

Mushroom Ventilators

1. Scope

This Japanese Industrial Standard specifies mushroom ventilators for ship use (hereinafter referred to as "ventilators").

2. Classification

The ventilators shall be classified by construction and limits of nominal diameter as given in Table.

Table

Type	Axial fan		Weathertight cover		Limits of nominal diameter
	Can be provided	Cannot be provided	Provided	None	
BA	—	○	○	—	150 ~ 500
BB	—	○	○	—	350 ~ 1500
BC	—	○	—	○	350 ~ 1500
BD	○	—	○	—	350 ~ 1500
BE	○	—	—	○	350 ~ 1500

3. Construction, Shape, Dimensions and Materials

The construction, shape, dimensions and materials shall be in accordance with Figs. 1 to 5.

4. Designation

The ventilators shall be designated by the title, type and nominal diameter. JIS number may be used in place of the title.

Example: Mushroom Ventilator Type BA 150 or JIS F 2407 BA 150

Reference Standards:

- JIS B 0205 — Metric Coarse Screw Threads
- JIS B 0216 — Metric Trapezoidal Screw Threads
- JIS B 1180 — Hexagon Head Bolts
- JIS B 1181 — Hexagon Nuts
- JIS B 2601 — Handwheels
- JIS B 2804 — Retaining Rings — C Type
- JIS G 3101 — Rolled Steel for General Structure
- JIS G 3454 — Carbon Steel Pipes for Pressure Service

Related Standards:

- JMS 3905 — Fitting Method of Ships' Wire Netting
- JMS 3906 — Application Standard of Ships' Wire Netting

Unit: mm

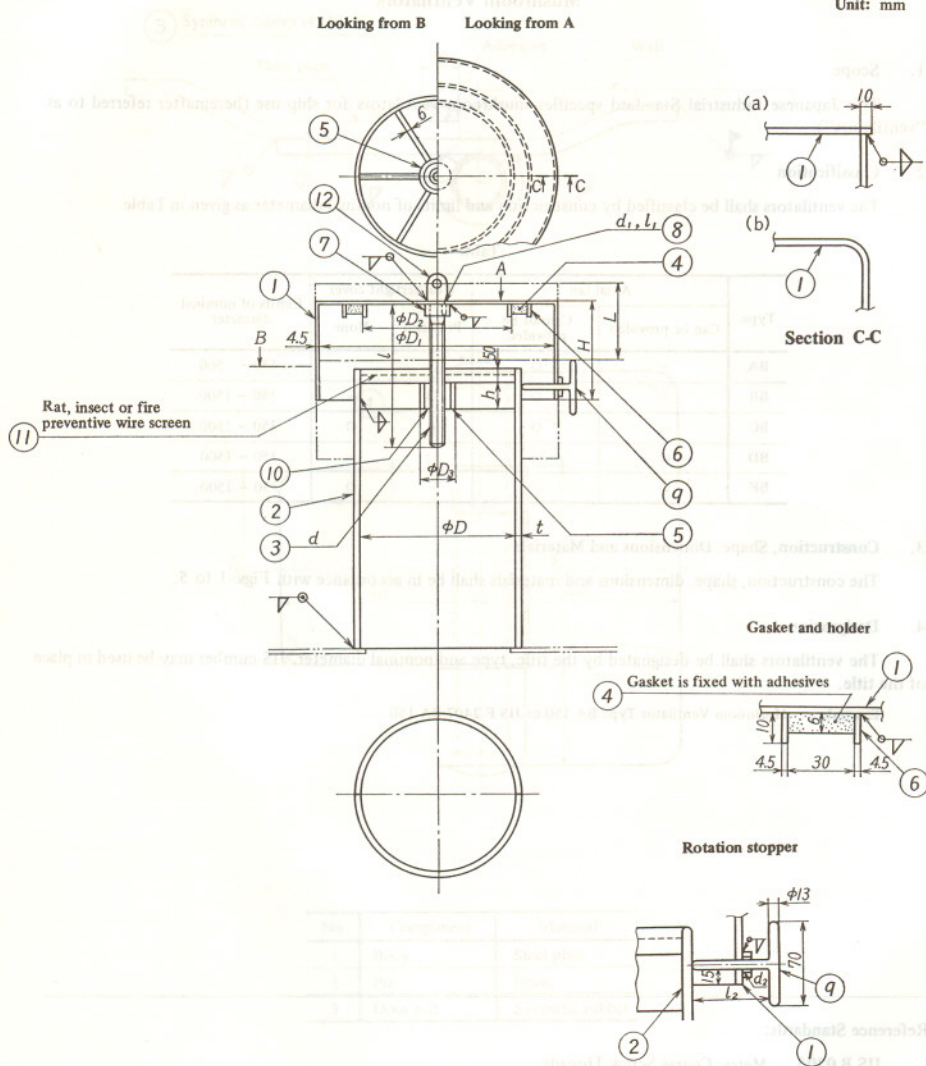


Fig. 1 Type BA, Assembly Plan

Unit: mm

Nominal dia.	Coaming	Bonnet			Lift	Screw rod		Set screw		Bearing		Rotation stopper		Reference
	<i>D</i>	<i>D</i> ₁	<i>D</i> ₂	<i>H</i>	<i>L</i>	<i>d</i>	<i>l</i>	<i>d</i> ₁	<i>l</i> ₁	<i>D</i> ₂	<i>h</i>	<i>d</i> ₂	<i>l</i> ₂	Calculated mass (kg)
150	150	240	130	100	40	M22	190	M 6	10	45	40	M10	70	6.2
200	200	310	180	110	50		200						80	8.8
250	250	380	230	125	65	M24	225	M 8	12	50	50		M12	90
300	300	460	280	135	75		235					105		16.7
350	350	530	330	150	90	M30	260			60	60	115		22.2
400	400	600	380	160	100		270					125		26.8
450	450	680	430	175	115	T M36	295	15	75	75	140	32.2		
500	500	750	730	185	125	T M40	305				150	38.5		

No.	Component		Material
1	Bonnet		Steel plate
2	Coaming		JIS G 3101-SS 41 or JIS G 3454-STPG 38
3	Screw rod		Brass or stainless steel
4	Gasket		Age-resisting rubber
5	Bearing		Steel plate and bar
6	Gasket holder		Steel plate
7	Top nut		Steel bar
8	Set screw		Brass
9	Rotation Stopper	Bolt	Brass or Stainless steel
		Nut	Stainless steel
10	Bush		Brass
11	Wire screen		Stainless steel
12	Eye plate		Steel plate

- Remarks:**
1. The plate thickness (t) of coaming shall conform to the requirements of the Classification Society.
 2. The screw threaded on d , d_1 and d_2 shall conform to JIS B 0205, and the top nut and the nut for rotation stopper to JIS B 1181-Class 1.
 3. The corner shape of bonnet may be either (a) or (b) as shown in the plan for Section C-C.
 4. Rat, insect or fire preventive wire screen, if provided, shall be fitted in the position as illustrated.
 5. The height of coaming shall be as specified by the purchaser.
 6. Calculated mass does not include that of coaming.
 7. The welding for attaching the coaming to the deck shall be applied on both sides as necessary.

Reference: For fitting the wire screen in Remark 4., refer to JMS 3905 of Japan Marine Standards Association, and for its selection to JMS 3906.

Fig. 1 Type BA, Assembly Plan (Continued)

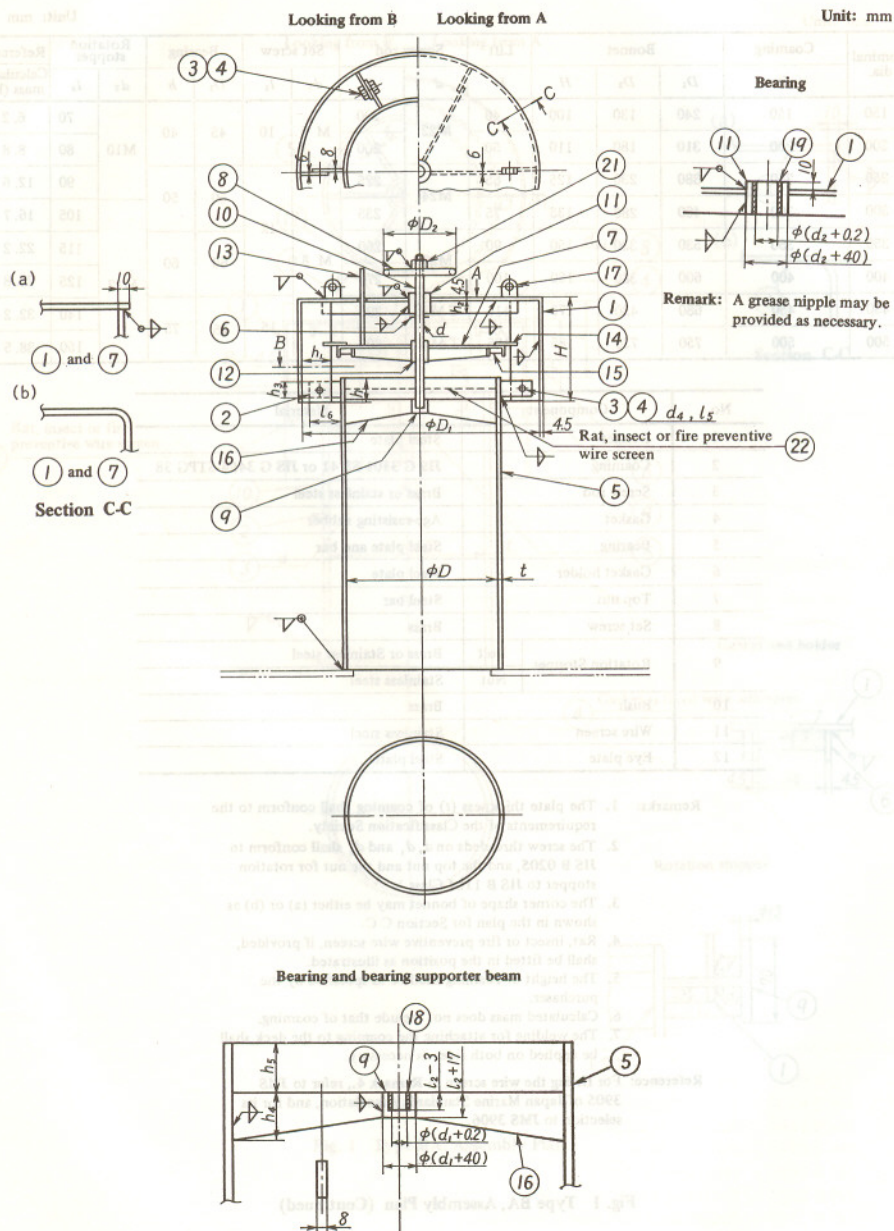


Fig. 2 Type BB, Assembly Plan

Unit: mm

Handle shaft

Weathertight cover, gasket, moving nut and guide

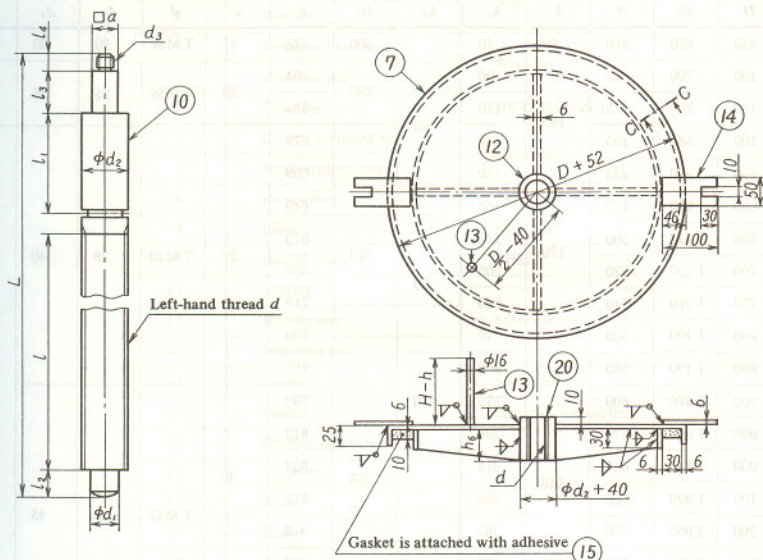


Fig. 2 Type BB, Assembly Plan (Continued)

Material	Part No.	Quantity	Unit	Material	Part No.	Quantity	Unit
Steel	1	1	PC	Steel	1	1	PC
Steel	2	1	PC	Steel	2	1	PC
Steel	3	1	PC	Steel	3	1	PC
Steel	4	1	PC	Steel	4	1	PC
Steel	5	1	PC	Steel	5	1	PC
Steel	6	1	PC	Steel	6	1	PC
Steel	7	1	PC	Steel	7	1	PC
Steel	8	1	PC	Steel	8	1	PC
Steel	9	1	PC	Steel	9	1	PC
Steel	10	1	PC	Steel	10	1	PC
Steel	11	1	PC	Steel	11	1	PC
Steel	12	1	PC	Steel	12	1	PC
Steel	13	1	PC	Steel	13	1	PC
Steel	14	1	PC	Steel	14	1	PC
Steel	15	1	PC	Steel	15	1	PC
Steel	16	1	PC	Steel	16	1	PC
Steel	17	1	PC	Steel	17	1	PC
Steel	18	1	PC	Steel	18	1	PC
Steel	19	1	PC	Steel	19	1	PC
Steel	20	1	PC	Steel	20	1	PC
Steel	21	1	PC	Steel	21	1	PC
Steel	22	1	PC	Steel	22	1	PC
Steel	23	1	PC	Steel	23	1	PC
Steel	24	1	PC	Steel	24	1	PC
Steel	25	1	PC	Steel	25	1	PC
Steel	26	1	PC	Steel	26	1	PC
Steel	27	1	PC	Steel	27	1	PC
Steel	28	1	PC	Steel	28	1	PC
Steel	29	1	PC	Steel	29	1	PC
Steel	30	1	PC	Steel	30	1	PC
Steel	31	1	PC	Steel	31	1	PC
Steel	32	1	PC	Steel	32	1	PC
Steel	33	1	PC	Steel	33	1	PC
Steel	34	1	PC	Steel	34	1	PC
Steel	35	1	PC	Steel	35	1	PC
Steel	36	1	PC	Steel	36	1	PC
Steel	37	1	PC	Steel	37	1	PC
Steel	38	1	PC	Steel	38	1	PC
Steel	39	1	PC	Steel	39	1	PC
Steel	40	1	PC	Steel	40	1	PC
Steel	41	1	PC	Steel	41	1	PC
Steel	42	1	PC	Steel	42	1	PC
Steel	43	1	PC	Steel	43	1	PC
Steel	44	1	PC	Steel	44	1	PC
Steel	45	1	PC	Steel	45	1	PC
Steel	46	1	PC	Steel	46	1	PC
Steel	47	1	PC	Steel	47	1	PC
Steel	48	1	PC	Steel	48	1	PC
Steel	49	1	PC	Steel	49	1	PC
Steel	50	1	PC	Steel	50	1	PC
Steel	51	1	PC	Steel	51	1	PC
Steel	52	1	PC	Steel	52	1	PC
Steel	53	1	PC	Steel	53	1	PC
Steel	54	1	PC	Steel	54	1	PC
Steel	55	1	PC	Steel	55	1	PC
Steel	56	1	PC	Steel	56	1	PC
Steel	57	1	PC	Steel	57	1	PC
Steel	58	1	PC	Steel	58	1	PC
Steel	59	1	PC	Steel	59	1	PC
Steel	60	1	PC	Steel	60	1	PC
Steel	61	1	PC	Steel	61	1	PC
Steel	62	1	PC	Steel	62	1	PC
Steel	63	1	PC	Steel	63	1	PC
Steel	64	1	PC	Steel	64	1	PC
Steel	65	1	PC	Steel	65	1	PC
Steel	66	1	PC	Steel	66	1	PC
Steel	67	1	PC	Steel	67	1	PC
Steel	68	1	PC	Steel	68	1	PC
Steel	69	1	PC	Steel	69	1	PC
Steel	70	1	PC	Steel	70	1	PC
Steel	71	1	PC	Steel	71	1	PC
Steel	72	1	PC	Steel	72	1	PC
Steel	73	1	PC	Steel	73	1	PC
Steel	74	1	PC	Steel	74	1	PC
Steel	75	1	PC	Steel	75	1	PC
Steel	76	1	PC	Steel	76	1	PC
Steel	77	1	PC	Steel	77	1	PC
Steel	78	1	PC	Steel	78	1	PC
Steel	79	1	PC	Steel	79	1	PC
Steel	80	1	PC	Steel	80	1	PC
Steel	81	1	PC	Steel	81	1	PC
Steel	82	1	PC	Steel	82	1	PC
Steel	83	1	PC	Steel	83	1	PC
Steel	84	1	PC	Steel	84	1	PC
Steel	85	1	PC	Steel	85	1	PC
Steel	86	1	PC	Steel	86	1	PC
Steel	87	1	PC	Steel	87	1	PC
Steel	88	1	PC	Steel	88	1	PC
Steel	89	1	PC	Steel	89	1	PC
Steel	90	1	PC	Steel	90	1	PC
Steel	91	1	PC	Steel	91	1	PC
Steel	92	1	PC	Steel	92	1	PC
Steel	93	1	PC	Steel	93	1	PC
Steel	94	1	PC	Steel	94	1	PC
Steel	95	1	PC	Steel	95	1	PC
Steel	96	1	PC	Steel	96	1	PC
Steel	97	1	PC	Steel	97	1	PC
Steel	98	1	PC	Steel	98	1	PC
Steel	99	1	PC	Steel	99	1	PC
Steel	100	1	PC	Steel	100	1	PC

Fig. 2 Type BB, Assembly Plan (Continued)

Unit: mm

Nominal dia.	Coaming	Bonnet					Hand- wheel	Handle shaft					
	<i>D</i>	<i>D</i> ₁	<i>H</i>	<i>h</i>	<i>h</i> ₁	<i>h</i> ₂	<i>D</i> ₂	<i>L</i>	<i>a</i>	<i>d</i>	<i>d</i> ₁	<i>d</i> ₂	<i>d</i> ₃
350	350	610	310	90	70	50	200	472	17	T M30	20	30	M16
400	400	700	345	105	90		280	504	22	T M36	25	36	M20
450	450	790	375		110			534					
500	500	880	405		130		315	579	27	T M40	28	40	M24
550	550	970	435		150	609							
600	600	1 050	470	120	649	60		679					
650	650	1 140	500		185			699					
700	700	1 230	520		205		719						
750	750	1 310	540		220		739						
800	800	1 400	560	140	240	70	759	30	T M45	32	45		
850	850	1 490	580		260		793						
900	900	1 570	600		275		813						
950	950	1 660	620		295		833						
1 000	1 000	1 750	640	140	315	355	873	32	T M45	32	45		
1 100	1 100	1 920	680		350		913						
1 200	1 200	2 090	720		385		953						
1 300	1 300	2 260	760		420		995						
1 400	1 400	2 430	800	140	455	400	1 035	32	T M45	32	45		
1 500	1 500	2 600	840		490								

Nominal dia.	Handle shaft					Bracket		Bearing supporter beam		Weather-tight cover	Hexagon head bolt, nut		Reference																														
	l	l_1	l_2	l_3	l_4	h_3	l_6	h_1	h_5		h_6	d_4	l_5	Calculated mass (kg)																													
350	230	160	28	26	18	50	90	80	80	50	M12	29	60.6																														
400	250		33	30	21	60	100	60		M16	32	78.8																															
450	280											80	120	100	96.8																												
500	310														43	32	80	120	100	117.5																							
550	340																			120	150	120	100	M20	35	136.6																	
600	380	53	36	100	120				100																	M20	35	158.5															
650	400					180	24	120																				150	120	100	M20	35	182.1										
700	420																																53	36	100	120	100	M20	35	204.0			
750	440														180	24	120	150	120																					100	M20	35	225.1
800	460																																										53
850	470	180	24	120	150				120	100	M20															35	279.6																
900	490					53	36	100				120	100	M20													35	308.4															
950	510																											180	24	120	150	120	100	M20	35	336.8							
1 000	510														53	36	100	120	100	M20	35	369.9																					
1 100	550																					180	24	120	150											120	100	M20	35	464.9			
1 200	590	53	36	100	120				100	M20	35															534.6																	
1 300	630					180	24	120				150	120	100												M20	35													609.2			
1 400	670																											53	36	100	120	100	M20	35	624.2								
1 500	710														180	24	120	150	120	100	M20														35					703.4			

Fig. 2 Type BB, Assembly Plan (Continued)