Pressure Balancing Shower & Tub/Shower Valve
46-2-BODY, 46-2X-BODY
Installation Brief

Model Numbers
46-2-BODY
Temptrol pressure balancing Shower & Tub/Shower valve body

46-2X-BODY
Temptrol pressure balancing Shower & Tub/Shower valve body with built-in service stops

Tools & Materials

<table>
<thead>
<tr>
<th>Trim Series</th>
<th>Pipe centerline to finished wall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford</td>
<td>2&quot; (51 mm) ± 1/4&quot; (± 6 mm)</td>
</tr>
<tr>
<td>Carrington</td>
<td>2&quot; (51 mm) ± 1/2&quot; (±13 mm)</td>
</tr>
<tr>
<td>Canterbury</td>
<td>2&quot; (51 mm) ± 1/2&quot; (±13 mm)</td>
</tr>
<tr>
<td>Temp Com</td>
<td>2&quot; (51 mm) ± 1/2&quot; (±13 mm)</td>
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</tbody>
</table>

Rough-in Installation
Installing control valve, piping & fittings
Reference rough-in dimension illustration on page 2 as required.

Important: Use alternate dimension figures when installing escutcheon trim listed in the table below.

1) Determine wall thickness
- Determine type of wall and wall thickness where valve will be mounted.
- Consider whether to use mounting plate by reviewing figure 2 below.
- Skip ahead to Step 3 if mounting plate will not be used.

2) Attach mounting plate to valve
Seat mounting plate against valve assembly as illustrated in figure 1.

3) Attach protective shield
- Reference figure 2 to determine whether shield is required.
- Attach plastic protective shield by snap fitting over end of valve spindle.

4) Install piping, fittings and control valve
Piping and fittings not supplied
- Control Valve
Install valve through cutout hole in wall as specified in figure 2 below and dimension illustration on page 2.
- Showerhead (S on valve)
Pipe from outlet port on valve marked S to showerhead mounting arm location.
- Hot & Cold Supply (H & C)
Pipe hot water supply to valve input marked H and cold water supply to valve input marked C.
- Tub Spout (T on valve)
Pipe from outlet port on valve marked T to tub spout. (46-2-BODY)

Walls for using T-177 valve mounting plate
- Fiberglass or acrylic walls (required)
- Plaster or other type walls (optional)
1/16" (2 mm) min • 1/2" (13 mm) max

Dry wall, plaster or other type wall
1/2" (13 mm) or greater finished wall

Reference rough-in dimensional drawing on page 2

Ensure valve’s mounting plate is flush against inner wall

Finished wall must be flush with back side of protective shield surface

Protective shield
"snap on-off"

P/n T-176 p/n T-177

Wall cutout hole size
3-1/2" (89 mm) min
4" (102 mm) max

Wall cutout hole size
3-1/2" (89 mm) min
4" (102 mm) max

Figure 1 Mounting plate
(valve without IPS ports shown)

Figure 2 Mounting valve (valve without IPS ports shown)
5) Remove protective shield
If attached in Step 3, then remove shield snap fitted over the end of valve spindle once valve is securely installed and wall finish work has been completed.

6) Adjust valve packing nut
Reference figure 3
- Turn hot & cold supplies on. Valve will not operate unless both hot and cold water supply pressures are on.
- Place handle over control spindle stem.

7) Flush system and check for leaks
- Turn valve to the warm position and run for a few minutes.
- If system is dirty, remove valve spindle in center of valve to ensure proper flushing. (See service instructions.)

8) Set Temp Limit stop screw
Reference figure 3
The limit stop screw limits valve handle from being turned to maximum position resulting in excessive hot water discharge temperatures.

Important! Do not substitute Tub Spout with restrictive fittings such as PEX, CPVC or outlet accessories such as a ledge spout, hose and spray that would subject the valve excessive internal back pressure, otherwise operation will be compromised.

Warning: Failure to adjust limit stop screw properly may result in serious scalding.

- Place handle on control spindle and open valve to maximum desired temperature.
- Turn limit stop screw clockwise until it seats.

Note: Do not install positive shut-off devices on control valve outlet or devices that do not allow the valve to flow at least 1.5 gpm.
### Temptrol Valve Replacement Parts and Optional Tools

<table>
<thead>
<tr>
<th>Symmons Part Number</th>
<th>Valve Body Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA-4</td>
<td>√</td>
<td>HOT &amp; COLD seat repair kit........(optional tool p/n T-35A/B)</td>
</tr>
<tr>
<td>TA-9</td>
<td>√</td>
<td>Control spindle washer repair kit</td>
</tr>
<tr>
<td>TA-10</td>
<td>√</td>
<td>Control spindle........(includes p/n TA-9 &amp; T-16 components)</td>
</tr>
<tr>
<td>T-12A</td>
<td>√</td>
<td>Cap assembly</td>
</tr>
<tr>
<td>T-16</td>
<td>√</td>
<td>Cap washer repair kit</td>
</tr>
<tr>
<td>T-35A/B</td>
<td>√</td>
<td>HOT seat removal tool, T-35A &amp; COLD seat removal tool, T-35B</td>
</tr>
<tr>
<td>T-52</td>
<td>√</td>
<td>Service stop spindle &amp; retainer</td>
</tr>
<tr>
<td>T-55C</td>
<td>√</td>
<td>Service stop spindle, retainer &amp; removal tool</td>
</tr>
<tr>
<td>T-108</td>
<td>√</td>
<td>Reverse seat &amp; tool kit (valve HOT &amp; COLD supply inputs are reversed)</td>
</tr>
</tbody>
</table>
## Trouble Shooting Chart

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve will not pass water.</td>
<td>Both hot and cold water supplies are not turned on.</td>
<td>Turn on both supplies. Valve will not operate unless both hot and cold water pressure is on.</td>
</tr>
<tr>
<td>Valve leaks when shut off.</td>
<td>Hot and cold washers are worn or foreign matter (dirt, chips) is lodged between washers and seat surfaces.</td>
<td>1) Replace washers using control spindle washer repair kit, p/n TA-9. 2) Replace hot &amp; cold seats using hot/cold seat repair kit, p/n T-4.</td>
</tr>
<tr>
<td>Temperature control handle is turned from cold to hot (or hot back to cold) and volume from spout or head is not constant.</td>
<td>Pressure-balancing piston housed in spindle assembly is restricted from free movement by foreign matter.</td>
<td>1) Open valve halfway, remove handle and tap spindle with plastic hammer. 2) Check water pressure balancing piston in control spindle. See service instructions. 3) Replace control spindle, p/n TA-10.</td>
</tr>
<tr>
<td>Valve delivers sufficient quantity of cold, but little hot, or the reverse.</td>
<td>Same as above</td>
<td>Same as above</td>
</tr>
<tr>
<td>Temperature varies without moving handle.</td>
<td>Same as above</td>
<td>Same as above</td>
</tr>
<tr>
<td>Valve delivery temperature reduces gradually during use; handle must be turned to hotter positions to maintain constant temperature.</td>
<td>Overdraw on hot water supply (i.e. running out of hot water).</td>
<td>Reduce maximum flow by using volume control adjustment on valve or showerhead. This will allow longer period of use before overdrawing hot water supply.</td>
</tr>
<tr>
<td>Valve delivers hot water when initially opened. Water turns colder as handle is rotated in a counter-clockwise direction toward the hot position.</td>
<td>Valve is piped incorrectly (i.e. the hot supply is piped to the valve's cold inlet and the cold supply is piped to the hot inlet.)</td>
<td>If piping is accessible, correct connections to the valve. If piping is not accessible, order a reverse seat and tool kit, p/n T-108. Older installations may also require replacing the hot seat, hot/cold seat repair kit, p/n TA-4.</td>
</tr>
</tbody>
</table>

## Service Instructions

### Removing control spindle assembly
*(Ref. parts assembly figure)*
- Shut off water supply to valve and remove control valve handle and dome cover.
- Remove escutcheon plate by first removing escutcheon screws.
- Turn valve's control spindle to half way position between minimum and maximum rotation.

**Important:** Failure to do this can damage control spindle assembly.

- Unscrew both spindle cap and control spindle assembly.

### Hot/Cold seat repair kit
*Order p/n TA-4, T-35A and T-35B.*
Installation requires both hot & cold removal tools, p/n T-35A & T-35B.
- Remove control spindle assembly.
- Remove both seats with removal tools.

### Control spindle washer repair kit
*Order p/n TA-9.*
- Remove control spindle assembly.
- Remove cold washer by holding spindle using valve handle and unscrew cold washer retainer using channel lock pliers.
- Remove hot washer by removing hot washer screw.

### Checking water pressure balancing piston
The perforated end of the control spindle assembly houses the water pressure-balancing piston which is the heart of the valve.
- Remove control spindle assembly.
- Shake spindle assembly and listen for clicking noise. Piston should be free to slide back and forth the full length of its travel.

### Control spindle washer repair kit
- If piston appears restricted then do the following:
  1) Tap the handle or stem end of the spindle against a solid object to free the piston.
  2) Try soaking in household vinegar and repeat step (1).
- If unable to free piston, replace control spindle, p/n TA-10.

### Important:
Do not attempt removal of the piston.

### Valve re-assembly
Reassemble by reversing above procedures.
After the control spindle assembly (TA-10) is threaded back into the spindle cap assembly (T-12A) ensure control spindle is rotated 1/2 turn clockwise from its maximum counter clockwise rotational position. Failure to do this will damage assembly.

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For California Residents

**WARNING:** This product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

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