

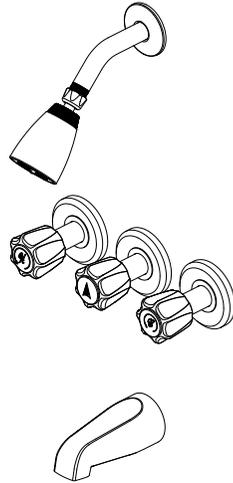


Design House is a registered brand of DHI Corp.

Mequon, WI 53092  
1-800-558-8700

## MILLBRIDGE THREE HANDLE TUB AND SHOWER FAUCET

Model 545913



Your new Design House faucet will give you years of trouble free performance. Thank you for choosing our product for your home. **Please read all of these instructions carefully before installing your new faucet.**

### Helpful tools to install this faucet:

- basin wrench
- Teflon tape
- (2) crescent wrenches
- silicon sealer
- flashlight
- faucet supply tubes

### IMPORTANT POINTS

- When installing your new faucet, hand tighten the connector nuts, then use one wrench to anchor the fitting and a second wrench to tighten the nut one additional turn. Connections that are too tight will reduce the integrity of the system.
- Wrap threaded connections (except aerator thread in spout or where o-ring or rubber sealant are present) with Teflon tape available from your local hardware or plumbing supply store. Always wrap in a clockwise direction.

### SAFETY TIPS

- **ALWAYS** protect your eyes with safety glasses.

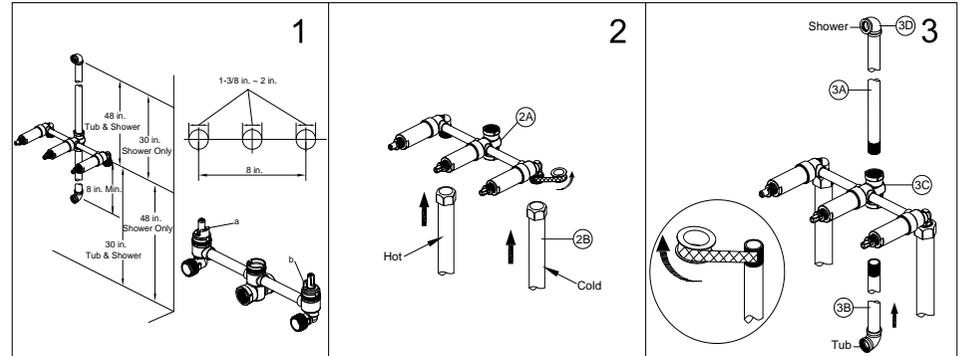
## INSTALLATION PROCEDURE

1. Shut off the water supply to the tub and shower. Verify that the hole sizes and position in the wall are correct:

A. The shower and tub spout outlet holes should be 1-1/4 in. diameter.  
B. For the cold water inlet (the right side) and the hot water inlet (the left side), cut or leave a 1-3/8 in. diameter hole (recommended size is 1-3/4 in.). The center to center distance between the cold and hot water inlets is 8 in. Note: Do not disassemble the cartridges during normal installation. When reinstalling the cartridge, be sure to insert with the limit stop (a & b) pointed inward as shown in the diagram. This is necessary for proper operation of the valve.

2. SUPPLY CONNECTION LAYOUT  
Wrap thread sealant tape around the valve body (2A) threads in a clockwise direction, as shown. Thread the waterline (2B, not included) to the valve body (2A), and tighten with a wrench.  
Note: a. Be sure to position the body (2A) correctly in the wall, with the markings "UP" facing upward.  
b. Hot water supply lines go into the H inlet, cold water supply lines go into the C inlet.

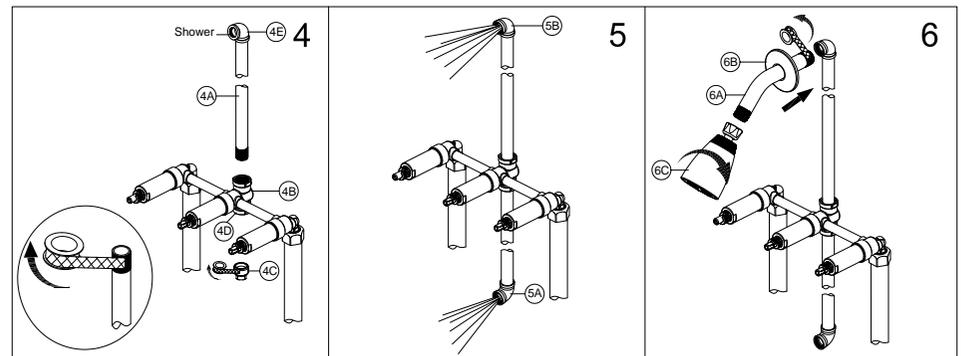
3. TUB & SHOWER OUTLET CONNECTIONS  
Wrap thread sealant tape around the pipe threads in a clockwise direction, as shown. Connect the shower (3A, not included) and tub outlet pipes (3B, not included) to the valve body (3C). Connect the pipe elbows (3D, not included) to the ends of both pipes, and tighten with a wrench.  
Note: Do not use PEX or CPVC between the valve and spout.



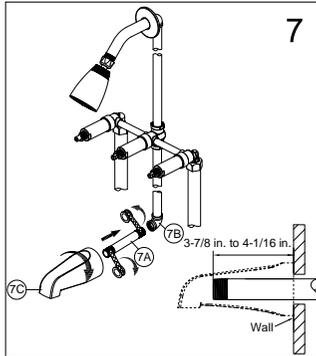
4. SHOWER ONLY OUTLET CONNECTIONS  
Wrap thread sealant tape around the pipe threads in a clockwise direction, as shown. Connect the shower outlet pipe (4A, not included) to valve body (4B). Wrap thread sealant tape around the threads of the plug (4C), and insert it into the bottom outlet (4D). Connect the pipe elbows (4E, not included) to the end of the pipe, and tighten with a wrench.

5. FLUSHING  
For tub and shower combinations:  
Turn on the hot and cold water supply lines, allowing water to flow from the tub spout outlet (5A, not included) until all debris is cleared from the line. Check all connections for leaks.  
For shower only combinations:  
Turn on the hot and cold water supply lines, allowing water to flow from the shower outlet (5B, not included) until all debris is cleared from the line. Pressure must be approximately equal on both hot and cold sides for the valve to function properly. Check all connections for leaks.

6. SHOWER FLANGE, SHOWER ARM AND SHOWER HEAD INSTALLATION  
Insert the long end of the shower arm (6A) through the flange (6B), then wrap thread sealant tape around the long end of the shower arm (6A) in a clockwise direction, as shown. Install the long end of the shower arm (6A) into the pipe elbow inside the wall. The flange (6B) should fit snug to the finished wall surface. Thread the shower head (6C) onto the shower arm (6A). Carefully tighten the shower arm (6A) and shower head (6C). Do not over tighten, as it could cause damage to the shower arm (6A).



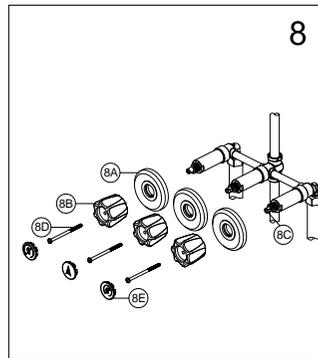
## INSTALLATION PROCEDURE



**7. FOR TUB SPOUT INSTALLATION**  
Wrap thread sealant tape around the pipe threads of the tub spout outlet (7A, not included) in a clockwise direction, as shown. Connect the tub spout outlet pipe (the tub spout outlet pipe should project 3-7/8 in. to 4-1/16 in. from the finished wall) to the lower pipe elbow (7B, not included). Tighten the elbows and tub spout outlet pipe connections with the strap wrench. Thread the spout (7C) onto the tub spout outlet pipe in a clockwise direction until the spout (7C) becomes flush with the finished wall. Tighten the spout (7C).

### 8. HANDLE INSTALLATION

Before proceeding, ensure the valves are closed. Position the flanges (8A) on the valve. Attach the handles (8B) onto the stems (8C), and secure them with the screws (8D). Use a phillips screwdriver to tighten the screws (8D). Attach the indexes (8E).



## TROUBLE SHOOTING

### o 545913 - Polished Chrome

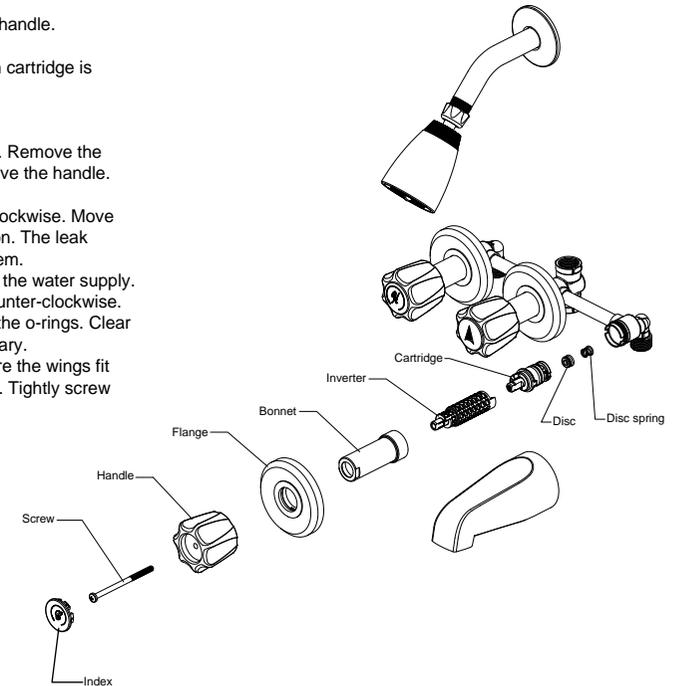
**Problem:** Faucet leaks from under handle.

**Cause:** Bonnet is loose or o-ring on cartridge is dirty or twisted.

**Action:**

1. Move the handle to OFF position. Remove the index, unscrew the screw and remove the handle. Then remove the flange.
2. Tighten the bonnet by turning it clockwise. Move the cartridge stem to the ON position. The leak should stop around the cartridge stem.
3. If the leak does not stop, shut off the water supply. Remove the bonnet by turning it counter-clockwise. Lift out the cartridge valve. Inspect the o-rings. Clear debris, untwist, or replace if necessary.
4. Replace the cartridge making sure the wings fit well into the cuts in the faucet body. Tightly screw the bonnet onto the faucet body.
5. Reinstall the handle.

**Many of these parts come preassembled. This exploded diagram is to assist in trouble shooting.**



## MAINTENANCE

Your new Design House faucet is designed to give you years of trouble free performance. Avoid abrasive cleaners, steel wool and harsh chemicals that will dull the finish and void your warranty.

Brass finishes are polished, then protected with a lacquer coating to help prevent tarnishing. Clean these surfaces only with a damp, soft cloth.

Keep it looking like new by cleaning it periodically with a mild solution of soapy water. Rinse thoroughly and then dry with a soft cloth.

### CONSUMER PROTECTION WARNING

Under the Safe Drinking Water Act, the U.S. Environmental Protection Agency restricts the amount of lead used in brass and solder. Your new faucet is made in strict compliance with all government standards. The materials used in the manufacture of this faucet are of industry standard quality and are similar to other plumbing products having brass fittings.

To reduce the amount of lead in your drinking water, allow the water to run for a moment before filling your glass and remember to always use cold water for drinking purposes.