

Cast steel screwdown vertical storm valves

1. Scope This Japanese Industrial Standard specifies cast steel screwdown vertical storm valves (hereinafter referred to as “storm valve”).

Remarks: This standard makes reference to the following standards:

JIS B 0205 – Metric coarse screw threads

JIS B 0207 – Metric fine screw threads

JIS B 0222 – 29° Trapezoidal screw threads

JIS B 2210 – Basic dimensions of ferrous material pipe flanges

JIS F 7102 – Application for gaskets and packings to piping system in machinery space

JIS F 7400 – Shipbuilding – Valves and cocks - general inspection requirement

JIS G 5101 – Carbon steel castings

JIS G 5501 – Gray iron castings

JIS H 2105 – Pig lead

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

JIS H 3250 – Copper and copper alloy rods and bars

JIS H 3260 – Copper and copper alloy wires

JIS H 5111 – Bronze castings

JIS K 6380 – Industrial rubber packing materials – classification system

2. Classification The storm valves shall be classified into two types as handle type (Symbol H) and spindle type (Symbol S).

3. Construction, shape and dimensions The construction, shape and dimensions of storm valve shall be as shown in **Figs. 1 and 2**. The permissible deviation of body thickness “*t*” is recommended to be within $\begin{smallmatrix} +15 \\ -10 \end{smallmatrix} \%$, but when the calculated value below 1 mm, the permissible deviation shall be 1 mm.

4. Materials The materials of storm valve shall be as given in **Table 1**

Table 1 Material of storm valve

No.	Component	Material
1	Body	JIS G 5101-SC 42
2	Cover	
3	Valve plate	JIS H 5111-BC 6
4	Closing arm for valve plate	
5	Counterweight	JIS H 2105-Class 1
6	Spindle box	JIS H 5111-BC 6
7	Packing gland nut	
8	Packing gland	
9	Spindle	JIS H 3250-C 4641 BD or C 4641 BE
10	Valve axle	JIS H 3250-C 3771 BD or C 3771 BE
11	Washer	Brass plate
12	Stud bolt and hexagon nut	JIS H 3250-C 3771 BD or C 3771 BE
13	Hexagon head bolt and hexagon nut	Brass bar
14	Hexagon head bolt and hexagon nut	JIS H 3250-C 3771 BD or C 3771 BE
15	Gasket	JIS F 7102-10 WS
16	Gasket	
17	Packing	JIS F 7102-9 GP
18	Gasket	JIS F 7102-10 WS
19	Gasket	JIS K 6380-Oil resisting synthetic rubber
20	Set plate for gasket	JIS H 3100-C 2600 P-0
21	Set screw for gasket	Brass bar
22	Set screw	JIS H 3250-C 3604 BD or C 3604 BE
23	Handle	JIS G 5501-FC 200
24	Hexagon nut	JIS H 3250-C 3771 BD or C 3771 BE
25	Washer	Brass bar
26	Split pin	JIS H 3260-C 2600 W

5. **Tests and inspection** The storm valve shall be subjected to the following tests and inspection.
- (1) **Visual inspection** Under the inspection, the valve shall be free from any defects.
 - (2) **Dimension inspection** All parts shall be inspected in accordance with **JIS F 7400** and shall conform to the requirements specified in 3.
 - (3) **Hydraulic inspection of body** The body shall be subjected to a hydraulic test pressure of 0.5 MPa, and no defect shall be found on all the parts of the body.
 - (4) **Operation inspection** On the condition not screwed down by spindle, the operation of valve shall be smooth, and the contact of the valve plate with the seat shall be such that it begins to open when the body is lifted about 5° towards opening direction.
6. **Designation** The storm valve shall be designated by the title, **JIS** number and nominal diameter.

Example: Cast steel screwdown vertical storm valve, Handle Type, 80 or **JIS F 3060 H 80**