

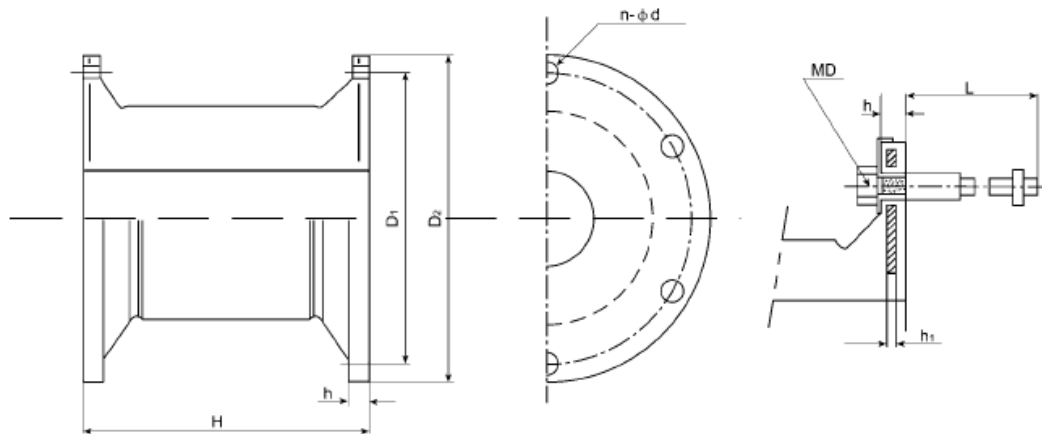


GLEN Super Cell Fenders

Features:

1. High E/R.H Value(energy absorption / reaction force, product height)
2. More Reasonable Structure
3. YGCH super cell rubber fender has the same installation bolt pitch and bolt with the general rubber fender
4. Minor affection in angular berthing
5. Accessories: Pre-built in U ring, Pre-built-in Bolt& Nut, Chains (Including tensile chain, weight chain &shear chain), Front Panel, Face Pad, Connector, Buffer.

Dimension:



Super Cell Rubber Fender (mm)

Type(mm)	H	h	D1	D2	n-Φd	MD	h1	L
GLEN400H	400	25	550	650	4-30	22	10	270
GLEN500H	500	25	550	650	4-32	24	12	300
GLEN630H	630	30	700	840	4-39	30	14	330
GLEN800H	800	30	900	1050	6-40	32	14	360
GLEN1000H	1000	35	1100	1300	6-47	39	18	430
GLEN1150H	1150	40	1300	1500	6-50	42	22	500
GLEN1250H	1250	45	1450	1650	6-53	45	22	500
GLEN1450H	1450	47	1650	1850	6-61	52	26	570
GLEN1600H	1600	50	1800	2000	8-61	52	28	570
GLEN1700H	1700	55	1900	2100	8-66	56	30	620
GLEN2000H	2000	55	2000	2200	8-74	64	32	700
GLEN2250H	2250	60	2300	2550	10-74	64	36	700



GLEN2500	2500	70	2700	2950	10-74	64	38	700
GLEN3000	3000	75	3150	3350	12-90	76	40	800

GLEN Super Cell Fenders

Performance Data:

R/F: KN E/A:KN-m		RL		RO		RH		RS		RE	
		Rated deflection 52.5%	Max deflection 55%	Rated deflection 52.5%	Max deflection 55%	Rated deflection 52.5%	Max deflection 55%	Rated deflection 52.5%	Max deflection 55%	Rated deflection 52.5%	Max deflection 55%
GLEN 400H	R	51	59	64	75	83	97	96	112	110	125
	E	9	9.5	11	12	14	15	17	18	19	21
GLEN 500H	R	86	99	108	125	140	160	162	187	182	210
	E	18	19	23	25	30	32	36	38	40	43
GLEN 630H	R	138	147	172	182	224	237	258	274	290	309
	E	38	40	48	50	62	67	72	76	80	85
GLEN 800H	R	211	225	275	292	355	378	412	437	464	493
	E	75	78	98	102	125	132	145	153	163	173
GLEN 1000H	R	349	372	436	463	567	603	655	696	737	784
	E	153	163	195	203	249	264	287	304	324	343
GLEN 1150H	R	462	491	578	614	750	798	865	920	975	1037
	E	233	247	297	309	379	401	437	463	492	521
GLEN 1250H	R	546	581	682	725	886	942	1022	1087	1153	1225
	E	299	316	382	396	486	516	561	594	632	669
GLEN 1450H	R	735	781	918	976	1193	1269	1376	1464	1551	1649
	E	468	495	596	619	760	804	876	928	987	1045
GLEN 1600H	R	894	950	1117	1189	1453	1544	1676	1781	1888	2007
	E	628	665	801	832	1020	1080	1177	1247	1326	1405
GLEN 1700H	R	1009	1073	1262	1342	1640	1743	1892	2012	2131	2266
	E	753	798	960	997	1224	1300	1413	1495	1591	1685
GLEN 2000H	R	1398	1485	1746	1856	2270	2413	2619	2783	2941	3136
	E	1227	1299	1564	1624	1994	2111	2300	2435	2591	2743
GLEN 2250H	R	2085	2216	2454	2607	3188	3390	3679	3911	4145	4406
	E	2060	2180	2472	2566	3150	3336	3628	3848	4095	4337
GLEN	R	2574	2737	3028	3220	3937	4182	4543	4829	5118	5441



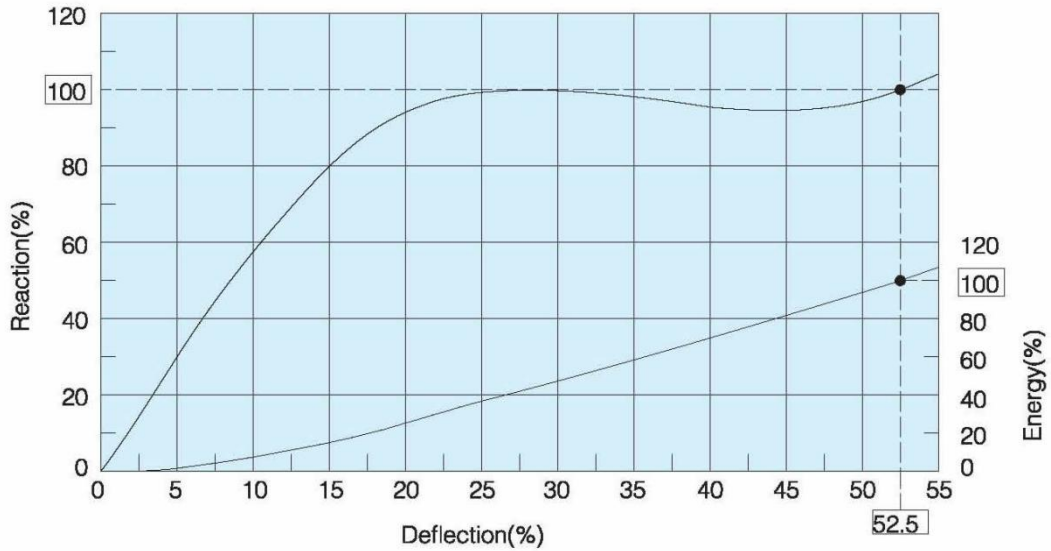
2500H	E	2826	2992	3391	3520	4322	4576	4987	5280	5318	5949
GLEN	R			3750	4217	4482	5099				
3000H	E			4300	4635	5160	5510				

*Performance tolerance: $\pm 10\%$

*Other performance are available to meet customers' request

GLEN Super Cell Fenders

Performance Curves:



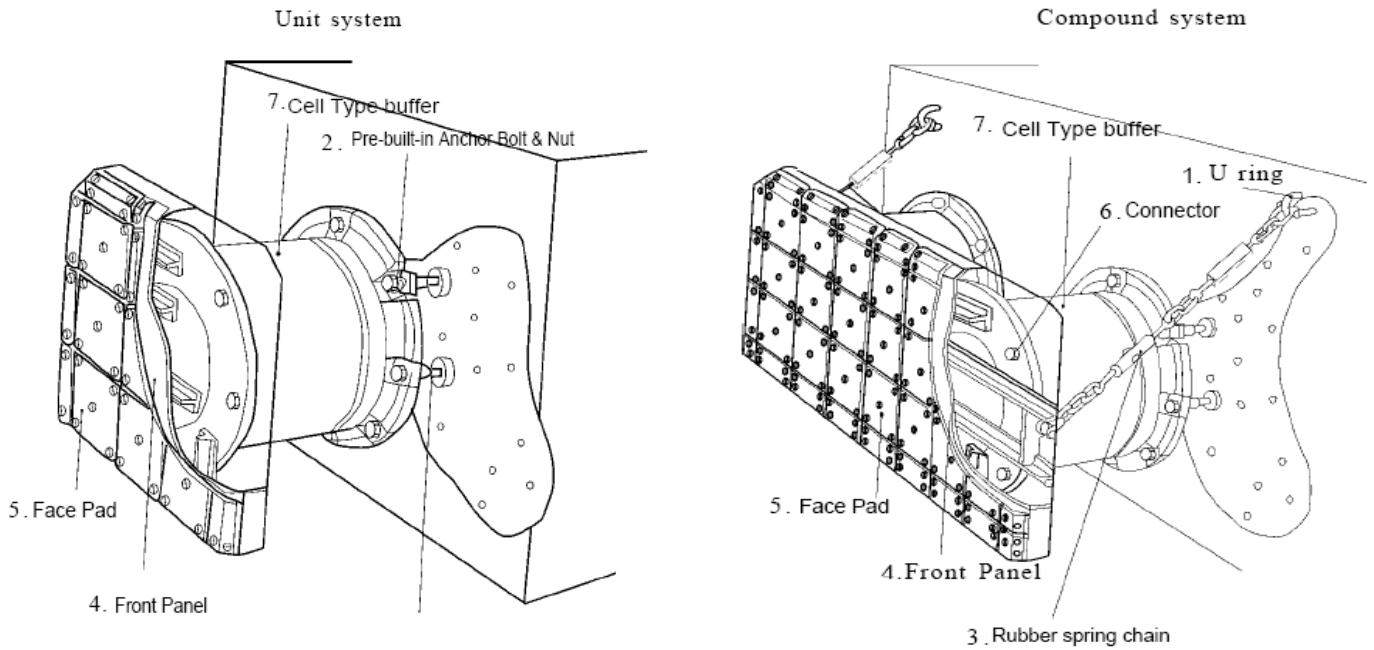
Intermediate deflection:

H(%)	0	5	10	15	20	25	30	35	40	45	50	52.5	55
E(%)	0	2	6.8	15	25	37	50	60	70	83	97	100	106
R(%)	0	30	58	80	93	98	99	97.5	95	96	97	100	106



GLEN Super Cell Fenders

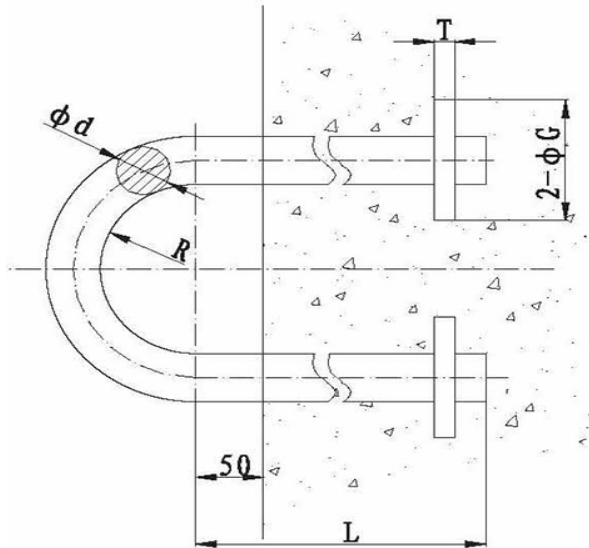
Installation:



No.	Name	Applications	Material
1	Pre-built in U ring	Holding chains	Q235 H.D.G
2	Pre-built-in bolt & nut	Fasten fenders onto dock	Stainless steel, Q235 H.D.G
3	Chains (including tensile chain, weight chain, shear chain)	1. limit fender deflection while fender local part under strain 2. support the front panel in avoid of sagging 3. prevent fender system from shear deflection	Q235 H.D.G 15Mn or 20Mn H.D.G
4	Front panel	Reduce surface pressure in avoid of damage of the fender & vessels	Q235 painted
5	Face pad	Reduce friction coefficient to protect hull	UHMW-PE
6	Connector	Connect the fender & front panel and face pad	Stainless steel, Q235 H.D.G
7	Buffer	Absorb ship impact energy to protect dock and vessels	Rubber, Q235



Accessories – U shackle



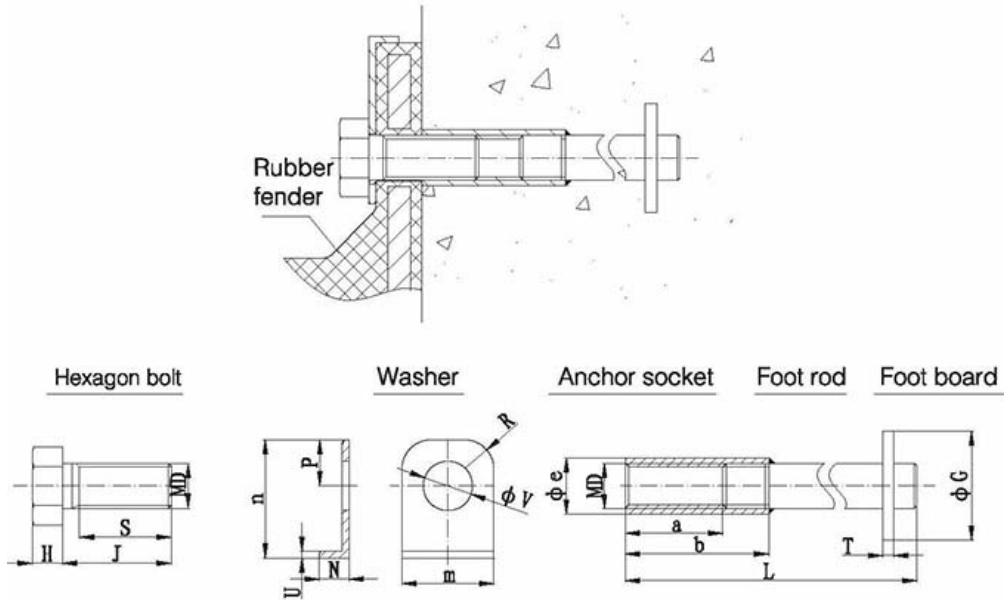
Material: Q235 H.D.G
 2Cr18Ni10Ti
 0Cr17Ni12Mo0
 0Cr18Ni9

Unit: mm

Type	Φd	R	L	ΦG	T
GLEN500H	Φ40	R70	600	Φ100	20~30
GLEN630H	Φ40	R70	600	Φ100	20~30
GLEN800H	Φ50	R80	650	Φ110	20~30
GLEN1000H	Φ55	R90	730	Φ120	20~30
GLEN1150H	Φ60	R100	780	Φ140	25~35
GLEN1250H	Φ60	R100	780	Φ140	25~35
GLEN1450H	Φ60	R100	780	Φ140	25~35
GLEN1600H	Φ65	R105	830	Φ150	25~35
GLEN1700H	Φ65	R105	830	Φ150	25~35
GLEN2000H	Φ70	R115	880	Φ160	25~35
GLEN2250H	Φ70	R115	880	Φ160	25~35
GLEN2500H	Φ80	R120	930	Φ160	25~35
GLEN3000H	Φ80	R120	930	Φ160	25~35



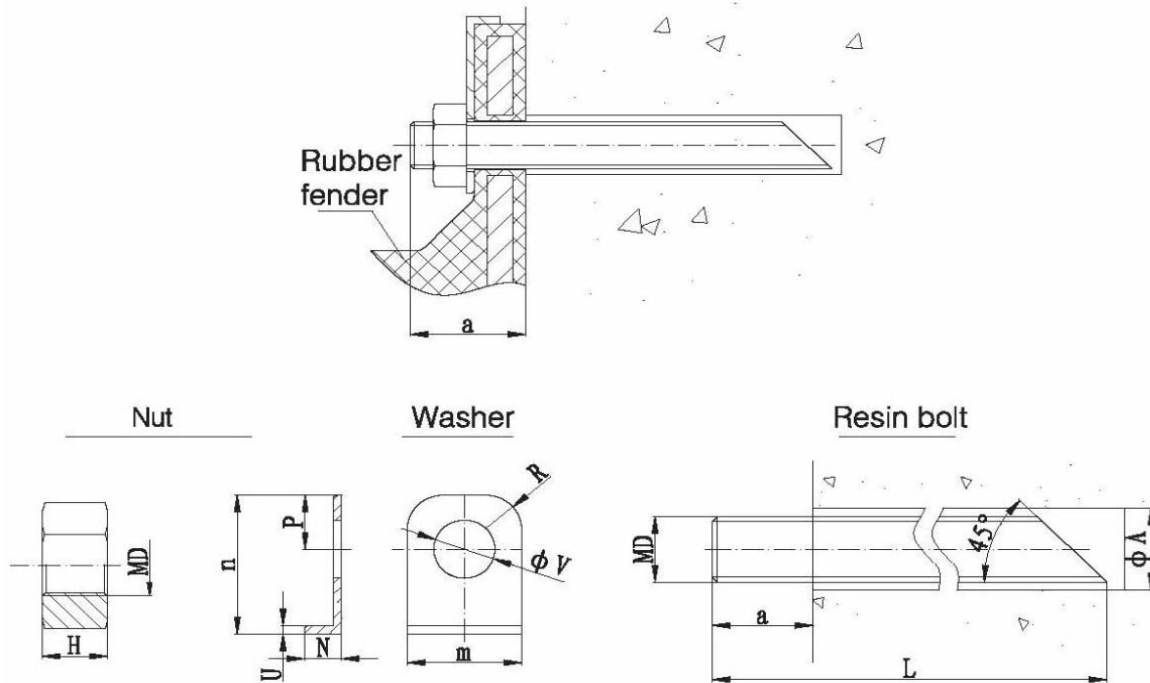
Super Cell Fender Fixings for New Concrete:



Type	MD	Hexagon bolt			Washer							Anchor Socket			Foot rod		Foot board
		H	J	S	m	N	n	P	U	V	R	b	e	a	G	T	L
GLEN400H	M22	15	65	55	50	20	82	25	5	25	15	80	31	50	70	6-10	220
GLEN500H	M24	17	65	55	50	20	82	25	5	28	15	80	34	50	70	6-10	240
GLEN630H	M30	19	80	70	60	25	107	30	5	34	15	100	39	65	80	10-12	300
GLEN800H	M33	23	80	70	65	25	117	35	5	36	15	100	44	65	80	10-12	330
GLEN1000H	M39	26	95	80	80	26	148	40	6	43	25	120	49	75	90	10-12	390
GLEN1150H	M42	26	100	80	85	28	151	43	6	46	25	120	54	75	90	12-16	420
GLEN1250H	M45	30	110	90	90	30	153	45	6	49	30	130	59	80	100	12-16	450
GLEN1450H	M52	35	120	95	100	34	158	50	6	56	30	140	69	85	100	12-16	500
GLEN1600H	M52	35	120	95	100	34	158	50	6	56	30	140	69	85	130	12-16	500
GLEN1700H	M56	35	135	110	105	40	165	55	8	62	30	150	74	90	130	16-20	560
GLEN2000H	M64	40	145	125	115	40	170	60	8	70	40	170	79	105	150	16-20	640
GLEN2250H	M64	40	150	125	115	43	195	60	8	70	40	170	79	105	150	16-20	640
GLEN2500H	M64	40	160	125	115	50	197	60	10	70	50	170	79	105	175	16-20	640
GLEN3000H	M76	50	190	145	140	55	182	70	10	84	50	200	94	125	175	20-24	760



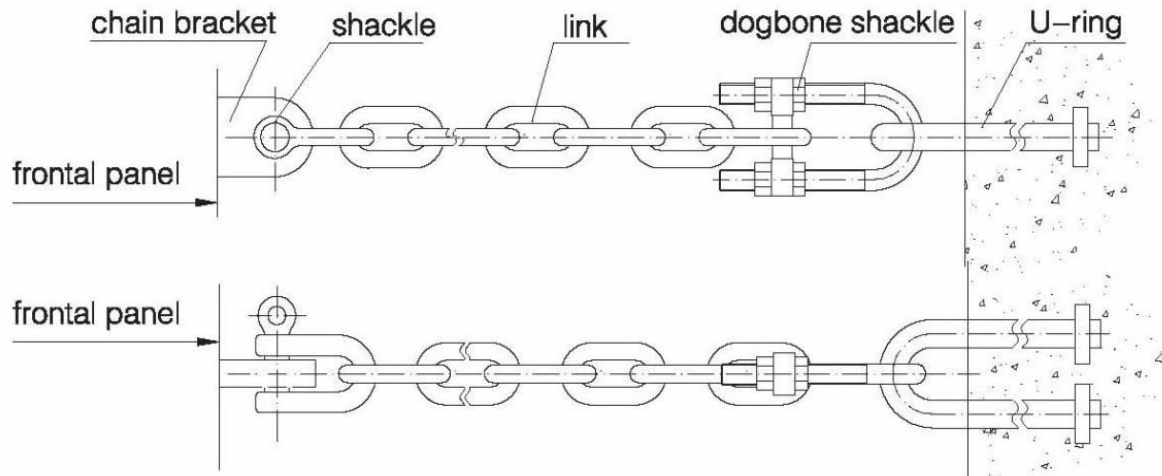
Super Cell Fender Fixings for Existing Concrete:



Type	MD	Nut	Washer							Resin bolt		
		H	m	N	n	p	U	V	R	a	L	A
GLEN400H	M22	20	50	20	82	25	5	25	15	60	260	28
GLEN500H	M24	22	50	20	82	25	5	28	15	60	280	30
GLEN630H	M30	26	60	25	107	30	5	34	15	70	360	38
GLEN800H	M33	28	65	25	117	35	5	36	15	75	400	42
GLEN1000H	M39	32	80	26	148	40	6	43	25	85	456	50
GLEN1150H	M42	34	85	28	151	43	6	46	25	95	510	55
GLEN1250H	M45	36	90	30	153	45	6	49	30	105	550	60
GLEN1450H	M52	42	100	34	158	50	6	56	30	115	630	65
GLEN1600H	M52	42	100	34	158	50	6	56	30	115	630	65
GLEN1700H	M56	45	105	40	165	55	8	62	30	125	680	68
GLEN2000H	M64	51	115	40	170	60	8	70	40	130	780	75
GLEN2250H	M64	51	115	43	195	60	8	70	40	140	780	75
GLEN2500H	M64	51	115	50	197	60	10	70	50	150	780	75
GLEN3000H	M76	64	140	55	182	70	10	84	50	180	940	88



Chains: (Unit: mm/KN)



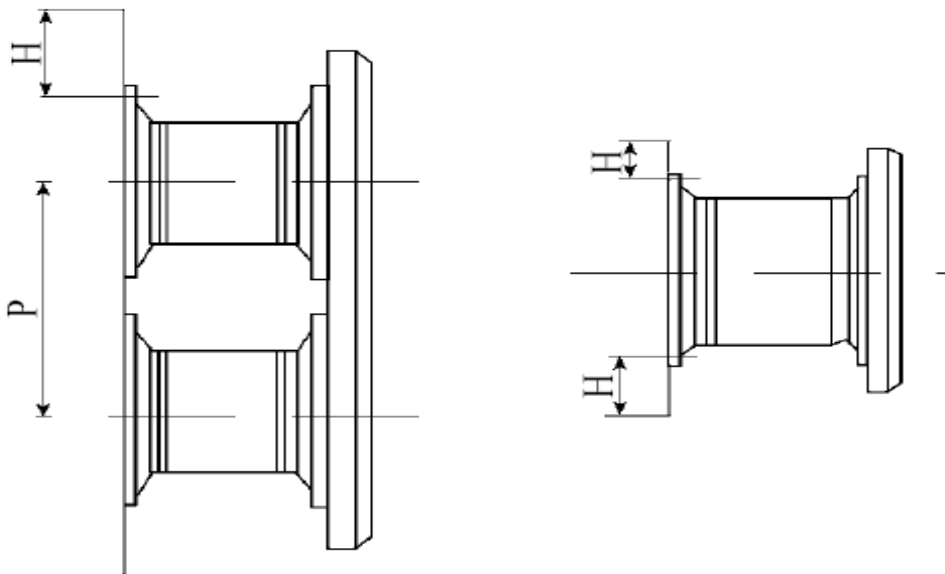
Type	Shackle 45# H.D.G	Link 20Mn H.D.G	Dogbone Shackle Q235 H.D.G	Breaking load
GLEN500H	M22	Φ20	M30	78
GLEN630H				
GLEN800H	M25	Φ25	M36	109
GLEN1000H	M32	Φ28	M39	135
GLEN1150H		Φ32	M42	188
GLEN1250H	M36	Φ34	M45	202
GLEN1450H	M38	Φ36	M48	227
GLEN1600H		Φ38	M52	253
GLEN1700H	M42	Φ40	M56	280
GLEN2000H	M45	Φ42		M56
GLEN2250H				
GLEN2500H	M50	Φ46	M60	371
GLEN3000H				



Spring Chains: (unit: mm/KN)

Type	Shackle 45# H.D.G	Link 20Mn H.D.G	Spring frame Q235 H.D.G	Rubber spring rubber	Dogbone Shackle Q235 H.D.G	Breaking load
GLEN500H	M22	Φ20	M30	Φ100 *Φ30*150	M30	78
GLEN630H						
GLEN800H	M25	Φ25	M36		M36	109
GLEN1000H						
GLEN1150H	M32	Φ28	M36		M39	135
GLEN1250H		Φ32				
GLEN1450H	M36	Φ34	M42		M42	188
GLEN1600H		Φ36				
GLEN1700H	M38	Φ38	M48		M45	202
GLEN2000H		Φ40				
GLEN2250H	M42	Φ42	M48	M48	227	
GLEN2500H						
GLEN3000H	M45	Φ46	M56	M52	253	
GLEN2500H						
GLEN2500H	M50	Φ46	M56	Φ150 *Φ50*200	M56	280
GLEN2500H						
GLEN3000H	M50	Φ46	M56	Φ150 *Φ50*200	M60	309
GLEN3000H						
GLEN3000H	M50	Φ46	M56	Φ150 *Φ50*200	M60	371
GLEN3000H						

Min. spacing between fender installation & min. spacing between fender and concrete structure





GLEN FLANGE *limited*
FOCUS ON MARINE INDUSTRY

Type	GLEN 400	GLEN 500	GLEN 630	GLEN 800	GLEN 1000	GLEN 1150	GLEN 1250	GLEN 1450	GLEN 1600	GLEN 1700	GLEN 2000	GLEN 2250	GLEN 2500	GLEN 3000
H	180	185	210	230	255	280	290	350	350	380	430	430	450	510
P	700	700	880	1120	1500	1730	1870	2180	2400	2550	2880	3360	3730	4500