

Tub-Shower System S-4402

Installation Brief



Model Number

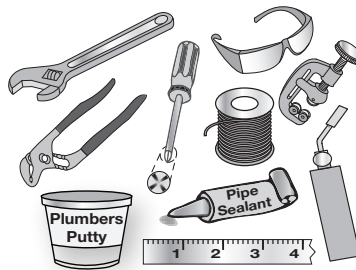
S-4402 Tub-Shower System

Decorative Finish Code

append to part numbers if applicable

- STN Satin Nickel
- Chrome (standard)

Tools & Materials



Need Help?

Contact Symmons customer service at (800) 796-6667, (781) 848-2250, customerservice@symmons.com
Mon - Fri 7:30 am - 7:00 pm EST

Please check Symmons website for technical help, the latest product information and warranty policy.
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Rough-in Installation

Control valve, piping & fittings

Reference rough-in dimension illustration on page 2 as required.

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.

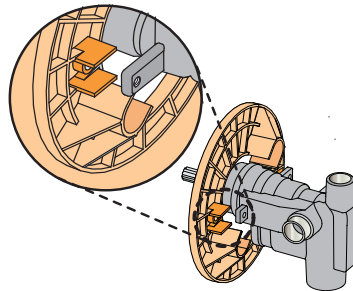


Figure 1 Mounting plate

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.

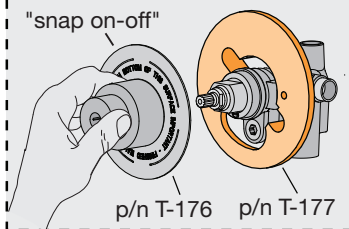
Walls for using T-177 mounting plate

- Fiberglass or acrylic walls (required)
 - Plaster or other type walls (optional)
- 1/16" (2 mm) min ▪ 1/2" (13 mm) max

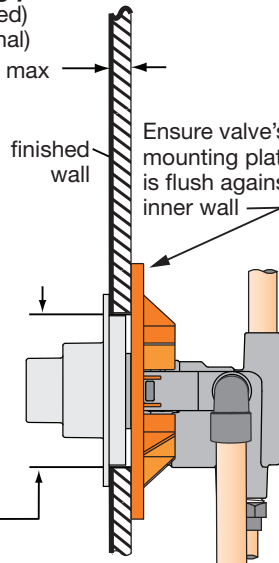
Protective shield

When mounting plate is used, then shield is optional for protecting end of valve during installation.

"snap on-off"



wall cutout hole size
3-1/2" (95 mm) min
4" (101 mm) max



Dry wall, plaster or other type wall

1/2" (13 mm) or greater
finished wall

2" ± 1/2"
(51 mm ± 13 mm)
pipe centerline
to finished wall

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

Protective shield
"snap on-off"
(required when
mounting plate
is not used)

wall cutout hole size
3-1/2" (89 mm) min
4" (101 mm) max

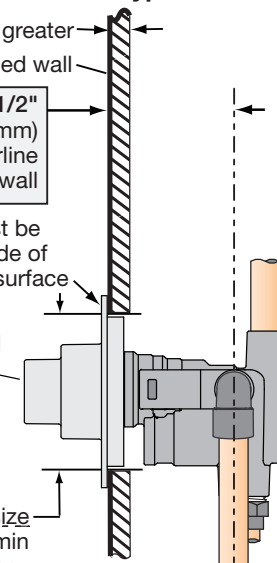


Figure 2 Mounting valve



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.

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*.

- Adjust *packing nut* for positive frictional resistance as handle is rotated from shutoff position across adjustment range.

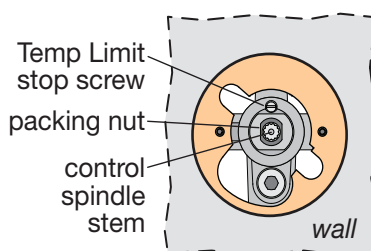


Figure 3 Valve adjustments

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.)

- Check for leaks around valve assembly and all pipe fittings.

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.

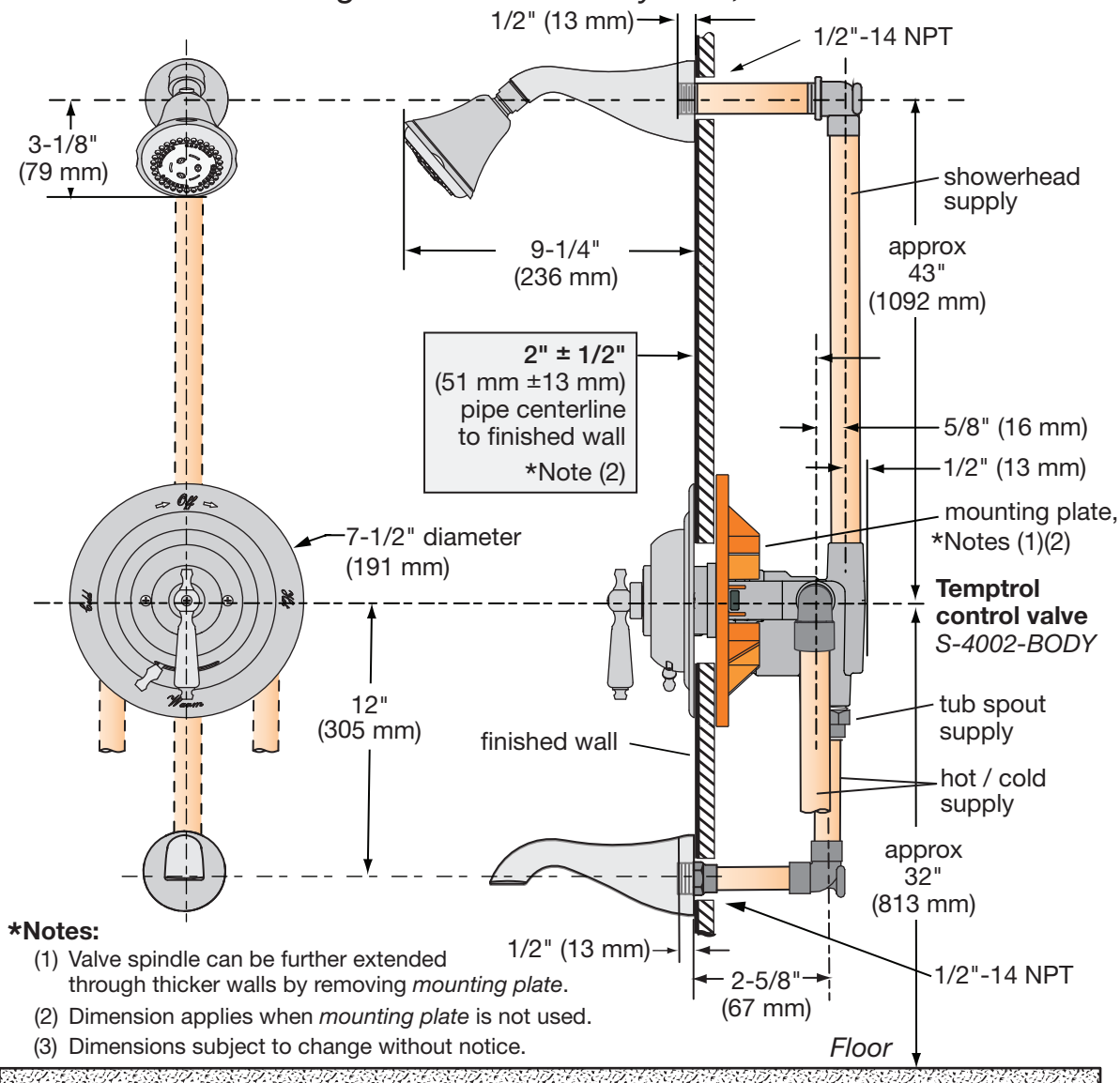


Warning: Failure to adjust *limit stop screw* properly may result in serious scalding.

- 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.

Dimensions Carrington Tub-Shower System, S-4402



Trouble Shooting Chart

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

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.

- Replace both seats even if only one appears worn.
- Install and tighten both seats to 15 foot pounds of torque.

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.

- If piston appears restricted then do the following:

- Tap the handle or stem end of the spindle against a solid object to free the piston.
- 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.