



General Suppliers

Bronze Fixed Orifice Double Regulating Valve

BS 7350 PN25

MV60 - 161

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 Fixed Orifice Double Regulating 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:

25 bar from -10°C to 100°C

21.8 bar at 120°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

FODRVs should be located to give access for operation, regulation and connection of the manometer probes to the test points.

Valves can be installed in horizontal or vertical pipelines.

The preferred orientation in a horizontal pipe is with the hand wheel upper most but the valve can be used in any orientation if dictated by space restrictions.



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STRAIGHT PIPE

The FODRV is a combined regulating and flow measurement device and must be installed with a minimum of 5 diameters of straight pipe upstream, having the same nominal diameter and not including any reducers or intrusions into the bore.

A minimum of 2 diameters of straight pipe are required downstream of the valve

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 plug.



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OPERATION

Prior to flushing or commissioning open the valve fully by rotating the hand wheel anticlockwise until a positive stop is felt.

Connect the manometer probes to the test points and use a silicone lubricant to ease insertion of the probe.

Regulation is accomplished by rotating the hand wheel - clockwise to close.

The decimal position indicator is viewed through the hand wheel display window.

Wheelkeys or other similar devices should not be used.

Valve Setting

When the required flow rate is achieved set the double regulating feature.

- Remove the hand wheel retaining screw, do not remove the hand wheel from the valve (if installed in the inverted position care must be taken so that the hand wheel does not drop).
- Regulate the inner spindle clockwise (using a thin bladed screwdriver) until a stop is felt. The regulated memory position is now set.
- Re-fit the hand wheel locking screw.

After disconnecting the probes, refit the test point blanking caps for protection and additional sealing.

MAINTENANCE

These FODRVs are maintenance free.

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