



Fig. KFDRV25 Bronze Fixed Orifice Double Regulating Valve Installation & Maintenance Instructions

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.

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.

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 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.

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.



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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 increases 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 pipework 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 pipework 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.

OPERATION

Prior to flushing or commissioning open the valve fully by rotating the handwheel 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 handwheel - clockwise to close.

The decimal position indicator is viewed through the handwheel 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 handwheel retaining screw, do not remove the handwheel from the valve (if installed in the inverted position care must be taken so that the handwheel does not drop).



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- 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 handwheel locking screw.

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

MAINTENANCE

These FODRVs are maintenance free.