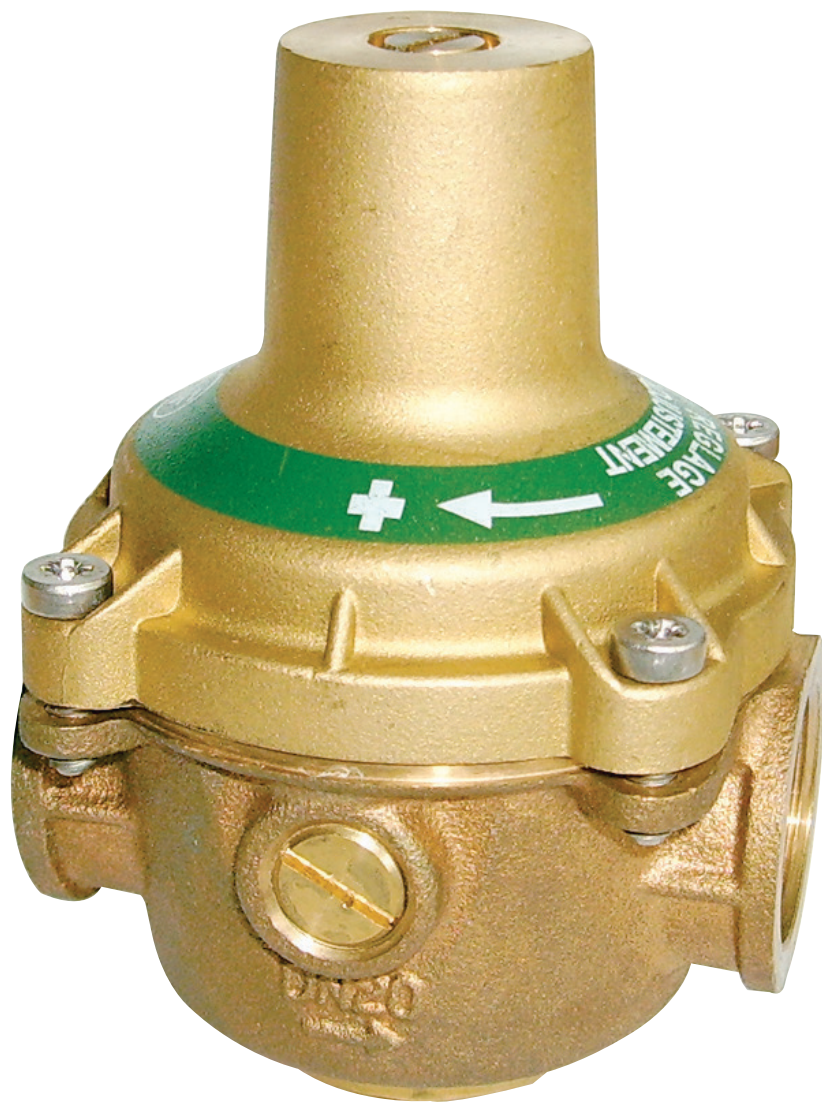


11BIS RCBP

Pressure reducing valves

Desbordes

Technical Data Sheet



Description

The Desbordes pressure reducing valves 11BIS RCBP bodies are made of bronze. Due to their design, they are not affected by scale or dirt and do not need any maintenance. They can be fitted on compressed air, neutral gases and fuel oil at ambient temperature circuits. 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
- Downstream setting : 0,1 bar to 0,6 bar
- Pressure gauge connection 1/4" and drain at each side of the casing



11BIS RCBP

Desbordes pressure reducing valves

DN	PFA in bar	PS in bar				Cat.	Ref.	Weight Kg
		L1	L2	G1	G2			
3/4 mm	20	10	10	x	10	4.3	149B7065	0,92

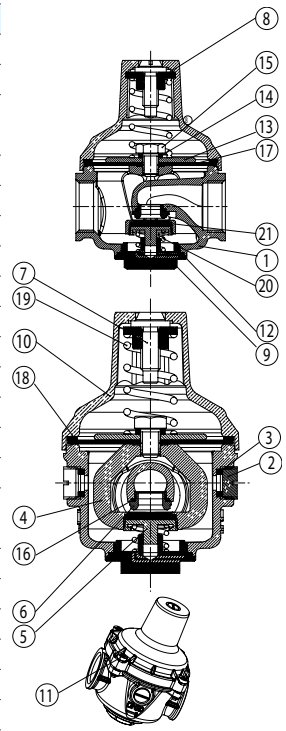
Important notice :

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	Female/female, BSP
Gauge connection	1/4"
Mediums	Water, other mediums : consult us

Nomenclature and materials

N°	Designation	Materials	EURO	ANSI
1	Body	Bronze	EN1982 CuSn5Zn5PB5-C-GS	ASTM B 505
		Bronze	EN1982 CuSn5Zn5PB2-C-GS	
2	Pressure gauge plug	Brass	EN12164 CW617N R360 mini 4MS	ASTM B 124
3	Seal	NBR (Nitrile)		
4	Stirrup	Brass	EN12165 CuZn40Pb2 H080	ASTM B 124
5	Flange	Brass	EN12164 CuZn39Pb3 R360 mini	ASTM B 124
6	Seat	Stainless steel	EN10088-3 X8CrNiS18-9	AISI 303
7	Adjusting screw	Brass	EN12164 CuZn39Pb3 R360 mini	ASTM B 124
8	Nut	Brass	EN12164 CuZn39Pb3 R360 mini	ASTM B 124
9	Plug cover	Brass	EN12164 CuZn39Pb3 R360 mini	ASTM B 124
10	Cap	Brass	EN12165 CuZn40Pb2 H080	ASTM B 124
11	Screw	Stainless steel	EN10088-3 X5CrNi 18-10	AISI 304
12	O-ring	NBR (Nitrile)		
13	Membrane washer	Brass	EN12164 CuZn39Pb3 R360 mini	ASTM B 124
14	Flate washer	Copper annealed		
15	Membrane screw	Stainless steel	EN10088-3 X5CrNi 18-10	AISI 304
16	O-ring	NBR (Nitrile)		
17	Membrane	EPDM		
18	Seal	Red fiber		
19	Spring	Stainless steel	EN10270-3 X10CrNi 18-8	AISI 302
20	Spring	Stainless steel	EN10270-3 X10CrNi 18-8	AISI 302
21	Seal	NBR		



Approvals

ACS

International construction Standards :
Thread connection NF EN ISO 228

Application

The DESBORDES 11 RCBP pressure reducing valves is especially designed for very low pressure, irrigation and laboratory.

Installation

In domestic water supply the DESBORDES 11 BIS RCBP reducing valves are fitted just after the water meter 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.

They remain adjustable within a 0,1 bar to 0,6 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.

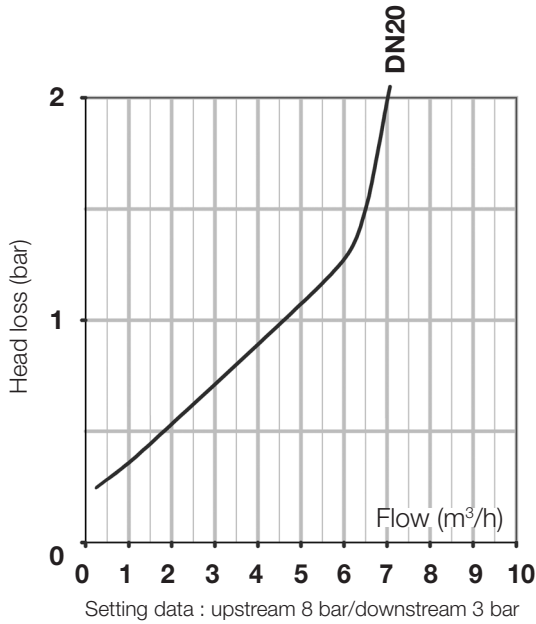
Max. upstream pressure : 10 bar.

Maintenance

Due to the special design, the Desbordés 11 BIS RCBP 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 very low flow.

Operation



DN (mm)	Kv	Q max	Q at 2 m/s
20	4,5	8	2,8

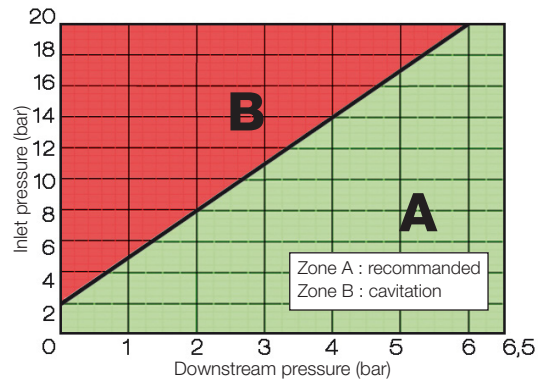
Kv : Flow in m³/h when the output pressure becomes 1 bar lower than its zero flow setting

11BIS RCBP - Headloss chart

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 :

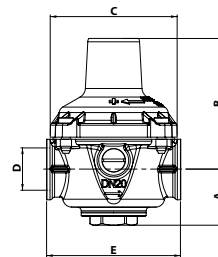
- Zone A : The point is in the no-cavitation zone, normal duty
- Zone B : The point is in the cavitation zone : continuous operation in this zone can cause rapid damage of the internal parts. If the pressure reducing valve is to operate in this zone, contact us.



Sizing

DN	D		A	B	C	E
mm	"	mm	mm	mm	mm	mm
20	3/4	20/27	32	75	73	76,5

11BIS RCBP



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