

CAUTION

Prior to installing, the instructions provided herein should be completely reviewed and understood before operating or repairing this equipment. All CAUTION and WARNING notes must be strictly observed to prevent personal injury or equipment damage.

Description

The high-pressure metering valve is designed for use in liquid and gas control applications. This valve can be used to meter or control flow on meter runs, flow lines, or as a choke under low pressure drop conditions where freezing is not an issue. The metering valve can be used anytime a reference control point is required in sixty fourth of an inch opening increments.

The metering valve has a single port body and a manual actuator. Because of the high pressure range, the packing box features live load packing with a teflon sleeve around the stem as well as a felt wiper and buna backups for leak-free sealing.

The Stem Guided metering valve features a Class IV metal to metal, non-balanced trim set. Multiple trim options are available to accommodate a variety of flow requirements.

The Cage Guided metering valve features a Class VI soft-seated, balanced trim set. Full port or reduced trim options are available with equal percentage or modified percentage flow characteristics.

A nameplate is attached to each valve. The nameplate lists the serial number, model number, and pressure rating.

Installation

Before installing the metering valve, inspect it for damage that may have occurred during shipment or for foreign material that may have collected during shipment. Inspect the openings in the valve and clean the process piping to ensure they are clear of scale, chips, and other debris. For flanged bodies, remove the masking sticker from the raised face of each end connection.

1. Install the valve with the arrow on the valve body pointing in the direction of flow. The arrow indicates the preferred direction of flow through the valve but the valve does not prevent flow in the opposite direction. The flow direction in the stem guided valve is down through the valve orifice. The flow through the cage-guided valve is up through the valve orifice. If conditions indicate backward flow, check valves can be installed.
2. Install the valve using good piping practices. For flanged bodied valves, use a suitable gasket between the body and the process piping flanges. For threaded (NPT) bodied valves, use TFE tape or pipe thread sealant on external pipe threads.
3. The rotation of the adjusting knob raises or lowers the valve plug relative to the valve seat.
4. Verify all pressure connections are tight before pressurizing the system.

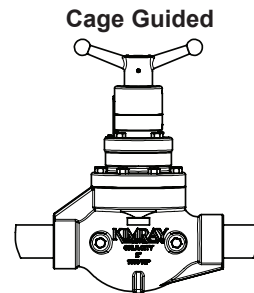


Figure 2

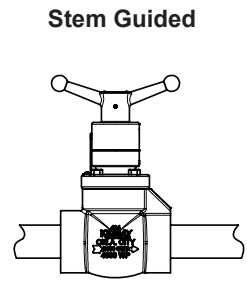


Figure 2

Setting the Indicator

Each indicator mark indicates a relative position of the stem in relation to the seat. Full closed is determined by the first indicator mark at the starting point. Full open is determined by the last indicator mark on each label. The numbers next to the indicator marks are in sixty-fourth inches.

Align the starting point inside the indicator window. Slowly turn the knob to the next indicator mark until the desired setpoint is reached.

Example: 1/4 ths. Inch Inner Valve

The distance from starting point to the next bullet is 2/64 ths, etc.....

5/8 ths. Inch Inner Valve

The distance from starting point to the next bullet is 8/64 ths, etc.....

7/8 ths. Inch Inner Valve

The distance from starting point to the next bullet is 11/64 ths, etc.....



CAUTION

When ordered, the high pressure metering valve configuration and construction materials were selected to meet specific pressure, temperature, pressure drop and fluid conditions. Since some body/trim material combinations are limited in their pressure drop and temperature ranges, do not subject the high pressure valve to any other conditions without first contacting the Kimray Inc. sales office or a sales / applications representative.

Start-up and Test

With the installation completed and appropriate relief and check valves installed and set, slowly open the upstream and downstream shutoff valves. In order to test the functionality of the valve, allow only a small amount of upstream pressure through the upstream shutoff valve. Check for proper valve operation by cycling the adjusting knob several times.

Maintenance

Maintenance should be performed on a regular basis. An initial inspection interval of 12 months is recommended. Depending on the service conditions of the valve, the inspection interval may be decreased or increased.

The valve can be repaired without removing the valve body from the piping.

Only use genuine Kimray replacement parts.

Repair kits and detailed repair instructions are available for each valve.

Visit www.kimray.com or contact your Kimray authorized distributor for additional product information and / or literature.

Inspection Schedule

*Valve Seat (seat, plug, cage & packing box).	Inspect every 6 months under normal service and conditions. Under severe service conditions such as sand, corrosion, salt, or high pressure drop, inspect every 2 months until a predictable pattern can be established. Check seating surface where ball meets cone seat for erosion.
Seals	Should be replaced as needed. Check for cracks or swelling. If the seal feels hard, replace.
Body	Under normal conditions, the valve body will last for years. Severe conditions will require inspection more frequently. The valve body should be inspected every time the valve trim is inspected.
*Under severe operating conditions, the maintenance schedule described will not be adequate and a shorter maintenance interval may be required.	

Trouble Shooting

Problem	Possible Cause(s)	Possible Solution
Fluid leaking from packing box	Packing worn.	Replace packing.
Valve leaks when closed	Debris stuck in valve. Soft seat worn. Trim worn	Disassemble and clean seat area. Replace seat. Replace trim.

WARNING

Before beginning installation:

- Read and follow instructions.
- Make sure the valve cannot operate during installation.

Do not exceed the maximum supply pressure specified on the valve nameplate.

Never tighten any fitting or the main connections to the valve while there is pressure on the line.

WARNING

Before any service, be certain that the valve is fully isolated and that all pressure upstream and downstream has been relieved. Use bypass valves or fully shut off the process.

Be sure that any operating or instrument gas lines have been disconnected.

Never stand directly in front of or over a valve when the system is pressurized. The valve could suddenly open, blowing debris into the person's face and eyes.

WARNING

A leaking valve is an indication that service is required. Failure to take valve out of service immediately may cause a hazardous condition.

NOTE

If conditions indicate the possibility of backward flow you may wish to install check valves. Never assume that a check valve is fully isolating the valve/controller.

For questions or comments, contact your local Kimray authorized distributor, or visit www.kimray.com.

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