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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

IAPMO GUIDE CRITERIA

FOR

HINGE TYPE COUPLINGS USED FOR JOINING HUBLESS CAST IRON SOIL PIPE AND FITTINGS

IGC 257-2009a

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable for hinge type couplings used for joining hubless cast iron soil pipe and fittings. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors, and users; to promote understanding regarding materials and manufacturer and to provide for identifying hinge type couplings that conform with this standard.
- 1.2** The provisions of this standard are not intended to prevent the use of any alternate material or method of construction, provided any such alternate meets the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** This standard covers physical requirements and tests in addition to general description of materials used. Certain features of construction and finish of the final product are also given together with the methods of marking and identification.
- 2.2** The hinge type couplings covered by this standard are intended for use on hubless cast iron soil pipe and fittings.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of those standards.
- | | |
|-------------|--|
| ASTM C 564 | Rubber Gaskets for Cast Iron Soil Pipe and Fittings |
| ASTM D 3965 | Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings |
| ASTM G 85 | Modified Salt Spray (Fog) Testing |
| ASTM G 154 | Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials |

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IAPMO IS 6

Installation Standard for Hubless Cast Iron Sanitary Systems

MSS SP 58

Pipe Hangers and Supports – Selection and Application

UL 723

Surface Burning Characteristics of Building Materials

4. DEFINITION

- 4.1 Coupling shall mean the complete assembly.
- 4.2 Gasket shall mean elastomeric portion of the coupling.
- 4.3 Clamp assembly shall mean the portion of the coupling excluding the gaskets including the tightening mechanism.

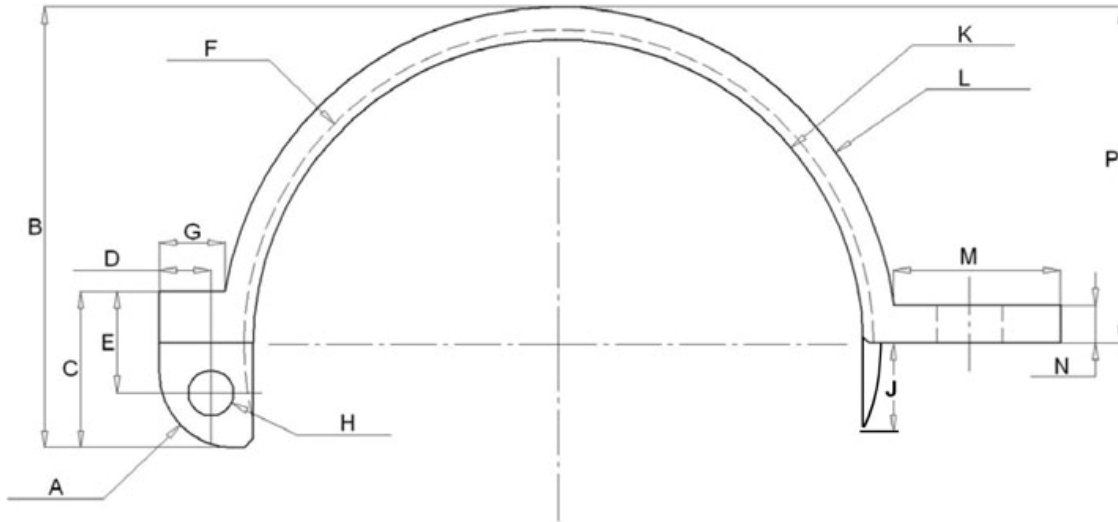
5. GENERAL REQUIREMENTS

- 5.1 The elastomeric gasket shall consist of one piece complying with the physical properties in ASTM C 564 using the Durometer Hardness column of Table 1 of that document as specified by the manufacturer.
 - 5.1.1 The elastomeric gasket shall have an inside center stop-ring spaced equal-distance from the ends to serve as a stop between the pipe/fitting ends that does not create an enlargement chamber or recess with a ledge, shoulder or reduction of pipe area or offer an obstruction to flow.
 - 5.1.2 The elastomeric gasket shall be free of defects such as cracks, holes, blisters, tears and/or pockets that may affect their use and serviceability.
- 5.2 The clamp assembly shall be made of polypropylene having a minimum cell class of 01141100 complying with ASTM D 4101 or Acrylonitrile-Butadiene-Styrene (ABS) having a minimum cell class of 42222 complying with ASTM D 3965. Material exposed within ducts or plenums shall be noncombustible or shall have a flame spread index not greater than 25 and a smoke developed index not greater than 50 when tested in accordance with UL 723.
 - 5.2.1 All clamp assemblies shall be so designed and manufactured so as to be capable of being torqued to a minimum of 115 % of their rated torque in inch/pounds required by the manufacturer's specifications.
 - 5.2.2 Clamp assembly drive screws, screws or bolts shall be 300 series stainless steel or chrome plated steel and shall not have screwdriver slots and shall be subjected for 24 hours to the salt spray test as described in ASTM G 85, Annex A1.
- 5.3 **Hangers.** Couplings shall be supported in such a manner as to maintain its alignment and prevent sagging of the pipe. All installations shall be in compliance to the UPC. Installation instructions shall include the following language: "Support adjacent to joint, not to exceed eighteen (18) inches (457 mm).

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5.4 Dimensional Requirements of the Clamp



	Dimensional Requirements (in)							
Size (in)	A	B	C	D	E	F	G	H
1 ½	0.25	1.362 ± 0.09	0.589 ± 0.09	0.188 ± 0.09	0.410 ± 0.09	R1.049 ± 0.09	0.323 ± 0.09	0.153 ± 0.09
2	0.25	1.651 ± 0.09	0.589 ± 0.09	0.188 ± 0.09	0.410 ± 0.09	R1.295 ± 0.09	0.356 ± 0.09	0.153 ± 0.09
3	0.25	2.265 ± 0.09	0.595 ± 0.09	0.188 ± 0.09	0.410 ± 0.09	R1.732 ± 0.09	0.356 ± 0.09	0.153 ± 0.09
4	0.25	2.737 ± 0.09	0.595 ± 0.09	0.207 ± 0.09	0.410 ± 0.09	R2.275 ± 0.09	0.359 ± 0.09	0.153 ± 0.09

	Dimensional Requirements (in)					
Size (in)	J	K	L	M	N	P
1 ½	0.200 ± 0.09	R1.013 ± 0.09	R1.251 ± 0.09	0.411 ± 0.09	0.450 ± 0.09	1.162 ± 0.09
2	0.300 ± 0.09	R1.244 ± 0.09	R1.471 ± 0.09	0.490 ± 0.09	0.450 ± 0.09	1.376 ± 0.09
3	0.400 ± 0.09	R1.672 ± 0.09	R1.976 ± 0.09	0.490 ± 0.09	0.450 ± 0.09	1.780 ± 0.09
4	0.500 ± 0.09	R2.215 ± 0.09	R2.477 ± 0.09	0.493 ± 0.09	0.450 ± 0.09	2.280 ± 0.09

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