VALVE SEAT REPLACEMENT

Standard Tef-Flow Seat

Standard Tef-Flow seats are white and can be cut for removal.

1. Place a piece of shim stock or feeler gauge behind seat ring to prevent scratching of stem surface.

2. Carefully cut through seat ring with utility knife.

3. Remove seat ring from stem.

4. To install new seat, place seat ring on standard S-Line ferrule equal size to valve (Figure 1) or on seat ring tool as shown in Figure 2 under Tef-Flow P seat.

5. Align stem on seat ring and apply pressure to snap seat into place.

6. Valve seat will spin freely when properly installed.

Figure 1 - Tef-Flow Seat
Tef-Flow P Seat

Tef-Flow P seats are gray and must be melted through for proper removal.

1. Melt through seat ring using clean plastic cutting tip on heavy duty soldering iron capable of maintaining 700°F (371°C) tip temperature.

**CAUTION:** DO NOT USE KNIFE TO CUT SEAT RING FROM STEM TO AVOID PERSONAL INJURY AND/OR DAMAGE TO STEM.

2. To install new seat, place installation tool base onto table or bench with 1.0” hole (Figure 2, item B).

3. Place stem through hole in base.

4. Place new seat ring (item C) onto stem with 30° seat angle and flat side facing away from base as shown.

5. Place seat ring tool (item A) over seat ring.

6. Using an arbor press, apply constant steady pressure to seat ring tool snapping seat ring into place.

**CAUTION:** DO NOT USE HAMMER TO INSTALL!

7. Valve seat will spin freely when properly installed.

<table>
<thead>
<tr>
<th>Tef-Flow™ P Tools</th>
<th>1”</th>
<th>1-1/2”</th>
<th>2”</th>
<th>2-1/2”</th>
<th>3”</th>
<th>4”</th>
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</thead>
<tbody>
<tr>
<td><strong>1. Base</strong></td>
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<td><strong>2. Seat Ring Tool</strong></td>
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Figure 2 - Tef-Flow P Seat
Tri Ring Seat

1. Remove Tri Ring seat by carefully cutting or using o-ring tool to pull seat out of groove. Do not scratch or nick metal seating surface.

2. Clean Tri Ring groove after removal of seat.

3. Lubricate new Tri Ring (Figure 3, item A) with diluted soap solution.

4. Place stem through 1 inch (25 mm) hole bored through a board secured by a vise.

5. Start Tri Ring as shown in Figure 3.

6. Using installation tool (Figure 3, item B), press Tri Ring into plug at locations A, B, C, and D (Figure 4). If tool is no used, **DO NOT** use knife or any other sharp item that will tear or cut Tri Ring.

7. To finish installation, press small sections of seal alternating from side to side (A-B-C-D) avoiding large loops of seal.

8. When properly installed, Tri Ring seat lip will protrude slightly from seat edge as shown in Figure 3.

![Figure 3 - Installing New Tri Ring Seat](image)

**Figure 3 - Installing New Tri Ring Seat**

![Figure 4 - Pressing Tri Ring into Plug](image)

**Figure 4 - Pressing Tri Ring into Plug**

Bonded Seat Stems
Bonded Seat Stems do not require maintenance. If seating surface becomes damaged, a new stem should be purchased.

Metal Seat Stems
Metal seat stems do not require maintenance. If seating surface becomes damaged, a new stem should be purchased. **DO NOT** attempt to re-lap or machine seating surfaces.
Radial Seal Installation

1. Lubricate o-ring seal and expand over stem groove.

2. Place assembly tool over stem and extrude o-ring seal into groove by evenly tightening cap screws on installation tool.


<table>
<thead>
<tr>
<th>SIZE</th>
<th>1-1/2&quot;</th>
<th>2&quot;</th>
<th>2-1/2&quot;</th>
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<td>120053</td>
<td>120055</td>
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