



Fig. KIDRV16VO & Fig. KIDRV16FO Iron 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:

EPDM elastomeric seat - 16 bar from -10°C to 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 the valve is used on applications for which it was not designed, a potential hazard could result.

LAYOUT AND SITING

VODRVs and 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 handwheel upper most but the valve can be used in any orientation if dictated by space restrictions.

STRAIGHT PIPE

The VODRV and FODRV are 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 handwheel operation.

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. Valve end protectors should be removed immediately prior to installation.

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

Valves should not be lifted using the handwheel or stem, use the correct slings.

The surface finish and condition of the gasket contact face on both the valve and pipework should be checked. Incorrect surface finish or damage can cause leakage and no attempt to assemble should be made until it has been rectified.

Gaskets should be suitable for the operating conditions including the maximum temperature and pressure.

During assembly bolts should initially be hand tightened sequentially to make the initial contact ensuring gaskets are concentric with the valve ports and that the flanges are parallel.

Finally tighten the bolts gradually and uniformly in an opposing sequence to prevent bending one flange relative to the other.

Care should be taken to align the flanges being assembled, especially when assembling the valve between exist flanges.

Flanged joints depend on compressive deformation of the gasket material to achieve a seal.

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

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 micrometer indicator consists of a sleeve beneath the handwheel which has numbered rings to represent the number of turns from zero (closed) to fully open.

The number of exposed rings indicates the position open.



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Fine setting is achieved using the numeric indicator which has divisions of 1/10th of a turn of the handwheel.

When the required setting is achieved, adjust the locking device to limit the maximum open position of the valve.

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

Wheel keys or similar devices should not be used.

MAINTENANCE

These VODRVs and FODRVs are maintenance free.