The Series BV3HL-3A Three-Piece Sanitary Ball Valve is designed to meet 3A standards and provides easy replacement of gaskets, seals, and seats without any special tools. The swing-out design of the valve allows for the center section of the valve body to be replaced while leaving the ends clamped in place if necessary.

The BV3HL-3A uses a cavity filled design, which means that the ball can remain completely enclosed by the pure TFE seats, eliminating the chance of product entrapment. Combined with an investment cast 316L SS casting, this series of valve is ideal for food, beverage, semi-conductor, or pharmaceutical applications. Superior leak protection is accomplished by using a load-loaded packing system featuring belleville washers. An ISO 5211 mounting pad is provided for easy automation.

OPERATION

Manual Operation - To open or close the valve, turn the handle 90° (1/4 turn). Valve in OPEN position: the handle is parallel (in line) with the valve or pipeline. Valve in CLOSED position: the handle is perpendicular (crossed) with the valve or pipeline.

Automated Operation - Valves with actuators should be checked for stem alignment. Most applications are direct mount to the actuator, greatly reducing any sideload or increased torque. Make sure that all insert adapters are properly placed on the valve stem and fully engaged in the actuator.

SPECIFICATIONS

Service: Compatible liquids and gases.
Body: 3-piece.
Line Size: 1/2” to 4”.
End Connections: Tri-Clamp (liner meets BS 4825, part 3).
Pressure Limits: 1000 psi (69 bar) WOG.
Wetted Materials:
  Body, Ball, End Caps: CF8M SS.
  Stem: 316 SS.
  Seats, Body Seal, Thrust Washer, Packing: TFE.
Temperature Limits: -40 to 450°F (-40 to 232°C) CWP.
  297°F (147°C) steam maximum.
Other Materials: 304 SS, vinyl.
Agency Approvals: 3A.
Disassembling and Cleaning the Valve -

**CAUTION:** Ball valves can trap fluids in the ball cavity when it is in the closed position. If the valve has been used with hazardous media, it must be decontaminated before disassembly or handling.

**WARNING:** All persons involved in the removal or disassembly of the valve should wear protective gear such as eye and face protection, gloves, etc.

Relieve the line pressure. Place the valve in the half-open position and flush the line to remove any hazardous material(s) from the valve.

Replacing the Thrust Washer, Packing, and Seats

**NOTE:** The Series BV3HL-3A Sanitary Ball Valve is designed with belleville washers for automatic wear compensation. If there are signs of leakage from the stem, it is time to replace the stem packing and thrust washer.

Before replacing the thrust washer, seats, and packing, the pipeline must be depressurized. Maintenance, removal and replacement of seats and seals is simple even if the valve is installed in line. By removing three of the body bolts and loosening the fourth bolt, the valve body can be swung out of line (see illustration 1.1). Seats, seals, gaskets and balls can be replaced without disturbing the pipe alignment.

**Bolt Tightening Specifications** - The body bolts on the valve must be tightened evenly. Tighten the bolts by hand, then use a wrench to tighten bolts in diagonal opposition. See chart 1.2 for bolt torque specifications.

**WARRANTY**

The Series BV3HL-3A Sanitary Ball Valve is warranted from defects in materials and workmanship for (1) year from the date of purchase. In the unlikely event the valve should fail, the unit can be returned to the factory for warranty repair if the warranty period has not expired. Contact our customer service department for an RGA number and to set up the return.

### CHART 1.2: Bolt Torques

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>Body Bolt Torque (IN LBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4˝</td>
<td>44</td>
</tr>
<tr>
<td>3/8˝</td>
<td>44</td>
</tr>
<tr>
<td>1/2˝</td>
<td>53</td>
</tr>
<tr>
<td>3/4˝</td>
<td>62</td>
</tr>
<tr>
<td>1˝</td>
<td>89</td>
</tr>
<tr>
<td>1-1/2˝</td>
<td>186</td>
</tr>
<tr>
<td>2˝</td>
<td>230</td>
</tr>
<tr>
<td>2-1/2˝</td>
<td>336</td>
</tr>
<tr>
<td>3˝</td>
<td>487</td>
</tr>
</tbody>
</table>