



Standard Specification for Molded Drain, Waste, and Vent (DWV) Short-Pattern Plastic Fittings¹

This standard is issued under the fixed designation F 2135; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This specification covers standard fitting geometries for molded short-pattern plastic fittings intended for use in drain, waste, and vent applications.

1.2 Fittings meeting the requirements of this specification are designed for use with outside-diameter controlled pipe. The body inside diameter can vary significantly as the wall thickness and outside diameter varies, and therefore, is not suitable for use as a fitting socket.

1.3 Fittings meeting the requirements of this specification shall be tested in accordance with the applicable requirements of Specifications D 2661 or D 2665.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units which are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings²

D 2661 Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings²

D 2665 Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings²

D 2749 Symbols for Dimensions of Plastic Pipe Fittings²

F 1498 Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings²

3. Requirements

3.1 Short-pattern fittings shall conform to the geometries as specified in this specification.

3.2 All other dimensions shall be determined in accordance with Test Method D 2122.

3.3 The exact outside shape of a short-pattern fitting is determined by the socket dimensions, wall thickness requirements, waterway, and any other critical dimensions that may be specified.

3.4 Configurations designed as short as possible are acceptable providing that the minimum wall thickness requirements for the particular nominal size being made is followed.

3.5 All short-pattern fittings used for drainage and having a 90° directional change (except vent fittings) shall have a pitch of ¼ in./ft or 1°12'.

3.6 All short-pattern fittings having tapered threads shall conform and be gaged in accordance with Specification F 1498.

3.7 45° Y-Branched:

3.7.1 Short-pattern 45° Y-branches shall not be pitched.

3.7.1.1 When the branch of a short-pattern 45° Y is of a smaller diameter than the main body of the fitting, the internal diameters of the fitting shall remain constant until they intersect one another.

3.8 One-Quarter Bends:

3.8.1 Short-pattern one-quarter bends shall have a centerline radius of curvature of not less than the nominal pipe size, with the exception of traps. The centerline radius of curvature shall be measured in accordance with Section 4.

3.9 Sanitary Tees:

3.9.1 Short-pattern sanitary tees and reducing tees shall have a centerline radius of curvature on the side branch of not less than its nominal size, when measured in accordance with Section 4. The alignment of the side branch shall be so located that the smallest inside radius of the side branch of the sanitary tee shall meet tangentially with, or within 5 % of, the main bore (see Fig. 1), when measured in accordance with 4.4.5.

NOTE 1—Refer to Appendix X1 for geometric configurations of some of the fittings being produced. Consult the individual manufacturer for laying lengths.

4. Test Method for Determining Compliance of Short-Pattern ¼Bends and Sanitary Tees

4.1 Scope:

¹ This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.63 on DWV. Current edition approved August 10, 2001. Published October 2001.

² Annual Book of ASTM Standards, Vol 08.04.