

RECOMMENDATION F

Testing PEX Pipe and Tubing Systems with Air

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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 the PPI that PEX pipe and tubing systems be permitted to be tested with compressed air or inert gas, provided that the manufacturer's instructions are followed and that all testing is performed in accordance with the local code regulations.

When an air pressure test is performed on-site to check for pressure-tightness, the test pressure and temperature for PEX systems shall be in accordance with the manufacturer's instructions and local code requirements. For systems that incorporate plastic fittings, valves or manifolds, air testing shall be in accordance with each component manufacturer's instructions. If the manufacturer of any component does not recommend air pressure testing at the required pressure, then that item must be isolated or removed from the system prior to an air pressure test.

WARNING: Compressed air or inert gas (e.g. nitrogen) used for pressure testing has high potential (stored) energy. Any uncontrolled release of that energy can present serious safety hazards.

PEX is a flexible material. Therefore, a failure or separation of the piping may cause unrestrained piping to whip or lash 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 manufacturers' installation instructions prior to pressure testing the system. Appropriate safety practices must be followed.

PPI advocates strictly following the pipe and tubing manufacturer's written instructions for pressure testing with air.