

**& MARITIME
OFFSHORE**



PROFILO AZIENDALE

Company Profile



Operiamo nel settore della componentistica per il sollevamento e la perforazione dal 1974. Da allora, grazie alla nostra costanza ed al nostro lavoro, siamo riusciti a conquistare una posizione preminente sul mercato nazionale ed internazionale. La nostra filosofia è sempre la stessa: sensibilità ai problemi della sicurezza, attenzione alla tecnologia e rispetto per le lavorazioni artigianali.

L'elemento fondamentale per mantenere questa leadership è il continuo raggiungimento degli obiettivi che ci siamo, nel tempo, prefissati: la costante ricerca e l'impegno per il miglioramento del prodotto, l'aggiornamento e l'evoluzione tecnologica dei processi produttivi e degli impianti ed infine la garanzia di un servizio ai nostri clienti sempre più efficiente, organizzato, dinamico e diversificato. Il nostro sviluppo aziendale si è ulteriormente consolidato con l'acquisizione di prestigiosi marchi internazionali, specificatamente nel settore delle funi speciali (DIEPA), nelle morse e pinze di sollevamento (TERRIER) e negli accessori di acciaio. Tutto ciò pur dedicando le migliori risorse ed energie alle nostre Divisioni Funi Acciaio ed Antinfortunistica, che attualmente operano presso lo Stabilimento di Castelnuovo Magra (SP), oltre che in un secondo magazzino realizzato a Palermo.

L'attività del Gruppo (Alioto Carlo & C. sas; Alioto Group srl; Alioto Service srl; Alitech srl) si completa quindi in ulteriori due settori che, seppur di recente creazione, possono già vantare Clienti di caratura internazionale (uno per tutti Fincantieri SpA): quello dei controlli e collaudi presso terzi di attrezzature ed impianti di sollevamento e, soprattutto, quello della carpenteria ed impiantistica navali.

Le nostre procedure, tutte certificate secondo la norma ISO 9001/2008 dall'Associazione Svizzera per Sistemi di Qualità e Management SQS e garantite dall'International Certification Network IQNET, sono riconosciute in ambito RINA sia per quanto riguarda la creazione delle asole sulle brache di acciaio con manicotti Talurit, la realizzazione delle brache in acciaio ad anello continuo che per quanto riguarda l'applicazione di terminali a testa fusa con procedura a caldo e/o a freddo a mezzo di resina bi-componente WIRELOCK. Il nostro banco prova, anch'esso riconosciuto da tutti i maggiori Enti di Classifica in ambito IACS, è sottoposto annualmente a verifiche di calibratura e taratura per mezzo del Servizio di Taratura in Italia SIT.

We have been dealing with lifting and drilling components since 1974. Since then, through hard work and perseverance, we have managed to conquer a leading position on national and international markets. Our philosophy is still the same: sensibility to safety issues, attention to technology, and respect for good craftsmanship.

The decisive factor to retain such leadership is the consistent achievement of the goals that we have set out for ourselves, over time: consistent research and commitment to product improvement, upgrading and technological improvement of our productive processes and plants, and finally an increasingly efficient, organised, dynamic and varied customer service.

Our corporate development has been further strengthened by the acquisition of prestigious international brands, in particular in the area of special ropes (DIEPA), lifting clamps and pincers (TERRIER) and steel accessories, while investing our best resources and energies in our Steel wire rope and Accident Prevention divisions, which are based at Castelnuovo Magra (SP), as well as in another unit in Palermo-Sicily.

Alioto Group business (Alioto Carlo & C. sas; Carlo Alioto SpA; Alioto Service srl; Alitech srl) is then completed by another two areas which even if recently created can already boast some international customers (let's just mention Fincantieri SpA): inspections and tests on lifting equipment and plants, at third parties' premises, and above all ship carpentry and plants. Our procedures, all certified in according to ISO 9001/2008 by the Swiss Quality Management Systems SQS and guaranteed by the International Certification Network IQNET, are recognized by RINA for the creation of slings eyes with Talurit ferrules, the productions of cable laid grommets as well regards the Socketing Operations by fusion or by bi-component resin WIRELOCK. Our test bench, also recognized by all major Classification Societies IACS members, is yearly verified and calibrated throughout the Italian Calibration Service-SIT.

I NOSTRI PRODOTTI

Our Products

Realizziamo qualsiasi attrezzatura o accessorio per il sollevamento, la trazione, il rimorchio o l'ancoraggio, anche di grandi strutture come navi, piattaforme, pontoni.

Forti di attrezzature idonee ed all'avanguardia (tra le quali un banco prova da 175 ton - e uno da 1000 ton in costruzione), presse da 150 a 2000 ton per cavi d'acciaio fino a 90 mm di diametro), siamo in grado di fornire sistemi di sollevamento sia di tipo standardizzato e conformi ai requisiti imposti dalla Normativa Macchine, sia su progetto unico realizzato da nostri Tecnici su richiesta del Cliente.

Questo catalogo ha lo scopo di illustrare la gamma di prodotti di utilizzo nell'applicazione navale, offshore, oil & gas, per ciò che concerne le attività di mooring e towing nelle loro molteplici sfaccettature.

Operiamo con successo in questo settore da vari anni, ampliando continuamente la gamma dei prodotti e dei servizi offerti sia in Italia che all'estero. Studiamo e ricerchiamo costantemente prodotti sempre più performanti e tecnologicamente più avanzati per soddisfare le clientele più esigenti. I nostri prodotti vengono realizzati secondo le norme riconosciute in ambito navale ed offshore, e possono essere certificati dai principali enti di classifica appartenenti all'IACS. Siamo inoltre in grado di effettuare una moltitudine di servizi "on-site" come l'applicazione di capicorda, il collaudo e/o il montaggio di attrezzature, carpenteria leggera ed impiantistica.

I nostri clienti sono compagnie petrolifere o di perforazione, compagnie di navigazione, compagnie di supporto offshore, cantieri navali, autorità portuali, etc.

Miriamo a consolidare la nostra presenza nel settore specifico lavorando con serietà e professionalità, facendo grande attenzione alla crescente esigenza di qualità e sicurezza della nostra clientela.

We manufacture any equipment or accessory for lifting, pulling, towing or anchoring even for large structures such as ships, offshore platforms and pontoons.

Equipped with appropriate and advanced equipment (including a 175 tons test bench and one being presently built with a capability of 1000 tons; presses with a press force between 150 and 2000 tons for swaging steel wire ropes up to diameters of 90 mm), we are able to supply any type of lifting equipment, either standard in accordance with the Machinery Directive regulations, or customized by our engineers to meet customers requirement.

This catalogue lists a range of products for mooring and towing in oil and gas, naval and offshore fields and their relative multiple applications.

We have been working in this industry for many years and are constantly expanding the range of products and services offered both in Italy and abroad. We constantly research for and design the most efficient and highly developed products to meet the requirements of the even most demanding customers. Our products are manufactured in compliance with marine and offshore recognized standards and can be certified by the major classification societies belonging to IACS.

Moreover, we are able to carry out a multitude of "on-site" services such as, for instance, socket application, testing and/or setting up of equipment, light metal carpentry and installations.

Our principal customers are oil and drilling, shipping and offshore companies as well as shipyards, port authorities, etc.

Our plan is to consolidate our presence in the industry by providing a serious and professional service while paying great attention to the growing demand from our customers for quality and safety.

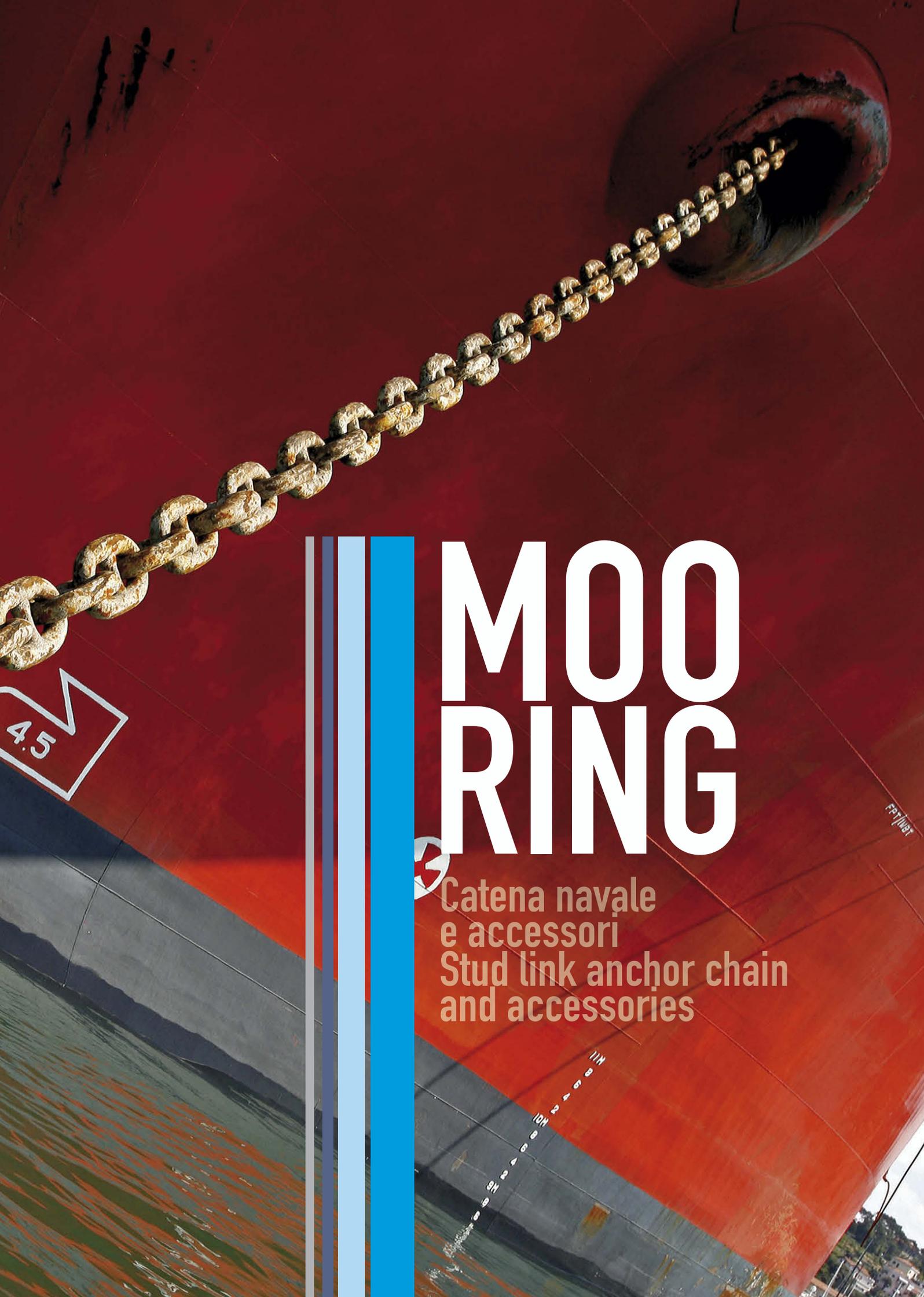


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MOORING RING

Catena navale
e accessori
Stud link anchor chain
and accessories

4.5



FPT/INDAT

11N
12N
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EQUIPEMENT TABLE

EQUIPMENT NUMBER EN		STOCKLESS ANCHORS		HHP ANCHOR	STUD LINK CHAIN CABLES FOR ANCHORS			
A < EN ≤ B		N°	Mass per anchor	Mass per anchor	Total length	Diameter mm		
A	B	B	kg	kg	m	Q1	Q2	Q3
50	70	2	180	135	220	14	12,5	
70	90	2	240	180	220	16	14	
90	110	2	300	225	247,5	17,5	16	
110	130	2	360	270	247,5	19	17,5	
130	150	2	420	315	275	20,5	17,5	
150	175	2	480	360	275	22	19	
175	205	2	570	427,5	302,5	24	20,5	
205	240	3	660	495	302,5	26	22	20,5
240	280	3	780	585	330	28	24	22
280	320	3	900	675	357,5	30	26	24
320	360	3	1020	765	357,5	32	28	24
360	400	3	1140	855	385	34	30	26
400	450	3	1290	967,5	385	36	32	28
450	500	3	1440	1080	412,5	38	34	30
500	550	3	1590	1192,5	412,5	40	34	30
550	600	3	1740	1305	440	42	36	32
600	660	3	1920	1440	440	44	38	34
660	720	3	2100	1575	440	46	40	36
720	780	3	2280	1710	467,5	48	42	36
780	840	3	2460	1845	467,5	50	44	38
840	910	3	2640	1980	467,5	52	46	40
910	980	3	2850	2137,5	495	54	48	42
980	1060	3	3060	2295	495	56	50	44
1060	1140	3	3300	2475	495	58	50	46
1140	1270	3	3540	2655	522,5	60	52	46
1220	1300	3	3780	2835	522,5	62	54	48
1300	1390	3	4050	3037,5	522,5	64	56	50
1390	1480	3	4320	3240	550	66	58	50
1480	1570	3	4590	3442,5	550	68	60	52
1570	1670	3	4890	3667,5	550	70	62	54
1670	1790	3	5250	3937,5	577,5	73	64	56
1790	1930	3	5610	4207,5	577,5	76	66	58
1930	2080	3	6000	4500	577,5	78	68	60
2080	2230	3	6450	4837,5	605	81	70	62
2230	2380	3	6900	5175	605	84	73	64
2380	2530	3	7350	5512,5	605	87	76	66
2530	2700	3	7800	5850	632,5	90	78	68
2700	2870	3	8300	6225	632,5	92	81	70
2870	3040	3	8700	6525	632,5	95	84	73
3040	3210	3	9300	6975	660	97	84	76
3210	3400	3	9900	7425	660	100	87	78
3400	3600	3	10500	7875	660	102	90	78
3600	3800	3	11100	8325	687,5	105	92	81
3800	4000	3	11700	8775	687,5	107	95	84
4000	4200	3	12300	9225	687,5	111	97	87
4200	4400	3	12900	9675	715	114	100	87
4400	4600	3	13500	10125	715	117	102	90
4600	4800	3	14100	10575	715	120	105	92
4800	5000	3	14700	11025	742,5	122	107	95
5000	5200	3	15400	11550	742,5	124	111	97
5200	5500	3	16100	12075	742,5	127	111	97
5500	5800	3	16900	12675	742,5	130	114	100
5800	6100	3	17800	13350	742,5	132	117	102
6100	6500	3	18800	14100	742,5		120	107
6500	6900	3	20000	15000	770		124	111
6900	7400	3	21500	16125	770		127	114
7400	7900	3	23000	17250	770		132	117
7900	8400	3	24500	18375	770		137	122
8400	8900	3	26000	19500	770		142	127
8900	9400	3	27500	20625	770		147	132
9400	10000	3	29000	21750	770		152	132
10000	10700	3	31000	23250	770			137
10700	11500	3	33000	24750	770			142
11500	12400	3	35500	26625	770			147
12400	13400	3	38500	28875	770			152
13400	14600	3	42000	31500	770			157
14600	16000	3	46000	34500	770			162

STUD LINK ANCHOR CHAIN AND ACCESSORIES

CATENA NAVALE E ACCESSORI



STUD LINK ANCHOR CHAIN pag. 20



KENTER JOINING LINK pag. 22



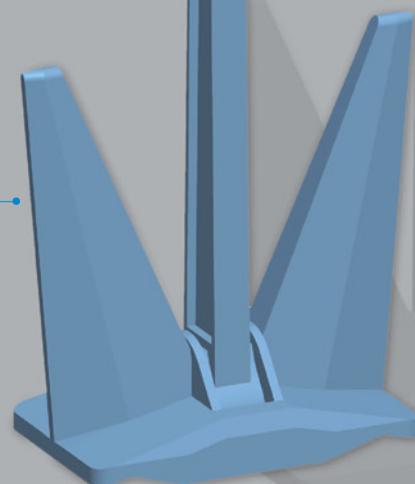
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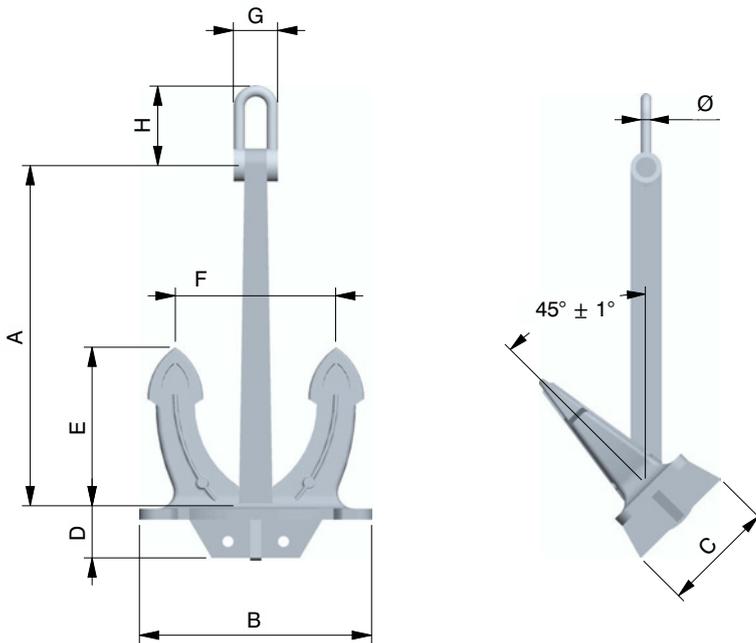


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ANCHOR pag. 8

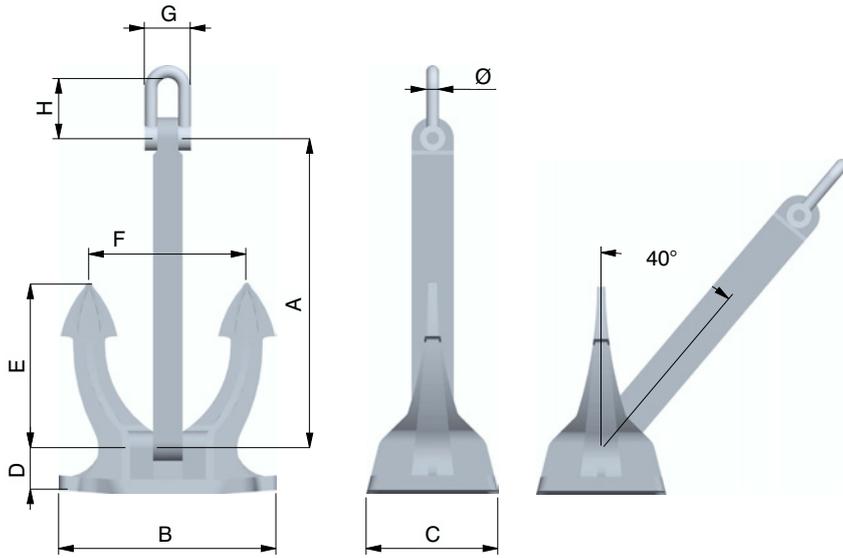




STOCKLESS ANCHOR | HALL

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

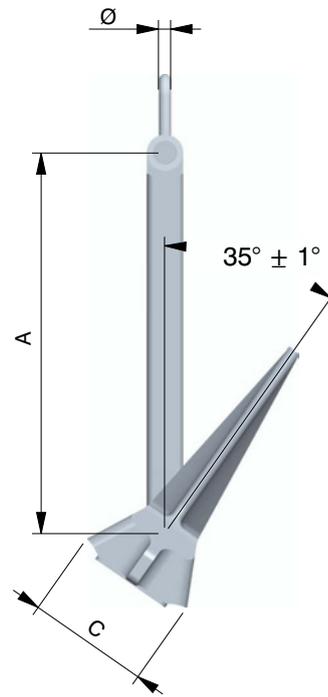
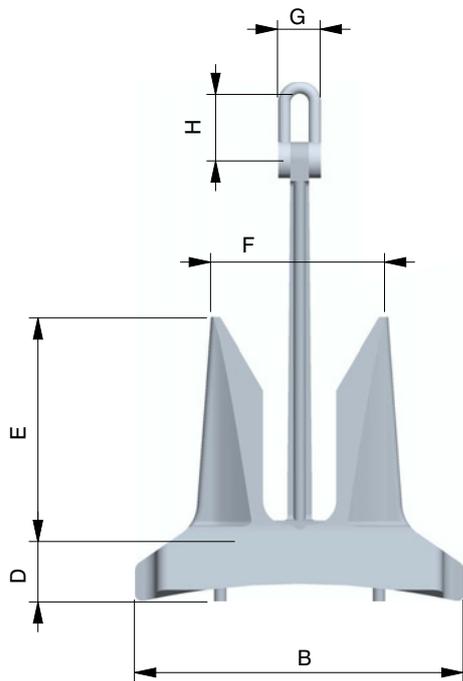
WEIGHT PESO	A	B	C	D	E	F	G	H	Ø
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm
10	385	270	125	42	191	191	51	60	15
16	410	316	146	49	223	223	57	72	16
25	476	367	169	57	259	259	74	84	20
35	533	411	189	64	290	290	80	98	22
50	599	464	214	71	325	325	80	98	22
65	658	505	233	78	355	355	88	115	24
75	690	530	244	82	374	374	88	115	24
100	760	582	270	90	410	410	83	115	24
125	814	629	290	97	443	443	100	130	28
150	866	670	308	103	470	470	100	130	28
200	952	735	339	114	518	518	113	145	32
220	982	759	350	117	534	534	113	145	32
250	1019	784	361	121	552	552	125	160	36
300	1095	844	388	130	595	595	139	175	40
360	1160	898	412	138	630	630	139	175	40
420	1255	967	444	149	675	675	152	192	45
480	1300	1000	460	154	700	700	167	215	48
570	1380	1060	490	164	745	745	167	215	48
660	1422	1096	506	169	769	769	175	235	50
700	1453	1119	516	172	784	784	175	235	50
780	1506	1160	535	178	813	813	175	235	50
900	1580	1220	560	188	855	855	183	255	50
1020	1645	1268	584	195	891	891	183	255	50
1290	1773	1374	630	211	965	965	216	280	62
1500	1369	1447	664	222	1015	1015	216	280	62
1740	1966	1517	698	234	1068	1068	238	310	63
2000	2058	1590	732	245	1120	1120	238	310	68
2280	2150	1657	763	255	1165	1165	260	340	74
2460	2207	1700	784	262	1191	1194	260	340	74
3000	2374	1832	841	282	1283	1283	284	360	82
3540	2490	1926	883	295	1349	1349	287	380	82
4000	2610	2008	924	309	1406	1406	310	385	90
4500	2712	2093	962	322	1465	1465	316	410	90
4890	2769	2135	934	329	1498	1493	346	415	100
5000	2790	2150	991	331	1510	1510	346	415	100
6000	2965	2284	1054	352	1605	1605	350	450	100
6900	3100	2393	1105	369	1681	1681	370	480	110
7800	3235	2493	1152	385	1752	1752	380	500	110
8775	3355	2585	1195	399	1816	1816	400	540	117
9072	3392	2615	1209	404	1837	1837	421	580	124
9900	3502	2699	1248	417	1896	1896	421	580	124
11100	3638	2803	1297	433	1970	1970	437	600	130
15400	4056	3126	1446	483	2199	2199	498	680	150
16100	4117	3173	1468	490	2232	2232	498	680	150



STOCKLESS ANCHOR | SPEK

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

WEIGHT PESO	A	B	C	D	E	F	G	H	Ø
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm
240	900	690	300	150	500	500	125	160	36
300	990	760	330	166	550	550	139	175	40
360	1080	828	360	180	600	600	139	175	40
420	1080	828	360	180	600	600	152	192	45
570	1170	900	390	196	650	650	167	215	48
600	1260	962	420	210	700	700	167	215	48
660	1260	962	420	210	700	700	175	235	50
780	1350	1032	450	225	750	750	175	235	50
900	1440	1100	480	240	800	800	183	255	50
1020	1530	1170	510	252	850	850	183	255	50
1140	1620	1240	540	268	900	900	216	280	62
1290	1710	1240	540	268	900	900	216	280	62
1440	1710	1300	570	279	950	950	216	280	62
1740	1800	1454	600	300	1000	1000	238	310	68
2100	1890	1454	630	312	1050	1050	260	340	74
2280	1890	1454	630	312	1050	1050	260	340	74
2460	2010	1514	660	324	1100	1100	260	340	74
2640	2070	1584	690	352	1150	1150	284	360	82
2850	2070	1584	690	352	1150	1150	284	360	82
3060	2160	1650	720	360	1200	1200	284	360	82
3300	2160	1550	720	360	1200	1200	287	380	82
3540	2350	1650	720	360	1200	1200	287	380	82
3780	2430	1850	810	393	1350	1350	310	385	90
4050	2430	1850	810	393	1350	1350	310	385	90
4590	2520	1926	852	413	1400	1400	346	415	100
4890	2520	1926	852	413	1400	1400	346	415	100
5250	2510	2000	870	414	1450	1450	350	450	100
5610	2610	2000	870	414	1450	1450	350	450	100
6000	2700	2060	900	446	1500	1500	350	450	100
6450	2700	2060	900	446	1500	1500	370	480	110
6900	2890	2138	930	456	1550	1550	370	480	110
7800	2920	2138	930	456	1550	1550	380	500	110
8300	2754	2332	1020	510	1680	1700	380	500	110
8700	3060	2332	1020	510	1700	1700	400	540	117
9300	3060	2332	1020	510	1700	1700	421	580	124
9900	3160	2332	1020	510	1700	1700	421	580	124
10500	3190	2440	1060	531	1700	1700	437	600	130
13500	3440	2632	1146	573	1910	1910	468	640	140
15400	3690	2824	1230	615	2050	2050	498	680	140
17800	3920	2922	1270	636	2120	2120	515	700	155
20000	4070	3028	1314	657	2190	2190	534	730	160
29000	4621	3438	1494	748	2494	2494	611	820	185



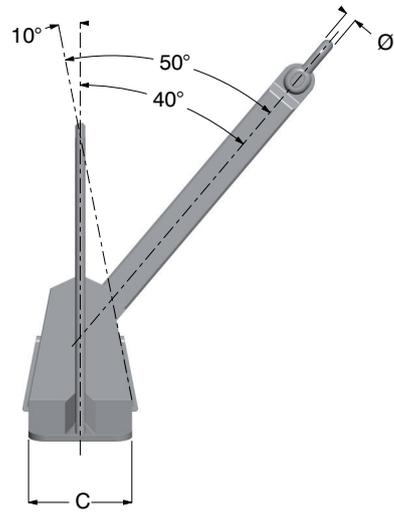
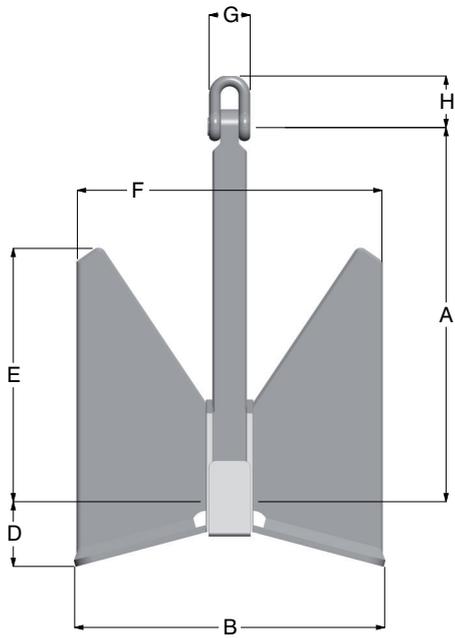
HIGH HOLDING POWER AC-14

CERTIFICATO DI CLASSE
INCLUSO
CLASS CERTIFICATE
INCLUDED



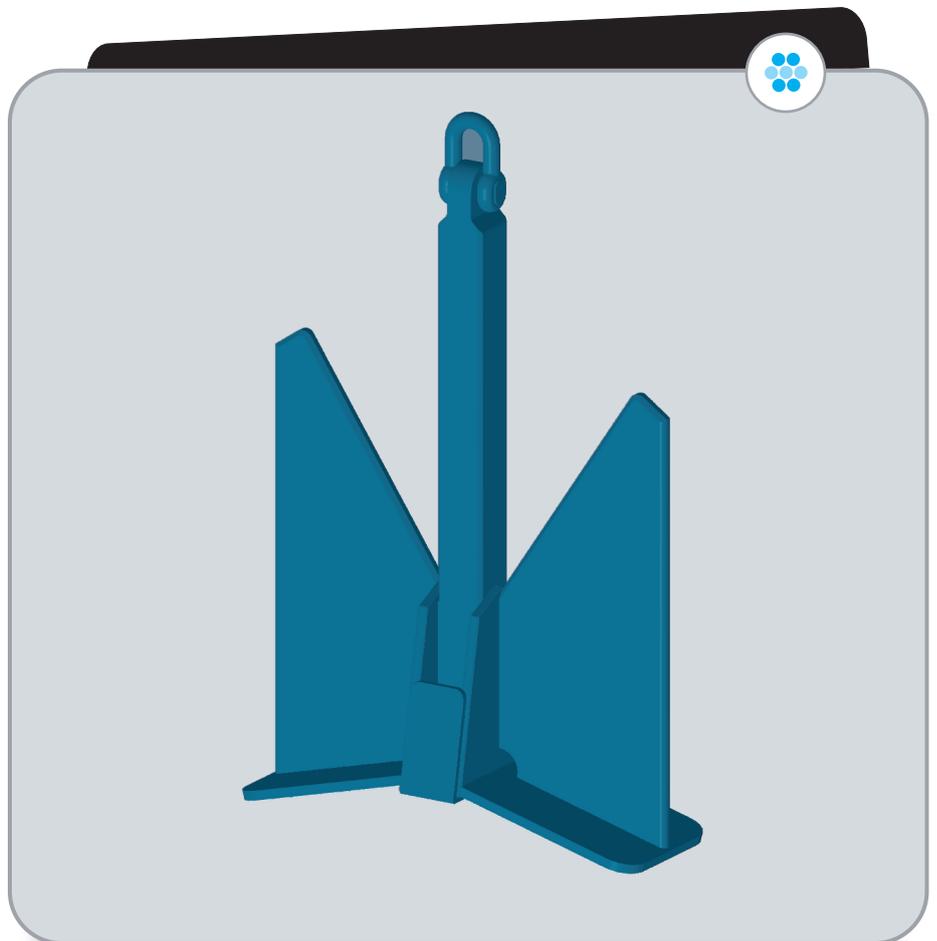


WEIGHT PESO	A	B	C	D	E	F	G	H	Ø
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm
50	590	529	164	107	359	283	80	98	22
75	677	605	188	122	411	324	88	115	24
90	718	643	199	130	437	344	88	115	24
100	745	666	207	135	452	357	88	115	24
135	821	737	228	143	500	394	100	130	28
180	904	811	251	157	550	434	100	130	28
225	974	874	270	169	593	468	125	160	36
270	1006	910	278	185	617	488	125	160	36
315	1072	962	297	195	653	515	139	175	40
340	1109	995	307	192	675	533	139	175	40
360	1109	995	307	192	675	553	139	175	40
430	1194	1071	331	206	727	574	152	192	45
460	1227	1101	340	212	747	590	167	215	43
495	1227	1101	340	212	747	590	167	215	48
544	1317	1172	363	237	795	627	167	215	48
585	1360	1221	378	236	828	654	167	215	48
675	1398	1254	387	242	851	672	175	235	50
750	1483	1304	404	264	885	698	175	235	50
765	1483	1267	391	244	860	679	175	235	50
855	1520	1363	423	267	925	729	183	255	50
910	1540	1385	427	270	938	740	183	255	50
970	1590	1425	440	275	968	764	183	255	50
1000	1590	1425	440	275	963	764	183	255	50
1080	1590	1425	440	275	968	764	183	255	50
1140	1660	1490	460	287	1011	798	183	255	50
1195	1660	1490	465	287	1011	798	216	280	62
1305	1761	1580	483	305	1072	846	216	280	62
1360	1761	1580	488	305	1072	846	216	280	62
1440	1795	1610	497	311	1093	862	216	280	62
1575	1855	1665	514	321	1130	892	238	310	68
1590	1855	1665	514	321	1130	892	238	310	68
1710	1891	1697	524	327	1152	910	238	310	68
1820	1940	1741	538	336	1182	933	238	310	68
1845	1940	1741	538	336	1182	933	238	310	68
1980	1940	1741	538	336	1182	933	238	310	68
2040	2016	1809	559	349	1227	969	238	310	68
2140	2016	1809	559	349	1227	969	238	310	68
2270	2089	1874	579	362	1272	1004	238	310	68
2295	2089	1874	579	362	1272	1004	238	310	68
2475	2150	1929	596	373	1309	1033	260	340	74
2655	2218	1991	615	384	1351	1066	260	340	74
2720	2218	1991	615	384	1351	1066	260	340	74
2835	2249	2018	623	390	1370	1031	260	340	74
3040	2302	2066	638	399	1402	1107	284	360	82
3240	2352	2110	652	407	1432	1130	287	380	82
3445	2400	2154	665	415	1462	1154	287	380	82
3670	2451	2200	680	424	1493	1178	287	380	82
3940	2510	2252	696	434	1529	1207	310	385	90
4210	2566	2303	711	444	1563	1234	310	385	90
4500	2624	2355	727	454	1598	1261	316	410	90
4840	2688	2412	745	465	1637	1292	346	415	100
5175	2749	2467	762	476	1674	1321	350	450	100
5515	2808	2520	778	486	1710	1350	350	450	100
5575	2808	2520	778	486	1710	1350	350	450	100
5850	2864	2570	794	496	1744	1376	350	450	100
6225	2923	2623	810	506	1780	1405	370	480	110
6525	2970	2665	823	514	1808	1428	370	480	110
6600	2981	2675	827	516	1815	1433	370	480	110
6975	3042	2730	843	527	1853	1462	380	500	110
7015	3042	2730	843	527	1853	1462	380	500	110
7425	3100	2782	859	537	1888	1490	380	500	110
7875	3162	2837	876	547	1925	1520	380	500	110
8325	3221	2890	893	558	1961	1548	400	540	117
8775	3278	2942	909	567	1996	1576	400	540	117
9225	3333	2991	924	577	2030	1602	400	540	117
9675	3386	3039	939	586	2062	1628	421	580	124
10125	3438	3085	953	595	2094	1653	421	580	124
10575	3488	3130	967	604	2124	1677	421	580	124
10695	3501	3141	970	606	2132	1683	421	580	124
11025	3537	3174	981	612	2154	1700	421	580	124
11250	3561	3196	987	616	2169	1712	421	580	124
11550	3592	3224	996	622	2138	1727	452	620	135
11850	3623	3251	1004	627	2206	1742	452	620	135
12075	3646	3272	1011	631	2220	1753	452	620	135
12525	3691	3312	1023	639	2248	1774	452	620	135
12675	3705	3325	1027	641	2256	1781	468	648	148
13200	3756	3370	1041	650	2287	1805	468	648	148
13350	3770	3383	1045	653	2296	1812	468	648	148
13875	3819	3426	1059	661	2326	1836	468	648	148
14100	3839	3445	1064	665	2338	1846	468	648	148
15000	3919	3517	1086	678	2387	1884	468	648	148
16125	4015	3603	1113	695	2445	1930	468	648	148
17250	4106	3685	1138	711	2501	1974	468	648	148
18375	4194	3763	1163	726	2554	2016	468	648	148
19500	4278	3839	1186	740	2605	2056	534	730	160



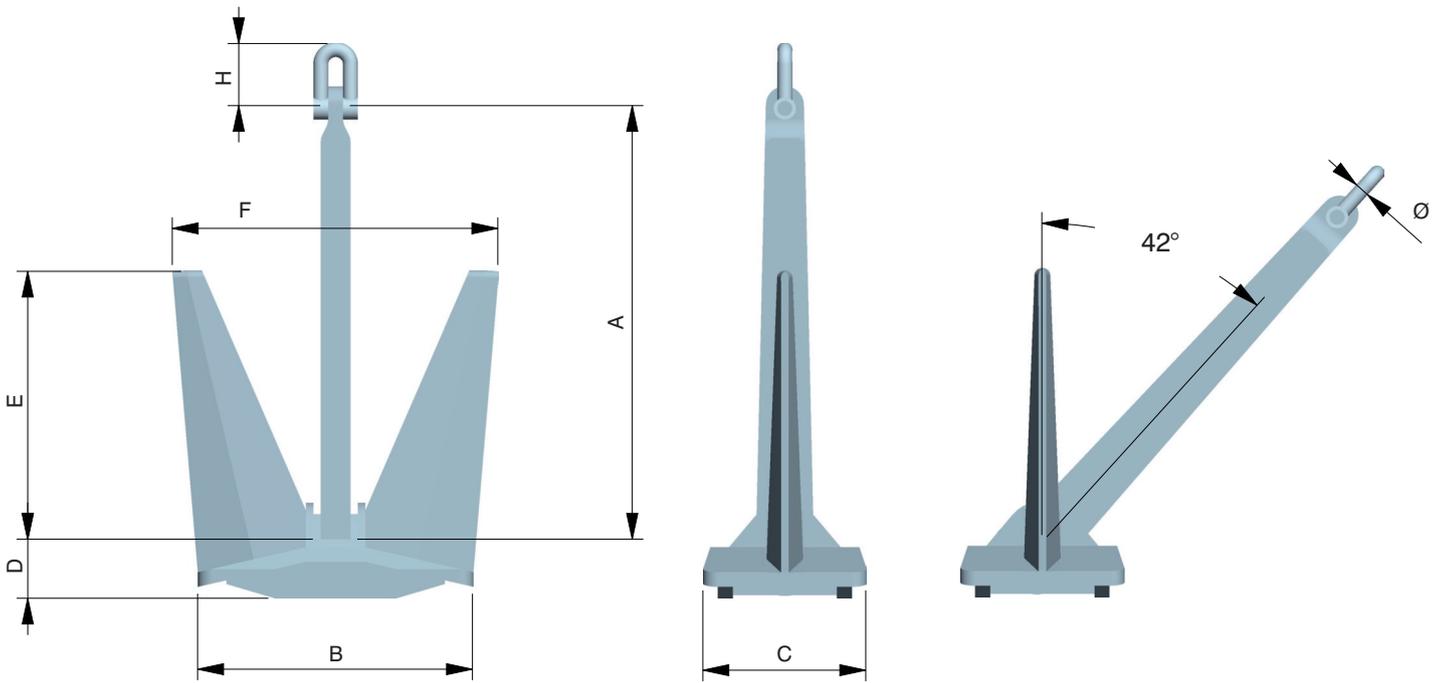
HIGH HOLDING POWER TW

CERTIFICATO DI CLASSE
INCLUSO
CLASS CERTIFICATE
INCLUDED





WEIGHT PESO	A	B	C	D	E	F	G	H	Ø
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm
60	650	539	203	140	420	650	90	120	22
75	700	581	215	151	452	700	90	120	22
90	712	594	224	160	458	712	90	120	27
105	771	637	239	169	501	771	105	142	28
135	815	674	255	178	528	815	105	142	28
160	895	747	286	194	581	895	115	157	32
180	937	780	297	201	610	937	115	157	32
225	982	821	312	224	641	982	125	174	36
270	1080	895	335	230	700	1080	125	174	36
300	1080	898	336	235	701	1080	125	174	36
360	1175	980	370	258	766	1175	140	201	40
430	1260	1040	393	274	818	1260	140	201	40
495	1295	1078	402	283	842	1295	140	201	40
585	1388	1149	436	302	899	1388	175	236	50
675	1456	1205	454	315	943	1456	175	236	50
765	1518	1256	470	328	984	1518	175	236	50
855	1575	1306	496	340	1020	1575	225	306	60
970	1642	1360	513	351	1064	1642	225	306	60
1195	1730	1435	537	377	1123	1703	225	306	60
1305	1814	1490	558	390	1175	1490	225	306	60
1440	1875	1554	585	402	1218	1554	225	306	60
1575	1931	1594	600	418	1250	1594	255	361	75
1710	1985	1635	614	429	1285	1635	255	361	75
1845	2035	1684	638	443	1315	1684	255	361	75
1980	2088	1733	652	451	1359	1733	255	361	75
2140	2138	1765	664	463	1385	1765	255	361	75
2295	2190	1802	678	473	1418	1802	255	361	75
2475	2240	1860	705	487	1453	1860	290	400	80
2655	2998	1900	716	497	1486	1900	290	400	80
2835	2350	1945	730	510	1521	1945	290	400	80
3040	2404	1984	744	520	1558	1984	290	400	80
3240	2456	2036	768	531	1590	2036	290	400	80
3445	2507	2070	782	540	1628	2070	290	400	80
3670	2560	2110	795	556	1658	2110	360	500	90
3940	2621	2152	802	563	1697	2152	360	500	90
4210	2680	2218	838	585	1735	2218	360	500	90
4500	2740	2264	854	596	1775	2264	360	500	90
4840	2800	2316	868	610	1312	2316	400	550	100
5175	2829	2334	876	615	1832	2334	400	550	100
5515	2921	2412	911	631	1893	2412	400	550	100
5850	2948	2439	918	642	1909	2439	400	550	100
6225	3033	2509	940	659	1964	2509	400	550	100
6975	3145	2623	990	675	2047	2623	400	550	100
7875	3264	2695	1012	709	2114	2695	470	660	130
8325	3340	2757	1041	724	2163	2757	470	660	130
8775	3381	2797	1052	737	2190	2797	470	660	130
9225	3453	2865	1092	756	2236	2865	470	660	130
9675	3497	2905	1109	768	2272	2905	500	700	140
10125	3552	2941	1126	780	2307	2941	500	700	140
10575	3591	2979	1142	791	2341	2979	500	700	140
11025	3658	3027	1158	802	2374	3027	540	750	150
12075	3784	3121	1174	813	2407	3121	540	750	150
12675	3829	3161	1196	826	2446	3161	540	750	150
13350	3903	3221	1214	840	2489	3221	570	800	160
14100	4010	3295	1236	855	2535	3295	570	800	160
15000	4057	3357	1262	873	2588	3357	570	800	160
16125	4170	3443	1293	894	2651	3443	625	870	175



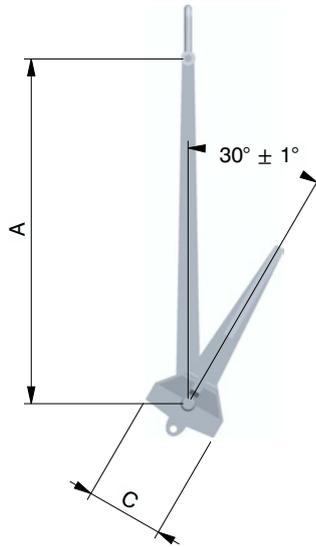
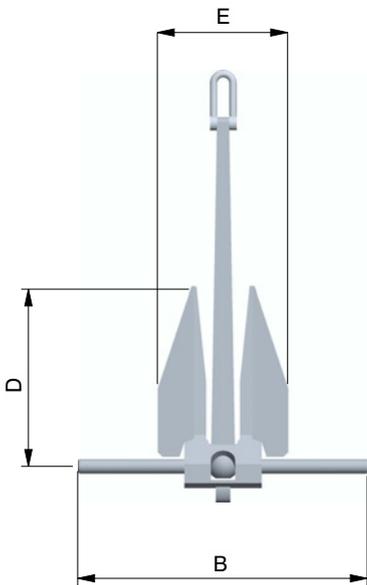
HIGH HOLDING POWER N

CERTIFICATO DI CLASSE
INCLUSO
CLASS CERTIFICATE
INCLUDED





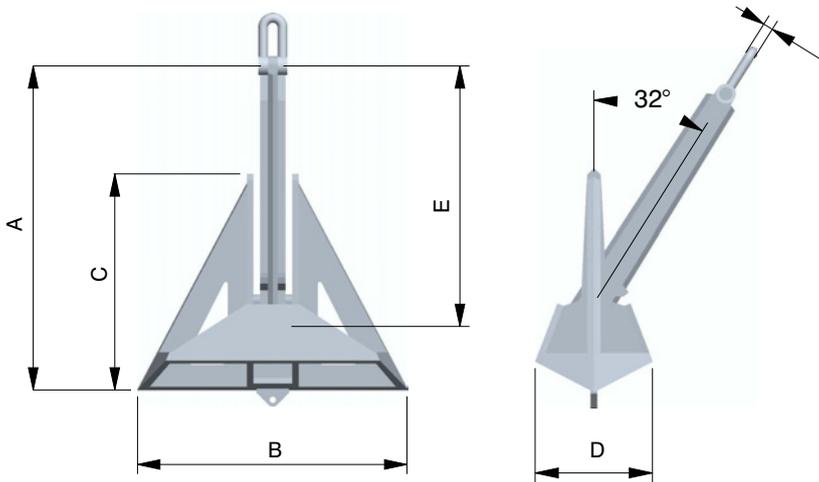
WEIGHT PESO	A	B	C	D	E	F	H	Ø
kg	mm	mm	mm	mm	mm	mm	mm	mm
320	1140	620	465	190	745	965	200	38
360	1190	340	480	195	780	1005	200	38
400	1230	885	500	205	805	1040	200	38
440	1270	900	510	201	830	1075	240	45
480	1305	940	535	215	855	1110	240	45
520	1340	960	555	225	875	1140	240	45
560	1375	975	565	230	900	1165	240	45
600	1410	1000	575	235	920	1185	250	50
640	1440	1035	585	240	940	1220	250	50
720	1495	1065	610	250	960	1270	250	50
800	1550	1100	615	255	1015	1310	250	50
900	1615	1145	645	270	1050	1365	300	60
1000	1670	1200	670	275	1090	1410	300	60
1125	1730	1240	730	288	1135	1465	300	60
1250	1775	1275	730	295	1160	1505	300	60
1500	1910	1370	765	315	1250	1615	300	60
1750	2000	1440	830	335	1310	1700	350	70
2000	2090	1500	840	345	1370	1770	350	70
2100 - 2350	2090 - 2160	1490	770	320	1360	1780	350	70
2350 - 2600	2160 - 2230	1540	800	330	1410	1850	400	80
2600 - 2900	2240 - 2310	1600	830	340	1460	1910	400	80
2900 - 3200	2320 - 2390	1650	855	350	1510	1980	400	80
3200 - 3500	2390 - 2470	1700	835	360	1560	2040	400	80
3500 - 3900	2470 - 2550	1760	910	380	1610	2110	450	90
3900 - 4300	2580 - 2640	1820	945	390	1670	2190	450	90
4300 - 4750	2650 - 2730	1890	980	400	1730	2260	450	90
4750 - 5250	2730 - 2820	1950	1010	420	1780	2330	500	100
5250 - 5800	2820 - 2910	2010	1040	430	1840	2410	500	100
5800 - 6400	2910 - 3010	2080	1080	450	1900	2490	550	110
6400 - 7050	3010 - 3110	2150	1110	460	1960	2570	550	110
7050 - 7800	3110 - 3210	2220	1150	470	2030	2660	600	120
7800 - 8600	3250 - 3320	2290	1190	490	2100	2750	650	130
8600 - 9500	3320 - 3430	2370	1225	510	2160	2840	650	130
9500 - 10500	3430 - 3540	2450	1270	520	2240	2930	700	140
10500 - 11600	3550 - 3670	2530	1310	540	2310	3030	750	150
11600 - 12800	3670 - 3790	2610	1355	560	2390	3130	750	150
12800 - 14200	3790 - 3910	2700	1400	530	2470	3240	800	160
14200 - 15700	3920 - 4050	2790	1450	600	2550	3350	800	160
15700 - 17200	4030 - 4170	2880	1490	610	2630	3450	870	175
17200 - 18900	4150 - 4300	2960	1540	630	2710	3550	870	175
18900 - 20800	4280 - 4430	3050	1580	650	2800	3660	870	175
20800 - 22800	4420 - 4580	3150	1630	670	2890	3780	930	185
22800 - 25000	4570 - 4720	3260	1690	700	2980	3900	930	185



HIGH HOLDING POWER | DANFORTH

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

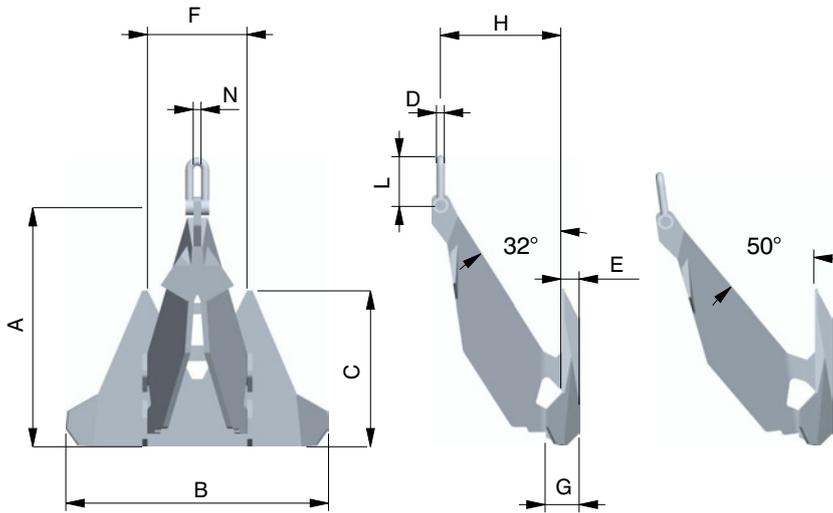
WEIGHT PESO	A	B	C	D	E
kg	mm	mm	mm	mm	mm
135	1350	1130	275	820	560
225	1600	1340	325	975	665
340	1720	1480	370	1000	720
455	1830	1580	410	1100	760
680	1955	1690	475	1180	815
910	2100	1820	525	1275	900
1135	2260	2140	560	1350	930
1360	2390	2260	595	1440	990
1820	2640	2550	660	1590	1050
2270	2780	2700	710	1650	1170
2730	2960	2810	750	1780	1200
3180	3120	2960	790	1880	1260
3635	3260	3090	825	1960	1320
4080	3380	3210	860	2040	1370
4540	3510	3330	890	2100	1420
5545	3730	3540	945	2240	1510
6350	3920	3720	995	2360	1590
7260	4100	4000	1040	2470	1660
8165	4270	4080	1080	2560	1730
9075	4570	4150	1110	2620	1770
11345	4710	4470	1195	2820	1910
13610	5000	4750	1270	3000	2025



DELTA ANCHOR

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

WEIGHT PESO	A	B	C	D	E	F	HPP Proofload
kg	mm	mm	mm	mm	mm	mm	kN
300	1380	1200	960	465	1080	45	98
500	1725	1500	1200	570	1350	48	143
750	1950	1700	1360	650	1530	50	198
1000	2150	1870	1500	710	1680	62	250
1500	2460	2140	1710	815	1920	70	350
2000	2715	2360	1890	900	2125	75	435
2500	2925	2540	2035	970	2290	80	510
3000	3105	2700	2160	1030	2430	90	576
3500	3240	2845	2280	1087	2565	90	635
4000	3375	2953	2315	1140	2650	100	686
5000	3658	3200	2560	1225	2900	110	776
6000	3935	3405	2720	1310	3125	110	875
7000	4120	3580	2860	1360	3220	117	968
7500	4215	3666	2925	1390	3295	124	1005
8000	4315	3750	3000	1425	3380	130	1048
9000	4490	3874	3120	1480	3512	135	1108
10000	4725	4100	3280	1560	3690	140	1172
11000	4868	4140	3310	1600	3750	145	1238
12000	4960	4275	3420	1640	3860	150	1300
13500	5120	4450	3560	1700	4000	155	1408
15000	5345	4600	3685	1735	4160	160	1520
16500	5678	4890	3919	1840	4418	170	1710
20000	5880	5065	4050	1900	4570	175	1840



OFFSHORE ANCHOR

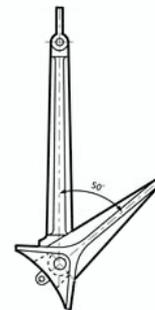
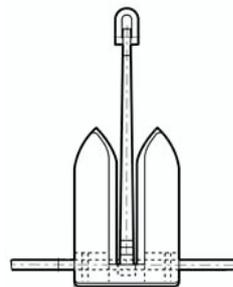
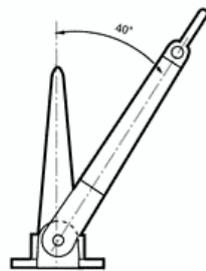
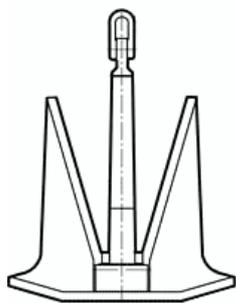
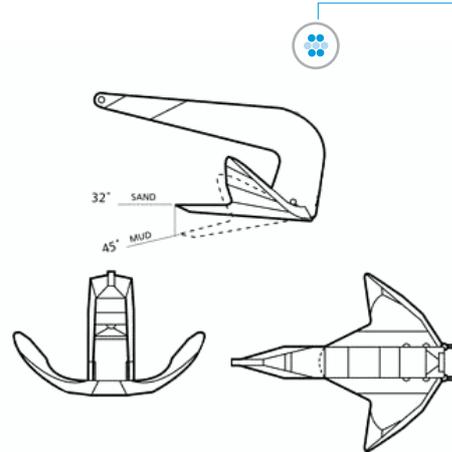
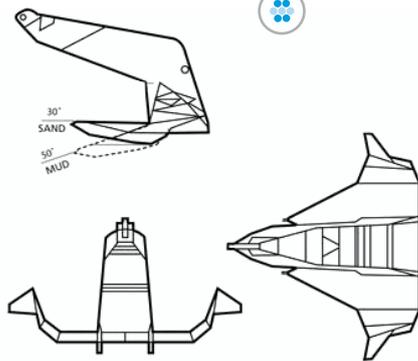
CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

WEIGHT/PESO	A	B	C	D	E	F	G	H	L	N	HHP Proofload
kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kN
500	2042	2183	1237	48	187	854	320	997	215	64	143
1000	2572	2750	1558	59	236	1076	404	1256	271	87	250
1500	2945	3148	1784	68	270	1232	462	1438	310	100	350
2000	3241	3465	1963	74	297	1356	508	1583	340	108	435
3000	3710	3967	2248	90	340	1553	581	1812	385	125	576
4000	4084	4366	2475	100	374	1709	640	1995	415	132	686
5000	4400	4703	2666	110	403	1841	690	2149	480	148	776
6000	4676	4998	2833	110	428	1956	733	2284	500	158	875
7000	4924	5262	2982	115	451	2059	772	2404	540	165	968
7500	5038	5384	3051	124	461	2107	790	2460	580	170	1005
8000	5148	5501	3119	130	471	2154	808	2515	600	172	1048
9000	5354	5721	3224	135	490	2240	840	2616	620	182	1108
10000	5545	5925	3360	140	508	2320	870	2710	640	188	1172
11000	5724	6116	3468	145	524	2395	898	2797	660	192	1238
12000	5829	6296	3570	150	539	2465	924	2879	680	198	1300
13500	6128	6548	3713	155	561	2564	961	2994	700	200	1408
15000	6347	6782	3846	160	581	2656	995	3101	730	210	1520
18000	6745	7207	4087	175	618	2823	1054	3295	790	225	1710
20000	6986	7465	4233	180	640	2924	1092	3413	800	235	1840
22000	7212	7706	4369	190	660	3018	1127	3523	850	242	1940
25000	7526	8041	4559	195	689	3149	1176	3677	860	250	2070
30000	7998	8545	4884	210	733	3260	1249	3907	940	265	2410



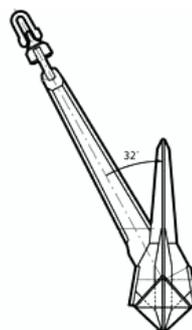
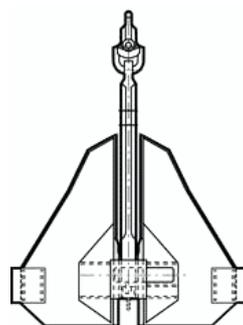
OTHER TYPES...

• Bruce FFTS



Bruce TS

D'Hone



Temco

Offdrill II

...OF ANCHORS



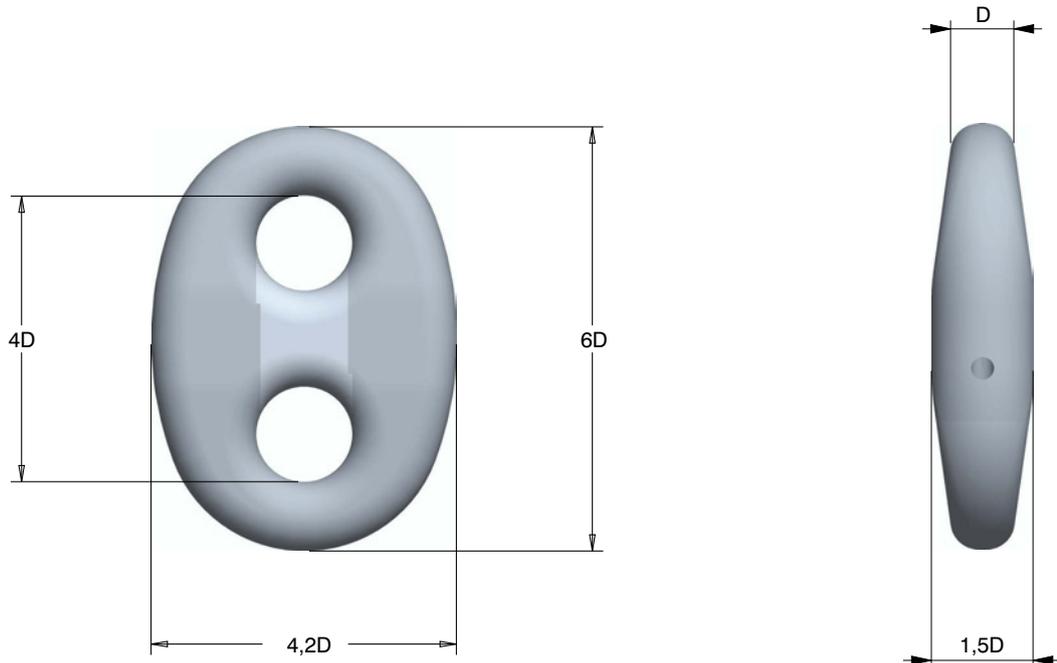
STUD LINK ANCHOR CHAIN | TEST LOADS

DIAMETER Ø		N° OF LINKS/27.5 M N° MAGLIE/27.5 M	APPROXIMATE MINIMUM MASS PESO APPROSSIMATIVO		GR 2		GR 3		ORQ		R 3		R 4	
mm	in		kg per 27,5 m	kg per m	Proof load ton	Break load ton								
12,5	1/2	549	110	4,0	6,7	9,4	9,4	13,5						
14	9/16	491	130	4,7	8,4	11,8	11,8	16,8						
16	5/8	429	170	6,2	10,9	15,3	15,3	22,0						
17,5	11/16	391	180	6,5	13,0	18,3	18,3	26,1						
19	3/4	357	220	8,0	15,3	21,5	21,5	30,7	21,9	33,1	23,2	34,9	33,8	42,8
20,5	13/16	329	260	9,4	17,3	24,9	24,9	35,6	25,4	40,5	26,8	40,5	39,3	49,8
22	7/8	305	300	10,9	20,4	28,6	28,6	40,9	29,2	46,5	30,9	46,5	45,1	57,1
24	15/16	285	340	12,4	24,2	33,9	33,9	48,5	34,6	55,2	36,6	55,2	53,5	67,8
26	1	259	405	14,7	28,3	39,7	39,7	56,7	40,5	64,5	42,8	64,5	62,4	79,2
28	1 1/8	245	475	17,3	32,7	45,8	45,8	65,5	46,7	74,5	49,5	74,5	72,1	91,5
30	1 3/16	225	545	19,8	37,5	52,4	52,4	74,9	53,5	85,2	56,5	85,2	82,6	104,7
32	1 1/4	213	615	22,4	42,5	59,4	59,4	84,9	60,6	96,5	64,1	96,5	93,6	118,7
34	1 5/16	195	690	25,1	47,7	66,8	66,8	95,5	68,2	108,6	72,0	108,6	105,2	133,5
36	1 7/16	187	775	28,2	53,3	74,6	74,6	107,0	76,1	121,2	80,5	121,2	117,4	149,0
38	1 1/2	179	860	31,3	59,3	82,8	82,8	118,0	84,5	134,6	89,3	134,6	130,4	165,4
40	1 9/16	171	950	34,5	65,3	91,4	91,4	131,0	93,3	148,6	98,6	148,6	143,9	182,6
42	1 5/8	165	1040	37,8	71,7	100,0	100,0	143,0	102,4	163,2	108,3	163,2	158,0	200,4
44	1 3/4	153	1130	41,1	78,4	110,0	110,0	157,0	111,9	178,4	118,4	178,4	172,8	219,1
46	1 13/16	147	1240	45,1	85,3	119,0	119,0	171,0	121,8	194,2	128,9	194,2	188,1	238,6
48	1 7/8	143	1345	48,9	92,6	130,0	130,0	185,0	132,1	210,5	139,7	210,5	204,0	258,7
50	2	137	1455	52,9	100,0	140,0	140,0	200,0	142,9	227,6	151,0	227,6	220,4	279,6
52	2 1/16	129	1575	57,3	108,0	151,0	151,0	215,0	153,9	245,1	162,7	245,1	237,4	301,2
54	2 1/8	125	1690	61,4	116,0	162,0	162,0	231,0	165,3	255,9	174,7	263,3	285,6	323,5
56	2 3/16	123	1810	65,8	124,0	174,0	174,0	248,0	177,0	282,0	187,1	282,0	273,2	346,5
58	2 5/16	119	1945	70,7	132,0	185,0	185,0	265,0	189,2	301,3	200,0	301,3	291,8	370,2
60	2 3/8	113	2075	75,4	141,0	198,0	198,0	282,0	201,6	321,1	213,2	321,1	311,0	394,6
62	2 7/16	111	2220	80,7	150,0	210,0	210,0	300,0	214,4	341,5	226,6	341,5	330,8	419,6
64	2 1/2	107	2370	86,2	159,0	223,0	223,0	319,0	227,6	362,3	240,5	362,3	351,0	445,3
66	2 5/8	105	2525	91,8	169,0	236,0	236,0	337,0	240,9	383,8	254,7	383,8	371,7	471,5
68	2 11/16	99	2685	97,6	178,0	250,0	250,0	357,0	254,7	405,7	269,3	405,7	393,0	498,5
70	2 3/4	97	2850	103,6	188,0	263,0	263,0	376,0	268,8	428,2	284,2	428,2	414,7	526,1
73	2 7/8	93	3100	112,7	203,0	285,0	285,0	407,0	290,5	462,8	307,1	462,8	448,2	568,6
76	3	89	3360	122,2	219,0	307,0	307,0	438,0	312,9	498,4	330,8	498,4	482,8	612,3
78	3 1/8	87	3535	128,5	230,0	322,0	322,0	459,0	328,2	522,8	346,9	522,8	506,3	642,3
81	3 3/16	85	3820	138,9	246,0	345,0	345,0	492,0	351,6	560,2	371,7	560,2	542,6	688,3
84	3 5/16	81	4105	149,3	263,0	368,0	368,0	526,0	375,8	598,6	397,2	598,6	579,8	735,5
87	3 7/16	79	4405	160,2	280,0	393,0	393,0	561,0	400,5	638,0	423,4	638,0	618,0	692,0
90	3 9/16	77	4705	171,1	298,0	417,0	417,0	596,0	425,8	678,3	450,2	678,3	657,0	833,4
92	3 5/8	73	4905	178,4	310,0	434,0	434,0	620,0	443,1	705,7	468,4	705,7	683,6	867,0
94	3 3/4	71	5210	189,4	329,0	460,0	460,0	657,0	469,3	747,6	496,1	747,6	724,1	918,5
97	3 13/16	71	5425	197,3	341,0	477,0	477,0	682,0	487,1	775,9	515,0	775,9	751,5	953,4
100	3 15/16	69	5745	208,9	360,0	504,0	504,0	720,0	514,3	819,2	543,7	819,2	793,5	1006,5
102	4	67	5970	217,1	373,0	522,0	522,0	746,0	532,7	848,5	563,2	848,5	821,8	1042,6
105	4 1/8	65	6320	229,8	393,0	550,0	550,0	785,0	560,7	893,2	592,8	893,2	865,1	1097,3
107	4 3/16	63	6575	239,1	406,0	568,0	568,0	812,0	579,7	923,3	612,8	923,3	894,3	1134,5
111	4 3/8	61	7080	257,4	433,0	606,0	606,0	865,0	618,2	984,7	653,5	984,7	953,8	1209,8
114	4 1/2	59	7475	271,8	453,0	635,0	635,0	907,0	647,6	1031,5	684,6	1031,5	999,1	1267,3
117	4 5/8	57	7870	286,2	474,0	664,0	664,0	948,0	677,4	1079,0	716,1	1079,0	1045,1	1325,8
120	4 3/4	57	8270	300,7	495,0	694,0	694,0	991,0	707,7	1127,2	748,1	1127,2	1091,8	1385,0
122	4 13/16	55	8550	310,9	510,0	714,0	714,0	1019,0	728,1	1159,7	769,6	1159,7	1123,3	1424,9
124	4 7/8	55	8835	321,3	524,0	734,0	734,0	1048,0	748,6	1192,4	791,3	1192,4	1155,0	1465,1
127	5	53	9270	337,1	546,0	764,0	764,0	1092,0	779,7	1241,9	824,3	1241,9	1203,0	1526,0
130	5 1/8	53	9710	353,1	568,0	795,0	795,0	1036,0	811,2	1292,1	857,6	1292,1	1251,5	1587,7
132	5 3/16	51	10005	363,8	583,0	816,0	816,0	1165,0	832,3	1325,8	879,9	1325,8	1284,2	1629,1
137	5 3/8	49	10750	390,9	620,0	868,0	868,0	1240,0	885,9	1411,1	936,5	1411,1	1366,8	1733,9

APPROXIMATE WEIGHT OF KENTERS, SHACKLES AND SWIVELS



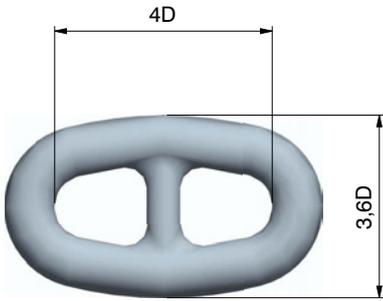
DIAMETER OF CHAIN DIAMETRO CATENA Ø	DIAMETER OF CHAIN DIAMETRO CATENA Ø	KENTER JOINING LINK	D-END ANCHOR SHACKLE	SWIVEL FORERUNNER
mm	in	kg	kg	kg
19	3/4	1,00	2,50	5,91
20,5	13/16	1,40	3,10	7,57
22	7/8	1,70	3,80	9,59
24	15/16	2,00	5,00	11,66
26	1	2,50	6,00	13,80
28	1 1/8	3,70	8,40	19,38
30	1 3/16	4,00	9,80	22,57
32	1 1/4	5,00	11,30	26,09
34	1 5/16	5,50	13,60	30,99
36	1 7/16	7,00	17,60	40,88
38	1 1/2	8,10	19,80	45,85
40	1 9/16	9,00	22,30	51,75
42	1 5/8	10,30	25,80	59,37
44	1 3/4	12,50	31,90	73,62
46	1 13/16	13,50	35,20	81,66
48	1 7/8	15,00	38,80	90,20
50	2	18	41	115
52	2 1/16	20	45	124
54	2 1/8	22	50	141
56	2 3/16	24	54	148
58	2 5/16	28	65	168
60	2 3/8	30	70	191
62	2 7/16	33	76	202
64	2 1/2	38	82	231
66	2 5/8	40	94	261
68	2 11/16	44	101	273
70	2 3/4	46	108	307
73	2 7/8	51	124	348
76	3	58	141	392
78	3 1/8	65	150	409
81	3 3/16	74	171	458
84	3 5/16	84	193	508
87	3 7/16	94	218	564
90	3 9/16	105	243	623
92	3 5/8	110	256	669
95	3 3/4	115	290	733
97	3 13/16	135	305	754
100	3 16/16	150	335	827
102	4	160	350	891
107	4 3/16	175	410	1042
111	4 3/8	200	445	1150
114	4 1/2	225	475	1239
117	4 5/8	230	505	1332
122	4 13/16	267	550	1465
127	5	315	600	1632
132	5 3/16	370	675	1790
137	5 3/8	390	750	2030
142	5 9/16	450	900	2380
147	5 3/4	505	1055	2980
152	6	545	1200	2990



KENTER JOINING LINK

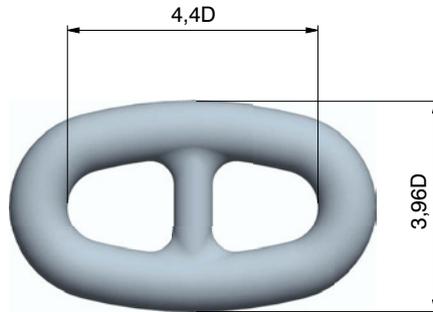
CERTIFICATO DI CLASSE
INCLUSO
CLASS CERTIFICATE
INCLUDED





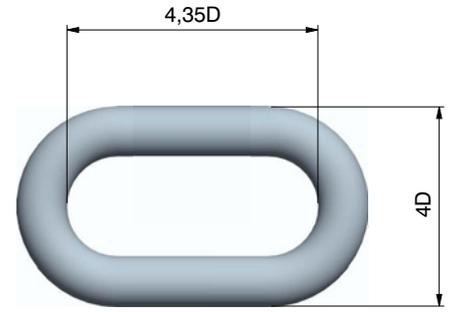
C

COMMON LINK



EL

ENLARGED LINK

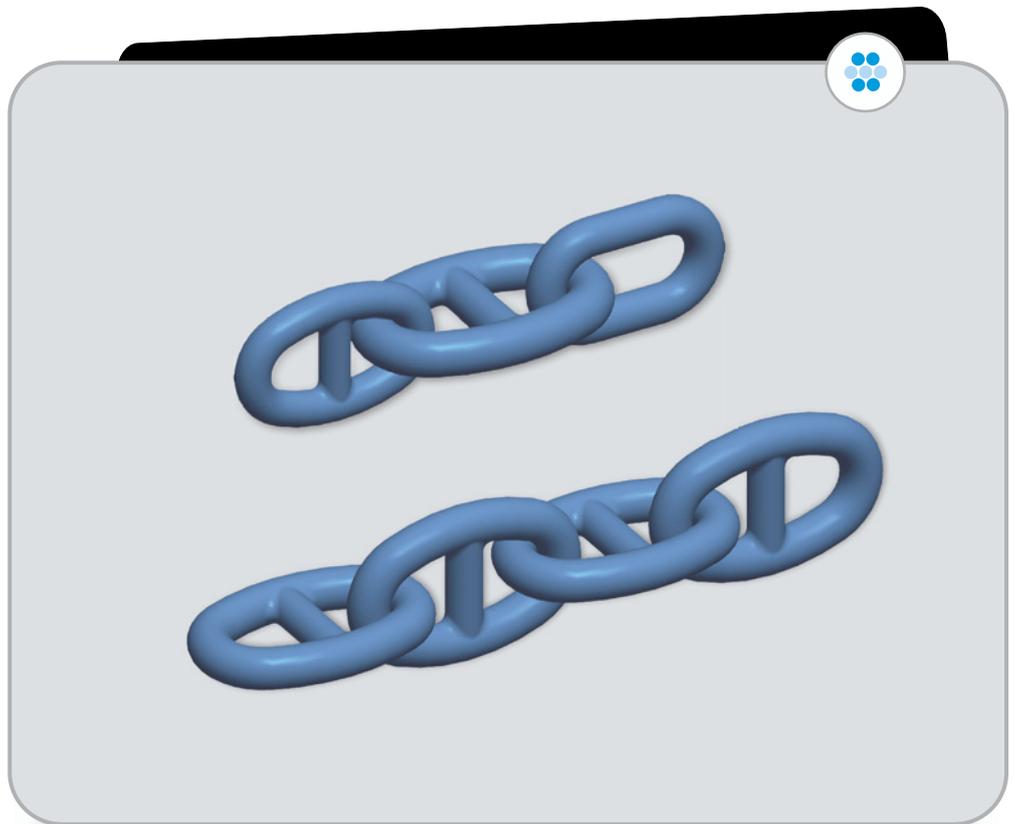
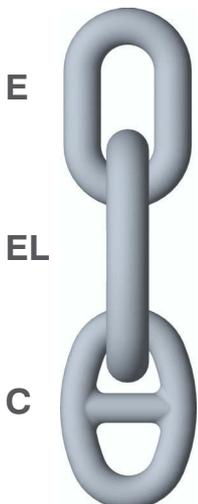


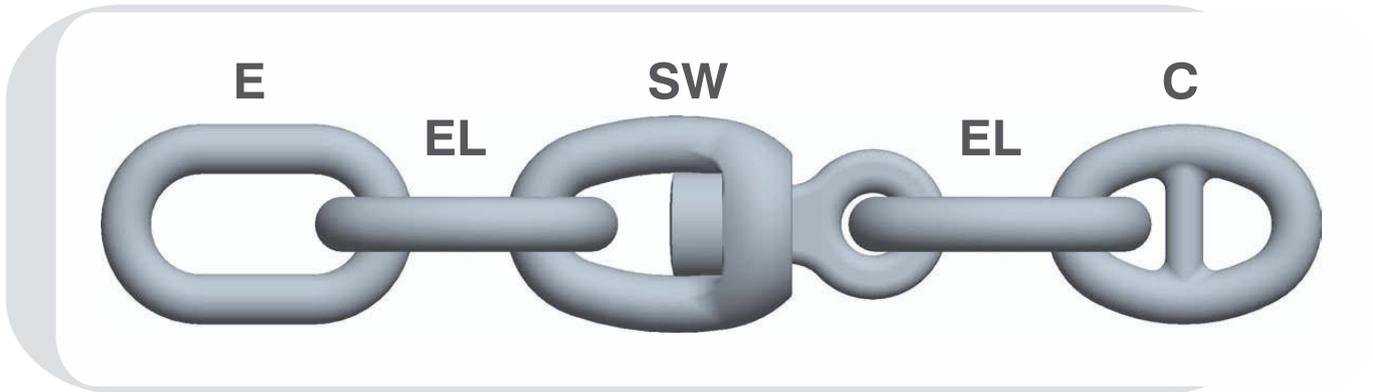
E

END LINK

**3 LINKS
ADAPTOR
PIECE**

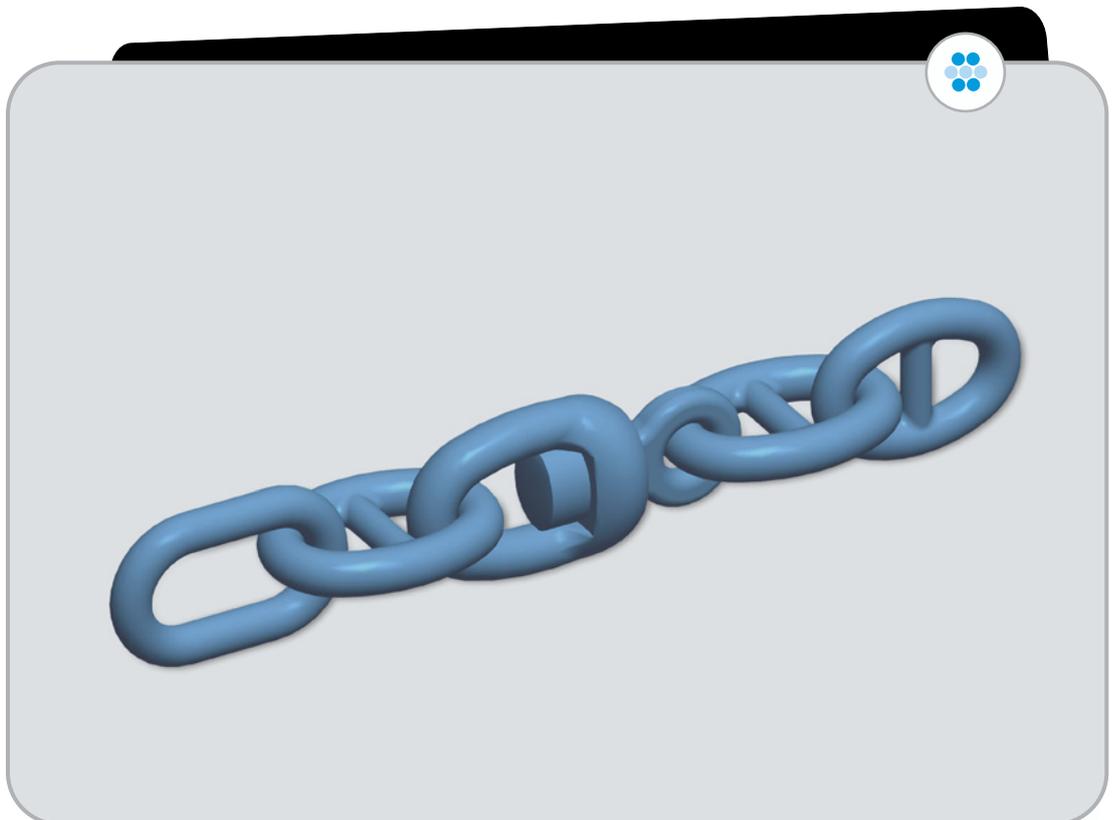
CERTIFICATO DI CLASSE
INCLUSO
CLASS CERTIFICATE
INCLUDED





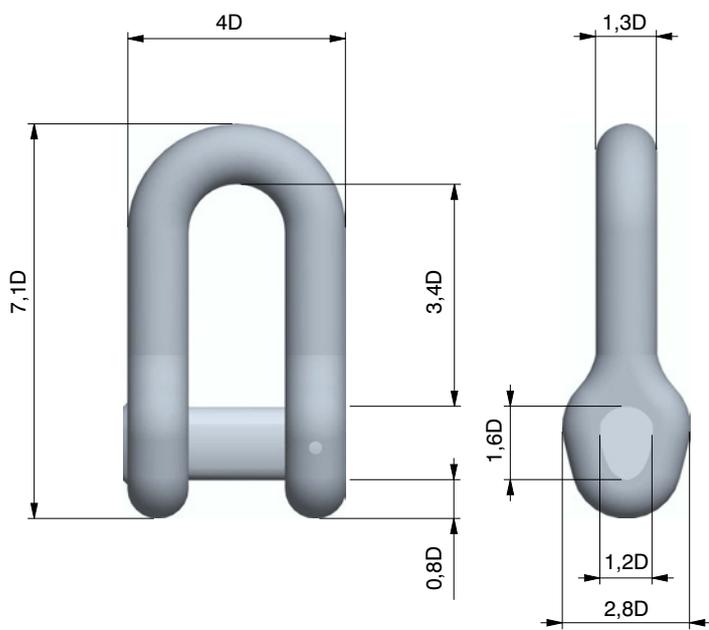
SWIVEL FORERUNNER

CERTIFICATO
DI CLASSE INCLUSO
CLASS CERTIFICATE
INCLUDED



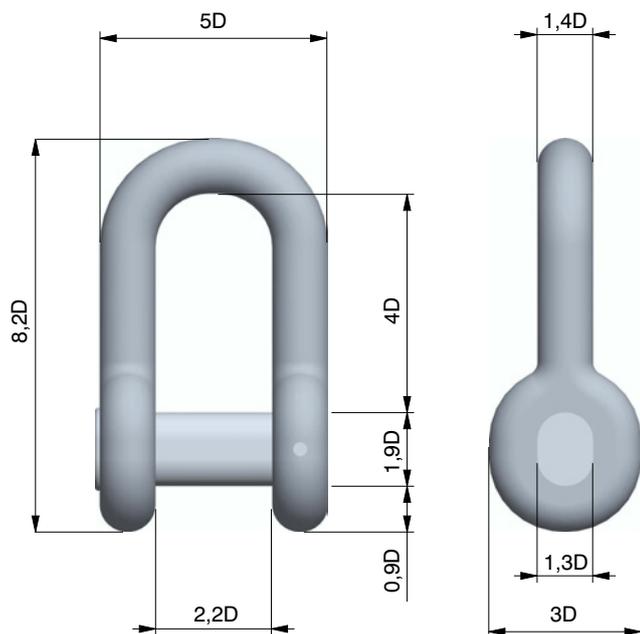


JOINING SHACKLE TYPE "D"



CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

ANCHOR SHACKLE TYPE "D"

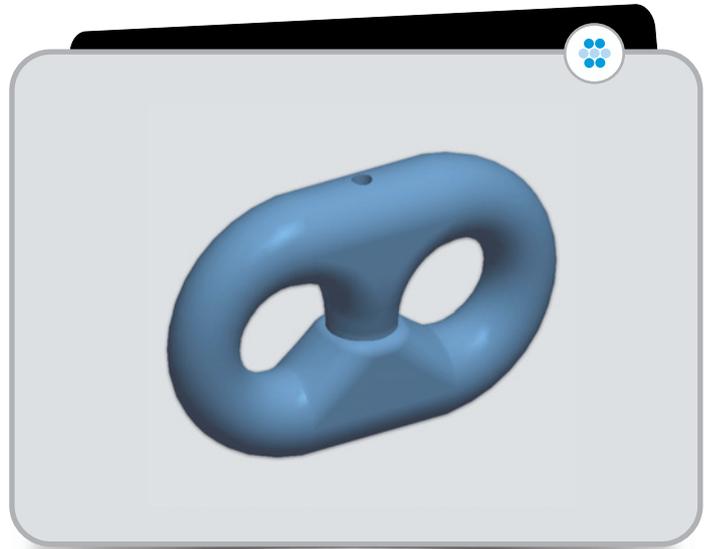
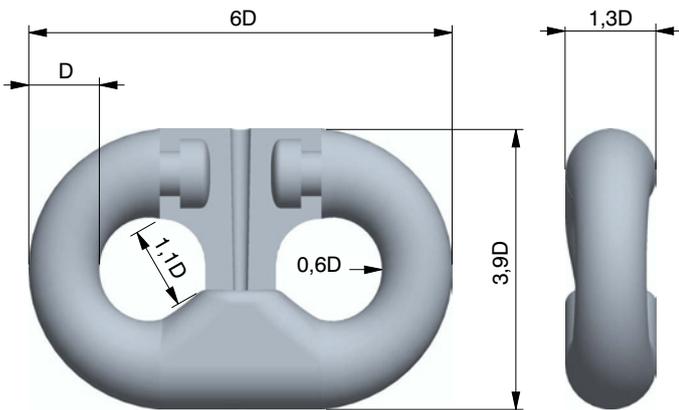


CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED



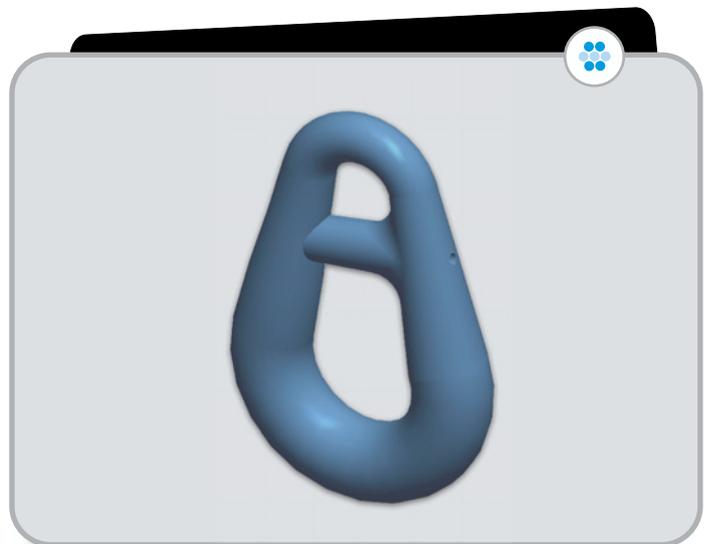
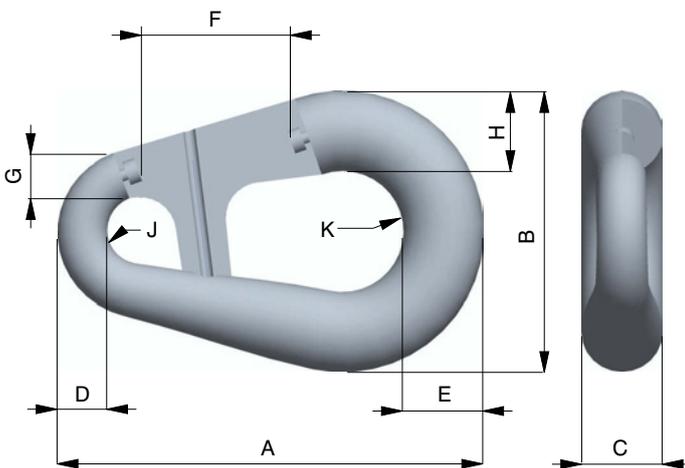
BALDT LINK

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED

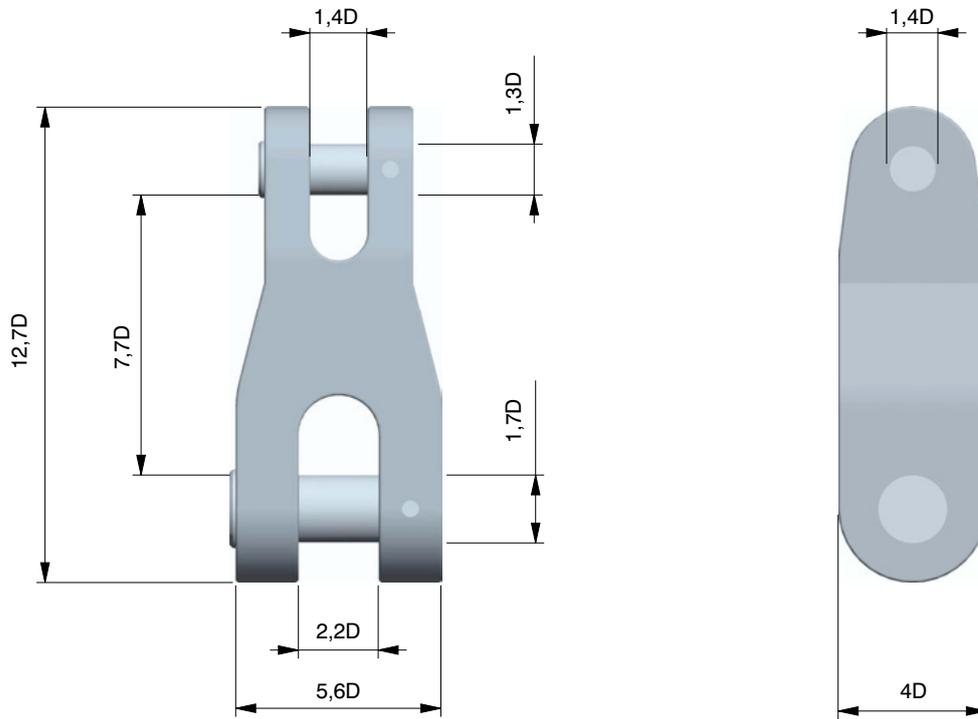


PEAR LINK

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED



N°	Chain / Catena	A	B	C	D	E	F	G	H	J	K	Weight / Peso	GR 3		GR 4	
													Proof Load	Break Load	Proof Load	Break Load
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	ton	ton	ton	ton
4	32-40	298	206	57	38	48	83	44	57	29	44	14,5	91,4	13,5	141,9	182,4
5	42-51	379	260	76	51	64	98	60	73	32	54	27	145,5	207,5	228,7	290,2
6	52-60	454	311	89	60	76	121	73	89	38	64	48	197,8	285,5	310,9	394,3
7	62-79	562	375	117	79	95	150	86	111	48	76	94	330	470	518	657,1
8	81-92	654	419	133	92	124	150	111	135	54	79	155	434,4	620	683,1	866,6
9	94-95	692	435	149	98	130	159	124x114	148x134	57	89	236	460	656,7	723,6	918
10	97-102	900	580	194	122	168	194	130x148	181	73	108	386	522,1	746,4	821,4	1041,9

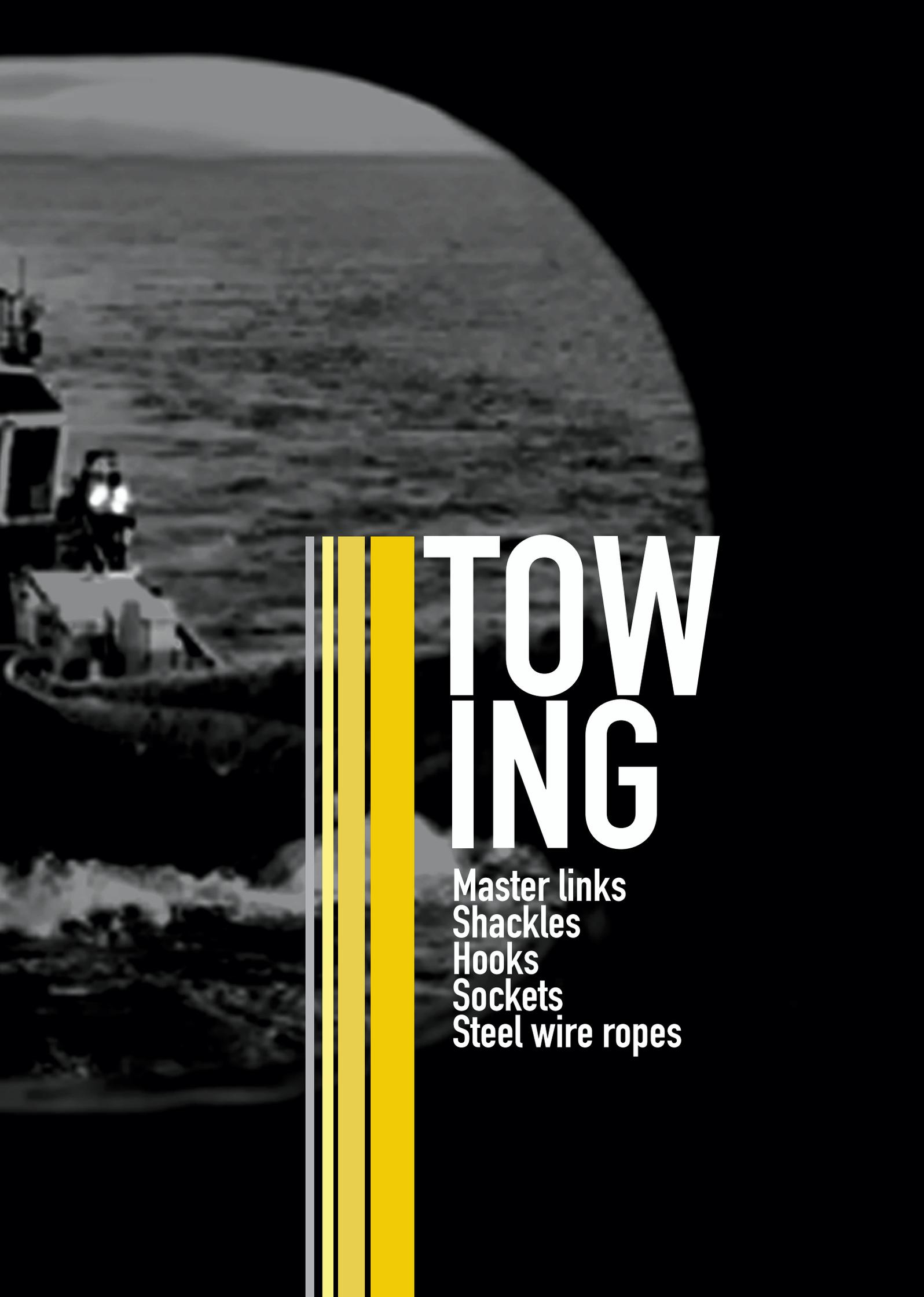


JAW-JAW SWIVEL SHACKLE TYPE A

CERTIFICATO
DI CLASSE INCLUSO
CLASS CERTIFICATE
INCLUDED







TOW ING

Master links
Shackles
Hooks
Sockets
Steel wire ropes

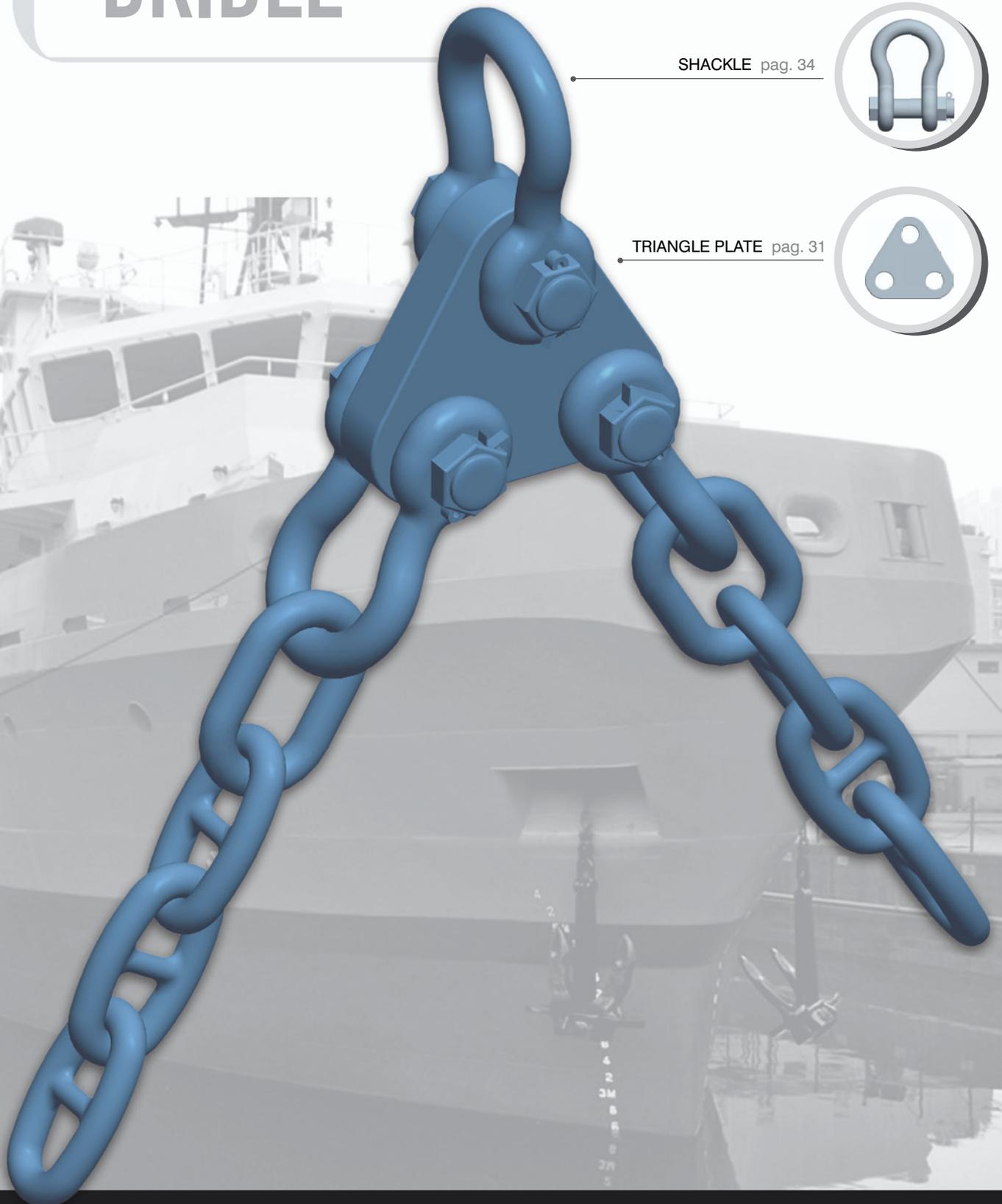


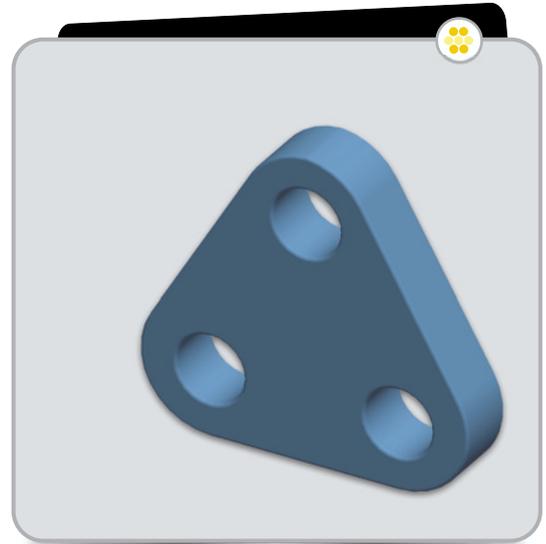
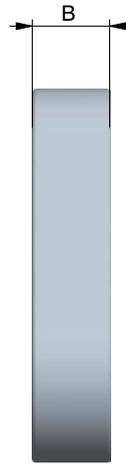
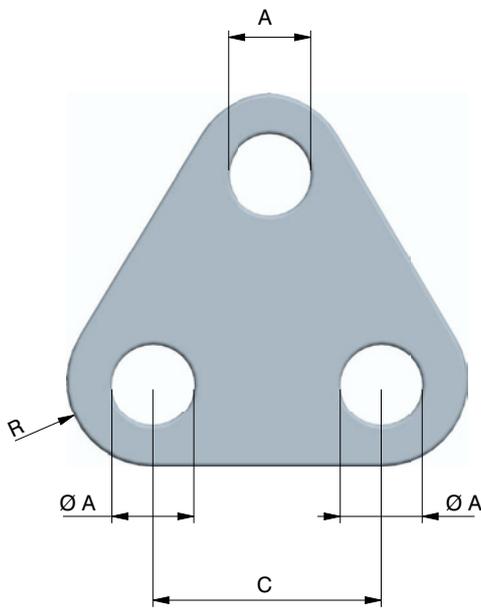
TOWING BRIDLE

SHACKLE pag. 34



TRIANGLE PLATE pag. 31

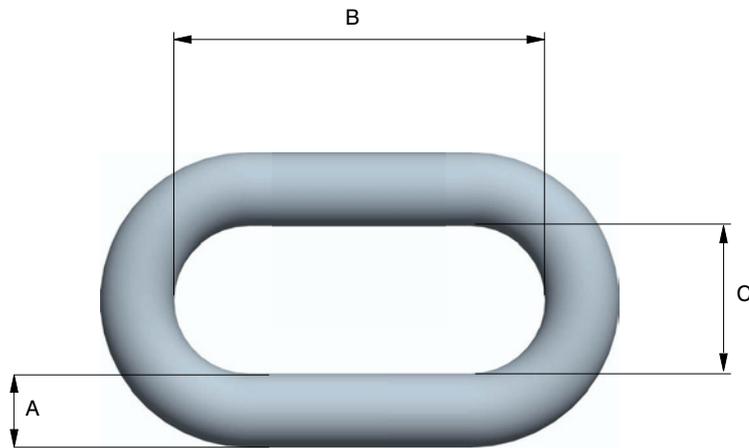




TRIANGLE PLATE

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

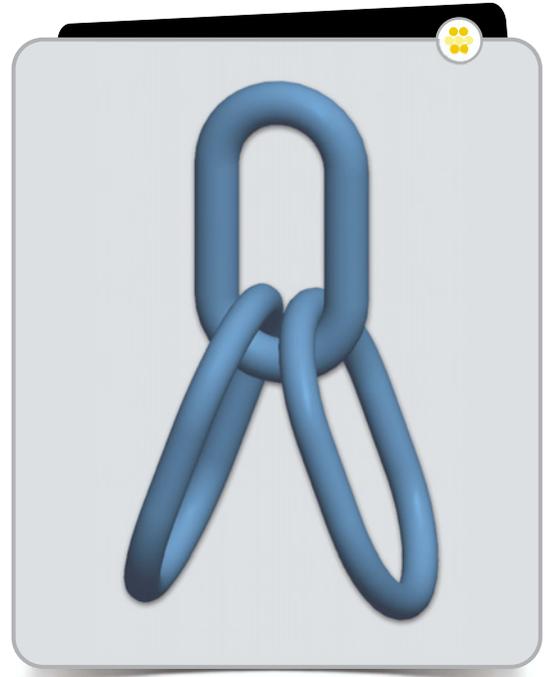
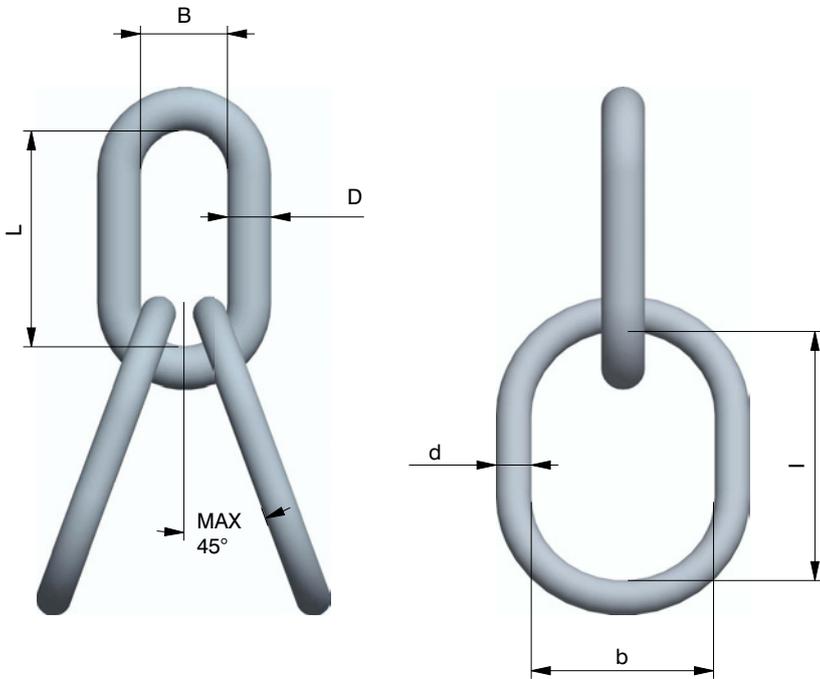
SWL	MBL	A	B	C	R	WEIGHT PESO
ton	ton	mm	mm	mm	mm	kg
17	85	47	35	120	65	10
25	125	55	40	150	80	18
35	175	60	50	160	90	28
55	275	75	70	210	105	58
85	425	90	80	230	135	96
120	600	105	100	280	170	188
150	750	115	110	320	185	256
175	875	115	110	320	195	274
200	1000	140	120	390	215	390
250	1250	150	140	390	240	518



MASTER LINK

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

SWL	MBL	A	B	C	WEIGHT PESO
ton	ton	mm	mm	mm	kg
5	20	22	160	90	1,5
8	32	26	180	100	2,3
10	40	32	200	110	3,9
16	64	36	260	140	6,3
26	104	45	340	180	13
36	144	51	350	190	17
47	188	57	400	200	25
58	232	63	430	230	32
84	336	72	440	250	46
105	420	80	450	250	62
131	524	90	460	300	75
157	628	100	500	300	103
250	1000	115	600	400	165
400	1600	152	800	400	380
500	2000	157	800	400	409
600	2400	167	800	400	460



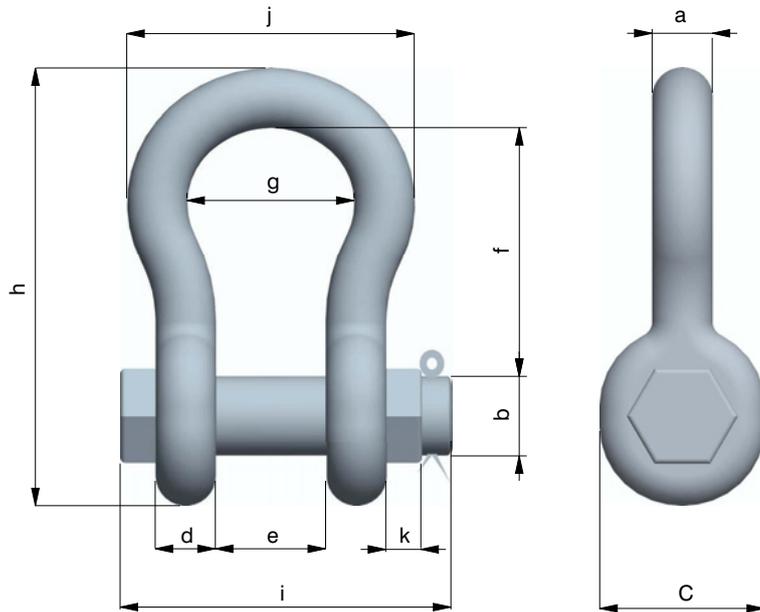
MASTER LINK ASSEMBLY

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

SWL	MBL	D	L	B	d	l	b	WEIGHT PESO
ton	ton	mm	mm	mm	mm	mm	mm	kg
70	280	68	460	220	68	430	300	175
100	400	80	500	250	80	460	330	223
125	500	90	560	270	90	500	330	303
175	700	100	600	270	100	560	330	401
250	1000	115	600	400	115	600	400	520
300	1200	115	600	300	115	600	400	520



STANDARD SHACKLE



STANDARD BOW SHACKLE WITH SCREW PIN

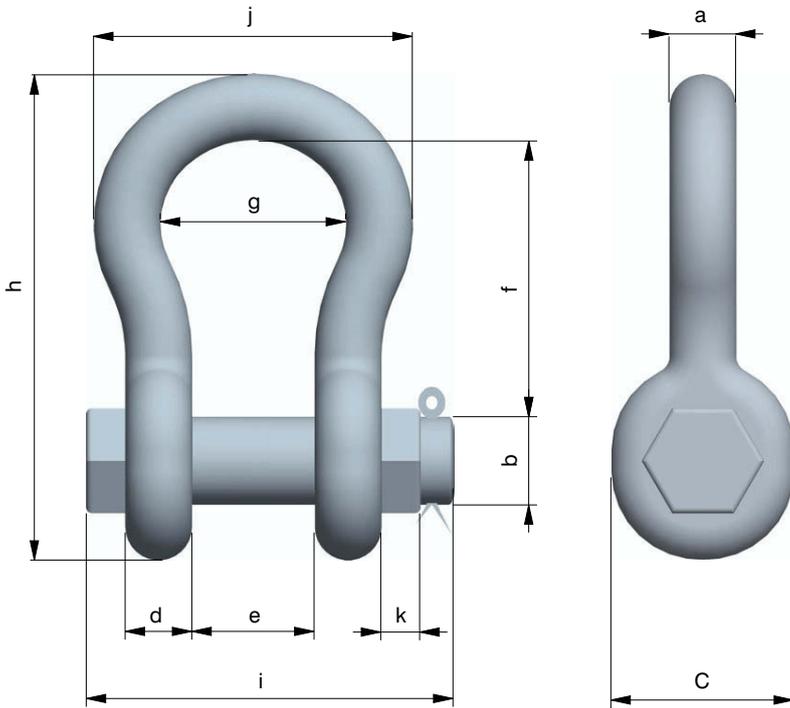
MBL: 6 x WLL

WLL	a	b	C	d	e	f	g	h	i	j	WEIGHT PESO
ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0,33	5	6	12,5	5	9,5	22	16	41	31	28	0,02
0,5	7	8	17	7	12	29	20	54	40	37	0,05
0,75	9	10	21	9	13,5	32	22	61	49	42	0,1
1	10	11	23	10	17	36,5	26	71	56	49	0,14
1,5	11	13	26	11	19	43	29	80	68	54	0,19
2	13,5	16	34	13,5	22	51	32	91	76	63	0,36
3,25	16	19	40	16	27	64	43	114	93	79	0,63
4,75	19	22	47	19	31	76	51	136	107	94	1,01
6,5	22	25	53	22	36	83	58	157	123	107	1,5
8,5	25	28	60	25	43	95	68	176	141	124	2,21
9,5	28	32	67	28	47	108	75	197	158	137	3,16
12	32	35	74	32	51	115	83	218	176	154	4,31
13,5	35	38	80	35	57	133	92	240	192	170	5,55
17	38	42	89	38	60	146	99	262	208	183	7,43
25	45	50	104	45	74	178	126	314	250	226	12,84
35	50	57	111	50	83	197	138	358	281	250	18,15
42,5	57	65	134	57	95	222	160	414	321	287	26,29
55	65	70	145	65	105	260	180	463	355	329	37,6

STANDARD BOW SHACKLE WITH SAFETY BOLT

MBL: 6 x WLL

WLL	a	b	C	d	e	f	g	h	i	j	k	WEIGHT PESO
ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0,5	7	8	17	7	12	29	20	54	43	37	4	0,06
0,75	9	10	21	9	13,5	32	22	61	51	42	5	0,11
1	10	11	23	10	17	36,5	26	71	61	49	8	0,16
1,5	11	13	26	11	19	43	29	80	68	54	11	0,22
2	13,5	16	34	13,5	22	51	32	91	83	63	13	0,42
3,25	16	19	40	16	27	64	43	114	99	79	17	0,74
4,75	19	22	47	19	31	76	51	136	115	94	20	1,18
6,5	22	25	53	22	36	83	58	157	131	107	23	1,77
8,5	25	28	60	25	43	95	68	176	151	124	25	2,58
9,5	28	32	67	28	47	108	75	197	167	137	28	3,66
12	32	35	74	32	51	115	83	218	179	154	31	4,91
13,5	35	38	80	35	57	133	92	240	198	170	34	6,54
17	38	42	89	38	60	146	99	262	202	183	19	8,19
25	45	50	104	45	74	178	126	314	244	226	24	14,22
35	50	57	111	50	83	197	138	358	270	250	27	19,85
42,5	57	65	134	57	95	222	160	414	302	287	30	28,33
55	65	70	145	65	105	260	180	463	330	329	33	39,59
85	75	83	163	75	127	329	190	556	376	355	40	62



SUPER SHACKLE

MBL: 5 x WLL

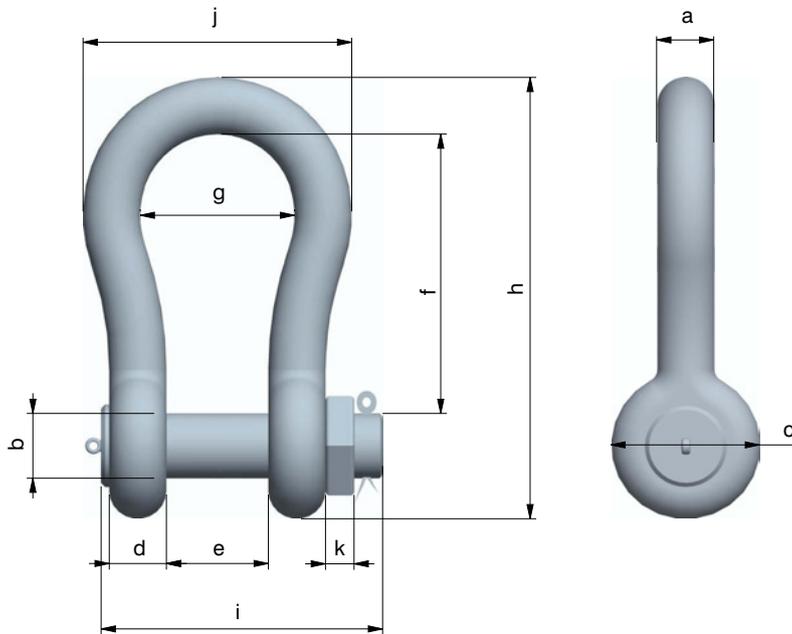
CON CERTIFICATO EN 10204-3.1.
PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA

WITH EN 10204-3.1 TEST CERTIFICATE.
THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON REQUEST

WLL	a	b	C	d	e	f	g	h	i	j	k	WEIGHT PESO
ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
3,3	13,5	16	34	13,5	22	51	32	91	81	63	11	0,44
5	16	19	40	16	27	64	43	114	99	79	17	0,79
7	19	22	47	19	31	76	51	136	115	94	20	1,26
9,5	22	25	53	22	36	83	58	157	131	107	23	1,88
12,5	25	28	60	25	43	95	68	176	151	124	25	2,78
15	28	32	67	28	47	108	75	197	167	137	28	3,87
18	32	35	74	32	51	115	83	218	179	154	31	5,26
21	35	38	80	35	57	133	92	240	198	170	34	6,94
30	38	42	89	38	60	146	99	262	203	183	19	8,79
40	45	50	104	45	74	178	126	314	244	226	24	15
55	57	57	133	50	83	197	138	365	286	264	27	22,0
85	70	70	159	65	105	260	180	468	342	339	33	42,0
120	83	83	171	75	127	329	190	564	400	371	40	70,0
150	95	95	215	89	144	381	238	667	440	416	50	112
175	105	108	245	100	165	400	275	702	490	485	60	160



HEAVY DUTY SHACKLE

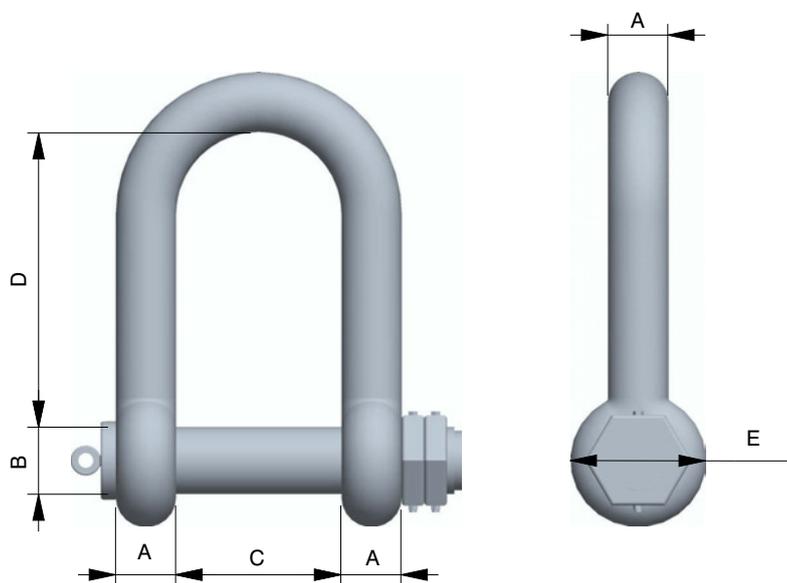


HEAVY DUTY SHACKLE

MBL: 5 x WLL

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON REQUEST

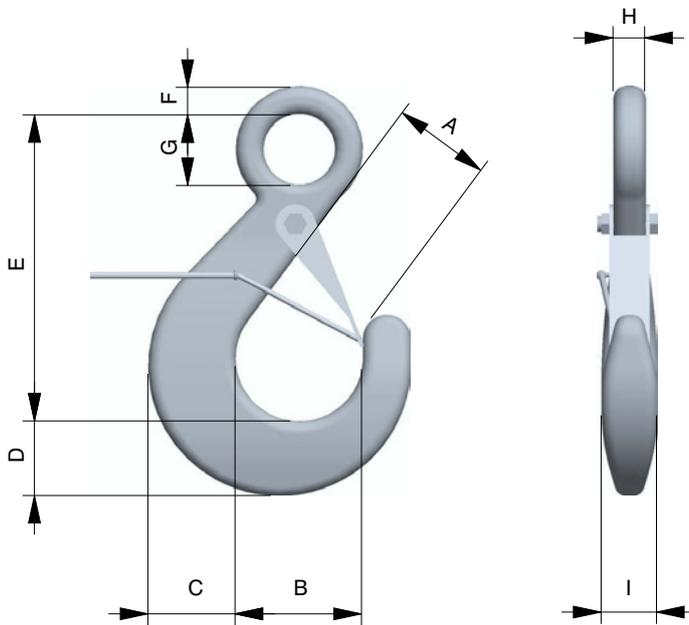
WLL	a	b	c	d	e	f	g	h	i	j	k	WEIGHT PESO
ton	mm	mm	mm	mm	kg							
120	95	95	215	89	144	381	238	667	440	416	50	110
150	105	108	245	100	165	400	275	702	490	485	60	160
200	120	130	288	110	175	500	290	854	520	530	60	235
250	130	140	308	115	200	540	305	921	560	565	65	285
300	140	150	335	120	200	600	305	1018	575	585	70	340
400	170	175	387	160	225	650	325	1137	690	665	70	560
500	180	185	410	160	250	700	350	1213	710	710	70	685
600	200	205	458	185	275	700	375	1267	810	775	70	880
700	210	215	468	200	300	700	400	1287	850	820	70	980
800	210	220	478	200	300	700	400	1294	870	820	70	1100
900	220	230	500	210	320	700	420	1320	920	860	70	1280
1000	240	240	530	210	340	700	420	1360	940	900	70	1460
1250	260	270	600	225	360	700	450	1430	1020	970	70	1990
1500	280	290	640	225	360	700	450	1480	1060	1010	70	2400



WIDE MOUTH DOUBLE NUT SHACKLE

CON CERTIFICATO EN 10204-3.1.
PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
WITH EN 10204-3.1 TEST CERTIFICATE.
THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
REQUEST

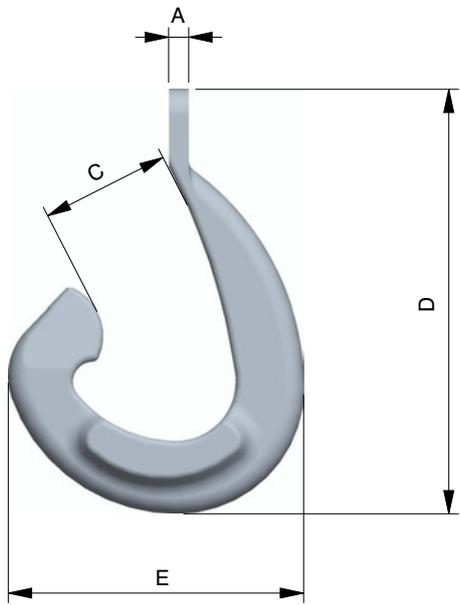
SWL	MBL	A	B	C	D	E	WEIGHT PESO
ton	ton	mm	mm	mm	mm	mm	kg
34	170	50	65	140	285	115	23
60	300	70	76	175	350	165	65
85	425	80	90	220	390	178	87
110	550	90	100	254	430	210	130
130	650	100	114	280	480	235	194
200	1000	125	133	300	600	265	354
225	1125	130	146	333	720	305	410
300	1500	140	165	366	850	305	560



EYE HOOK ROV HOOK

CON CERTIFICATO EN 10204-3.1.
PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
WITH EN 10204-3.1 TEST CERTIFICATE.
THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
REQUEST

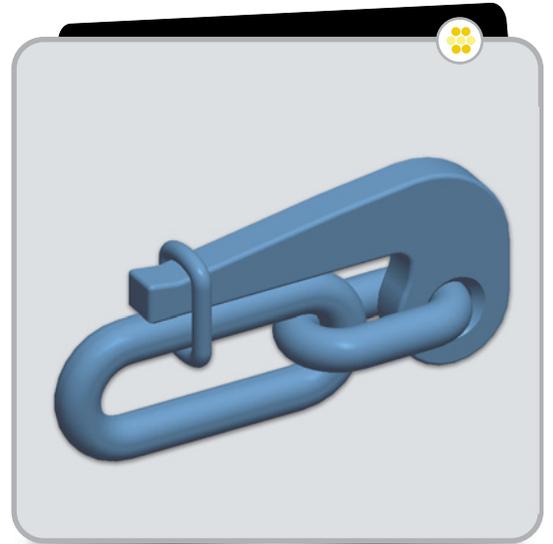
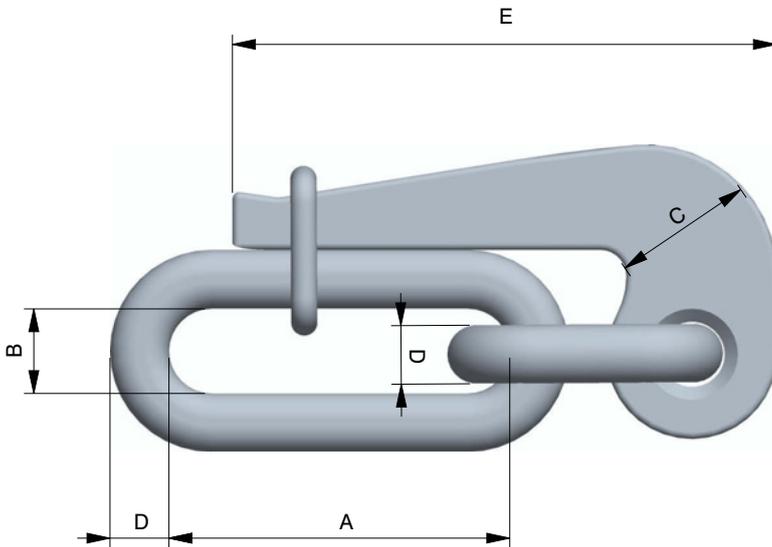
SWL	MBL	A	B	C	D	E	F	G	H	I	WEIGHT PESO
ton	ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
8	32	38	62	53	46	174	20	32	20	35	3
12,5	50	53	79	67	58	219	25	40	25	45	6
16	64	58	88	75	65	246	28	46	28	50	8
20	80	64	99	85	73	277	32	52	32	56	12
28	112	71	112	96	83	313	36	60	36	63	16
31	124	81	125	106	920	349	40	66	40	70	22
40	160	93	140	116	103	386	45	72	45	78	32
50	200	106	158	135	116	442	50	84	50	89	46
63	252	119	176	151	130	494	56	90	56	99	63
80	320	131	198	168	145	610	63	102	63	110	80
100	400	151	225	195	172	650	74	116	74	125	125
150	600	173	250	225	199	765	86	130	86	160	250
200	800	200	275	260	237	850	102	150	102	180	365
250	1000	133	310	290	269	928	120	170	120	200	515
300	1200	264	350	330	310	1052	40	190	140	220	730
400	1600	303	400	380	344	1195	170	210	170	240	1055



CHASER HOOK

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

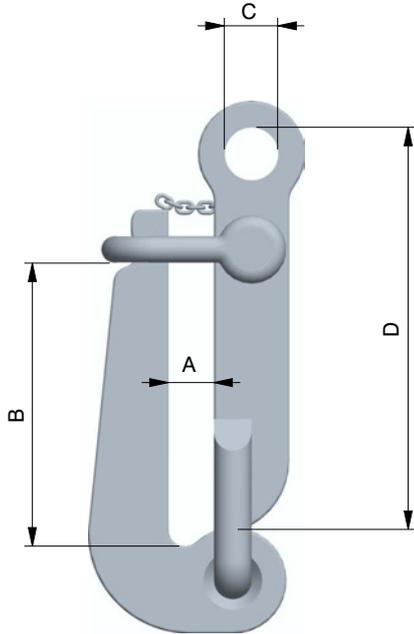
SWL	A	B	C	D	E	F	WEIGHT PESO
ton	mm	mm	mm	mm	mm	mm	kg
150	125	86	680	2220	1780	330	1800
200	180	145	680	2220	1780	550	2600
250	180	1453	680	2220	1780	600	2730



PELICAN HOOK

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

SWL	MBL	D	A	B	C	E	WEIGHT PESO
ton	ton	mm	mm	mm	mm	mm	kg
0,4	1,6	9	89	16	27	125	0,6
0,75	3	12	102	22	28	165	1
1,25	5	16	130	23	42	180	1,5
2	8	22	170	34	46	230	4
5	20	25	200	38	66	280	8
9	36	32	260	58	88	360	14



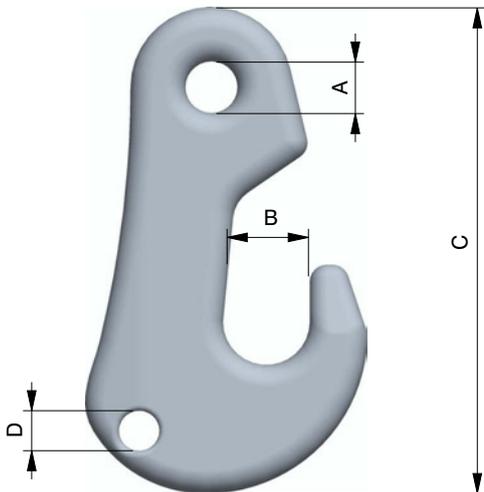
HEAVY DUTY PELICAN HOOK

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

SWL	MBL	B	C	A	D	WEIGHT PESO
ton	ton	mm	mm	mm	mm	kg
3,5	17,5	85	26	35	240	7
5	25	100	38	35	234	12
8	40	150	50	55	300	17
12	60	160	55	65	358	26
17	85	165	55	70	390	45
25	125	180	60	76	430	62
35	175	200	60	85	465	100
55	275	230	75	90	500	152
70	350	250	85	100	600	234
85	425	310	103	110	704	352
120	600	418	105	160	858	524
150	750	482	115	180	919	616



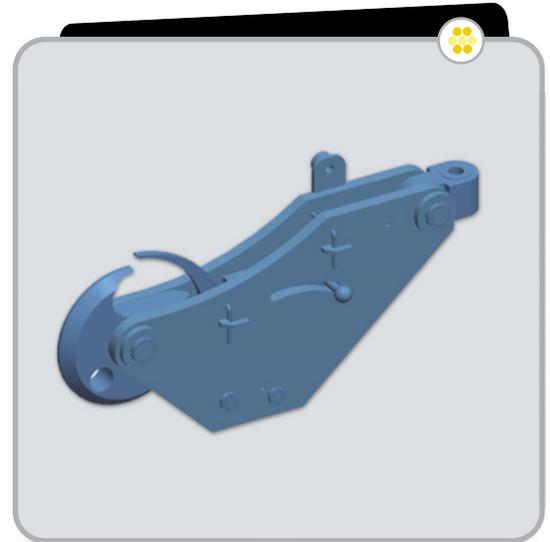
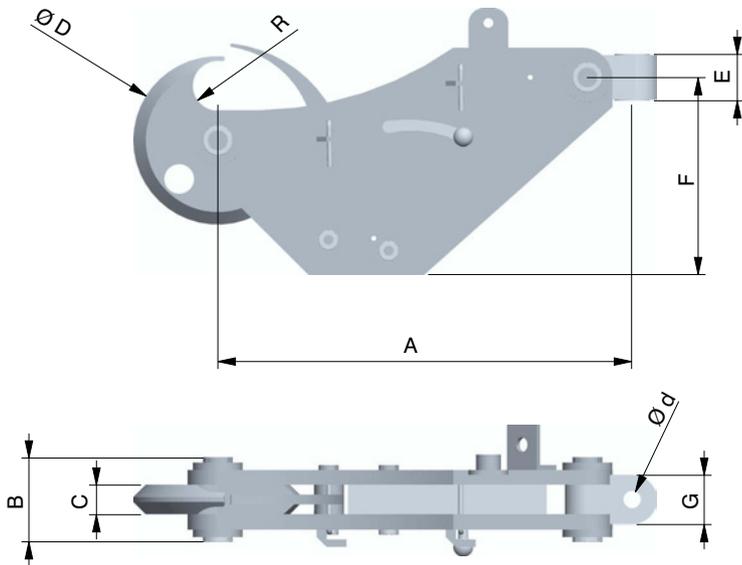
ANCHOR LINE HOOK



ANCHOR LINE HOOK

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

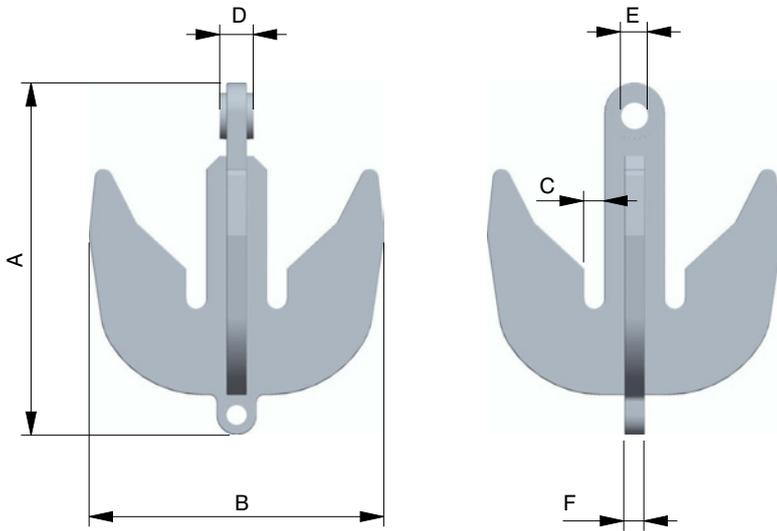
SWL	MBL	A	B	C	D	E	WEIGHT PESO
ton	ton	mm	mm	mm	mm	mm	kg
15	60	38	58	343	32	45	8
20	80	40	74	343	32	60	13
25	100	52	86	440	38	65	22
50	200	80	112	618	45	90	100
80	320	90	130	709	62	100	145



QUICK RELEASE DISC TYPE TOWING HOOK

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

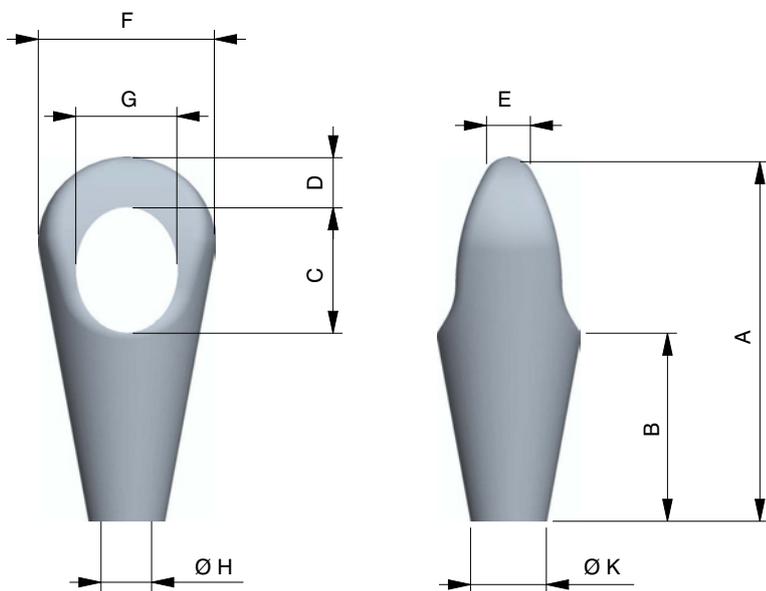
SWL	A	B	C	D	d	E	F	G	R	Ø OF MOORING LINE	
										Synthetic Rope	Wire Rope
ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
5	585	106	40	300	30	68	267	74	47	28	16
15	776	158	60	400	45	105	356	111	63	36	20
30	906	197	85	460	65	118	411	141	73	52	28
50	1217	229	90	617	75	150	550	164	97	68	38
75	1250	257	95	650	85	160	570	170	102	76	42
90	1335	260	105	720	100	160	602	180	102	86	48
100	1467	260	110	750	110	170	620	195	115	100	54
125	1592	299	120	800	115	185	650	210	120	106	58
150	1728	339	140	850	135	190	710	250	130	125	64
200	1988	409	180	950	155	215	815	300	140	150	72
300	2233	470	220	1050	170	260	950	320	150	200	85



CHAIN GRAPNEL

CON CERTIFICATO EN 10204-3.1.
 PROOF LOAD ENTE DI CLASSIFICA SU RICHIESTA
 WITH EN 10204-3.1 TEST CERTIFICATE.
 THIRD PARTY PROOF LOAD TEST CERTIFICATE UPON
 REQUEST

SWL	A	B	C	D	E	F	WEIGHT PESO
ton	mm	mm	mm	mm	mm	mm	kg
150	1778	1372	102	114	112	76	1266
250	2008	1670	125	200	135	100	2290



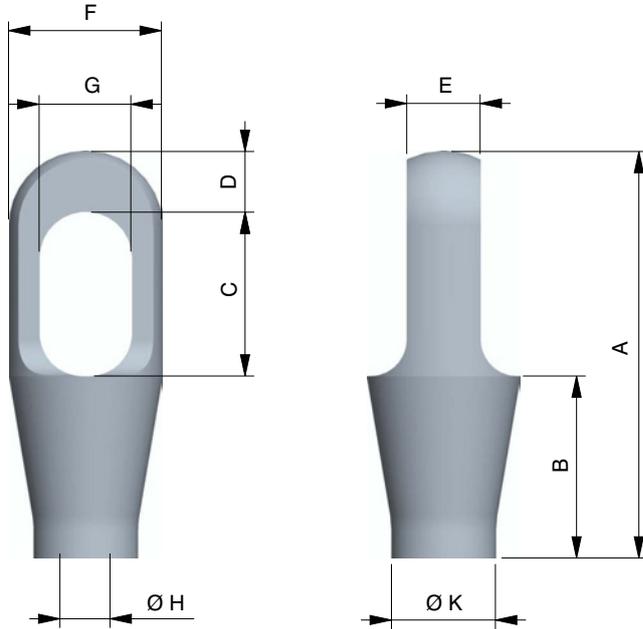
ANCHOR PENDANT SOCKET

CERTIFICAZIONE EN 10204:2005 2.1 IN ACCORDO ALLA EN 13411-4:2009
 CERTIFICATION EN 10204:2005 2.1 IN ACCORDANCE WITH EN 13411-4:2009

WIRE Ø FUNE Ø	SWL	MBL	A	B	C	D	E	F	G	Ø H	Ø K	WEIGHT PESO
mm	ton	ton	mm	kg								
38-42	32	160	309	162	103	44	40	152	92	45	67	12
43-48	40	200	369	193	123	53	48	176	110	51	74	16
49-54	50	250	408	210	140	58	52	200	125	57	83	23
55-60	60	300	452	230	157	65	58	226	140	66	96	33
61-68	80	400	499	250	174	75	66	250	156	74	107	44
69-75	100	500	551	280	191	80	70	275	171	79	115	58
76-80	120	600	591	309	196	86	76	290	180	86	125	76
81-86	140	700	643	332	211	100	90	304	188	92	133	109
87-93	160	800	699	363	231	105	95	332	206	98	142	118
94-102	180	900	747	380	255	112	101	366	228	108	157	142



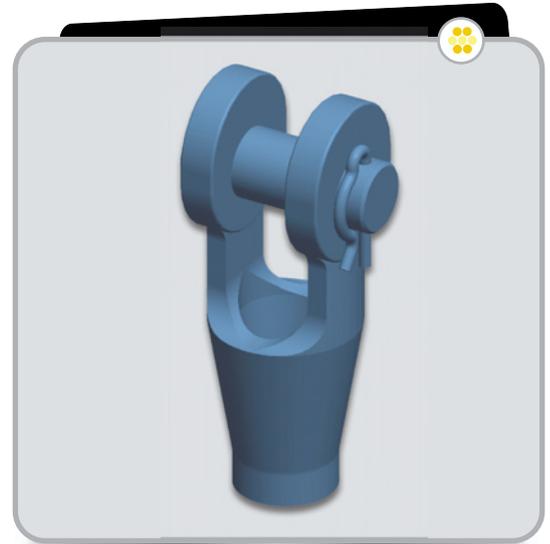
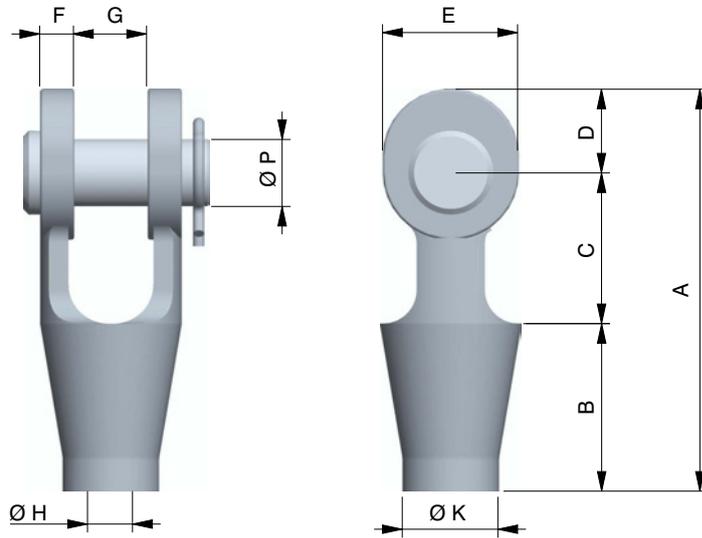
CLOSED SPELTER SOCKET



CLOSED SPELTER SOCKET

CERTIFICAZIONE EN 10204:2005 2.1 IN ACCORDO ALLA EN 13411-4:2009
CERTIFICATION EN 10204:2005 2.1 IN ACCORDANCE WITH EN 13411-4:2009

WIRE Ø FUNE Ø	SWL	MBL	A	B	C	D	E	F	G	Ø H	Ø K	WEIGHT PESO
mm	ton	ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6-7	1,6	8	102	46	45	11	14	38	22	9,5	20	0,3
8-10	2,4	12	120	54	52	14	17,5	44	24	12,5	26	0,5
11-13	4	20	140	64	59	17	23	53	30	14	30	0,7
14-16	5	25	162	76	65	21	26	64	36	17,5	38,5	1,3
18-19	8	40	194	89	78	27	32	75	42	21	46	2,1
20-22	11	55	224	101	90	33	38	90	50	25,5	55	3,6
23-26	15	75	253	114	103	36	45	101	57	28	62	5,1
27-30	18	90	282	127	116	39	51	114	65	32	70	7
31-36	25	125	312	139	130	43	57	127	71	38	83	10,4
37-39	30	150	358	152	155	51	63	142	78	41	90	15
40-42	34	170	390	165	171	54	70	150	82	44	97	18,5
43-48	45	225	443	190	198	55	76	171	95	51	112	27,5
49-54	56	280	502	216	224	62	82	193	111	57	125	39,5
55-60	72	360	550	229	248	73	92	219	125	66	135	51
61-68	85	425	597	148	270	79	102	241	140	74	150	67
69-75	92	460	644	179	286	79	124	273	159	79	160	105
76-80	112	560	689	305	298	86	133	292	171	86	170	121
81-86	125	625	736	330	311	95	146	311	184	92	180	160
87-93	144	720	788	356	330	102	159	330	197	98	200	185
94-102	175	875	845	381	356	108	178	362	216	108	215	235



OPEN SPELTER SOCKET

CERTIFICAZIONE EN 10204:2005 2.1 IN ACCORDO ALLA EN 13411-4:2009
 CERTIFICATION EN 10204:2005 2.1 IN ACCORDANCE WITH EN 13411-4:2009

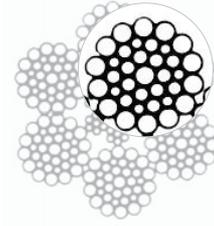
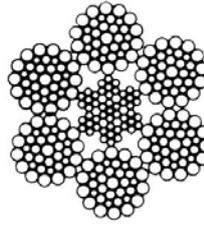
WIRE Ø FUNE Ø	SWL	MBL	A	B	C	D	E	F	G	Ø H	Ø K	Ø P	WEIGHT PESO
mm	ton	ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
6-7	1,6	8	105	46	40	19	34	9	18	9,5	20	17,5	0,4
8-10	2,4	12	122	57	45	23	40	11,2	20,6	12,5	26	20,6	0,8
11-13	4	20	142	64	51	27	48	12,7	25,6	14	30	24,4	1,1
14-16	5	25	171	76	63	32	56	14,5	32	17,5	38,5	30	1,9
18-19	8	40	205	89	76	40	70	16,5	38	21	46	35	3,2
20-22	11	55	238	101	89	48	80	20,5	45	25,5	55	41	5,3
23-26	15	75	273	114	101	58	100	22,5	51	28	62	51	8,4
27-30	18	90	306	127	114	65	110	25	57	32	70	57	11,3
31-36	25	125	337	139	127	71	122	28	63	38	83	63	16
37-39	30	150	394	152	162	80	140	30	76	41	90	70	23
40-42	34	170	415	165	165	85	150	33	76	44	97	76	29
43-48	45	225	467	191	178	98	170	39	89	51	112	89	43
49-54	56	280	552	216	228	108	186	46	101	57	125	95	64
55-60	72	360	603	229	254	120	210	53	113	66	135	108	86
61-68	85	425	654	248	273	133	230	60	127	74	150	121	118
69-75	92	460	696	279	279	138	240	73	133	79	160	127	160
76-80	112	560	736	305	286	145	250	76	146	86	170	133	180
81-86	125	625	790	330	300	160	275	79	159	92	180	140	225
87-93	144	720	849	356	318	175	300	82	172	98	200	152	250
94-102	175	875	922	381	343	198	336	89	191	108	215	178	380



STEEL WIRE ROPE CLASS 6x36 IWRC

acc.to EN 12385-4

Fune acciaio classe 6x36 IWRC



CARATTERISTICHE GENERALI

Costruzione fune: 6X36 WS + IWRC | Anima: METALLICA
 Tipologia di finitura: LUCIDA o ZINCATA
 Numero di trefoli esterni: 6 | Numero totale di fili: 216 + 49
 Tipologia di avvolgimento: CROCIATO | Senso di avvolgimento: DESTRO o SINISTRO
 Diametri disponibili: 6 - 70 mm | Caratteristica di costruzione: WARRINGTON-SEALE
 Numero totale di fili per trefolo: 36 | Numero totale di fili esterni: 14

IMPIEGHI:

ARGANI, PARANCHI, STRALLATURE, BRACHE, RIMORCHIO, ORMEGGIO, OFFSHORE, SOLLEVAMENTO IN GENERE

CERTIFICAZIONI:

Dichiarazione di Conformità EN 10204 in accordo alle EN ISO 12100-1, EN 12385-1, EN 12385-2, EN 12385-4, EN 10264-1, EN10264-2
 *Su richiesta Certificato di Conformità EN 10204 3.1 in accordo alle EN ISO 12100-1, EN 12385-1, EN 12385-2, EN 12385-4, EN 10264-1, EN10264-2
 *Su richiesta Certificazione e/o collaudo con ente di classifica "IACS" quali RINA - LLOYD'S REGISTER OF SHIPPING - DNV - GERMANISHER LLOYD ed altri.

ULTERIORI DETTAGLI E COSTRUZIONI SUL NOSTRO CATALOGO "FUNI ACCIAIO"

WIRE ROPE CHARACTERISTICS

Rope construction: 6x36 WS + IWRC | Core: STEEL
 Type of external surface: BRIGHT or GALVANIZED
 Total number of strands: 6 | Total number of wires: 216 + 49
 Type of lay: ORDINARY LAY | Lay direction: RIGHT HAND LAY or LEFT HAND LAY
 Diameter range: 6 - 70 mm | Characteristics: WARRINGTON-SEALE
 Total number of wires for strand: 36 | Total number of outer wires: 14

APPLICATIONS:

WINCHES, HOISTING, GUY ROPES, SLINGS, TOWING, MOORING, OFFSHORE, GENERAL LIFTING PUROPOUSES

IN ACCORDANCE TO:

Declaration of Conformity EN 10204 in accordance with EN ISO 12100-1, EN 12385-1, EN 12385-2, EN 12385-4, EN 10264-1, EN10264-2
 *Upon request Certificate of Conformity EN 10204 3.1 in accordance with EN ISO 12100-1, EN 12385-1, EN 12385-2, EN 12385-4, EN 10264-1, EN10264-2
 *Test certificate through IACS member such as RINA - LLOYD'S REGISTER OF SHIPPING - DNV GERMANISCHER LLOYD and others upon request.

FURTHER DETAILS AND CONSTRUCTIONS ON OUR "STEEL WIRE ROPES" CATALOGUE

Ø Fune Ø Rope	Ø Filo esterno Ø Outer wire	Peso 100 mt Weight 100 mt	Carico di rottura minimo / Minimum Breaking force					
			1770		1960		2160	
mm	mm	Kg	Kg	kN	Kg	kN	Kg	kN
10	0,56	41	6423	63	7113	70	7839	77
11	0,62	49	7772	76	8606	84	9485	93
12	0,67	59	9249	91	10242	100	11287	111
13	0,73	69	10855	106	12021	118	13247	130
14	0,78	80	12590	124	13941	137	15364	151
15	0,84	92	14452	142	16004	157	17637	173
16	0,90	105	16443	161	18209	179	20067	197
17	0,95	118	18563	182	20556	202	22653	222
18	1,01	133	20811	204	23045	226	25397	249
19	1,06	148	23188	227	25677	252	28297	278
20	1,12	164	25693	252	28451	279	31354	308
21	1,18	180	28326	278	31367	308	34568	339
22	1,23	198	31088	305	34426	338	37938	372
23	1,29	216	33979	333	37626	369	41466	407
24	1,34	236	36998	363	40969	402	45150	443
25	1,40	256	40145	394	44455	436	48991	481
26	1,46	276	43421	426	48082	472	52988	520
27	1,51	298	46825	459	51852	509	57143	561
28	1,57	321	50358	494	55764	547	61454	603
29	1,62	344	54019	530	59818	587	65922	647
30	1,68	368	57809	567	64015	628	70547	692
32	1,79	419	65774	645	72834	715	80267	787
34	1,90	473	74253	728	82223	807	90613	889
36	2,02	530	83245	817	92181	904	101587	997
38	2,13	591	92752	910	102708	1008	113188	1110
40	2,24	654	102772	1008	113804	1116	125417	1230
42	2,35	721	113306	1112	125469	1231	138272	1356
44	2,46	792	124354	1220	137703	1351	151754	1489
46	2,58	865	135916	1333	150506	1476	165863	1627
48	2,69	942	147991	1452	163878	1608	180600	1772
50	2,80	1023	160581	1575	177819	1744	195963	1922
52	2,91	1106	173684	1704	192329	1887	211954	2079
54	3,02	1193	187302	1837	207408	2035	228572	2242
56	3,14	1283	201433	1976	223056	2188	245816	2411
58	3,25	1376	216078	2120	239273	2347	263688	2587
60	3,36	1472	231237	2268	256059	2512	282187	2768
62	3,47	1572	246909	2422	273414	2682	301313	2956
66	3,70	1782	279796	2745	309831	3039	341446	3350
70	3,92	2004	314739	3088	348524	3419	384088	3768
71	3,98	2062	323796	3176	358553	3517	395140	3876
72	4,03	2120	332981	3267	368725	3617	406350	3986
73	4,09	2180	342295	3358	379038	3718	417715	4098
74	4,14	2240	351737	3451	389494	3821	429238	4211
75	4,20	2301	361307	3544	400092	3925	440917	4325
76	4,26	2362	371006	3640	410832	4030	452754	4442
77	4,31	2425	380834	3736	421714	4137	464747	4559
78	4,37	2488	390790	3834	432739	4245	476896	4678
79	4,42	2553	400875	3933	443906	4355	489203	4799
80	4,48	2618	411087	4033	455215	4466	501666	4921
81	4,54	2683	421429	4134	466667	4578	514286	5045
82	4,59	2750	431899	4237	478261	4692	527063	5170
83	4,65	2818	442497	4341	489997	4807	539996	5297



ATTIVITÀ E SERVIZI SPECIALIZZATI / ON SITE SERVICES AND SPECIALIZED ACTIVITIES

La nostra ambizione è quella di fornire ai nostri Clienti un prodotto "chiavi in mano", completo di assistenza ed installazione. In questo senso ci siamo specializzati, in quarant'anni di esperienza aziendale, nella realizzazione di lavorazioni e montaggi di ogni sorta di accessorio di sollevamento.

Siamo quindi naturalmente in grado di offrire ai nostri Clienti servizi che vanno dal montaggio delle funi all'applicazione in loco di capicorda a testa fusa; dalla progettazione e realizzazione di bilancini di sollevamento alla verifica ed analisi delle attrezzature attraverso prove sia distruttive che non. Ci avvaliamo di personale specializzato, istruito secondo procedure normalizzate ed abilitato dai principali Enti di Classifica, pronto ad intervenire anche in condizioni estreme e ad offrire la propria competenza e professionalità.

Our objective is to supply our customers with a "turnkey" product, including full service and installation. Thereby, for this reason, in the last forty years of experience in the field, we have specialized in the manufacturing and connection of every kinds of lifting accessories. We are therefore able to offer our customers a range of services, as for instance, from ropes assembly to on-site connection of cast head sockets, from design and manufacturing of lifting scales to non-destructive testing and analysis of equipment. We employ qualified personnel, trained and qualified by the major Classification Societies, prepared to intervene even in extreme conditions to provide their expertise and professionalism.

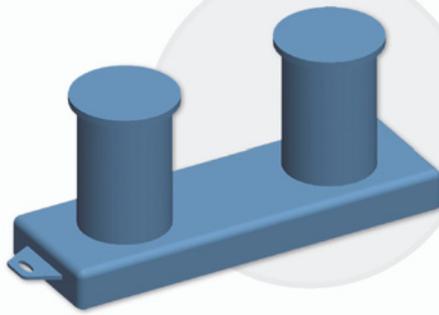




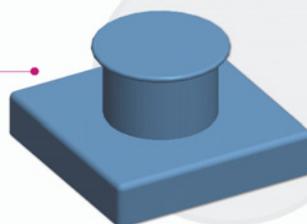
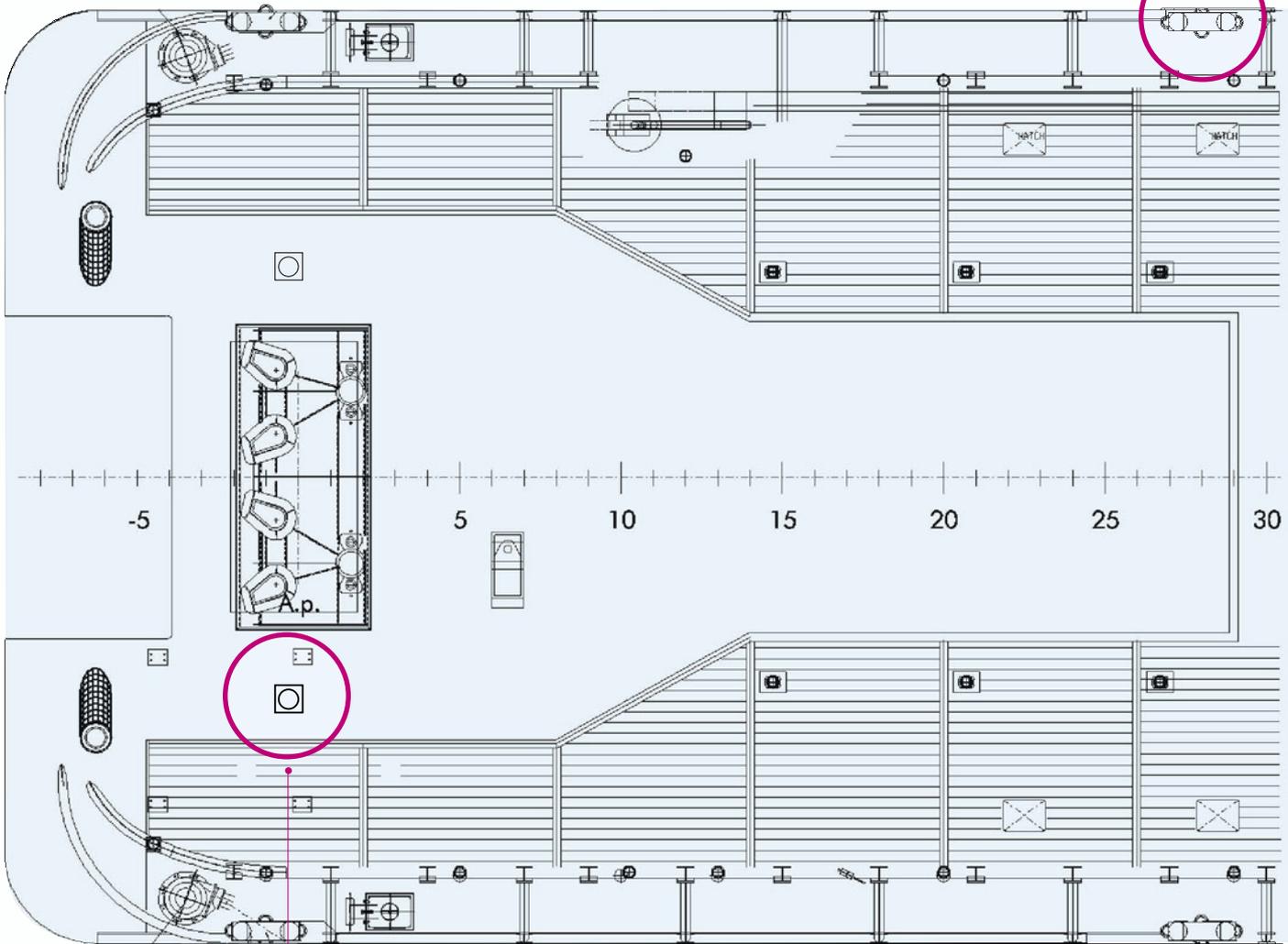
DECK & DOCK Equipment



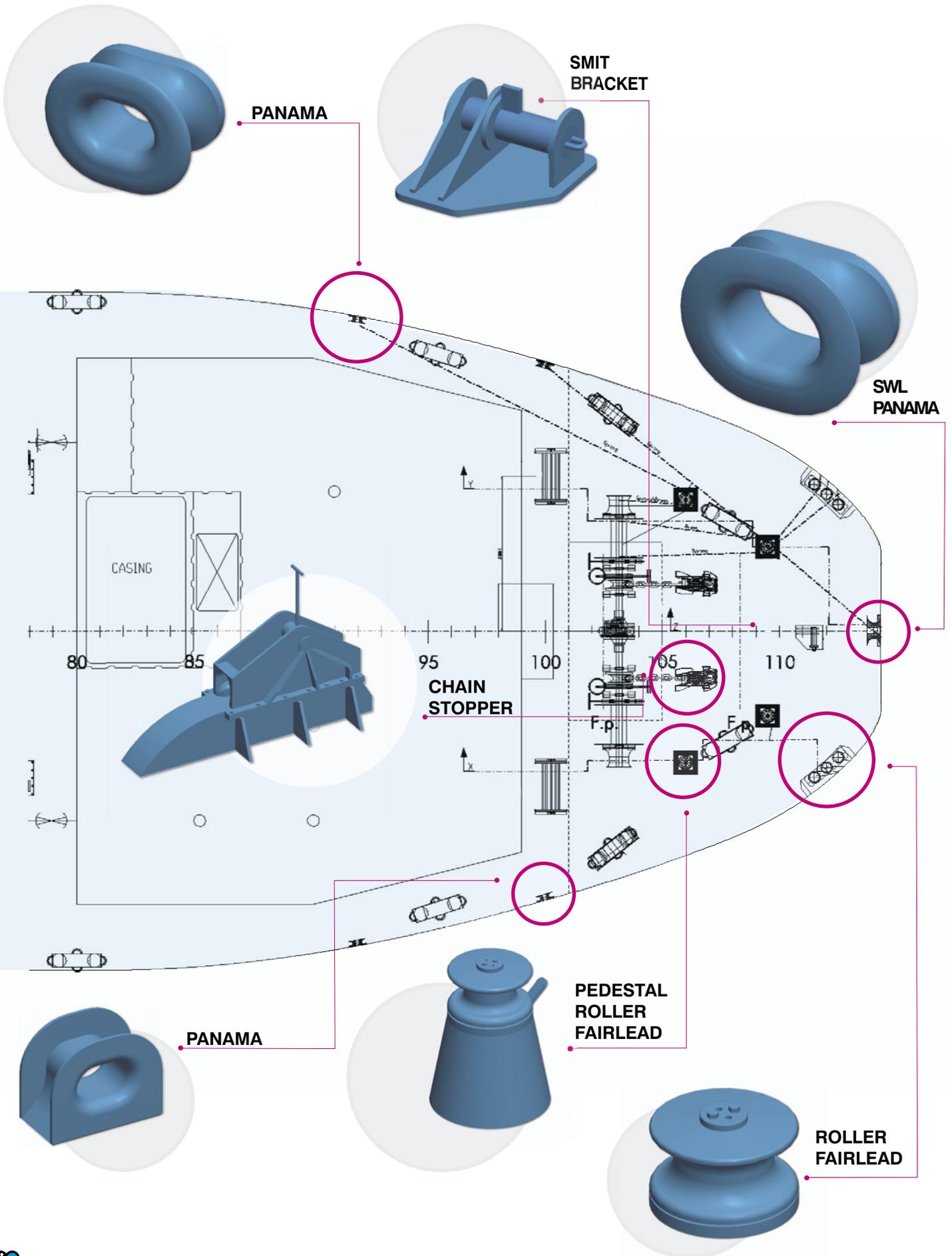
MOORING PLAN



DOUBLE BOLLARD



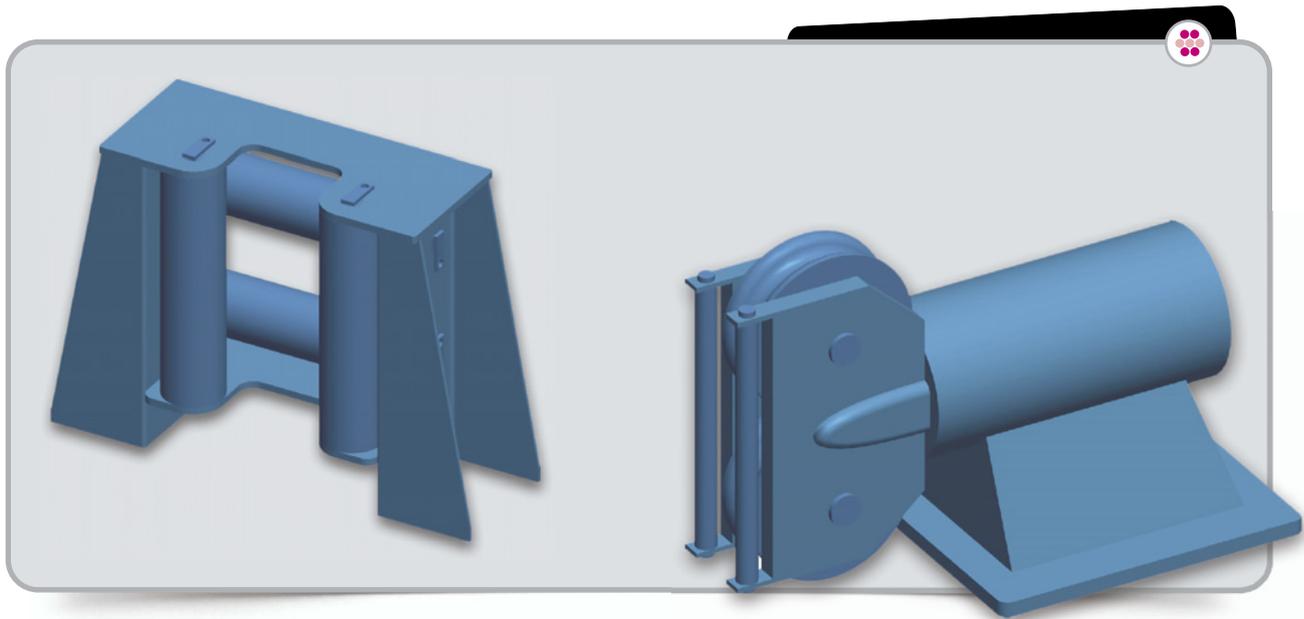
TUG BOLLARD





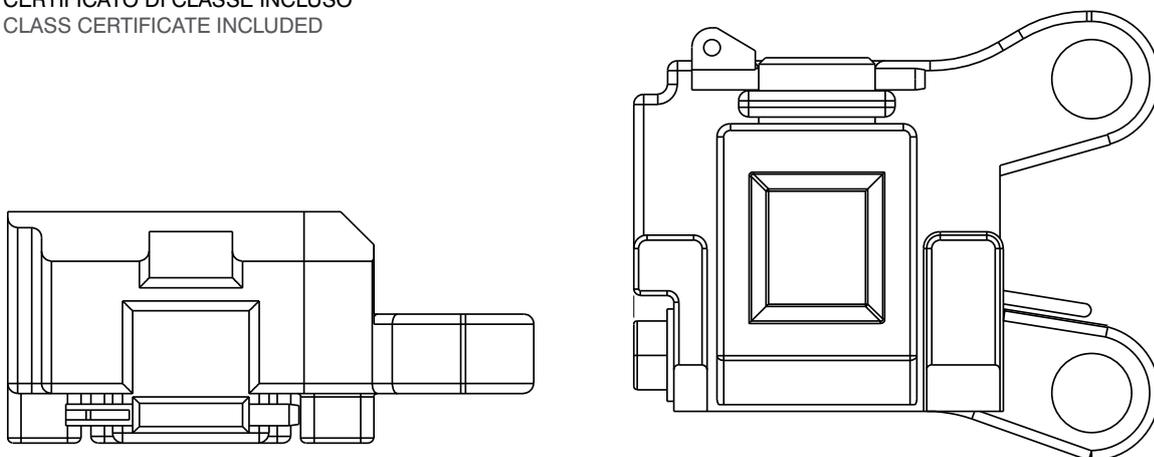
FAIRLEADS

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED



CARPENTER STOPPERS

CERTIFICATO DI CLASSE INCLUSO
CLASS CERTIFICATE INCLUDED





SERVICES

Carpenteria e saldature per
costruzioni navali
Shipbuilding

Riparazioni navali | offshore
Ship repair & offshore

Montaggio tubi e avviamento
impianti - riparazioni
Piping for new constructions
and maintenance

Saldatori certificati da RINA e altri
enti di classifica
Our welders are certified by RINA
and by other class certification
societies





AL-PLUS

Coil length/Lunghezza	200 m or 220 m	% break strength % carico di rottura	elongation % allungamento %
Spliced strength/Resistenza dell'impalmatura	± 10 %	25%	4%
Weight & length tolerance/Tolleranza peso e lunghezza	± 5 %	50%	6%
Diameter/Diametro	± 2 %	75%	8%
		100%	10%

Material	Co-Polymer monofilament
Materiale	Co-Polimeri monofilamento
Construction	8 Strands Multiplait (4x2)
Costruzione	8 Legnoli intrecciati (4x2)
Colour	White
Colore	Bianco
Markers	2 yarn black
Indicatori	2 Fili Neri
Specific gravity/Peso specifico	0,91
Melting Point/Punto di Fusione	170°C
Abrasion Resistance	Good
Resistenza all'abrasione	Buona
UV Resistance	Excellent
Resistenza ai raggi UV	Eccellente

DIAMETER Ø	CIRC	WEIGHT PESO	MBL	MBL
mm	in	kg per 100 m	ton	kN
40	5	72,3	31,8	312
44	5,5	87,5	37,7	370
48	6	104	44,4	435
52	6,5	122	52,0	510
56	7	142	61,2	600
60	7,5	163	66,8	655
64	8	185	74,4	730
68	8,5	210	83,1	815
72	9	234	95,9	940
76	9,5	263	107,1	1050
80	10	289	117,3	1150
88	11	350	140,7	1380
96	12	417	163,2	1600
104	13	489	183,5	1800
112	14	567	214,1	2100
120	15	651	244,7	2400

AL-25

Coil length/Lunghezza	200 m or 220 m	% break strength % carico di rottura	elongation % allungamento %
Spliced strength/Resistenza dell'impalmatura	± 10 %	25%	4%
Weight & length tolerance/Tolleranza peso e lunghezza	± 5 %	50%	6%
Diameter/Diametro	± 2 %	75%	8%
		100%	10%

Material	Blend of continuous filament Polyester and high tenacity Polyolefin
Materiale	Miscela di Poliestere a filo continuo e Poliolefine ad alta tenacità
Construction	8 strands multiplait (4x2)
Costruzione	8 Legnoli intrecciati (4x2)
Colour	White
Colore	Bianco
Markers	1 yarn bleu
Indicatori	1 filo blu
Specific gravity / Peso specifico	0,99
Melting Point / Punto di Fusione	260°C external
Abrasion Resistance	Excellent
Resistenza all'abrasione	Eccellente
UV Resistance	Excellent
Resistenza ai raggi UV	Eccellente

DIAMETER Ø	CIRC	WEIGHT PESO	MBL	MBL
mm	in	kg per 100 m	ton	kN
40	5	83,5	30,6	300
44	5,5	103,5	37,2	365
48	6	121,5	43,3	425
52	6,5	142,5	50,5	495
56	7	166	58,1	570
60	7,5	190,5	66,3	650
64	8	216,5	74,4	730
68	8,5	243,5	83,6	820
72	9	274	93,3	915
76	9,5	306	103,0	1010
80	10	335	115,2	1130
88	11	408	138,7	1360
96	12	485	164,2	1610
104	13	566	192,7	1890
112	14	658	224,3	2200
120	15	755	254,9	2500



NYLON

Coil length/Lunghezza	200 m or 220 m	% break strength % carico di rottura	elongation % allungamento %
Spliced strength/Resistenza dell'impalmatura	± 10 %	25%	11%
Weight & length tolerance/Tolleranza peso e lunghezza	± 5 %	50%	18%
Diameter/Diametro	± 2 %	75%	27%
		100%	35%

Material	High tenacity Polyester multifilament fibre
Materiale	Poliesteri ad alta tenacità fibra multifilamento
Construction	8 strands multiplait (4x2)
Costruzione	8 Legnoli intrecciati (4x2)
Colour	White
Colore	Bianco
Markers	1 yarn green
Indicatori	1 filo verde
Specific gravity/Peso specifico	1,38
Melting Point/Punto di Fusione	260°C
Abrasion Resistance	Excellent
Resistenza all'abrasione	Eccellente
UV Resistance	Excellent
Resistenza ai raggi UV	Eccellente

DIAMETER	CIRC	WEIGHT PESO	MBL	MBL
mm	in	kg per 100 m	ton	kN
40	5	99	30,0	294
44	5,5	120	35,8	351
48	6	142	42,0	412
52	6,5	166	48,8	479
56	7	193	56,0	549
60	7,5	221	63,7	625
64	8	252	72,0	706
68	8,5	290	81,0	794
72	9	319	89,9	882
76	9,5	365	100,0	981
80	10	394	109,9	1078
88	11	477	130,9	1284
96	12	568	154,0	1510
104	13	666	182,0	1785
112	14	772	210,1	2060
120	15	887	240,0	2354

POLYESTER

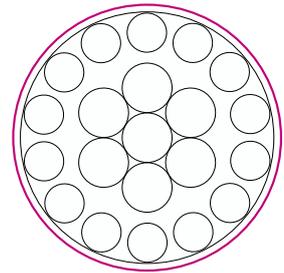
Coil length/Lunghezza	200 m or 220 m	% break strength % carico di rottura	elongation % allungamento %
Spliced strength/Resistenza dell'impalmatura	± 10 %	25%	5%
Weight & length tolerance/Tolleranza peso e lunghezza	± 5 %	50%	8%
Diameter/Diametro	± 2 %	75%	12%
		100%	16%

Material	High tenacity polyester multifilament fibre
Materiale	Poliestere alta tenacità fibra multifilamento
Construction	8 Strand multiplaid (4x2)
Costruzione	8 Legnoli intrecciati (4x2)
Colour	White
Colore	Bianco
Markers	2 yarn green
Indicatori	2 fili verdi
Specific gravity/Peso specifico	1,38
Melting Point/Punto di Fusione	260°C
Abrasion Resistance	Excellent
Resistenza all'abrasione	Eccellente
UV Resistance	Excellent
Resistenza ai raggi UV	Eccellente

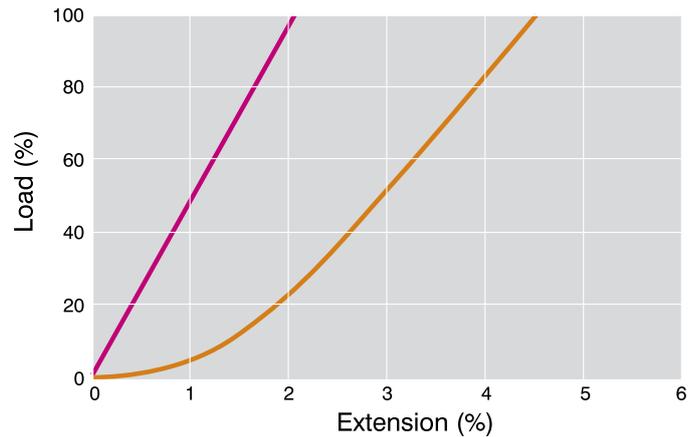
DIAMETER	CIRC	WEIGHT PESO	MBL	MBL
mm	in	kg per 100 m	ton	kN
40	5	121	23,9	234
44	5,5	147	28,5	280
48	6	175	33,5	329
52	6,5	205	39,1	384
56	7	238	44,8	439
60	7,5	173	49,8	489
64	8	311	57,9	568
68	8,5	360	64,9	637
72	9	393	72,1	707
76	9,5	453	80,1	786
80	10	485	88,4	867
88	11	587	106	1040
96	12	699	125,4	1230
104	13	820	144,8	1420
112	14	950	165,2	1621
120	15	1090	189,7	1861



Material	Dyneema®, high modulus polyethylene SK62 or SK75
Materiale	Dyneema®, elevata % di polietilene SK62 e SK75
Construction/Costruzione	Superline
Colour	Superline - White
Colore	Superline - Bianco
Markers	Blue and lime - Steelite Blue and pink - Steelite Xtra
Indicatori	Blu e giallo - Steelite Blu e rosa - Steelite Xtra
Relative Density	0.97 to 1.15
Densità	0.97 a 1.15
Melting Point/Punto di Fusione	150°C
Torque Properties	Torque Balanced
Proprietà di torsione	Resistente alla torsione
Shrinkage (Cold Water)	
Ritiro a freddo	0%
Water Uptake	Low
Assorbimento d'acqua	Basso
UV Resistance	Very Good
Resistenza ai raggi UV	Molto Buona
Abrasion Resistance	Excellent
Resistenza all'abrasione	Eccellente



Load v Extension



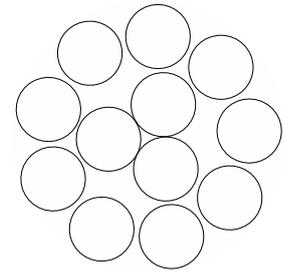
Worked Superline New Superline

STEELITE STEELITE XTRA

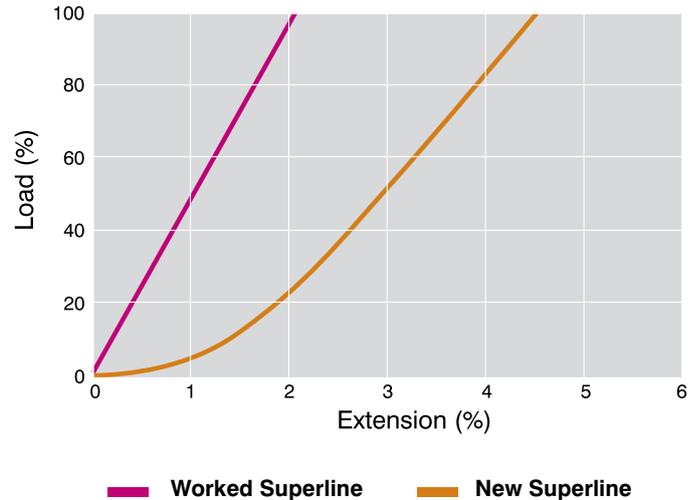
Diameter		Circ		Nominal mass kg/m	Steelite minimum breaking force (F min)			Steelite Xtra minimum breaking force (F min)		
mm	in	mm	in		kN	ton	ton (200lb)	kN	ton	ton (200lb)
28	1 1/8	88	3 1/2	0,46	466	47,5	52,3	608	62,0	68,3
30	1 7/32	94	3 5/8	0,48	503	51,3	56,5	657	67,0	73,8
32	1 5/16	100	4 1/8	0,67	593	60,4	66,6	687	70,0	77,1
34	1 13/32	107	4 2/5	0,73	674	68,7	75,7	814	83,0	91,5
36	1 1/2	113	4 5/7	0,77	722	73,6	81,1	912	93,0	102
40	1 5/8	126	5 1/9	0,87	883	90,0	99,2	1109	113,0	125
44	1 3/4	138	5 1/2	1,04	1050	107,0	118	1315	134,0	148
48	2	151	6 2/7	1,38	1236	126,0	139	1609	164,0	181
52	2 1/8	163	6 2/3	1,73	1442	147,0	162	1903	194,0	241
56	2 1/4	176	7	1,90	1658	169,0	186	2237	228,0	251
60	2 1/2	188	7 6/7	2,08	1893	193,0	213	2570	262,0	289
64	2 5/8	201	8 1/4	2,45	2384	243,0	268	3012	307,0	338
68	2 13/16	214	8 5/6	2,66	2639	269,0	296	3365	343,0	378
72	3	226	9 3/7	2,85	2963	302,0	333	3718	379,0	418
76	3 1/16	239	9 5/8	3,16	3335	340,0	375	4189	427,0	471
80	3 1/8	251	9 4/5	3,34	3659	373,0	411	4473	456,0	503
88	3 1/2	276	11	4,24	4444	453,0	499	5278	538,0	593
96	3 3/4	301	11 7/9	4,92	5229	533,0	587	6131	625,0	698
104	4 1/8	327	13	6,01	6141	626,0	690	7289	743,0	819
112	4 3/8	352	13 3/4	7,01	7191	733,0	808	8152	831,0	916
120	4 3/4	377	15	9,18	8231	839,0	925	9349	953,0	1050



Material	Dyneema®, high modulus polyethylene SK62 or SK75
Materiale	Dyneema®, elevata % di polietilene SK62 e SK75
Construction	12 strand (12x1)
Costruzione	12 legnoli (12x1)
Colour	12 Strand - dark grey
Colore	12 Legnoli - Grigio scuro
Markers	Blue and lime - Steelite Blue and pink - Steelite Xtra Blu e giallo - Steelite Blu e rosa - Steelite Xtra
Indicatori	
Relative Density/Densità	0.97
Melting Point/Punto di Fusione	150°C
Torque Properties	Torque Balanced
Proprietà di torsione	Resistente alla torsione
Shrinkage (Cold Water)	
Ritiro a freddo	0%
Water Uptake	Low
Assorbimento d'acqua	Basso
UV Resistance	Very Good
Resistenza ai raggi UV	Molto Buona
Abrasion Resistance	Excellent
Resistenza all'abrasione	Eccellente

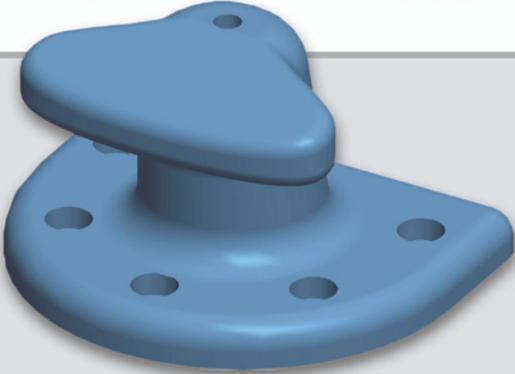
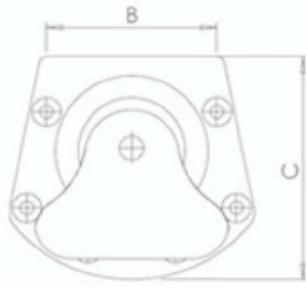
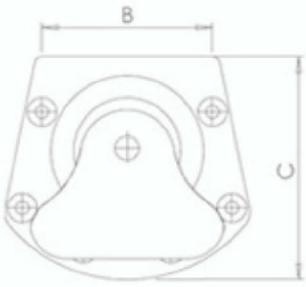


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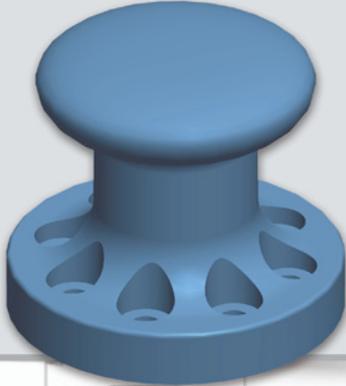


12 STRAND STEELITE STEELITE XTRA ROUNDLINE

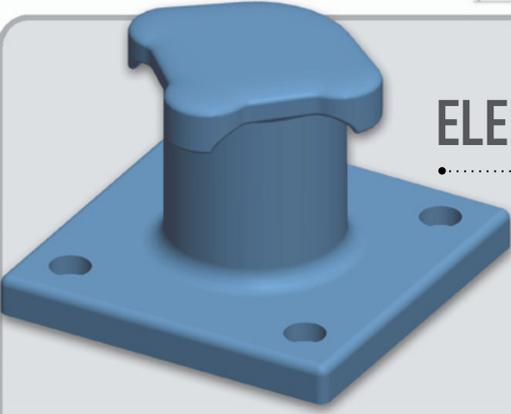
Diameter		Circ		Nominal mass kg/m	Steelite			Steelite Xtra		
mm	in	mm	in		minimum breaking force (F min)			minimum breaking force (F min)		
					kN	ton	ton (200lb)	kN	ton	ton (200lb)
12	1/2	38	1 4/7	0,08	137	14,0	15,4	162	16,5	18,2
14	9/16	44	1 3/4	0,10	169	17,2	19	198	20,2	22,3
16	5/8	50	2	0,12	199	20,3	22,4	234	23,9	26,3
18	3/4	57	2 1/3	0,17	244	24,9	27,4	311	31,7	34,9
20	5	63	2 5/9	0,21	331	33,7	37,1	389	39,7	43,7
22	7/8	69	2 3/4	0,25	393	40,1	44,2	462	47,1	51,9
24	1	75	3 1/7	0,27	417	42,5	46,8	491	50,1	55,1
28	1 1/8	88	3 1/2	0,38	566	57,7	63,6	666	67,9	74,8
32	1 5/16	101	4 1/8	0,50	740	75,4	83,1	870	88,7	97,7
36	1 1/2	113	4 5/7	0,63	903	92,0	101	1059	108,0	119
40	1 5/8	126	5 1/9	0,75	1059	108,0	119	1256	128,0	141
44	1 3/4	138	5 1/2	0,87	1246	127,0	140	1432	146,0	161
48	2	151	6 2/7	1,04	1442	147,0	162	1658	169,0	186
52	2 1/8	163	6 2/3	1,16	1609	164,0	181	1854	189,0	208
56	2 1/4	176	7	1,42	1893	193,0	213	2178	222,0	245
60	2 1/2	189	7 6/7	1,58	2060	210,0	231	2374	242,0	267
64	2 5/8	201	8 1/4	1,74	2325	237,0	261	2678	273,0	301
68	2 3/4	214	8 2/3	1,99	2570	262,0	289	2953	301,0	332
72	3	226	9 3/7	2,24	2914	297,0	327	3355	342,0	377
76	3 1/16	239	9 5/8	2,49	3237	330,0	364	3728	380,0	419
80	3 1/8	251	9 5/6	2,74	3541	361,0	398	4071	415,0	457



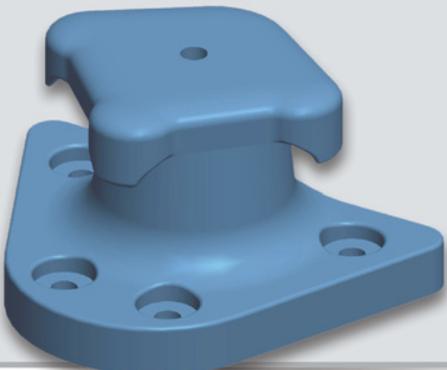
X-A TYPE TEE



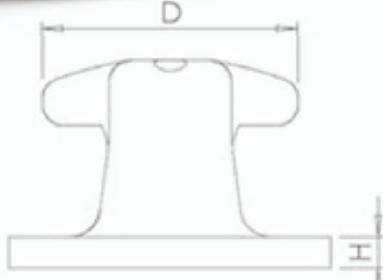
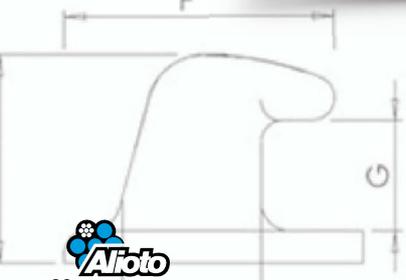
BEAN

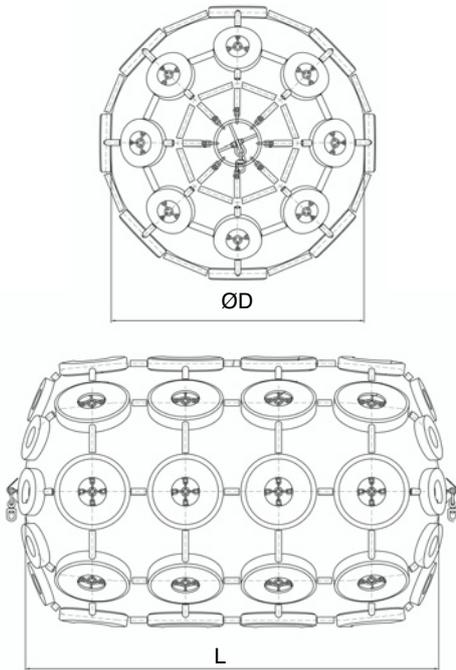


ELEPHANT

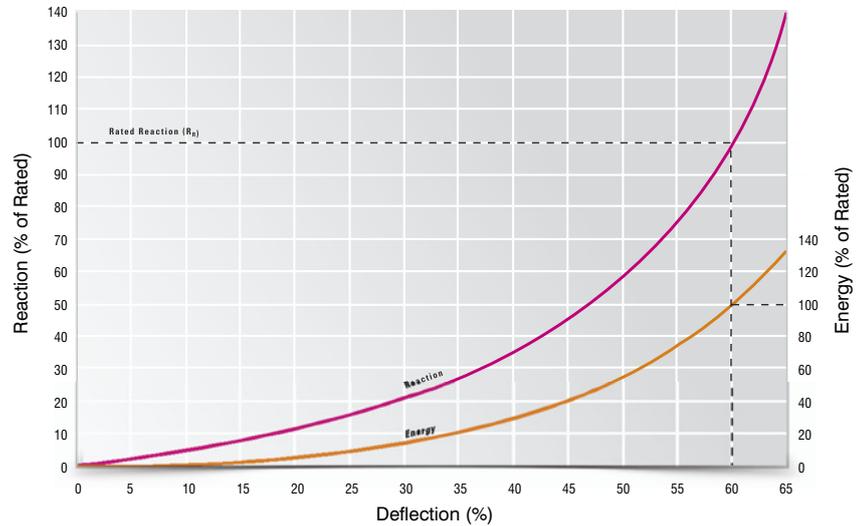


TRITON





Generic performance curve

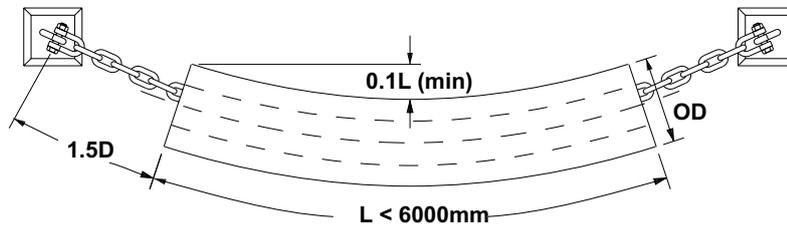
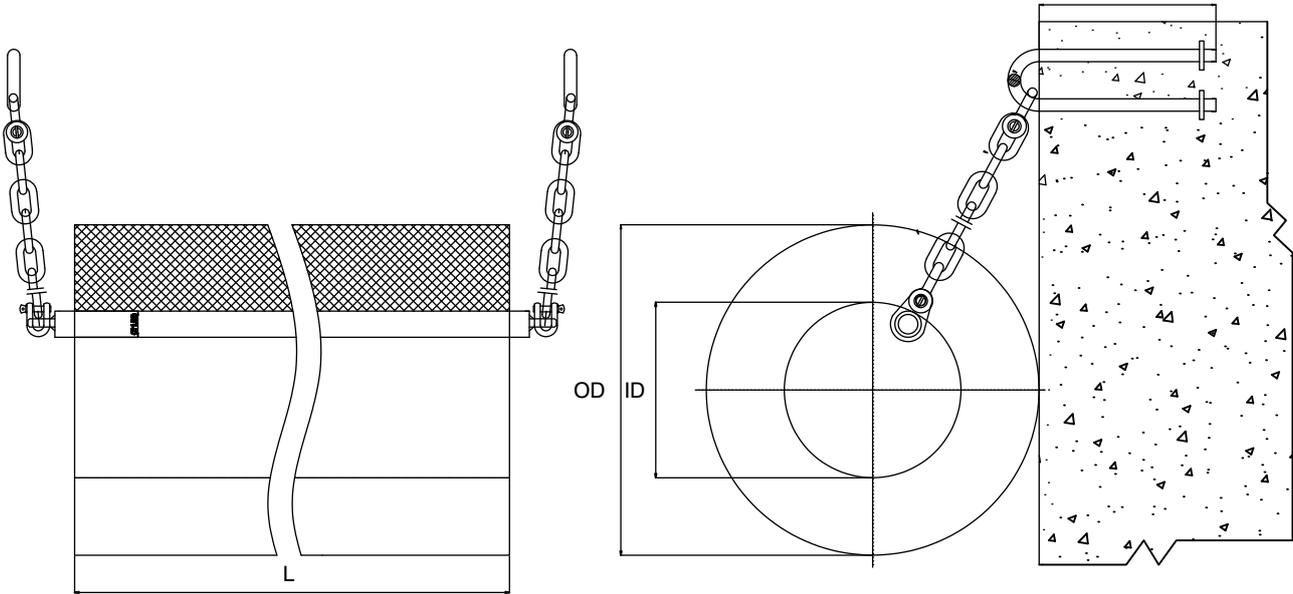


PNEUMATIC FENDERS

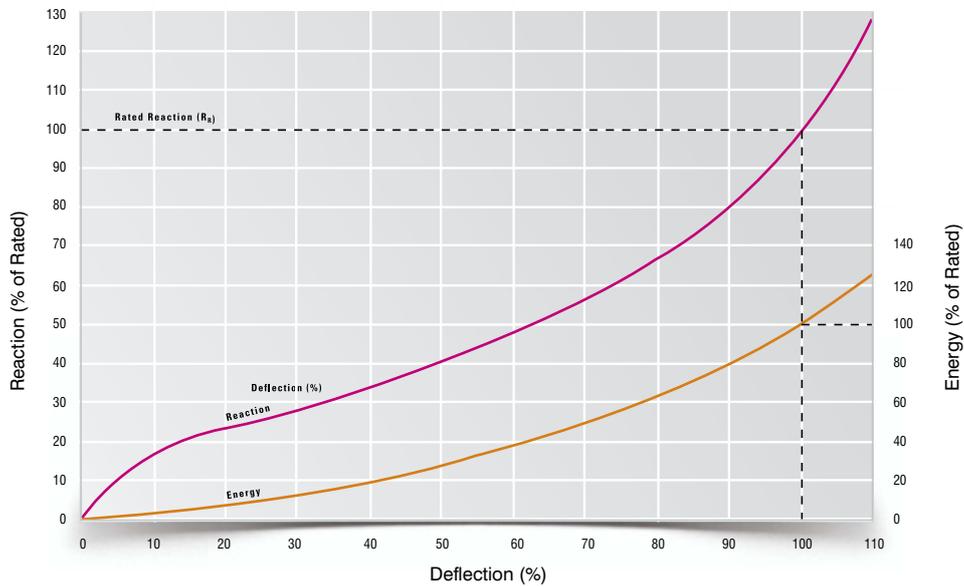
Fender Size	Hook Type	CTN Type	Chain	Energy	0.5kgf/cm ² Reaction	Hull Pressure	Energy	0.8kgf/cm ² Reaction	Hull Pressure
ØDxL	kg	kg	mm	kNm	kN	kNm ²	kNm	kN	kNm ²
300X500	10	10	10	1,3	22,6	189	1,7	29,4	246
300X600	15	15	10	1,5	26,5	180	2	35,3	239
500X800	25	25	13	5,7	58,9	187	7,4	78,5	249
500X1000	35	35	13	7,2	73,6	179	9,1	98,1	239
800X1200	75	175	16	21,6	141	188	28,1	187	250
800X1500	95	205	16	27,5	186	191	35,1	235	241
1000X1500	140	310	16	40,2	222	190	52,7	281	240
1000X2000	170	370	16	54	295	180	70,2	374	228
1200X1800	180	390	19	69,7	320	190	91	44	240
1200X2000	200	420	19	77,5	354	185	101	449	235
1350X2500	270	530	19	125	496	181	175	650	238
1500X2500	300	700	22	152	554	186	196	697	234
1500X3000	350	790	22	182	658	178	235	837	227
2000X3000	550	1430	25	324	883	189	422	1122	240
2000X3500	650	1570	29	378	1030	183	491	1315	234
2000X6000	950	2170	32	647	1766	171	843	2246	217
2500X4000	1100	2610	32	675	1481	188	872	1864	236
2500X5500	1350	2970	35	928	2037	178	1197	2560	224
3000X5000	1700	4320	38	1226	2207	185	1570	2786	233
3300x4500	1800	4160	38	1324	2197	194	1712	2764	244
3300X6500	2250	5370	44	1913	3169	181	2472	3993	228
3300X10500	2800	6850	51	3090	5121	171	4297	6612	220
4500X10500	4300	4850	51	4689	5690	144	6563	7464	189



CYLINDRICAL FENDERS



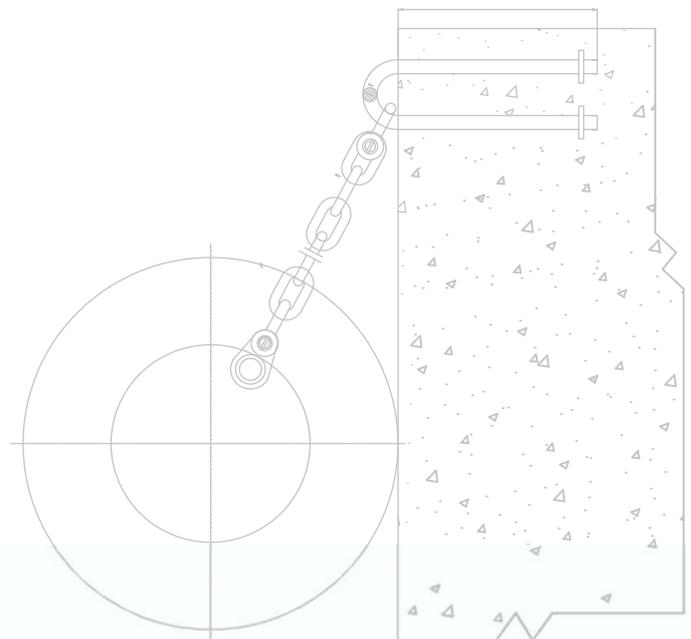
Generic performance curve





OD	ID	ID/OD	R	E	P	Weight/Peso
mm	mm		kN	kNm	kNm ²	kg
100	50	0,50	43	0,8	547	7
125	65	0,52	51	1,3	500	10,6
150	75	0,50	65	1,8	552	15,6
175	75	0,43	92	2,7	781	23,2
200	90	0,45	98	3,5	693	29,6
200	100	0,50	86	3,3	547	27,8
250	125	0,50	108	5,1	550	43,4
300	150	0,50	129	7,4	547	62,6
380	190	0,50	164	11,8	550	100,4
400	200	0,50	172	13,1	547	111,2
450	225	0,50	194	16,6	549	140,8
500	250	0,50	275	28	700	175
600	300	0,50	330	4	700	253
700	400	0,57	325	52	517	309
750	400	0,53	380	61	605	377
800	400	0,50	440	72	700	449
875	500	0,57	406	81	517	482
925	500	0,54	461	93	587	567
1000	500	0,50	550	112	700	702
1050	600	0,57	487	117	517	695
1100	600	0,55	541	131	574	795
1200	600	0,50	660	162	700	1010
1200	700	0,58	542	151	493	889
1300	700	0,54	650	184	591	1122
1300	750	0,58	595	178	505	1050
1400	700	0,50	770	220	700	1375
1400	750	0,54	705	214	598	1307
1400	800	0,57	649	208	516	1235
1500	750	0,50	825	253	700	1579
1500	800	0,53	760	246	605	1506
1600	800	0,50	880	288	700	1796
1600	900	0,56	757	273	535	1637
1650	900	0,55	812	295	575	1789
1750	900	0,51	929	340	657	2107
1750	1000	0,57	811	325	516	1929
1800	900	0,50	990	364	700	2273
1850	1000	0,54	921	372	586	2266
2000	1000	0,50	1101	450	701	2806
2000	1200	0,60	871	415	462	2395
2100	1200	0,57	974	467	517	2778
2200	1200	0,55	1083	524	575	3180
2400	1200	0,50	1321	647	701	4041

OD	ID	L	ØB	Chain	Shackle
mm	mm	mm	mm	mm	mm
800	40	1000	35	24	28
		1500	45	28	35
		2000	55	32	38
		2500	65	34	44
		3000	70	40	50
1000	500	1000	45	28	35
		1500	55	32	38
		2000	65	38	44
		2500	75	40	50
		3000	85	44	50
1200	600	1000	50	28	35
		1500	65	34	44
		2000	75	40	50
		2500	85	44	50
		3000	100	50	56
1400	800	1000	65	38	44
		1500	70	38	44
		2000	80	44	50
		2500	90	48	56
		3000	100	52	64
1600	800	1000	75	40	50
		1500	80	40	50
		2000	90	46	50
		2500	110	48	56
		3000	120	54	64



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