

PRESSURE REDUCER



- Brass pressure reducer
- PN 25
- Downstream pressure adjustable from 0.5 to 6 bar
- Piston-type operation
- Pressure compensation system
- Maximum operating temperature 80° C
- Threaded connections female
- Available sizes from 1/2" to 2"
- Compliant with Ministerial Decree D.M. 174

Field of application:

Series "20" pressure reducers are designed for pressure reduction and control in plants having the following characteristics:

Maximum inlet pressure:	25 bar
Downstream adjustment range:	0,5 - 6 bar
Maximum operating pressure:	80° C
Connection threads:	ISO 228/1
Tested to Standard:	DIN EN 1567
Useable fluids:	Water, compressed air.
Guaranteed reduction ratio:	5 - 1

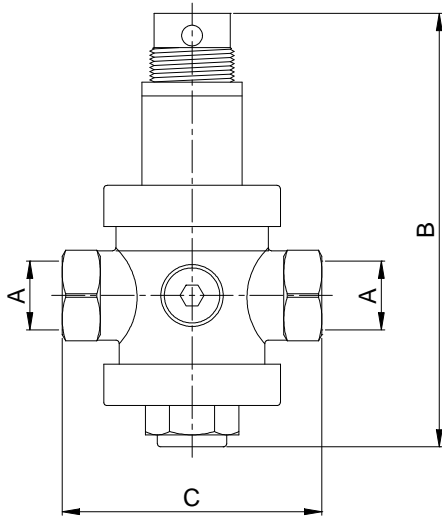
List of materials:

Body metal:	Brass alloy CW617N UNI EN12165 - CB753S EN1984
Internal component metal:	Brass alloy CW614N UNI EN12164
Seal seat:	Stainless steel AISI 303
Stem:	Brass alloy CW614N UNI EN12164
Springs:	Stainless steel AISI 302 (sizes from 1¼" to 2" only)
O-Rings:	NBR 70 sh
Flat seals:	Fiber suitable for use with potable water
Plastic components:	Acetylic resin

Available sizes

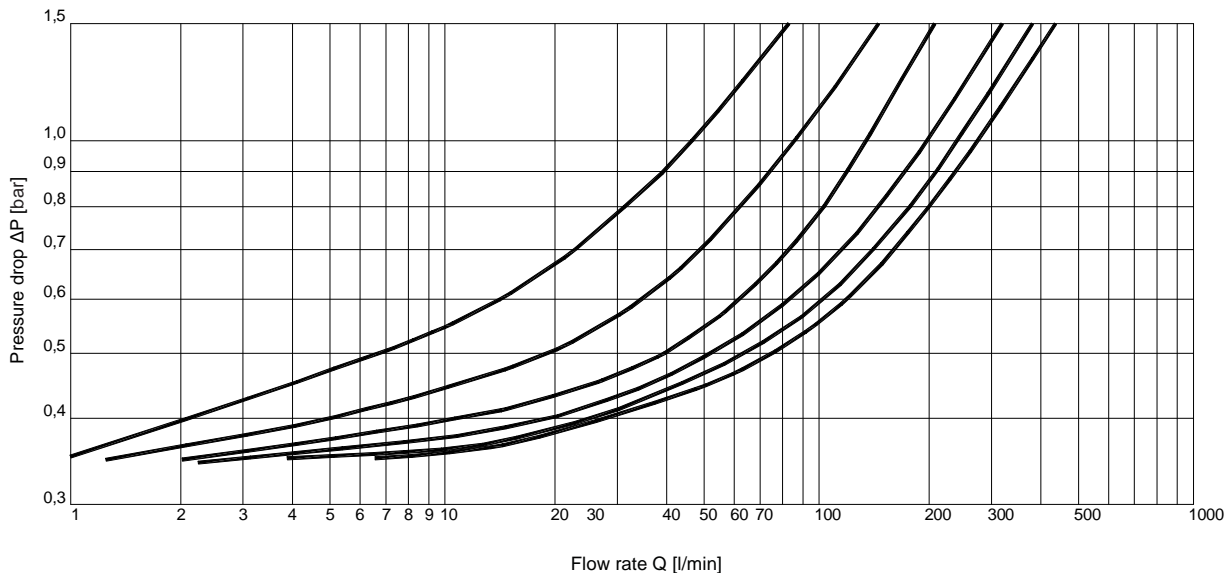
Art. 20-04	Brass pressure reducer - PN25 - DN 1/2"
Art. 20-05	Brass pressure reducer - PN25 - DN 3/4"
Art. 20-06	Brass pressure reducer - PN25 - DN 1"
Art. 20-07	Brass pressure reducer - PN25 - DN 1¼"
Art. 20-08	Brass pressure reducer - PN25 - DN 1½"
Art. 20-09	Brass pressure reducer - PN25 - DN 2"

Series 20 pressure reducers: main measurements



Art.	A	B	C
20-04	1/2"	120	75
20-05	3/4"	150	85
20-06	1"	160	89
20-07	1¼"	220	125
20-08	1½"	220	130
20-09	2"	250	138

Flow rate and pressure drop diagram:



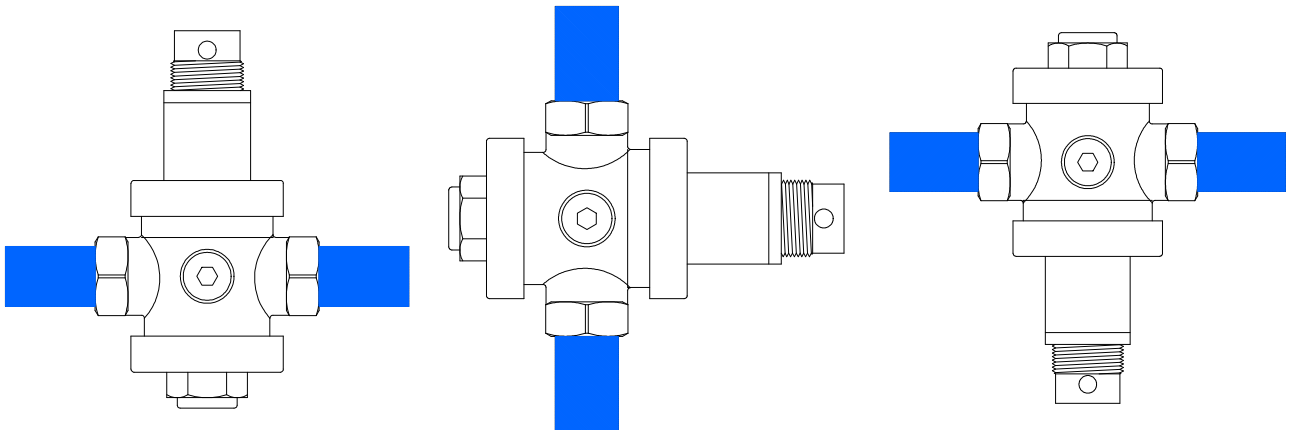
Series 20 pressure reducers ideal flow rates

For an optimal choice of the Series 20 pressure reducer to install in a plant we recommend you refer to the table below which indicates the ideal operating pressures. The values indicated in both litres/minute and m³/hour represent the flow rate range within which best operation, quietness and pressure drop limitation are achieved.

Model	Size	Ideal flow rate L/min	Ideal flow rate m ³ /ora
20-04	1/2"	20-50	1,2 – 3,0
20-05	3/4"	50-75	3,0 – 4,5
20-06	1"	75-95	4,5 – 6,0
20-07	1¼"	95-130	6,0 – 8,0
20-08	1½"	110-140	7,0 – 8,5
20-09	2"	120-160	7,5 – 10,0

Pressure reducer installation

Operation of Series 20 pressure reducers is not affected by gravity therefore they can be installed in any position:



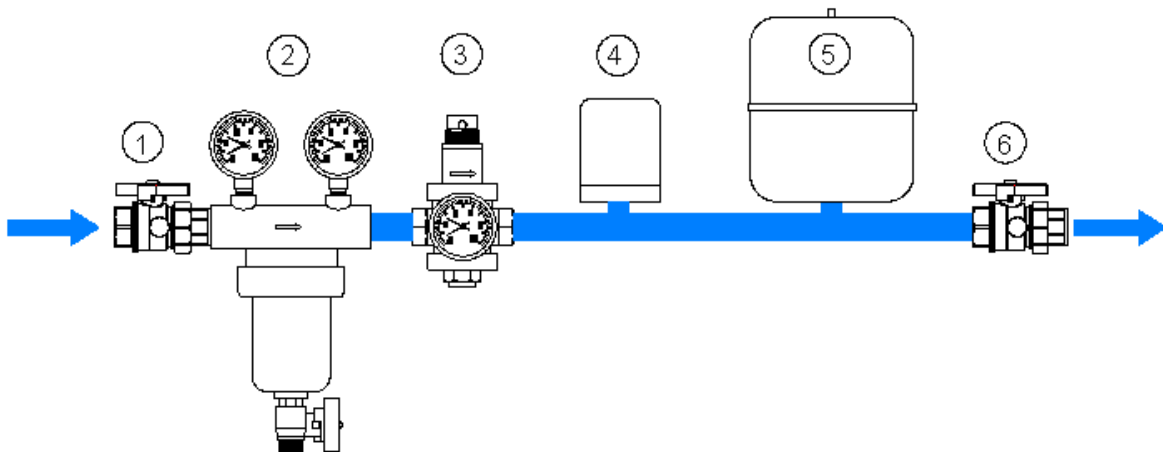
The pressure reducer can be damaged by impurities in the water. In order to protect the reducer itself and all downstream plant components (thermostatic mixers, taps, showers etc.) we recommend installation of a self-cleaning filter upstream of the pressure reducer.

When used in conjunction with equipment for the production or storage of hot water or with pipes exposed to sharp temperature changes in the downstream section of the plant, the pressure down-stream of the reducer may increase. This is not due to malfunction of the reducer but to the increase in water volume caused by variations in water temperature. This problem can be eliminated by installing an expansion tank between the boiler and pressure reducer.

Finally, we recommended installation of a water hammer device in order to prevent damage to the internal components of the pressure reducer caused by violent return pressure surges.

Recommended pressure reducer installation design

Installation as indicated in the diagram below eliminates almost all functional problems that may occur in modern water supply systems.



1 – Interception valve
2 – Filter

3 – Pressure reducer
4 – Water hammer absorber

5 – Water expansion tank
6 – Interception valve

How to adjust the pressure

All te-sa pressure reducers are tested prior to packaging. During testing they are calibrated to 3 bar outlet pressure. The outlet pressure can be easily adjusted once the reducer is installed on the plant.

To adjust the outlet pressure simply slacken the ring nut and rotate the spring press as shown in the sequence below. Rotate clockwise to increase the pressure and anticlockwise to decrease it. The system must be closed to enable correct adjustment of the pressure.



Item specifications

Series 20 Brass pressure reducer



Brass pressure reducer F.F. - PN 25, pressure adjustable from 0.5 to 6 bars, piston-type operation with pressure compensation system. Maximum operating temperature 80°C. Compliant with Ministerial Decree D.M. 174.

Available sizes: from 1/2" to 2".