

# STAINLESS STEEL PRESSURE REDUCING VALVE PRV-S ELITE FOR STEAM

## MAIN CHARACTERISTICS

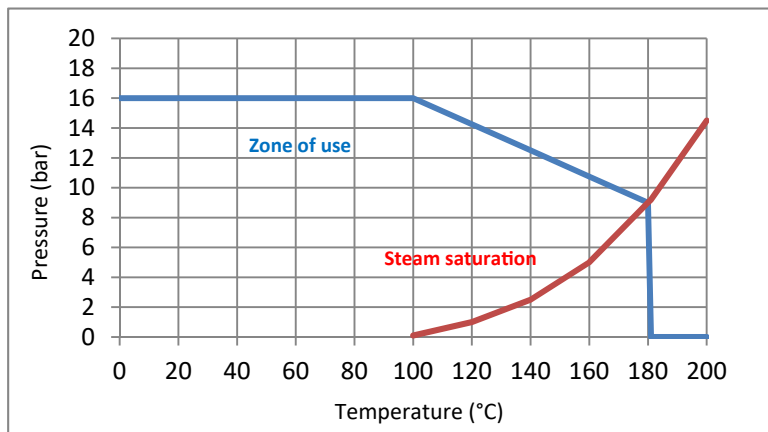
The stainless steel PRV-S valve is intended for the function of pressure reduction for the networks of clean steam. The construction of the valve is in stainless steel with tightness in FPM/PTFE. The setting of the downstream pressure is made by means of the screw. The pressure gauge allows the direct reading of the reduced pressure. The flow is one-way indicated by an arrow on the body. The PRV-S valve suits with compatible fluids free of particles. It must be necessarily protected by a strainer installed upstream.

## AVAILABLE MODELS

Diameters DN15 to DN25  
 BSP screwed end connections or flanges PN16 as EN 1092-1  
 Downstream pressure range: 1-6 bar to 4-10 bar

## LIMITS OF USE

Max allowed fluid pressure : PS	16 bar
Max allowed fluid temperature : TS	180°C
Use on saturated steam :	9 bar / 180°C
ΔP minimum :	1 bar
ΔP maximum :	10 bar



Flange type

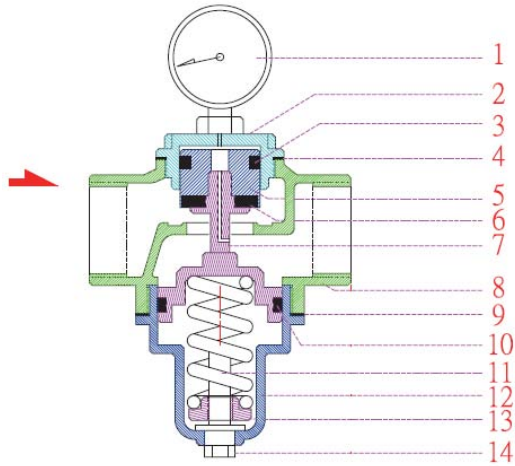
## REGULATIONS AND STANDARDS OF CONSTRUCTIONS

Item	Standard	Item	Standard
Pressure equipment directive 97/23	DN15 to DN25 : A3 § 3 excluded	Conception	ANSI B16.34
Material	ASTM A 182	Test final	API 598
BSP theard	ISO 228	Flanges	EN 1092-1

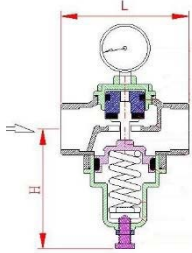
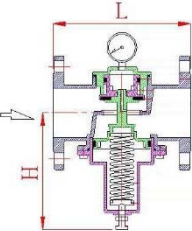
Modifications reserved

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## CONSTRUCTION

n°	Item	Material	Plan
1	Gauge Ø 63	All stainless steel – 1/4"	
2	Upper cover	Stainless steel 1.4408	
3	U-ring	FPM	
4	Sealing spacer	PTFE	
5	Shaft	Stainless steel 1.4408	
6	Gasket	PTFE	
7	Lower seat	Stainless steel 1.4408	
8	Corps	Stainless steel 1.4408	
9	Sealing spacer	PTFE	
10	U-ring	FPM	
11	Spring	Spring steel	
12	Spring box	Stainless steel 1.4408	
13	Spring washer	Brass	
14	Adjusting screw	Stainless steel 1.4401	

## DIMENSIONS (mm)

	DN	H	L	Gauge connection	Weight (kg)	
BSP screwed end connections	1/2"	80	70	G 1/4"	0,8	
	3/4"	105	85		1,0	
	1"	105	92		1,1	
Flanges	15	85	155	G 1/4"	2,0	
	20	105	155		2,8	
	25	105	155		5,3	

## SPARE PARTS

DN	1/2" – DN 15	3/4" – DN 20	1" – DN 25
Kit of sealing item 3,4,6,9 and 10	981830	981831	981832
Spring 1-6 bar	981730	981733	981736
Spring 4-10 bar	981731	981734	981377

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## FLOW COEFFICIENTS Kv (m<sup>3</sup>/h.)

Size	1/2" – DN 15	3/4" – DN 20	1" – DN 25
Kv	1,4	5,3	6,6

## TABLE OF FLOWRATE STEAM (kg/h.)

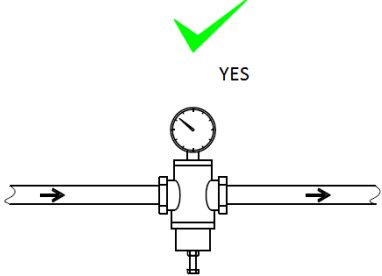
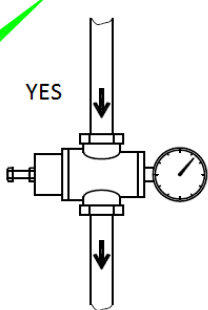
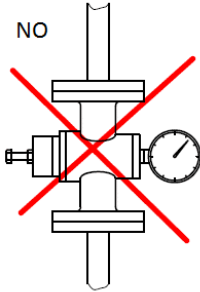
Flowrate (Kg/h)		Pressure upstream (bar)	3	4	5	6	8	10	12
Pressure downstream (bar)	1	1/2"	50	67	84	100	134	168	201
		3/4"	190	254	318	381	508	636	763
		1"	230	307	384	460	614	768	921
	2	1/2"	50	67	94	100	134	168	201
		3/4"	187	250	318	381	508	636	763
		1"	225	302	384	460	614	768	921
	3	1/2"		61	84	100	134	168	201
		3/4"		233	318	381	508	636	763
		1"		281	384	460	614	768	921
	4	1/2"			72	100	134	168	201
		3/4"			271	373	499	636	763
		1"			327	451	603	768	921
	6	1/2"					134	168	201
		3/4"					465	635	749
		1"					562	767	905
8	1/2"						168	201	
	3/4"						542	747	
	1"						654	902	

Modifications reserved

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## INSTALLATION

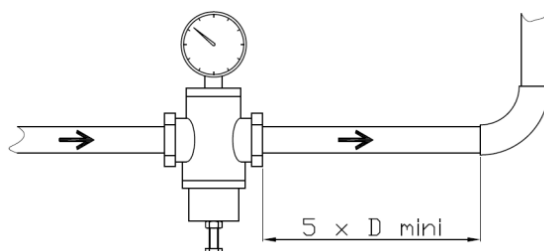
**Position of mounting :** The usual position of mounting of the PRV-S is vertical on horizontal piping, manometer upward. mounting on vertical piping : Although not recommended this mounting is possible for diameters DN 15 for DN 25, only on downward flow.

		
Horizontal mounting: Any diameters	Vertical mounting :	
	Authorized only on downward flow and DN15 to DN25	Forbidden on ascending flow or diameters superior to DN25

**Convergent and divergent :** If the diameter of the PRV-S is lower than the diameter of the piping (see § sizing), install upstream a convergent.

For a use on a gas, It is necessary to plan at the exit of the PRV-S a bigger sized pipe to that of the entrance and to link it by a divergent, The relaxed gas needing a bigger pipe's section.

**Length of tranquillizing :** To assure a good stability of the downstream pressure and reduce the turbulences at the exit of the PRV-S, plan before any of accident piping or device, A straight piping length at least equal to 5 x DN and 10 x DN if possible. In the case of a double pressure reduction, plan an identical length between both valves.



**Upstream isolation :** Plan a stop valve upstream to the PRV-S. This one is not necessarily tight in zero flowrate and cannot be considered as an isolation valve.

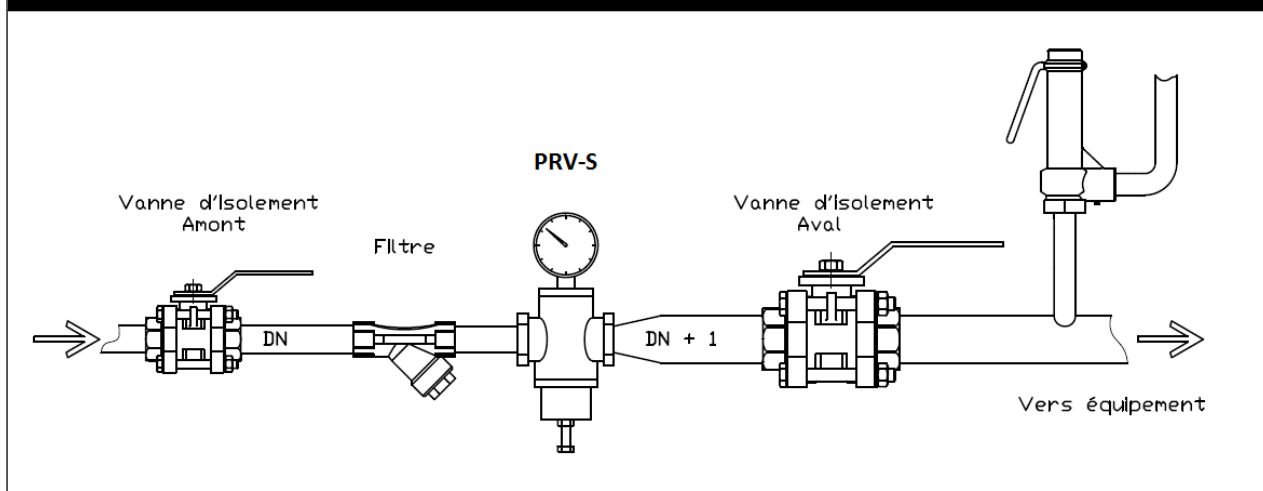
**Upstream filtration :** To protect the mechanism about 5/10 ° intern impurities, plan a filter of protection upstream to the PRV-S with a threshold of filtration.

**Safety valve :** For the pressure reduction of on a gas : the low pressure reducer PRV-S not being necessarily tight in zero flowrate, the upstream pressures and downstream could balance each other. Plan a safety valve to protect downstream equipments to the LPRV.

Modifications reserved

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Example of a pressure reducing system for a gas :



## INSTRUCTIONS OF MOUNTING AND MAINTENANCE

### 1. Mounting

Verify that the range of pressure indicated on the body is adequate with regard to the use. Before any installation, isolate the upstream pipe and the downstream, depressurize the pipe and bring the installation at room temperature. Install a valve of isolation in the upstream and an other one in the downstream. Install also a strainer upstream. Clean carefully the pipe of any particle by rinsing with water or a blowing with air. Install the reducer LPRV by respecting the sense of the arrow indicated on the body and with the pressure gauge upward. Make the tightness of the grip of pressure gauge. Open slowly the upstream valve and the downstream. Use the adjusting screw item (14) and read the indication of the pressure on the manometer to adjust the pressure downstream looked for.

### 2. Maintenance

Before any intervention, isolate the upstream pipings and the downstream by using valve intended for that purpose. Depressurize the pipe and bring the installation at room temperature. Unscrew completely the adjusting screw item (14). Remove screen the cork of the upstream strainer and clean or replace it. For a complete visit of the device, unscrew the parts (2) and (12). Verify the state of sealing parts (3), (4), (9) and (10). Replace them if needed. Verify also the state of the spring item (11). Replace it if it is broken or strongly corroded. Clean all the internal parts. Reassemble all the internal parts, in the inverse order of the dismantling. Put back the device in service by opening slowly the upstream valve then the downstream valve. Adjust the upstream pressure by means of the screw item (14).

Modifications reserved