4. Clean all components and sealing surfaces carefully. Do not scratch or nick the ball or seats.
5. Lubricate flange seals and the concave surface of seat assemblies with lubricant provided, except for PEEK seats. Lubricate PEEK seats with a non-silicone based system compatible lubricant.
6. Place low dead space inserts around ball. Make sure stem cut-out on inserts are aligned with the valve stem. The 3-way insert has two identical cut outs—one for the stem and one for the bottom port opening.
7. Position support rings onto seat subassemblies.
8. Install the seat subassemblies with support rings in the center body. Make sure lubricated concave surfaces of the seat subassemblies face the ball.
9. Position the flange seals in the center body around the outside diameter of the seat subassemblies.
10. 2-way valves—Swing the center body back into position between the flanges and reinstall the body stud/bolt and nuts.
   3-way valves—Return the center body to its position between the flanges and reinstall the body studs/bolts and nuts.
11. 2-way valves—Place and leave the valve in the open position.

**WARNING:** Before servicing any installed valve, you must:
- Depressurize system
- Cycle valve

**WARNING:** Residual materials may be left in valve and system.

1. Lock out valve by isolating from system and depressurize.
2. 2-way valves—Place and leave the valve in the open position and loosen the body studs/bolts. Remove the black stud/bolt and swing out the center body from between flanges.
3. 3-way valves—Place and leave the valve handle in line with either side port. Make sure bottom port is disconnected from system. Loosen and remove the body studs/bolts. Remove the center body from between flanges.
3. Remove the flange seals, seat subassemblies, and seat support rings. Set them aside for re-use.

**NOTE:** On 65, 65X, 68, and 68X series ball valves, discard the seat support rings.

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**Kit Contents:**
- Low Dead Space Inserts
- Lubricant
- Instruction Sheet
- Material Safety Data Sheet
- Seat Support Rings

*Provided in 65, 65X, 68 and 68X series kits only

**WARNING:** Refer to drawing throughout assembly procedure.

**WARNING:** Residual materials may be left in valve and system.

1. Lock out valve by isolating from system and depressurize.
2. 2-way valves—Place and leave the valve in the open position and loosen the body studs/bolts. Remove the black stud/bolt and swing out the center body from between flanges.
3. 3-way valves—Place and leave the valve handle in line with either side port. Make sure bottom port is disconnected from system. Loosen and remove the body studs/bolts. Remove the center body from between flanges.
3. Remove the flange seals, seat subassemblies, and seat support rings. Set them aside for re-use.

**NOTE:** On 65, 65X, 68, and 68X series ball valves, discard the seat support rings.
3-way valves – Place and leave the valve handle in line with either side port.

12. Torque the body studs/bolts according to the TORQUE SEQUENCE illustration shown (Sequence is alphabetical). Torque the bolts/studs to the value listed in the “1st” column of the Torque Chart according to the appropriate Valve Series/Body Material and Fastener Type/Material. Repeat the sequence for the 2nd, 3rd, 4th and 5th torque.

<table>
<thead>
<tr>
<th>Valve Series / Body Material</th>
<th>Fastener Type / Material</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
</tr>
</thead>
<tbody>
<tr>
<td>62 Series Brass</td>
<td>Carbon Steel Bolts</td>
<td>5 (0.57)</td>
<td>10 (1.1)</td>
<td>20 (2.3)</td>
<td>30 (3.4)</td>
<td>30 (3.4)</td>
</tr>
<tr>
<td>62 Series Carbon on Stainless Steel</td>
<td>Carbon Steel Studs/Bolts</td>
<td>5 (0.57)</td>
<td>10 (1.1)</td>
<td>20 (2.3)</td>
<td>40 (4.5)</td>
<td>40 (4.5)</td>
</tr>
<tr>
<td>63 Series Stainless Steel</td>
<td>Stainless Steel Studs/Bolts</td>
<td>10 (1.1)</td>
<td>20 (2.3)</td>
<td>40 (4.5)</td>
<td>60 (6.8)</td>
<td>60 (6.8)</td>
</tr>
<tr>
<td>63 Series Carbon on Stainless Steel</td>
<td>Carbon Steel Studs/Bolts</td>
<td>10 (1.1)</td>
<td>20 (2.3)</td>
<td>40 (4.5)</td>
<td>100 (11.3)</td>
<td>100 (11.3)</td>
</tr>
<tr>
<td>63 Series Stainless Steel</td>
<td>Stainless Steel Studs/Bolts</td>
<td>10 (1.1)</td>
<td>20 (2.3)</td>
<td>40 (4.5)</td>
<td>60 (6.8)</td>
<td>60 (6.8)</td>
</tr>
<tr>
<td>65 Series Brass</td>
<td>Carbon Steel Bolts</td>
<td>25 (2.8)</td>
<td>50 (5.7)</td>
<td>100 (11.3)</td>
<td>160 (18.0)</td>
<td>160 (18.0)</td>
</tr>
<tr>
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<td>Carbon Steel Studs/Bolts</td>
<td>25 (2.8)</td>
<td>50 (5.7)</td>
<td>100 (11.3)</td>
<td>300 (33.9)</td>
<td>300 (33.9)</td>
</tr>
<tr>
<td>65 Series Stainless Steel</td>
<td>Stainless Steel Studs/Bolts</td>
<td>35 (4.0)</td>
<td>75 (8.5)</td>
<td>150 (17.0)</td>
<td>300 (33.9)</td>
<td>300 (33.9)</td>
</tr>
<tr>
<td>67 Series Carbon on Stainless Steel</td>
<td>Carbon Steel Studs/Bolts</td>
<td>35 (4.0)</td>
<td>75 (8.5)</td>
<td>150 (17.0)</td>
<td>400 (45.2)</td>
<td>400 (45.2)</td>
</tr>
<tr>
<td>67 Series Stainless Steel</td>
<td>Stainless Steel Studs/Bolts</td>
<td>40 (4.5)</td>
<td>80 (9.1)</td>
<td>160 (18.0)</td>
<td>320 (36.5)</td>
<td>320 (36.5)</td>
</tr>
<tr>
<td>68 Series Carbon on Stainless Steel</td>
<td>Carbon Steel Studs/Bolts</td>
<td>40 (4.5)</td>
<td>80 (9.1)</td>
<td>160 (18.0)</td>
<td>600 (67.8)</td>
<td>600 (67.8)</td>
</tr>
</tbody>
</table>

TORQUE CHART in-lbs & (N-m)

Note: 62 through 65 series torques are the same for studs or bolts.