



PRESSURE REDUCING VALVE – PISTON TYPE

AISI-304 STAINLESS STEEL

PURPOSE

The purpose of this device is to allow the user to regulate the pressure of an installation at the valve outlet as required. It helps all downstream devices and equipment work at a constant pressure, preventing water hammer and optimizing their service life.

APPLICATIONS

The most common applications are: general plumbing, heating, water networks and non-corrosive fluids in general. All fluids must be free of lime scale and solid particles. This pressure reducing valve is a special device designed to adjust the desired outlet pressure. The outlet pressure can be regulated using the adjustment nut (6). It is widely used in high-rise buildings, municipal water supply networks, mines, underground garages, etc., to ensure that water consumed at different levels within the supply system can obtain the desired water pressure.

MAXIMUM WORKING TEMPERATURE

Due to the quality of the materials used to manufacture this pressure reducing valve, the working temperature range is from 0°C up to a maximum of 80°C. However, to extend its service life, it is recommended that it normally operates within a temperature range not exceeding 50°C.

WORKING PRESSURE RANGE

The maximum nominal inlet pressure is 16 bar.

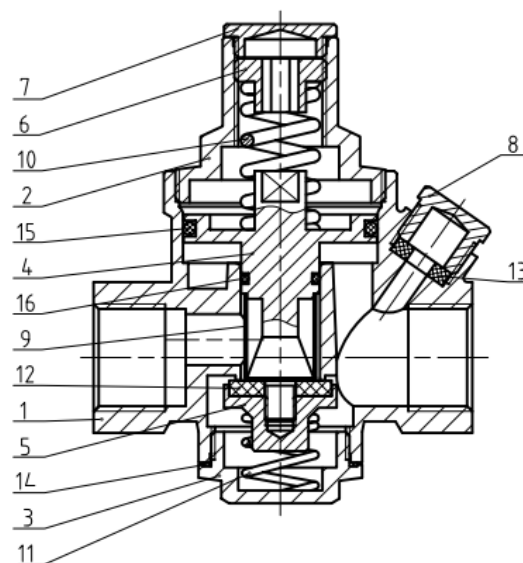
The outlet pressure can be adjusted from 2 bar to 8 bar. It is recommended not to exceed the maximum outlet pressure of 8 bar in order to avoid damaging the internal parts of the pressure reducing valve. However, with an outlet pressure of up to 4 bar, the valve operates more steadily. With outlet pressures above this value and up to 8 bar, this valve may be slightly unstable. It is also recommended to work with a maximum inlet pressure of 10 bar to extend its service life.

This valve is supplied with the outlet pressure set at 3 bar. When the inlet pressure increases or decreases, the outlet pressure remains at the adjusted value, with a tolerance of ± 1 bar, even when there is no consumption at the outlet, provided that the inlet pressure value is equal to or higher than the adjusted outlet value.

MATERIALS

The materials used to manufacture this pressure reducing valve are described below:

1. Body AISI304 stainless steel
2. Upper cap AISI304 stainless steel
3. Lower cap AISI304 stainless steel
4. Core or piston AISI304 stainless steel
5. Inner cap Nickel-plated brass
6. Adjustment nut Nickel-plated brass
7. Adjustment nut cover Nickel-plated brass
8. Pressure gauge port plug AISI304 stainless steel
9. Filter AISI304 stainless steel
10. Shaft spring AISI304 stainless steel
11. Lower spring AISI304 stainless steel
12. Inner gasket NBR
13. Pressure gauge port gasket NBR
14. Lower gasket PTFE (Teflon)
15. Upper O-ring NBR
16. Lower O-ring NBR

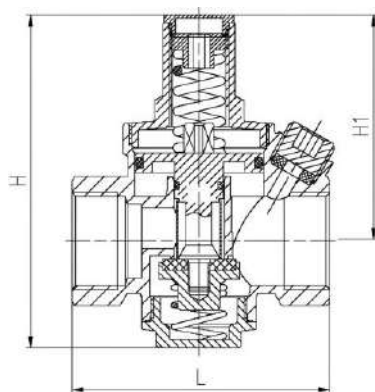




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AVAILABLE SIZES



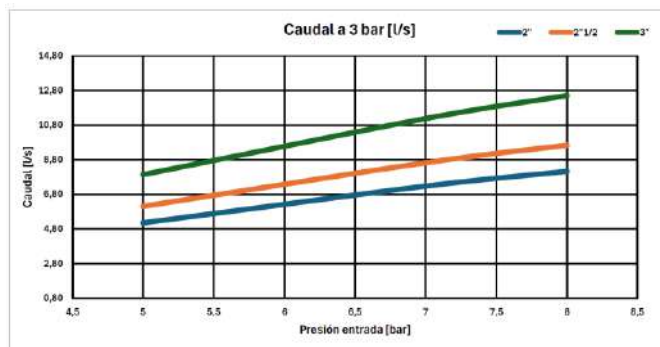
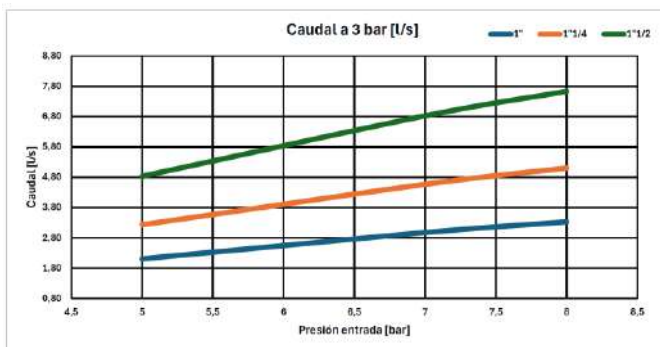
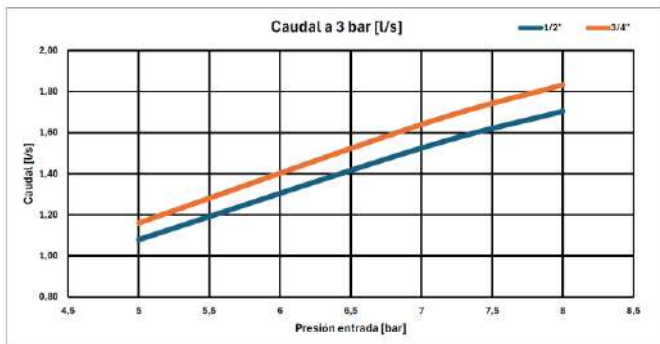
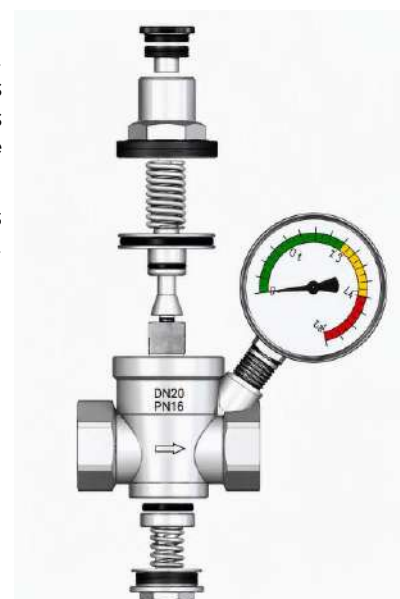
CODE	THREAD	L	H	H1	MESH
5860120000	1/2"	68	91	62	18
5860340000	3/4"	70	91	62	18
5860100000	1"	75	97	65	18
5860114000	1"1/4	83	107	72	18
5860112000	1"1/2	99	137	95	18
5860200000	2"	105	145	99	18

Mesh measurements are expressed in holes per square inch.

Detailed exploded view of the pressure reducing valve components.

This pressure reducing valve includes an outlet with an M14x1.5 to 1/4" thread, prepared for fitting a pressure gauge if required. A conversion accessory is available, if needed, to fit 1/4" BSP threaded pressure gauges. The code for this item is **5850000014**. Make sure that the pressure gauge scale is suitable for the desired pressure range.

The pressure gauge is not supplied as standard. If the pressure reducing valve is required to be supplied with a pressure gauge, this must be expressly indicated, specifying the desired pressure range.





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INSTALLATION INSTRUCTIONS

This pressure reducing valve must be installed and adjusted by a qualified installer. During installation, suitable tools must be used to avoid damaging either the valve or its connections. For correct operation, the flow direction marked by an arrow on the body of the pressure reducing valve must be followed. It is advisable to flush the entire installation before connecting this valve.

Make sure that there is no leakage between the pressure reducing valve and its pipe connection. Check that the pipe connection is free from stress, whether from tension, compression, torsion or bending.

Choose the optimum size of pressure reducing valve according to the pipe sizing of the installation, its flow rate and the desired working pressure.

Make sure that the medium or fluid to be regulated is compatible with the materials and characteristics of this valve and with its working temperature.

To adjust the outlet pressure, first remove the adjustment nut cover (7) and use a suitable tool on the pressure adjustment nut (6) until the desired outlet pressure is reached. When the adjustment nut is tightened clockwise, the outlet pressure increases. When the adjustment nut is loosened counter-clockwise, the outlet pressure decreases. Periodic maintenance is recommended to make sure that the internal filter operates normally and is not clogged.

Examples of pressure reducing valve installation options:



For buildings with 5 floors or fewer, the pressure reducing valve can be installed on the main inlet pipe or service connection. This creates a pressure difference on each floor. If we take as an example that each floor is 3 m high, the pressure is reduced by 0.3 bar as each floor level increases.



For buildings with more than 5 floors, the pressure reducing valve should be installed at the service connection of each dwelling or each floor, in order to ensure that all floors have the same inlet pressure. In this case, it is also advisable to install a larger pressure reducing valve at the building service connection.

NOTE: These two examples are not intended to be an installation and/or distribution manual for pressure reducing valves.