



# **OPERATION AND MAINTENANCE MANUAL TECHNO CHECK VALVES**

*For technical questions, please contact the following:*

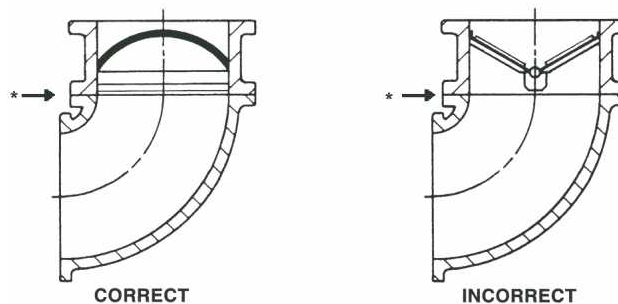
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## GENERAL

The internal assembly of the Techno check should move freely from the open to closed position without binding. Even in the largest valves, the internals should operate easily by hand. The Techno check may appear not to close tightly when so operated, but this simply means that the sealing member has not assumed its “set” and in no way should be interpreted as a failure of the valve to close easily or to seat tightly. This condition, if it exists, will be rectified by a few flexings in service. All Techno check valve assemblies are treated with a locking solution during assembly and no loose fasteners should be found.

## PRECAUTIONS

- **Positive displacement and Rotary Lobe Blowers** – When used in this application, a Techno check should always be mounted on the downstream side of a silencer.
- **Reciprocating Pumps and Compressors** – Techno check Valves should not be used in these applications.
- **Pipe Fittings, Expansions, Reductions and Swages** – A minimum of 5 pipe diameters should be maintained between the Valve and Pipe Fittings (Tees, Elbows, etc.), Expansions, Reductions, and Swages.
- **Male Threaded, Plain or Grooved End Valves** – These valves may be held stationary in vises or with special wrenches, but should never be turned with a pipe wrench of any kind since serious risk of body distortion would be incurred. The use of a strap wrench is acceptable.
- **Adjacent to Vertical Elbows** – When installing Techno check Valves in vertical lines downstream from an elbow, it is necessary to orient the hinge post to prevent unequal loading of the two valve plates.



**NOTE:** Frequently the discharge of pumps and compressors simulates the above elbow configuration, which causes higher velocity at the outer circumference. Care should be taken to position valves as shown above for these applications.

## VALVE STORAGE

Valves should be stored indoors and in their original containers to keep them clean and to avoid damage.

## **VALVE POSITIONING**

- A. **Horizontal Lines** – Valves installed in Horizontal Lines must be bolted, threaded or coupled in place with the stationary support “Hinge Post” in the Vertical Position, i.e., in such a manner that the bolts protruding through the valve body are at the top and bottom of the installed valve, perpendicular to the flow. Wafer Style 5050 and 5051 do not have body bolts, however the valve body is clearly marked with a FLOW DIRECTION arrow and “TOP” to assist with proper positioning.
- B. **Vertical Lines** – In the downward or upward position, no special attention need be given to the Hinge Post position. The only exception being when mounted directly downstream of an elbow. In this case, the flow velocity will be higher at the outer circumference of the elbow. Therefore, the Hinge Post should be mounted perpendicular to the outermost portion of the elbow. See opposite side (PRECAUTIONS) for illustration of this positioning.

## **SPRINGS - VALVE PLATES**

Springs are standard on all Wafer Style 5050, 5051, and Deepwell Style 5002-F Valves. Springs are normally recommended for all Vertical downward flow applications of all Technocheck Valves. This is the general guideline and some downward flow applications may not require heavy-duty springs. Also certain downward flow conditions, depending on valve size and materials of construction, may require heavy-duty springs. If in doubt about spring selections, CONSULT THE FACTORY WITH THE DETAILS OF YOUR APPLICATION.

## **FLANGE GASKETS**

Standard 1/16” thick rubber gaskets or as otherwise preferred are to be used when installing a Flanged or Wafer Style Valve. Gaskets may be oiled, greased, or left dry as preferred. Gaskets are not supplied with Valves.

## **MAINTENANCE**

Maintenance of a Techno check Valve is seldom required. Repair or replacement of internal assembly is straight forward, requiring no special skills or tools. Following are a few precautions.

1. When installing internal assembly, particular care must be taken not to distort the sealing member.
2. Insert new internal assembly from the “downstream” side. Slide assembly into valve body until bolt holes in the body line up with tapped holes in the hinge post of the internal assembly. In horizontal lines, the hinge post must be secured in the vertical plane.
3. Treat hinge post bolts with “Loctite 246” sealant prior to assembly.
4. Nyltite washers must be used on hinge post bolts with final assembly.
5. After assembly, allow four hours for Loctite to set before placing the valve in service.
6. If you have any questions regarding our instructions, consult the factory.

**NOTE:** Above maintenance instructions apply to all metal valves except styles 5050 and 5051.

## **PRESSURE-TEMPERATURE RATING OF TECHNOCHECK VALVES**

*The pressure rating and temperature limitation of each valve is indicated on the nameplate.*

*Caution should be taken not to exceed these limitations. If in doubt, consult the factory for verification. At right is a general guide of the temperature limitations of the valve sealing material.*

### **SEALING MEMBER MATERIALS**

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<b>MATERIAL</b>	<b>*TEMPERATURE RANGE</b>
Buna-N	-60 to 225°F
Neoprene	-40 to 225°F
EPDM	-40 to 300°F
Viton	-20 to 400°F
Silicone	-100 to 500°F

*\* This temperature rate is for general guidance.  
The figures may vary with application.*