

Weathertight steel doors for small ships

1. **Scope** This Japanese Industrial Standard specifies weathertight steel doors (hereinafter referred to as the "door") used in the doorway in end bulkhead of superstructures, wall of deck houses, etc. of ship having a length (L) of below 90 m, in accordance with Japanese Regulation for the Construction of steel ships.

Remarks: This standard makes reference to the following standards:

JIS F 2330 – Fittings for small ships' weathertight steel doors

JIS G 3101 – Rolled steel for general structure

2. **Classification** The doors shall be classified into four classes as given in **Table 1**, according to their application.

Table 1

Class	Application
A	Doors in the front bulkhead of superstructure and deckhouse in the first tier above the freeboard deck
B	Doors in the front bulkhead of superstructure and deckhouse in the second tier above the freeboard deck
C	Doors in the side walls and aft walls of superstructure and deckhouse in the first tier above the freeboard deck, and doors in the front bulkhead of deckhouse in the third tier or more above the freeboard deck
D	Doors in the side walls and aft end walls of superstructure and deckhouse in the second tier above the freeboard deck

3. **Construction, shape, and dimensions** The construction, shape and dimensions shall be as follows:

- (1) The right-hand opening (symbol **R**) shall mean the door to be opened to the right as seen when facing the door and the left-hand opening (symbol **L**) to the left.
- (2) The size of doorway and door, the thickness of door plate and size of stiffener shall be as given in **Attached Table 1**.
- (3) The fittings attached to the door shall conform to **JIS F 2330**.
- (4) **Figs. 1 to 8** show the right-hand opening, and in the case of left-hand opening the arrangement of fittings shall be reversed.
- (5) The door shall be fitted with lock hanger, check clip and hook as necessary.
- (6) The position of handle shall be determined according to the sill height.
- (7) **Figs. 1 to 8** show the doors with rounded corners, but corners may be squared.

Remarks: 1. L shows the length of main hull structure in meter. Figures are rounded down to the nearest integer of Steel Ships.
 2. One stiffener need to be attached to the door plate.
 3. Calculated mass shows mass of door plate only.
 4. Thickness of door plate shall be determined as follows.
 5. Thickness of door plate for welded joint shall be 3 mm greater than above value.
 However, minimum thickness shall be 3 mm.

4. Materials

The materials shall be as given in Table 2.

Table 2

No.	Component	Material
1	Door plate	JIS G 3101-SS41*
2	Gasket retainer	Steel plate
3	Gasket	Age-resisting synthetic rubber
4	Stiffener	JIS G 3101-SS41*
5	Coaming	JIS G 3101-SS41*

Remark: * SS41 shall be interpreted as SS400 from January 1991.

5. Designation

The doors shall be designated by the title or JIS number, class, nominal number, thickness of door plate, size of stiffener and direction of opening.

Example: Weathertight steel doors for small ships A 1050-6-75 × 6 R or JIS F 2332 A 1050-6-75 × 6 R

6. Marking

The door shall be marked indelibly in a conspicuous part with the particulars agreed upon between the parties concerned.

Attached Table 1

Unit: mm

Nominal No.	Size of door way	Size of door	Class A				Class B				Class C				Class D	
			Thickness of door plate		Size of stiffener		Thickness of door plate		Size of stiffener		Thickness of door plate		Size of stiffener	Thickness of door plate	Size of stiffener	
			L ≤ 50m	L < 90m	L ≤ 50m	L < 90m	L ≤ 50m	L < 90m	L ≤ 50m	L < 90m	L ≤ 50m	L < 90m				
1050	1000×500	1040×540	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1150	1100×500	1140×540	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1155	1100×550	1140×590	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1160	1100×600	1140×640	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1250	1200×500	1240×540	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1255	1200×550	1240×590	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1260	1200×600	1240×640	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1350	1300×500	1340×540	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1355	1300×550	1340×590	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1360	1300×600	1340×640	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1455	1400×550	1440×590	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	
1460	1400×600	1440×640	5.5	6	65×4.5	75×6	4.5	5	50×4.5	65×4.5	4.5	5	50×4.5	4.5	50×4.5	

Nominal No.	Calculated mass kg						
	Class A		Class B		Class C		Class D
	L ≤ 50 m	L < 90 m	L ≤ 50 m	L < 90 m	L ≤ 50 m	L < 90 m	
1050	26.6	29.1	21.8	24.2	21.5	23.9	21.5
1150	29.2	31.8	23.9	26.5	23.5	26.1	23.5
1155	31.7	34.6	26.0	28.9	25.6	28.4	25.6
1160	34.3	37.4	28.1	31.2	27.7	30.8	27.7
1250	31.7	34.6	25.9	28.8	25.6	28.4	25.6
1255	34.5	37.6	28.2	31.3	27.8	30.9	27.8
1260	37.3	40.6	30.5	33.9	30.1	33.4	30.1
1350	34.2	37.4	28.0	31.1	27.6	30.7	27.6
1355	37.2	40.6	30.5	33.8	30.1	33.4	30.1
1360	40.2	43.9	32.9	36.5	32.5	36.1	32.5
1455	40.0	43.6	32.7	36.4	32.3	35.9	32.3
1460	43.2	47.1	35.3	39.3	34.9	38.8	34.9

- Remarks: 1. L shows the length of ship in accordance with Japanese Regulation for Construction of Steel Ships.
2. One stiffener shall be attached to class D, two stiffeners to others.
3. Calculated mass show those of door plate only.
4. Thickness of door plate show minimum value.
5. Thickness of door plate for inland going ships may be 0.5 mm smaller than above value. However, minimum thickness shall be 4.5 mm.