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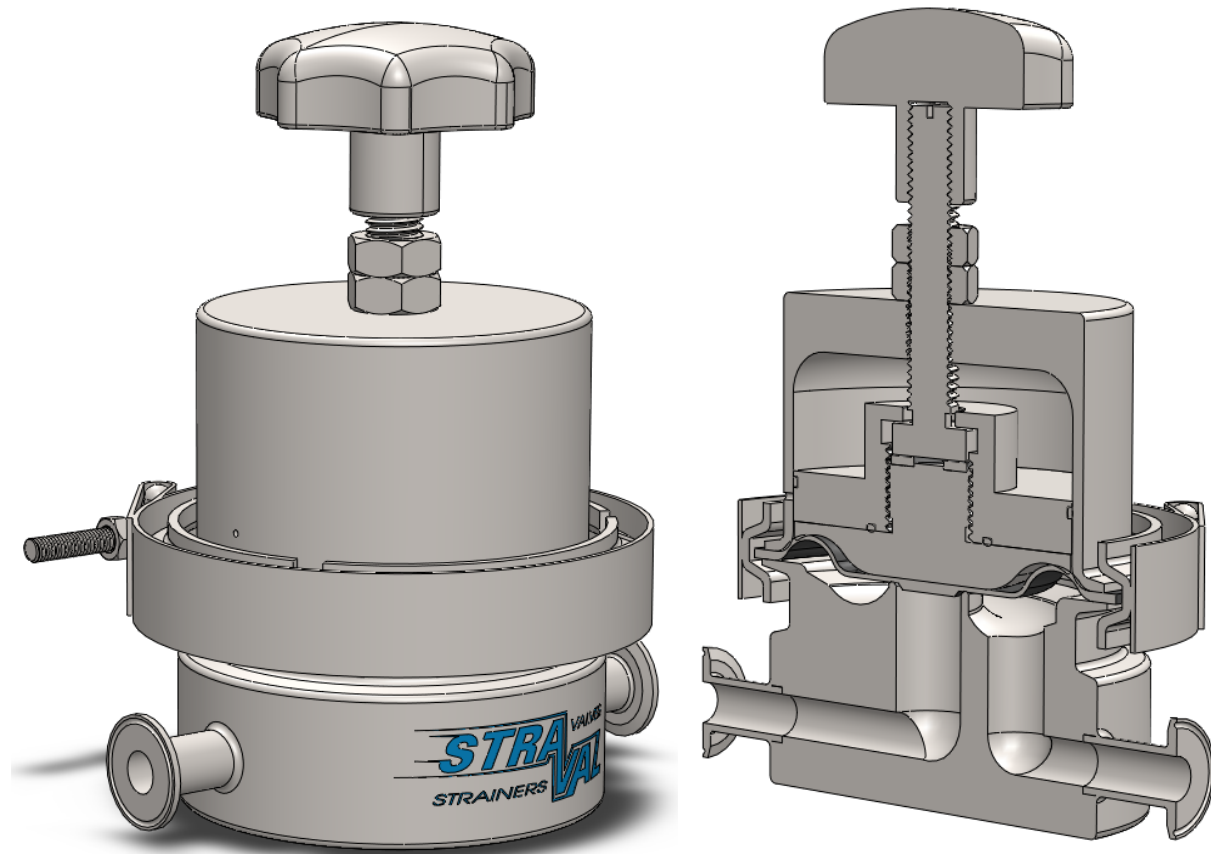
**Fax:** (973)-340-9933

**Location:** 20 Bushes Lane  
Elmwood Park, NJ 07407

**Website:** [www.straval.com](http://www.straval.com)

## Model SOV09i-TC

### In-Line Sanitary Tri-Clamp Flange Shut Off Valve



- In-Line, Self-Draining Design
- Diaphragm or Piston Operated
- 1/2" - 2 1/2" Sanitary Tri-Clamp Connections
- Inlet Pressures Up To 150 PSIG (10.3 BAR)
- In Line Serviceable
- Internal 20 RA or Electropolish Surface Finish
- ANSI Class VI Seat Leakage

## Maintenance and Repair

The shut-off valve is shipped from our facility in the closed position, ready for immediate operation. If any signs of malfunction arise, begin by inspecting the inlet and outlet ports to ensure there is no debris or blockage. Visible leakage from the vent hole indicates diaphragm or piston seal failure. In such cases, the valve seals will need to be replaced, or the valve should be sent in for possible repair.

Before removing the valve from service, ensure it is completely isolated from the piping system to avoid personal injury. The valve seat is typically the most vulnerable component, prone to failure due to corrosion or deformation caused by pressure and temperature. If excessive seat leakage occurs, the diaphragm or seat may require replacement or reworking.

To inspect and replace these components, remove the housing clamp to expose the valve's moving parts and seals. Although it is more convenient to perform maintenance with the valve removed from the piping, this valve is designed for easy in-line repair, provided all necessary precautions are taken to ensure technician safety.

## Disassembly Instructions

Before beginning disassembly, ensure the process line is fully depressurized and securely isolated upstream and downstream to prevent injury. Start by removing the V-band clamp to access the valve trim. This will separate the housing and its internal components from the valve body, exposing them for inspection. The diaphragm or seat seal should be checked first for wear and replaced if necessary.

To further disassemble the internal parts within the housing, remove the adjusting knob from the stem by holding the stem with locking pliers and turning the knob counterclockwise until it detaches; then remove the two jam nuts. (the jam nuts are in place to indicate the valve is fully shut). Next, unscrew the stem, which holds the remaining components, until it comes out of the housing, allowing you to access all seals and internal components for inspection. Carefully remove each component and check for signs of wear, deformation, rough surfaces, or obstructions caused by dirt or foreign objects, as these can lead to improper operation.

If leakage from the vent hole is observed, it indicates diaphragm or seat failure, requiring immediate replacement. For diaphragm sealing design, removing the housing assembly from the body will expose the diaphragm for easy access and replacement. For piston sealing design, replace the O-ring seat by turning the seat holder counterclockwise with a flathead screwdriver to loosen and remove it from the piston, exposing the seat O-ring for replacement. Refer to the illustration below for a visual guide to the disassembly process.

\* Replacement parts are available for purchase through Straval at the time of order and are readily available any time after. Please contact Straval for recommendations on troubleshooting for this specific valve. Contact information is on the cover page in the header. \*

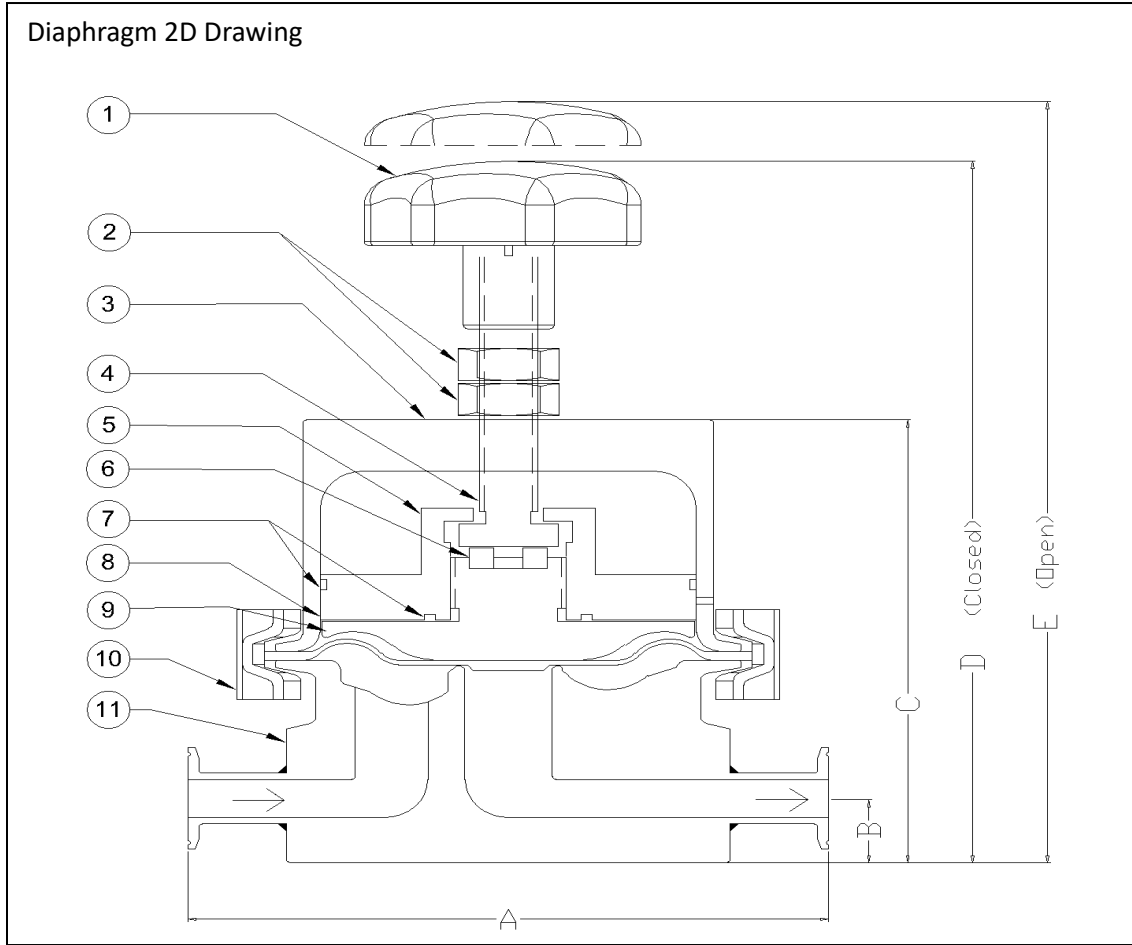
## Reassembly and Testing

Once all valve parts have been cleaned and inspected, reassemble the valve in reverse order. Apply a compatible valve seal lubricant to the seals, ensuring it is suitable for the elastomer used. Avoid lubricating elastomers that come into contact with the valve seat, as this could cause potential leakage. Ensure the valve seat is free of dirt or foreign particles, which could prevent it from fully closing and cause unwanted leakage.

Lubricate threaded components with a food grade anti-seize compound. After reassembling the housing and internal components, securely clamp the housing back onto the valve body. The valve is now ready for final installation and testing.

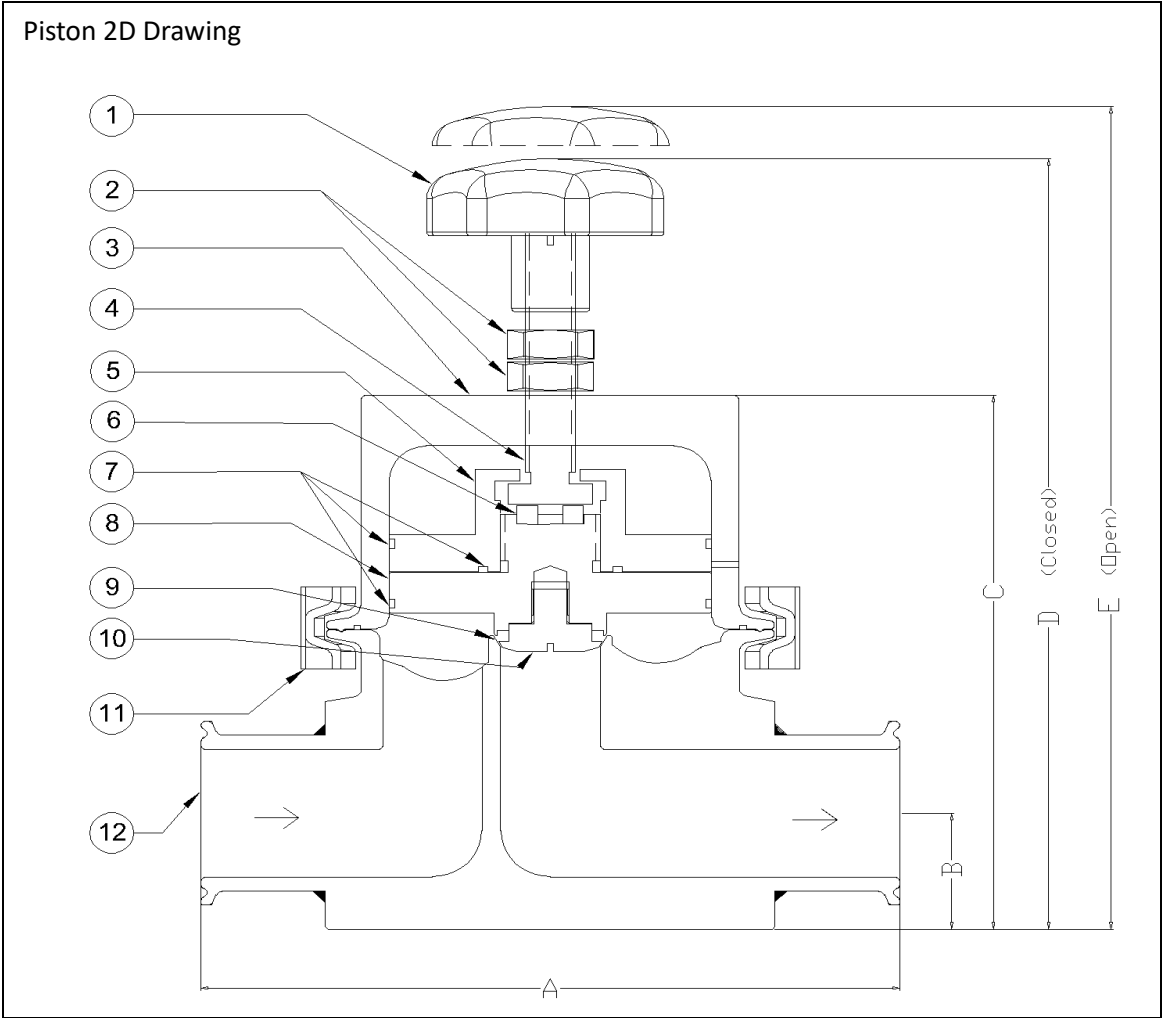
Perform testing with the valve in the shut position, placing the two jam nuts in place to indicate it is fully closed. Once the line is flowing, check for any leakage at the outlet. If no leakage is detected, the seals are properly installed, and the repair is successful. Open and close the valve to confirm proper operation, ensuring appropriate flow through the full range.

## Model SOV09i-TC Schematics



### Material List & Specification (1/2", 3/4", 1") – Diaphragm Operated

Part		Material
1	Adjusting Knob	316L Stainless Steel
2	Jam Nuts	316L Stainless Steel
3	Housing	316L Stainless Steel
4	Stem	316L Stainless Steel
5	Stem Guide	316L Stainless Steel
6	PTFE Ring	PTFE
7	O-Rings	Viton, Buna, EPDM
8	Diaphragm Brace	316L Stainless Steel
9	Diaphragm	PTFE/Viton, PTFE/Buna, EPDM
10	V-Band Clamp	316L Stainless Steel
11	Body	316L Stainless Steel



**Material List & Specification**  
**(1-1/2", 2", 2-1/2") – Piston Operated**

Part		Material
1	Adjusting Knob	316L Stainless Steel
2	Jam Nuts	316L Stainless Steel
3	Housing	316L Stainless Steel
4	Stem	316L Stainless Steel
5	Stem Guide	316L Stainless Steel
6	PTFE Ring	PTFE
7	O-Rings	Viton, Buna, EPDM
8	Piston	316L Stainless Steel
9	Seat	Viton, Buna, EPDM, Kalrez
10	Seat Holder	316L Stainless Steel
11	V-Band Clamp	316L Stainless Steel
12	Body	316L Stainless Steel