



AMERICAN Flanged Pipe
Ductile Iron Welded Flange
Class 125 Welded Flange Dimensions

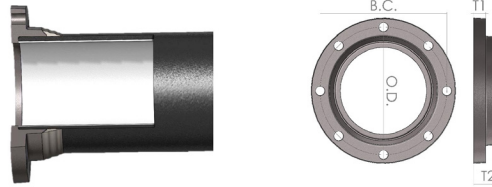


Table with 8 columns: Size in., O.D. Flange in., B.C. Bolt Circle in., T1: Flange Thickness in., T2: Overall Thickness in., Bolt Hole Diameter in., Number of Bolt Holes, and Approx. Weight Pounds. Rows list sizes from 4 to 36 inches.

Welded flanges may be used on flanged outlets and pipes in sizes 4-inch through 36-inch. The ductile iron class 125 flange is produced in accordance with the requirements of ANSI/AWWA C115/A21.15 and ASME B16.1. Class 250 ductile iron flanges can be furnished upon request. Class 125 welded flanges are rated for 250 psi working pressure.

This information covers the specification requirements for purchased ductile iron weld-on flanges in accordance with the latest revisions of ANSI/AWWA C115/A21.15, C110/A21.10, and/or ASME B16.1, as applicable.

Material, Metallurgical, and Mechanical Requirements

Weld-on flanges shall be made of ductile iron conforming to the mechanical requirements of C110/A21.10 and ASTM A536, ductile iron grade 65-45-12. Ductile iron grades 70-50-05 and 60-40-12 may be allowed with approval by the purchaser.

Casting Surface Quality

Castings shall conform to the Surface Finish Number, or a lower number, according to MSS SP-112 Quality Standard for Evaluation of Cast Surface Finishes.

OD Surface Finishes

External Surfaces of castings shall conform to Surface Finish Number 5 with the allowance that a maximum of 30% of the total surface area may conform to Number 7.

Protruding Metal

Protruding extra metal, including, but not limited to, flash at parting lines and core assembly joints, chaplets, gate and riser pads and core-surface burn-in, shall be ground flush with the surrounding surfaces such that the final ring is capable to pass the relevant sized go/no-go cross section gauge.

voids, shrinkage, inclusions, and porosity

Voids, Shrinkage, Inclusions, and Porosity located on cast surfaces shall be acceptable according to the Definition of Surface Quality by Visual Examination for Types II, III, IV, and VII, in MSS SP-55.

Grind Marks

Grind marks shall be acceptable according to the Definition of Surface Quality by Visual Examination for Type VIIIa in MSS SP-55.

Fabrication

Machined surfaces shall be free of any voids, protruding metal, inclusions, or porosity. The repair of defects by plugging or welding is not allowed on castings and machined surfaces.

Coatings and Linings

Coatings and linings shall be as specified on the purchase order. A rust preventative coating shall be applied to the machined faces of the flanges. The coating must be easily removable by a solvent prior to welding.

Markings

The flange manufacturer's mark, country where cast, flange size, and the letters "DI" shall be cast or stamped with metal die on the back face of the flanges. In addition, "B16.1" and the relevant class designation number shall be cast or stamped on the flanges per the requirements listed in ASME B16.1, section 5.2 unless otherwise specified by the customer.

Referenced Documents

- ANSI/AWWA C115/A21.15-11 "Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges"
ANSI/AWWA C151/A21.51-17 "Ductile-Iron Pipe, Centrifugally Cast"
ANSI/AWWA C110/A21.10-12 "Ductile-Iron and Gray-Iron Fittings"
ANSI/ASME B1.20.1 "Pipe Threads, General Purpose, Inch" (2013)
ANSI/AWWA C104/A21.04-16 "Cement-Mortar Lining for Ductile-Iron Pipe and Fittings"
ISO 2531:2009 "Ductile iron pipes, fittings, accessories and their joints for water applications"
ISO 7005-2:1988 "Metallic flanges — Part 2: Cast iron flanges"
MSS SP 9 2018 "Spot Facing for Bronze, Iron, and Steel Flanges" (2018)