

Designation: F1073 - 87 (Reapproved 2012) F1073 - 19

An American National Standard

Standard Specification for Door Fittings, for Watertight /Gastight /Airtight, Weathertight, and Non-Tight Doors, for Marine Use¹

This standard is issued under the fixed designation F1073; 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 principal design and type of material for manufacturing fittings for watertight/gastight/airtight, weathertight, and non-tight doors, for marine use. Note that "gastight" is commercial terminology which also means "airtight" in naval terminology.
- 1.2 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.
 - 1.3 The fittings are intended for use on all doors for marine use, except joiner and expanded metal doors.
- 1.4 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

iTeh Standards

2.1 ASTM Standards:²

A36/A36M Specification for Carbon Structural Steel

A240/A240M Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

A276 Specification for Stainless Steel Bars and Shapes

A563 Specification for Carbon and Alloy Steel Nuts

A668/A668M Specification for Steel Forgings, Carbon and Alloy, for General Industrial Use

B140/B140M Specification for Copper-Zinc-Lead (Red Brass or Hardware Bronze) Rod, Bar, and Shapes

B210 Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes (Metric) B0210 B0210M

B211 Specification for Aluminum and Aluminum-Alloy Rolled or Cold-Finished Bar, Rod, and Wire (Metric) B0211_B0211M

2.2 Military Standards:³

MIL-P-24441MIL-C-81706 Epoxy-Polyamide PaintCoating, Aluminum and Aluminum Alloys

MIL-DRL-24441D

MIL-DTL-24441/20B(SH) Paint, Epoxy-Polyamide, Green Primer, Formula 150, Type III

MIL-DTL-24441/21B(SH) Paint, Epoxy-Polyamide, Haze Gray Formula 151, Type III

MIL-P-17578A Packing Material, Plastic (for Dogs for Watertight Closures) (Symbol 1425)

MIL-C-81706NAVSEA SI 009-32 Coating, Aluminum and Aluminum AlloysCleaning and Painting Requirements; Accomplish DOD-STD-2138 Metal Sprayed Coating Systems for Corrosion Protection

2.3 Federal Specifications:³

QQ-C-390QQ-C-390B (Notice 2) Copper Alloy Castings (see this notice for ASTM references)

TT-E-490MIL-PRF-24635 Enamel-Silicone Alkyd Copolymer, Semi-gloss, Exterior Performance Specification: Coating Systems, Weather-Resistant, Exterior Use

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.03 on Outfitting and Deck Machinery.

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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 Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, http://www.dodssp.daps.mil.

- 2.4 ANSI Standard:
- A2.6 Standard for Fire Tests of Window Assemblies⁴
- 2.5 AISI Standard:
- 316 Low Alloy Stainless Steel (Cres 316)⁵

3. Classification

3.1 The dogs and hinges shall be classified as given in Table 1.

4. Ordering Information

- 4.1 Ordering for fittings shall be indicated on the purchase order prepared for doors, with reference to this specification noted.
- 4.2 When ordering fittings, indicate the following:
- 4.2.1 Type,
- 4.2.2 Quantity,
- 4.2.3 Marking (see Section 8), and
- 4.3 Inspection and acceptance of fittings shall be agreed upon between the purchaser and the supplier.

5. Materials and Manufacture

- 5.1 The material shall be as specified in Tables 2-4.
- 5.2 All securing screws and fasteners shall be of stainless steel, Type 316.
- 5.3 All glazing in portlights of fire door shall meet ANSI A2.6.

6. Construction, Shape, and Dimensions

- 6.1 The construction, shape, and dimensions for dogs and hinges shall be as shown in Figs. 1-9.
- 6.2 Door dogs shall be supplied with hold-open clips.

7. Workmanship, Finish, and Appearance

- 7.1 All materials shall have a smooth finish.
- 7.2 Pretreatment and priming of door fittings shall be as follows:
- 7.2.1 Mild steel fittings shall be abrasive blasted to "near white" metal and coated with inorganic zinc silicate at 1.5 to 3.0 mils.
- 7.2.2 Steel fittings, secured on doors, shall be welded to steel; whereas aluminum fittings when secured to aluminum or glass-reinforced plastic doors, shall be welded or bolted into position.
- 7.2.3 Nonferrous fittings shall be either riveted or bolted to aluminum, steel or glass-reinforced plastic doors, or combination thereof.
 - 7.2.4 Where different metals are to be used, insulation shall be used between them, in way of contact, to prevent galvanic action.

8. Product Marking

8.1 Each fitting shall be marked with its purchase order number and shall indicate the type of fitting, left hand or right hand. The marking shall be applied on a waterproof tag and attached to the fitting.

9. Keywords

9.1 airtight; door fittings; doors; gastight; marine; non-tight; ship; tightness integrity; watertight; weathertight

TABLE 1 Classification of Dogs and Hinges

Туре	Description
Dog:	
A	Fitted to door
В	Fitted to door frame
Hinge:	
A	With clenched pin
В	With clenched pin secured with cotter pin

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

⁵ Available from American Iron and Steel Institute (AISI), 1140 Connecticut Ave., NW, Suite 705, Washington, DC 20036, http://www.steel.org.



Cor	nponent	****			A1 .		01
Number	Item	— Mild Ste	eel		Aluminum		Glass-Reinforced Plastic
1	Handle interio	Specification A	668/A668M	Specifica	tion A668/A668M		Specification A668/A668M
2 2	Handle exteri	· ·			tion A668/A668M		Specification A668/A668M
3	- Jam nut	Specification A			tion A563		Specification A276
4	Spring washe			AISI (316			AISI (316)
	- Washer			steel con			steel commercial
5		steel commerci					
6	— Dog sleeve	Specification A		•	tion B210 (AL-5086)		Specification B210 (AL 5086)
7	—Bushing	oil impregnated			gnated bronze		oil impregnated bronze
8	—Packing						MIL-P-17578A
9	- Packing gland	MIL-P-17578A			578A		MIL-P-17578A
10	 Grease fitting 	Specification B	3140/B140M	Specifica	tion B140/B140M		Specification B140/B140M
11		QQ-C-390		Specifica	tion B210		QQ-C-390
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Number	Item	- Willu Ste	eei		Aluminum		Glass-neimorceu Flastic
1	Handle interio	Specification A668/A668	8M	Specification A6	668/A668M	Specifi	cation A668/A668M
1 2 3 4 5 6 7 8 9 10	Handle exteri			Specification A6			cation A668/A668M
3	Jam nut	Specification A563		Specification A5			cation A276
4	Spring washe			AISI (316)		AISI (3	
-	Washer	steel commercial		steel commercia	اد		ommercial
5	Dog sleeve	Specification A36/A36M	ı	Specification B2			cation B210 (AL 5086)
9	Bushing	oil impregnated bronze		oil impregnated			regnated bronze
<u>/</u>					bronze		
8	Packing	MIL-P-17578A		MIL-P-17578A			17578A
9	Packing gland			MIL-P-17578A			17578A
10		Specification B140/B140	ON A				
	Grease fitting			Specification B1			cation B140/B140M
11	Wedge	copper alloy casting or o	commercial steel	Specification B1 Specification B2 Prial for Door H	end e		cation B140/B140M ralloy casting or commercial s
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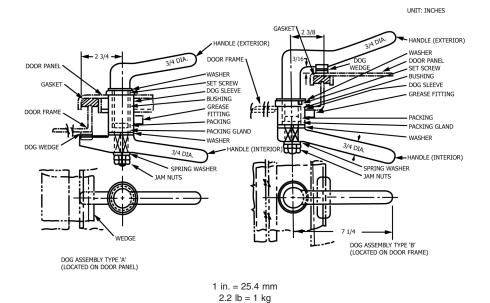


FIG. 1 Watertight, Airtight, and Weathertight Door Dog Assembly (Estimated Weight 8 lb)

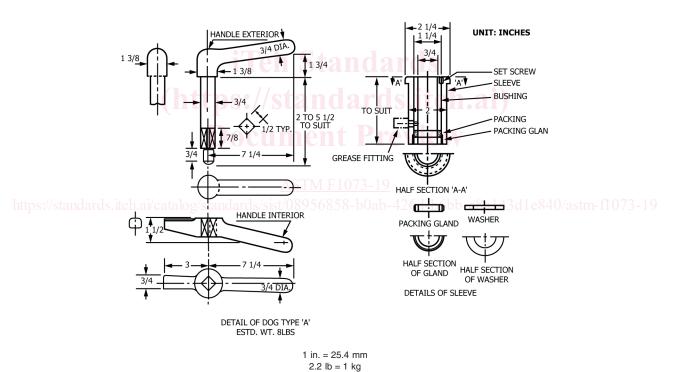


FIG. 2 Dog Details