General Suppliers

Cast Iron Globe Valve - BS 5152 PN16 **MV50-1118**

Installation & Maintenance Instructions

CE MARKING AND THE PRESSURE EQUIPMENT DIRECTIVE 97/23/EC

This has been implemented in United Kingdom law by the Pressure Equipment Regulations 1999 (SI 1999/2001).

The regulations apply to all valves with a maximum allowable pressure greater than 0.5 bar.

Valves with a maximum allowable pressure not exceeding 0.5 bar are outside the scope of the Directive.

Valves are categorized in accordance with the maximum working pressure, size and ascending level of hazard, which is dependent on the fluid being transported.

Fluids are classified as Group 1, dangerous fluids or Group 2, all other fluids including steam. Categories are SEP (sound engineering practice) and for ascending levels of hazard, I, II, III or IV. All valves designated as SEP do not bear the CE mark nor require a Declaration of Conformity.

Categories I, II, III or IV carry the CE mark and require a Declaration of Conformity

(Note- all valves up to and including 25mm (1”) having a maximum allowable pressure greater than 0.5 bar are designated SEP regardless of fluid group).

THE ATEX Directive 94/9/EC

These globe valves are excluded from the ATEX Directive since they have no source of ignition, should not be installed in potentially explosive atmospheres and should only transport Group 2 non-hazardous liquids.

PRODUCT LIFE CYCLE

The life of the valve is dependent on its application, frequency of use and freedom from misuse.

The properties of the fluid being transported such as pressure and temperature must be taken into account to avoid premature failure.

Other factors to be considered are the electrolytic interaction between dissimilar metal used in the system, dezincification and stress corrosion cracking occurring on chilled water service.

Before commissioning a system, it should be flushed to eliminate debris and chemically cleaned as appropriate to eliminate contamination, all of which will prolong the life of the valve.

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LIMITS OF USE

These products are categorized as SEP for Group 2 Liquid, but are not necessarily suitable for all fluids in this group.

These valves shall not use on Group 2 Gases and Group 1 Liquids.

Operating pressures and temperatures

Maximum non shock pressure and temperature range:

16 bar from -10˚C to 100˚C

7 bar at 170˚C

Water hammer and other shock conditions should be avoided. Not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive service or transporting abrasive solids.

Warning: The maximum surface temperatures are given above. Care should be taken when operating the valve at these temperatures, to avoid severe burns to the skin.

PRESSURE / TEMPERATURE RATING

These valves must be installed in a piping system where the normal pressure and temperature do not exceed the above ratings.

If system testing will subject the valve to pressures in excess of the working pressure rating, this should be within the test pressure for the body with the valve in the open position.

If the limits of use specified in these instructions are exceeded or if the valve is used on applications for which it was not designed, a potential hazard could result.

LAYOUT AND SITING

It should be considered at the design stage where valves will be located to give access for operation, and routine inspection.

The preferred installation orientation is with the valve stem vertical in horizontal pipework and with the valve stem horizontal in vertical pipe work.

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INSTALLATION

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

Valves are precision manufactured items and as such, should not be subjected to misuse such as careless handling, allowing dirt to enter the valve through the end ports and excessive force during hand wheel operation.

All special packaging material must be removed.

Confirm that the pipe threading length is correct to avoid excessive penetration of the pipe into the valve which would otherwise cause damage.

It is common practice to apply thread sealing compounds appropriate to the application but excessive use should be avoided, since this increase thread interference and may cause overstressing of the body ends.

The direction arrow cast on the body must be coincident with the direction of flow in the pipeline.

Ensure the threads are properly engaged and proceed to tighten the valve onto the pipe. The wrench must only be located on the valve end into which the pipe is being threaded to avoid distortion of the valve.

Valves and adjoining pipe work must be provided with adequate support to avoid inducing bending stresses into the valve body, which will impair its performance.

Immediately prior to valve installation, the pipe work to which the valve is to be fastened should be checked for cleanliness and freedom from debris.

After installation, the valve may be opened and closed fully to confirm satisfactory operation.

It is recommended that valves installed on end of line service and unused for prolonged periods should be fitted with a blank flange.

OPERATION

Open the valve by rotating the hand wheel anticlockwise until a positive stop is felt. When fully open it is recommended to close the valve by ½ a turn.
Close the valves by rotating the hand wheel clockwise until a positive stop is felt.
Wheel keys or similar devices should not be used.

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The operator should use suitable hand protection at extreme temperature conditions. Globe valves should only be used in the full open or closed position.

MAINTENANCE

The valve should be at zero pressure and ambient temperature prior to any maintenance.

A full risk assessment and method statement must be compiled prior to any maintenance. Only correctly fitting tools and equipment should be used.

The valve should be included in a planned maintenance programme.

These globe valves should not normally require any maintenance; however, in the event of maintenance being necessary, the following procedure should be followed:

Gland Packing

Remove the hand wheel, nameplate, gland nut and gland.
Partially repack or fully replace the existing packing depending upon the amount of packing in the stuffing box or severity of the leakage.
Using a sharp pointed tool, lift out the existing packing and ensure the stem and stuffing box are clean & free from debris taking care not to cause any damage.
Fit replacement packing, re-fit the gland, gland nut, hand wheel and nameplate and confirm stem resistance while operating the valve.
When the valve is re-pressurized, check for leak tightness and further adjust the gland as necessary.

Disc Sealing Washer

Unscrew the bonnet assembly from the body and remove the old disc washer.
Examine the body seat for damage or debris, remove and clean as necessary.
Fit the new disc sealing washer and re-assemble the valve. Pressurize the valve and check the body joint for leakage and that the valve now isolates.
Fit genuine Maplef replacement components.

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