

## PISTON SENSING PRESSURE REDUCING VALVES PRV31SS (1" to 2" – DN 25 to DN 50)

### DESCRIPTION

The ADCA PRV31SS is a series of direct acting, spring-loaded, piston 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.
- Built-in strainer.
- Balanced valve plug.
- Full stainless steel construction.
- Various sealing options to meet compatibility requirements.

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

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

- AVAILABLE MODELS:** PRV31SS – stainless steel, piston sensing.

- SIZES:** 1" to 2"; DN 25 to DN 50.

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

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



### CE MARKING – GROUP 2 (PED – European Directive)

Class 150	PN 40 / PN 63 Class 300 / Class 600	Category
1" to 2" DN 25 to 50	1" and 1 1/4" DN 25 and DN 32	SEP
–	1 1/2" and 2" DN 40 and DN 50	1

### FLOW RATE COEFFICIENTS (m³/h)

SIZE	1" DN 25	1 1/4" DN 32	1 1/2" DN 40	2" DN 50
<b>Kvs</b>	7,5	8,2	14,4	15,4

### LIMITING CONDITIONS

Valve model	PRV31SS				
Body design conditions	Cl. 150	Cl. 300	Cl. 600	PN 40	PN 63 *
Max. upstream pressure	16 bar	40 bar	50 bar	40 bar	50 bar
Max. downstream pressure	50 bar				
Min. downstream pressure	3 bar				
Max. design temperature	80 °C				
Max. recommended reducing ratio	40:1				

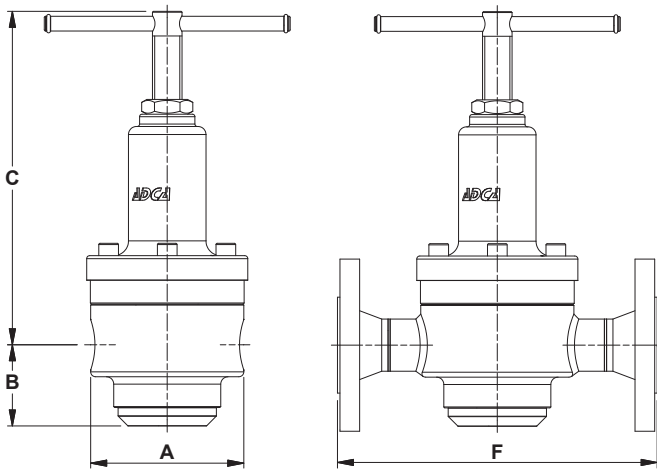
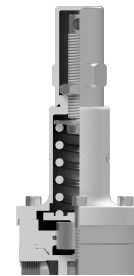
\* Rating PN 63 for threaded versions.

OPTIONS

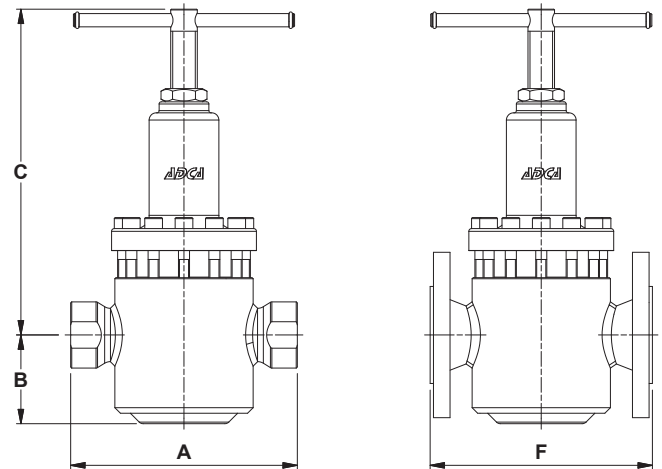
PRESSURE GAUGE CONNECTION



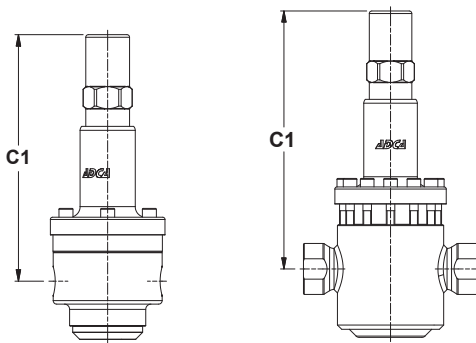
TOP CAP



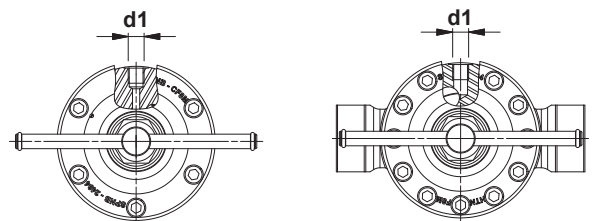
1" and 1 1/4" – DN 25 and DN 32



1 1/2" and 2" – DN 40 and DN 50



Optional top cap



Optional pressure gauge connection

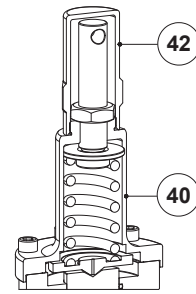
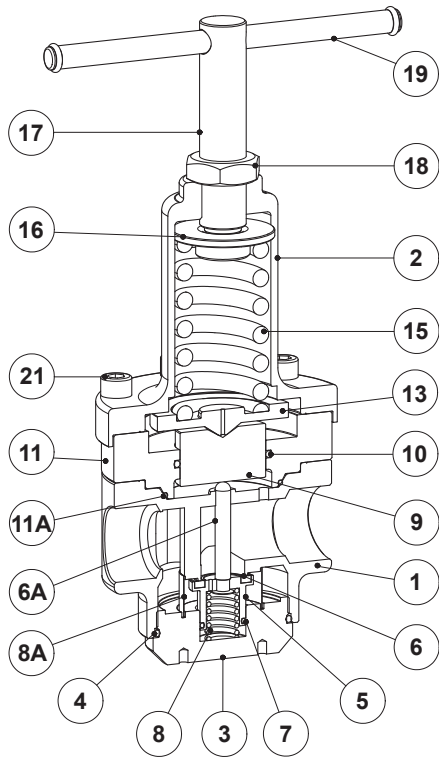
DIMENSIONS (mm)

SIZE	THREADED				d1	WGT. (kg)	PN 40		PN 63		CLASS 150		CLASS 300		CLASS 600	
	A	B	C	C1			F *	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)	F *	WGT. (kg)
1" – DN 25 **	125	66	271	280	1/4"	–	–	–	230	16,3	–	–	–	–	230	14,7
1 1/4" – DN 32	125	66	271	280	1/4"	11	260	14,9	260	17,2	260	14	260	15,1	260	15,9
1 1/2" – DN 40	205	81	296	304	1/4"	14,7	201	18,3	260	22,3	235	18	248	20,2	264	21,2
2" – DN 50	205	75	302	310	1/4"	15,3	230	20,3	300	23,5	254	19	267	20,7	300	23,2

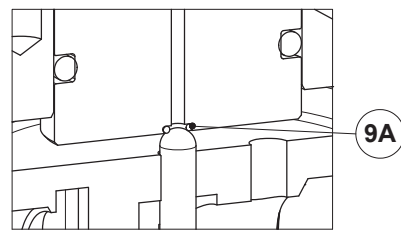
\* Different face to face dimensions on request; \*\* Only available with PN 63 and Class 600 flanged connections.

Remarks: As standard, in versions manufactured with EN 1092-1 flanges or ISO 7 Rp threads, connection d1 is female threaded ISO 7 Rp. In versions with ASME B16.5 flanges or NPT threads, this connection is female threaded NPT.

MATERIALS

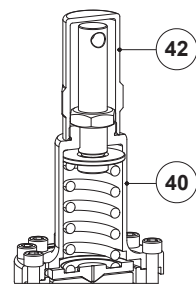
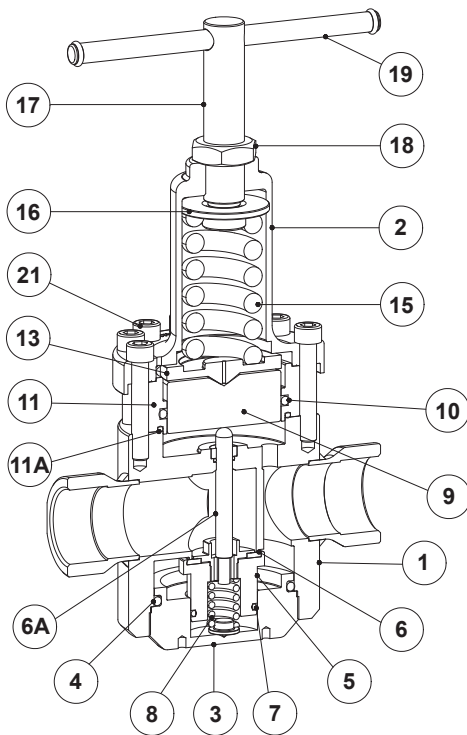


Optional top cap

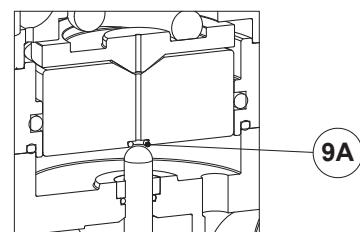


Optional relieving version

1" and 1 1/4" – DN 25 and DN 32



Optional top cap



Optional relieving version

1 1/2" and 2" – DN 40 and DN 50

MATERIALS			
POS. N°	DESIGNATION	1" and 1 1/4" – DN 25 and DN 32	1 1/2" and 2" – DN 40 and DN 50
1	Valve body	AISI 316 / 1.4401	AISI 316 / 1.4401
2	Spring cover	A351 CF8M / 1.4408	A351 CF8M / 1.4408
3	Bottom cover	AISI 316 / 1.4401	AISI 316 / 1.4401
4	* O-ring	NBR; EPDM; PTFE; FPM	NBR; EPDM; PTFE; FPM
5	* Piston	AISI 316 / 1.4401	AISI 316 / 1.4401
6	* Valve head	NBR; EPDM; PTFE; FPM	NBR; EPDM; PTFE; FPM
6A	* Pushrod	AISI 316 / 1.4401	AISI 316 / 1.4401
7	* Piston o-ring	NBR; EPDM; FPM	NBR; EPDM; FPM
8	* Valve spring	AISI 302 / 1.4300	AISI 302 / 1.4300
8A	* Strainer screen	AISI 304 / 1.4301	–
9	* Piston	AISI 316 / 1.4401	AISI 316 / 1.4401
9A	* O-ring	NBR; EPDM; FPM	NBR; EPDM; FPM
10	* O-ring	NBR; EPDM; FPM	NBR; EPDM; FPM
11	Piston sleeve	AISI 316 / 1.4401	AISI 316 / 1.4401
11A	* O-ring	NBR; EPDM; PTFE; FPM	NBR; EPDM; PTFE; FPM
13	Spring plate	AISI 304 / 1.4301	AISI 304 / 1.4301
15	* Adjustment spring	AISI 302 / 1.4300	AISI 302 / 1.4300
16	Top spring plate	Brass	Brass
17	Adjustment stem	AISI 304 / 1.4301	AISI 304 / 1.4301
18	Locknut	Stainless steel A2-70	Stainless steel A2-70
19	Handwheel	AISI 304 / 1.4301	AISI 304 / 1.4301
21	Bolts	Stainless steel A2-70	Stainless steel A2-70
40	Cover	AISI 316L / 1.4404	A351 CF8M / 1.4408
42	Top cap	AISI 316L / 1.4404	AISI 316L / 1.4404

\* Available spare parts.

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 PRV31SS												
<b>Valve model</b>	R31	.	5	W	N	C	4	R	.	A	15	
PRV31SS – piston sensing pressure reducing valve	R31											
<b>Regulating range</b>												
N° 5 – 3 to 30 bar			5									
N° 6 – 5 to 50 bar <b>b)</b>			6									
<b>Application</b>												
Water				W								
Gases				G								
Oxygen (degreased)				O								
<b>Seal material</b>												
NBR					N							
EPDM					E							
PTFE <b>a)</b>					T							
FPM / Viton					V							
<b>Maximum inlet pressure</b>												
30 bar						C						
50 bar <b>b)</b>						D						
<b>Gauge port options</b>												
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			
<b>Top cap and relieving</b>												
Non-relieving										(1)		
Relieving (only for non-dangerous gases)										R		
Non-relieving with top cap (adjustment screw with cover)										T		
Relieving with top cap (adjustment screw with cover, only for non-dangerous gases)										V		
<b>Pipe connection</b>												
Female threaded ISO 7 Rp											A	
Female threaded NPT ASME B1.20.1											C	
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	
<b>Size</b>												
1" or DN 25 (only available with PN 63 and Class 600 flanged connections)												25
1 1/4" or DN 32												32
1 1/2" or DN 40												40
2" or DN 50												50
<b>Special valves / Extras</b>												
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) All seals except piston o-rings, which are supplied in FPM/Viton or others on request.

b) Not applicable to sizes 1 1/4" and DN32.