FluoroSeal Inc.

M-OM-0002rev0

SLEEVED VALVES
OPERATING & MAINTENANCE INSTRUCTIONS

FLUOROSEAL VALVES REQUIRE LITTLE OR NO MAINTENANCE AND WHEN PROPERLY APPLIED CAN BE EXPECTED TO GIVE LONG TROUBLE FREE SERVICE.

INSTALLATION INSTRUCTIONS

Install valve into your process line according to the following instructions:

FLANGED PLUG VALVES

- Remove flange protectors.
- Insert valve into your process line.
- Using appropriate gaskets and bolts, bolt the valve into your process line.

SOCKET WELD AND BUTT WELD VALVES

Socket Weld and Butt Weld Plug Valves need to be welded into your process line prior to operation. FluoroSeal Inc. recommends using only ASME qualified procedures and personnel for weld installation of Socket Weld and Butt Weld Valves.

- Remove the plastic protection cap
- Initial Visual Inspection of valve to assure that no foreign object obstructs the waterway, and that the weld surface is free of corrosion or physical damage.
- The valve should be as shipped from the factory, in the open position. The double D on the stem will indicate the position of the plug.
- As FluoroSeal Plug Valves are offered in a variety of sleeve and top seal materials, care should be given not to exceed the respective maximal temperatures at the body sleeve area. For PTFE the max temperature is 400deg F or 204Deg C. Contact the FluoroSeal Technical department for other sleeve materials, additional information or help.
- In order to reduce the temperature at the body sleeve area, the welder can wrap a damp fireproof cloth around the body at core area, and pour cold water as needed to reduce the temperature.
- The area to be welded shall be cleaned of grease and oil and moisture free.
- For valves with Socket Welding end, insert the tube in the socket to maximum and retract it 2 mm, make two welding tacks to define welding position, then continue welding.
- For valves with Butt Welding ends, leave a 2 mm gap between pipe and valve end, and fill gap with weld for full penetration.
- Weld using low heat input and gradual welding technique. Discontinue welding after each pass or as often as needed (do not exceed 200°C/400°F for PTFE, RTFE, and PFA; 316°C/600°F for HiTemp RTFE; 246°C/475°F for GF2P; 149°C/300°F for UHMWPE) in order to prevent any damage to the sleeve. Allow the metal to cool below 80°C/175°F prior to continue welding.

OPERATING INSTRUCTIONS

- Lever: Align lever with valve body to open valve, move lever to 90° of valve body to close.
- Gear Operator: Turn gear operator wheel clockwise to open valve, counterclockwise to close valve.

MAINTENANCE INSTRUCTIONS

Plug valves and installed gear operators on Sleeved plug valves do not require periodic maintenance, e.g. periodic lubrication. Certain adjustments may however be performed as needed.

SEAL ADJUSTMENTS

All FluoroSeal® valves are factory adjusted and pressure tested for bubble tight seal. Normally further adjustment is not required. Should seepage occur at the plug stem or downstream the following adjustment procedure should be followed:

Locate the three adjusting bolts spaced at (120°) from each other around the plug stem. Each of these bolts should be tightened in (1/4) turn increments until seepage stops. Care should be taken to prevent over adjusting as this will result in excessive operating torque. The valve should be operated a full cycle after each adjustment.

Should seepage still occur after adjustment, seals may require replacement.

TOP SEAL REPLACEMENT

Caution: Before attempting to disassemble the valve care should be taken to flush out any hazardous fluids and release entrapped pressures. Failure to do so could result in serious injury.

TOP SEAL REPLACEMENT — DISASSEMBLY PROCEDURE

- Back off the three adjusting bolts until they are several turns clear of contact with the thrust collar
- Rotate the plug one or two times which will allow the plug to pop up from the sleeve seal relieving any pressure that may be trapped below the plug
- The cover bolts should then be loosen four complete turns only and the plug rotated one or two cycles, or until it is evident the plug is loose not allowing trapped pressure
- All of the cover bolts and then the cover should be removed
- With a twisting motion lift the plug from the body
- Discard all of the PTFE components and metal diaphragm from the plug stem, but retain the metal thrust collar for reuse
- The plug and sleeve should be flushed and wiped clean of any residue and visually inspected for any damage before reassembly

TOP SEAL REPLACEMENT — REASSEMBLY

Refer to Appendix A — Figure 1

Place the plug in the body with the ports in the open position. New top seal components should be placed on the plug stem in the following order:

- Combination PTFE diaphragm and stem seal collar
- PTFE delta ring
- Combination formed metal diaphragm and static eliminator
- The used thrust washer should be placed on top of the metal diaphragm
- The adjustment bolts should be backed off flush with bottom of cover bore
- Place the cover over the plug stem
- Press the plug into the body using a press until the plug port opening is approximately (1/16) inch above the bottom of the body port opening

Make sure the PTFE diaphragm is sitting in the inner counter bore of the body and the metal diaphragm and seating shoulder of the cover are sitting in the outer body bore.

The cover bolts should then be tightened uniformly to the following torque values:

Bolt Size	Ft.lb
5/16"	12
3/8"	20
7/16"	35
1/2"	45
5/8"	95
3/4"	130

Tighten the adjusting bolts uniformly (1/4) turn at a time until contact is made with the thrust collar, plus (1/4) turn each to seat the plug.

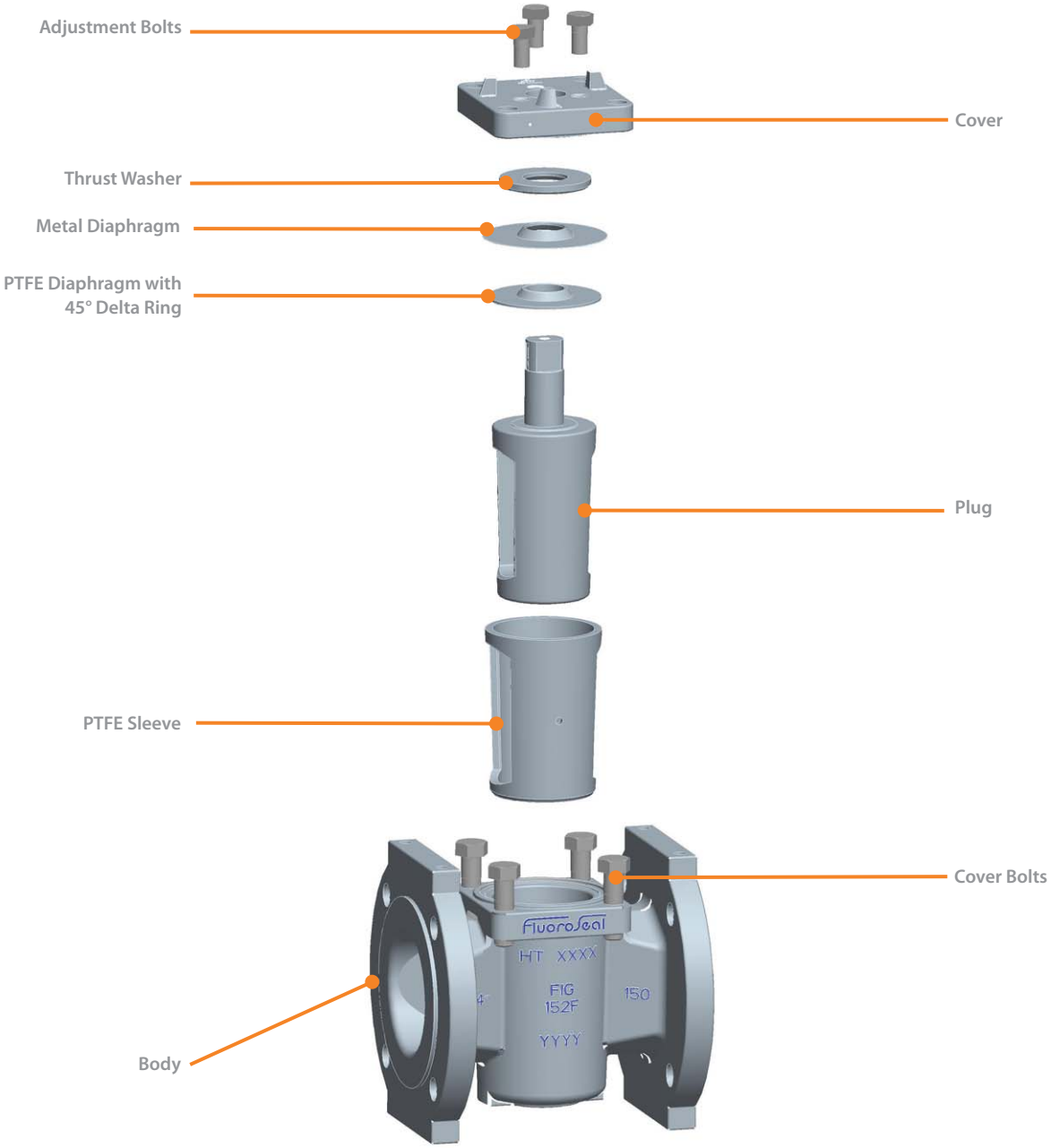
Replace the wrench or gear operator assembly and rotate the plug one full cycle.

Leave the plug in the open position until installation.

Should further assistance be required contact your distributor.

LIST OF COMPONENTS IN APPENDIX A — FIGURE 1

Adjustment Bolts
Cover Bolts
Metal Diaphragm
Plug
Body
Cover
Thrust Washer
PTFE Diaphragm with 45® Delta Ring
PTFE Sleeve


Adjustment Bolts
Cover
Thrust Washer
Metal Diaphragm
PTFE Diaphragm with
45° Delta Ring
Plug
PTFE Sleeve
Cover Bolts
Body
FluoroSeal
HT XXXX
FIG
152F
YYYY
4"
150