	8	266	381	459		8	411	431	510			8,6	285	408	488
	8,6	257	367	440		8,6	395	416	494				17	1,7 – 8,6	321
15	1,5 – 7,5	300	424	508	15	1,5 – 7,5	455	477	565	17	1,7 – 8,6	321	453	543	
	8,6	285	408	488		8,6	439	463	546		17	1,7 – 8,6	321	453	543