

**PISTON SENSING PRESSURE REDUCING VALVE  
PRV31SS  
1/2" to 1" – DN 15 to DN 25**

**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:** 1/2" to 1"; DN 15 to DN 25.
- 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.



1/2" to 3/4" – DN 15 to DN 20



1" – DN 25



1/2" to 3/4" – DN 15 to DN 20

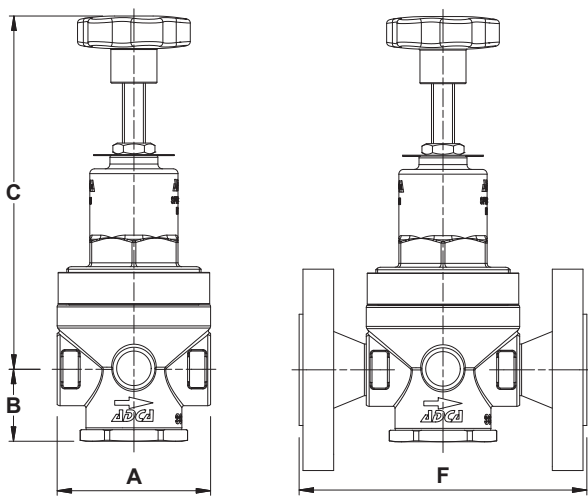
1" – DN 25

CE MARKING – GROUP 2 (PED – European Directive)	
PN 63	Category
1/2" to 1" – DN 15 to 25	SEP

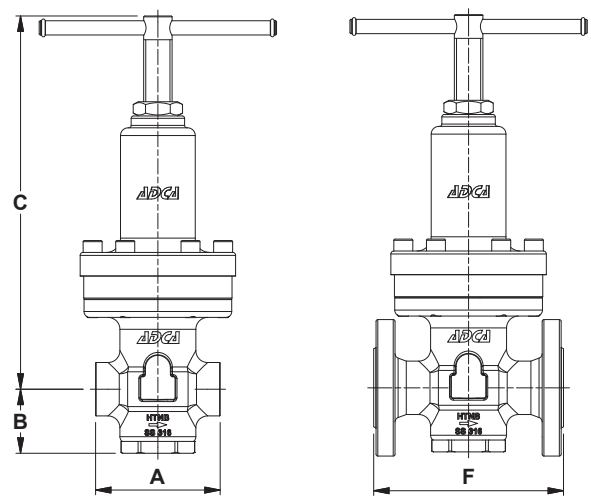
FLOW RATE COEFFICIENTS (m³/h)			
SIZE	1/2" – DN 15	3/4" – DN 20	1" – DN 25
Kvs	3	3,5	7,5

LIMITING CONDITIONS				
<b>Valve model</b>	<b>PRV31SS</b>			
Body design conditions	Cl. 150	Cl. 300	PN 40	PN 63 *
Max. upstream pressure	16 bar	40 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			

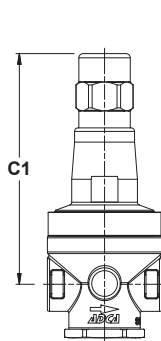
\* Rating PN 63 for threaded versions.



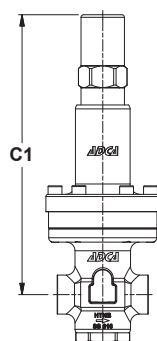
1/2" to 3/4" – DN 15 to DN 20



1" – DN 25



Optional top cap

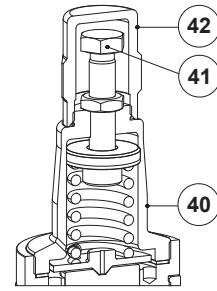
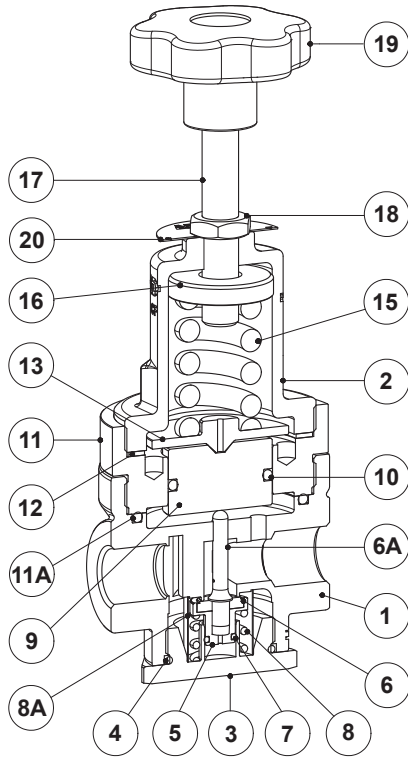


Optional pressure gauge connection

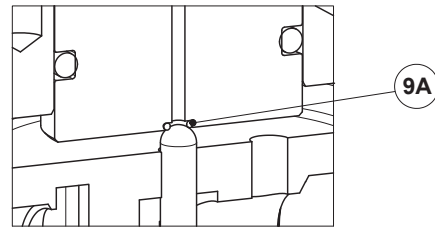
DIMENSIONS (mm)												
SIZE	THREADED						PN 40		CLASS 150		CLASS 300	
	A	B	C	C1	d1	WEIGHT (kg)	F *	WEIGHT (kg)	F **	WEIGHT (kg)	F *	WEIGHT (kg)
1/2" – DN 15	80	38	184	162	1/4"	2,8	150	4,9	150	4,2	150	5,2
3/4" – DN 20	80	38	184	162	1/4"	2,7	150	5,4	150	4,6	150	5,6
1" – DN 25	105	54	315	322	1/4"	9,2	160	11,8	230	11,1	230	12,2

\* Different face to face dimensions on request.

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.

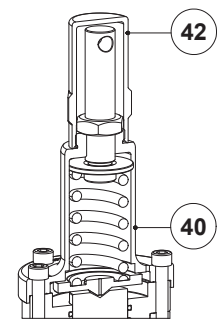
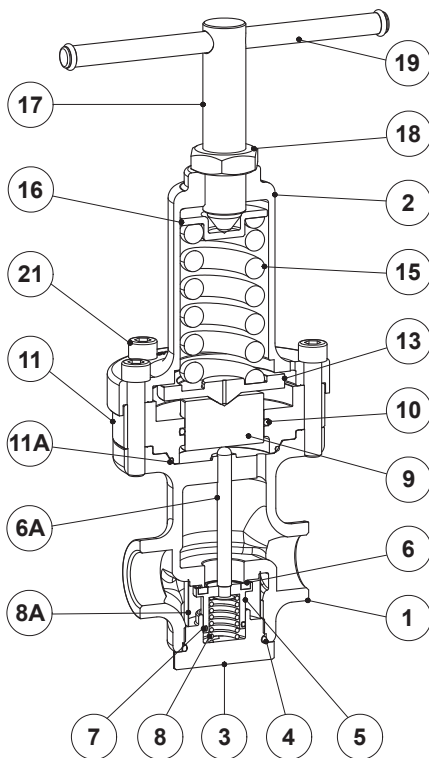


Optional top cap

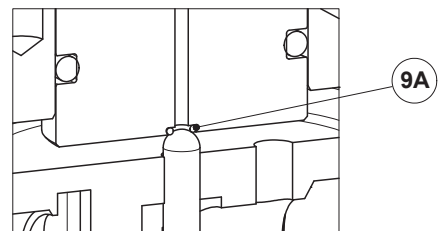


Optional relieving version

1/2" to 3/4" – DN 15 to DN 20



Optional top cap



Optional relieving version

1" – DN 25

MATERIALS			
POS. N°	DESIGNATION	1/2" to 3/4" – DN 15 to DN 20	1" – DN 25
1	Valve body	A351 CF8M / 1.4408	A351 CF8M / 1.4408
2	Spring cover	A351 CF8M / 1.4408	A351 CF8M / 1.4408
3	Bottom cover	A351 CF8M / 1.4408	A351 CF8M / 1.4408
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	AISI 304 / 1.4301
9	Piston	AISI 304 / 1.4301	AISI 304 / 1.4301
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
12	Gasket	Aluminium	–
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	AISI 316 / 1.4401
17	Adjustment stem	AISI 304 / 1.4301	AISI 304 / 1.4301
18	Locknut	Stainless steel A2-70	Stainless steel A2-70
19	Handwheel	Plastic	AISI 304 / 1.4301
20	Spring id. plate	Aluminium	–
21	Bolts	–	Stainless steel A2-70
40	Cover	AISI 316L / 1.4404	A351 CF8M / 1.4408
41	Adjustment screw	Stainless steel A2-70	–
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												
Valve model	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			6									
<b>Application</b>												
Water				W								
Gases				G								
Oxygen (degreased)				O								
<b>Seal material</b>												
NBR					N							
EPDM					E							
PTFE a)					T							
FPM / Viton					V							
<b>Maximum inlet pressure</b>												
30 bar						C						
50 bar						D						
<b>Gauge port 1/4"</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 ASME B16.5 Class 150												U
Flanged ASME B16.5 Class 300												V
<b>Size</b>												
1/2" or DN 15												15
3/4" or DN 20												20
1" or DN 25												25
<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.