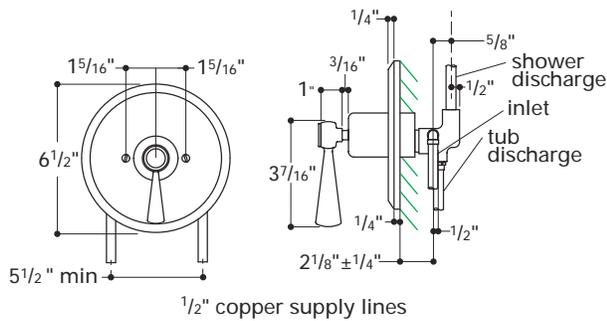


**BNSV90**(Beacon trim) +**GUSV8IR**(rough)

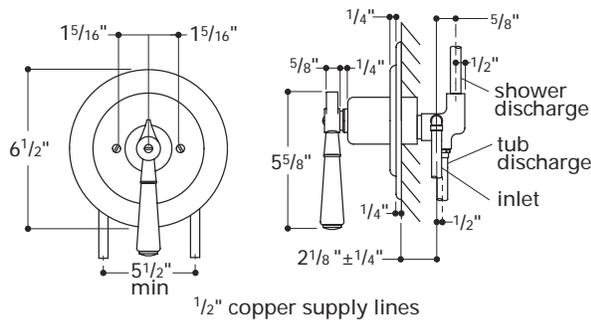


**ROUGH-IN**

This valve can be used as either a combination tub/shower or as a shower valve only. It has a built-in choke for use with a diverter tub spout. If used as a shower valve only, cap the bottom outlet.

- Check incoming water pressure; ideal operating pressure is 40 - 50 psi., maximum static pressure is 125 psi., minimum static pressure is 25 psi.
- Install hot on left and cold on right according to valve markings.
- **IMPORTANT:** Valve rough-in is  $2\frac{1}{8}" \pm \frac{1}{4}"$  from centerline of supplies to face of finish wall. Install so that the line indicated on rough-in plaster shield on valve is flush with finish wall as shown in figure 1 (lower left).
- **NOTE:**  $\frac{1}{2}"$  copper supplies must be a minimum of  $5\frac{1}{2}"$  on center.
- Pressurize and examine for leaks.

**WWSV96** (Round trim with porcelain handle & **GUSV8IR** (rough)  
**WWSV97** (Round trim with metal lever handle & **GUSV8IR** (rough)

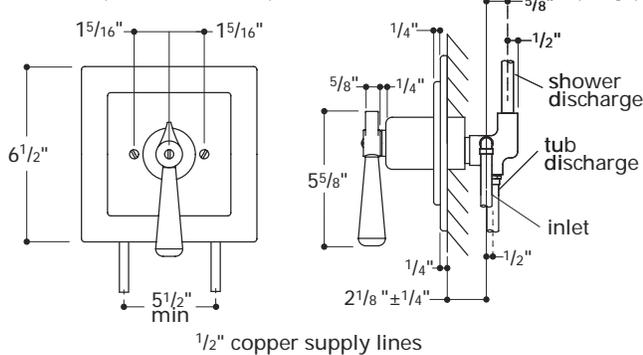


**FINISH**

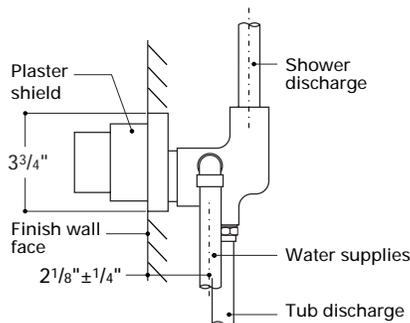
Please refer to the specification diagram on the left and back side of this page.

- Use only a protected, smooth-jawed, or strap wrench on any finished surface.
- When tile wall is finished, remove (pull off; do not turn) ENTIRE protective rough-in plaster shield (T-26) and discard.
- **TURN ON** hot and cold supplies: valve will not operate unless BOTH are turned on.
- Unscrew dome cover (T-19/20) and discard. Tighten packing nut (T-17) for positive frictional resistance to handle. Check valves cap, packing nut, and all valve, pipe and fitting connections for leaks. Set limit stop screw as directed below.
- **IMPORTANT:** This valve is equipped with a limit stop screw to limit the valve handle from being turned to excessively hot water discharge temperatures. To adjust, remove dome cover, open valve to maximum desired temperature, and turn in limit stop screw clockwise until it seats. Failure to adjust limit stop properly may result in serious scalding.
- Screw dome cover into place over valve spindle until fully seated.
- Slide face plate over dome cover and attach with screws provided. Slide the spindle cap over the valve spindle and attach handle with screw provided. **NOTE:** The BNSV94 handle screw is concealed behind the metal index. To access this screw turn the index in a counter-clockwise motion to remove.
- Prior to installing shower head/spout, allow valve to run in warm position for a few minutes to totally flush system. If system is quite dirty, remove valve spindle to ensure proper flushing.
- If further assistance is required, please contact Product Support at: 1-800-927-2120 (8am-7pm EST).

**WWSV94** (Square trim with metal lever handle & **GUSV8IR** (rough)  
**WWSV95** (Round trim with porcelain handle & **GUSV8IR** (rough)



**Figure 1**



**OPERATION OF VALVE:**

- The main handle of the valve is for control of temperature only, not volume. From the OFF position, the handle is turned counterclockwise through a minimum cold position, through a warm and hot position for a maximum turn of approximately one revolution. This allows for infinite temperature adjustments to suit the requirements of any user.
- **WARNING: FAILURE TO ADJUST THE LIMIT STOP SCREW PROPERLY MAY RESULT IN SERIOUS SCALDING.**
- If further assistance is required, please contact Product Support at 1-800-927-2120 (8am-7pm EST).

These guidelines have been prepared for the professional contractor to aid in the installation of:  
**PRESSURE BALANCE SHOWER & TUB/SHOWER SYSTEMS**  
**(BNSV90+GUSV8IR)(WWSV96+GUSV8IR)(WWSV94+GUSV8IR)**

9.14.07

All dimensions are based on original specifications and are subject to change and variation. Please consult your Design Associate for current specifications.

W A T E R W O R K S<sup>®</sup>

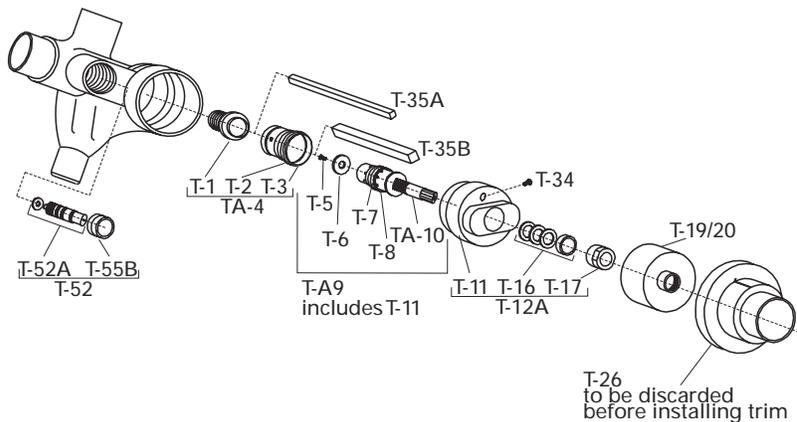
## TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
Valve will not flow water.	Hot and cold water not turned on.	Turn on both supplies. Valve will not operate unless both hot and cold water pressure is turned on.
Valve leaks when shut off.	Hot and cold washers are worn, or there is foreign matter between washers and seat surfaces.	Replace hot and cold washers; inspect top surface on hot and cold seals; replace if necessary.
Temperature control handle is turned from cold to hot (or hot to cold), and volume from spout/head is not constant.	Pressure balancing piston housed in spindle assembly is blocked from free movement by foreign matter.	With valve open halfway, remove handle and tap spindle with plastic hammer. If problem is not solved, remove spindle assembly completely and tap handle end against solid object to free piston. Soaking in household vinegar will also help free foreign matter.
Valve delivers sufficient quantity of cold, but little hot (or the reverse of this).	Same as above.	Same as above.
Temperature varies without moving the handle.	Same as above.	Same as above.
Valve delivery temperatures reduces gradually during use; handle must be turned to a hotter position to maintain constant temperature.	Overdraw on hot water supply; i.e. running out of hot water.	Check hot water source.

### PARTS FOR GUSV80R:

Individual part numbers

- T-1 Hot renewable seat
- T-2 Cold seat O-ring
- T-3 Cold renewable seat
- T-5 Hot washer screw
- T-6 Hot washer
- T-7 Cold washer retainer
- T-8 Cold washer
- TA-10 Flow control spindle
- T-11 Cap gasket
- T-12A Cap assembly
- T-16 Packing, O-ring and washer
- T-17 Packing nut
- T-19/20 Dome cover and lock nut
- T-26 Plaster shield
- T-34 Limit stop with O-ring
- T-35A Hot seat removal tool
- T-35B Cold seat removal tool
- T-52A Stop spindle assembly/  
escutcheon screw retainer
- T-55B Stop plaster shield
- T-55C Stop plaster shield removal tool



Composite part numbers

- T-52 Stop spindle assembly/  
escutcheon screw retainer (T-52A):  
Stop plaster shield (T-55B)
- TA-4 Hot seat (T-1); Cold seat (T-3);  
Cold seat O-ring (T-2)
- TA-9 Hot washer screw (T-5);  
Hot washer (T-6);  
Cold washer retainer (T-7);  
Cold washer (T-8);  
Cap gasket (T-11)
- TA-10 Spindle assembly

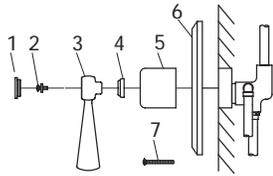
These guidelines have been prepared for the professional contractor to aid in the installation of:

**PRESSURE BALANCE SHOWER & TUB/SHOWER SYSTEMS  
(BNSV90+GUSV81R)(WWSV96+GUSV81R)(WWSV94+GUSV81R)**

All dimensions are based on original specifications and are subject to change and variation. Please consult your Design Associate for current specifications.

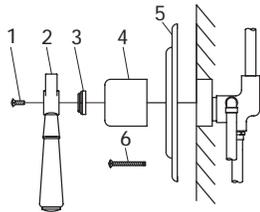
W A T E R W O R K S<sup>®</sup>

**BNSV90**(Beacon trim)



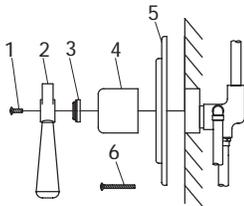
- (Index) 1.  X1
- (Handle screw) 2.  X1
- (Handle) 3.  X1
- (Spindle cap) 4.  X1
- (Dome cover) 5.  X1
- (Faceplate) 6.  X1
- (Faceplate screw) 7.  X2

**WWSV96**(Round trim)



- (Handle screw) 1.  X1
- (Handle) 2.  X1
- (Spindle cap) 3.  X1
- (Dome cover) 4.  X1
- (Faceplate) 5.  X1
- (Faceplate screw) 6.  X2

**WWSV94**(Square trim)



- (Handle screw) 1.  X1
- (Handle) 2.  X1
- (Spindle cap) 3.  X1
- (Dome cover) 4.  X1
- (Faceplate) 5.  X1
- (Faceplate screw) 6.  X2