

# PRESSURE REDUCING VALVE

## TYPE PR515-PR515E

### Description

These simple and robust designed pressure reducing valves (without auxiliary energy) are adapted to a large number of processes requiring downstream pressure control. The pressure reducing valve closed when the downstream pressure increases. The set point is adjustable with a hand wheel which compresses a spring more or less according to the desired set point value. These valves are particularly adapted for liquids (water, oil, acids...) and gases (air, nitrogen...).

Direct passage valve :

- PR515 (Single reverse seat)
- PR515E (Single reverse seat balanced by piston)

### Characteristics

Flanges : DN15 to DN100

Threaded sleeves : ½" to 2"

Material : Steel 1.0619 – A216 WCB/WCC

Stainless steel 1.4408 – A351 CF8M

Flanges ISO PN16...40 – Class 150, 300

Design ANSI B16-34 PN50

### Options

- Flanges with grooves
- Flanges ANSI Class 150, Class 300
- PTFE soft seal cone (Max. Temp 200°C)
- Seat and exhaust valve : Stellite
- Device without copper alloy

### Special features

Wide range of Kvs: 0.08 to 126

Pressure set point range: 0.1 to 18.1 bar

PMA : according to PN

TMA : according to material

PMO : according to max. range

TMO : 150°C

### How to order

- Pressure reducing valve type PR515 or PR515E DN, PN, Material, Flanges according to EN. Kvs = \_\_\_ Ø seat = \_\_\_ mm Internal impulse (or external on pipe). Plug, stem and seat in stainless steel.
- Actuator type \_\_\_\_\_ Diaphragm in EPDM (or NBR or FKM) Range of adjustment n° \_\_\_\_\_ form \_\_\_\_\_ to \_\_\_\_\_ bar

### Certifications

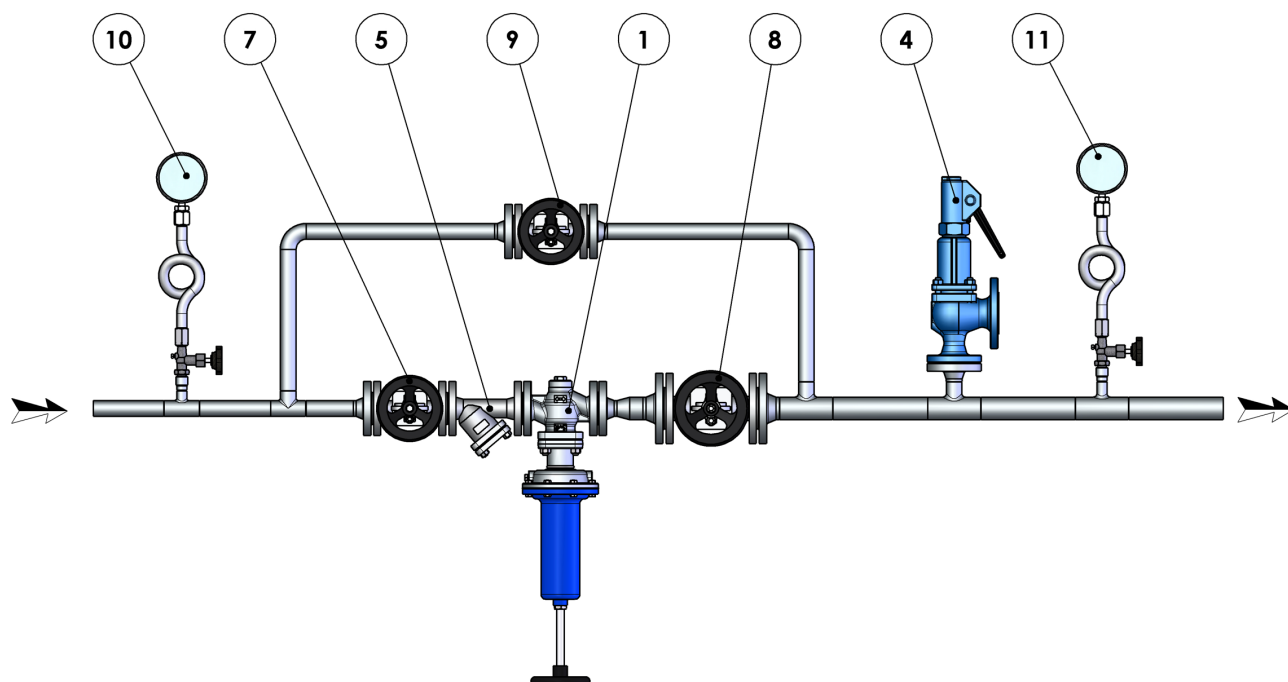
DESP; ATEX II 2 G/D; ISO9001 / PED; ATEX II 2 G/D; ISO9001



## Operation

The pressure reducing valves type PR515 and PR515E are self-actuated (without auxiliary energy) controlling the pressure downstream compared to a set point. The pressure reducing valve closed by increase in the pressure downstream in a proportional way.

The choice of the adjustment range will be carried out according to the pressure downstream to control and of adjustment range table.



### Example of installation

Rep./Item	Désignation / Description
1	Pressure reducing valve
4	Safety valve
5	Y strainer
7	Inlet isolating valve
8	Outlet isolating valve
9	Bypass valve
10	Upstream gauge
11	Downstream gauge

## Mounting

It is imperative to assemble the pressure reducing valve, on horizontal piping, the actuator downwards to protect the diaphragm from high temperatures.

However, after consulting our sales department, according to the temperature and the diaphragm material, the device can be assembled with actuator upwards.

## Operational Limits

Pressure reducing valve	Nominal Diameter	Leakage rate	Max. temperature in actuator
PR515 Single seat	DN 15 ... DN 65	Metallic sealing  < 0,1% Kvs	50°C With NBR diaphragm
	PR515E Single seat balancing by piston		DN 20 ... DN 100
			150°C With FKM diaphragm

### Kvs values (m<sup>3</sup>/h)

PR515							
Sleeves	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Flanges	15	20	25	32	40	50	65
Ø / Seat	Kvs						
3.5	0.08	0.08	0.08				
3.6	0.15	0.15	0.15				
5	0.38	0.38	0.38				
5	0.8	0.8	0.8				
16	1.1	1.1	1.1				
16		1.6					
16	2.5	2.8	2.8				
20			3.6	4.1			
20			5.5	5.7			
25				8.3	8.5		
32					17	21	
40						29	31
50							41

PR515E Balanced								
Sleeves	-	1"	1 1/4"	1 1/2"	2"	-	-	-
Flanges	20	25	32	40	50	65	80	100
Ø / Seat	Kvs							
20	4.9	5.2	4	4.1	5.2			
25		8	8.3	8.5	12	12		
32			14	17	21	21		
40				24	29	31	31	31
50					36	41	42	45
65						54	59	60
80							71	75
100								126

\* Up to seat Ø32

### Adjustment range (bar eff)

PR515					
Type	Surface	N° Plage Range	R Ressort Spring	Range according to Ø seat	
				Ø2 to Ø20 Stroke 5mm	Ø25 to Ø65 Stroke 10mm
B	175 cm <sup>2</sup>	24	8-41	0.06 ... 0.6	0.1 ... 0.6
		23	8-40	0.1 ... 1.0	0.2 ... 0.9
		22	8-39	0.2 ... 1.6	0.4 ... 1.5
		21	8-38	0.3 ... 2.1	0.7 ... 1.9
		20	8-37	0.6 ... 3.7	1.2 ... 3.4
C	70 cm <sup>2</sup>	31	8-41	0.1 ... 1.5	0.3 ... 1.5
		30	8-40	0.3 ... 2.4	0.5 ... 2.3
		29	8-39	0.5 ... 3.9	0.9 ... 3.7
		28	8-38	0.8 ... 5.1	1.7 ... 4.7
		27	8-37	1.5 ... 9.3	3.0 ... 8.6
		104	8-98	2.9 ... 15.0	5.7 ... 13.6

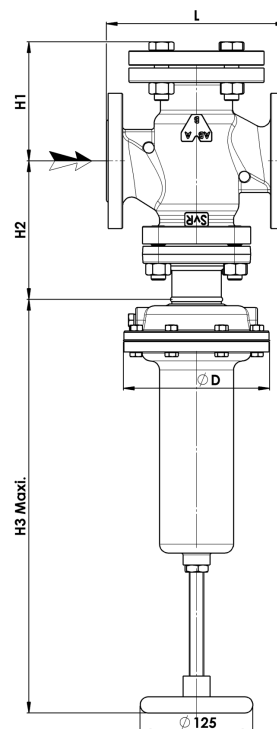
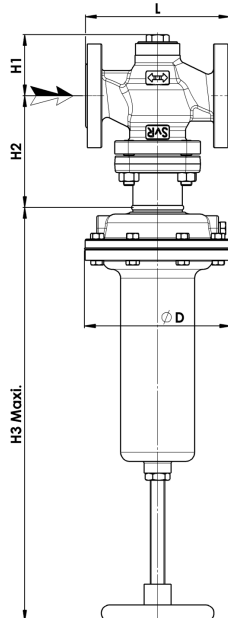
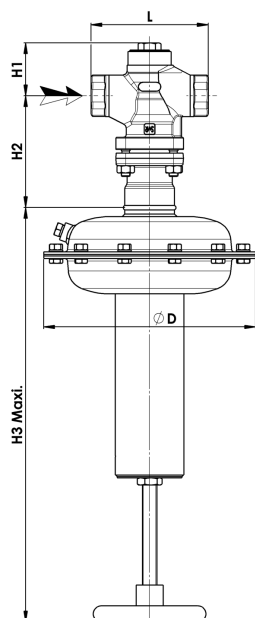
PR515E						
Type	Surface	N° Plage Range	R Ressort Spring	Range according to Ø seat		
				Ø20 Stroke 5mm	Ø25 à/ to Ø80 Stroke 10mm	Ø100 Stroke 15mm
B	175 cm <sup>2</sup>	24	8-41	0.1 ... 0.6	0.1 ... 0.6	0.2 ... 0.6
		23	8-40	0.1 ... 1.0	0.2 ... 0.9	0.3 ... 0.9
		22	8-39	0.2 ... 1.6	0.4 ... 1.5	0.5 ... 1.4
		21	8-38	0.3 ... 2.1	0.7 ... 1.9	1.0 ... 1.7
		20	8-37	0.6 ... 3.7	1.2 ... 3.4	1.8 ... 3.1
C	70 cm <sup>2</sup>	31	8-41	0.1 ... 1.5	0.3 ... 1.5	0.4 ... 1.4
		30	8-40	0.3 ... 2.4	0.5 ... 2.3	0.8 ... 2.2
		29	8-39	0.5 ... 3.9	0.9 ... 3.7	1.4 ... 3.4
		28	8-38	0.8 ... 5.1	1.7 ... 4.7	2.5 ... 4.3
		27	8-37	1.5 ... 9.3	3.0 ... 8.6	4.5 ... 7.8
		104	8-98	2.9 ... 15.0	5.7 ... 13.6	8.6 ... 12.1

# Dimensions

PR515/E DN1/2" – DN2" (Sleeve) Up to seat Ø32  
Actuator B 175cm<sup>2</sup>

PR515/E DN15 – DN65 /Flanges)  
Up to seat Ø32  
Actuator C 70cm<sup>2</sup>

PR515/E DN40 – DN100 (Flanges)  
Above seat Ø32 /Actuator C 70cm<sup>2</sup>



All dimensions in mm

\* Face to face ISO EN558 series 1

Threaded and welded version						
DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
L	130	130	130	200	200	200
H1	70	70	70	100	100	100
H2	125	125	125	150	150	150
H3	460					
Masse / Mass (kg)	13	13	13	22	22	22

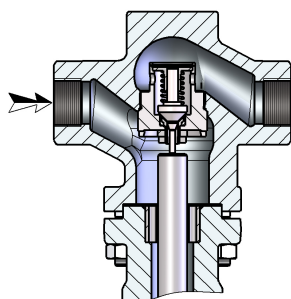
Flanges version									
DN	15	20	25	32	40	50	65	80	100
L (ISO PN16/25/40)	130	150	160	180	200	230	290	310	350
L (ANSI Class 150 RF)	184	184	184	/	222	254	/	298	353
L (ANSI Class 150 RF)	/	/	/	/	200*	230*	/	310*	350*
L (ANSI Class 300 RF)	190	194	197	/	235	267	/	317	368
L (ANSI Class 150 RTJ)	/	/	197	/	235	267	/	311	365
L (ANSI Class 300 RTJ)	201	207	210	/	248	283	/	333	384
H1	45	50	70	80	95	100	110	/	/
H1	/	/	/	/	135	150	160	175	185
H2	125	125	125	130	130	150	155	150	160
H3	460								
Mass (kg)	13	14	17	19	23	25	28	40	58

Up to seat Ø32  
Above seat Ø32  
Up to seat Ø32  
Up to seat Ø32  
Up to seat Ø32  
Up to seat Ø32  
Up to seat Ø32  
Above seat Ø32

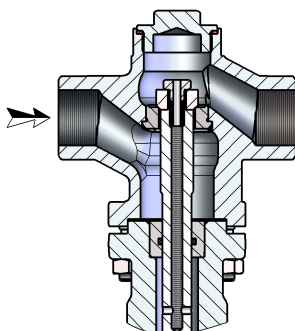
Actuator	B	C
ØD	235	161
Surface / Section	175 cm <sup>2</sup>	70 cm <sup>2</sup>
Raccordement Connexion	1/4" NPT	

## Part List - PR515 DN15 – DN65 / DN½” - DN2”

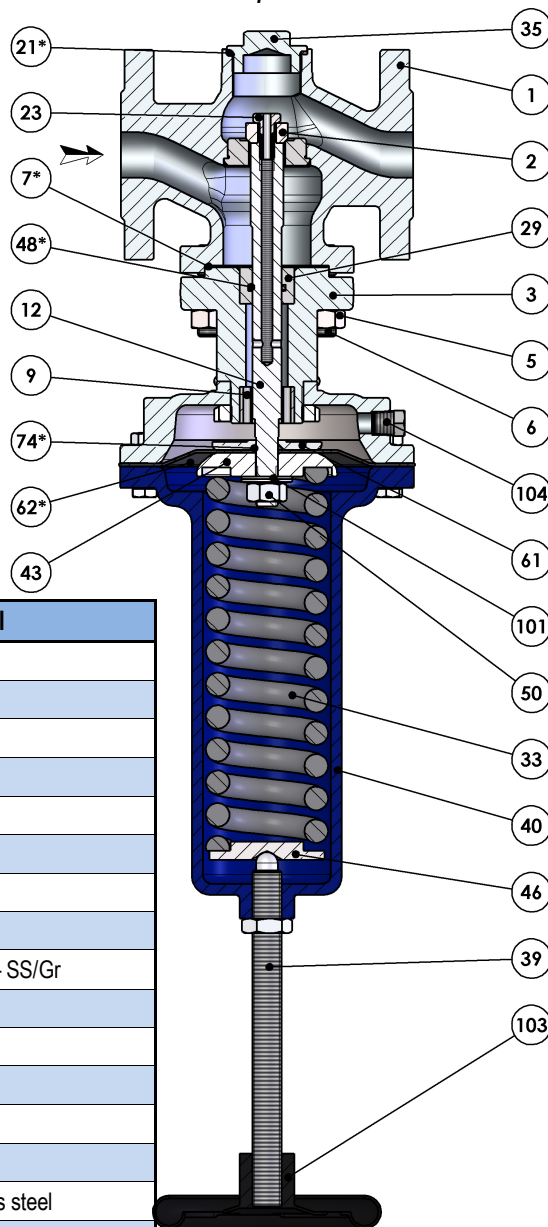
PR515 DN15-25 - DN½”-1”  
Kvs 0.08 – 0.8



PR515/E DN½” – DN2” (Sleeve) Up to seat  
Ø32



PR515/E DN15 – DN65 (Flanges)  
Up to seat Ø32



Item	Description	Material
1	Body	1.0619 / 1.4408
2	Cone	Stainless steel
3	Cover	1.0565 / 1.4408
5	Stud	8.8 / A2-70
6	Nut	8.8 / A2-70
7*	<b>Gasket</b>	Graphite
9	Bush	Stainless steel
12	Stem	Stainless steel
21*	<b>Gasket</b>	Cu/Gr – Inox/Gr – Cu/Gr – SS/Gr
23	Screw	A2-70
29	Bush	Stainless steel
33	Spring	Steel
35	Cap	Steel/Stainless steel
39	Adjusting screw	Stainless steel
40	Spring case	Cast iron – Inox / Stainless steel
46	Spring washer	Steel
48*	<b>O-ring</b>	FKM
50	Nut	A2-70
61	Diaphragm plate	Steel
62*	<b>Diaphragm</b>	EPDM / FKM / NBR
74*	<b>O-ring</b>	FKM
101	Spring washer	Steel
103	Handwheel	Steel
104	Cap	Stainless steel

\* Spare parts

## Part List - PR515E DN20 – DN100

PR515/E DN20 – DN100 (Flanges)  
Above seat Ø32

Item	Description	Material
1	Body	1.0619 / 1.4408
2	Cone	Stainless steel
3	Cover	1.0565 / 1.4408
5	Stud	8.8 / A2-70
6	Nut	8.8 / A2-70
7*	<b>Gasket</b>	Graphite
9	Bush	Stainless steel
12	Stem	Stainless steel
25	Cover	1.0565 / 1.4404
26*	<b>Gasket</b>	Graphite
27	Nut	8.8 / A2-70
28	Screw	8.8 / A2-70
29	Bush	Stainless steel
33	Spring	Steel
39	Adjusting screw	Stainless steel
40	Spring case	Cast iron –Stainless steel
46	Spring washer	Steel
48*	<b>O-ring</b>	FKM
50	Nut	A2-70
61	Diaphragm plate	Steel
62*	<b>Diaphragm</b>	EPDM / FKM / NBR
74*	<b>O-ring</b>	FKM
101	Spring washer	Steel
103	Handwheel	Steel
104	Cap	Stainless steel

\* Spare parts

