

DECK MACHINERY

RUBBER FENDER



D型橡胶护舷

D-type rubber fender

D형 고무펜더

◆ 特点 Features 구조특징

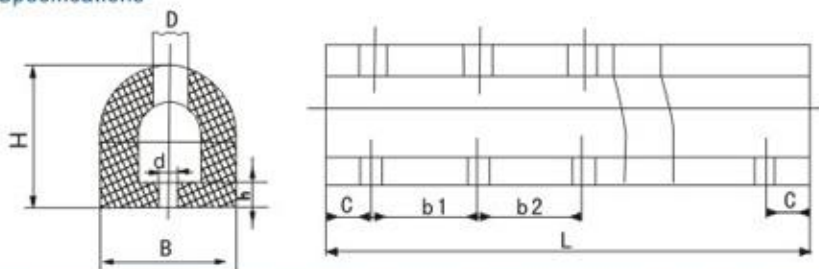
1. 反力、吸能量适中;
2. 重量较轻, 安装维修方便;
3. 底部宽度小, 特别适合框架式码头使用.

1. Reaction force and energy absorption are moderate;
2. It is light and could be installed and maintained conveniently;
3. With small bottom width, it is especially applicable for framed dock.

1. 반작용력, 에너지 흡수 적당함
2. 가벼우며 보유 설치가 편리함
3. 밑부분 넓이가 작기에 후레임식 부두에 특별히 적용



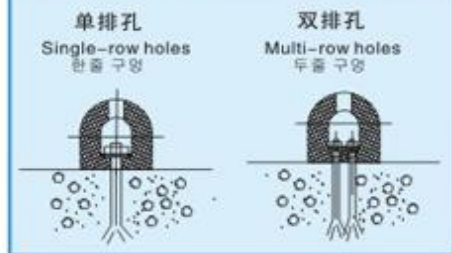
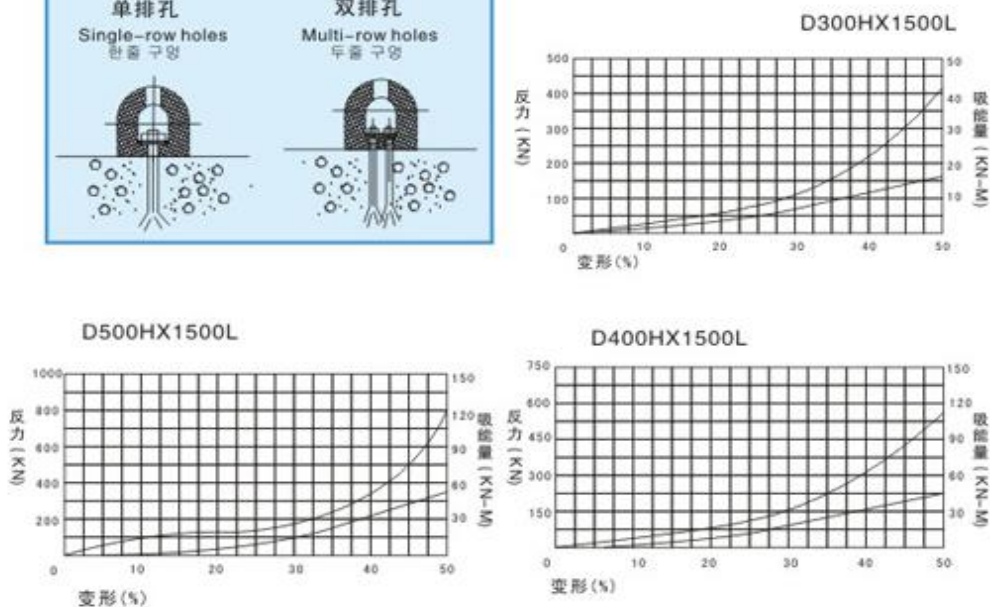
◆ 规格 规格尺寸 Specifications



规格 规格尺寸 Specifications	H	B	L	b1	b2	c	h	D	d	安装孔数 Number of mounting holes 설치 구멍수
D200Hx200x1000L	200	200	1000	350	-	150	30	55	28	3
D200Hx200x1500L	200	200	1500	600	600	150	30	55	28	3
D200Hx200x2000L	200	200	2000	500	500	250	30	55	28	4
D300Hx300x900L	300	300	900	600	-	150	40	65	32	2
D300Hx300x1000L	300	300	1000	600	-	200	40	65	32	2
D300Hx300x1500L	300	300	1500	600	600	150	40	65	32	2
D300Hx300x2000L	300	300	2000	500	500	250	40	65	32	3
D300Hx360x1000L	300	360	1000	350	350	150	40	65	32	4
D300Hx360x1500L	300	360	1500	400	400	150	40	65	32	4
D400Hx400x1500L	400	400	1500	400	400	150	55	65	32	4
D400Hx400x2000L	400	400	2000	400	400	200	55	65	32	5
D500Hx1000L-3hx2	500	500	1000	350	350	150	60	65	28	3x2
D500Hx1500L-4hx2	500	500	1500	400	400	150	60	65	28	4x2
D500Hx2000L-5hx2	500	500	2000	400	400	200	60	65	28	5x2

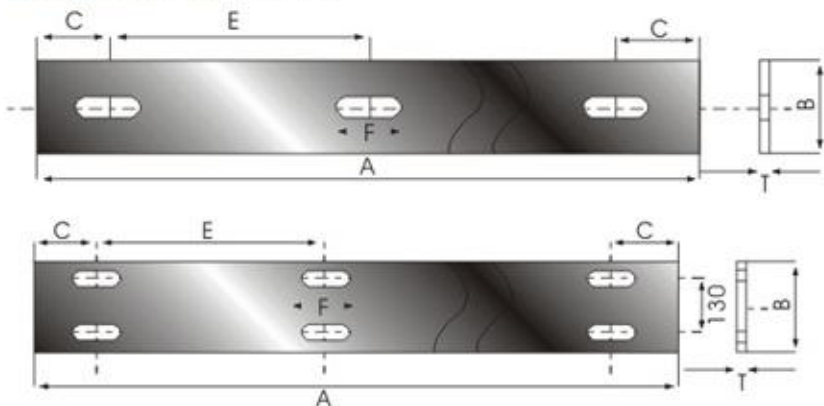
◆ 性能表 Performance 기능

规格规格尺寸 Specifications	设计压缩变形% Designed compression deflection % 디자인 압축 변형%	性能 Performance 기능		
		反力 (KN) Reaction Force 반작용력(KN)	吸能量 (KN-M) Energy Absorption 에너지 흡수	性能公差% Performance Tolerance 기능 공차%
D200Hx200x1000L	50	147	5.1	±10
D200Hx200x1500L		220	7.7	
D200Hx200x2000L		294	10.2	
D300Hx300x900L		270	10	
D300Hx300x1000L		300	12	
D300Hx300x1500L		450	17	
D300Hx300x2000L		600	24	
D300Hx360x1000L		323	13	
D300Hx360x1500L		480.7	19.6	
D400Hx400x1500L		585	30	
D400Hx400x2000L		780	40	
D500Hx1000L-3hx2		460	32	
D500Hx1500L-4hx2		700	48	
D500Hx2000L-5hx2		920	64	

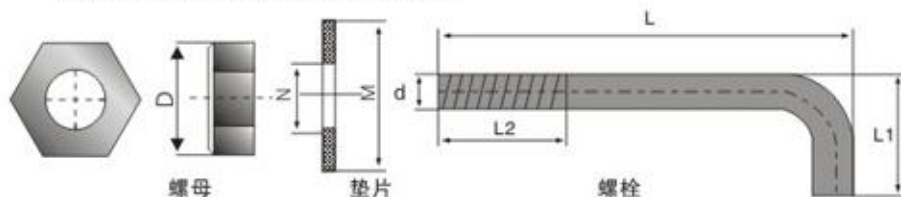
**◆ 安装 설치
Installation**

**◆ 性能曲线 기능곡선
Performance Curve**


◆ D型橡胶护舷的金属配件

Metal Accessories 금속 액세서리



紧固螺栓 Bolt washer and nut 조임볼트



型号 Type 타입	压板 Impacted Plate						螺母 Nut 너트	垫片 Washer 워셔				螺栓 Bolt 볼트		
	A	B	C	F	E	T		D	M	N	L	L1	L2	D
D200H	1000	70	200	50	600	14	38	50	27	300	120	90	24	
D200H	1500	70	150	50	600	14								
D200H	2000	70	250	50	500	14								
D300H	1000	100	200	60	600	16	41	55	31	400	120	100	27	
D300H	1500	100	150	60	600	16								
D300H	2000	100	250	60	500	16								
D300H	1000	120	200	60	600	16								
D300H	1500	120	150	60	600	16	41	55	31	450	120	120	27	
D400H	2000	120	200	60	400	16								
D500H	1000	180	150	50	350	18	36	50	27	500	120	120	24	
D500H	1500	180	150	50	400	18								
D500H	2000	180	200	50	400	18								

GD型橡胶护舷

GD— type rubber fender

Gd형 고무펜더

◆ 特点 Features 구조특징

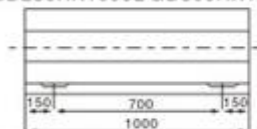
- 1、反力吸能比D型护舷高
- 2、安装强度及使用寿命比D型护舷有很大提高
- 3、一般适用于框架式码头

- 1、High energy absorption and low reaction force;
- 2、Applicable for frame duck;
- 3、High installation stability long service time;

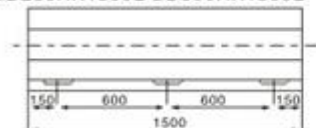
1. 반작용력 에너지 흡수가 D형 펜더보다 높음
2. 설치 강도 및 사용내구성이 D형 펜더보다 아주 높음
3. 일반적으로 후레임식 부두에 적용함

◆ 规格 Specifications 규격치수

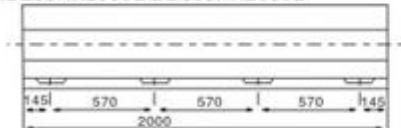
GD280HX1000L GD300HX1000L



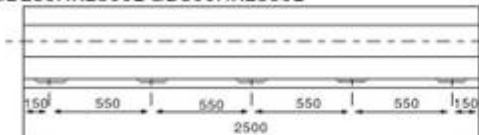
GD280HX1500L GD300HX1500L



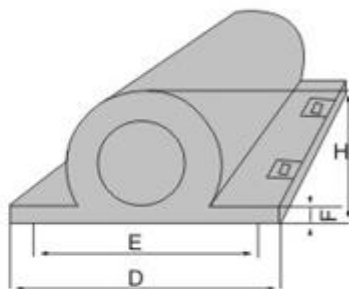
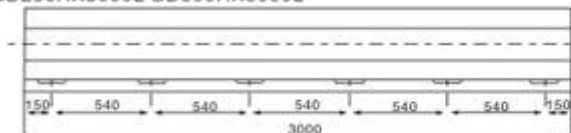
GD280HX2000L GD300HX2000L



GD280HX2500L GD300HX2500L



GD280HX3000L GD300HX3000L



I型橡胶护舷

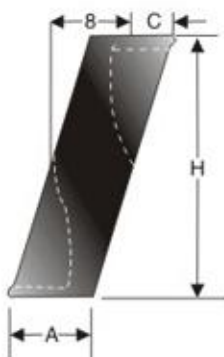
I-type rubber fender

I형 고무펜더

◆ 特点 Features 구조특징

1. 反力低，吸能量高。
 2. 根据性能要求，可组合成各种类型和尺寸的护舷系统。
 3. 在垂直或倾斜压缩时可到达适宜的性能。
1. Reaction force is low and the energy absorption amount is high.
 2. Based on performance requirements, the fender systems in various types and sizes could be built up.
 3. The proper performance could be up to when it is compressed vertically or aslant.
1. 반작용력이 낮으며 에너지 흡수가 높음
 2. 기능요구에 근거하여 여러가지 타입 및 사이즈인 펜더 시스템을 조합할수있음
 3. 수직 혹은 경사 압축시에는 적당한 기능에 도달가능

◆ 规格 규격치수 Specifications



◆ 尺寸 규격치수 Measures

规格 Specification 규격치수	H	A	B	C
I300H	300	94	94	47
I400H	400	125	124	63
I500H	500	158	142	87
I550H	550	172	170	87
I600H	600	188	199	87
I750H	750	235	230	118
I800H	800	250	240	129
I1000H	1000	322	310	162
I1250H	1250	451	388	202
I1400H	1400	454	454	228
I1600H	1600	500	480	257



◆ 性能表 Performance 기능

规格 규격치수 Specifications	高反力型R1 고반작용력형R1 High reaction force		标准反力型RO 표준반작용력형RO Standard reaction force	
	(KN)	(KN-M)	(KN)	(KN)
I300H	160	22	110	15
I400H	210	39	150	27
I500H	265	61	187	43
I550H	294	75	206	52
I600H	320	89	224	62
I750H	400	137	282	96
I800H	428	157	299	110
I1000H	535	245	374	172
I1250H	668	383	467	268
I1400H	775	516	543	361
I1600H	855	628	599	440

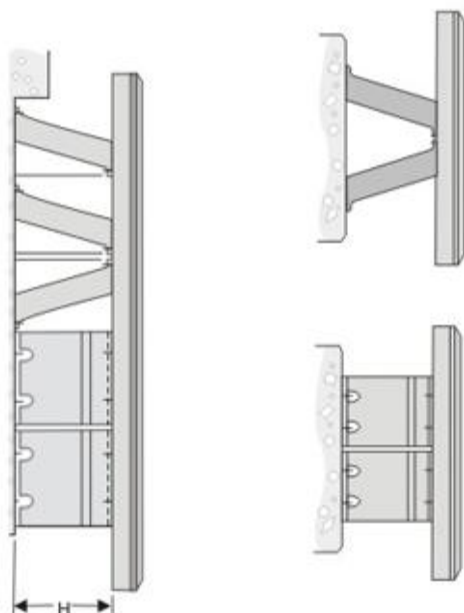
性能公差 Performance Tolerance $\pm 10\%$

기능 공차 Performance Tolerance $\pm 10\%$

◆ 安装总成图

Drawing for assembly
installation

설치 총 구성도면



M型橡胶护舷

M-type rubber fender

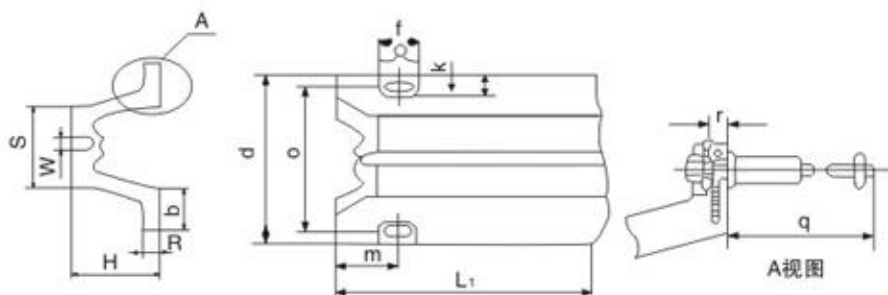
M형 고무펜더

◆ 特点 Features 구조특징

吸收能量高、反力低，结构合理，安装，维修方便。

With large amount of energy absorption, low reaction force and reasonable structure, it could be installed and maintained conveniently.

높은 에너지 흡수, 낮은 반작용력, 합리적인 구조, 편리한 설치 및 보유

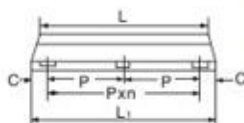


◆ 规格 Specifications 규격치수

断面尺寸 Cross-section dimension 절단면 사이즈

型号 type 타입	h	s	w	t	b	m	d	e	f	g	k	i	r	q
M300	300	396	60	33	204	140	750	640	140	70	35	105	24	230
M400	400	528	80	44	272	150	1000	870	165	82	41	120	30	290
M500	500	660	100	55	340	160	1250	1090	180	94	46	140	33	325
M600	600	776	120	66	408	170	1500	1310	195	100	50	160	36	430
M800	800	1035	160	88	544	180	2000	1740	270	136	68	260	48	430

长度尺寸 Length dimension 길이 사이즈



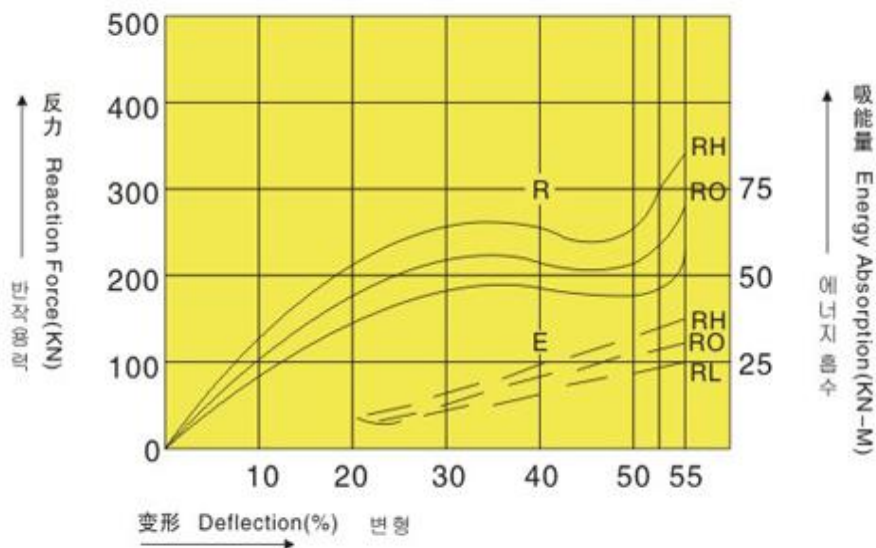
型号 type 타입	L=1000				L=1500				L=2000			
	L_1	C	P	n	L_1	C	P	n	L_1	C	p	n
M300	1150	140	870	1	1650	140	685	2	2150	137.5	625	3
M400	1200	150	900	1	1700	150	700	2	2200	147.5	635	3
M500	1250	160	930	1	1750	160	715	2	2250	157.5	645	3
M600	1300	170	960	1	1800	170	730	2	2300	167.5	655	3
M800	1400	180	1040	1	1900	180	770	2	2400	180.0	680	3

◆ 性能表 Performance 기능

型号 type 타입	设计压缩变形 (%)						性能公差% Performance Tolerance 기능 공차
	高反力型R1 High reaction force 울트라하이		标准反力型RO Standard reaction force 고반작용력형R1		低反力型RL Low reaction force 표준 반작용력형R0		
	反力R Reaction Force 반작용력R	吸能量R Energy Absorption 에너지 흡수R	反力R Reaction Force 반작용력R	吸能量R Energy Absorption 에너지 흡수R	反力R Reaction Force 반작용력R	吸能量R Energy Absorption 에너지 흡수R	
M300x1000L	257	29.4	213	24.3	182.3	20.6	± 10
M400x1000L	341	53.0	282	44.1	242.0	37.2	
M500x1000L	427	83.3	354	68.6	304.0	58.8	
M600x1000L	514	120.0	425	100.0	366.0	84.2	
M800x1000L	685	213.0	566	177.3	486.0	150.0	

◆ 性能曲线 기능곡선
Performance Curve

M300X1000L



N型橡胶护舷

N-type rubber fender

N형 고무펜더

◆ 特点 Features 구조특징

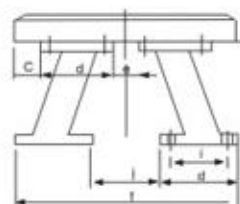
反力低, 吸能量大; 安装方便; 一般适合于大、中型码头

Large contact area, little surface pressure;
High energy absorption low reaction force;
Easy for installation;

낮은 반작용력, 큰 에너지 흡수, 편리한 설치,
일반 대중형 부두에 적용



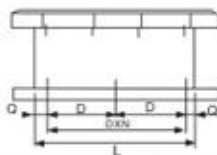
◆ 规格 규격치수 Specifications



◆ 尺寸 규격치수 Measures

Specifications	H	c	d	e	f	i	j	Weight(kg)
H600	600	150	500	65	1500	370	500	600
H800	800	150	600	100	1700	460	500	900
H1000	1000	250	700	100	2000	550	600	1280
H1250	1250	325	800	200	2450	650	850	1800
H1400	1400	325	900	200	2700	730	900	2200
H1700	1700	350	1050	200	3150	860	1050	3100
H2000	2000	400	1300	200	3700	1000	1300	4200
H2250	2250	550	1350	300	4000	1150	1300	5400
H2500	2500	675	1400	350	4400	1200	1600	6000

◆ 长度 길이 Length



Length 길이	L=1000			L=1500			L=2000			L=2500		
	D	Q	n	D	Q	n	D	Q	n	D	Q	n
H600	700	150	1	600	150	2	850	150	2	700	200	3
H800	700	150	1	600	150	2	850	150	2	700	200	3
H1000	700	150	1	600	150	2	850	150	2	700	200	3
H1250	700	150	1	600	150	2	850	150	2	700	200	3
H1400	700	150	1	600	150	2	850	150	2	700	200	3
H1700	700	150	1	600	150	2	850	150	2	700	200	3
H2000	700	150	1	600	150	2	850	150	2	700	200	3
H2250	600	200	1	550	200	2	800	200	2	700	200	3

◆ 性能表 Performance 가능

规格 Specifications 규격치수	超高反力型 super High Reaction Force 울트라하이 반작용력형		高反力型 High Reaction Force 고반작용력형		标准反力型 Standard Reaction Force 표준 반작용력형		低反力型 Low Reaction Force 저반작용력형	
	KN	KN-M	KN	KN-M	KN	KN-M	KN	KN-M
H800	650	199	605	185	518	158	432	132
H1000	810	338	755	314	650	270	540	225
H1250	1010	526	945	490	810	420	679	350
H1400	1130	660	1060	615	910	528	758	440
H1700	1380	970	1290	906	1100	708	920	648
H2000	1620	1345	1510	1258	1298	1080	1080	898
H2250	1820	1700	1700	1588	1460	1360	1216	1133

SA型橡胶护舷

SA-type rubber fender
SA형 고무펜더



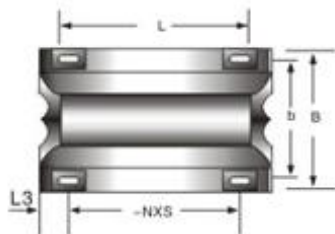
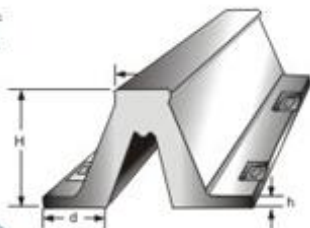
◆ 特点 Features 구조특징

- 1、制品具有高吸能，低反力的特点
- 2、制品结构合理，使用寿命长
- 3、可设置防冲板，保护护舷，降低面压
- 4、更换方便

1. 제품의 특징은 높은 에너지 흡수 및 낮은 반작용력
2. 제품의 구조가 합리하고 사용내구성이 좋음
3. 방호판을 설정가능하여 펜더를 보호하고 면압력을 감소
4. 교체하기 편리함

1. The product has the features of high energy absorption and low reaction force.
2. The reasonable structure, the product has long service life.
3. The striking plate could be set to protect the fender and lower the surface pressure.
4. It is convenient to be replaced.

◆ 规格 규격치수 Specifications



◆ 尺寸 규격치수 Measures

模型Model	B (mm)	b (mm)	c (mm)	d (mm)	H (mm)	h (mm)	s (mm)
GT200H	400	320	145	128	200	30	260
GT250H	500	410	175	160	250	33	300
GT300H	600	490	225	196	300	33	300
GT400H	800	670	300	260	400	40	360
GT500H	1000	840	375	325	500	45	420
GT600H	1200	1010	450	390	600	54	480
GT800H	1500	1340	600	520	800	72	640
GT1000H	2000	1680	750	650	1000	90	640

1000L				
模型Model	L1a (mm)	L2a (mm)	L3a (mm)	Weight (Kg)
GT200H-1000L	1100	860	120	62
GT250H-1000L	1125	865	130	85
GT300H-1000L	1150	870	140	120
GT400H-1000L	1200	900	150	208
GT500H-1000L	1250	930	160	325
GT600H-1000L	1300	960	170	480
GT800H-1000L	1400	1040	180	875
GT1000H-1000L	1500	1100	200	1395

2500L				
模型Model	L1d (mm)	L2d (mm)	L3d (mm)	Weight (Kg)
GT200H-2500L	2600	785	122.5	151
GT250H-2500L	2625	790	127.5	225
GT300H-2500L	2650	790	140	315
GT400H-2500L	2700	800	150	635
GT500H-2500L	2750	840	160	810
GT600H-2500L	2800	820	170	1113
GT800H-2500L	2900	845	182.5	2045
GT1000H-2500L	3000	865	202.5	3200

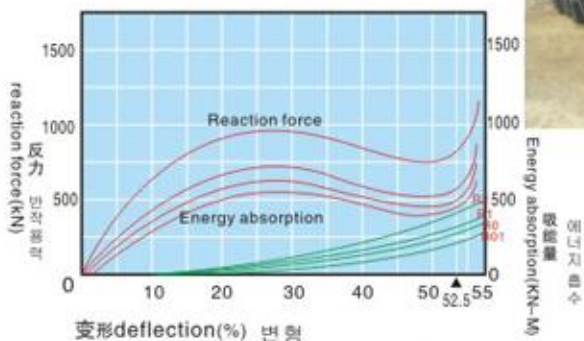
1500L				
模型Model	L1b (mm)	L2b (mm)	L3b (mm)	Weight (Kg)
GT200H-1500L	1600	680	120	91
GT250H-1500L	1625	680	132.5	130
GT300H-1500L	1650	685	140	175
GT400H-1500L	1700	700	150	300
GT500H-1500L	1750	715	160	450
GT600H-1500L	1800	730	170	680
GT800H-1500L	1900	770	180	1220
GT1000H-1500L	2000	800	200	1920

3000L				
模型Model	L1e (mm)	L2e (mm)	L3e (mm)	Weight (Kg)
GT200H-3000L	3100	715	120	180
GT250H-3000L	3125	715	132.5	270
GT300H-3000L	3150	715	140	375
GT400H-3000L	3200	725	150	638
GT500H-3000L	3250	730	160	963
GT600H-3000L	3300	740	170	1380
GT800H-3000L	3400	760	180	2420
GT1000H-3000L	3500	775	200	4610

2000L				
模型Model	L1c (mm)	L2c (mm)	L3c (mm)	Weight (Kg)
GT200H-2000L	2100	620	120	122
GT250H-2000L	2125	620	132.5	170
GT300H-2000L	2150	625	137.5	230
GT400H-2000L	2200	635	147.5	390
GT500H-2000L	2250	645	157.5	605
GT600H-2000L	2300	655	167.5	880
GT800H-2000L	2400	680	180	1570
GT1000H-2000L	2500	700	200	2450

3500L				
模型Model	L1c (mm)	L2c (mm)	L3c (mm)	Weight (Kg)
GT200H-3500L	3600	672	120	210
GT250H-3500L	3625	673	130	310
GT300H-3500L	3650	674	140	435
GT400H-3500L	3700	680	150	740
GT500H-3500L	3750	688	160	1150
GT600H-3500L	3800	692	170	1595
GT800H-3500L	3900	708	180	4600
GT1000H-3500L	4000	720	200	6400

◆ 性能曲线 기능곡선
Performance Curve



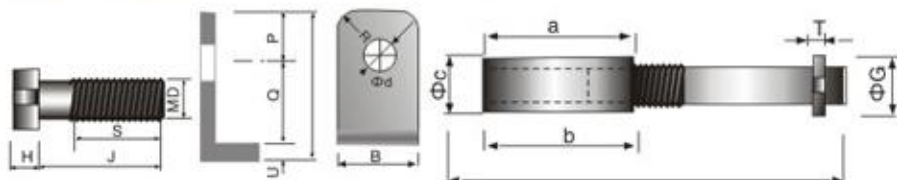
◆ 性能表 Performance 기준

Grade	超高反力型R2 Super Reaction Force 울트라하이 반응형 R2				高反力型R1 High Reaction Force 고반응형 R1				标准反力型R0 Standard Reaction Force 표준 반응형 R0				D1低反力型R01 Low Reaction Force 저반응형 R01			
	50%		52.5%		50%		52.5%		50%		52.5%		50%		52.5%	
Deflection	R(KN)	E(KN-M)	R(KN)	E(KN-M)	R(KN)	E(KN-M)	R(KN)	E(KN-M)	R(KN)	E(KN-M)	R(KN)	E(KN-M)	R(KN)	E(KN-M)	R(KN)	E(KN-M)
GT200H-1000L	170	11	231	15	149	11	199	10	110	9	149	8	74	5	99	6
GT200H-1500L	254	17	344	20	225	14	298	17	168	11	224	12	112	7	149	9
GT200H-2000L	341	20	452	28	300	20	400	25	229	17	229	17	148	9	200	11
GT200H-2500L	424	26	576	35	376	24	499	29	275	20	376	20	187	11	248	14
GT200H-3000L	511	30	650	41	450	28	600	34	330	24	451	26	224	14	300	18
GT200H-3500L	580	35	800	50	524	35	700	41	384	26	525	28	261	16	348	20
GT250H-1000L	211	16	278	20	180	17	249	18	138	12	190	15	963	8	118	9
GT250H-1200L	315	25	420	31	274	24	376	25	211	19	288	21	141	12	178	13
GT250H-2000L	422	32	581	39	361	32	500	37	284	23	380	28	187	15	241	17
GT250H-2500L	520	40	700	50	450	39	621	46	351	30	475	36	235	20	300	20
GT250H-3000L	625	49	839	58	540	48	748	53	421	36	570	41	281	24	381	24
GT250H-3500L	735	57	981	69	631	58	874	65	493	41	688	48	328	28	416	28
GT300H-1000L	324	41	450	44	249	31	346	33	206	26	285	28	177	22	246	24
GT300H-1200L	486	62	675	68	374	47	519	50	309	39	429	42	266	33	369	38
GT300H-2000L	684	82	900	88	498	62	692	68	412	52	572	58	354	44	492	48
GT300H-2500L	810	100	1125	110	623	78	865	83	515	66	715	70	443	55	615	60
GT300H-3000L	972	123	1350	132	747	93	1038	99	618	78	855	84	531	666	738	72
GT300H-3500L	1134	144	1575	154	872	100	1211	116	721	91	1000	98	620	77	860	84
GT400H-1000L	432	70	600	79	332	55	462	61	276	45	383	48	235	40	328	43
GT400H-1200L	649	109	900	116	499	83	693	89	413	68	573	73	355	61	493	66
GT400H-2000L	885	145	1200	155	665	110	923	119	550	93	765	99	472	80	655	87
GT400H-2500L	1082	182	1501	195	831	138	1152	148	687	116	956	120	589	99	820	107
GT400H-3000L	1299	218	1802	233	996	170	1382	178	825	138	1145	145	709	120	934	128
GT400H-3500L	1512	258	2100	273	1160	195	1612	211	962	161	1337	172	817	140	1149	150
GT500H-1000L	540	110	751	117	414	85	575	92	345	72	478	77	292	62	411	66
GT500H-1200L	810	171	1123	180	622	130	860	140	515	108	717	116	444	92	614	98
GT500H-2000L	1082	225	1500	242	831	175	1150	186	688	145	956	154	591	125	820	133
GT500H-2500L	1345	283	1874	300	1006	215	1442	231	834	180	1192	193	738	156	1025	164
GT500H-3000L	1610	338	2250	353	1240	252	1726	270	1032	216	1434	231	865	185	1232	202
GT500H-3500L	1880	398	2825	424	1453	306	2014	326	1204	252	1672	270	1032	217	1432	230
GT600H-1000L	646	162	890	170	478	125	692	131	412	104	572	111	350	90	492	96
GT600H-1200L	970	243	1348	260	747	187	1032	199	618	158	858	167	528	133	738	150
GT600H-2000L	1280	325	1780	340	999	245	1378	265	824	206	1144	222	702	180	961	197
GT600H-2500L	1618	408	2214	438	1245	315	1725	339	1030	260	1430	278	889	222	1225	239
GT600H-3000L	1940	488	2690	525	1490	377	2077	406	1236	312	1716	333	1062	267	1487	288
GT600H-3500L	2285	571	3101	613	1742	442	2421	470	1442	384	2002	389	1239	311	1721	332
GT500H-1000L	884	280	1200	310	662	222	921	240	550	185	764	198	471	159	655	171
GT500H-1200L	1290	430	1800	466	996	335	1382	360	825	278	1146	297	707	233	982	252
GT500H-2000L	1720	578	2400	622	1328	444	1840	470	1100	370	1528	396	942	317	1311	339
GT500H-2500L	2158	725	3000	777	1681	550	2300	500	1375	463	1910	496	1180	397	1642	418
GT500H-3000L	2590	869	3600	930	1990	687	2700	714	1650	555	2292	594	1410	476	1966	511
GT500H-3500L	2800	970	3800	1060	2130	745	2900	810	1921	660	2620	710	1600	562	2210	620
GT1000H-1000L	1080	453	1500	487	831	349	1152	370	688	289	956	310	590	247	818	262
GT1000H-1200L	1680	680	2245	726	1243	522	1723	560	1032	434	1434	466	883	371	1225	389
GT1000H-2000L	2158	907	3000	970	1684	698	2300	746	1376	578	1912	620	1178	493	1630	530

◆ 金属配件 금속부품
Metal Accessories

护舷长度(米) Fender length 편대 길이 (미터)	1.0	1.5	2.0	2.5	3.0	3.5
螺栓数量 Bolts (PCS) 볼트 수량	4	6	8	8	10	12

序号NO. 번호	名称Name 이름	材质Material 소재	数量 Qty 수량
1	螺栓 Bolt 볼트	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12Mo ₂	1
2	垫片 Washer 워셔	Q235热镀锌 Q235 Hot-galv	1
3	预埋螺母 Pre-built-innut 예설경 너트	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12Mo ₂	1
4	地角杆 Foot rod 지각 로드	Q235	1
5	地角板 Foot board 지각판	Q235	1



规格 specifications 규격치수	①螺栓 Bolt							②垫片 워셔 Washer						③预埋螺母 Pre-built-innut 예설경 너트	④地角杆 Foot rod 지각 로드	⑤地角板 Foot board 지각판		
	D	J	S	H	M	N	n	P	Q	U	V	R	a	b	c	T	L	G
SA-A150	M22	55	50	14	68	12	23	23	32	5	24	10	50	75	28	6	165	50
SA-A200	M24	65	59	15	74	14	33	33	42	5	26	10	59	85	32	6	180	55
SA-A250	M27	65	60	17	88	16	42	42	48	5	30	15	60	90	34	9	200	55
SA-A300	M30	85	70	19	100	19	109.5	47	58	5	37	25	85	120	42	9	300	80
SA-A400	M36	95	80	23	119	22	126	52	68	6	43	25	85	125	48	9	360	85
SA-A500	M42	110	90	26	127	25	145	56	83	6	49	30	95	140	58	12	420	110
SA-A600	M48	110	100	30	139	28	165	61	98	6	52	30	95	145	65	12	480	115
SA-A800	M64	150	120	40	195	32	266	124	134	8	70	40	125	190	78	16	640	130
SA-A1000	M64	150	120	40	215	36	306	134	164	8	70	40	125	190	78	16	640	130

SC鼓型橡胶护舷

SC cell rubber fender

SC드럼형 고무편대

◆ 特点 Features 구조특징

1. 吸能量/反力值提高

SC 超级鼓型橡胶护舷与普通鼓型橡胶护舷相比, E/R.H 值约提高15%, 普通鼓型橡胶护舷的E/R.H值一般为0.375~0.385, 而SC 超级鼓型橡胶护舷的E/R.H值一般为0.43~0.44.

2. 结构更加合理

SC 超级鼓型橡胶护舷, 与普通橡胶护舷相比, 结构更加合理, 护舷筒体与法兰连接部, 采用了圆滑过渡, 减少了护舷根部在压缩变形时的应力集中现象, 护舷受力更加合理, 并且提高了护舷的压缩量, 由普通型的47.5%增加到52.5%.

3. SC超级鼓型橡胶护舷与普通型橡胶护舷具有相同的安装螺栓孔距和螺栓孔。

4. 具有倾斜靠泊影响小的特点。

1. High energy absorption/reaction force value.

Compared with common cell rubber fenders, SC cell rubber fender has about 15% higher E/R.H value. The common cell rubber fender has 0.375~0.385 E/R.H, while the one of SC super cell rubber fender has 0.43~0.44 normally.

2. More reasonable structure

Compared with common rubber fender, SC super cell rubber is more reasonable in the structure design. The joint between the fender buffer and flange adopts smooth transition to reduce the stress concentration at the fender bottom during the deflection caused by compression, which results in more reasonable force dispersion. Furthermore the deflection value of the fender is increased to 52.5% from 47.5% of the common type.

3. SC super cell rubber fender has the same installation bolt pitch and bolt holes with the common rubber fender.

4. It has the feature of minor affection in angular berthing.

1. 에너지 흡수/반작용력 가치를 높임

SC슈퍼 드럼형 고무펜더와 일반 고무 펜더를 비교 할때, E/R.H가치는 약15%증가하며 일반 드럼형 고무 펜더의E/R.H가치는 일반적으로0.375~0.385이며, SC슈퍼 드럼형 고무 펜더의E/R.H가치는 일반적으로 0.43~0.44임

2. 더욱 합리적인 구조

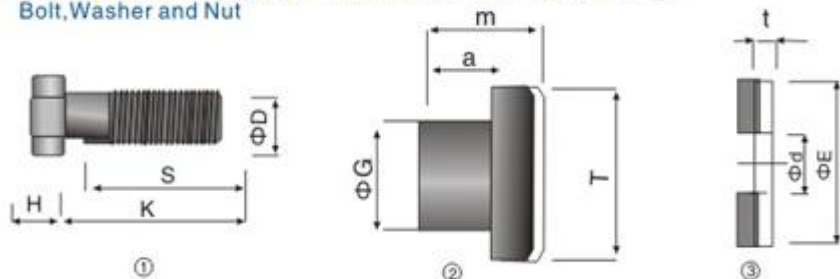
SC슈퍼 드럼형 고무펜더와 일반 고무 펜더를 비교 할때, 구조가 더욱 합리하며 펜더 통체와 플랜지 연결부위는 스무드하게 연결되며 펜더 루트부위가 압축 변형할때의 응력이 집중하는 현상을 감소 시키며 펜더가 더욱 합리하게 힘을 받으며 펜더의 압축량을 높혀주며 일반형의47.5% 로부터52.5%까지 증가 시킴

3. SC슈퍼 드럼형 고무펜더와 일반 고무 펜더를 비교 할때, 같은 설치 볼트 구멍거리와 볼트 구멍이있음

4. 경사 정지시 영향이 작은 특징

◆ 贴面板与防冲板联接件 레이네이트판 및 충격방지판 연결건

Bolt, Washer and Nut

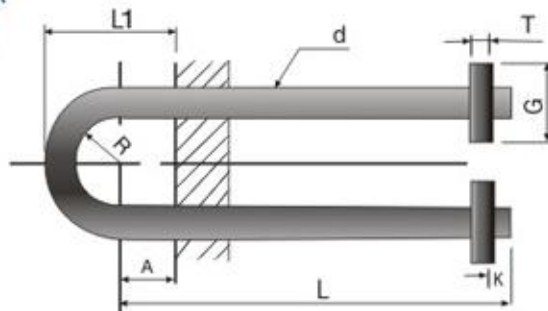


规格 specifications 규격치수	螺栓 Bolt 볼트				螺母 Nut 너트				垫片 Washer 워셔			
	D	K	S	H	m	a	G	D	T	E	d	t
M16	16	30	20	10	14	9	24	16	36	32	18	2.5
M20	20	45	40	20	20	9	32	20	40	46	22	3

◆ SC鼓型橡胶护舷-U型环

SC cell rubber fender U-Ring

SC드럼형 고무펜더 U-반지



规格 specifications 규격표시	d	R	L1	L	A	T	K	G
SC400H	40	60	220	440	60	25	25	100
SC500H	40	60	220	440	60	25	25	100
SC630H	40	60	220	400	60	25	25	100
SC800H	50	75	250	650	70	30	30	120
SC1000H	60	75	250	750	70	30	30	120
SC1150H	60	75	250	750	70	30	30	120
SC1250H	60	90	250	790	70	30	30	120
SC1450H	60	90	250	850	70	30	30	120
SC1600H	60	90	250	900	70	30	30	120
SC1700H	70	90	250	1100	70	30	30	120
SC2000H	70	90	250	1220	70	30	30	130
SC2250H	80	120	300	1300	70	30	30	160
SC2500H	80	120	300	1400	70	30	30	160
SC3000H	90	130	330	1500	80	30	30	180

◆ 安装总成

Installation Figure

설치 총 구성도면



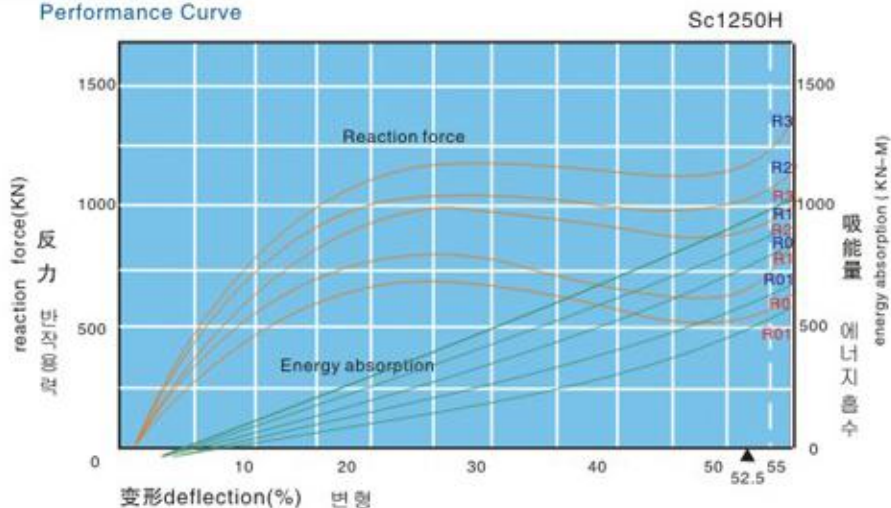
◆ 主要配件及用途 주요부품 및 용도
 Main Accessories and Applications

No	名称 description 이름	用途 Applications 용도	材质 Material 기재
1	预埋件 Per-Built in Parts 임베디드 부품 매설된 너트	U型环 吊挂链条用	Q235涂漆或热浸锌
		U_Ring Holding chains	Q235 painted or hot galvanized
		U-반지 행거체인용	Q235 페인트 혹은 열 아연 도금
		预埋螺母 护舷本体与码头连接。	1Cr13或Q235热浸锌
		Bolt & Nut Fasten fenders on to dock	Stainless steel or hot galvanized
		편더 주체와 부두가 연결	Cr13혹은Q235 열아연 도금
2	贴面板	降低摩擦系数, 保护船体不受伤害	UHMV-PE
	face Pad	Friction coefficient and protect the vessels hull	UHMV-PE
	래미네이트판	마찰계수를 감소시켜 선체를 보호하고 상해를 방지	UHMV 재질
3	防冲板	用来承受本体所产生的压力, 达到降低面压之目的	Q235涂漆, 热镀锌
	Front Panel	Protect the vessels hull	Q235 painted
	충격방지판	본체가 나타나는 압력을 지원하여 표면 압력을 감소시키는 목적	Q235 페인트 혹은 열 아연 도금
4	斜拉链	承受防冲板重力, 减少护舷下垂	Q235涂漆, 热镀锌
	Weight Chain	Support the frontal frame	Q235 painted
	경사 체인	충격 방지판의 중력을 지원하여 편더의 아래로 늘어짐을 감소	Q235 페인트 혹은 열 아연 도금
5	水平链	约束护舷(防重设备)系统的剪切变形	Q235涂漆, 热镀锌
	Shear Chain	Restraining the shearing deflection of the fender system	Q235 painted
	수평 체인	편더판체(충격방지 장비)시스템의 전단 변형	Q235 페인트 혹은 열 아연 도금
6	垂直链	当护舷下部受到力时, 限制上部护舷拉伸	Q235涂漆, 热镀锌
	Tension Chain	Restraining stretching of the fender at partial compression	Q235 painted
	수직 체인	편더 하부가 힘을 받을때 상부 편더의 연장력을 통제함	Q235 페인트 혹은 열 아연 도금
7	联接螺栓、螺母	护舷与防冲板及其他部件联接	1Cr13或Q235热浸锌
	Connector	Connect the fender, front panel and face pad	Stainless steel or hot galvanized
	연결볼트, 너트	편더와 충격방지판 및 기타 부품의 연결	1Cr13혹은Q235 열아연 도금

◆ 尺寸 규격치수
 Measures

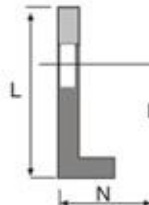
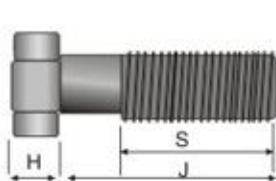
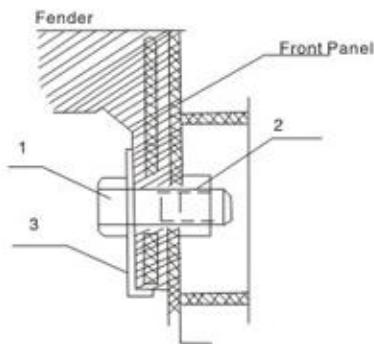
规格 specifications 규격치수	H (mm)	ΦW (mm)	ΦB (mm)	D (mm)	n × d (mm)	Weight (Kg)
SC400H	400	650	550	25	4 × 30	78
SC500H	500	650	550	25	4 × 32	110
SC630H	630	840	700	25	4 × 39	230
SC800H	800	1050	900	30	6 × 40	410
SC1000H	1000	1300	1100	35	6 × 47	790
SC1150H	1150	1500	1300	37	6 × 50	1200
SC1250H	1250	1650	1450	40	6 × 53	1500
SC1450H	1450	1850	1650	42	6 × 61	2300
SC1600H	1600	2000	1800	45	8 × 61	3000
SC1700H	1700	2100	1900	50	8 × 66	3600
SC2000H	2000	2200	2000	50	8 × 74	4200
SC2250H	2250	2550	2300	57	10 × 74	7400
SC2500H	2500	2950	2700	70	10 × 74	10500
T3000H	3000	3350	3150	75	12 × 90	18500

◆ 性能曲线 기능곡선
Performance Curve



◆ 防冲板联接件 충격방지판 연결건
Fastening Bolt for Front Panel

序号 NO.	名称 이름	材质 Material	数量 수량
1	螺栓 Bolt 볼트	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO2	1
2	垫片 Washer 워셔	Q235镀锌 Q235镀锌 Hot-galv	1
3	预埋螺母 Pre-built-in nut 예설경 너트	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO2	1
4	地角杆 Foot rod 지각 로드	Q235	1
5	地角板 Foot board 지각판	Q235	1



规格 규격치수 Specifications	螺栓 Bolt 볼트				螺母	垫片 Washer 워셔						
	D	J	S	H	T	d	E	N	L	B	R	t
SC400H	22	75	55	15	20	25	24	18	76	50	15	5
SC500H	24	80	55	17	22	28	25	18	78	60	15	5
SC630H	30	90	55	19	24	34	33	20	105	65	15	5
SC800H	33	100	60	23	28	37	35	25	112	70	15	5
SC1000H	39	115	65	26	32	43	40	26	142	80	25	6
SC1150H	42	125	70	26	32	46	43	28	145	85	25	6
SC1250H	45	130	75	30	38	49	45	31	147	90	30	6
SC1450H	52	145	85	35	45	56	50	31	152	100	30	6
SC1600H	52	145	85	35	45	56	50	31	152	100	30	6
SC1700H	56	160	90	35	45	63	55	38	157	110	30	8
SC2000H	64	170	95	40	51	70	58	40	160	116	40	8
SC2250H	64	170	95	40	51	70	60	43	187	120	40	8
SC2500H	64	190	95	40	51	70	65	50	192	125	50	10
SC3000H	76	215	110	50	64	84	70	55	172	140	50	10

自主研发的SC鼓型橡胶护舷

SC super cell rubber fender independently developed

고크에서 자체 연구 개발한 SC 드럼형 고무 펜더

◆ 特点 Features 구조특징

自主研发的SC鼓型橡胶护舷与一般同类产品相比具有以下优点:

1. 设计压缩变形大;
2. 单位吸能量高;
3. 护舷前端设有防冲钢架, 从而降低船舶靠泊面压力, 适用于大型港口、码头。

Compared with general products of the same kind, SC super cell rubber fender independently developed

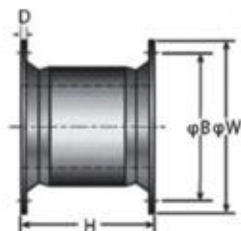
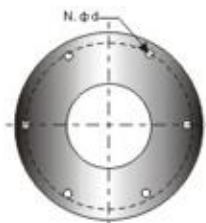
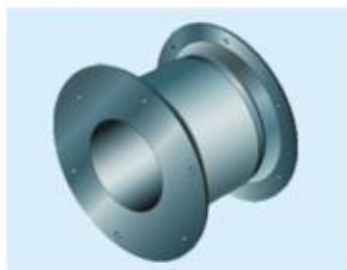
1. The designed compression deflection is large;
2. The unit energy absorption is high;
3. There is impact-proof steel frame set at front end of the fender to reduce the pressure on the berthing surface of the ship. It is applicable for large-size port and dock.

고크에서 자체 연구 개발한SC 드럼형 고무 펜더와 일반 동종류 제품을 비교하면 이하의 장점이 있음

1. 디자인 압축 변형이 큼
2. 단위 에너지 흡수량이 높음
3. 펜더 전단에 충격 방지 후레임이 설치되어 선박의 정박 압력을 감소시키며 대형 항구, 무두에 적용한다.

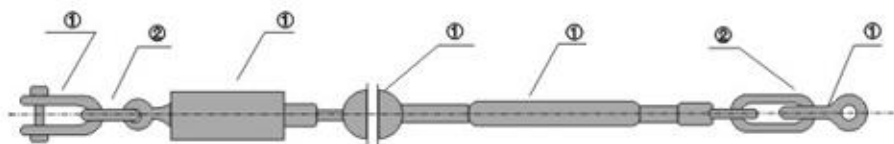


◆ 规格 규격치수
Specifications



◆ 橡胶弹簧链 고무스프링 체인
Spring Chain Construction

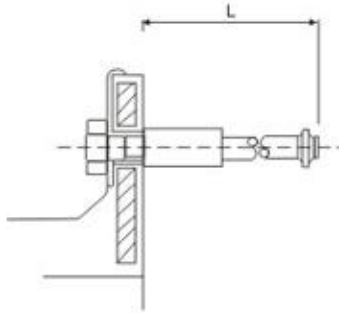
NO	名称 Name 이름	材质 Material 자재
1	末端卸扣 End Button 말단 후크	Q235热浸锌 Q235 Hot-Galv Q235 열아연 도금
2	末端链环 End Ring 말단 체인링	Q235热浸锌 Q235 Hot-Galv Q235 열아연 도금
3	弹簧框架 Springle Frame 스프링 프레임	Q235热浸锌 Q235 Hot-Galv Q235 열아연 도금
4	普通链环 Ring 일반 체인링	Q235热浸锌 Q235 Hot-Galv Q235 열아연 도금
5	螺旋扣 spiral Button 나선 후크	Q235热浸锌 Q235 Hot-Galv Q235 열아연 도금



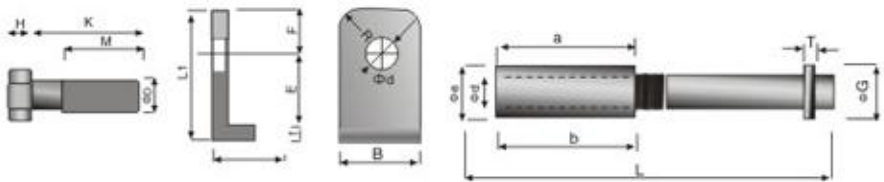
◆ 规格 규격치수
Specifications

规格 Specifications 규격치수	普通链环 Ring 일반 체인링	末端链环 End Ring 말단 체인링	末端卸扣 End Button 말단 후크	弹簧架 Spring Frame 스프링 프레임	螺旋扣 Spiral Button 나선 후크
SC630H	φ20	φ22	Mx22	φ32	M36
SC800H	φ22	φ25	Mx25	φ32	M36
SC1000H	φ25	φ28	Mx28	φ32	M36
SC1150H	φ25	φ28	Mx28	φ32	M36
SC1250H	φ25	φ28	Mx28	φ32	M36
SC1450H	φ28	φ30	Mx30	φ32	M36
SC1600H	φ28	φ30	Mx30	φ42	M42
SC1700H	φ32	φ34	Mx34	φ42	M42
SC2000H	φ34	φ36	Mx36	φ42	M48
SC2250H	φ34	φ36	Mx36	φ42	M48
SC2500H	φ38	φ40	Mx40	φ52	M52
SC3000H	φ40	φ42	Mx42	φ52	M56

◆ 预埋件
Pre-Built in Parts
임베디드 부품



序号 NO.	名称 Name 이름	材质 Material 자재	数量 Qty 수량
1	螺栓 Bolt 볼트	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO2	1
2	垫片 Washer 워셔	Q235镀锌 Q235镀锌 Hot-galv	1
3	预埋螺母 Pre-built-nut 예설정 너트	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO2	1
4	地角杆 Foot rod 지각 로드	Q235	1
5	地角板 Foot board 지각판	Q235	1



螺栓 Bolt 볼트 垫片 Washer 워셔 预埋件 Pre-Built in Parts 임베디드 부품

规格 Specifications 규격치수	螺栓 Bolt 볼트				垫片 Washer 워셔								预埋件 Pre-Built in Parts 임베디드 부품						
Specification	D	K	M	H	B	L1	N	t	V	E	F	R	d	e	a	b	L	T	G
SC400H	22	75	60	19	65	109.5	19.5	4.5	34	72	33	15	22	30	75	105	330	9	75
SC500H	24	75	60	19	65	109.5	19.5	4.5	34	72	33	15	24	32	75	105	330	9	75
SC630H	30	75	60	19	65	109.5	19.5	4.5	34	72	33	15	30	38	75	105	330	9	75
SC800H	33	85	70	22	70	116.5	24	4.5	36	77	35	25	33	42	85	120	360	9	80
SC1000H	39	95	75	26	80	148	26	6	43	102	40	25	39	50	85	125	430	9	85
SC1150H	42	100	80	26	85	151	28	6	46	102	43	30	42	55	85	125	500	12	90
SC1250H	45	120	90	30	90	153	31	6	49	102	45	30	45	60	95	140	500	12	110
SC1450H	52	120	95	35	100	158	31	6	56	102	50	30	52	70	100	150	570	12	120
SC1600H	52	120	95	35	100	158	34	6	56	102	50	30	52	70	100	150	570	12	120
SC1700H	56	135	110	35	110	165	38	8	63	102	55	30	56	75	105	165	620	16	125
SC2000H	64	150	125	40	125	168	40	8	70	102	58	40	64	80	125	190	700	16	130
SC2250H	64	150	125	40	125	195	43	8	70	127	60	40	64	80	125	190	700	16	130
SC2500H	64	170	125	40	125	202	50	10	70	127	65	50	64	80	125	190	700	16	130
SC3000H	76	190	145	50	140	207	55	10	84	127	70	50	76	95	135	210	800	19	135

U型橡胶护舷 U-type rubber fender

U형 고무펜더

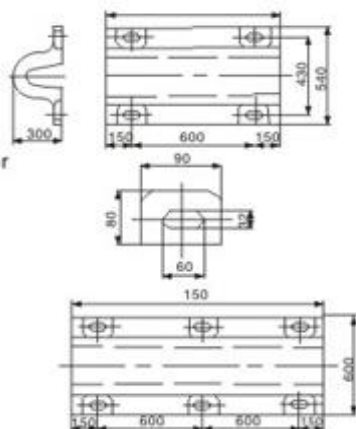
◆ 特点 Features 구조특징

1. 反力、吸能量适中
2. 底部宽度较小，适用框架式码头
3. 安装牢固，便于维修

1. Reaction force and energy absorption are moderate.
2. With small bottom width, it is especially applicable for framed dock.
3. Installed firmly, it is convenient for maintaining.

1. 반작용력, 에너지 흡수가 적당함
2. 일부분의 넓이가 작기에 후레임식 부두에 적용
3. 튼튼히 설치되어 보수에 편리함

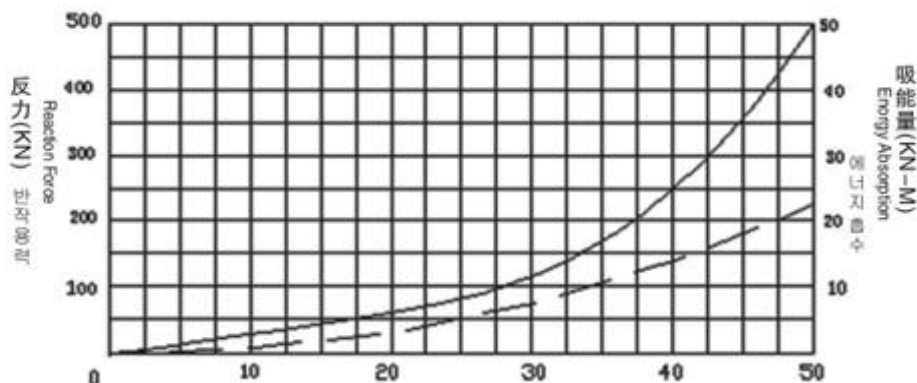
◆ 规格 Specifications 규격치수



◆ 性能表 Performance 기능

型号规格 Specifications 규격치수	设计压缩变形% Designed compression deflection % 디자인 압축 변형	反力 (KN) Reaction Force 반작용력(KN)	吸能量(KN-M) Energy Absorption 에너지 흡수	性能公差% Performance Tolerance 기능 공차%
U300Hx1500L	50	495	24	± 10
	62.5	600	43.5	

◆ 性能曲线 性能곡선 Performance Curve



V型橡胶护舷

V-type rubber fender

V형 고무펜더

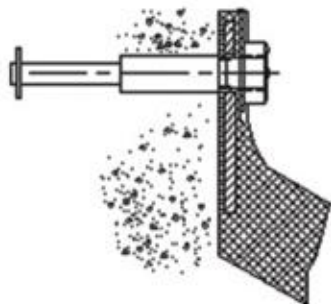
◆ 特点 Features 구조특징

1. 反力适中, 吸能量较高
2. 安装牢固, 拆卸方便
3. 适用于中型码头

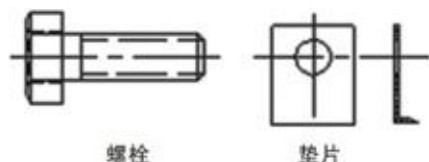
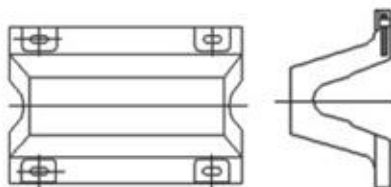
1. Reaction force is moderate and the energy absorption amount is much higher.
2. Installed firmly, it is convenient for dismantling.
3. It is applicable for medium-size dock.

1. 반작용력이 적당하고 에너지 흡수가 높음
2. 튼튼히 설치되고 분해가 편리함
3. 중형 부두에 적용함

◆ 安装 설치 Installation

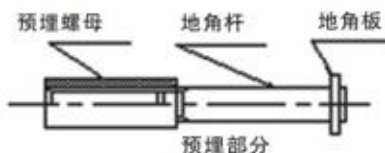


◆ 规格 Specifications 규격치수



螺栓

垫片



预埋螺母

地角杆

地角板

预埋部分

W型橡胶护舷

W-type rubber fender

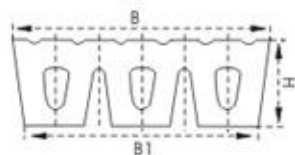
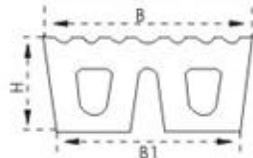
W형 고무펜더

◆ 特点 Features 구조특징

1. 吸能量高, 反力低。 2. 安装, 维修方便。

1. large amount of energy absorption, low reaction force.
2. installed and maintained conveniently.

높은 에너지 흡수, 낮은 반작용력, 합리적인 구조, 편리한 설치 및 보유



◆ 尺寸 규격치수 Measures

型号 Type 타입	尺寸(mm) Measures 규격치수			
	B	B1	H	L
W300	480	426	300	300-2000
W330	550	420	330	300-2000
W450	500	420	450	300-2000

型号 Type 타입	尺寸(mm) Measures 규격치수			
	B	B1	H	L
W300	600	546	300	300-2000
W400	600	550	400	300-2000

巨型橡胶护舷

Kui-Type Rubber Fender
 কে - 타입 고무 펜더

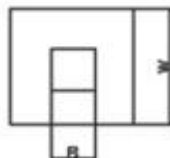
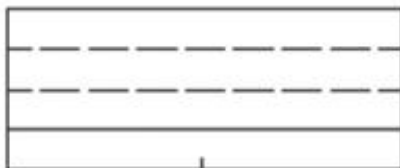
◆ 特点 Features 구조특징

反力、吸能量适中；重量轻，易安装。

Reaction force and energy absorption are moderate; with small weight, it is easily to be installed.

반작용력, 에너지 흡수가 적당함, 가볍고 설치하기 쉬움

◆ 规格 규격치수 Specifications



型号 Type 타입	W	B	L	备注 Remark 비고
150 × 75	150	75	500-5000	其他规格可 根据用户要求 生产 products in other dimensions could be produced according to clients' requirements. 기타 규격은 사용 자의 요구에 따라 생산 가능
200 × 100	200	100		
250 × 125	250	125		
300 × 150	300	150		
400 × 200	400	200		
500 × 250	500	250		

◆ 性能表 Performance 기능

型号 Type 타입 W × B	高反力型 High Reaction Force 고반작용력형		标准反力型 Standard Reaction Force 표준반작용력형		性能公差% Performance Tolerance 기능 공차%
	反力(KN) Reaction Force 반작용력(KN)	吸能量(KN-M) Energy Absorption 에너지 흡수	反力(KN) Reaction Force 반작용력(KN)	吸能量(KN-M) Energy Absorption 에너지 흡수	
150 × 75	780	15	647	13	± 10
200 × 100	1055	27.4	876	33	
250 × 125	1321	43.4	1090	34	
300 × 150	1580	62	1302	50	
400 × 200	2100	110	1730	92	
500 × 250	2620	170	2167	140	

圆筒型橡胶护舷

Cylindrical type rubber fender

원통형 고무 펜더

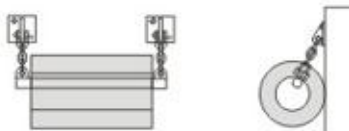
◆ 特点 Features 구조특징

1. 圆筒型橡胶护舷是中空的圆筒型橡胶制品，用链条和钢棒悬挂在码头上，安装维修方便；
2. 圆筒型橡胶护舷反力低，面压小，吸能量合理；
3. 圆筒型橡胶护舷对船舶靠泊时的纵摇和横摇适应性强；
4. 圆筒型橡胶护舷特别适用于重力式码头和整体式码头的上部；
5. 圆筒型橡胶护舷适用于各种大小的船舶；
6. 安装形式多样，可采用垂直、水平、对角线等形式。

1. Cylindrical type rubber fender is hollow rubber product in cylindrical type, which is hanged on the dock with chains and steel bar and convenient for installing and maintaining;
2. Cylindrical rubber fender has low reaction forces, little surface pressure, and reasonable energy absorption;
3. Cylindrical type rubber fender has strong adaptability against longitudinal and cross iseways of ships when berth at the dock;
4. Cylindrical type rubber fender is especially applicable for upper part of gravity typedocks and integral type docks;
5. Cylindrical type rubber fender is applicable for ships with different sizes.
6. Various installation forms could be selected, such as vertical, horizontal and diagonal etc. forms.

1. 원통형 고무 펜더는 가운데 비어있는 원통형 고무 제품이며 체인 및 철강봉을 이용하여 부두에 걸어놓으며 설치 및 보수가 편리함
2. 원통형 고무 펜더는 반작용력이 낮고 표면 압력이 작고 에너지 흡수가 합리함
3. 원통형 고무 펜더는 선박이 정박할때 종향 흔들림과 횡향 흔들림 적응성이 강함
4. 원통형 고무 펜더는 중력식 부두 및 전체식 부두의 상부에 특별히 적용함
5. 원통형 고무 펜더는 여러가지 크기의 선박에 적용함
6. 설치형식이 다양하며 수직, 수평, 대각선등 형식이 가능함

◆ 安装 설치 Installation



规格 Specifications 규격치수	钢棒 steel bar 철강봉	链腿 anchoring chain 장거	卸扣 shackle 후크	U型环 U-Ring U-반지
Y150	18-33	10-17	10-18	15-25
Y300	25-44	13-23	14-24	20-36
Y400	50-70	13-23	19-24	20-36
Y500	60-100	14-26	20-28	25-40
Y800	60-100	19-32	20-32	30-50
Y1000	100-150	24-42	24-42	38-65
Y1200	120-180	34-46	28-45	40-70
Y1400	130-200	40-50	30-48	42-80
Y1600	140-220	30-52	30-55	48-85



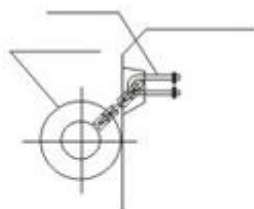
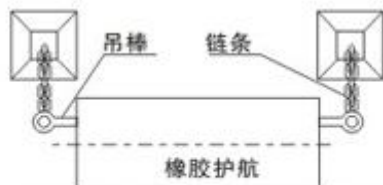
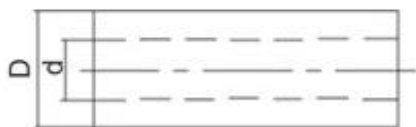
◆ 尺寸 규격치수
Measures

规格 Specification 규격치수	L (mm)	D Φ(mm)	d Φ(mm)	Weight (kg)
Y150		150	75	18
Y200		200	100	28
Y250		250	125	45
Y300		300	150	64
Y400		400	200	110
Y500		500	250	175
Y600		600	300	250
Y700	500-30000	700	350	345
Y800		800	400	450
Y900		900	450	570
Y1000		1000	500	710
Y1100		1100	550	870
Y1200		1200	600	1020
Y1400		1400	700	1400
Y1600		1600	800	1800



◆ 规格 Specifications 규격치수

规格 규격치수 Specification	外径D mm mm	内径d mm mm	长度L 길이 mm
Y150	150	75	500-30000
Y200	200	100	
Y250	250	125	
Y300	300	150	
Y400	400	200	
Y500	500	250	
Y600	600	300	
Y700	700	350	
Y800	800	400	
Y900	900	450	
Y1000	1000	500	
Y1100	1100	550	
Y1200	1200	600	
Y1300	1300	650	
Y1400	1400	700	
Y1500	1500	750	
Y1600	1600	800	



◆ 圆筒形橡胶护舷性能表 원통형 고무 펜더 기능기능
Cylindrical type rubber fender Performance

型号 Type 타입	设计压缩变形% Designed compression deflection % 디자인 압축 변형	反力(KN) Reaction Force 반작용력(KN)	吸能量(KN-M) Energy Absorption 에너지 흡수	性能公差% Performance Tolerance 기능 공차%
Y150 × 1000L	50	45	1.5	± 10
Y200 × 1000L		61	2.7	
Y300 × 1000L		91	6	
Y400 × 1000L		120	10.6	
Y500 × 1000L		151	16.4	
Y600 × 1000L		182	24	
Y700 × 1000L		208	32	
Y800 × 1000L		237.4	41.2	
Y900 × 1000L		267.8	52	
Y1000 × 1000L		297.2	63.8	
Y1100 × 1000L		331	77.2	
Y1200 × 1000L		363	95	
Y1300 × 1000L		392	108	
Y1400 × 1000L		421.8	127.5	
Y1500 × 1000L		451	147	
Y1600 × 1000L		481	176	

转鼓型橡胶护舷

Drum-type rubber fender
회전드럼식 고무 펜더

◆ 特点 Features 구조특징

- 1、反力吸能比D型护舷高
- 2、安装强度及使用寿命比D型护舷有很大提高
- 3、一般适用于框架式码头

1. Reaction-force energy absorption is higher than the one of D type fender.
2. Compared with D type fender, the installation strength and service life are greatly improved.
3. It is generally applicable for framed dock.

1. 반작용력 에너지 흡수가 D형보다 높음
2. 설치 강도 및 사용 내구성이 D형 펜더보다 아주 높음
3. 일반적으로 후레임식 부두에 적용함

◆ 转鼓D型橡胶护舷特点 회전 드럼D형 고무 펜더의 특징

Feature of type D drum-type rubber fender

D 型转鼓护舷是护舷安装在由轴架支撑的一个固定轴上，从而使护舷随着轴而转动。

Type D drum-type fender is mounted on a fixed axle supported by a special frame, which will rotate following with the axle.

D형 회전 드럼 펜더는 펜더가 축 후레임으로 지원된 고정축에 설치되었기에 펜더는 축을 따라 이동함

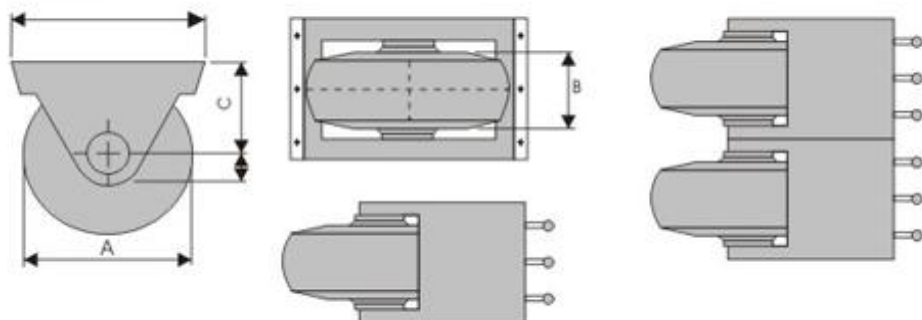
◆ **转鼓B型橡胶护舷特点** 회전 드럼B형 고무 펜더의 특징
Feature of type B drum-type rubber fender

B型转鼓护舷是护舷在三轴上转动，使护舷变形量增加一倍，从而性能大大提高。

Type B drum-type rubber fender is the fender body which rotates on three axes to double the fender deflections, and consequently improve the performance greatly.

B형 회전 드럼 펜더는 펜더가 3축에서 회전하여 펜더의 변형량을 1배 증가시켜 기능이 대폭 증가됨

◆ **安装 Installation** 설치



◆ **规格 Specifications** 규격치수

型号 Type	타입	A	B	C	D	E	F	G	
Model	타입	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	#Turn Cells	Weight(kg)
D1-060-20		600	200	320	110	420	695	1	120
D1-075-25		750	250	400	140	510	670	1	230
D1-090-30		900	300	480	165	610	1040	1	410
D1-120-40		1200	400	640	220	820	1380	1	980
D1-150-50		1500	500	800	275	1010	1740	1	1810
D1-180-60		1800	500	960	330	1210	2080	1	3130
D1-210-70		2100	700	1155	385	1410	2440	1	4800
D1-240-80		2100	800	1280	440	1610	2770	1	6040
D2-060-20		600	200	320	110	770	695	2	210
D2-075-25		750	250	400	140	835	670	2	420
D2-090-30		900	300	480	165	1120	1040	2	775
D2-120-40		1200	400	640	220	1500	1380	2	1770
D2-150-50		1500	500	800	275	1850	1740	2	3330
D2-180-60		1500	600	960	330	2215	2080	2	5720
D2-210-70		2100	600	1155	385	2590	2440	2	9750
D2-240-80		2400	800	1280	440	2950	2770	2	12400
D3-060-20		600	200	320	110	1120	695	3	310
D3-075-25		600	250	400	140	1360	670	3	610
D3-090-30		900	300	480	165	1630	1040	3	1080
D3-120-40		1200	400	640	220	2180	1380	3	2550
D3-150-50		1500	500	800	275	2690	1740	3	4850
D3-180-60		1800	500	960	330	3220	2080	3	8400
D3-210-70		2100	500	1155	385	3770	2440	3	13670
D3-240-80		2100	500	1280	440	4290	2770	3	18390

◆ 性能表 Performance 기능

型号 Type 타입	压缩变形(mm) Common Max 압축 변형	反力(KN) Reaction Force 반작용력	吸能量(KN-M) Energy Absorption 에너지 흡수
D1-060-20	125	70	2.5
D1-075-25	157	110	4.8
D1-090-30	184	150	3.8
D1-120-40	260	270	19.6
D1-150-50	325	430	38.4
D1-180-60	390	620	66.3
D1-210-70	455	840	107
D1-240-80	520	1100	157
D2-060-20	125	140	50
D2-075-25	157	210	10
D2-090-30	184	310	17
D2-120-40	260	550	39
D2-150-50	325	860	77
D2-180-60	390	1240	133
D2-210-70	455	1690	210
D2-240-80	520	2200	320
D3-060-20	125	210	7
D3-075-25	157	320	14
D3-090-30	184	460	25
D3-120-40	260	820	60
D3-150-50	325	1280	110
D3-180-60	390	1850	200
D3-210-70	455	2520	320
D3-240-80	520	3290	470

锥型型橡胶护舷

Cone type rubber fender

삼각추형 고무 펜더

◆ 特点 Features 구조특징

1. 鼓型护舷的第三代产品，结构更加合理，变形量增大，吸能量高，使用寿命更长。
2. 倾斜压缩性能更好，10° 以下性能几乎不降低。
3. 规格全，可满足多种设计需要。
4. 通过调整配方可获得多种性能。
5. 前端可放置防冲板、贴面板，护舷所受的剪切力大大降低。
6. 安装简单快捷

1. It is the third generation product of cell fender with more reasonable structure with increased deflection, higher energy absorption and longer service life.
2. It has better performance in angular compression, and the performance will not be reduced under the condition of that the inclination angle is below 10° .

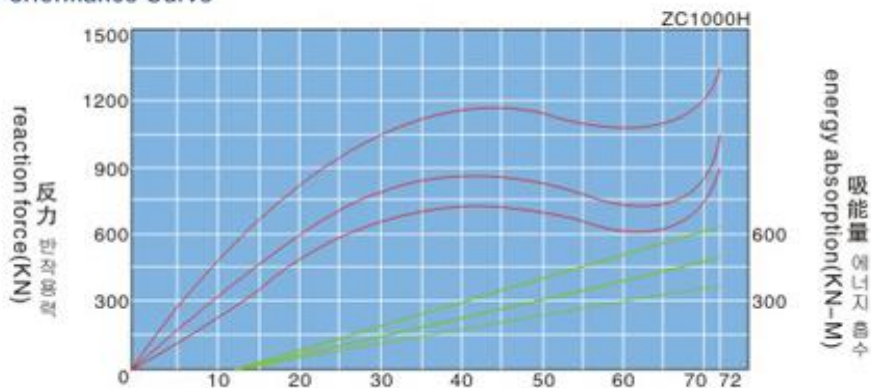
3. Various specifications could meet numerous design requirements.
4. Various performances are available by adjusting configuration plan.
5. Impact-proof plate and veneer could be installed at the front end to greatly reduce the shear force.
6. It is easy and convenient for installing.

1. 드럼형 팬더의 제3세대 제품으로서 구조가 더욱 합리하고 편형량이 크고 에너지 흡수가 높으며 사용내구성이 더욱 큼
2. 경사 압축 기능이 더욱 좋으며 10° 이하의 기능은 기본상 낮아지지 않음
3. 규격이 많고 여러가지 디자인 요구를 만족함
4. 처방을 조정하여 여러가지 기능을 얻을수있음
5. 전단에는 충격 방지판, 레미네이트판을 놓을수있어 팬더가 받는 전단력을 대폭 감소
6. 간단하고 신속한 설치

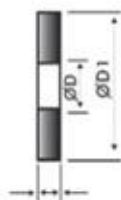
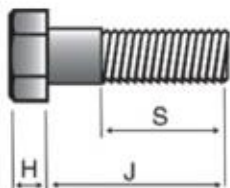
◆ 尺寸 규격치수 Measures

规格	H	B	C	D	E	F	G	Weight
Model	(Mm)	Φ(Mm)	Φ(Mm)	Φ(Mm)	Φ(Mm)	# × Type	# × Φ(Mm)	(Kg)
CONE600H	600	900	810	510	390	6 × M24	6 × 30	235
CONE700H	700	1050	945	595	455	6 × M30	6 × 38	350
CONE800H	800	1200	1080	680	520	8 × M36	6 × 44	540
CONE900H	900	1350	1215	765	585	6 × M36	6 × 44	765
CONE1000H	1000	1500	1350	850	650	6 × M42	6 × 50	1050
CONE1100H	1100	1650	1485	935	715	6 × M42	6 × 50	1400
CONE1150H	1150	1725	1550	998	750	6 × M42	6 × 50	1600
CONE1200H	1200	1800	1620	1020	780	8 × M42	8 × 50	1950
CONE1300H	1300	1950	1755	1105	845	8 × M48	8 × 56	2400
CONE1400H	1400	2100	1890	1190	930	8 × M48	8 × 60	3060
CONE1600H	1600	2400	2158	1360	1040	8 × M48	8 × 60	4600
CONE1800H	1800	2700	2428	1528	1170	10 × M56	10 × 74	6600

◆ 性能曲线 기능곡선 Performance Curve

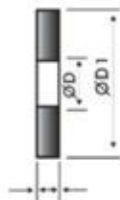
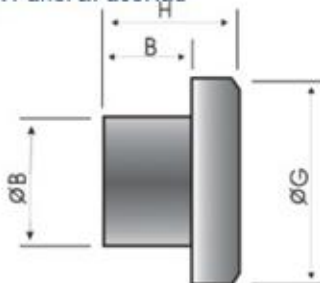
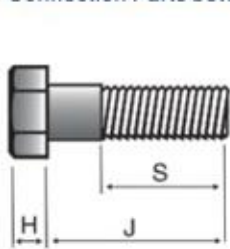


◆ 护舷与防冲板联接配件 펜더와 충격방지판 연결 부품
Connection Parts between Fender & Front Rad



项目 规格 규격치수 Item 항목 Specification	①螺栓 Bolt 볼트				①垫片 Washer 워셔		
	D	J	S	H	d	d1	h
Cone500-600	24	50	40	15	26	44	4
Cone700	30	55	45	19	33	56	4
Cone800	36	65	50	23	39	66	5
Cone900	36	75	60	23	39	66	5
Cone 1000-1100	42	80	65	26	45	78	6
Cone1150	42	85	70	26	45	78	6
Cone1200	42	92	75	26	45	78	6
Cone 1300-1600	48	100	80	30	52	92	8
Cone1800	56	120	100	35	62	105	10
材质 Material	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO				Q235镀锌 Q235 Hot-galv		

◆ 防冲板与贴面板联接配件 충격 방지판과 레이네이트판 연결 부품
Connection Parts between Front Panel & FaceRad

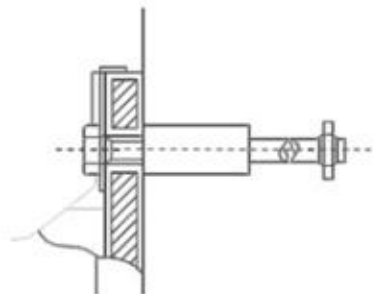


名称 Name 이름	项目 Item 항목	①螺栓 Bolt 볼트				①螺母 Nut 너트				①垫片 Washer 워셔			
		D	J	S	H	h	a	c	D	G	d	d	t
M16		16	45	40	10	20	11	28	16	40	32	17.5	2.5
M20		20	45	40	12	20	11	32	20	36	46	22	2.5
材质 Material 자재		1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO				1Cr13(2Cr13), 1Cr18Ni9Ti, 0Cr17Ni12MO				Q235镀锌 Q235 Hot-galv			

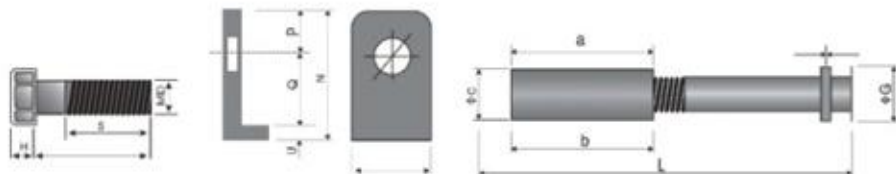
◆ 性能表 Performance 기능

规格 규격치수 Specifications		设计压缩变形 Rated Deflection 디자인 압축 변형		最大压缩变形 Maxed Deflection 최대 변형	
		反力(KN) Reaction Force 반작용력(KN)	吸能量(KN-M) Energy Absorption 에너지 흡수	反力(KN) Reaction Force 반작용력(KN)	吸能量(KN-M) Energy Absorption 에너지 흡수
CONEOOH	Super Reaction Force(R2)	411	140	455	145
	High Reaction Force(R1)	318	100	350	100
	Standard Reaction Force(R1)	249	79	280	80
CONEOOH	Super Reaction Force(R2)	581	216	630	225
	High Reaction Force(R1)	448	168	502	174
	Standard Reaction Force(R2)	356	130	411	135
CONEOOH	Super Reaction Force(R2)	719	320	800	333
	High Reaction Force(R1)	572	243	645	255
	Standard Reaction Force(R1)	452	185	512	194
CONEOOH	Super Reaction Force(R2)	928	466	1035	480
	High Reaction Force(R1)	742	352	840	365
	Standard Reaction Force(R1)	688	270	670	280
CONEOOH	Super Reaction Force(R2)	1156	626	1280	655
	High Reaction Force(R1)	930	475	1037	489
	Standard Reaction Force(R0)	728	351	830	378
CONEOOH	Super Reaction Force(R2)	1400	830	1560	858
	High Reaction Force(R1)	1120	539	1260	686
	Standard Reaction Force(R0)	878	490	1010	502
CONEOOH	Super Reaction Force(R2)	1645	1054	1840	1090
	High Reaction Force(R1)	1302	800	1470	840
	Standard Reaction Force(R0)	1030	800	1182	651
CONEOOH	Super Reaction Force(R2)	1645	1054	1840	1099
	High Reaction Force(R1)	1302	800	1470	840
	Standard Reaction Force(R0)	1030	620	1182	650
CONEOOH	Super Reaction Force(R2)	1945	1346	2100	1400
	High Reaction Force(R1)	1558	1030	1785	1070
	Standard Reaction Force(R0)	1241	800	1410	820
CONEOOH	Super Reaction Force(R2)	2237	1700	2500	1788
	High Reaction Force(R1)	1800	1300	2000	1350
	Standard Reaction Force(R0)	1430	1002	1630	1046
CONEOOH	Super Reaction Force(R2)	2950	2480	3300	2568
	High Reaction Force(R1)	2380	1940	2850	2010
	Standard Reaction Force(R0)	1870	1470	2140	1540
CONEOOH	Super Reaction Force(R2)	3780	3591	4233	3735
	High Reaction Force(R1)	3020	2278	3412	2894
	Standard Reaction Force(R0)	2400	2136	2736	2228

◆ 预埋件 임베디드 부품
Pre-Built in Parts



序号 No. 아니오	名称 Name 이름	材质 Material 소재	数量 Qty 수량
1	螺栓 Bolt	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO	1
2	垫片 Washer	Q235镀锌 Q235 Hot-galv	1
3	预埋螺母 Zinc-alloy	1Cr13(2Cr13) 1Cr18Ni9Ti 0Cr17Ni12MO	1
4	地角杆 Foot rod	Q235	1
5	地角板 Foot board	Q235	1



◆ 锥型橡胶护舷-U型环及链条 삼각추형 고무 맨더 U형링 및 체인
Cone type rubber fender

U型环及链条 U형링 및 체인
Spring Chain and U-Ring



锚链结构及规格 앵커 구조 및 규격
Structure and specifications of Rubber Chain



规格 Specifications 규격치수	普通链环直径 diameter of common link 일반 체인링 지름	末端链环直径 diameter of end link 말단 체인링 지름	冲撞卸扣 end shackle 말단 후크	弹簧框直径 diameter of spring frame 스프링 후크링 지름	螺旋卸扣 spiral button 나선 후크	自制卸扣 self-made shackle 자제 제작 후크		U型环直径 diameter of U ring U형링 지름
						直径 Diameter 지름	长度 Length 길이	
Conc600	22	22	M25	32	M36	32	125-220	40
Conc700	25	25	M25	32	M36	36	145-245	50
Conc800	28	28	M28	32	M36	40	160-275	50
Conc900	28	28	M28	32	M36	40	160-275	50
Conc1000	30	30	M32	32	M36	42	170-300	55
Conc1100	30	30	M32	36	M42	42	170-300	55
Conc1200	34	34	M36	36	M42	45	185-320	60
Conc1300	36	36	M36	36	M48	48	195-340	65
Conc1400	42	42	M42	48	M48	52	210-370	65
Conc1600	40	40	M50	56	M64	64	255-498	70
Conc1600	40	40	M50	56	M64	64	255-498	70

注：上述尺寸为参考尺寸,应根据具体的护舷系统的设计核实调整。

Note: The above value is for reference only, it is subject to change in accordance with actual fender system design.

주: 상기 사이즈는 참조용 사이즈이며 구체적인 펜더 시스템의 디자인에 근거하여 조정하여야 함

滚轮式护舷 Roller type fender

롤러식 펜더



◆ 标准尺寸及技术参数明细

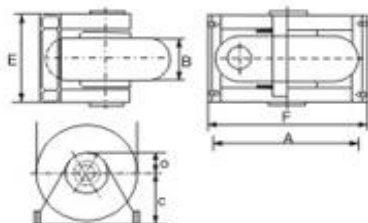
Details for standard size and technical parameter

표준 사이즈 및 기술 파라미터 명세서

D1型滚动护舷标准尺寸

Standard size of type D1 roller type fender

D1형 롤러 펜더 표준 사이즈

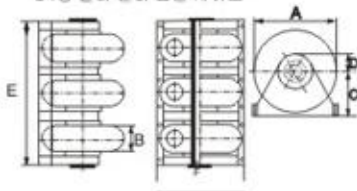


规格 규격치수 Specifications	A	B	C	D	E	F
D1-060-20	600	200	320	110	420	695
D1-075-25	750	250	400	140	510	870
D1-090-30	900	300	480	165	610	1040
D1-120-40	1200	400	640	220	820	1380
D1-150-50	1500	500	800	275	1010	1740
D1-180-60	1800	600	960	330	1210	2080
D1-210-70	2100	700	1150	385	1410	2440
D1-240-80	2400	800	1280	440	1610	2770

D1型滚动护舷标准尺寸

Standard size of type D1 roller type fender

D1형 롤러 펜더 표준 사이즈

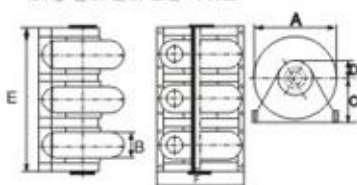


规格 규격치수 Specifications	A	B	C	D	E	F
D2-060-20	600	200	320	110	770	695
D2-075-25	750	250	400	140	935	870
D2-090-30	900	300	480	165	1120	1040
D2-120-40	1200	400	640	220	1500	1380
D2-150-50	1500	500	800	275	1850	1740
D2-180-60	1800	600	960	330	2215	2080
D2-210-70	2100	700	1150	385	2590	2440
D2-240-80	2400	800	1280	440	2950	2770

D1型滚动护舷标准尺寸

Standard size of type D1 roller type fender

D1형 롤러 펜더 표준 사이즈



规格 규격치수 Specifications	A	B	C	D	E	F
D3-060-20	600	200	320	110	1120	695
D3-075-25	750	250	400	140	1360	870
D3-090-30	900	300	480	165	1630	1040
D3-120-40	1200	400	640	220	2180	1380
D3-150-50	1500	500	800	275	2690	1740
D3-180-60	1800	600	960	330	3220	2080
D3-210-70	2100	700	1150	385	3770	2440
D3-240-80	2400	800	1280	440	4290	2770

◆ 规格 규격치수
Specifications

规格 규격치수 Specifications	常用最大挠度(mm) common maximum deflection 흔히 사용되는 최고 변위	常用最大荷重 (T) common maximum load 흔히 사용되는 최고 부하	吸能量 (KN·M) Energy Absorption 에너지 흡수
D1-060-20	125	7	0.25
D1-075-25	157	11	0.48
D1-090-30	184	15	0.88
D1-120-40	260	27	1.96
D1-150-50	325	43	3.84
D1-180-60	390	62	6.63
D1-210-70	455	84	10.7
D1-240-80	520	110	15.7
D2-060-20	125	14	0.5
D2-075-25	157	21	1
D2-090-30	184	31	1.7
D2-120-40	260	55	3.9
D2-150-50	325	86	7.7
D2-180-60	390	124	13.3
D2-210-70	455	169	21
D2-240-80	520	220	32
D3-060-20	125	21	0.7
D3-075-25	157	32	1.4
D3-090-30	184	46	2.5
D3-120-40	260	82	6
D3-150-50	325	128	11
D3-180-60	390	185	20
D3-210-70	455	252	32
D3-240-80	520	329	47

拖轮橡胶护舷

에인선 고무 펜더

Tugboat type rubber fender

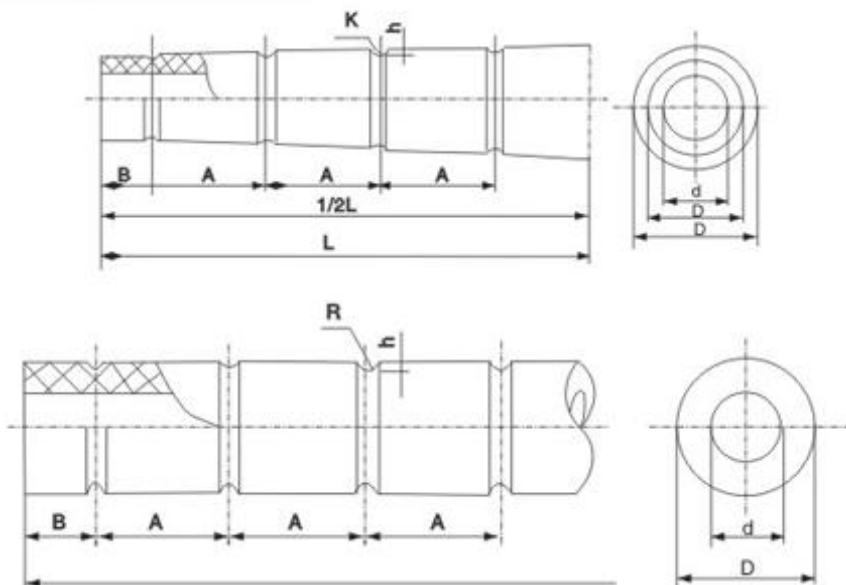
◆ 特点 Features 구조특징

适用于各种港口拖轮和推轮

It is applicable for various tugboats and pushboats of port.

여러가지 항구 에인선 및 푸시보트

◆ 规格 Specifications 규격치수



◆ 注意

1. 圆中 (A, B) 尺寸由用户确定。R、H有两种机 (R15、H30和R25、H50)。
2. 其他非系列规格可根据用户需要制造。
3. 为便于安装可根据用户需要制造橡胶塞头。

1. The size in the circles (A, B) is determined by clients. R-H has two models (R15, H30 and R25, H50).
2. Other specifications which are not in series could be manufactured according to clients' requirements.
3. The rubber bung could be manufactured according to demand of clients to install the fender conveniently.

1. 원속의 (A, B) 사이즈는 사용자가 확정함. R, H는 두가지 기형 (R15, H30및R25, H50) 이있음
2. 기타 비 시리즈 규격은 사용자의 요구에근거하여 제조함
3. 설치의 편리를 위하여 고객의 요구에 따라 고무 플러그를 제조함

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Quality Products Global Service 전문적인 품질로 전세계에 서비스

规格 Specifications 규격치수	内径 inner diameter 아이디	外径 external diameter 외경		制品长度 Product Length 제품 길이	备注 Remark 비고
		D	D'		
Φ200xΦ100xL	100	200		500-20000	直型 Straight 곧은
Φ300xΦ150xL	150	300			
Φ400xΦ200xL	200	400			
Φ500xΦ220xL	220	500			
Φ500xΦ250xL	250	500			
Φ600xΦ300xL	300	600			
Φ700xΦ350xL	350	700			
Φ750xΦ350xL	350	750			
Φ800xΦ400xL	400	800			
Φ400xΦ300xΦ200xL	200	400	300		
Φ500xΦ400xΦ250xL	250	500	400		
Φ600xΦ450xΦ250xL	250	600	450		
Φ700xΦ500xΦ300xL	300	700	500		
Φ750xΦ450xΦ250xL	250	750	450		
Φ760xΦ500xΦ300xL	300	760	500		
Φ800xΦ600xΦ400xL	400	800	600		

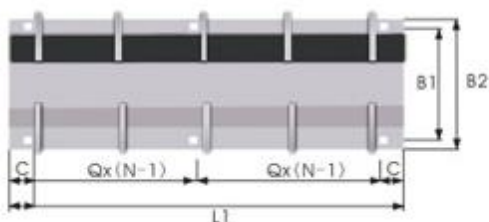


橡胶舷梯

Rubber gangway ladder
고무 현운사다리

◆ 特点 Features 구조특징

1. 具有护舷和爬梯两种功能。
 2. 与DG护舷具有相同的安装孔距，具有互换性。
 3. 安装、维修方便，使用寿命长。
1. It could be functioned as fender and climbing ladder.
 2. It has same mounting holes pitch with DG fender, and they can be replaced by each other.
 3. It could be installed and maintained conveniently, and has long service life.
1. 랜더 및 사다리 등 두가지 기능
 2. DG랜더와 같은 설치 구멍 거리가 있어 호환성 있음
 3. 설치 보유가 편리하며 사용내구성이 좋음



Model	L1	L	Q	c	B1	B2	H	J	K	n
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
H200x1500	1500	1500	800/700	100	400	320	200	270	M24	3
H200x1800	1800	1800	800	100	400	320	200	270	M24	3
H200x2100	2100	2100	600/700	100	400	320	200	270	M24	4
H200x2400	2400	2400	700/800	100	400	320	200	270	M24	4
H200x2700	2700	2700	800/900	100	400	320	200	270	M24	4
H200x3000	3000	3000	700	100	400	320	200	270	M24	5
H300x1000	1150	1000	870	140	600	490	300	300	M30	2
H300x1500	1650	1500	685	140	600	490	300	300	M30	3
H300x2000	2150	2000	625	140	600	490	300	300	M30	4
H300x2500	2850	2500	790	140	600	490	300	300	M30	4
H300x3000	3150	3000	725	140	600	490	300	300	M30	5
H300x3500	3650	3500	674	140	600	490	300	300	M30	6
H400x1000	1200	1000	800	150	800	670	400	360	M36	2
H400x1500	1700	1500	700	150	800	670	400	360	M36	3
H400x2000	2200	2000	635	150	800	670	400	360	M36	4
H400x2500	2700	2500	800	150	800	670	400	360	M36	4
H400x3000	3200	3000	725	150	800	670	400	360	M36	5
H400x3500	3700	3500	680	150	800	670	400	360	M36	6