

Shipbuilding – Hose connections and fittings

1. Scope This Japanese Industrial Standard specifies base fittings, connections, nozzles and international shore connections for hose (hereinafter referred to as “hose connection and fitting”) used in ships.

Remark: This standard makes reference to the following standards:

JIS B 0205 – Metric coarse screw threads

JIS B 0207 – Metric fine screw threads

JIS B 2240 – Basic dimensions of copper alloy pipe flanges

JIS F 7102 – Shipbuilding – Piping system in machinery space – Application for gaskets and packings

JIS F 7387 – Shipbuilding – Bronze 16 K cocks

JIS F 7400 – Shipbuilding – Valves and cocks – General inspection requirement

JIS G 3101 – Rolled steel for general structure

JIS G 3452 – Carbon steel pipes for ordinary piping

JIS H 3100 – Copper and copper alloy sheets, plates and strips

JIS H 3250 – Copper and copper alloy rods and bars

JIS H 3260 – Copper and copper alloy wires

JIS H 3270 – Copper beryllium alloy, phosphor bronze and nickel silver rods, bars and wires

JIS H 5111 – Bronze castings

JIS K 6332 – Rubber hoses for compressed air

2. Classification The hose connections and fittings shall be classified as given in **Table 1**:

Table 1

Class	Nominal dia.	Nominal pressure kgf/cm ²	Fluid	Symbols			Applicable hose	Applications
				Base fittings	Hose connections	Nozzles		
For metal hoses	5	5	Saturated steam	FHR 515	FHTM 15	FHZV 15	5/8 metal hose	For cleaning sea chest strainer and boiler, and for soda boiling
		10		FHR 1015				
For rubber hoses	15	5	Air	FHR 515	FHT 15	FHZC 15	5/8 rubber hose	For cleaning sea chest strainer, boiler and machinery, and for air motor
		10		FHR 1015				
	25	5		FHR 525	FHT 25	—	1 rubber hose	
		10		FHR 1025				
For canvas hoses	40	5	Water	FHR 540	FHT 40	FHZ 40 × 12 40 × 16	1½ canvas hose	For extinguishing, deck washing, reserve water shifting, draining boiler water, etc.
		10		FHR 1040				
	50	5		FHR 550	FHT 50	FHZ 50 × 20	2 canvas hose	
		10		FHR 1050				
	65	10		FHR 1065	FHT 65	FHZ 65 × 20	2½ canvas hose	
For international shore connections	65	10		FHK 65			—	For international shore connection

3. Construction, shape and dimensions The construction, shape and dimensions shall be as shown in Figs. 1 to 4.

4. Materials The materials shall, as a rule, be as shown in Figs. 1 to 4.

Remarks:

- The hose shall comply with JIS B 1996.
- The hose shall comply with JIS B 1997.
- The hose shall comply with JIS B 1998.

5. Tests and inspection The hose connections and fittings shall be subjected to the following items of inspection in accordance **JIS F 7400**.

- (1) Material inspection
- (2) Visual inspection
- (3) Dimensional inspection
- (4) Assembly inspection
- (5) Hydraulic inspection

The hose connections and fittings shall be tested as follows:

- (a) Hydraulic inspection for base fittings and international shore connections after assembly:
For nominal pressure 5 K : 0.75 MPa
For nominal pressure 10 K : 1.5 MPa
- (b) Hydraulic inspection for hose connections and nozzles after assembly:
For metal hose and rubber hose : 1.5 MPa
For canvas hose : 0.75 MPa

6. Designation The hose connections and fittings shall be designated by the title, nominal pressure and nominal diameter or symbol. **JIS** number may be used in place of the title.

- Examples:
1. Marine 5 K –15 Base Fitting for Metal Hose
or FHR 5 15 or JIS F 7335–5 K –15R
 - nominal diameter
 - nominal pressure
 - marine base fitting for metal hose
 2. Marine 5 K –15 Hose Connection for Metal Hose
or FHTM 5 15 or JIS F 7335–5 K –15TM
 - marine hose connection for metal hose
 3. Marine 5 K –15 Nozzle for Metal Hose
or FHZV 5 15 or JIS F 7335–5 K –15ZV
 - marine nozzle for metal hose
 4. Marine International Shore Connection
or FHK 65 or JIS F 7335–65 HK
 - marine international shore connection

7. Marking The following particulars shall be marked on the base fittings and the nozzle for canvas hose:

- (1) Nominal diameter

Also, nominal pressure shall be marked on the base fittings.

- Examples:
1. For a 40 × 12 nozzle for canvas hose: 40 × 12
 2. For a 5 K –40 base fitting: 5 K –40

- (2) Manufacturer's name or mark

- (3) Year and month of manufacture or the abbreviated

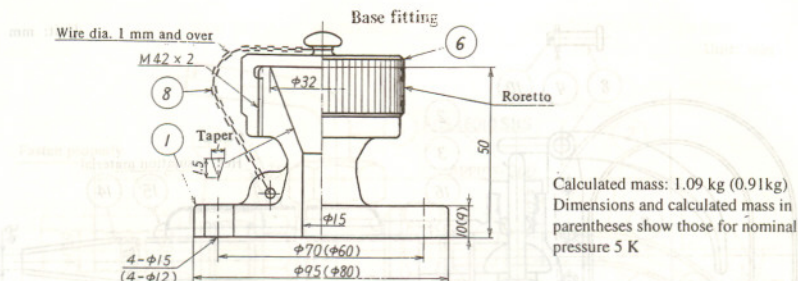
Related Standard:

ISO 5208 – Industrial valves – Pressure testing for valves



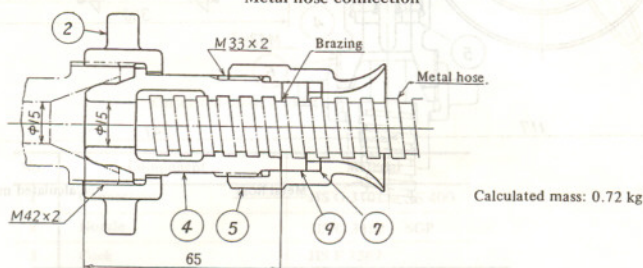
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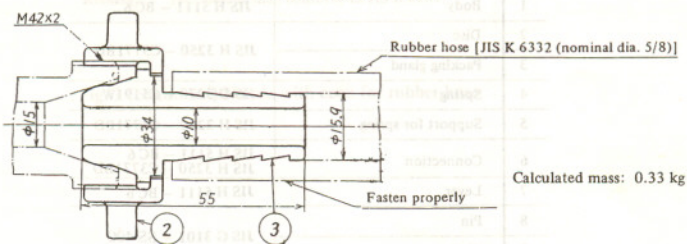


Bolt holes of flange shall straddle body center lines.

Metal hose connection



Rubber hose connection



No.	Component	Material
1	Base fitting	JIS H 5111 – BC 6
2	Nut	
3	Nipple	
4	Nipple	
5	Union nut	
6	Cap	
7	Ring	JIS H 3250 – C3771BD
8	Chain	JIS H 3260 – C2600W
9	Packing	Asbestos

- Remarks: 1. The flanges shall conform to JIS B 2240, except thickness "t" of the flanges for nominal pressure 10 kgf/cm².
2. The threads shall conform to JIS B 0207.
3. The calculated masses are given for reference only.

Fig. 1 Hose connections and fittings of nominal dia. 15