



Installation, use and maintenance instructions for ball valves

Introduction

The ball valve is a device for the interception of fluids. It is composed by:

- **body or cover**, it's the external part of the valve in which the shaped connections are machined for mounting the valve on the pipeline;
- **shutter (ball)** it's the effective interception device of the valve; the tightness is obtained by means of the compression of two soft material seats against the ball;
- **stem** is the connection system between the shutter and the operation organ;
- **operation organ** is the device to operate the valve which is normally a lever handle.

Installation

Make sure that the protection plugs are removed from the valve.

The valve must be installed in open position, by not working plant and after checking that no pressure is in the pipeline and by ambient temperature only.

The down- and up-stream pipeline has to be connected with the valve without generating tensions during or after the assembly.

It is recommended that, after the installation is made according to one of the following three descriptions, an accurate washing of the whole plant is done by keeping the **valve open**, in order to remove all residues which may damage the shutter or the seats.

Concerning the carbon steel valves (ex. 705000, 713000, 722000 and derivative ones), the external painting is suggested in those cases where the valves are installed in environments that can generate oxydation.

Valves with threaded ends

The assembly on the plant is made by means of the two threaded ends machined into the body of the valve.

The two threaded ends are manufactured according to international standards; also the fittings or the pipeline must comply to the same ones in order to fit properly with the valve.

To guarantee the tightness of the junctions, seal materials may be used by putting them on the threads of the pipeline (hemp, teflon tape, etc.).

During the assembly, it is recommended to screw the pipeline and keep the valve clamped with a wrench on the hexagonal or octagonal area outside the threaded end into which the pipe is screwed; besides please make sure to not exceed with the torque which may cause tensions inside the valve.

Valves with flanged ends

The assembly on the plant is made by means of the flanges on the body of the valve.

The two flanged ends are manufactured according to international standards and also the flanges to which they have to be fixed, must comply with the same ones.

The tightness between the flanges must be guaranteed by means of a gasket whose choice and assembly, has to be made by the installer.

During the installation, make sure that the flanges and the counterflanges are properly mounted, tighten the screws in two steps (smooth screwing to join and lock, by paying attention to turn two bolts together, symmetric to the diameter of the flanges).



Valves with butt weld

The two butt weld connections are usually manufactured according to international standards, also the fittings or the pipeline must comply to the same ones in order to fit properly with the valve.

During the welding, please make sure that the central part of the valve doesn't become overheated. For more safety, if possible, remove the central part of the valve.

Use

The fluid through the valve has to be compatible with the materials of construction of the valve. Pressure and temperature conditions have to be less to the maximum condition recommended in the technical documentation of the product. For other information, please consult the website www.valpres.it. It is recommended to use the valve in completely open or closed position (always avoid half open or half closed position). Temperature conditions are listed into the attached table.

Manutenzione

The valve has to be periodically checked to make sure of its proper operation. A higher checking frequency is recommended when the valve is working under extreme conditions.

For a correct operation of the valve it is suggested to manoeuvre it (open and close or vice-versa) at least twice a year.

Table operating temperatures

ARTICLE	MINIMUM TEMPERATURE	MAXIMUM TEMPERATURE
700000	- 20°C	+ 160°C
701000	- 20°C	+ 160°C
702000	- 20°C	+ 160°C
703000	- 20°C	+ 160°C
704000	- 20°C	+ 160°C
705000	- 10°C	+ 160°C
<i>706600 - 707600</i>	- 10°C	+ 120°C
708000	- 20°C	+ 80°C
<i>709000</i>	- 20°C	+ 160°C
<i>709100</i>	- 10°C	+ 160°C
710000 - <i>711000 - 712000</i>	- 20°C	+ 160°C
713000 - <i>714000 - 715000</i>	- 10°C	+ 160°C
720000 - 721000	- 20°C	+ 160°C
720006	- 20°C	+ 160°C
720009	- 10°C	+ 160°C
720078	- 20°C	+ 160°C
720008	- 10°C	+ 160°C
720212	- 20°C	+ 160°C
720232	- 10°C	+ 160°C
720400	- 20°C	+ 160°C
<i>720700 - 720650</i>	- 20°C	+ 160°C

Ball valves series



ARTICLE	MINIMUM TEMPERATURE	MAXIMUM TEMPERATURE
722000 - 720001	- 10°C	+ 160°C
725000	- 20°C	+ 160°C
730000 - 730003	- 10°C	+ 120°C
731000	- 10°C	+ 120°C
750000 - 751000	- 10°C	+ 120°C
760000	- 20°C	+ 160°C
760001	- 10°C	+ 160°C
760005	- 20°C	+ 160°C
762000	- 10°C	+ 160°C
760040	- 20°C	+ 160°C
760041	- 10°C	+ 160°C
760801	- 20°C	+ 160°C
760802	- 10°C	+ 160°C
761030	- 20°C	+ 160°C
761031	- 10°C	+ 160°C
760200 - 760150	- 20°C	+ 160°C
765000	- 20°C	+ 160°C
765001	- 10°C	+ 160°C
766000	- 20°C	+ 160°C
766001	- 10°C	+ 160°C
763000	- 20°C	+ 160°C
764000	- 10°C	+ 160°C
763100 - 764100	- 20°C	+ 160°C
763030 - 764150	- 20°C	+ 160°C
772000 - 775000	- 20°C	+ 160°C
776000 - 776001	- 10°C	+ 160°C
776007 - 776010	- 20°C	+ 160°C
776400 - 776401	- 20°C	+ 160°C
776600 - 776601	- 10°C	+ 160°C