

Installation Standard For HUBLESS CAST IRON SANITARY AND RAINWATER SYSTEMS

IAPMO IS 6-2006

1.0 SCOPE

- 1.1** This installation standard is for use with listed systems of hubless cast iron pipe and fittings, utilizing listed couplings.
- 1.2** This standard shall serve to supplement any existing applicable standards and requirements of appropriate codes and laws regulating use of hubless cast iron pipe and fittings in building sewer, drainage, waste, vent, and rainwater systems, and to provide the necessary requirements for installation, use and inspection of piping and fittings for this purpose. This system may be used in any location where cast iron pipe is acceptable under the Uniform Plumbing Code.
- 1.3** The provisions of this standard are not intended to prevent the use of any alternate material or method of construction, provided it meets the requirements of the standard.

Note: The following sections of the Uniform Plumbing Code apply to this standard:

101.4.1.1	Repair and Alterations
301.1	Minimum Standards (Material)
310.0	Workmanship
311.0	Prohibited Fittings and Practices
313.0	Protection of Piping, Materials, and Structures
314.0	Hangers and Supports
316.4	Prohibited Joints and Connections
317.0	Increases and Reducers
Table 3-1	Hanger Rod Sizes
Table 3-2	Hanger and Support Spacing
701.0	Materials (Drainage)
704.4	Closet Flanges
705.1	Type of Joints
705.3.2	Expansion Joints
707.14	Blind Plugs
712.2 and 712.3	Water and Air Testing
Table 7-3	Drainage Fixture Unit Values (DFU)

Table 7-5	Maximum Unit Loading and Maximum Length
903.0	Materials (Venting)
1003.0	Traps Described
Chapter 11	Storm Drainage
1101.3	Materials Uses
1101.11	Roof Drainage
Table 14-1	Plumbing Material Standards

2.0

PRODUCT REQUIREMENTS

2.1

Minimum Standards

Hubless pipe, fittings, and couplings shall be manufactured in strict compliance with appropriate standards acceptable to IAPMO. [UPC 301.1]

2.2

Markings

All hubless system components shall be clearly marked with the following:

- (a) Manufacturer's name or manufacturer's registered trademark; the markings shall be adequate to readily identify the maker or manufacturer to the end user of the product;
- (b) Products listed by IAPMO that are covered by this standard shall be labeled with the designated IAPMO certification mark;
- (c) Country of origin; and
- (d) Any other markings required by law.

2.2.2

Pipe shall be legibly and continuously marked along the full length of the barrel. [UPC 301.1.2]

2.2.3

Markings on fittings shall be cast raised letters and not be located in the W dimension as found in the product standard. With the exception of the fittings with notations in the standards allowing for optional positioning lugs fittings have a raised lug. When properly positioned, the gasket in other than wider body couplings will rest against but will not cover the lug.

- Gaskets for wider body couplings will cover the lug. [UPC 301.1.2]
- 2.3** All installations shall be made so that the components can be readily identified. When laying hubless pipe in a ditch, the identification shall be on the top side of the pipe. When in walls, the identification shall be on a side readily visible to the inspector.
- 2.4 Workmanship**
All piping systems shall be installed and supported in a workmanlike manner. [UPC 310.0]
- 2.5 Hangers and Supports**
Support and stability of all components of a hubless cast iron sanitary and rainwater system shall be given prime consideration. [UPC 314.0]
- 2.5.1** Vertical hubless systems shall be supported per Table 3-2 of the Uniform Plumbing Code.
- 2.5.2** Horizontal hubless systems shall be supported per Table 3-2 of the Uniform Plumbing Code. Supports shall be adequate to maintain alignment and prevent sagging and shall be placed within eighteen (18) inches (457 mm) of the joint.
- 2.5.3** Joints shall be supported at least at every other joint except that when the developed length between supports exceeds four (4) feet (1219 mm) they shall be provided at each joint. Supports shall also be provided at each horizontal branch connection. Such support shall be placed immediately adjacent to the coupling.
- 2.5.4** Suspended lines shall be suitably braced to prevent horizontal movement.
- 2.5.5** Closet bends, trap arms, and similar branches shall be secured against movement in any direction.
- 2.5.6** Hubless systems, in the ground shall be laid on a firm bed for its entire length except where support is otherwise provided which is adequate in the judgement of the Administrative Authority.
- [UPC 314.3]
Vertical sections and their connecting branches shall be adequately staked and fastened to driven steel pipe or reinforcing bars so as to remain stable while backfill is placed or concrete is poured.
- 2.6 Joints**
During installation assembly, hubless pipe and fittings shall be inserted into the gasket and firmly seated against a center stop. Center stop ring or fittings shall not create an enlargement chamber or recess with a ledge, shoulder, or reduction of pipe area or offer an obstruction to flow. In order to provide a sound joint with field cut lengths of pipe, the ends shall be cut square. Coupling assemblies shall be properly positioned and uniformly tightened to the torque required. The use of an adequate torque wrench recommended by the manufacturer of the coupling assemblies shall be used. [UPC 705.1]
- 2.6.1** Listed adapters designed for the specific transition intended shall be used for the intermembering transition of different piping materials.
- 2.6.2** The connection of closet rings, floor and shower drains, and similar "slip over" fittings to hubless pipe and fittings and the connection of hubless pipe and fittings to conventional pipe hubs shall be accomplished by the use of caulked lead joints, or other listed connections.

ADOPTED: 1966

REVISED: 1972, 1974, 1975, 1982, 1989, 1991, 1993, 1995, 2000, 2003, 2006