



Engineered Valves

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INSTALLATION AND MAINTENANCE INSTRUCTIONS

FIGURE 105

FABRI-VALVE[®] BONNETLESS KNIFE GATE VALVE

INSTALLATION:

The Figure 105 is polyurethane lined valve with the seat and inlet liner of separate loose rings and is held in by the mating flanges. The rings are designed to seal without a gasket. (Do not install a gasket between the loose rings and the mating flanges.) The valves must only be used with flat face pipe flanges. Bolt to mating flanges with proper size bolts, tightening opposites to provide even sealing pressure.

Note: Bolting matches ANSI 150 Class bolting dimensions through 24" size.

WARNING: THE SEAT RING AND BODY LINER ARE LOOSE PIECES AND NOT ATTACHED TO THE VALVE BODY. THE VALVE MUST BE INSTALLED BETWEEN TWO MATING FLANGES BEFORE PRESSURIZING. FAILURE TO DO THIS MAY CAUSE DAMAGE OR INJURY. IF THE VALVE IS INSTALLED ON THE DISCHARGE END OF A PIPELINE A COMPANION FLANGE MUST BE BOLTED TO THE OUTLET FLANGE OF THE VALVE TO RETAIN THE REPLACEABLE SEAT. THE GATE MUST BE SLIGHTLY OPEN WHEN INSTALLING.

Note: When rubber lined pipe and flanges are used, do not tighten the flange connection more than 25% of the rubber flange thickness or 1/16 of an inch maximum. For example if the rubber lining is 1/8 of an inch thick, do not compress the flange connection more than 1/32 of an inch. Over-tightening the rubber lined flange connection will decrease the life of the seats and increase the actuator thrust requirements of the valve.

NOTE: BOTH SEATS OF THE VALVE MUST BE FULLY SUPPORTED BY THE MATING FLANGES OF THE PIPE. IF THE INTERNAL DIAMETER (I.D.) OF THE MATING FLANGE IS 1/2" (13mm) OR GREATER THAN THE I.D. OF THE RUBBER SEATS, A LOAD DISTRIBUTION RING IS REQUIRED. CONSULT FACTORY FOR PRICING AND AVAILABILITY.

In the selection of mounting bolts, be sure that the bolts in the chest section are short enough to tighten before bottoming in the tapped holes of the valve flange.

The stuffing box or packing gland may require some adjusting after line pressure is up to normal. Tighten just enough to stop leakage. Over-tightening may cause undue pressure against gate causing packing to wear rapidly and making the valve difficult to operate.

MAINTENANCE:

TO REPACK STUFFING BOX: DANGER: DO NOT REPACK VALVE UNDER PRESSURE

1. Disconnect stem from gate and raise stem.
2. Remove gland nuts and raise the stuffing box or packing gland.
3. Remove old packing.
4. Install new packing, using the same number of rows and type of packing cut to exact length to fit around the gate and on a 30 degree taper to the horizontal. Stagger the packing joints from row to row on the flat side of the gate.
5. Replace the stuffing box or packing gland and gland nuts, making sure the gate is centered.
6. Lower stem to gate and connect stem to the gate.
7. After the line is up to pressure, tighten gland just enough to stop leakage.

TO REPLACE SEAT RINGS OR INLET LINER:

1. Remove the valve from the pipeline and open gate.
2. Seat ring is loose and may be removed from outlet flange of valve. If necessary, it may be driven out with a piece of wood from the inlet side.
3. Inspect the seat surface of the ring. If wear appears on only a small area the seat ring may be rotated to put wear point towards the top of the port and further service obtained.
4. Clean the recess where the seat ring fits.
5. If the seat ring is nonmetallic install new or rotated ring. If seat ring is metallic install the new or rotated ring with a new, 1/16" thick gasket between the body and seat ring.

LUBRICATION:

Working parts will require lubrication at regular intervals, dependent on frequency of operation.

Part	Recommended Lubricants
Grease Fitting On Yoke:	Chevron Industrial Grease-medium Texaco Molytex Grease #2 improved.
Thread Portion of Stem, Valve Seats and Gland Bolts or Studs:	Moly XL 47-F2-75 Fel-Pro C5-A Compound

VALVES WITH ELECTRIC ACTUATORS

Valves with electric motors should be set up torque closed, position open if valve is single seated and position closed, position open if valve is double seated.

WARNING:

Valves and valve actuators supplied by Engineered Valves are designed and manufactured using good workmanship and materials, and they meet the applicable industry standards. These valves are available with components of various materials, and they should be used only in services recommended herein or by a company valve engineer. Misapplication of the product may result in injuries or property damage. A selection of valve components of the proper material consistent with the particular performance requirement is important for proper application.

Examples of the misapplication or misuse of a valve or valve actuator includes use in an application that exceeds the pressure / temperature rating, or failure to maintain the equipment as recommended.