

Marginal Markings

- Solid vertical lines indicate technical changes from 2012 IBC.
- - - Dashed vertical lines indicate technical changes in Seattle amendments.
- ➔ Solid deletion arrow indicates IBC text has been deleted.
- ⇨ Hollow arrow indicates Seattle amendments have been deleted.

Text Markings

- Underlining indicates Seattle amendments. ADULT FAMILY HOME.
- Italics indicate a defined term. *A dwelling* licensed.
- Strikethrough indicates Seattle deletions. (~~ADULT FAMILY HOME~~)
- A bracketed and underlined W indicates Washington state amendments. [W]

CHAPTER 21 HYDRONIC PIPING

Note: this chapter includes only those sections of the 2015 International Residential Code for which amendments are proposed.

SECTION M2101 HYDRONIC PIPING SYSTEMS INSTALLATION

M2101.3 Protection of potable water. The potable water system shall be protected from backflow in accordance with the provisions listed in Section ((P2902)) 603 of the *Uniform Plumbing Code*.

~~[W](M2101.7 Prohibited tee applications. Fluid in the supply side of a hydronic system shall not enter a tee fitting through the branch opening.)~~

SECTION M2103 FLOOR HEATING SYSTEMS

M2103.3 Piping joints. Copper and copper alloy systems shall be soldered in accordance with ASTM B 828. Fluxes for soldering shall be in accordance with ASTM B 813. Brazing fluxes shall be in accordance with AWS A5.31. Piping joints that are embedded shall be installed in accordance with the following requirements:

1. Steel pipe joints shall be welded.
2. Copper tubing shall be joined by brazing complying with Section ((P3003.6.4)) 605.3.1 of the *Uniform Plumbing Code*.
3. Polybutylene pipe and tubing joints shall be installed with socket-type heat-fused polybutylene fittings.
4. CPVC tubing shall be joined using solvent cement joints.
5. Polypropylene pipe and tubing joints shall be installed with socket-type heat-fused polypropylene fittings.
6. Cross-linked polyethylene (PEX) tubing shall be joined using cold expansion, insert or compression fittings.
7. Raised temperature polyethylene (PE-RT) tubing shall be joined using insert or compression fittings.

SECTION M2105 GROUND-SOURCE HEAT-PUMP SYSTEM LOOP PIPING

M2105.9 CPVC plastic pipe. Joints between CPVC plastic pipe or fittings shall be solvent-cemented in accordance with Section ((P2906.9.1.2)) 605.2.2 of the *Uniform Plumbing Code*. Threaded joints between fittings and CPVC plastic pipe shall be in accordance with Section M2105.9.1.

M2105.14 PVC plastic pipe. Joints between PVC plastic pipe or fittings shall be solvent-cemented in accordance with Section ((P2906.9.1.4)) 605.12.2 of the *Uniform Plumbing Code*. Threaded joints between fittings and PVC plastic pipe shall be in accordance with Section M2105.9.1.

M2105.18 Protection of potable water. Where ground-source heat-pump ground-loop systems have a connection to a potable water supply, the potable water system shall be protected from backflow in accordance with Section ((P2902)) 603 of the *Uniform Plumbing Code*.

M2105.19 Pipe penetrations. Openings for pipe penetrations in walls, floors and ceilings shall be larger than the penetrating pipe. Openings through concrete or masonry building elements shall be sleeved. The annular space surrounding pipe penetrations shall be protected in accordance with Section ((P2606.4)) Section 312 of the *Uniform Plumbing Code*.