

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

Pressure Reducing Valve with threaded ends



GENEBRE Ref.: 2272

INSTRUCTIONS FOR INSTALLATION, OPERATION & MAINTENANCE MANUAL

1. Product description	3
2. Transport and Storage conditions	3
3. Exploded view	4
4. Installation Instructions	
4.1 Preparation	5
4.2 Assembling	5
5. Operating Instructions	
5.1 Usage	6
5.2 Setting instructions	6
5.3 Cavitation Chart	6
6. Maintenance Instructions	7
7. Reparation Instructions	7
8. Hygiene and Safety Instructions	8

1. Product description.

Genebre, S.A. offers a wide range of valves designed and assembled to handwheel and drive fluids in industrial procedures.

The compatibility of materials used to build the valves (see technical specifications) and the application of valves to the different industrial processes is at user's risk. Valves will have an optimal behavior when working conditions do not exceed pressure and temperature limits (pressure curve) for which they have been designed.

2. Transport and Storage conditions



Transport and storage of this kind of products must be done keeping them in their original package!

VISUAL INSPECTION

Check whether during transport, unloading and placement the products have suffered damages.

During storage it is recommended to keep them into the included protective wrapping to avoid damages or dirt accumulation in the inside part of the valve. The wrap must not be removed until valve is to be installed.

Valves must be stored in a dry and clean environment.



If you notice any kind of anomaly during reception of the goods, contact immediately with GENE BRE in order to determine the possible responsibilities on the issue.

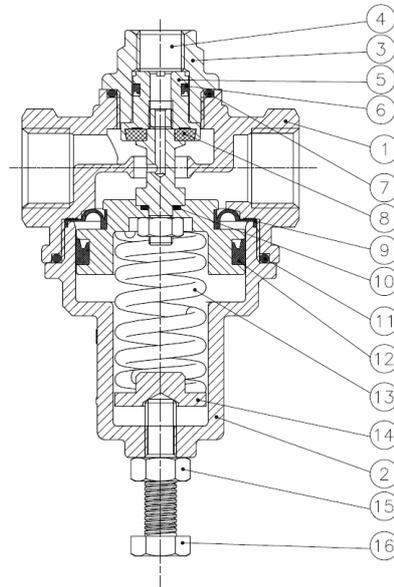
IMPORTANT NOTE:

Before installing and/or manipulating these elements, READ CAREFULLY these instructions for use and OBSERVE all contained information. If you fail to understand any of their content, please contact GENE BRE, S.A.



User is responsible for the safe use of these products, according to present instructions for use and specific technical documentation of the device.

3) Exploded view



Nº	Name	Material	Surface Treatment
1	Body	Stainless Steel 1.4408	Pickling + Blasting
2	Bottom cover	Stainless Steel 1.4408	Pickling + Blasting
3	Top cover	Stainless Steel 1.4408	Pickling + Blasting
4	Plug	SS 304	-----
5	Piston	Stainless Steel 1.4408	-----
6	U'ring	FPM	-----
7	O'ring	FPM	-----
8	Seat	FPM	-----
9	Diaphragm	FPM	-----
10	O'ring	FPM	-----
11	O'ring	FPM	-----
12	O'ring	FPM	-----
13	Spring	Spring steel	Painted
14	Spring guide	Stainless Steel 1.4308 (CF8)	-----
15	Nut	SS 304	-----
16	Adjusting screw	SS 304	-----

4. Installation instructions

4.1) Preparation

Remove any material remains of the valve wrapping.

Serious problems may arise with the installation of a valve in a dirty pipe.

Make sure the pipe is not dirty and doesn't have welding particles, for example, before installing it. This may cause irreparable damages in the valve when the equipment is started → *prepare a clean working area.*

Plan beforehand enough space for future maintenance operations.

4.2) Assembling

Make sure the valve's pipe and thread end are clean and are compatible one with another (type of thread end) Apply an appropriate sealing into the pipes' thread ends and thread the valve being careful not to excessively tighten the conical threaded ends.

To tighten the valve into the pipe it is recommended to use a spanner or monkey wrench only on the hexagonal area of the valves edges or in the body central assembly; the force applied needs to be less than 30 Nm.

Design for this kind of valves allows only one position for assembling it to the pipe, specified by means of an arrow in the valve's body that indicates the direction in which the fluid needs to circulate.



If possible, it is recommended to install the valve in horizontal position.

Valves do not have to support pipe's efforts, so it is advisable to anticipate a good alignment and parallelism of such pipe.

It is also recommended to use filters in the pipe to extend lifecycle of the valve.

5. Operating instructions

5.1) Usage

Valve materials have to be fully compatible with the fluid circulating through the valve. Otherwise, valve could be seriously damaged.

The main purpose of pressure reducing valves is to reduce the fluid pressure to optimum operating values, constantly below the maximum permitted vales so as not to damage installations after the reducing valve.

The pressure reducing valves is recommended for use in liquid or gas with inlet pressures no higher than 25 bar (not suitable for steam).
The pressure reducing valve is factory regulated with an outlet pressure value of 3 bar.

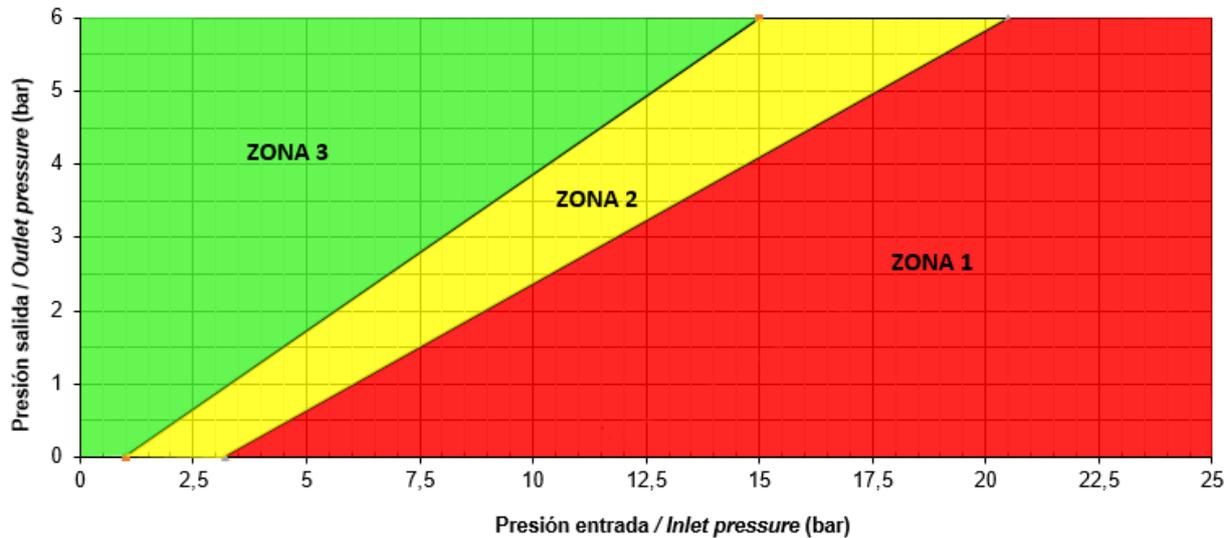
5.2) Setting instructions

The pressure reducer has been preset at 3 bar of outlet pressure. If is necessary to modify it, follow next instructions:

- a. Check that hydraulic circuit is completely full and close all devices (valves, taps, etc.).
- b. Loosen the nut (part.15).
- c. To reduce the outlet pressure, loosen the adjusting screw (part.16) rotating counterclockwise.
- d. To increase the outlet pressure, tighten the adjusting screw (part.16) rotating clockwise.
- e. In order to simplify this operation, connect a pressure gauge replacing the plug (part.4), which indicates outlet pressure.
- f. When you get the desired outlet, pressure tighten the nut (part 15).

5.3) Cavitation Chart

Advice: If you want to reduce the outlet pressure with respect to the inlet pressure more than the recommended by the diagram cavitation (zona3), we recommend installing a second pressure reducing valve in serially to divide the pressure drop in two separate falls within the zona3 (optimum operating area).



Zona 1: Cavitation zone: Avoid working within this area.

Zona 2: Critical zone: It is recommended not working within this pressure range.

Zona 3: Working zone: The pressure reducing valve works in good conditions without cavitation.

6. Maintenance instructions

Frequency, place and process of maintenance will be determined by the user by taking into account usage of the product.

7. Reparation instructions

These types of valves, due to their assembling specifications are not worth repairing, because most of the times are simply not cost-effective, so we recommend to directly replace them.



Before disassembling the pipe's valve to clean or replace it, make sure that line has been closed and depressurized because a bad operational procedure could cause a serious accident to staff and installation system



Before installing new valve, check if it meets the requirements of the valve being replaced

8. Hygiene and Safety Instructions

8.1) Fluid passing through a valve or accessory can be corrosive, toxic, flammable or pollutant. When operating valves, you must follow the security instructions and it is recommended to use personal protection gadgets:

- 1) Protect your eyes.
- 2) Wear gloves and appropriate working clothes.
- 3) Wear safety footwear.
- 4) Wear a helmet.
- 5) Have running water at hand.
- 6) To operate flammable fluids, make sure you have an extinguisher at hand.

8.2) Before removing a valve from a pipe, check always if the line is completely drained and depressurized.

8.3) Any valve being used by toxic services department needs to obtain a cleanliness certificate before being operated.