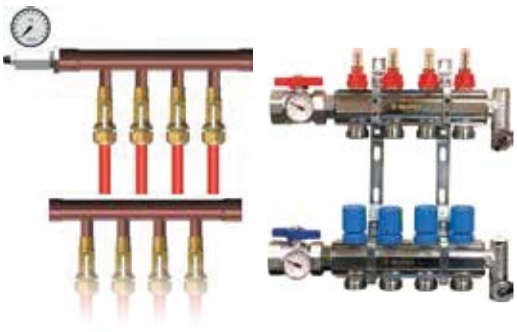
PRESSURE TESTING THE LOOPS

TEMPORARY MANIFOLD FOR PRESSURE TESTING

Temporary manifolds can be quite simple since the only requirement you have is to connect the loops for pressure testing. A simple copper plumbing manifold will do fine. As mentioned in previous section, it is a good idea to have the manifold already prepared and ready for mounting prior to arriving at the jobsite. This includes mounting the pressure test kit on the manifold. Make sure to mount the temporary manifold slightly higher than the finish manifold to make sure that you have enough length of the tubing left after you remove the test manifold. For the finish manifold, the lower manifold ports should be at least 18"–24" off the floor to make sure that you have enough tubing to work with. Mount the temporary manifold about 6" higher. Use appropriate tools and fasteners to secure the manifold before starting the tubing installation.



PRESSURE TESTING THE LOOPS AND MANIFOLD

Pressure testing of a completed piping system is typically required by local code regulations and the piping manufacturer to ensure pressure⊠tightness. In new construction, it is often difficult to test systems using pressurized water because of freezing conditions, insufficient water supply, or insufficient water pressure. It is the recommendation of MrPEX Systems that the system be allowed to be pressure tested with compressed air or inert gas in accordance with local codes. Once all loops have been installed and connected to the manifold, it is time to pressure test the tubing and manifold.

› Connect a pressure test kit with a 0–100 psi gauge and an air valve to the manifold. › prior to filling the system, make sure to open the manifold supply and return valves.

› Pressure test any portion of the system that will be embedded in the floors, walls or ceilings of the building to 40–60 psi or 1.5 times the operating pressure, whichever is greater, for at least 30 minutes or for a sufficient period of time to determine if any leaks exist in the system, and as consistent with local and mechanical codes. Reduce pressure to 30 psi prior to embedding the tubing. A 30–40 psi pressure test should remain during phases of construction to monitor system integrity.

NOTE: If tubing is to be left under pressure for a longer period, make sure to reduce the pressure to 30 psi. NOTE: Consult local mechanical code for specific requirement in your area.

WARNING:

Hydro testing with plain water is not recommended in geographical areas where the temperature could dip below freezing. Even if the system is "Blown out", it is very difficult to get all the water out of the system. Remaining water after blowing the system out, will collect in low areas and will be subject to potential freezing that could cause damage to pipe and surrounding structure. Compressed air or inert gas (e.g. nitrogen) used for pressure testing has a high potential (stored) energy. Any uncontrolled release of that energy can present serious safety hazards. PEX is a flexible piping material. Therefore, a failure or separation of the piping may cause unrestrained piping to whip about as the energy of the suddenly decompressing air or gas escapes. PEX piping must be properly restrained to prevent or limit whipping in these cases. All fastening and securing requirements of the PEX manufacturer must be followed. Any incomplete or unrestrained fitting could become a projectile during pressure testing. Therefore, all fittings must be installed correctly and all pipes must be secured properly according to the installation instructions prior to pressure testing the system. Appropriate safety practices must be followed.

FINISH MANIFOLD

The finish manifold consists of a supply and a return header. The supply body is equipped with a balancing valve and flowmeter, and the return body is equipped with an on/off valve. A plastic knob comes standard on the on/off valve for manual control and can be removed to accommodate a valve actuator for electronic zone control. If you are using the finish manifold on the jobsite for pressure testing, take appropriate measures to protect the manifold from jobsite damage, dust, and/or paint etc. Make sure installation looks professional and neat. It is a good idea to have the manifold already prepared and ready for mounting prior to arriving at the jobsite. This includes mounting the pressure test kit on the manifold. For the finish manifold, the lower manifold ports should be at least 12"–18" off the floor to make sure that you have enough tubing to work with. Use appropriate tools and fasteners to secure the manifold before starting the tubing installation.

Finish manifolds should be equipped with a fully sealing ball valve on the supply and return to allow servicing the manifold and tube without interrupting the pressure in the rest of the system.