



Designation: A1056 – 20

Standard Specification for Cast Iron Couplings Used for Joining Hubless Cast Iron Soil Pipe and Fittings¹

This standard is issued under the fixed designation A1056; 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 reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers the materials and testing of cast iron couplings for joining hubless cast iron soil pipe and fittings for sizes 1½ to 10 in.

1.2 It is the purpose of this specification to furnish information as to the characteristics of a particular sleeve type coupling when applied to cast iron soil pipe and fittings manufactured in accordance with Specification A888, latest revision, and CISPI Designation 301, latest revision.

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

1.4 The following precautionary caveat pertains only to the test method portion, Section 8, of this specification. *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

A48/A48M Specification for Gray Iron Castings

A644 Terminology Relating to Iron Castings

A888 Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications

C564 Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings

D2240 Test Method for Rubber Property—Durometer Hardness

E8/E8M Test Methods for Tension Testing of Metallic Materials

2.2 *ASME Standards:*³

ASME B18.2.1 Square and Hex Bolt and Screws Inch Series

ASME B18.1.2 Square and Hex Nuts (Inch Series)

2.3 *CISPI Standard:*⁴

CISPI 301 Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste and Vent Piping Applications

3. Terminology

3.1 *Definitions:*

3.1.1 Definitions of the following terms used in this specification are found in Terminology A644: elastomeric, durometer, and dynamic.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *center stop, n*—an integral part of the gasket centered on the axial length of the gasket intended to limit the insertion depth of the pipe and/or fitting to be coupled.

3.2.2 *clamp assembly, n*—that portion of the coupling excluding the gasket, nuts, and bolts.

3.2.3 *coupling, n*—the complete assembly.

3.2.4 *fitting, n*—parts of a pipeline other than straight pipes, valves, or couplings.

3.2.5 *gasket, n*—the elastomeric portion of the coupling.

3.2.6 *joint, n*—the point of assembly consisting of the coupling and the joined pipes or fittings, or both.

3.2.7 *manufacturer of the clamp assembly, n*—the entity that casts the clamp assembly.

¹ This specification is under the jurisdiction of ASTM Committee A04 on Iron Castings and is the direct responsibility of Subcommittee A04.75 on Gaskets and Coupling for Plumbing and Sewer Piping.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American Society of Mechanical Engineers (ASME), ASME International Headquarters, Three Park Ave., New York, NY 10016-5990, <http://www.asme.org>.

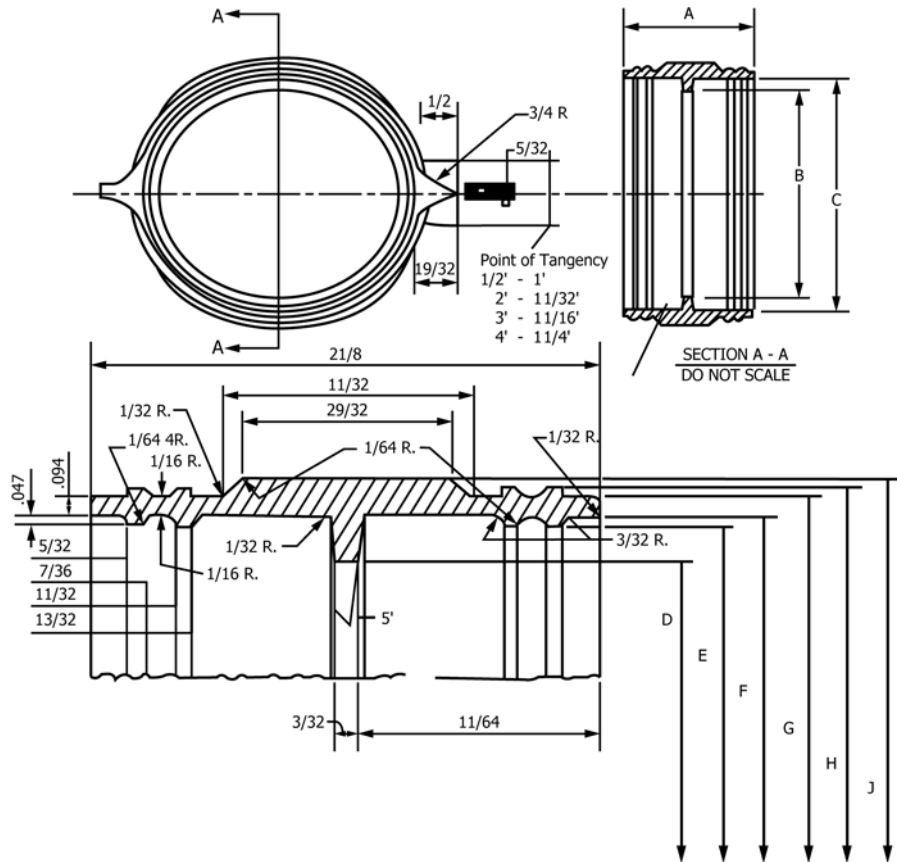
⁴ Available from Cast Iron Soil Pipe Institute (CISPI), 5959 Shallowford Rd., Suite 419, Chattanooga, TN 37421, <http://www.cispi.org>.

3.2.8 *manufacturer of the coupling, n*—the entity that assembles the components of the coupling such as the gasket and the clamp assembly.

3.2.9 *manufacturer of the gasket, n*—the entity that produces the elastomeric portion of the coupling.

4. Materials and Manufacture

4.1 Physical properties of gaskets shall comply with Specification C564 and the dimensions, material specifications, and physical and chemical properties as shown in Figs. 1 and 2 and Tables 1 and 2.



Dimensions, in. (mm)

	1 1/2 (38.100)	2 (50.800)	3 (76.200)	4 (101.600)	5 (127.000)	6 (152.400)	8 (203.200)	10 (254.000)
A	2.125 (53.975)	2.125 (53.975)	2.125 (53.975)	2.125 (53.975)	3.000 (76.200)	3.000 (76.200)	4.000 (101.600)	4.000 (101.600)
B	1.531 (38.887)	1.969 (50.013)	2.969 (75.413)	4.000 (101.600)	4.969 (126.213)	5.969 (151.613)	7.969 (202.413)	10.085 (256.159)
C	1.937 (49.200)	2.344 (59.538)	3.344 (84.938)	4.406 (111.912)	5.344 (135.737)	6.344 (161.138)	8.344 (211.938)	10.460 (265.684)
D	1.531 (38.887)	1.969 (50.013)	2.969 (75.413)	4.000 (101.600)	4.969 (126.213)	5.969 (151.613)	7.969 (202.413)	10.085 (256.159)
E	1.037 (26.340)	2.250 (57.150)	3.250 (82.550)	4.313 (109.550)	5.250 (133.350)	6.250 (158.750)	8.250 (209.550)	10.366 (263.296)
F	1.937 (49.200)	2.344 (59.538)	3.344 (84.938)	4.406 (111.912)	5.344 (135.737)	6.344 (161.138)	8.344 (211.938)	10.460 (265.684)
G	2.125 (53.975)	2.531 (64.287)	3.531 (89.687)	4.594 (116.688)	5.532 (140.513)	6.532 (165.913)	8.532 (216.713)	10.650 (270.510)
H	2.219 (56.363)	2.625 (66.675)	3.625 (92.075)	4.684 (118.974)	5.626 (142.900)	6.626 (168.300)	8.626 (219.100)	10.744 (272.898)
J	2.313 (58.750)	2.719 (69.063)	3.719 (94.463)	4.781 (121.437)	5.720 (145.288)	6.720 (170.688)	8.720 (221.488)	10.838 (275.285)

NOTE 1—Dimensional tolerances to be RMA Class 3 (see Table 1).

FIG. 1 Rubber Gasket