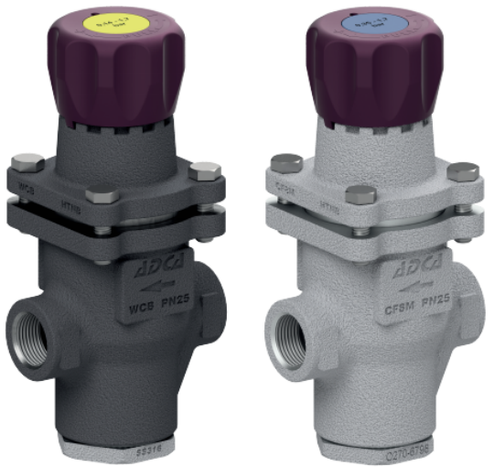
Válvula Reductora de Presión PRV25I

DESCRIPTION

The ADCA PRV25 series of direct acting pressure reducing valves, are designed for use on steam, compressed air, water and other gases and liquids.
They 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 – carbon steel construction, metal to metal sealing.
PRV25/2SG – carbon steel construction, soft sealing.
PRW25/2S – carbon steel construction, balanced soft sealing.
PRV25I – stainless steel construction, metal to metal sealing.
PRV25IG – stainless steel construction, soft sealing.
PRW25I – stainless steel construction, balanced soft sealing.

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.
A “Y” strainer should be installed upstream of the valve.
See IMI – Installation and maintenance instructions.

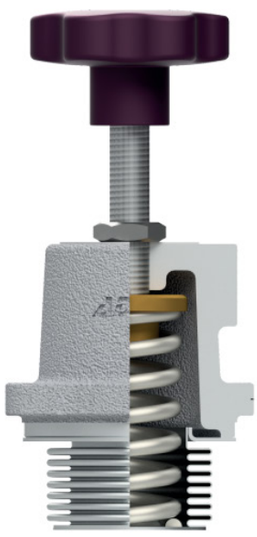
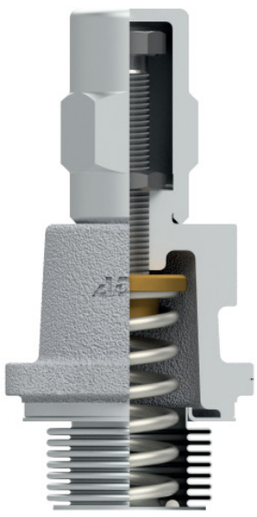
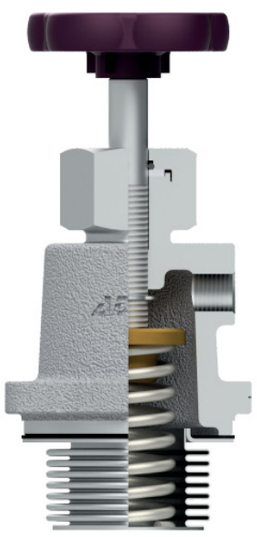
CE MARKING – GROUP 2 (PED – European Directive)	
PN 25	**Category**
DN 15 to 25	SEP

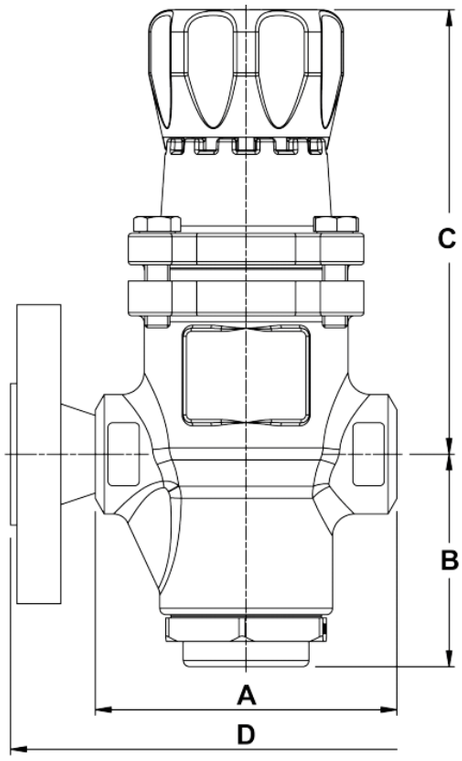
LIMITING CONDITIONS			
Valve model	**PRV25/2S PRV25I**	**PRV25/2SG PRV25IG**	**PRW25/2S PRW25I**
Body design conditions	PN 25	PN 25	PN 25
Maximum upstream pressure	17 bar	17 bar	14 bar
Maximum downstream pressure	8,6 bar	8,6 bar	8,6 bar
Minimum downstream pressure	0,14 bar	0,14 bar	0,35 bar
Maximum design temperature	210 °C	180 °C	75 °C
Maximum recommended reducing ratio	10:1	10:1	10:1
Maximum dome loading pressure	8,6 bar	8,6 bar	8,6 bar

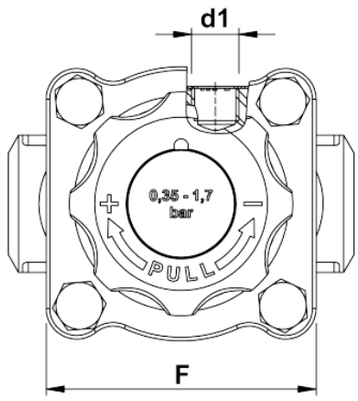
FLOW RATE COEFFICIENTS (m^3/h)			
SIZE	**1/2" – DN 15**	**3/4" – DN 20**	**1" – DN 25**
Kvs	1,7	2,6	3,1

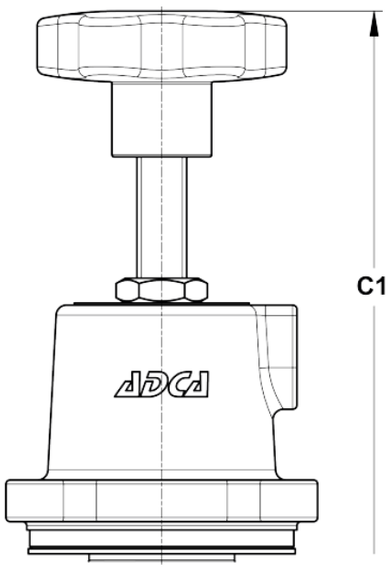
REGULATING RANGES				
SPRING COLOUR	**BLUE ***	**YELLOW ****	**GREEN**	**RED**
Spring loaded	0,35 – 1,7 bar	0,14 – 1,7 bar	1,4 – 4,0 bar	3,5 – 8,6 bar
Spring and dome loaded ***	0,35 – 1,7 bar	0,14 – 1,7 bar	1,4 – 4,0 bar	–

* Only applicable on the PRW models; ** Only applicable on the 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.

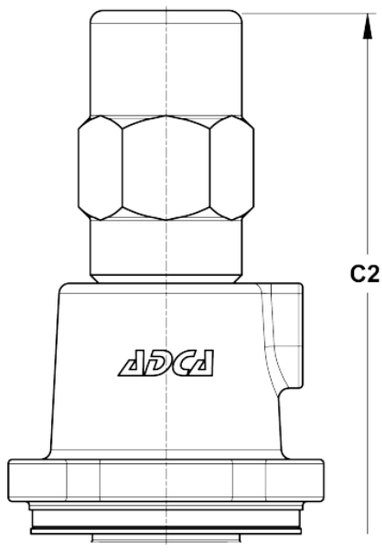
PRV25 OPTIONAL COVERS		
RISING ADJUSTMENT KNOB WITH LOCK NUT	**TOP CAP**	**SPRING AND DOME LOADED**
		



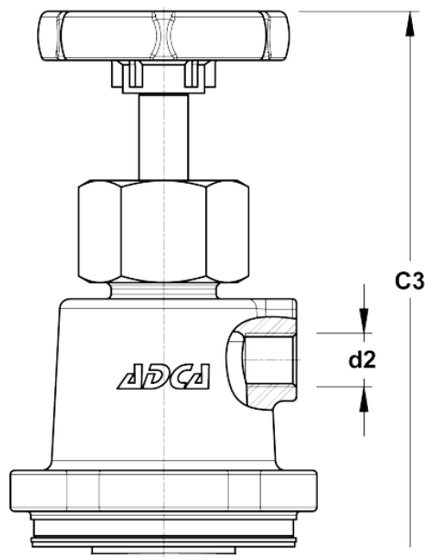




Rising adjustment knob (optional)



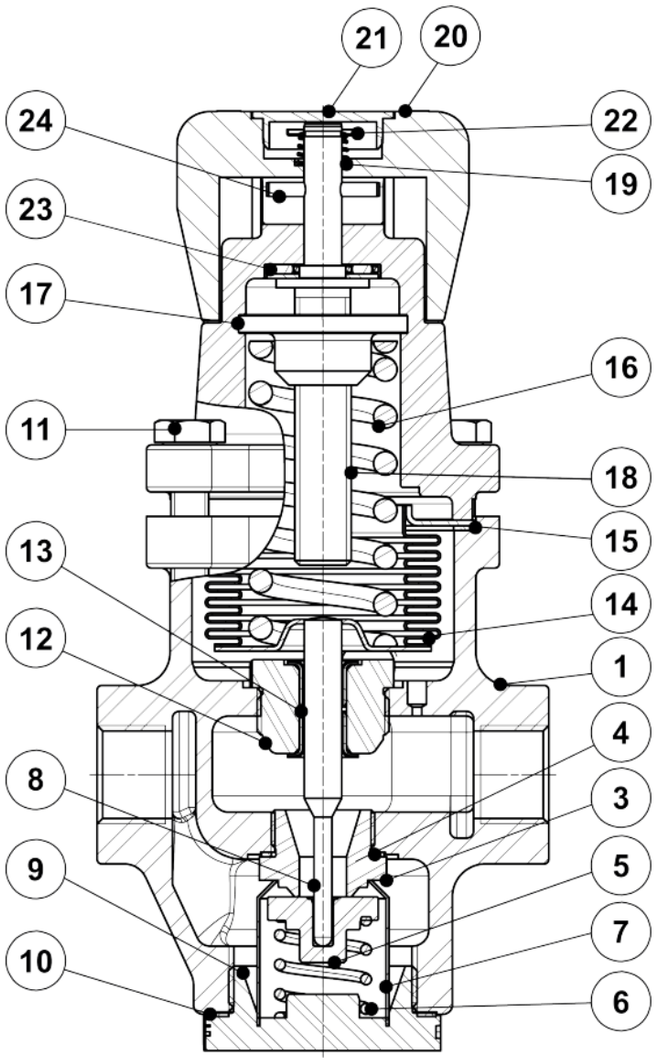
Top cap (optional)

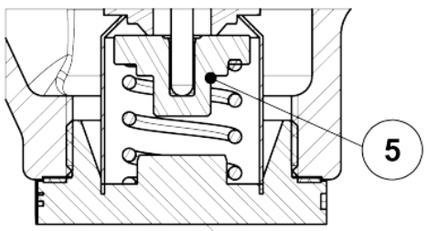


Spring and dome loaded (optional)

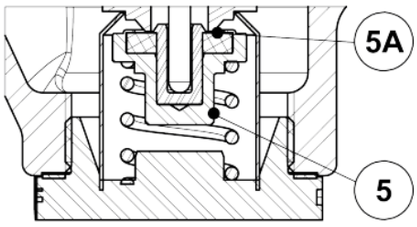
DIMENSIONS (mm)																
THREADED											PN 25		CLASS 150		CLASS 300	
SIZE	A	B	C	C1	C2	C3	d1 *	d2 **	F	WGT. (kg)	D	WGT. (kg)	D	WGT. (kg)	D	WGT. (kg)
1/2" – DN 15	96	68,5	141	242	237	243	1/4"	1/4"	74	3	150	4,4	150	4	150	4,4
3/4" – DN 20	96	68,5	141	242	237	243	1/4"	1/4"	74	3	150	5	150	4,4	150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

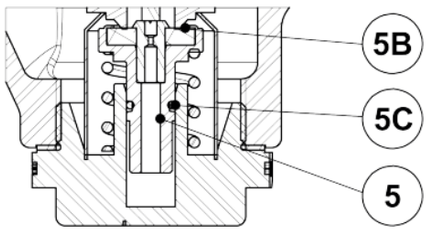




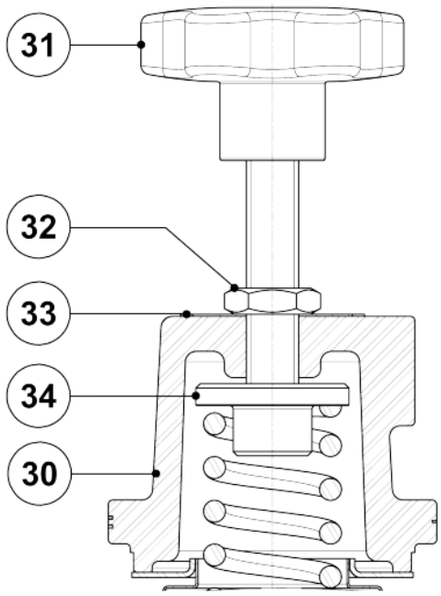
Metal to metal sealing



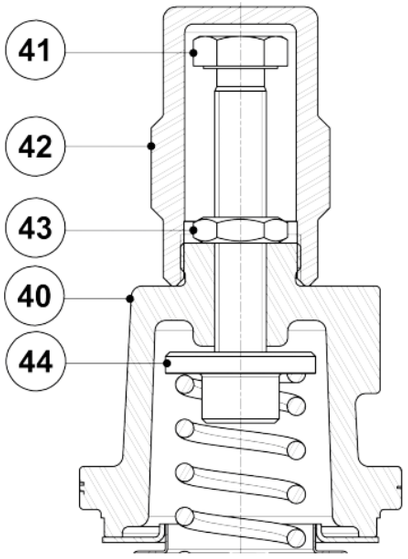
Soft sealing



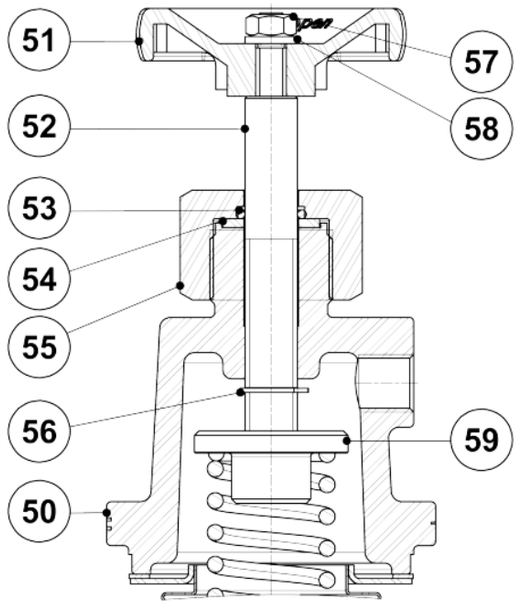
Balanced soft sealing



Rising adjustment knob (optional)



Top cap (optional)



Spring and dome loaded (optional)

MATERIALS			
POS. Nº	**DESIGNATION**	**PRV25/2S**	**PRV25I**
1	Body	A216 WCB / 1.0619	A351 CF8M / 1.4408
2	Cover	A216 WCB / 1.0619	A351 CF8M / 1.4408
3	* Seat	AISI 316 / 1.4401	AISI 316 / 1.4401
4	* Gasket	Copper	Copper
5	* Valve	Hardened stainless steel	Hardened stainless steel
5A	* Valve head	PTFE / Graphite	PTFE / Graphite
5B	* Valve head	NBR	NBR
5C	* O-ring	NBR	NBR
6	* Valve return spring	AISI 302 / 1.4300	AISI 302 / 1.4300
7	* Strainer screen	AISI 304 / 1.4301	AISI 304 / 1.4301
8	Pushrod	AISI 316 / 1.4401	AISI 316 / 1.4401
9	Bottom cap	A351 CF8M / 1.4408	A351 CF8M / 1.4408
10	* Cap gasket	Stainless steel / Graphite	Stainless steel / Graphite
11	Cover bolts	Steel 8.8	Stainless steel A2-70
12	* Guide bush	AISI 316 / 1.4401	AISI 316 / 1.4401
13	* Plain bearing	Bronze filled PTFE	Bronze filled PTFE
14	* Bellows	AISI 316 Ti / 1.4571	AISI 316 Ti / 1.4571
15	* Bellows gasket	Stainless steel / Graphite	Stainless steel / Graphite
16	* Adjustment spring	Steel	Steel
17	Top spring plate	Brass	Brass
18	Adjustment screw	AISI 304 / 1.4301	AISI 304 / 1.4301
19	Spring	AISI 302 / 1.4300	AISI 302 / 1.4300
20	Adjustment knob	Nylon	Nylon
21	Spring identification plate	Plastic	Plastic
22	Retaining washer	AISI 302 / 1.4300	AISI 302 / 1.4300
23	Bearing	Steel	Steel
24	Pin	AISI 304 / 1.4301	AISI 304 / 1.4301
30	Cover	A351 CF8 / 1.4308	A351 CF8 / 1.4308
31	Adjustment knob	Plastic	Plastic
32	Nut	Stainless steel A2-70	Stainless steel A2-70
33	Spring identification plate	Aluminium	Aluminium
34	Top spring plate	Brass	Brass
40	Cover	A351 CF8 / 1.4308	A351 CF8 / 1.4308
41	Adjustment screw	Stainless steel A2-70	Stainless steel A2-70
42	Top cap	AISI 303 / 1.4305	AISI 303 / 1.4305
43	Nut	Stainless steel A2-70	Stainless steel A2
44	Top spring plate	Brass	Brass
50	Cover	A351 CF8 / 1.4308	A351 CF8 / 1.4308
51	Adjustment knob	Plastic	Plastic
52	Adjustment stem	AISI 304 / 1.4301	AISI 304 / 1.4301
53	* O-ring	EPDM	EPDM
54	* Gasket	PTFE	PTFE
55	Tightening nut	AISI 303 / 1.4305	AISI 303 / 1.4305
56	Retaining ring	Stainless steel A2-70	Stainless steel A2-70
57	Washer	Stainless steel A2-70	Stainless steel A2-70
58	Nut	Stainless steel A2-70	Stainless steel A2-70
59	Top spring plate	Brass	Brass

* 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.

STEAM CAPACITY TABLE (kg/h)

INLET (bar)	OUTLET (bar)	SATURATED STEAM		
		DN 15	DN 20	DN 25
2	0,2 – 1	75	110	132
	1,8	68	102	125
3	0,3 – 1,5	104	148	177
	2	97	141	170
	2,6	90	134	162
4	0,4 – 2	125	180	210
	2,5	118	171	201
	3,6	107	158	190
5	0,5 – 2,5	137	192	230
	3	134	189	222
	4,5	128	183	213
6	0,6 – 3	166	221	266
	4	154	212	256
	5,5	138	200	242
7	0,7 – 3,5	175	250	300
	4,5	168	242	290
	5,5	157	228	270
	6,3	148	216	253
8	0,8 – 4	222	300	357
	5	208	290	350
	6	189	271	330
	7,2	170	240	286
9	0,9 – 4,5	230	321	382
	6	209	300	363
	7	192	271	324
	8	172	241	285
10	1 – 5	238	341	408
	6	230	330	397
	7	215	307	363
	8,6	177	260	312
11	1,1 – 5,5	250	358	427
	6	244	348	415
	7	237	337	402
	8,6	206	296	356
12	1,2 – 6	265	375	449
	7	260	370	444
	8	246	350	421
	8,6	236	333	400
13	1,3 – 6,5	281	398	476
	7	279	391	470
	8	266	381	459
	8,6	257	367	440
15	1,5 – 7,5	300	424	508
	8,6	285	408	488
17	1,7 – 8,6	321	453	543

COMPRESSED AIR CAPACITY TABLE (Nm^3/h – 0 °C – 1,013 bar)

INLET (bar)	OUTLET (bar)	COMPRESSED AIR		
		DN 15	DN 20	DN 25
2	0,2 – 1	120	126	147
	1,8	109	112	135
3	0,3 – 1,5	157	169	195
	2	150	162	187
	2,6	142	153	178
4	0,4 – 2	196	203	243
	2,5	188	196	235
	3,6	170	181	219
5	0,5 – 2,5	208	222	253
	3	202	211	242
	4,5	197	203	235
6	0,6 – 3	240	251	298
	4	232	244	286
	5,5	225	230	266
7	0,7 – 3,5	269	282	337
	4,5	260	270	321
	5,5	245	255	300
	6,3	233	244	284
8	0,8 – 4	323	339	396
	5	315	330	383
	6	290	306	361
	7,2	258	270	318
9	0,9 – 4,5	347	363	424
	6	322	340	400
	7	293	309	364
	8	264	279	328
10	1 – 5	372	388	453
	6	354	375	438
	7	328	348	410
	8,6	280	296	348
11	1,1 – 5,5	387	404	474
	6	375	394	463
	7	362	383	451
	8,6	319	338	398
12	1,2 – 6	404	423	500
	7	398	418	492
	8	375	400	469
	8,6	358	380	448
13	1,3 – 6,5	428	447	530
	7	420	440	522
	8	411	431	510
	8,6	395	416	494
15	1,5 – 7,5	455	477	565
	8,6	439	463	546
17	1,7 – 8,6	486	510	604

WATER CAPACITY TABLE (m^3/h)

D.P (bar)	WATER		
	DN 15	DN 20	DN 25
1,5	2,10	3,21	3,83
2	2,43	3,70	4,42
3	2,95	4,54	5,41
4	3,43	5,24	6,25
5	3,78	5,78	6,90
6	4,16	6,25	7,45
7	4,37	6,68	7,96
8	4,63	7,08	8,45
9	4,88	7,47	8,90
10	5,12	7,83	9,34
12	5,56	8,51	10,15