

GS HIGHTECHER PRODUCT GUIDEBOOK

SINCE 1992

Our Product List



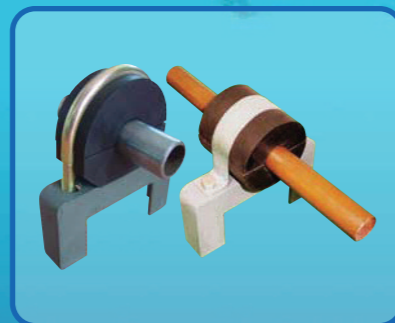
Air Vent Head Box Type



Convex Coupling for Sliding
Expansion Joint



Sea Chest Cover & Sea conn. Pipe
Plug for under water survey



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



Hydraulic Test Plug



Pipe Coupling



Bellows Type Expansion Joint



Scupper Plug



GS Hightecher Co., Ltd.

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as of 2017



GS Hightecher Co., Ltd.

INTRODUCTION

Since its establishment in 1992,

GS HIGHTECHER CO., LTD. has been specialized in manufacturing ship's Valves and Fittings such as Bronze Casting Marine Valves, Air Vent Heads, Convex Couplings, Expansion Joints, Pipe Couplings, Sea Chest Covers and Pipe Plugs for shipbuilding materials. We have been continuously endeavoring to develop the equipment for Marine vessels.

We are **NOT STAYING** in the present, moving forward into the **FUTURE**.

Sun-Boq PARK
CEO & Chairman



Brief History

Foundation : Aug. 1992

Capital : USD 620,000

Facility : Land : approx. 14,000M², Factory : 5,000M²

Type Approval Class Certificates : ABS, BV, DNV, LR, NK, KR, RINA, RMRS

Major Customers : DSME, SAMSUNG, HYUNDAI, HANJIN, STX, SPP, DAESUN and other Domestic Shipbuilders, MHI, TSUNEISHI, SANOYAS, NAIKAI, IMABARI, EUROPE, ASIA, CHINA and etc.

Since 1992

- 1992 Aug. Established Youngram Metal Co, Ltd.
- 2000 Dec. Obtained major Class Certificates for Air Vent Head (DNV, ABS, BV, LR, KR, NK, GL, RINA)
- 2001 Dec. Acquired BVQI ISO 9001-2000 Certifications
- 2002 Apr. Changed the company name to GS HIGHTECHER Co., Ltd.
- 2003~2004 Obtained major Class Certificates for Convex type Coupling. (DNV, ABS, BV, LR, KR, NK, GL)
- 2005 Sep. Awarded Quality Assurance Certificate (Grade A) from DSME
- 2010 May. Signed contracts with Japanese shipyards (TSUNEISHI, NAIKAI, SANOYAS, IMABARI, MHI and Etc.)
- 2014 Jun. Construction of new Factory in Miryang, Kyongnam province. (Land : 14.000M², Factory : 5,000M²)
- 2017. Mar. Obtained RMRS Type Approval Certificate

CERTIFICATES

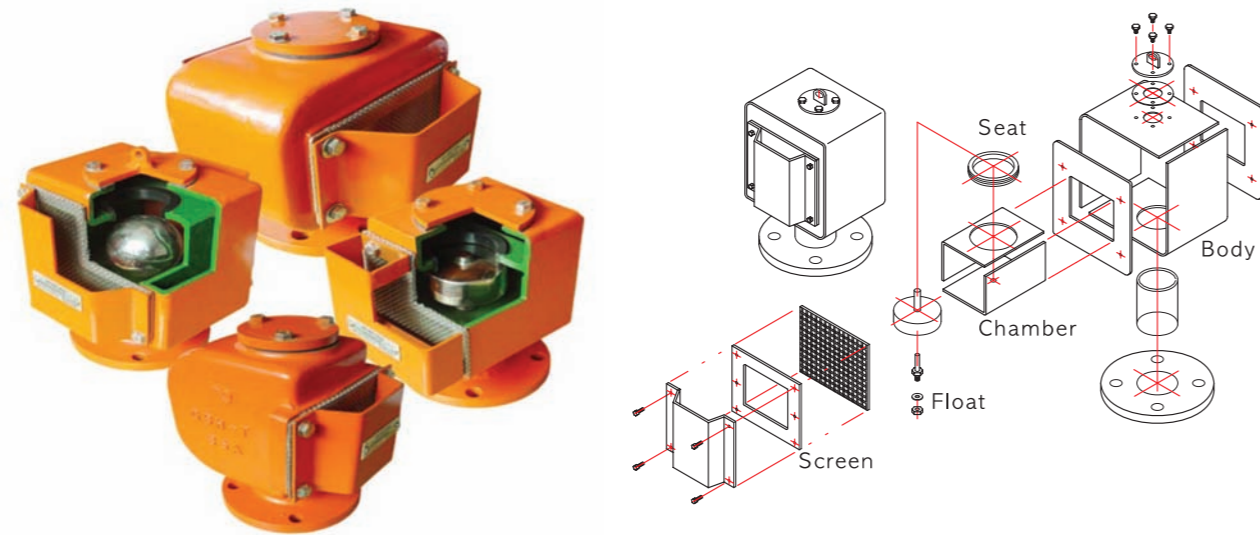
• Certified Type Approval by International Association of Classification Societies



AIR VENT HEAD

- Optimized size for reducing dead space.
- Lighter weight over 15% than before.
- Designed increasing Air Volume Rate over 2 times than before (for safety).
- Developed HALF BALL FLOAT for increasing Air volume rate.
- Developed the New Snap Lip Seal for tight Sealing.

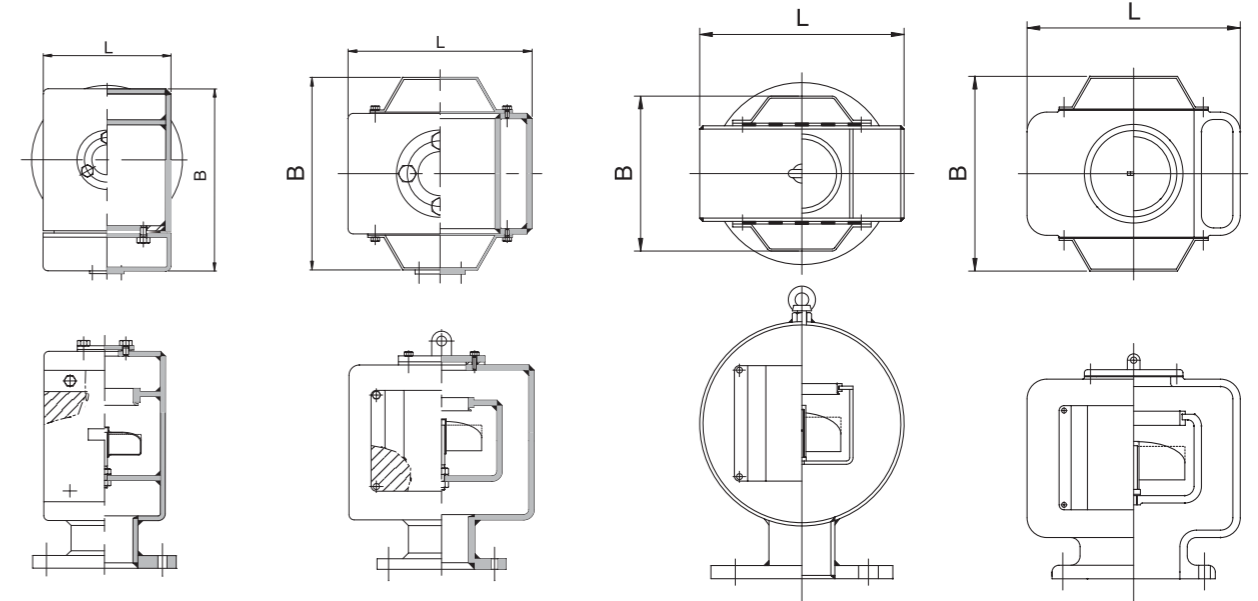
- Air Vent Head Box type is designed to compact and light-weight to enable large space to the Passage Way and consider the important loading weight in ship.
- Air Vent Head Box type is qualified by International Association of Classification Societies.
- Box type is apply to the Rule of IACS P3, S27 and designed to Light-weight, Equal-thickness, Strong and Compact size compare with the existing uneconomical product that is heavy, irregular thickness, weak to corrosion and brittleness.



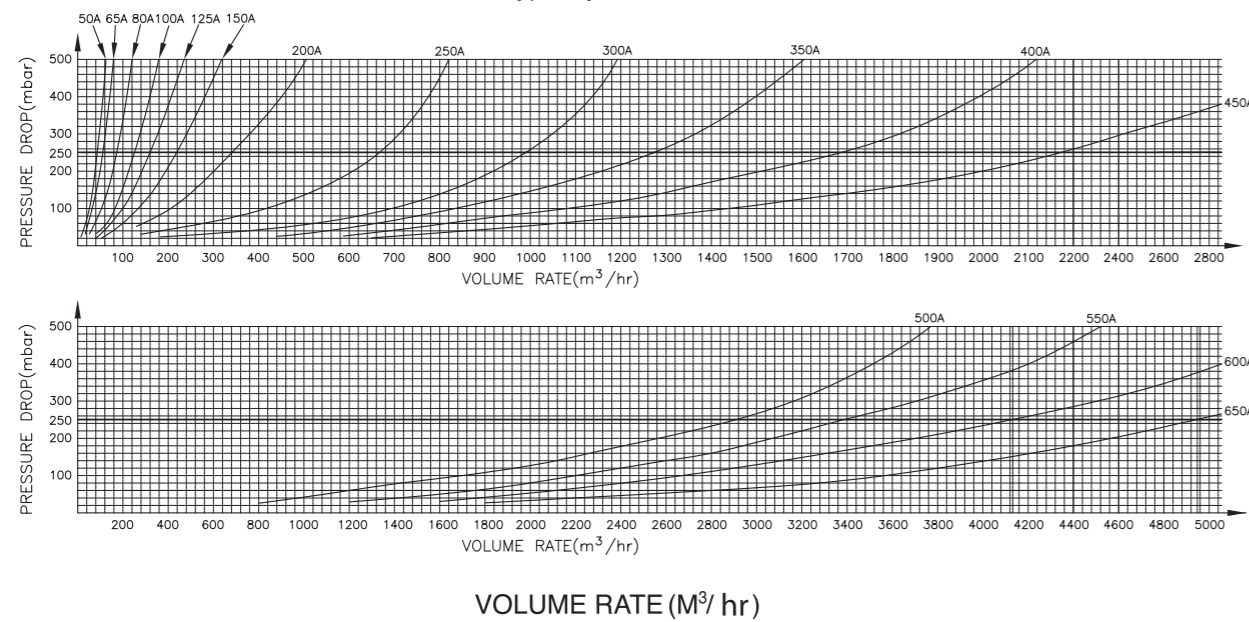
Box Type

Pipe Form Type

Cast Type



Box Type Hydraulic Resistance Curve



Comparison Table in Dimension & Weight for each type.

N.D		Box Type		Pipe Form Type		Casting Type	
A (mm)	B (inch)	L x B	W (kg)	L x B	W (kg)	L x B	W (kg)
50A	2	90 x 153	8.2	165.2 x 151	10	84 x 147	9.8
65A	2 1/2	107 x 183	9.6	216.3 x 157	13	104 x 182	11.6
80A	3	129 x 216	11.6	216.3 x 178	15	127 x 217	13.6
100A	4	229 x 221	16.8	267.4 x 254	24	223 x 227	18.0
125A	5	260 x 266	21.8	318.5 x 286	39	262 x 268	27.0
150A	6	304 x 312	29.6	355.6 x 330	59	309 x 317	38.0
200A	8	390 x 399	46.8	457.2 x 409	79	407 x 407	71.0
250A	10	487 x 503	70.5	546 x 514	116	492 x 511	102
300A	12	577 x 603	82.3	635 x 598	154	585 x 609	143
350A	14	644 x 672	112.4	715 x 674	181	653 x 674	291
400A	16	735 x 773	143.6	815 x 767	215	746 x 766	273
450A	18	809 x 560	170.1	920 x 846	267	828 x 856	306
500A	20	898 x 944	216.2	1020 x 904	335		
550A	22	1006 x 1018	265.8	1120 x 1026	406		
600A	24	1097 x 1115	318.6	1255 x 1121	457		
650A	26	1192 x 1222	365.3	1345 x 1248	508		

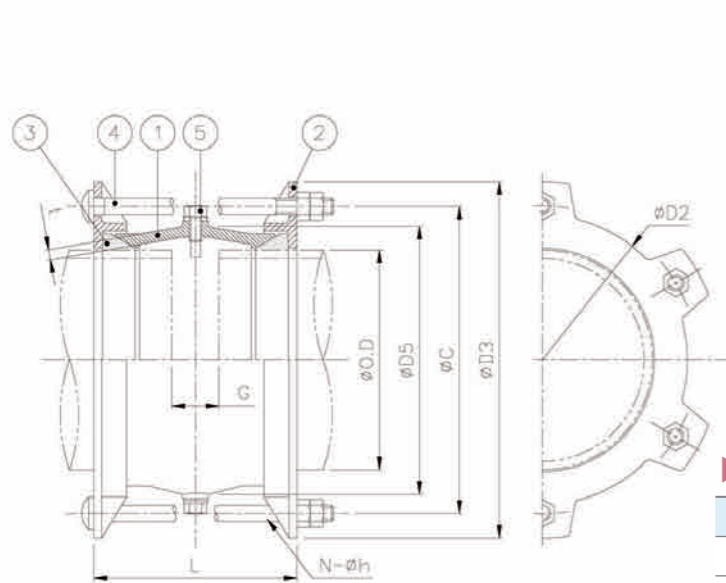
Pressure drop : 2500mmaq(250mbar)

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

CONVEX COUPLING

● Convex Type Sliding Expansion Joint



► Material

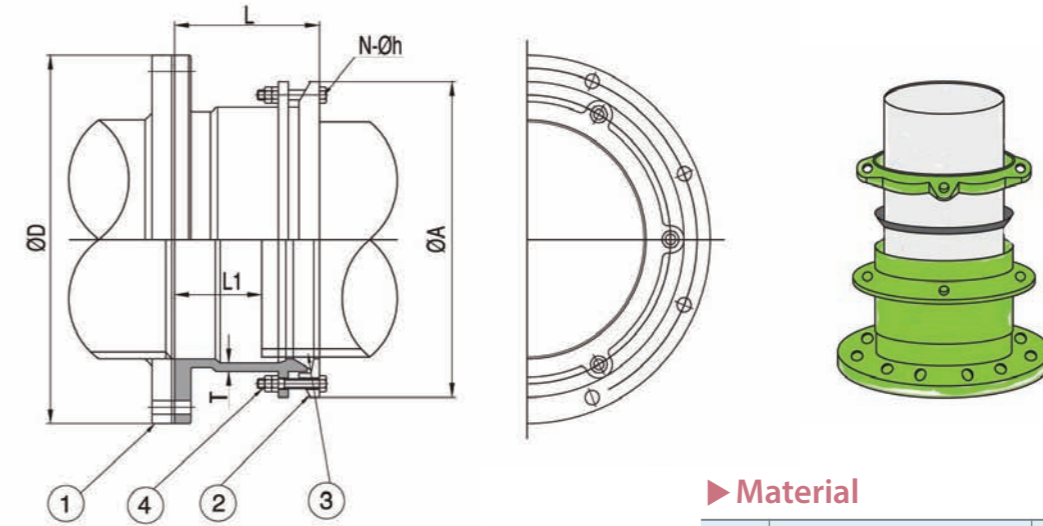
No.	Description	Material	Q'ty
1	Convex Middle Ring	FCD450, SUS304, 316	1
2	Lug type Follower	FCD450, SUS304, 316	2
3	Packing	NBR, VITON, TEFLON	2
4	Bolt & Nut	SS400/SUS304/SUS316	3~16
5	Stop Bolt & Washer	SUS304/SUS316	2

► Dimension

PIPE		øD2	øD3	øD5	øDC	Approx.L long	T	N-øh	Weight(kg) long	Working Pressure (bar)	Test Pressure (bar)
N.D	O.D										
50A	60.5	80	86	96.4	120	268	5.2	3-ø12	5.5	16	64
65A	76.3	97	102	113	138	268	6.0	4-ø12	7.0		
80A	89.1	110	115	126	150	277	6.0	4-ø12	10.0		
100A	114.3	139	141	154	178	278	6.5	4-ø12	14.3		
125A	139.8	165	166	180	204	279	7.0	6-ø12	18.8		
150A	165.2	193	192	207	236	285	7.5	6-ø16	22.5		
200A	216.3	248	245	263	292	285	9.0	6-ø16	33.5		
250A	267.4	299	296	314	343	293	9.0	8-ø16	43.3		
300A	318.5	350	346	364	393	295	9.0	8-ø16	49.5		
350A	355.6	387	384	402	432	296	9.0	10-ø16	58.4		
400A	406.4	440	436	456	486	302	10.0	10-ø16	63.2		
450A	457.2	491	487	507	537	303	10.0	12-ø16	75.4		
500A	508.0	542	539	559	589	307	10.0	12-ø16	92.7		
550A	558.8	594	590	611	641	313	10.5	14-ø16	102.6		
600A	609.6	644	640	661	692	313	10.5	14-ø16	110.3		
650A	660.4	695	691	713	744	318	11.0	16-ø16	122.9		
700A	711.2	747	743	765	796	328	11.0	16-ø16	132.4		
750A	762.0	797	792	815	846	331	11.0	16-ø16	141.1		
800A	812.8	849	845	867	898	331	11.0	16-ø16	150.0		

NOTE : The material subject to customer's requirement.

● Flang Adapter Coupling



► Material

No.	Description	Material	Q'ty
1	Body	FCD450, SUS304, 316	1
2	Lug Type Follower	FCD450	1
3	Packing	NBR, VITON, TEFLON	1
5	Bolt & Nut	SS400/SUS304/SUS316	3~16

► Dimension

PIPE		D2			Approx.L			T	øA	L1		N-øh	Working Pressure (bar)	Test Pressure (bar)
N.D	øO.D	5K	10K	16K	5K	10K	16K			5K/10K	16K			
CLA-40A	48.6	120	14	140	175	179	179	6	136	90	90	3-ø15	16	64
CLA-50A	60.5	130	155	155	178	180	180	6	150	90	90	3-ø15		
CLA-65A	76.3	155	175	175	177	181	181	7	166	90	90	4-ø15		
CLA-80A	89.1	180	185	200	183	187	189	7	189	90	90	4-ø19		
CLA-100A	114.3	200	210	225	189	191	195	9	219	100	100	4-ø19		
CLA-125A	139.8	235	250	270	190	194	196	10	247	100	100	6-ø19		
CLA-150A	165.2	265	280	305	198	202	204	11	277	100	100	6-ø19		
CLA-200A	216.3	320	330	350	203	205	209	13	336	110	105	6-ø19		
CLA-250A	267.4	385	400	430	207	209	213	13	383	110	105	8-ø19		
CLA-300A	318.5	430	445	480	208	212	216	13	436	110	105	8-ø19		
CLA-350A	355.6	480	490	540	213	215	223	13	472	125	115	10-ø19		
CLA-400A	406.4	540	60	605	215	219	229	13	527	125	115	10-ø19		
CLA-450A	457.2	605	620	675	212	218	228	14	581	125	115	12-ø19		
CLA-500A	508	665	675	730	213	219	231	14	633	125	115	12-ø19		
CLA-550A	558.8	720	745	795	215	221	233	14	688	125	120	14-ø19		
CLA-600A	609.6	770	795	845	216	222	236	14	741	125	120	14-ø19		
CLA-650A	660.4	825	845	895	216	224	238	14	791	135	120	16-ø19		
CLA-700A	711.2	875	905	960	215	223	239	14	848	135	120	16-ø19		
CLA-750A	762	945	970	1020	219	227	243	14	898	135	120	16-ø19		
CLA-800A	812.8	995	1020	1085	217	225	243	14	949	135	120	16-ø19		

NOTE 1. The material subject to customer's requirement.
2. Flange size can be changed according to the pressure & connected flange.
3. L1 = Recommended setting length

SEA CHEST COVER & SEA CONNECTION PIPE PLUG

for under water survey

ISSUES

When the valves in the sea overboard connection pipe shall be repaired or replaced, ship to be brought to dry dock.

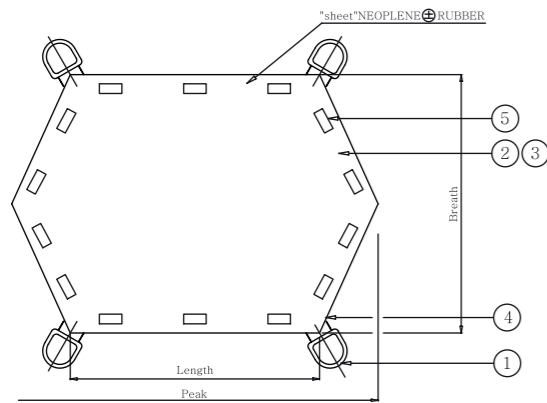
In other way, diver to be jumped into sea water to easily secure outside sea chest with our Sea Chest Cover and/or you can simply insert our Sea Connection Pipe Plugs into the openings of the pipes.

FEATURES

- ▶ No Need to bring ship into dry dock
- ▶ Reusable
- ▶ Easy to use with it's simple structure
- ▶ Easy to bring our product into sea water

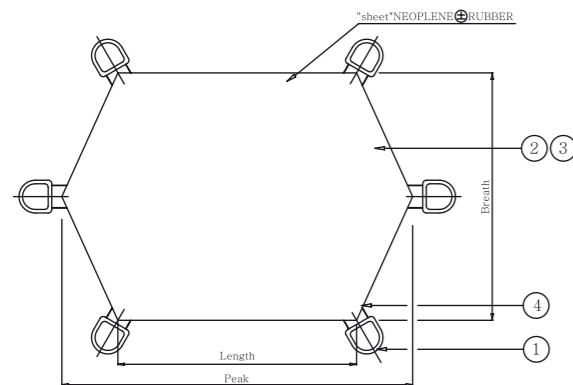
SEA CHEST HULL APERTURE BLANKS

Magnetic Blanket G1-TYPE



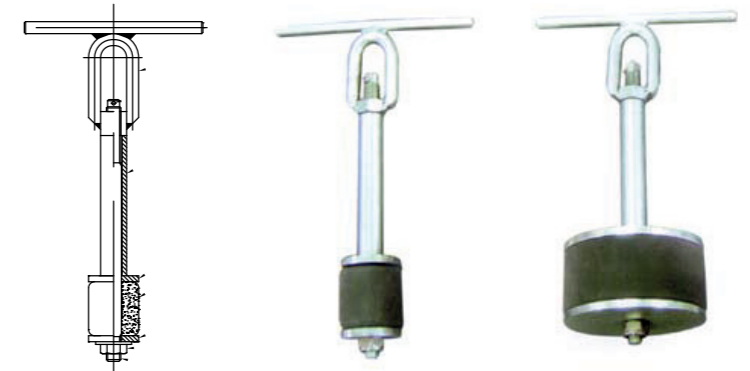
SEA CHEST HULL APERTURE BLANKS

General Blanket TYPE G2-TYPE

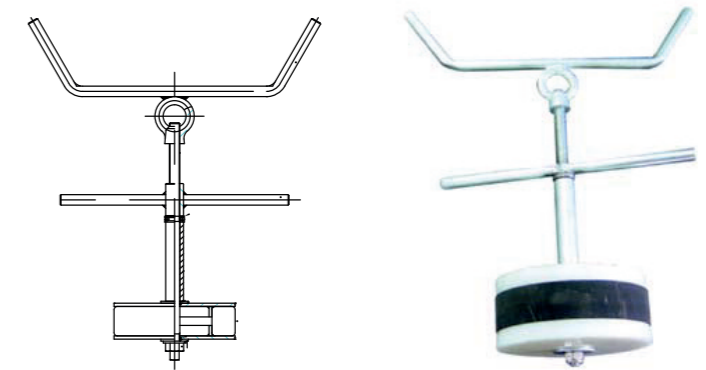


SEA CONNECTION PIPE PLUG

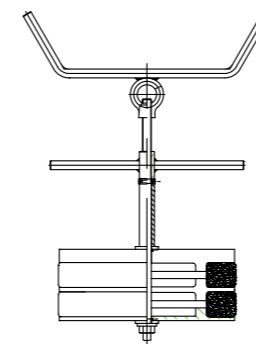
OPERATING HANDLE
A-TYPE



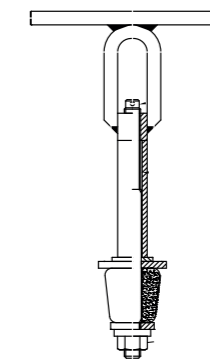
OPERATING HANDLE
B-TYPE



OPERATING HANDLE
C-TYPE



OPERATING HANDLE
D-TYPE

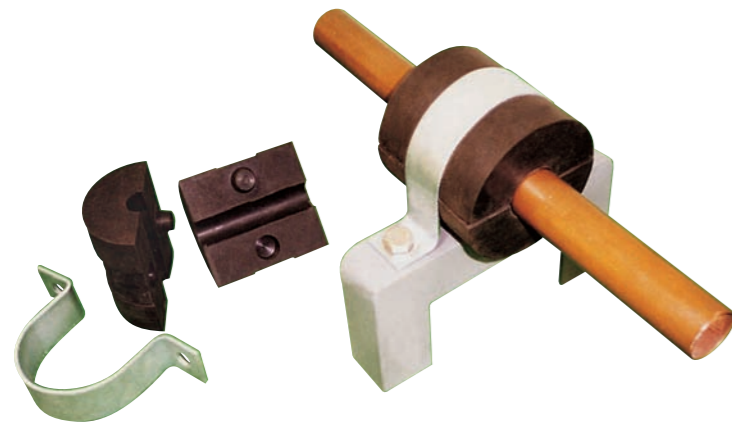


INSERT
F-TYPE



RUBBER PAD & STRAP FOR PIPE SUPPORT

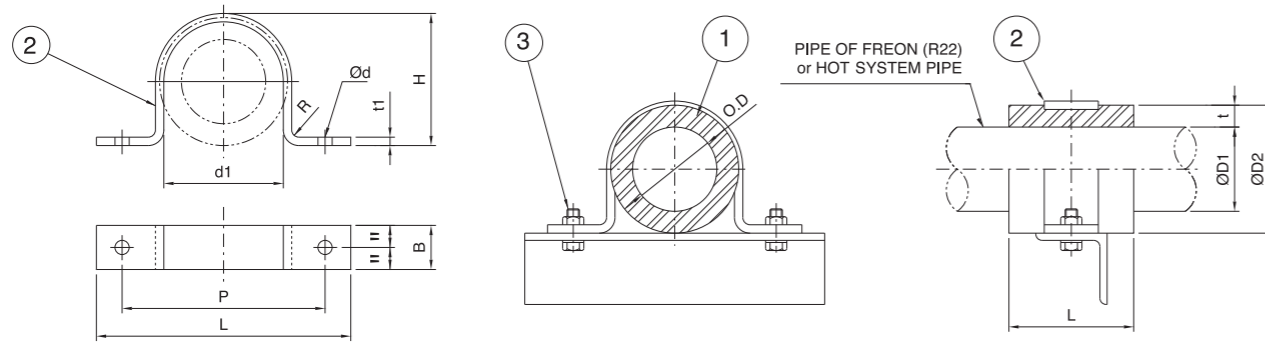
of freon R22 sytem and hot water system



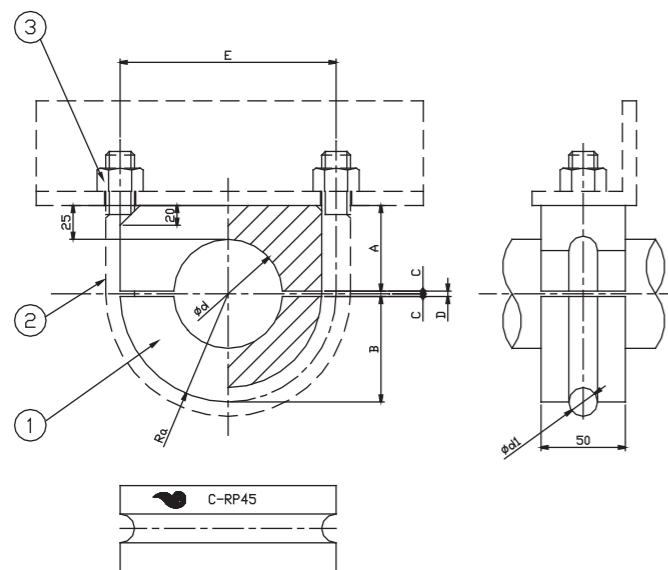
• Rubber Pad Strap A-Type

► Material

No.	Description	Material	Q'ty
1	Rubber Pad	NBR or EPDM	2
2	Steel Strap	SS400(G)	1
3	Bolt/Nut	SS400(G)	2

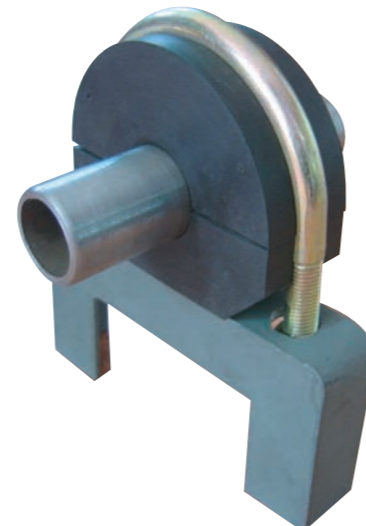


• Rubber Pad & U-Bolt B-Type



► Material

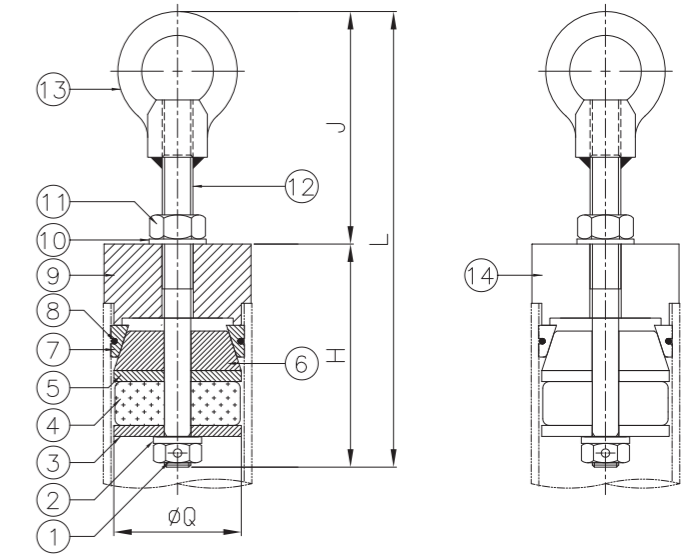
No.	Description	Material	Q'ty
1	Rubber Pad	NBR or EPDM	2
2	U-Bolt	SS400(G)	1
3	Nut	SS400(G)	2



HYDRAULIC TEST PLUG

GS HIGHTECHER CO., LTD.
http://gshightecher.koreasme.com

• Plug Type

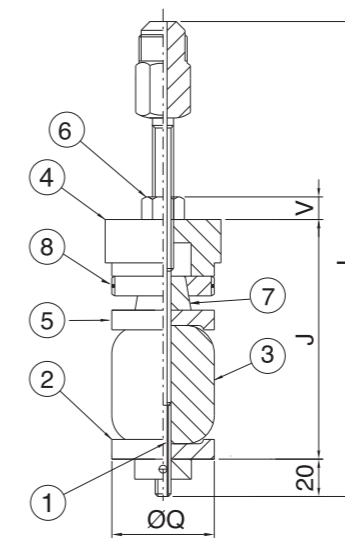
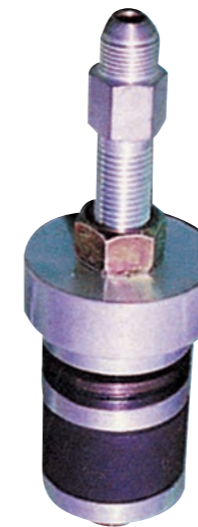


► Material

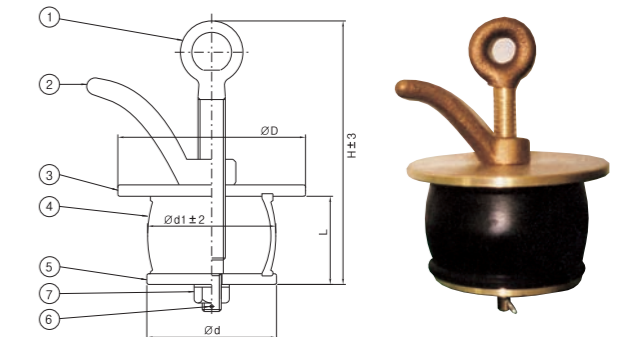
No.	Description	Material	Q'ty
1	Hex Nut	SUS304	1
2	Washer	SUS304	1
3	Base Plate	SS400	1
4	Rubber Ball	EPDM	1
5	Top Plate	SS400	1
6	Collet Guide Cone	SS400	1
7	Support O-ring	SILICON	1

No.	Description	Material	Q'ty
8	Collect	S45C	1
9	Cover Plate	SS400	1
10	Washer	SUS304	1
11	Hex. Nut	SUS304	1
12	Plug Type Shaft	SS400(G)	1
13	Eye Nut	SS400(G)	1
14	Pipe		

• Filling Type



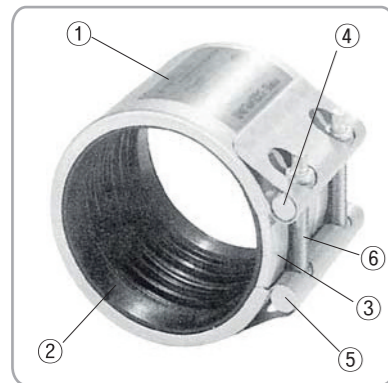
• Scupper Plug



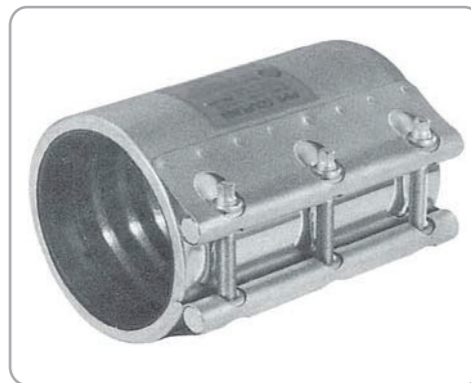
► Material

No.	Description	Material	Q'ty
1	Shaft	BC	1
2	Operating Handle	BC	1
3	Top Plate	HDPE	1
4	Rubber Seal	EPDM or NBR	1
5	Baseplate	BS	1
6	Split Pin	BS	1
7	Nut	BC	1

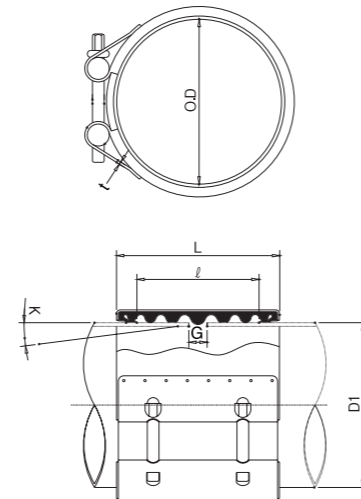
Multi Flex Type for New Installation



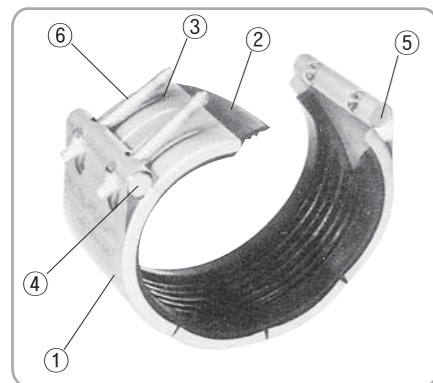
Model:MF-RS



Model:MF-RL



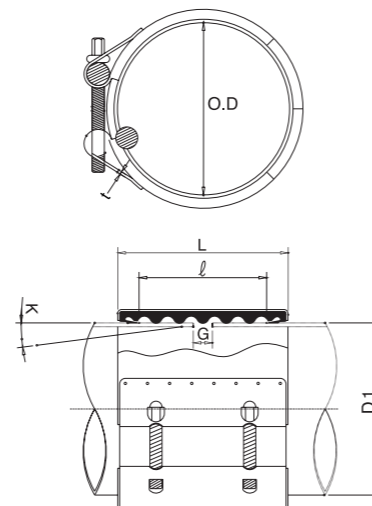
Multi Flex Type Repair Clamp for Repair work



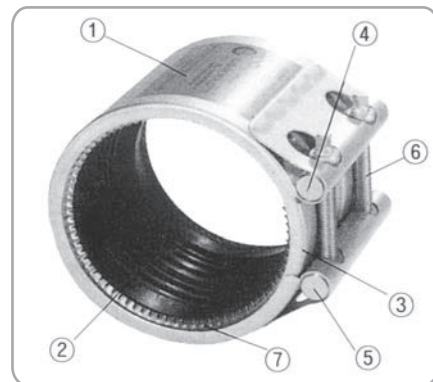
Model:RC-S



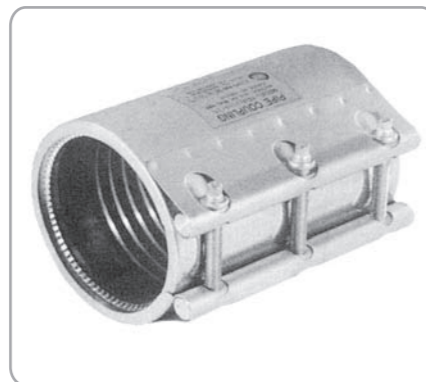
Model:RC-L



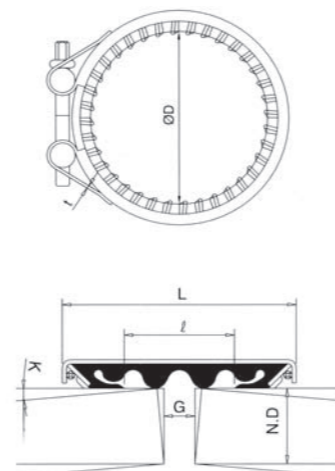
Grip Ring Type for New Installation



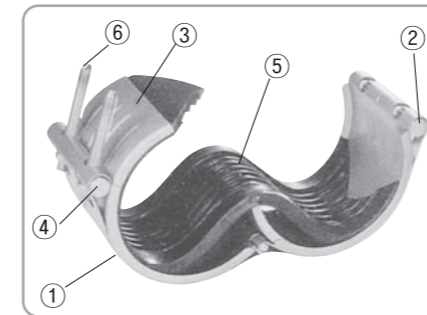
Model:GR-S



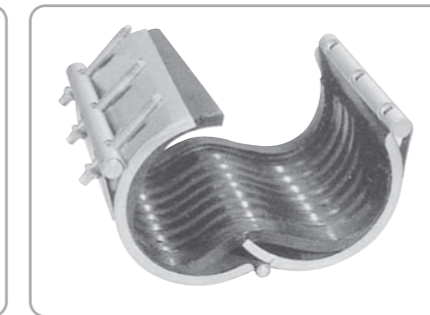
Model:GR-L



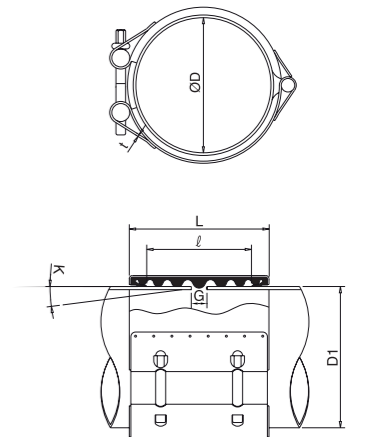
Repair Clamo Hinge Type for Repair Work



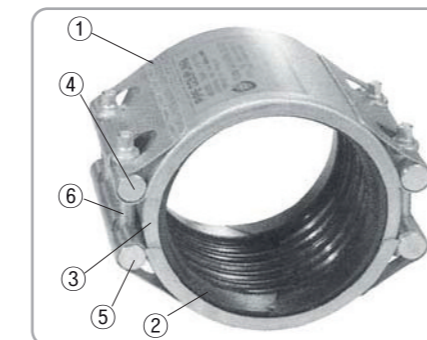
Model:RCH-S



Model:RCH-L



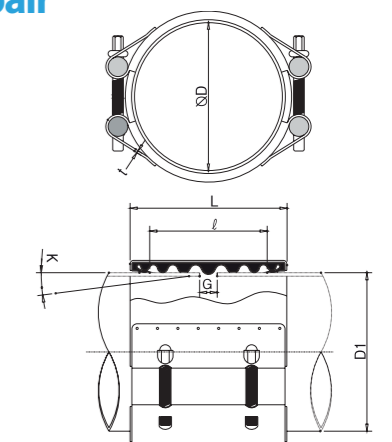
Multi Flex Double Lock Type for New Installation & Repair



Model:MF-DLS



Model:MF-DLL



Various Test method

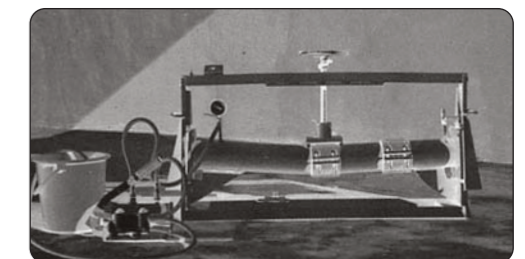
1. Bending Test

MODEL	TESTED PRESSURE	BENDING ANGLE	TEST RESULT
MF-RS100	64Kg/cm ²	Both side 10°	Good

2. Fire Endurance Test

MODEL	TESTED PRESSURE	TEST RESULT
MF-RS100	32Kg/cm ²	water leakage did not occur

Test Laboratory : Korea Institute of Machinery & Material
Rule Applied : G.I.
Contents : No Leakage & Deformation of the Product when tested 30min at 80 with 5.0kg/cm² Circulation

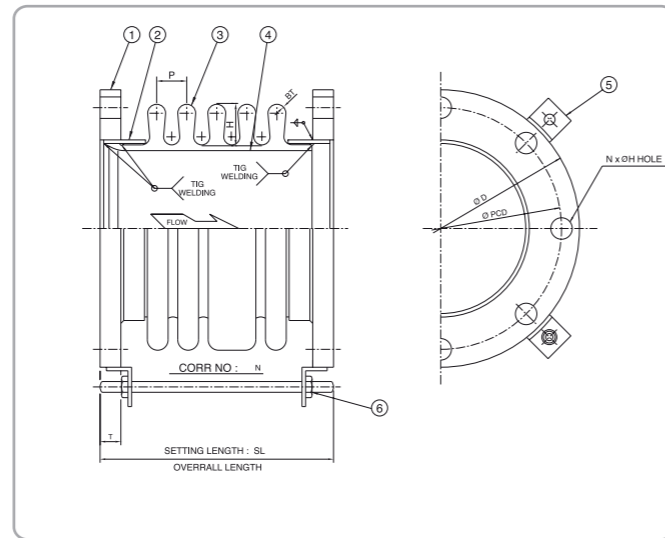
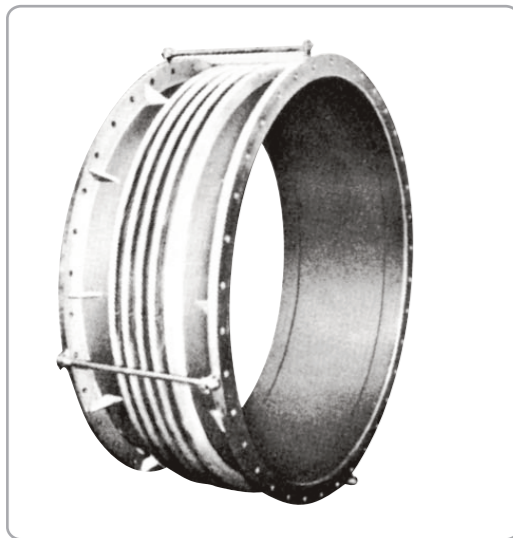


Free Type Expansion Joint

End pipes and flanges are connected to each end of bellows and are mainly used to absorb the expansion and vibration of low-pressure piping

Application

- MAX. pressure : 2kgf/cm², 5k, 10k
- Use : to absorb low-pressure gas pipe, exhaust gas pipe, duct flue, and to prevent vibration of engine exhaust pipe, inlet and outlet of blower



Bellows Type Flexible Joint

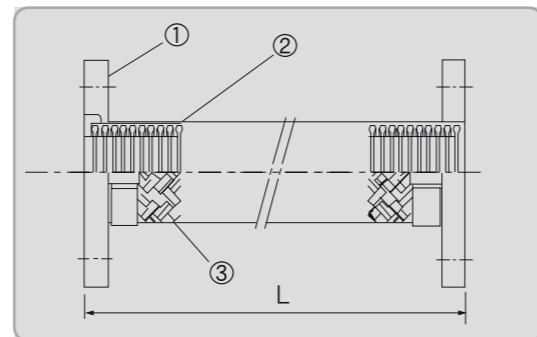
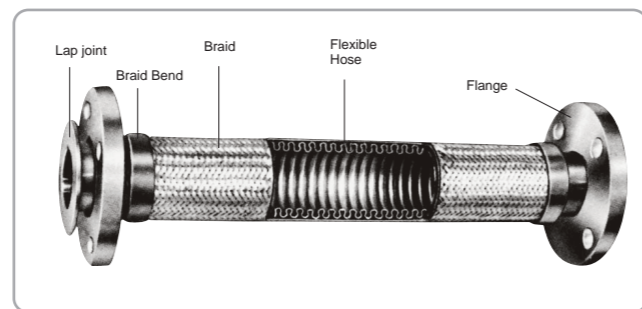
This Product is characterized by its structure which is suitable for piping installed in narrow space, and effectively absorbs vibration and withstand high temperature and high pressure.

Application

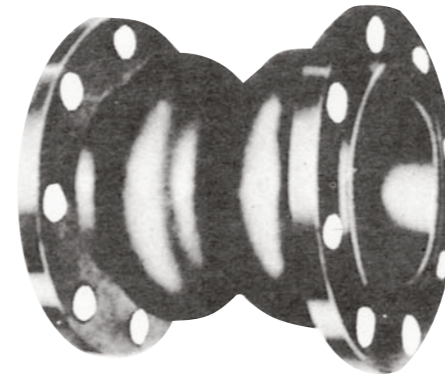
- MAX. working temp : 220
- Max. working press : 10kg/cm²
- Test pressure : 15kg/cm²
- Application Fluid : Water (Fresh, Boiled, Oil, Gas, Air, Steam)
- Bellows : 1 Fly or 2Fly for system

Material

No.	Name of part	Material
1	Flange	SS400 or STS304 or 306
2	Bellows	STS304 or STS316
3	Braid	STS304



Flexible Rubber Connector

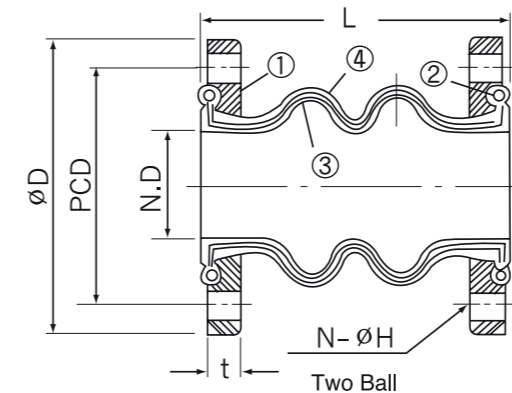
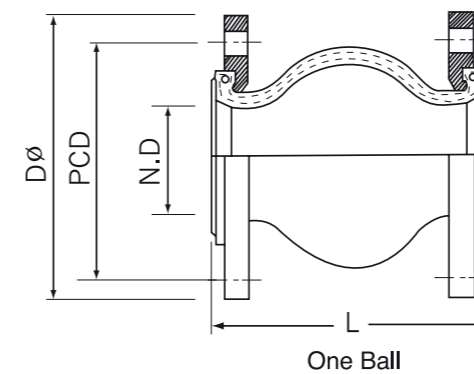


Application

- Working Pressure : 10kg/cm²
- Working temperature : -20 ~ 100
- Applicable Fluid : Water (Fresh, Boiled), Sea water, Air, Acid, Alkali

Material Table

Water & Hot water pressure pipe	Architecture facilities, general factory piping
Feeding / Drainage	Water supply facilities, sewage system
Oil Drainage	Plant, Shipbuilding
Loading Line	Harbor facilities
Others	Sewage disposal plant, Mine Chemical plant



No.	Name of part	Material
1	Flange	SS400 Changeble
2	Wire	Carbon steel wire strand
3	Elastomer	Specail synthetic rubber
3	Reinforcing Fabric	Synthetic fiber