

SCB 锥型橡胶护舷

Super Cone Rubber Fenders

锥形护舷为新一代产品，具有当前护舷中最高反力吸收能比，更具效率。

产品在大的压缩角度下也十分稳定，可提供优良的剪切强度。

Super cone rubber fender is the 3rd generation product of cell type fender;

Cone fenders have the highest energy to reaction ratios of any fender currently in use;

Match up with frontal panel and low friction PE pad;



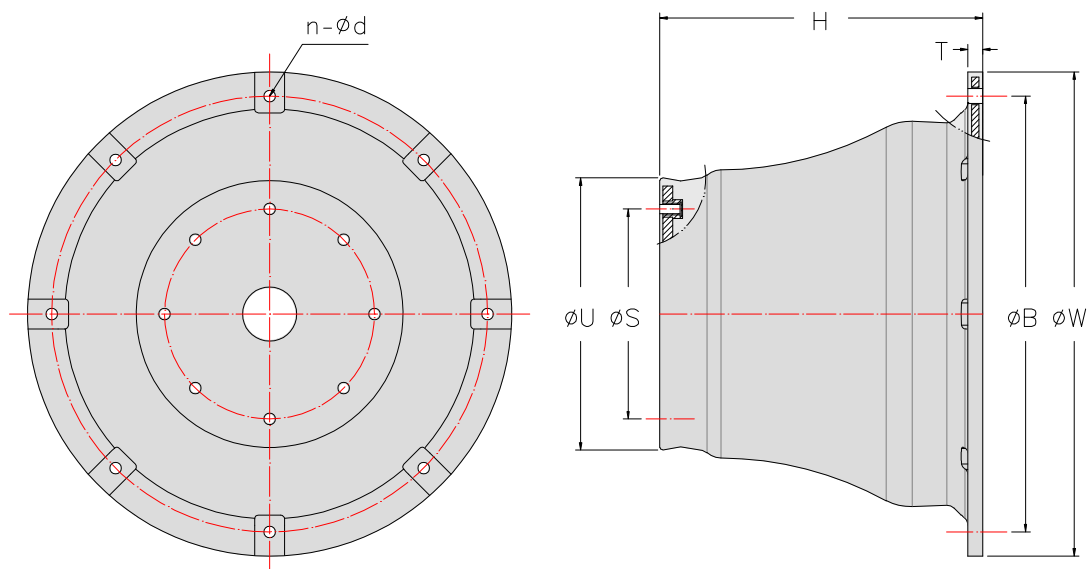
SCB 锥型橡胶护舷

Super Cone Rubber Fenders



规格型号 Specification

Type-1



规格 Specification	H	T	ΦU	ΦS	ΦB	ΦW	Φd	Anchors	重量(kg) Weight
500H	500	25	425	325	675	750	30	4-M24	142
600H	600	27	510	390	810	900	30	6-M24	232
700H	700	32	595	455	945	1050	38	6-M30	393
800H	800	36	680	520	1080	1200	44	6-M36	540
900H	900	41	765	585	1215	1350	44	6-M36	752
1000H	1000	45	850	650	1350	1500	50	6-M42	1022
1100H	1100	50	935	715	1485	1650	50	6-M42	1510
1150H	1150	52	998	750	1550	1725	50	6-M42	1601
1200H	1200	54	1020	780	1620	1800	50	8-M42	1960
1300H	1300	59	1105	845	1755	1950	60	8-M48	2403
1400H	1400	66	1190	930	1890	2100	60	8-M48	3060
1600H	1600	72	1360	1060	2160	2400	70	8-M48	4605
1800H	1800	78	1530	1190	2430	2700	76	10-M56	6608
2000H	2000	80	1900	1540	2920	3200	76	10-M56	9200

[Units: mm]

性能 Performance

规格 Specification		500H	600H	700H	800H	900H	1000H	1100H	1150H	1200H	1300H	1400H	1600H	1800H	2000H
性能 Performance															
RS	R(kN)	340	480	655	862	1078	1339	1490	1764	1760	2125	2255	3130	3750	4260
	E(kNm)	80	155	232	368	480	669	840	1029	1110	1585	1686	2420	3530	4630
RH	R(kN)	270	382	525	706	862	1078	1150	1395	1400	1705	1804	2268	3000	3540
	E(kNm)	65	125	180	294	395	541	650	880	880	1310	1349	1935	2830	3800
RO	R(kN)	195	285	380	510	640	785	930	1050	1120	1340	1445	1815	2400	2980
	E(kNm)	46	94	150	225	310	435	495	660	710	1043	1079	1548	2260	3190
RL	R(kN)	165	230	310	410	510	630	800	830	890	1125	1150	1420	1910	2655
	E(kNm)	37	75	120	180	252	350	408	530	560	750	860	1230	1800	2830

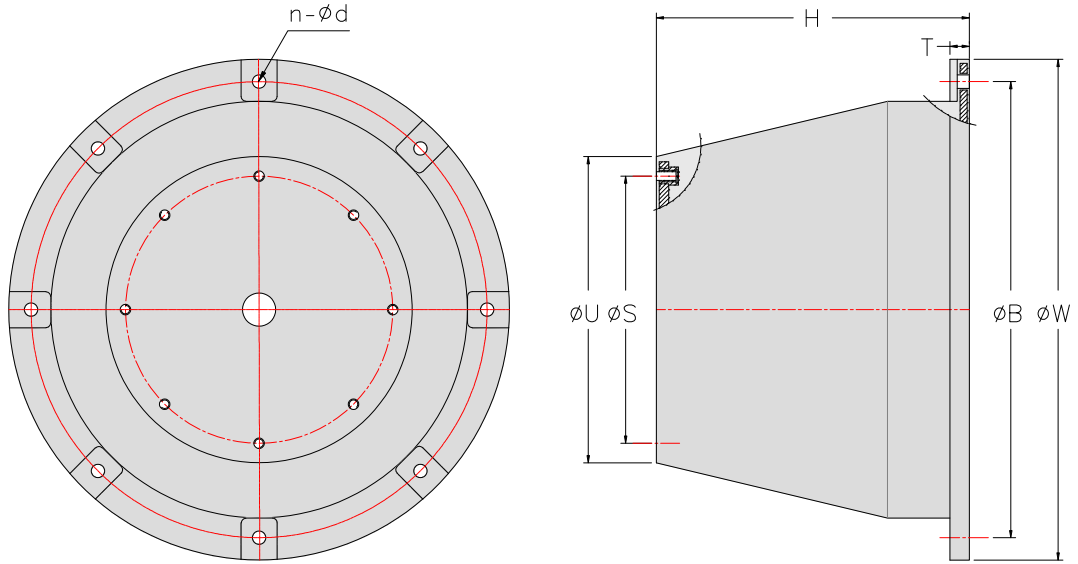
[Units: kN, kNm]

- 注
Note:
- (1) RS-超高反力型, RH-高反力型, RO-标准反力型, RL-低反力型 ;
 - (2) R-反力, E-吸能 ;
 - (3) 设计压缩量: 70%
 - (4) 性能公差: 反力 \leq +10%, 吸能 \geq -10%
- RS: Super high Reaction Force, RH: High Reaction Force
RO: Standard Reaction Force, RL: Low Reaction Force
R: Reaction Force, E: Energy Absorption;

PIANC系数 PIANC factors					
角度系数Angular compression Factor		温度系数 Temperature Factor		速度系数Velocity Factor	
角度 (度) Angle(dgree)	AF	温度 (摄氏度) Temperature(°C)	TF	时间 (秒) Time (second)	VF
0	1.000	50	0.916	1	1.050
3	1.039	40	0.946	2	1.020
5	1.055	30	0.978	3	1.012
8	1.029	23	1.000	4	1.005
10	1.000	10	1.030	5	1.000
15	0.856	0	1.075	6	1.000
20	0.739	-10	1.130	8	1.000
		-20	1.248	\geq 10	1.000
		-30	1.540		

规格型号 Specification

Type-2



规格 Specification	H	T	φU	φS	φB	φW	φd	Anchors	重量(kg) Weight
500H	500	30-38	490	425	730	800	30	4-M24	165
600H	600	35-42	590	515	875	960	38	4-M30	270
700H	700	35-42	685	600	1020	1120	38	4-M30	415
800H	800	35-42	785	685	1165	1280	38	6-M30	610
900H	900	40-50	885	770	1313	1440	38	6-M30	840
1000H	1000	40-50	980	855	1460	1600	44	6-M36	1120
1050H	1050	45-55	1030	900	1530	1680	44	6-M36	1365
1100H	1100	50-58	1080	940	1605	1760	44	8-M36	1565
1200H	1200	50-58	1175	1025	1750	1920	50	8-M42	2030
1300H	1300	50-58	1275	1100	1900	2080	60	8-M48	2460
1400H	1400	60-70	1370	1195	2040	2240	60	8-M48	3110
1600H	1600	70-80	1570	1365	2335	2560	60	8-M48	4660
1800H	1800	70-80	1765	1540	2625	2880	76	10-M56	6640
2000H	2000	90-110	1955	1710	2920	3200	76	10-M56	9580

[Units: mm, kg]



性能

Performance

规格 Specification		500H	600H	700H	800H	900H	1000H	1050H	1100H	1200H	1300H	1400H	1600H	1800H	2000H
性能 Performance															
G4	R(kN)	318	442	605	804	1010	1255	1382	1510	1808	2110	2452	3208	4055	4988
	E(kNm)	74	130	226	340	485	668	772	888	1154	1465	1830	2732	3892	5335
G3	R(kN)	246	330	473	620	782	960	1069	1174	1410	1638	1890	2480	3142	3860
	E(kNm)	60	104	185	277	392	542	624	724	938	1190	1481	2218	3160	4335
G2	R(kN)	215	282	411	535	671	830	924	1015	1212	1415	1645	2142	2715	3336
	E(kNm)	55	90	164	244	344	472	552	636	830	1048	1310	1952	2780	3810
G1	R(kN)	175	242	353	452	577	716	780	868	1035	1212	1410	1822	2320	2855
	E(kNm)	47	80	147	217	311	423	491	569	737	936	1170	1741	2485	3412
G0	R(kN)	135	188	283	361	465	565	632	690	822	960	1120	1440	1842	2265
	E(kNm)	37	63	116	170	247	335	390	452	588	741	930	1380	1970	2710

[Units: kN, kNm]

注

Note:

- (1) G4: 超高反力型, G3: 中高反力型, G2: 高反力型, G1: 标准反力型, G0: 低反力型 ;
- (2) R-反力, E-吸能 ;
- (3) 设计压缩量: 70%
- (4) 性能公差: 反力 \leq +10%,吸能 \geq -10%
- (5) 其它型号规格可详细咨询

G4: Super high Reaction Force, G3: Extra high Reaction Force, G2: High Reaction Force

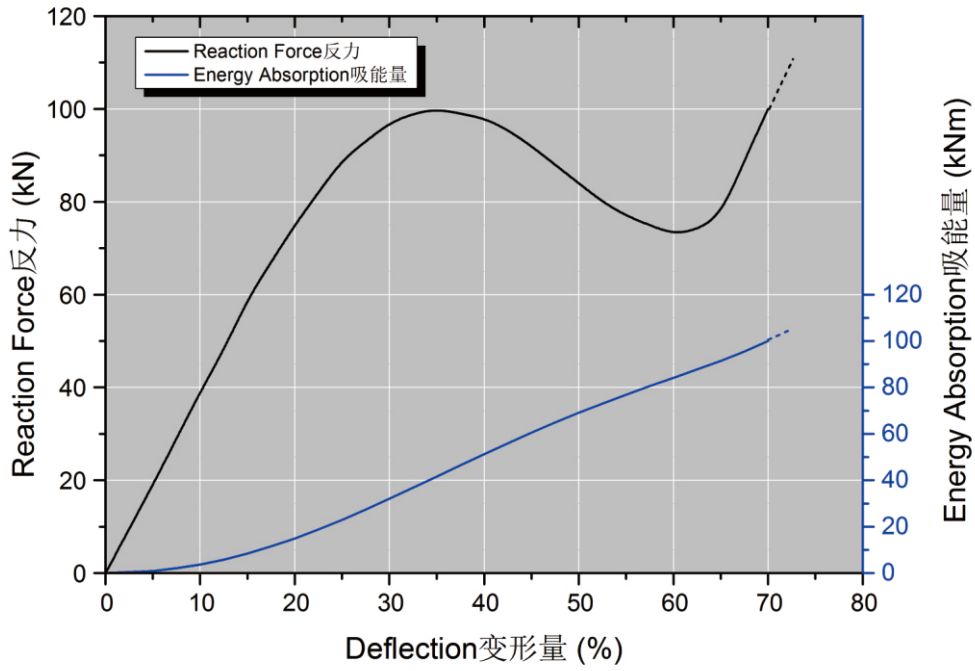
G1: Standard Reaction Force, G0: Low Reaction Force

R: Reaction Force, E: Energy Absorption;

Rated Deflection: 70%

PIANC系数 PIANC factors					
角度系数 Angular compression Factor		温度系数 Temperature Factor		速度系数 Velocity Factor	
角度 (度) Angle(dgree)	AF	温度 (摄氏度) Temperature(°C)	TF	时间 (秒) Time (second)	VF
0	1.000	50	0.916	1	1.20
3	1.039	40	0.946	2	1.16
5	1.055	30	0.978	3	1.14
8	1.029	23	1.000	4	1.13
10	1.000	10	1.030	5	1.11
15	0.856	0	1.075	6	1.10
20	0.739	-10	1.130	8	1.09
		-20	1.248	\geq 10	1.07
		-30	1.540		

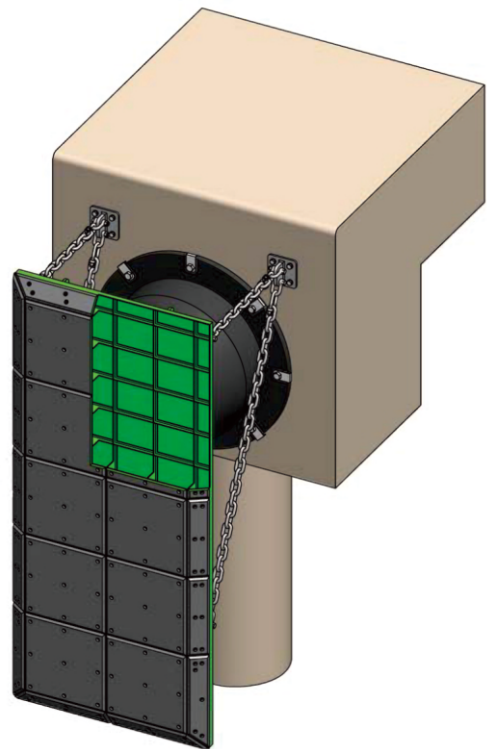
性能曲线 Performance Curve



护舷总成及配件 Fender Assembly & Accessories

锥型护舷系统一般包括：橡胶护舷本体、防冲板、贴面板、紧固件、预埋件、链条等。

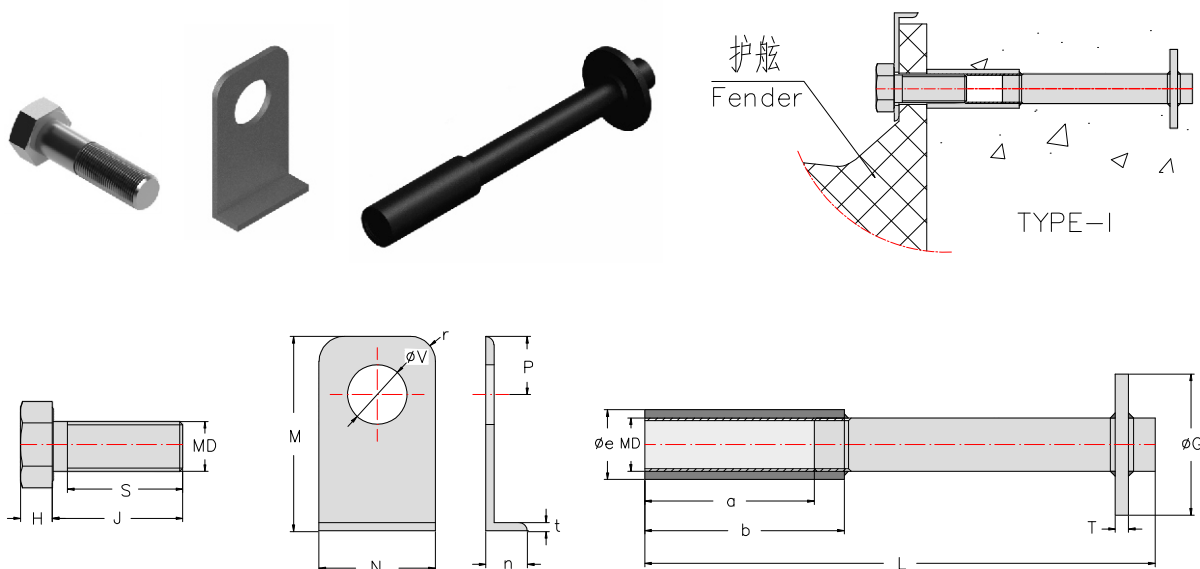
A super cone fender system includes rubber fender, steel frontal panel, face pad, fasteners, precast nut, bolt, chain



预埋件-I Precast Nut-I

适用于新浇筑混凝土

Used for installing fenders to new concrete.

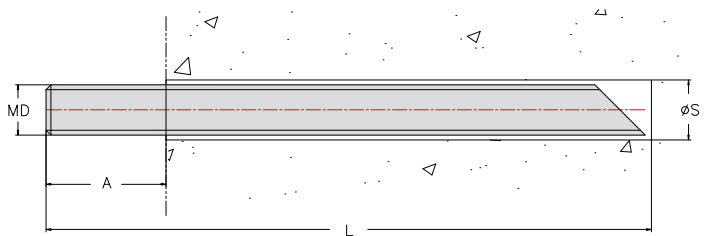
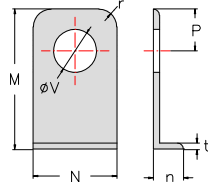
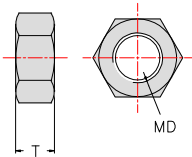
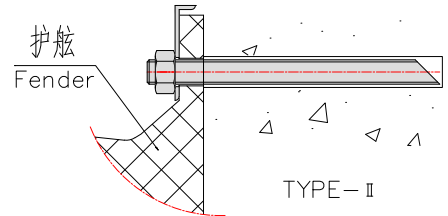
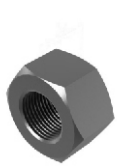


规格 Specification	螺栓 Hex Bolt				垫片 L-Washer							预埋螺母 Precast Nut			地角杆, 地角板 Anchor rod, plate		
	MD	H	J	S	N	n	M	P	t	V	r	a	b	e	T	L	G
500H	M24	15	60	55	55	20	69	25	4	28	15	60	90	36	6	240	75
600H	M24	15	65	60	60	20	83	30	5	28	15	65	100	36	6	240	75
700H	M30	19	70	65	65	20	93	33	5	34	15	70	105	39	10	300	80
800H	M36	23	85	70	70	24	102	35	5	40	15	85	120	44	10	360	85
900H	M36	23	90	75	70	24	113	37	6	40	15	85	120	44	10	360	85
1000H	M42	26	95	85	85	26	126	43	6	46	25	95	125	59	12	420	100
1100H	M42	26	100	90	85	26	134	43	6	46	25	95	130	59	12	420	100
1150H	M42	26	100	90	90	28	142	46	6	46	25	95	130	59	12	420	100
1200H	M42	26	110	95	90	31	144	46	8	46	25	100	140	59	12	420	100
1300H	M48	30	120	95	105	31	158	52	8	52	30	100	150	64	12	480	115
1400H	M48	30	120	95	110	31	165	52	8	52	30	100	150	64	12	480	120
1600H	M48	30	135	110	115	34	190	52	10	52	30	105	165	64	16	480	135
1800H	M56	35	135	110	115	40	207	60	10	60	30	105	165	78	16	560	140
2000H	M56	35	150	130	120	45	212	60	10	60	30	105	165	78	16	560	140

[Units: mm]

预埋件-II

Anchor Bolt- II



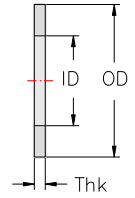
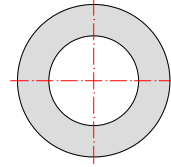
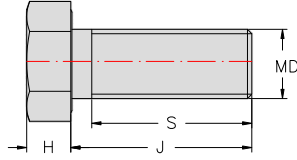
规格 Specification	锚固螺栓 Anchor Bolt				螺母 Nut	垫片 L-Washer						
	MD	A	L	ϕS		T	N	n	M	P	t	V
500H	M24	55	280	30	20	55	20	73	28	5	28	15
600H	M24	55	280	30	20	55	20	80	28	5	28	15
700H	M30	65	360	38	24	65	20	93	33	5	34	15
800H	M36	75	440	46	29	70	24	102	35	5	40	15
900H	M36	80	440	46	29	70	24	111	35	6	40	15
1000H	M42	95	510	55	32	85	26	126	43	6	46	25
1100H	M42	95	510	55	32	85	26	134	43	6	46	25
1150H	M42	95	510	55	32	85	28	139	43	6	46	25
1200H	M42	105	510	55	32	85	31	144	43	8	46	25
1300H	M48	115	580	60	36	95	31	158	50	8	52	30
1400H	M48	120	600	65	40	110	34	170	55	8	56	30
1600H	M56	135	680	68	43	120	34	192	60	10	60	30
1800H	M56	140	680	68	43	120	34	207	60	10	60	30
2000H	M56	160	680	68	43	130	45	212	60	10	60	30

[Units: mm]

» 联接件 Connection Accessories

用于将锥形护舷顶部与钢制法兰联接

Used for fixing steel flange onto the top of the cone fender.

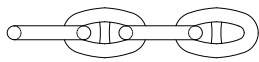


规格 Specification	六角螺栓 Hex Bolt			圆垫圈 Round Washer		
	MD	J	S	OD	ID	Thk
500H~600H	M24	50	40	44	26	4
700H	M30	55	45	56	33	4
800H	M36	65	50	66	39	5
900H	M36	75	50	66	39	5
1000H~1100H	M42	90	70	78	45	8
1150H~1200H	M42	100	80	78	45	8
1300H	M48	110	90	92	52	8
1400H	M48	120	90	92	52	8
1600H	M48	140	100	92	52	8
1800H	M56	140	100	105	62	10
2000H	M56	140	100	105	62	10

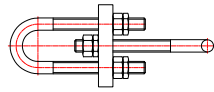
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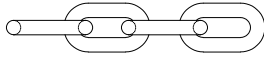
锚链结构及规格 Structure and specification of Chains



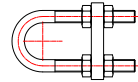
有档锚链
Stud Link Chains



张紧器
Tensioner -1



无档锚链
Open Link Chains



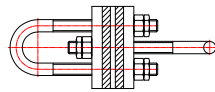
自制卸扣
Tensioner -2



弓形卸扣 G-2130
Bow Shackle



D形卸扣 G-2130
Dee Shackle



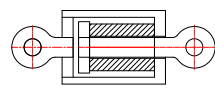
橡胶弹簧 -1
Shock Absorber -1



弓形卸扣 G-209
Bow Shackle



D形卸扣 G-210
Dee Shackle

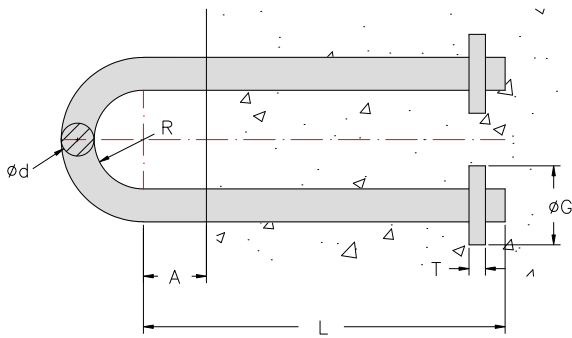


橡胶弹簧 -2
Shock Absorber -2

规格 Specification	链环 Links	卸扣 Shackle	自制卸扣 Tensioner
500H	Φ20.5	Φ22	M24
600H	Φ20.5	Φ22	M24
700H	Φ24	Φ28	M27
800H	Φ28	Φ32	M33
900H	Φ32	Φ35	M36
1000H	Φ34	Φ38	M39
1100H	Φ36	Φ38	M42
1150H	Φ36	Φ38	M42
1200H	Φ38	Φ45	M45
1300H	Φ38	Φ45	M45
1400H	Φ40	Φ45	M48
1600H	Φ44	Φ50	M52
1800H	Φ50	Φ64	M60
2000H	Φ55	Φ64	M64
材质 Material	Q235 HDG, U2,U3 HDG.	Gr.S HDG	Q235/GR8.8 HDG

[Units: mm]

预埋U型环 U Anchor



规格 Specification	Φd	R	L	A	T	ΦG
500H	40	70	600	50	20~30	100
600H	45	70	600	50	20~30	100
700H	50	80	650	50	20~30	110
800H	55	90	730	70	20~30	120
900H	60	100	780	70	25~35	140
1000H	60	100	780	70	25~35	140
1100H	60	100	780	70	25~35	140
1150H	65	105	830	70	25~35	150
1200H	65	105	830	70	25~35	150
1300H	65	105	830	70	25~35	150
1400H	65	105	830	70	25~35	150
1600H	70	115	880	80	25~35	160
1800H	70	115	880	80	25~35	160
2000H	80	120	930	80	25~35	160

[Units: mm]

说明 以上表格信息仅供参考，锚链以及预埋U型环等配件根据实际需求选定；

Note: 特殊配件及型号需求请联系我公司。

All chain and accessory information is for guidance only.

Every chain design should be checked to confirm suitability for the intended application.

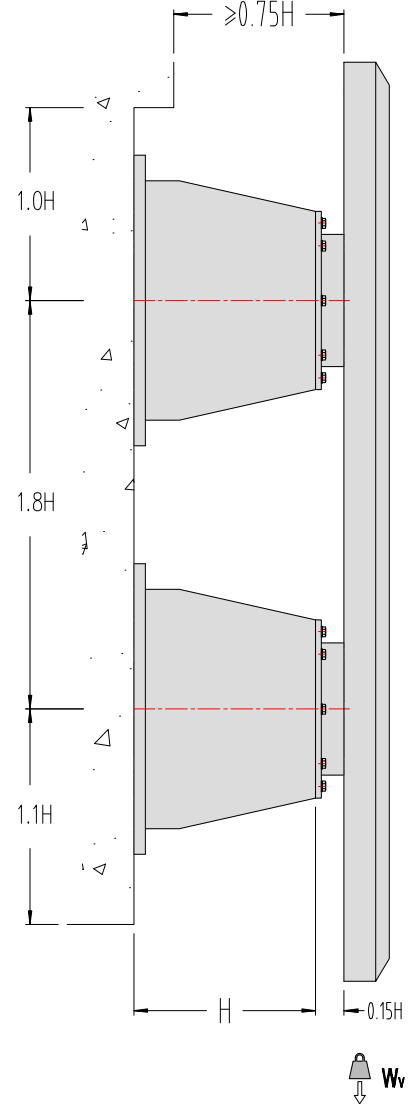
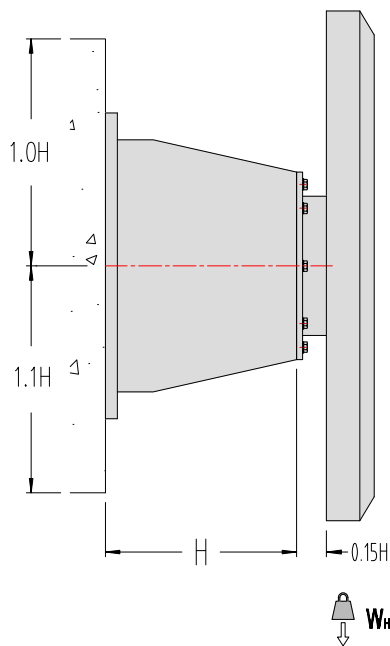


护舷的安装间距以及承重 Clearances and Weight support

护舷的最小安装间隙 Minimum Clearances

橡胶护舷和防冲板之间以及附近必须有足够的空间，使其在受力变形时不会发生阻碍。

There must be enough space around and between the cone fenders and the steel panel to allow them to deflect without interference.



护舷承重 Weight support

锥形护舷系统在没有支撑锚链的情况下，防冲板的限定重量指南

Cone fenders can support a lot of static weight. The table is a guide to the permitted weight of front panel before additional support chains may be required.

护舷性能 Performance	水平单锥或多锥 Single or multiple horizontal ($n \geq 1$)	垂直单锥或多锥 Multiple vertical ($n \geq 2$)
低反力 RL	$W_H \leq n \times 0.85 \times w$	$W_V \leq n \times 1.0 \times w$
标准反力 RO	$W_H \leq n \times 1.0 \times w$	$W_V \leq n \times 1.25 \times w$
高反力 RH	$W_H \leq n \times 1.3 \times w$	$W_V \leq n \times 1.55 \times w$

n = 护舷的数量 number of Cell fenders.

W = 护舷的重量 Fender weight

W_H = 水平布置防冲板的重量

panel weight - single or multi-horizontal

W_V = 垂直布置防冲板的重量

以上表格数据仅供参考,如有疑问,请咨询。

Distances given in the side diagram are for guidance. If in doubt, please contact us.