

5 SP

Pressure reducing valves type SECURO

Desbordes

Technical Data Sheet



Description

The Desbordes pressure reducing valves 5SP – SECURO bodies are made of chromed bronze. Due to the design, they are not affected by scale or dirt and do not need any maintenance. They work as pressure reducing valve as well as “pressure regulating valve” (when applies for gas). For these cases of applications consult us.

- Control and maintain the downstream pressure at an adjustable reduced value, whether there is a flow or not
- Keep an outlet pressure at a constant value, even by variation of the upstream pressure (the downstream pressure cannot vary more than 10 % of the variation of the upstream pressure, according to the Standard)
- Guarantee a high flow rate at a constant outlet pressure because of low head loss
- Downstream setting : 1bar to 5.5 bar; indicative value according to EN1567.
- Adjustable : supplied pre-set at 3 bar.
- Equipped with 2 plugs 1/4” at the bottom to allow the mounting of a pressure gauge.



5 SP

Desbordes pressure reducing valves type SECURO

DN		PFA in bar	PS in bar				Cat.	Ref.	Weight Kg
"	mm		L1	L2	G1	G2			
3/4"	20	16	16	16	x	16	4.3	149B7312	0,4

Important notice :

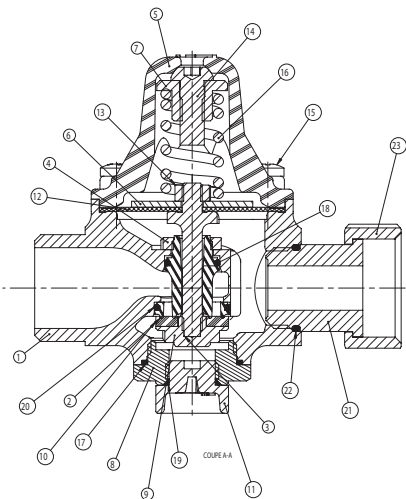
L1, L2, G1 and G2 correspond to liquids/gas classified into degree of danger according to the Pressure Equipment Directive (PED). The article 4.3 applies to equipments with no CE marking.

Technical features

Operating temperature	Mini. : -10 °C / Maxi. in permanent service : 80 °C
Permissible operating pressure (PFA) in water	See table above
Maximum permissible pressure (PS) other mediums	See table above
Connection	Inlet male, outlet union nut, BSP thread
Gauge connection	1/4"
Mediums	Water : EPDM Other mediums : consult us

Nomenclature and materials

N°	Designation	Materials	EURO	ANSI
1	Body	Chrome plated bronze	CuSn5Zn5Pb5-C	ASTM B 505
2	Seat	PA (Polyamide)		
3	Stem	Brass	CuZn39Pb3	ASTM B 124
4	Nut	POM (Polyacetal)		
5	Cap	PA (Polyamide)		
6	Plate washer	Stainless steels	X6CrNiTi18-10	AISI 321
7	Guide	Brass	CuZn39Pb3	ASTM B 124
8	Plug	Chrome plated brass	CuZn39Pb3	ASTM B 124
9	Flange	Brass	CuZn39Pb3	ASTM B 124
10	Seal	EPDM		
11	Plug	PA (Polyamide)		
12	Membrane	Water	EPDM	
		Other mediums	FKM	
13	Nut	Stainless steel	X5CrNiTi18-10	AISI 304
14	Screw	Stainless steel	X6Cr17	
15	Screw	Stainless steel	X5CrNiTi18-10	AISI 304
16	Spring	Anticorrosive steels		
17	O-ring	NBR (Nitrile)	NBR 70 ShA	ASTM B 124
18	O-ring	NBR (Nitrile)	NBR 70 ShA	ASTM B 124
19	O-ring	NBR (Nitrile)	NBR 70 ShA	ASTM B 124
20	O-ring	NBR (Nitrile)	NBR 70 ShA	ASTM B 124
21	Connection	Chrome plated brass		
22	O-ring	NBR (Nitrile)		
23	Nut	Chrome plated brass	CuZn39Pb3	ASTM B 124



Approvals

ACS

International construction Standards :
Thread connection NF EN ISO 228

Application

The Desbordes pressure reducing valves 5 SP - SECURO agrees to the protection of individual device, water heater.

Installation

In domestic water supply the DESBORDES 5SP - SECURO reducing valves are fitted just after the device and thus protect the whole installation.

If there is a frost risk, they should be drained.

It can be fitted in any positions (horizontal, upright, upside down, fluid ascending or reversed and inclined...) if you respect the direction of flow as indicated by the arrow engraved on the body.

However if the circuit present a risk of back pressure or hammering we recommend to protect the pressure reducing valve with a check valve directly after its output.

Fonctionnement

Flow :

During water flow, water pressure exercised on the diaphragm decreases, which allows the spring to relax. The piston disc-yoke assembly moves towards the bottom to allow the water to pass.

Flow stoppage :

When water flow stops, the downstream pressure pushes on the diaphragm again, the spring goes back to its initial position, which leads to the valve closing, stopping water from flowing freely.

Setting

The adjustment must be done without flow ie no downstream outflow. The 5SP - SECURO pressure reducing valve is factory pre-set at 3 bar.

They remain adjustable within a 1 bar to 5,5 bar range.

To increase the pressure, tighten the adjusting screw (clockwise as you look at the screw from above). To reduce the pressure, undo the adjusting screw (anticlockwise as you look at the screw from above), slightly open a tap for a moment, close again, then tighten the screw again until you obtain a desired pressure.

Water hammers can damage the reducing valve. When commissioning, open slowly and gradually the valve at the upstreamside. A booster unit with a sudden start close to the pressure reducer requires the safety of an absorption tank. Just like by any intervention on the pipework, the circuits must be rinsed beforehand.

Max. upstream pressure : 16 bar.

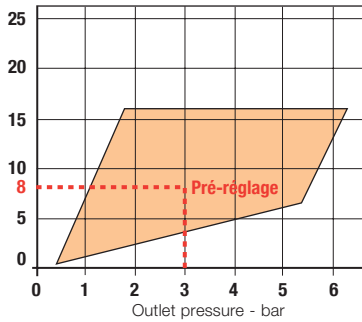
Maintenance

Due to the special design, the Desbordes 5SP - SECURO pressure reducing valves is not affected by scale or dirt and does not need any maintenance if is fitted by a professional.

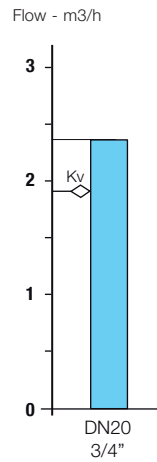
Diaphragm, spring, seat, valve are largely dimensioned to allow precise and constant adjustment allowing a high flow.

Operation

5 SP - Pressure setting range



Flow



Maximum flow, at 0 outlet pressure, for upstream pressure of 8 bar.

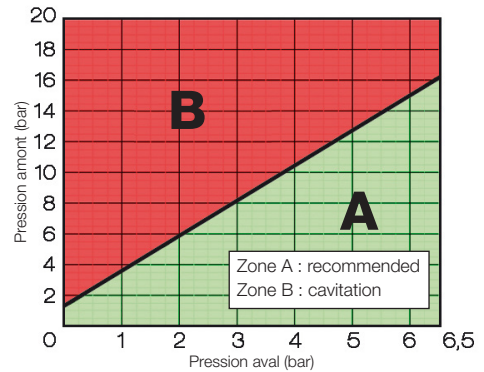
Kv : Flow in m3/h when the output pressure becomes 1 bar lower than its zero flow setting

Cavitation

Checking if the differential of pressure, between the upstream and the desired downstream pressure, is not too large, is necessary to avoid cavitation risk.

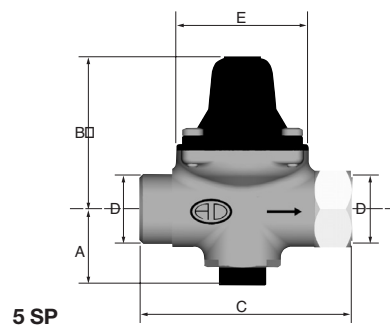
By putting in the graph hereafter, the upstream value and the desired downstream pressure, 2 results are possible :

- Zone A : The point is in the no-cavitation zone, normal duty
- Zone B : The point is in the cavitation zone : continuous operation in this zone can cause rapid damage of the internal parts. If the pressure reducing valve is to operate in this zone, contact us.



Sizing

DN	D		A	B	C	E
mm	"	mm	mm	mm	mm	mm
20	3/4	20/27	29	58	82	50



The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

Socla reserves the right to carry out any technical and design improvements to its products without prior notice. Warranty : All sales and contracts for sale are expressly conditioned on the buyer's assent to Socla terms and conditions found on its website at www.socla.com. Socla hereby objects to any term, different from or additional to Socla terms, contained in any buyer communication in any form, unless agreed to in a writing signed by an officer of Socla.



A WATTS Brand

Socla sas

365 rue du Lieutenant Putier • 71530 Virey-Le-Grand • France

Tel. +33 03 85 97 42 00 • Fax +33 03 85 97 42 42

contact@wattswater.com • www.socla.com

ISO 9001 version 2015 / ISO 18001