

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

IAPMO GUIDE CRITERIA

FOR

**SPECIALIZED MISCELLANEOUS PLASTIC DWV
FITTINGS AND FITTING ASSEMBLIES**

IAPMO IGC 67- 2009a

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for a closet flange with integral 45° angle outlet, a 45° or 1 1/2" shifted closet flange with vertical outlet, a closet flange with swivel ring 45° angle outlet, a 1-1/2" shifted outlet closet flange, a dishwasher wye, 3" x 2" double wye for horizontal branch, flush closet flange, stack vent, short pattern elbow, and an extended coupling assembly. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding design, materials, manufacturing and installation; and to provide for identifying closet flanges with integral 45° angle outlet, 45° or 1 1/2" shifted closet flanges with vertical outlet, closet flange with swivel ring 45° angle outlet, 1-1/2" shifted outlet closet flanges, dishwasher wyes, 3" x 2" double wye for horizontal branch, flush closet flanges, stack vent, short pattern elbow, and extended coupling assemblies (hereafter called specialized plastic DWV fitting assemblies). The fittings covered by this standard are intended for use in drain, waste and vent systems, as covered in Chapter 3 and 4 of the Uniform Plumbing Code.

2. SCOPE

- 2.1** The provisions of the standard are to allow for the establishment of technology for specialized plastic DWV fitting assemblies. The provision of the standard is not intended to prevent the use of alternate design, assembly configuration, method or material, provided any such alternate meets the performance and minimum specification criteria outlined herein.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard.
ASME B1.20.1 Pipe Threads, General Purpose, Inch

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ASTM D 1784	Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
ASTM D 2661	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D 2665	Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D 1784	Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
ASTM D 3965	Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings
ASTM F 409	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings

4. GENERAL REQUIREMENTS

4.1 Materials

- 4.1.1 Acrylonitrile-Butadiene-Styrene (ABS) fittings shall be made of a virgin ABS compound except as provided in Section 4.1.3 and shall comply with a minimum cell classification of 3-2-2-2-2 per ASTM D 3965.
- 4.1.2 Poly Vinyl Chloride (PVC) fittings shall be made of single virgin compound, except as provided in Section 4.1.3 and shall comply with a minimum cell classification of 12454 as per ASTM D 1784.
- 4.1.3 Clean, rework plastic generated from the manufacturer's own fitting production and conforming to the appropriate cell requirements may be used, provided that the fittings meet all the requirements of the IGC.
- 4.1.4 Other parts of the fitting shall be made of approved corrosion resisting material.
- 4.1.5 Fittings shall be manufactured so as not to restrict the flow capacity of the drainage line, offer abnormal obstruction to flow, produce excessive turbulence, or have an excessive body ledge or shoulder. The fitting or fitting assembly shall conform to Section 311.5 in the Uniform Plumbing Code.

4.2 Dimensions

- 4.2.1 Fittings shall be compatible with pipe and fittings made to the requirements of ASTM D 2661, Table A1.1 for ABS and ASTM D 2665, Table 1 for PVC.
- 4.2.2 Fitting patterns and geometry and other dimensions shall comply with Figs. 1 through 142

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and/or minimum requirements of the Uniform Plumbing Code. Tolerances shall be $\pm 1/4"$ unless otherwise specified.

4.2.3 Closet Flange with Integral or Swivel Ring 45° Angle Outlet. The dimensions of the flange portion of the closet flange shall comply with requirements contained in Section 408.4 of the Uniform Plumbing Code. The outlet of the fitting shall leave the flange at an angle of 45° and be sized to the nominal pipe size of the connecting pipe system.

4.2.4 Dishwasher Wye. The inlet and outlet of the body of the fitting shall comply with dimensions specified in 4.2.1. An inlet spigot entering the side of the fitting body shall be sized so as to accommodate a 1/2" or 3/4" dishwasher drainage pipe. The inlet spigot shall be provided with a watertight seal when not required as a dishwasher drainage point.

4.2.5 Extended Coupling Assembly. For the closet flange, the assembly shall comply with the requirements contained in Section 408.4.1 of the Uniform Plumbing Code. The outlet of the fitting shall be sized in accordance with the manufacturer's specifications.

The extension sleeve of the coupling assembly shall provide a sleeve sized to accommodate the outside dimension of the closet flange and create a smooth transition through a spigot outlet into the connecting pipe system.

4.2.6 45° or 1-1/2" Shifted Closet Flange with Vertical Outlet. The dimension of the flange portion of the closet flange shall comply with requirements contained in Section 408.4.1 of the Uniform Plumbing Code. The outlet of the fitting shall leave the flange at a 1.5" offset and be sized to the nominal pipe size of the connecting pipe system.

4.2.7 Stack Vent. The inlet and outlet of the body of the fitting shall comply with dimensions specified in 4.2.1. Internal baffles shall be a maximum wall thickness of 0.50".

4.2.8 Flushed Closet Flange. The dimensions of the flange portion of the closet flange shall comply with requirements contained in Section 408.4 of the Uniform Plumbing Code. The outlet of the fitting shall be sized in accordance with the manufacturer's specifications and be sized to the nominal pipe size of the connecting pipe system.

4.2.9 3" x 2" Double Wye for Horizontal Branch. The inlet and outlet of the body of the fitting shall comply with dimensions specified in 4.2.1. An inlet threads shall comply with ASME B1.20.1

4.2.10 Short Pattern Elbow. The inlet and outlet of the fitting shall be sized in accordance with the manufacturer's specifications and be sized to the nominal pipe size of the connecting pipe system.

5. PERFORMANCE AND WORKMANSHIP

- 5.1** All ABS fittings shall comply with the performance requirements called for in ASTM D 2661, Annex A1.
- 5.2** All PVC fittings shall comply with the performance requirements specified in Section 6.3.2 and 6.4 of ASTM D 2665 and Section 7.3 of ASTM F 409.
- 5.3** **Workmanship.** The inside and outside surface of the fittings shall be free of cracks, holes, blisters, voids, foreign inclusions, or other defects that are visible to the naked eye and that may effect the wall integrity.

6. MARKING AND IDENTIFICATION

- 6.1** Marking on all fittings shall appear permanently or indelibly and shall consists of:
- (a) Manufacturer's name or trademark;
 - (b) Symbol ABS or PVC.

Revised: 1/95, 4/02, 7/04, 5/05, 11/06, 2/07, 3/07, 8/07, 6/08, 1/09, 8/09

Editorial Revision: 4/04

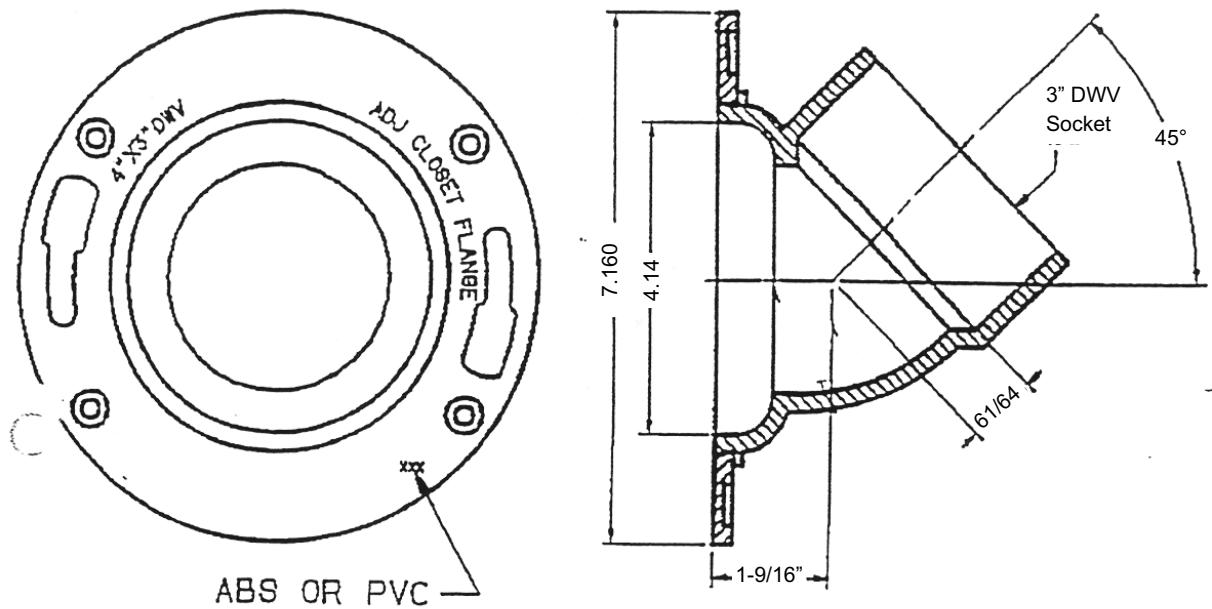


Figure 1
Closet Flange with Integral 45° Angle Outlet