

AIR VENT HEAD

To cope with VACUUM which is occurred in the sloshing condition of ballast by rolling and pitching of the vessel, it is desinged to combine the advantages of both the half ball float and BOX TYPE AIR VENT HEAD.



G.S Hightecher Co., Ltd.



● Certified Type Approvals by international classification societies

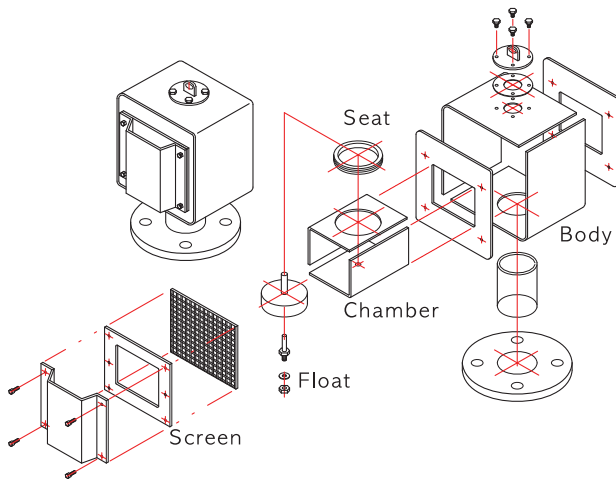




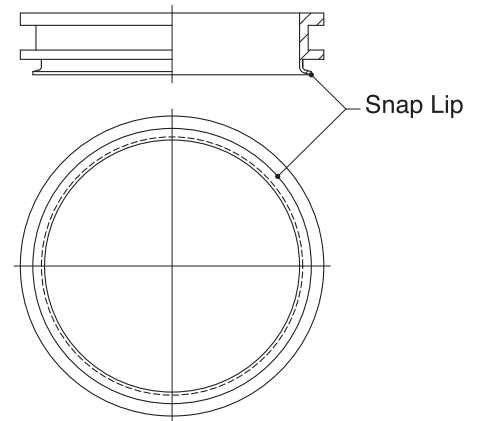
air vent head

● Box type Air Vent Head consists of a body and a chamber. Because CASTING type and PIPE form type Air Vent Head need much space in installation with heavy weight, the box type Air Vent Head is relatively developed with lowering in weight and size accordingly enhanced the work efficiency. When sea water comes into the tank through chamber of Air Vent Head, The float prevents seawater from coming into the tank by sealing the seat of chamber. We have developed SNAP LIP SEAL for sealing tightly. Two openings are designed above 100A to be flowed off well and the design meets class regulation with IACS. FLAME SCREEN is provided to prevent the flame from entering into the tank. The kinds of FLANGE or length of PIPE is adjustable according to customer request.

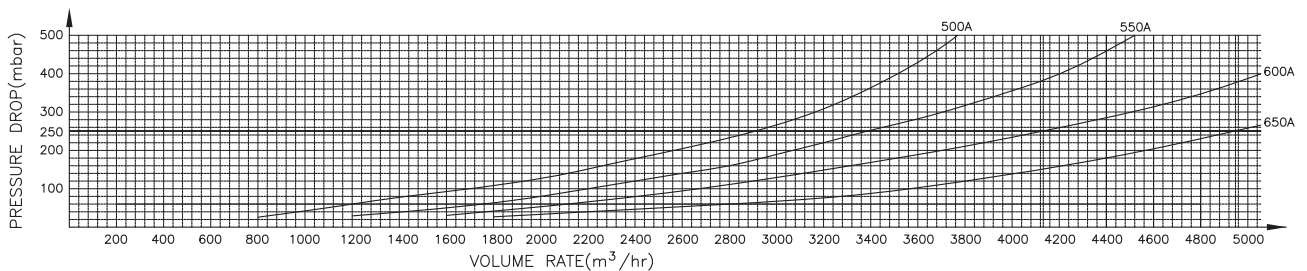
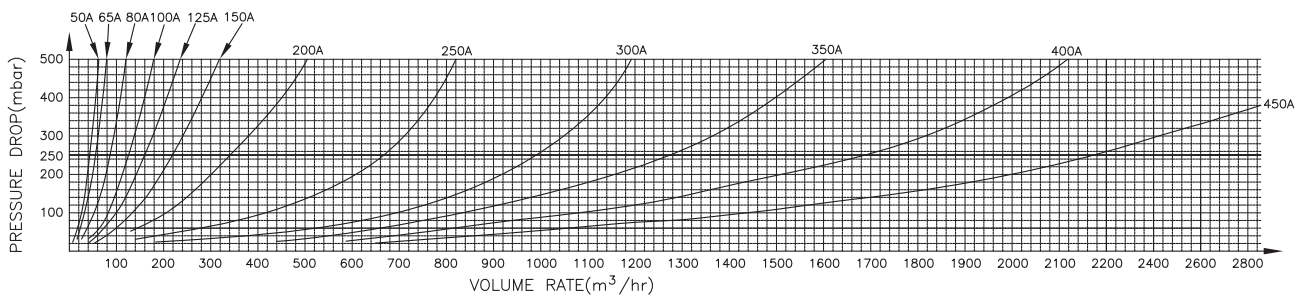
Box Type Air Vent Head



New Snap Lip Seat



Box Type Hydraulic Resistance Curve



VOLUME RATE (M³/ hr)

■ Pressure drop : 2500mmaq(250mbar)

Unit : m³/hr

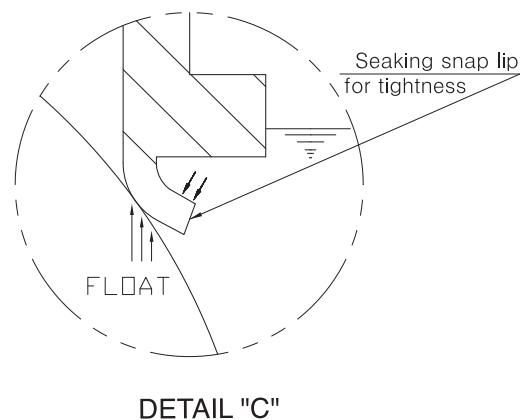
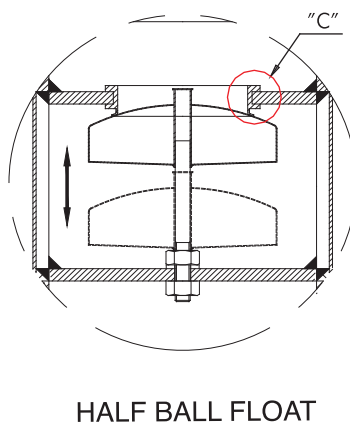
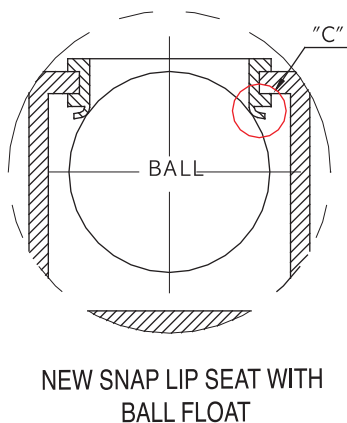
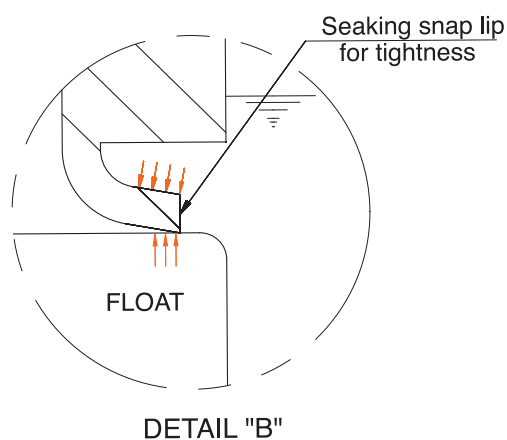
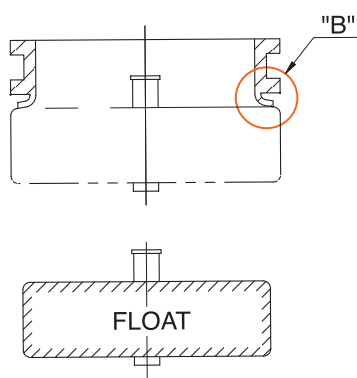
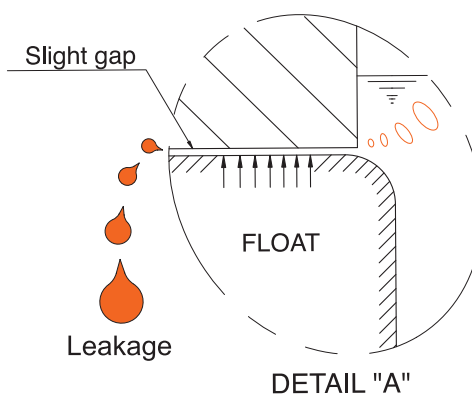
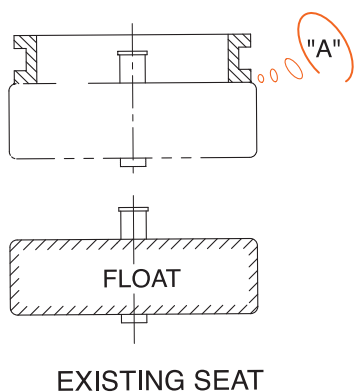
N.D	50A	65A	80A	100A	125A	150A	200A	250A	300A	350A	400A	450A	500A	550A	600A	650A
VOLUME RATE	38	50	77	118	157	216	325	677	992	1264	1687	2180	2750	3394	4124	4948





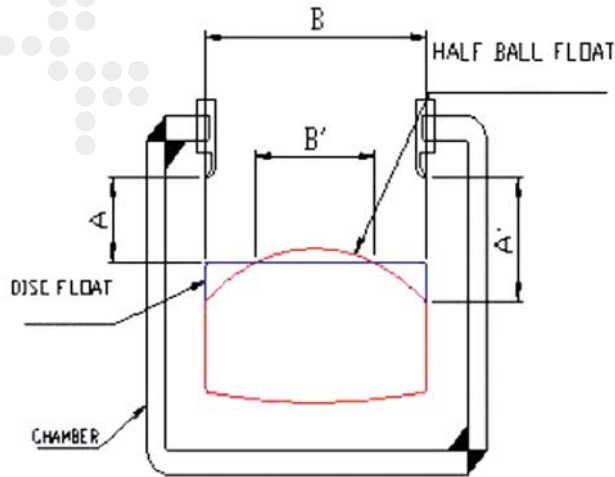
air vent head

● Air Vent Head which is installed on the vessel is required strict design and function according to classification regulation and IACS P3 in order not to be inflowed in tank by seawater. As the existing method is that the face of gasket and float is touched directly, the leakage occurs between gasket and float. For the vessel safety, the junction method of gasket and float has been consequently improved. Therefore a flexible snap lip is seated in the lower part of gasket, sealed tightly and prevented from flooding of the vessel.





1. Structure and principle of half ball float

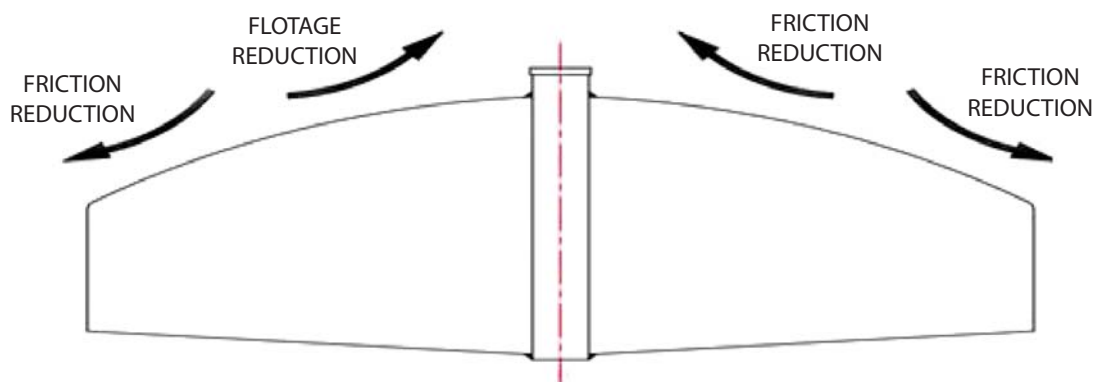


$$A' > A \quad B' > B$$

FLOW AREA RATE VACUUM AREA RATE
AREA RATE

- The half ball float is made of disc shape in the lower part, the upper part is shape of circle, and it is increased of FLOW AREA, it is reinforced the volume of the upper part, and it is satisfied with FLOW RATE to enlarge cross section area rate of regular capacity.
- It is solved the VACUUM problem to increase the FLOW VOLUME due to having suction cross sectional area enlarge and VACUUM sectional area rate to become small.
- In the condition of satisfying the FLOW RATE, the safety was jumped up due to adjusting utmost height of R in chamber and increasing FLOW AREA volume.

2. The merit of half ball float



- Having the damage of float to be prevented to reduce the resistance of flow material due to the design as circle in the upper of half ball float.
- When the vessel is rolled left and right, it is enlarged the suction cross sectional area rate in the contrast of vacuum by sloshing of water careen, and it is prepared the safety due to put down the buoyancy.
- Disc float is occurred pin hole by the corrosion which is contaminated other material, chip due to the plane in the upper part, but half ball float is rolled down other material due to the circle in the upper part.





air vent head

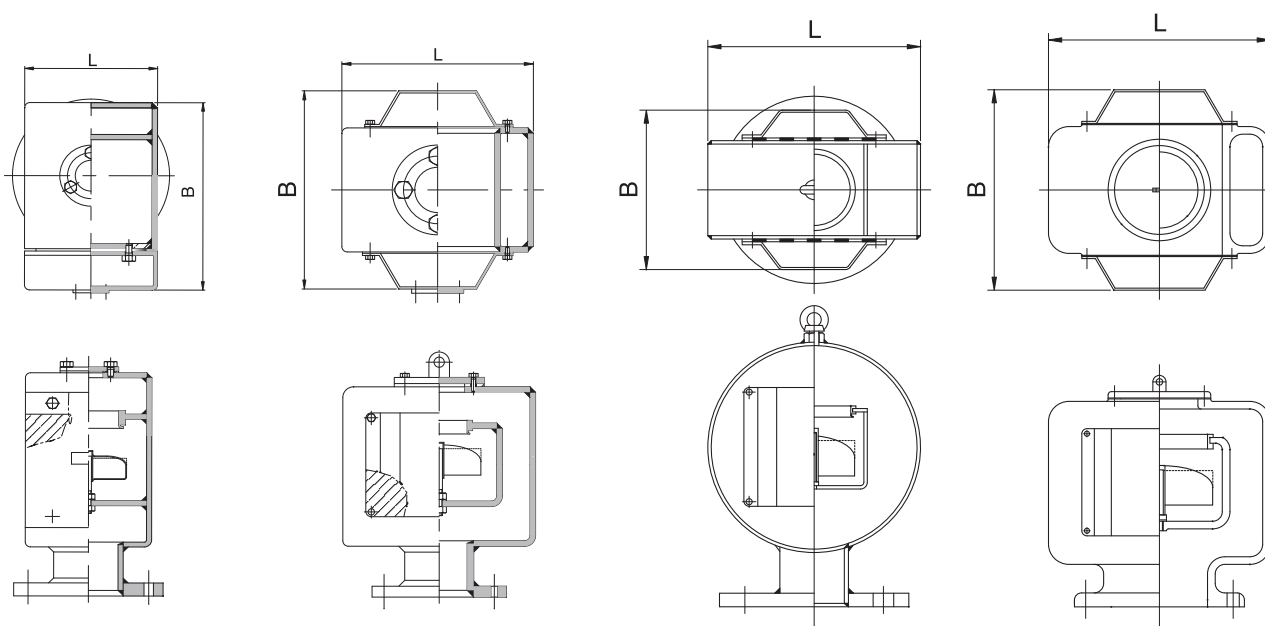
● We developed the Air Vent Head-Box type with a steel plate which is satisfied FLOW RATE and the rule of world classification societies comparable to existing air vent head of CASTING TYPE, PIPE FORM TYPE. Thus, we designed its compact weight of the air vent head must be light for her dead weight as an out fittings of ship with minimization of body size to enlarge the available space which is required for reducing a deadspace of passage way.

● As our qualified products which acquired type approvals (ABS, DNV, RINA, KR, NK, BV, GL, LR), the existing products which is heavy weight, irregular thickness, corrosion and brittleness are not economical. Thus, we designed the Air Vent Head-Box type with a steel plate in the rule of IACS P3, S27 and regular thickness which resulted in the notable weight reduction, strong structure and easy application.

Box Type

Pipe Form Type

Cast Type



■ Comparison Table in Dimension & Weight of Disc Type.

N.D		Box Type		Pipe Form Type		Casting Type (Bonnet Type)	
A(mm)	B(inch)	L X B	W(kg)	L X B	W(kg)	L X B	W(kg)
50A	2	105 X 163	8.8	165.2 X 152	10	170 X 134	9.8
65A	2 1/2	120 X 186	10.6	216.3 X 158	13	212 X 146	11.6
80A	3	135 X 221	12.6	216.3 X 179	15	235 X 162	13.6
100A	4	232 X 254	18.1	267.4 X 256	24	255 X 237	18.0
125A	5	276 X 286	23.6	318.5 X 285	39	304 X 291	27.0
150A	6	318 X 330	31.3	355.6 X 338	59	346 X 345	38.0
200A	8	425 X 409	49.1	457.2 X 412	79	444 X 441	71.0
250A	10	520 X 514	71.4	558.8 X 513	116	551 X 552	102
300A	12	588 X 598	86.2	660.4 X 601	154	644 X 646	143
350A	14	678 X 674	118.2	711.2 X 677	181	738 X 733	191
400A	16	758 X 767	151.4	850 X 770	215	835 X 737	273
450A	18	840 X 848	182.1	920 X 875	267	916 X 820	306
500A	20	917 X 904	216.2	997 X 937	335		
550A	22	1001 X 1026	265.8	1074.6 X 1074.6	406		
600A	24	1091 X 1121	318.6	1151.1 X 1151.1	457		
650A	26	1229 X 1248	371.7	1228.7 X 1228.7	508		



FLOAT FLOAT COMPARISON

THE COMPARISON OF FLOAT

SECTION	DISC	HALF BALL	BALL
FUNCTION	<ul style="list-style-type: none"> Air proof is large and other material-sticked Afraid of damage by the shock overflowed Unstable by vacuum when the careen condition of ballast water in rolling and pitching of vessel. 	<ul style="list-style-type: none"> Design as shape of ball in the upper part to flow down of other material and to reduce air proof and exclusion of shock. Exclusive design of vacuum to prepare careen condition of ballast water when rolling and pitching of vessel. 	<ul style="list-style-type: none"> Safe float against vacuum condition when rolling and pitching of vessel. Prevent the condition which is stuck other material in the upper part and minimum of air proof.
SAFETY	<ul style="list-style-type: none"> Using the guide and not to hit the chamber when the vessel rolling Gasket & float damaged due to vacuum condition repeatedly. As the junction surface of gasket and float is flat, the float is movable and the leakage occurs regardless of buoyance 	<ul style="list-style-type: none"> Using the guide and not to hit the chamber when the vessel rolling. No damage with exclusion of vacuum condition. 	<ul style="list-style-type: none"> Afraid the damage by hit the chamber as rolling of vessel. Exclusion of vacuum ECONOMY
ECONOMY	<ul style="list-style-type: none"> Good 	<ul style="list-style-type: none"> Good (two times of DISC FLOAT and parallel with ball float) 	<ul style="list-style-type: none"> Being inferior

COMPARISON OF FLOW VELOCITY, VOLUME AS PER FLOAT FLOAT

N.D		WATER (PRESSURE DROP : 250mbar)	AIR VACUUM (REVERSE FLOW)					
			DISC/HALF BALL/BALL FLOAT	DISC FLOAT		HALF BALL FLOAT		BALL FLOAT
A(mm)	B(inch)	FLOW RATE (m ³ /h)	REVERSE FLOW RATE (m ³ /h)	REVERSE VELOCITY (m/s)	REVERSE FLOW RATE (m ³ /h)	REVERSE VELOCITY (m/s)	REVERSE FLOW RATE (m ³ /h)	REVERSE VELOCITY (m/s)
50A	2	38	133.5	25.4	283	45.3	229	43.6
65A	2 1/2	50	263.5	24.0	466	42.4	496	45.0
80A	3	77	356.8	23.1	683	44.2	683	44.2
100A	4	118	626.9	23.5	1154	43.3	1102	41.3
125A	5	157	944.8	22.9	1540	41.2	1957	47.4
150A	6	216	1305	22.5	2780	48.0	2598	44.8
200A	8	325	2205	21.4	4523	43.9	4327	45.0
250A	10	677	3676	21.0	7036	40.2	7352	42.4
300A	12	992	5169	20.6	12295	49.0	10539	48.9
350A	14	1264	6443	20.5	14551	46.3	13199	47.9
400A	16	1687	8291	20.2	18839	45.9	18239	47.4
450A	18	2180	10700	20.6	21763	41.9	21815	41.4
500A	20	2750	13232	20.5	27432	42.5	27110	44.3
550A	22	3394	16716	20.3	34009	41.3	34585	43.2
600A	24	4124	20010	20.3	44158	44.8	41400	46.8
650A	26	4948	23717	20.4	50566	43.5	48829	45.7





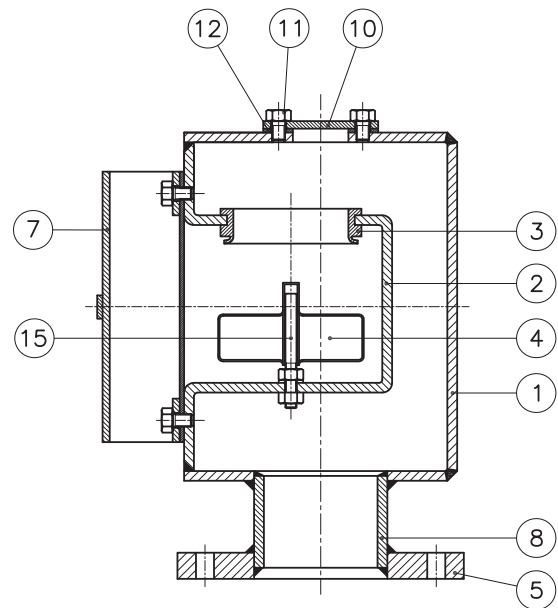
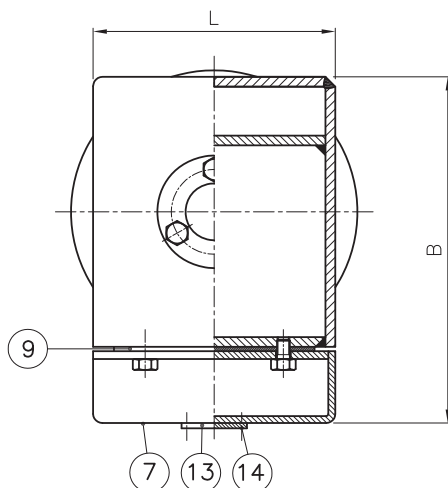
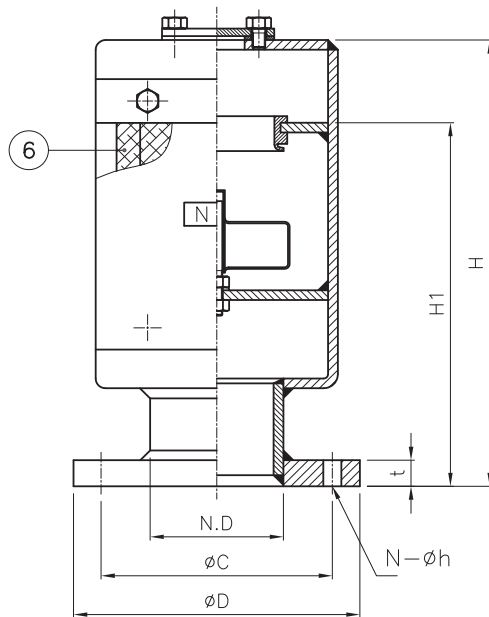
air vent head

● Box Type Disc Float : 40A~80A

NOTE

1. BUG SCREEN WITH WIRE MESH #6 TO BE FITTED FOR GENERAL TANK.
2. FLAME SCREEN WITH MESH #30 TO BE FITTED FOR W.B.T OF OIL & CHEMICAL CARRIER
3. STEEL PART : HOT DIP GAL'V

ITEM NO.	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	BODY	SS400	1	GAL'V
2	CHAMBER	SS400	1	GAL'V
3	RUBBER SEAT	NBR	1	
4	BALL FLOAT	SUS304	1	
5	FLANGE	SS400	1	GAL'V
6	BUG SCREEN	SUS304	1	SEE NOTE 1,2
7	SIDE COVER	SS400	4~12	
8	LOWER PIPE	STPG370	1	GAL'V
9	SCREEN HOLDER	SS400	1	GAL'V
10	TOP COVER	SS400	1	GAL'V
11	HEX. BOLT	SS400(W)	7	GAL'V
12	TOP PACKING	NBR	1	
13	NAME PLATE	SUS304	1	
14	SET'G SCREW	SUS304	2	
15	GUIDE BAR	SUS304	1	



DIMENSION

(UNIT : mm)

N.D	H	H1	B	L	φD	φC	t	N-φh	WEIGHT (kg)
50A	234	188	163	105	130	105	14	4-15	8.8
65A	245	197	186	120	155	130	14	4-15	10.6
80A	250	201	221	135	180	145	14	4-19	12.6



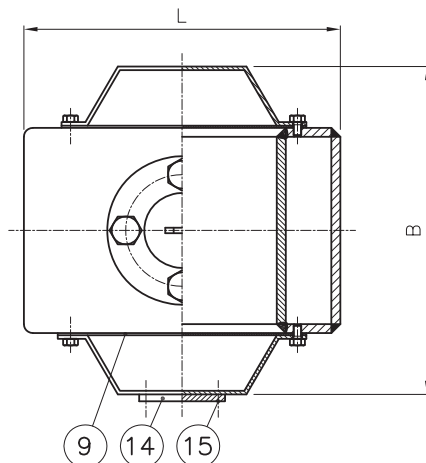
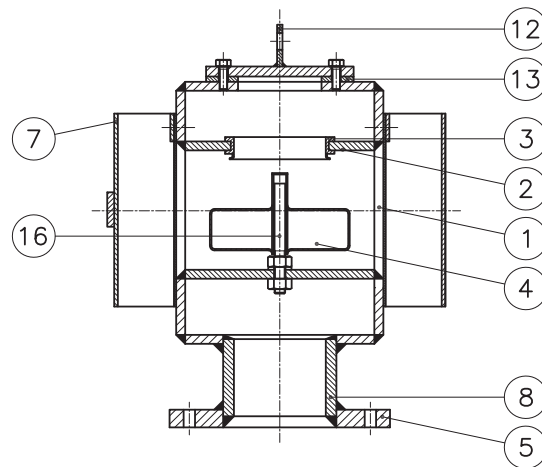
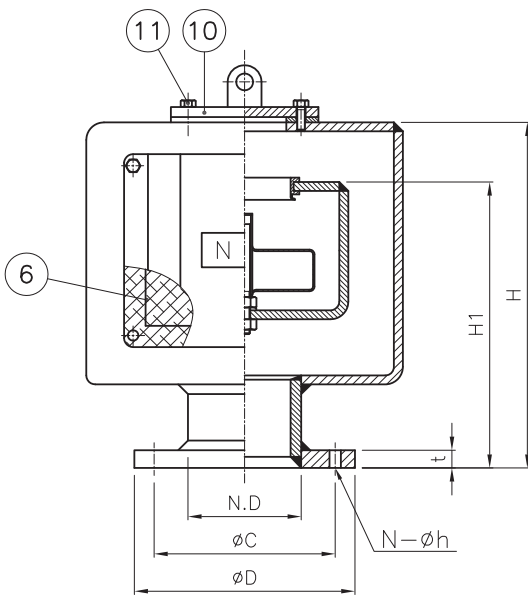
air vent head

● Box Type Disc Float : 100A~650A

NOTE

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2. FLAME SREEN WITH MESH #30 TO BE FITTED FOR W.B.T OF OIL & CHEMICAL CARRIER
3. LIFTING LUG USE ONLY SIZE 150A
4. STEEL PART : HOT DIP GAL'V

ITEM NO.	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	BODY	SS400	1	GAL'V
2	CHAMBER	SS400	1	GAL'V
3	RUBBER SEAT	NBR	1	
4	BALL FLOAT	SUS304	1	
5	FLANGE	SS400	1	GAL'V
6	BUG SCREEN	SUS304	1	SEE NOTE 1,2
7	SIDE COVER	SS400	4~12	
8	LOWER PIPE	STPG370	1	GAL'V
9	SCREEN HOLDER	SS400	1	GAL'V
10	TOP COVER	SS400	1	GAL'V
11	HEX. BOLT	SS400(W)	7	GAL'V
12	LIFTING LUG	SS400	1	SEE NOTE 3
13	TOP PACKING	NBR	1	
14	NAME PLATE	SUS304	1	
15	SET'G SCREW	SUS304	2	
16	GUIDE BAR	SUS304	1	



DIMENSION

(UNIT : mm)

N.D	H	H1	B	L	øD	øC	t	N-øh	WEIGHT (kg)
100A	270	225	254	232	200	165	16	8-ø19	18.1
125A	306	250	286	276	235	200	16	8-ø19	23.6
150A	323	268	330	318	265	230	18	8-ø19	31.3
200A	392	314	409	425	320	280	20	8-ø23	49.1
250A	440	348	514	520	385	345	22	12-ø23	71.4
300A	557	434	598	588	430	390	22	12-ø23	86.2
350A	584	452	674	678	480	435	24	12-ø25	118.2
400A	644	507	767	758	540	495	24	16-ø25	151.4
450A	695	536	848	840	605	555	24	16-ø25	182.1
500A	780	600	904	917	655	605	24	20-ø25	216.2
550A	910	709	1026	1001	720	665	26	20-ø27	265.8
600A	1010	785	1121	1091	770	715	26	20-ø27	318.6
650A	1152	891	1248	1229	825	770	26	24-ø27	371.7



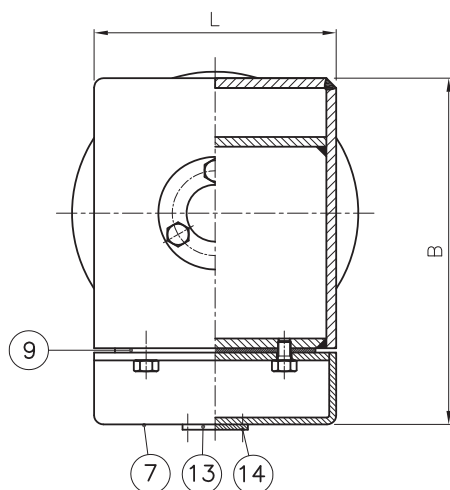
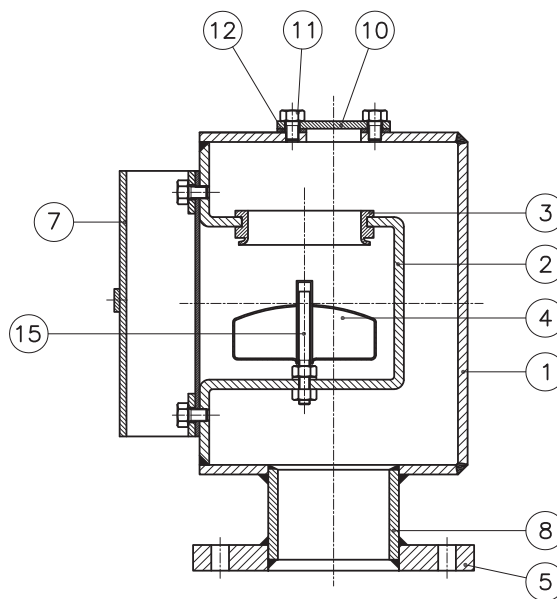
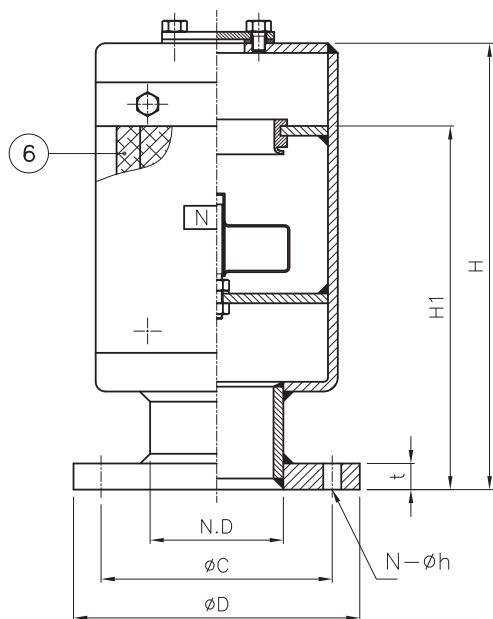
air vent head

● Box Type Halfball Float : 40A~80A

NOTE

1. BUG SCREEN WITH WIRE MESH #6 TO BE FITTED FOR GENERAL TANK.
2. FLAME SREEN WITH MESH #30 TO BE FITTED FOR W.B.T OF OIL & CHEMICAL CARRIER
3. STEEL PART : HOT DIP GAL'V

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4	BALL FLOAT	SUS304	1	
5	FLANGE	SS400	1	GAL'V
6	BUG SCREEN	SUS304	1	SEE NOTE 1,2
7	SIDE COVER	SS400	4~12	
8	LOWER PIPE	STPG370	1	GAL'V
9	SCREEN HOLDER	SS400	1	GAL'V
10	TOP COVER	SS400	1	GAL'V
11	HEX. BOLT	SS400(W)	7	GAL'V
12	TOP PACKING	NBR	1	
13	NAME PLATE	SUS304	1	
14	SET'G SCREW	SUS304	2	
15	GUIDE BAR	SUS304	1	



DIMENSION (UNIT : mm)

N.D	H	H1	B	L	øD	øC	t	N-øh	WEIGHT (kg)
50A	234	188	163	105	130	105	14	4-15	8.8
65A	245	197	186	120	155	130	14	4-15	10.6
80A	250	201	221	135	180	145	14	4-19	12.6



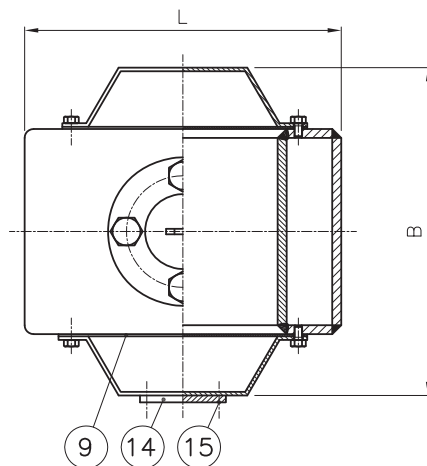
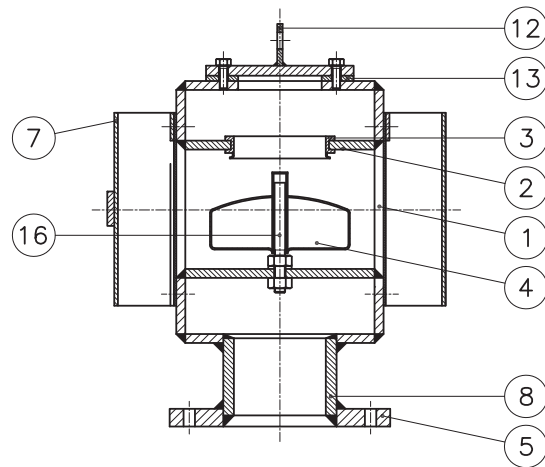
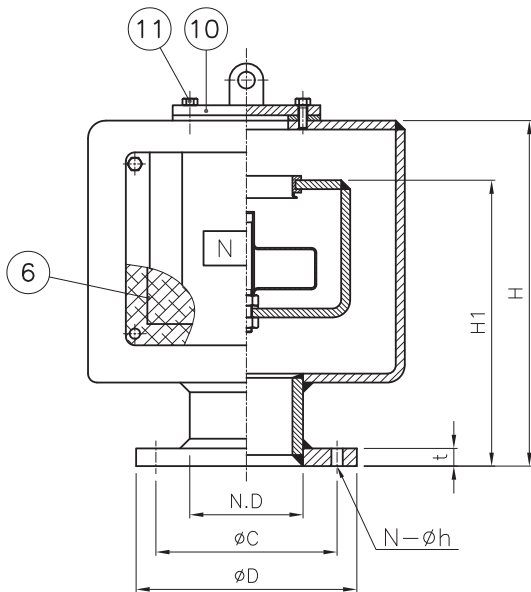
air vent head

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(UNIT : mm)

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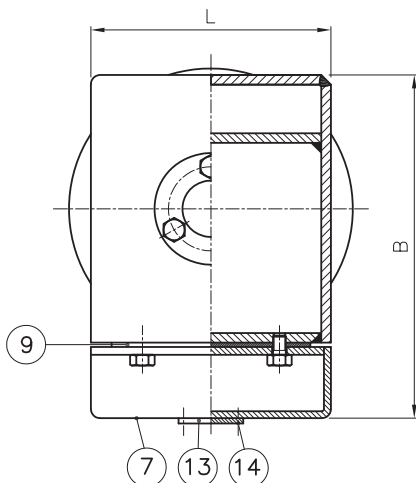
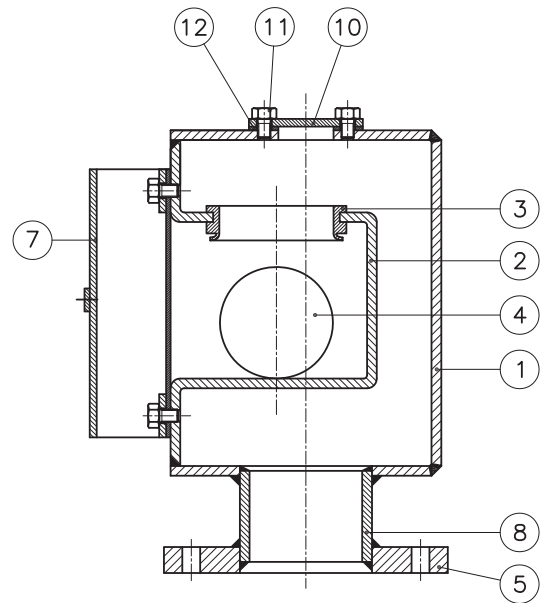
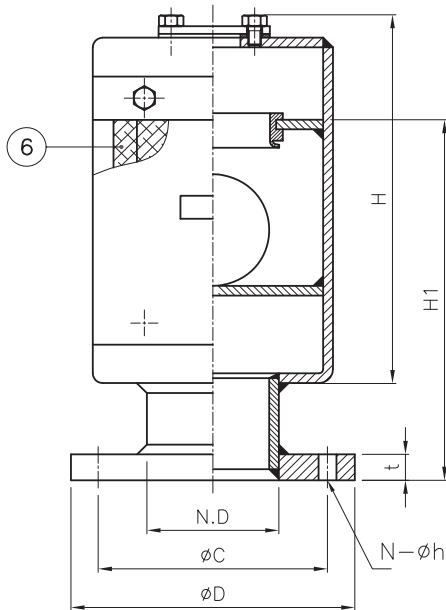
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● Box Type Ball Float : 40A~80A

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13	NAME PLATE	SUS304	1	
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(UNIT : mm)

N.D	H	H1	B	L	phi D	phi C	t	N-phi h	WEIGHT (kg)
50A	255	222	193	120	130	105	14	4-15	8.9
65A	255	222	193	120	155	130	14	4-15	10.9
80A	277	240	219	135	180	145	14	4-19	13.8



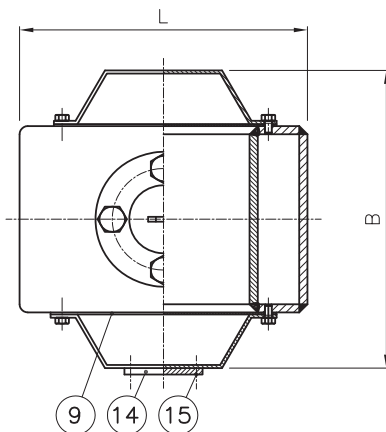
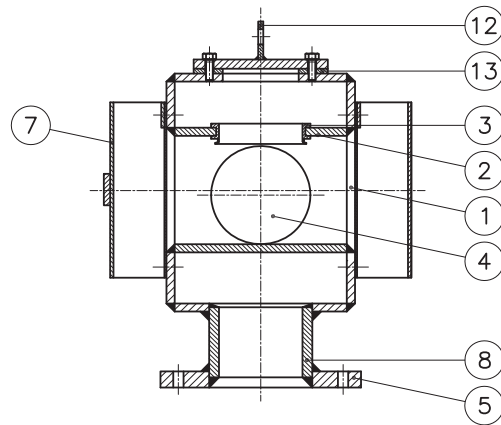
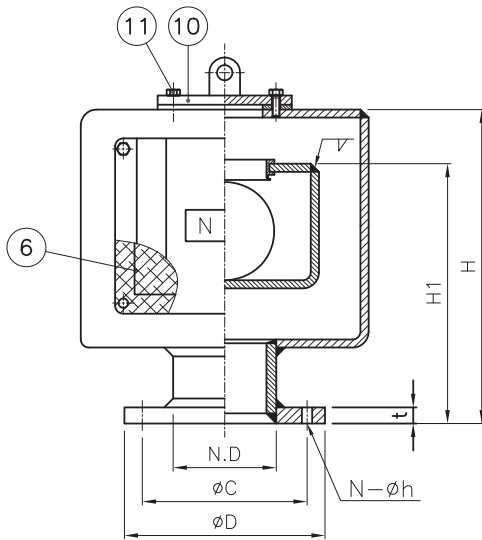
air vent head

● Box Type Ball Float : 100A~600A

NOTE

1. BUG SCREEN WITH WIRE MESH #6 TO BE FITTED FOR GENERAL TANK.
2. FLAME SREEN WITH MESH #30 TO BE FITTED FOR W.B.T OF OIL & CHEMICAL CARRIER
3. LIFTING LUG USE ONLY SIZE 150A
4. STEEL PART : HOT DIP GAL'V

ITEM NO.	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	BODY	SS400	1	GAL'V
2	CHAMBER	SS400	1	GAL'V
3	RUBBER SEAT	NBR	1	
4	BALL FLOAT	SUS304	1	
5	FLANGE	SS400	1	GAL'V
6	BUG SCREEN	SUS304	1	SEE NOTE 1,2
7	SIDE COVER	SS400	4~12	
8	LOWER PIPE	STPG370	1	GAL'V
9	SCREEN HOLDER	SS400	1	GAL'V
10	TOP COVER	SS400	1	GAL'V
11	HEX. BOLT	SS400(W)	7	GAL'V
12	LIFTING LUG	SS400	1	SEE NOTE 3
13	TOP PACKING	NBR	1	
14	NAME PLATE	SUS304	1	
15	SET'G SCREW	SUS304	2	



DIMENSION

(UNIT : mm)

N.D	H	H1	B	L	phi D	phi C	t	N-phi h	WEIGHT (kg)
100A	314	278	254	232	200	165	16	8-phi19	21.1
125A	383	329	286	276	235	200	16	8-phi19	31.2
150A	410	357	330	318	265	230	18	8-phi19	40.7
200A	499	428	409	425	320	280	20	8-phi23	66.7
250A	604	510	514	520	385	345	22	12-phi23	100.4
300A	707	598	598	588	430	390	22	12-phi23	133.6
350A	780	660	674	678	480	435	24	12-phi25	178.6
400A	884	755	767	758	540	495	24	16-phi25	232.7
450A	1016	849	848	840	605	555	24	16-phi25	294.7
500A	1114	932	904	917	655	605	24	20-phi25	349.6
550A	1250	1048	1026	1001	720	665	26	20-phi27	442.2
600A	1366	1129	1123	1091	770	715	26	20-phi27	521.4

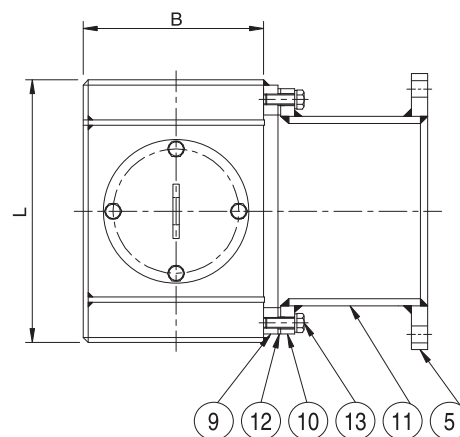
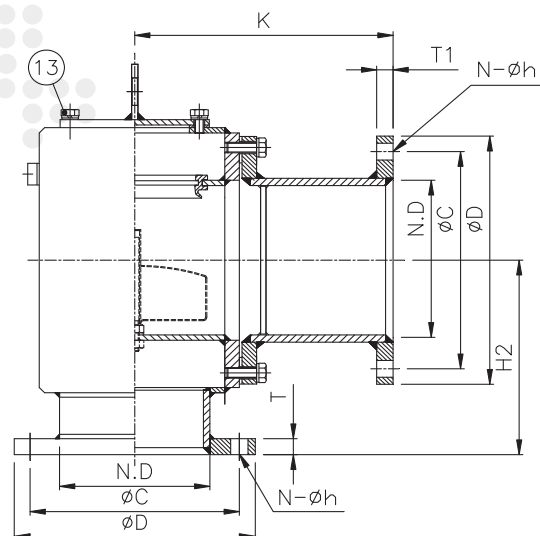




air vent head

● Box Type Over Flow Half Ball Float : 100A~500A

[PIPE TYPE]



■ Material Table

NO.	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	BODY	SS400	1	HOT DIP GAL'V
2	CHAMBER	SS400	1	HOT DIP GAL'V
3	SEAT GASKET	NBR	1	
4	HALF BALL FLOAT	SUS304	1	
5	SLIP-ON FLANGE	SS400	1	JIS 5K
6	LOWER PIPE	STPG370	1	HOT DIP GAL'V
7	GUIDE BAR	SUS304	1	
8	LIFTING LUG	SS400	1	SEE NOTE 2
9	PIECE FLANGE	SS400	1	HOT DIP GAL'V
10	FLANGE	SS400	1	HOT DIP GAL'V
11	SIDE PIPE	STPG370	1	HOT DIP GAL'V
12	GASKET	NEOPRENE	1	
13	HEX. BOLT, WASHER	SUS304	8	
14	TOP COVER	SS400	1	HOT DIP GAL'V
15	PACKING	N.B.R	1	
16	HEX. BOLT, WASHER	SUS304	4-12	

■ Code no & Dimension Table

Unit:mm

CODE NO	N.D	H	H1	H2	K	B	L	øC	øD	T	N-øh
				PIPE	PIPE						
ATH	100A	270	225	170	160	154	232	165	200	16	8-19
ATH	125A	306	230	188	180	176	276	200	235	16	8-19
ATH	150A	323	268	196.5	210	210	318	230	265	18	8-19
ATH	200A	392	324	236	260	259	425	280	320	20	8-23
ATH	250A	440	358	260	320	314	520	345	385	22	12-23
ATH	300A	557	433	323.5	370	368	588	390	430	22	12-23
ATH	350A	584	460	337	420	414	678	435	480	24	12-25
ATH	400A	644	510	372	480	477	758	495	540	24	16-25
ATH	500A	780	623	445	570	564	917	605	655	24	20-25

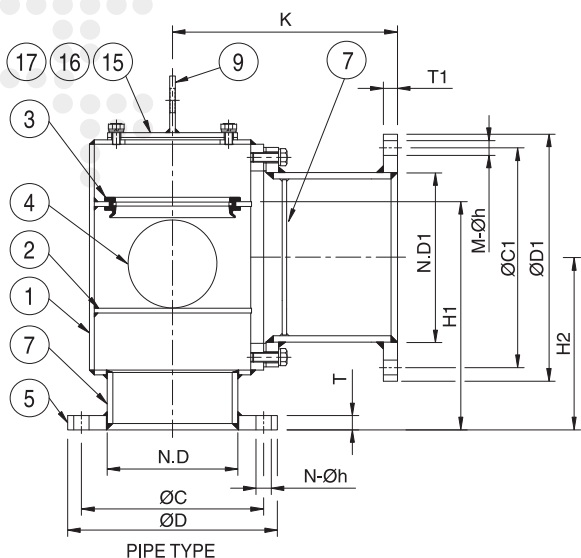
※NOTE 1.Lifting lug to be for 150A and above size.



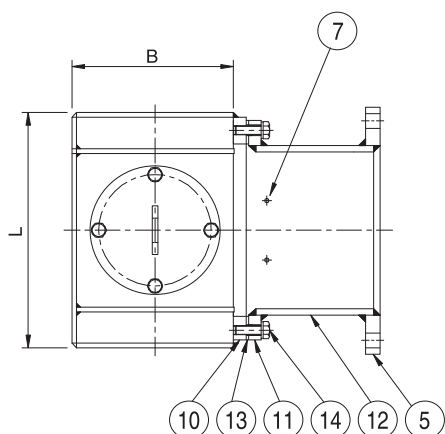
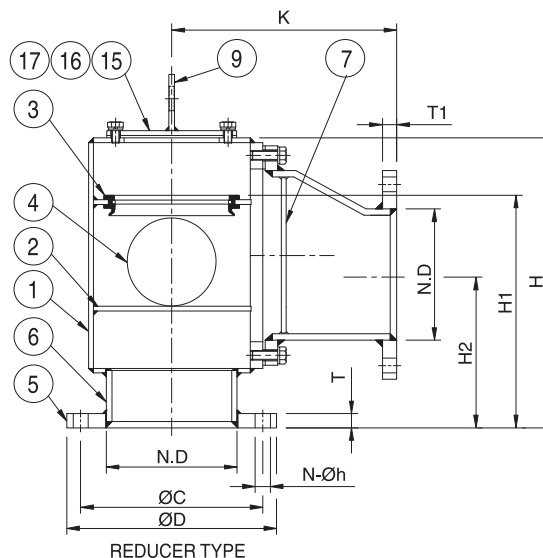
air vent head

● Box Type Over Flow Ball Float : 100A~500A

[PIPE TYPE]



[REDUCER TYPE]



■ Material Table

NO.	DESCRIPTION	MATERIAL	QTY	REMARK
1	BODY	SS400	1	HOT DIP GAL'V
2	CHAMBER	SS400	1	HOT DIP GAL'V
3	SEAT GASKET	NBR	1	
4	BALL FLOAT	SUS304	1	
5	SLIP-ON FLANGE	SS400	1	JIS 5K
6	LOWER PIPE	STPG370	1	HOT DIP GAL'V
7	PROTECTION BAR	SS400	1	HOT DIP GAL'V
8	LIFTING LUG	SS400	1	HOT DIP GAL'V
9	PIECE FLANGE	SS400	1	HOT DIP GAL'V
10	FLANGE	SS400	1	HOT DIP GAL'V
11	SIDE PIPE	STPG370	1	HOT DIP GAL'V
12	GASKET	NEOPRENE	1	
13	HEX. BOLT, WASHER	SUS304	8	
14	TOP COVER	SS400	1	HOT DIP GAL'V
15	PACKING	NEOPRENE	1	
16	HEX. BOLT, WASHER	SS400	20-35	

■ Code no & Dimension Table

Unit:mm

CODE NO	N.D	H	H1	H2		K		B	L	øC	øD	T	N-øh	N.D1	øC1	øD1	T1	M-øh
				PIPE	REDUCER	PIPE	REDUCER											
ATB 100A	100A	309	264	189.5	176.8	160	239	154	232	165	200	16	8-19	125A	200	235	16	8-19
ATB 125A	125A	383	307	226.5	213.8	180	263	176	276	200	235	16	8-19	150	230	265	18	8-19
ATB 150A	150A	410	355	240	214.5	210	292	210	318	230	265	18	8-19	200	280	320	20	8-23
ATB 200A	200A	494	426	287	261.5	260	342	259	425	280	320	20	8-23	250	345	385	22	12-23
ATB 250A	250A	579	497	329.5	304	320	395	314	520	345	385	22	12-23	300	390	430	22	12-23
ATB 300A	300A	736	612	416	394.5	370	549	368	588	390	430	22	12-23	350	435	480	24	12-25
ATB 350A	350A	786	664	474	418.6	420	608	414	678	435	480	24	12-25	400	495	540	24	16-25
ATB 400A	400A	852	718	476	450.6	480	654	477	758	495	540	24	16-25	450	555	605	24	16-25
ATB 500A	500A	1063	906	586.5	561.1	570	825	564	917	605	655	24	20-25	550	665	720	26	20-27

※NOTE 1.Lifting lug to be for 150A and above size.

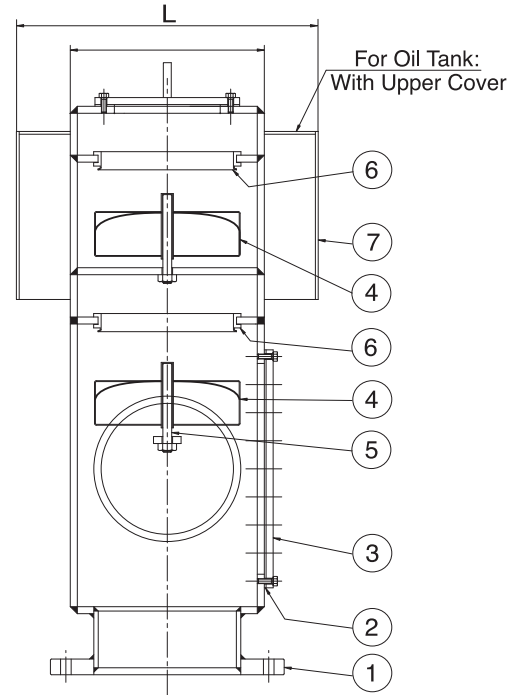
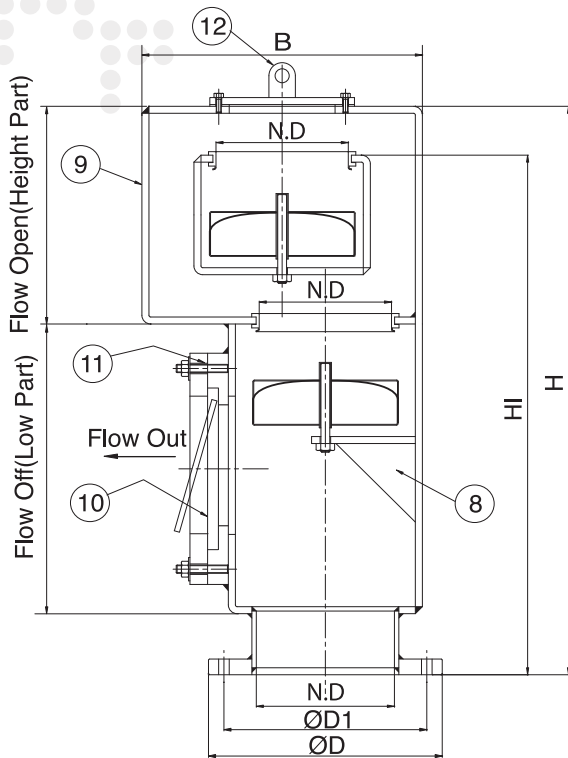




air vent head

● Air Vent Head Double Check Valve Type

Having flow over in lower part, after installation double venthead to prevent flowing the fluid from Air Vent Head.



■ Material Table

NO.	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	FLANGE	SS400	1	JIS-5K
2	PACKING	NEOPRENE	1	
3	INSPECTION-HOLE	SS400	1	GAL'V
4	FLOAT	SUS304	2	
5	GUIDE BAR	BSBF/SUS304/SUS316	2	
6	SEAT GASKET	NBR	2	
7	SIDE COVER	SS400	2	
8	SUPPORTING PLATE	SS400	1	GAL'V
9	BODY	SS400	1	GAL'V
10	SWING CHECK VALVE	SS400	1	GAL'V
11	STUD BOLT	SS400	16	GAL'V
12	LIFTING LUG	SS400	1	GAL'V

※NOTE 1.Lifting lug to be for 150A and above size.

■ Code no & Dimension Table

Unit:mm

CODE NO	N.D	B	ØD	H	L	ØD1	H1
	A(mm)						
DCD	100A	232	200	600	254	165	555
DCD	125A	276	235	660	286	200	603
DCD	150A	318	265	730	330	230	674
DCD	200A	425	320	860	409	280	791
DCD	250A	520	385	960	514	345	868

※NOTE 1.Standard coating : Hot dip Gal'v (only carbon steel part)

2.Flame screen with wire mesh #30 to be fitted for oil & F.W.tank and W.B.T of oil & chemical carrier or wire mesh #4 for other tanks.



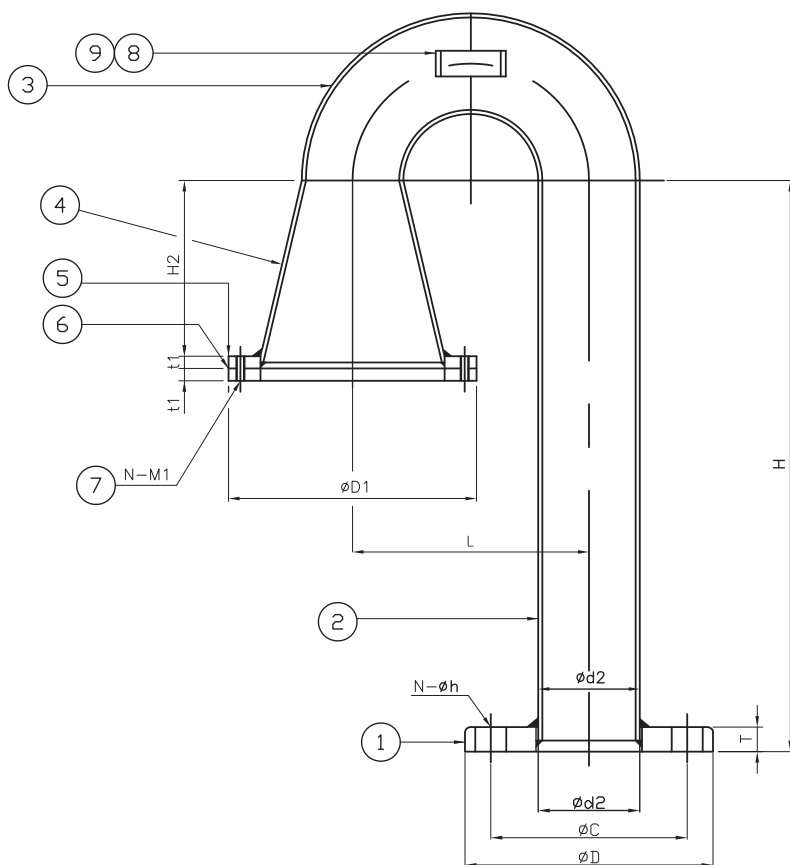
air vent head

GOOE NECK AIR VENT HEAD

NOTE

1. FLANGE CONN. : JIS 5K SOFF TYPE
2. COATING SPEC : HOT DIPED GALV'
3. PIPE & FITTING SHALL BE
SCH.40(40A~250A)
9.5t(300A&ABOVE)
4. 40A~65A : LONG ELBOW
80A~ABOVE : SHORT ELBOW
5. DIMENSION "H" IS CHANGEABLE
ACCORDING TO PURCHASER'S REQUIERMENT (ORDER)

ITEM NO.	DESCRIPTION	MATERIAL	Q'TY	REMARK
1	FLANGE	SS400	1	
2	PIPE	STPG370	1	SEE NOTE 3
3	ELBOW	STPG370	2	
4	REDUCER	STPG370	1	
5	SCREEN PLATE	SS400	2	
6	WIRE NET	SUS304	1	#6 OR #30
7	HEX BOLT	SUS304	4~12	
8	SEAT FOR NAME PLATE	SUS304	1	
9	NAME PLATE	SS400	1	



DIMENSION

UNIT : mm

SIZE	øD	øC	T	øD1	t1	ød2	H2	L	N-M1	N-øh
40A	120	95	12	100	4	48.6	71.2	114.4	4-M5	4-15
50A	130	105	14	110	4	60.5	83.9	152.4	4-M5	4-15
65A	155	130	14	120	4	76.3	83.9	190.6	4-M5	4-15
80A	180	145	14	150	4	89.1	96.6	152.4	4-M5	4-19
100A	200	165	16	177	5	114.3	122	203.2	6-M6	8-19
125A	235	200	16	203	5	139.8	134.7	254.0	6-M6	8-19
150A	265	230	18	260	5	165.2	147.4	305.7	6-M6	8-19
200A	320	280	20	320	5	216.3	172.8	406.4	8-M10	8-ø23
250A	385	345	22	375	6	267.4	198.2	508	12-M10	12-ø23
300A	430	390	22	413	6	318.5	325.2	609.6	12-M10	12-ø23
350A	480	435	24	463	6	355.6	354.6	711.2	12-M10	12-ø25
400A	540	495	24	520	6	406.4	376	812.8	12-M10	16-ø25



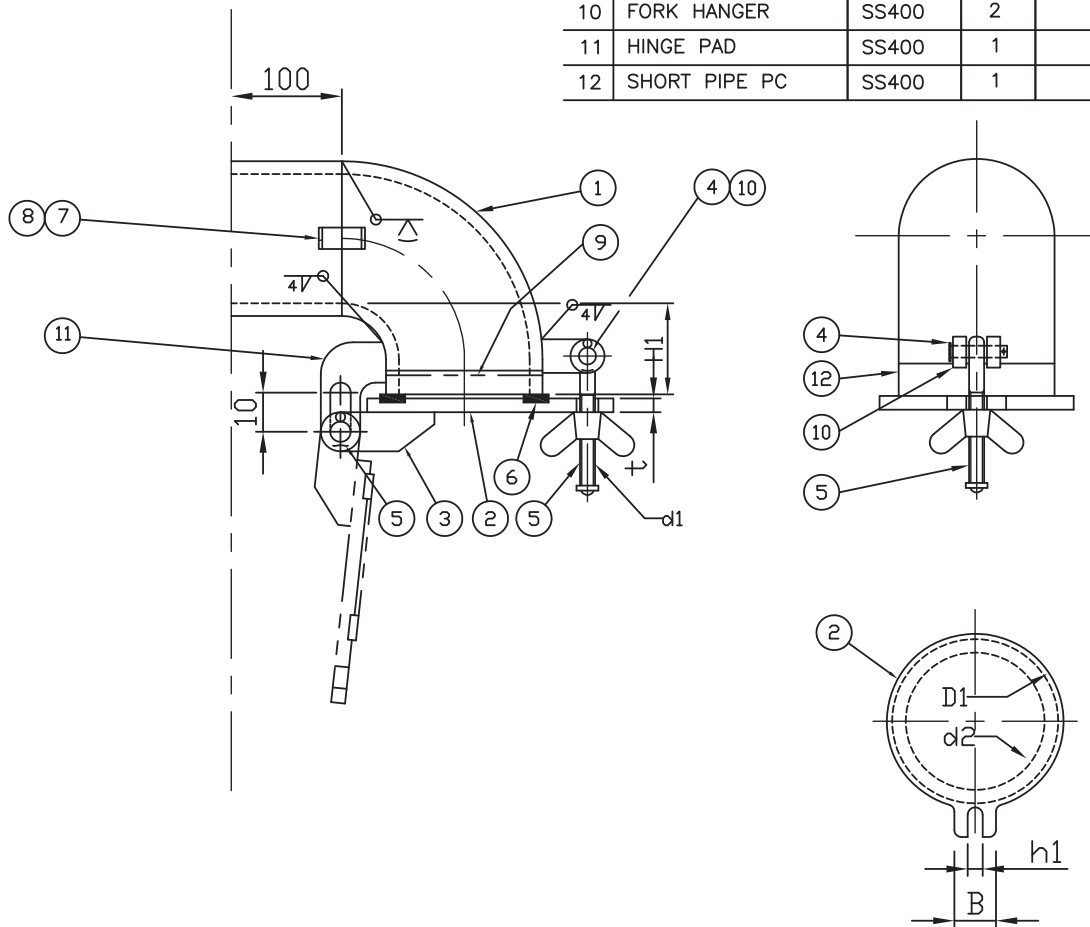
air vent head

GOOSENECK WALL MOUNT TYPE

NOTE

1. FLANGE CONN. : JIS5K
2. PIPE & FITTING SHALL BE SCH.40(40A~300A) SPP (350A~ABOVE)
- 40A~65A : LONG ELBOW
80A~ABOVE : SHORT ELBOW
4. DIMENSION "L" IS CHANGEABLE ACCORDING TO PURCHASER'S REQUIERMENT (ORDER)

NO.	DISCRIPTION	MAT'L	Q'TY	REMARK
1	ELBOW	STPG370	1	
2	COVER	SS400	1	
3	HINGE BLADE	SS400	2	
4	HEAD PIN/SPLIT PIN	BSBF	2	DIN 1434
5	I-BOLT & BUTTERFLY NUT	BSBF	1	
6	COVER GASKET	NBR	1	
7	SEAT FOR NAME PLATE	SS400	1	
8	NAME PLATE	SUS304	1	
9	FRAME SCREEN	SUS304	1	#6 OR #30
10	FORK HANGER	SS400	2	
11	HINGE PAD	SS400	1	
12	SHORT PIPE PC	SS400	1	



DIMENSION (UNIT : mm)

N.D	H1	H2	H3	t	L	D1	d2	B	d1	h1
40A	42.5	70	38	10	100	58.6	32.6	45	M10	12
50A	55.6	70	51.45	10	100	70.5	44.5	45	M10	12
65A	60.4	70	62.35	10	100	86.3	50.3	45	M10	12
80A	66.7	70	37.15	10	100	99.1	69.1	45	M10	12
100A	84.5	90	50.45	12	100	126.3	90.3	55	M12	14
125A	97.1	90	63.7	12	100	151.8	115.8	55	M12	15
150A	109.8	100	76.9	14	100	177.2	139.2	65	M16	18
200A	140.1	100	103.25	14	100	228.3	186.3	65	M16	18
250A	165.3	100	129.6	16	100	279.4	241.4	65	M16	18
300A	195.6	100	155.85	16	100	332.5	292.5	65	M16	18
350A	227.8	100	188.9	18	100	369.6	329.6	65	M20	22



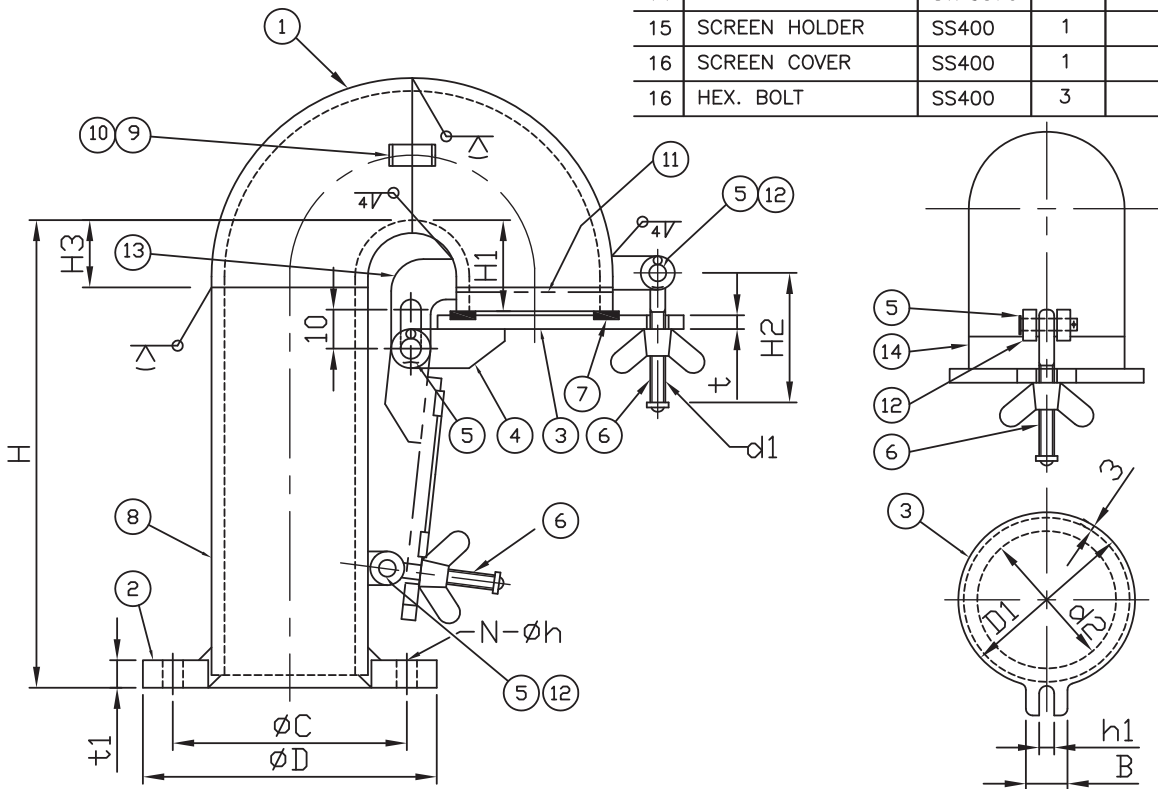
air vent head

GOOSENECK AIR VENT HEAD DECK TYPE

NOTE

1. FLANGE CONN. : JIS5K
2. PIPE & FITTING SHALL BE SCH.40(40A~300A) SPP (350A~ABOVE)
3. 40A~65A : LONG ELBOW
80A~ABOVE : SHORT ELBOW
4. DIMENSION "H" IS CHANGEABLE ACCORDING TO PURCHASER'S REQUIERMENT (ORDER)

NO.	DISCRIPTION	MAT'L	Q'TY	REMARK
1	ELBOW	STPG370	2	
2	FLANGE	SS400	1	SEE NOTE 1,2
3	COVER	SS400	1	
4	HINGE BLADE	SS400	2	
5	HEAD PIN/SPLIT PIN	BSBF	3	DIN 1434
6	I-BOLT & BUTTERFLY NUT	BSBF	2	
7	COVER GASKET	NBR	1	
8	PIPE	STPG370	1	SEE NOTE 2
9	SEAT FOR NAME PLATE	SS400	1	
10	NAME PLATE	SUS304	1	
11	SCREEN MESH	SUS304	1	#6 OR #30
12	FORK HANGER	SS400	2	
13	HINGE PAD	SS400	1	
14	SHORT PIPE PC	STPG370	1	
15	SCREEN HOLDER	SS400	1	
16	SCREEN COVER	SS400	1	
16	HEX. BOLT	SS400	3	



DIMENSION

(UNIT : mm)

N.D	H1	H2	H3	øC	øD	t1	t	D1	d2	B	d1	h1	N-øh
40A	42.5	70	38	95	120	12	10	58.6	32.6	45	M10	12	4-15
50A	55.6	70	51.45	105	130	14	10	70.5	44.5	45	M10	12	4-15
65A	60.4	70	62.35	130	155	14	10	86.3	50.3	45	M10	12	4-15
80A	66.7	70	37.15	145	180	14	10	99.1	69.1	45	M10	12	4-19
100A	84.5	90	50.45	165	200	16	12	126.3	90.3	55	M12	15	8-19
125A	97.1	90	63.7	200	235	16	12	151.8	115.8	55	M12	15	8-19
150A	109.8	100	76.9	230	265	18	14	177.2	139.2	65	M16	19	8-19
200A	140.1	100	103.25	280	320	20	14	228.3	186.3	65	M16	19	8-23
250A	165.3	100	129.6	345	385	22	16	279.4	241.4	65	M16	19	12-23
300A	195.6	100	155.85	390	430	22	16	332.5	292.5	65	M16	19	12-23
350A	227.8	100	188.9	435	480	24	18	369.6	329.6	65	M20	23	12-25



Our Product List



Air Vent Head Box Type



Rubber Pad & Strap For Pipe Support of Freon or Hot System pipe



SEA CHEST & SEA CONN. Blanking For Under Water Survey



Convex Coupling for Sliding Expansion joint



Hydraulic Test Plug



Pipe Coupling



Bellows Type Expansion Joint



Scupper Plug



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