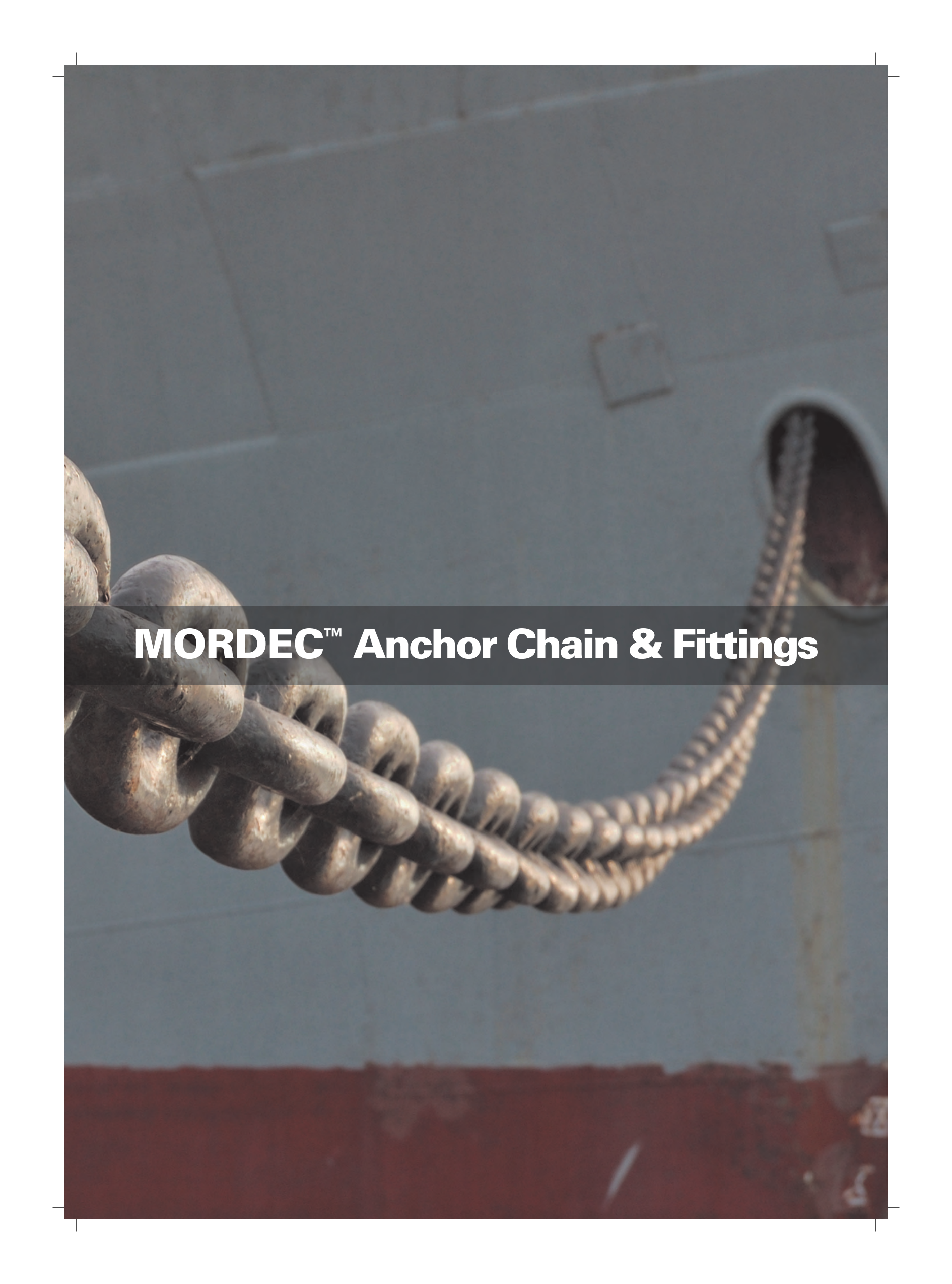




MORDEC™ Anchor Chain & Fittings

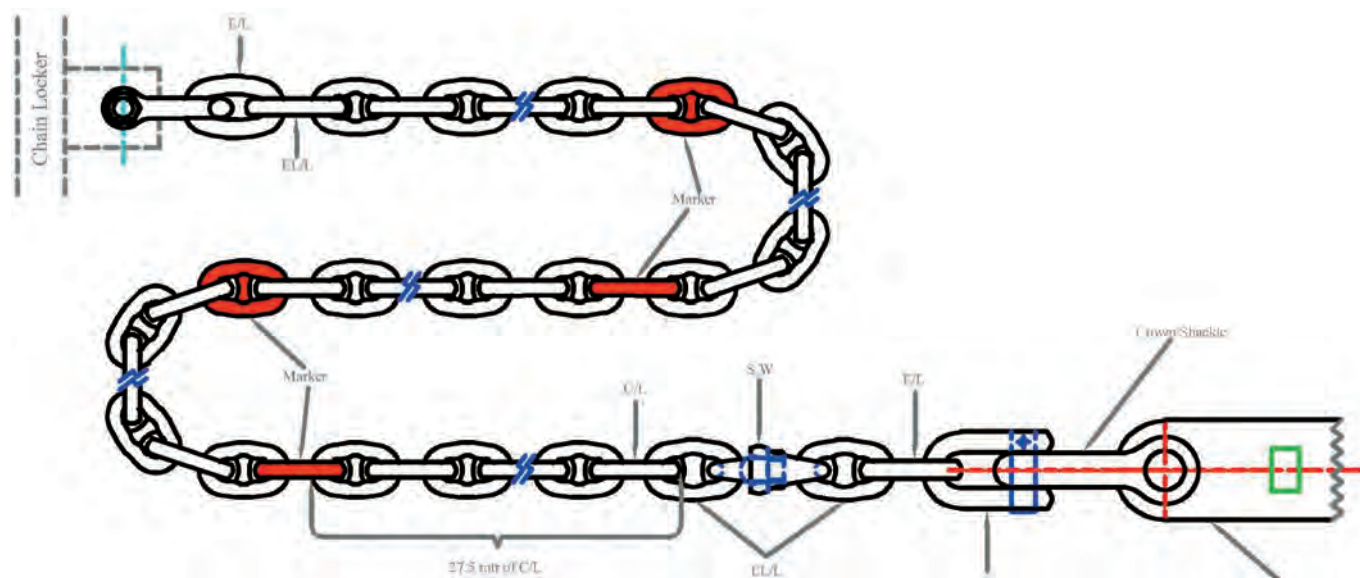
MORDEC™ ANCHOR CHAIN & FITTINGS

MORDEC™ Next Generation Chain Solution

The proportion and configurations of our present day stud link chain systems was adopted by Lloyds in 1858, after years of usage, that it would be maintained at 15 fathom (Imperial measurement) or 27.5mtrs as a standard length to be connected by connecting elements. However, many chain systems failed due to the high fatigue rate of the connecting elements. Thus, according to offshore standards, connection elements are considered as “weak” links and not recommended in long term mooring systems. In fact, longer lengths have been in use widely in the marine market all along although not strongly promoted.

After much research and development by MEP Systems, we are pleased to introduce MORDEC™ Next Generation Chain Solution to the marine industry to reduce the number of connecting elements in anchor chain arrangement, thus *“Reducing the risk of possibility of failure in your vessel’s mooring system, and resulting in obstructions in vessel operations.”*

An illustration of “MORDEC™ Next Generation Chain Solution”



The objective of MORDEC™ Next Generation Chain Solution is to reduce the number of “weak” links; thus, reducing the risk of chain system failure.

Features and Advantages:

- Reduce risk of failure in Mooring Systems with reduced number of “Weak” Links
- 27.5mtr length Marker: Common link at the end of every standard length will be marked with a different (red) colour and a unique identifier traceable to appropriate certification
- Improve operational efficiency due to easy handling onboard - Length of chain cable supplied will depend on its total weight
- Reduce installation and labor cost for ship owners
- Reduce metal fatigue of the Anchor Windlass (Gypsy) thus longer life span of machinery
- Chain configuration is available in various lengths - 55mtr / 82.5mtr / 110mtr / 137.5mtr / 165mtr (Longer length is available on request)

MORDEC™ ANCHOR CHAIN & FITTINGS

Mechanical Properties

MECHANICAL PROPERTIES						
	GRADE 1		GRADE 2		GRADE 3	
Quality Assurance	N.R.		N.R.		N.R.	
Heat Treatment	Normalised		Normalised		Quenched & Tempered	
Ultimate Tensile Strength	45 Ksi	310 MPa	71 Ksi	490 MPa	100 Ksi	690 MPa
Reduction of area	—		—		40%	
Elongation	25% ①		22%		17% ④	
Impact values average in base material charpy V-notch	— ②		— ③		0°C ⑤	
					43.5 ftlbs	59 J

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1. When tensile strength is between 310 MPa and 400 MPa elongation 30%.

2. For DNV at room temperature 27 Joules.

3. For DNV at 0°C 27 Joules.

4. For DNV Weld zone 14%.

5. For DNV Weld zone 49 Joules.

6. MPa = N/mm².

MECHANICAL PROPERTIES			
		RQ3	RQ4
Quality Assurance		Required	Required
Ultimate strength MPA		641	862
Reduction of area %		40	40
Elongation %		17	12
Desing temperature °C		0	-20
Impact value Joules	B	58	41
Average of three	W	49	34
Stud welding		—	Not permitted

Chemical Composition

	Grade 2	Grade 3
1.1. C	0.24	0.28
1.2. Si	0.15-0.55	0.15-0.35
1.3. Mn	1.00-1.60	1.35-1.90
1.4. P	0.001-0.035	0.01-0.035
1.5. S	0.01-0.035	0.01-0.035
1.6. Al	0.02	0.02-0.065
1.7. N	N.A.	0.015 max
1.8. Cr	N.A.	0.25 max
1.9. Cu	N.A.	0.35 max
1.10. Nb	N.A.	0.05 max
1.11. Ni	N.A.	0.4 max
1.12. V	N.A.	0.1 max
1.13. Mo	N.A.	0.08 max
1.14. Bar Stocking Code	TBA	TBA
1.15. Additional unintentional Element	Other impurities	Other impurities

MORDEC™ ANCHOR CHAIN & FITTINGS

Ship Chain IACS Equipment Tables (Part 1 of 2)

Equipment Number		Equipment Letter				Stud Link Cables for Bower Anchor				Stockless Bower Anchor		
Exceeding	Not Exceeding	LR	ABS	DNV	GL	Total Length	Diameter			Number	Weight Conv. Anchor	Weight HHP Anchor
							Grade1	Grade2	Grade3		kg.	kg.
						m.	mm.	mm.	mm.			
50	70	A	-	a	102	220	14	12.5	-	2	180	135
70	90	B	-	b	103	220	16	14	-	2	240	180
90	110	C	-	c	104	247.5	17.5	16	-	2	300	225
110	130	D	-	d	105	247.5	19	17.5	-	2	360	270
130	150	E	-	e	106	275	20.5	17.5	-	2	420	315
150	175	F	U6	f	107	275	22	19	-	2	480	360
175	205	G	U7	g	108	302.5	24	20.5	-	2	570	430
205	240	H	U8	h	109	302.5	26	22	20.5	3	660	495
240	280	I	U9	i	110	330	28	24	22	3	780	585
280	320	J	U10	j	111	357.5	30	26	24	3	900	675
320	360	K	U11	k	112	357.5	32	28	24	3	1020	765
360	400	L	U12	l	113	385	34	30	26	3	1140	855
400	450	M	U13	m	114	385	36	32	28	3	1290	970
450	500	N	U14	n	115	412.5	38	34	30	3	1440	1080
500	550	O	U15	o	116	412.5	40	34	30	3	1590	1195
550	600	P	U16	p	117	440	42	36	32	3	1740	1305
600	660	Q	U17	q	118	440	44	38	34	3	1920	1440
660	720	R	U18	r	119	440	46	40	36	3	2100	1575
720	780	S	U19	s	120	467.5	48	42	36	3	2280	1710
780	840	T	U20	t	121	467.5	50	44	38	3	2460	1845
840	910	U	U21	u	122	467.5	52	46	40	3	2640	1980
910	980	V	U22	v	123	495	54	48	42	3	2850	2140
980	1060	W	U23	w	124	495	56	50	44	3	3060	2295
1060	1140	X	U24	x	125	495	58	50	46	3	3300	2475
1140	1220	Y	U25	y	126	522.5	60	52	46	3	3540	2655
1220	1300	Z	U26	z	127	522.5	62	54	48	3	3780	2835
1300	1390	A	U27	A	128	522.5	64	56	50	3	4050	3040
1390	1480	B	U28	B	129	550	66	58	50	3	4320	3240
1480	1570	C	U29	C	130	550	68	60	52	3	4590	3445
1570	1670	D	U30	D	131	550	70	62	54	3	4890	3670
1670	1790	E	U31	E	132	577.5	73	64	56	3	5250	3940
1790	1930	F	U32	F	133	577.5	76	66	58	3	5610	4210
1930	2080	G	U33	G	134	577.5	78	68	60	3	6000	4500

LR = Lloyd's Register of Shipping

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DNV = Det Norske Veritas

GL = Germanischer Lloyd

MORDEC™ ANCHOR CHAIN & FITTINGS

Ship Chain IACS Equipment Tables (Part 2 of 2)

Equipment Number		Equipment Letter				Stud Link Cables for Bower Anchor				Stockless Bower Anchor		
Exceeding	Not Exceeding	LR	ABS	DNV	GL	Total Length	Diameter			Number	Weight Conv. Anchor	Weight HHP Anchor
						m.	Grade1 mm.	Grade2 mm.	Grade3 mm.		kg.	kg.
2080	2230	H	U34	H	135	605	81	70	62	3	6450	4840
2230	2380	I	U35	I	136	605	84	73	64	3	6900	5175
2380	2530	J	U36	J	137	605	87	76	66	3	7350	5520
2530	2700	K	U37	K	138	632.5	90	78	68	3	7800	5850
2700	2870	L	U38	L	139	632.5	92	81	70	3	8300	6225
2870	3040	M	U39	M	140	632.5	95	84	73	3	8700	6525
3040	3210	N	U40	N	141	660	97	84	76	3	9300	6975
3210	3400	O	U41	O	142	660	100	87	78	3	9900	7425
3400	3600	P	U42	P	143	660	102	90	78	3	10500	7875
3600	3800	Q	U43	Q	144	687.5	105	92	81	3	11100	8325
3800	4000	R	U44	R	145	687.5	107	95	84	3	11700	8775
4000	4200	S	U45	S	146	687.5	111	97	87	3	12300	9225
4200	4400	T	U46	T	147	715	114	100	87	3	12900	9675
4400	4600	U	U47	U	148	715	117	102	90	3	13500	10125
4600	4800	V	U48	V	149	715	120	105	92	3	14100	10575
4800	5000	W	U49	W	150	742.5	122	107	95	3	14700	11025
5000	5200	X	U50	X	151	742.5	124	111	97	3	15400	11550
5200	5500	Y	U51	Y	152	742.5	127	111	97	3	16100	12075
5500	5800	Z	U52	Z	153	742.5	130	114	100	3	16900	12675
5800	6100	A*	U53	A*	154	742.5	132	117	102	3	17800	13350
6100	6500	B*	U54	B*	155	742.5	137	120	107	3	18800	14100
6500	6900	C*	U55	C*	156	770	-	124	111	3	20000	15000
6900	7400	D*	U56	D*	157	770	-	127	114	3	21500	16125
7400	7900	E*	U57	E*	158	770	-	132	117	3	23000	17250
7900	8400	F*	U58	F*	159	770	-	137	122	3	24500	18375
8400	8900	G*	U59	G*	160	770	-	142	127	3	26000	19500
8900	9400	H*	U60	H*	161	770	-	147	132	3	27500	20625
9400	10000	I*	U61	I*	162	770	-	152	132	3	29000	21750
10000	10700	J*	U62	J*	163	770	-	157	137	3	31000	23250
10700	11500	K*	U63	K*	164	770	-	157	142	3	33000	24750
11500	12400	L*	U64	L*	165	770	-	162	147	3	35500	26625
12400	13400	M*	U65	M*	166	770	-	-	152	3	38500	28875
13400	14600	N*	U66	N*	167	770	-	-	157	3	42000	31500
14600	16000	O*	U67	O*	168	770	-	-	162	3	46000	34500

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MORDEC™ ANCHOR CHAIN & FITTINGS

Proof and Breaking Load Chart (Part 1 of 2)

LOAD (in kN) = $c \times d^2 \times (44 - 0.08 \times d)$ (d in mm)

SI UNITS

Diameter	Proof load				Breaking load				Approx. mass		Number of links per 27.5 m
	Grade 2 $c = 0.0098$	Grade 3 $c = 0.0137$	ORQ/RQ3 $c = 0.014$	Grade 4 $c = 0.0216$	Grade 2 $c = 0.0137$	Grade 3 $c = 0.0196$	ORQ/RQ3 $c = 0.0211$	Grade 4 $c = 0.0275$	27.5m $0.6292 \times d^2$	100 m	
mm	kN	kN	kN	kN	kN	kN	kN	kN	kg	kg	
16	107	150	-	-	150	216	-	-	160	582	429
17.5	127	179	-	-	179	256	-	-	190	691	391
19	150	211	215	331	211	301	324	421	225	819	357
20.5	175	244	249	385	244	349	376	490	264	975	329
22	200	280	286	442	280	401	431	562	305	1166	305
24	237	332	339	524	332	376	511	667	362	1318	285
26	278	389	397	612	389	556	598	779	425	1538	259
28	321	449	458	707	449	642	691	900	493	1775	245
30	368	514	524	809	514	735	790	1030	566	2028	225
32	417	583	594	917	583	833	895	1167	644	2298	213
34	468	655	668	1030	655	937	1007	1312	727	2584	195
36	523	732	746	1150	732	1050	1120	1465	815	2967	187
38	581	812	828	1280	812	1160	1250	1630	909	3292	179
40	640	896	910	1410	896	1280	1380	1800	1007	3634	171
42	703	981	1000	1550	981	1400	1510	1970	1110	3992	165
44	769	1080	1100	1690	1080	1540	1650	2160	1218	4368	153
46	837	1170	1190	1840	1170	1680	1800	2350	1331	4761	147
48	908	1280	1290	2000	1280	1810	1950	2540	1450	5170	143
50	981	1370	1400	2160	1370	1960	2110	2750	1573	5596	137
52	1060	1480	1510	2330	1480	2110	2270	2960	1701	6040	129
54	1140	1590	1620	2500	1590	2270	2440	3180	1835	6500	125
56	1220	1710	1740	2680	1710	2430	2620	3410	1973	6976	123
58	1290	1810	1850	2860	1810	2600	2800	3640	2117	7596	119
60	1380	1940	1980	3040	1940	2770	2980	3870	2265	8110	113
62	1470	2060	2100	3240	2060	2940	3170	4120	2419	8642	111
64	1560	2190	2230	3430	2190	3130	3360	4380	2577	9191	107
66	1660	2320	2360	3640	2320	3310	3560	4630	2741	9757	105
68	1750	2450	2500	3850	2450	3500	3760	4900	2909	10339	99
70	1840	2580	2630	4060	2580	3690	3970	5170	3083	10938	97
73	1990	2800	2850	4390	2800	3990	4290	5580	3353	11869	93
76	2150	3010	3070	4730	3010	4300	4620	6010	3634	12837	89
78	2260	3160	3220	4950	3160	4500	4850	6310	3828	13504	87

MORDEC™ ANCHOR CHAIN & FITTINGS

Proof and Breaking Load Chart (Part 2 of 2)

LOAD (in kN) = c x d² x (44 - 0.08 x d) (d in mm)

SI UNITS

Diameter	Proof load				Breaking load				Approx. mass		Number of links per 27.5 m
	Grade 2 c = 0.0098	Grade 3 c = 0.0137	ORQ/RQ3 c = 0.014	Grade 4 c = 0.0216	Grade 2 c = 0.0137	Grade 3 c = 0.0196	ORQ/RQ3 c = 0.0211	Grade 4 c = 0.0275	27.5m 0.6292xd ²	100 m	
mm	kN	kN	kN	kN	kN	kN	kN	kN	kg	kg	
81	2410	3380	3450	5320	3380	4820	5190	6760	4128	14536	85
84	2580	3610	3680	5680	3610	5160	5550	7230	4440	15605	81
87	2750	3860	3920	6050	3860	5500	5920	7700	4762	17090	79
90	2920	4090	4170	6440	4090	5840	6290	8190	5097	18250	77
92	3040	4260	4340	6690	4260	6080	6540	8520	5326	19040	73
95	3230	4510	4600	7090	4510	6440	6930	9030	5679	20260	71
97	3350	4680	4770	7360	4680	6690	7200	9370	5920	21100	71
98	3400	4770	4860	7490	4770	6820	7330	9540	6043	21520	69
100	3530	4940	5040	7770	4940	7060	7600	9890	6292	22380	67
102	3660	5120	5220	8040	5120	7320	7870	10240	6546	23260	65
105	3860	5400	5500	8470	5400	7700	8280	10780	6937	24610	63
107	3980	5570	5680	8760	5570	7960	8560	11140	7204	25530	61
108	4040	5660	5770	8900	5660	8090	8700	11330	7339	26000	59
111	4250	5940	6060	9340	5940	8480	9130	11890	7752	27420	57
114	4440	6230	6350	9780	6230	8900	9570	12450	8177	28880	57
117	4650	6510	6640	10230	6510	9300	10010	13030	8613	30380	57
120	4860	6810	6940	10690	6810	9720	10450	13610	9060	31920	55
122	5000	7000	7140	11000	7000	9990	10750	14000	9365	32970	55
124	5140	7200	7340	11310	7200	10280	11060	14390	9675	34030	53
127	5350	7490	7640	11780	7490	10710	11520	14990	10148	35660	53
130	5570	7800	7950	12250	7800	11140	11980	15600	10635	37320	51
132	5720	8000	8160	12590	8000	11420	12290	16020	10965	38450	51
137	6080	8520	8680	13390	8520	12160	13090	17050	11810	41360	49
142	6450	9040	9210	14220	9040	12910	13890	18100	12690	44360	47
147	6840	9560	9750	15050	9560	13660	14700	19160	13600	47480	47
152	7220	10100	10300	15890	10100	14430	15520	20230	14500	50690	45
157	7600	10640	10850	16740	10640	15200	16350	21310	15510	54020	43
162	7990	11170	11400	17600	11170	15970	17190	22400	16510	57440	43
167	8370	11710	11960	18460	11710	16750	18030	23500	17550	60980	41
172	8720	12260	12520	19320	12260	17530	18880	24600	18620	64620	39
177	9160	12810	13090	20190	12810	18320	19730	25710	19710	68360	39

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MORDEC™ ANCHOR CHAIN & FITTINGS

Weight of Anchor Chain & Fittings (Part 1 of 2)

Chain Diameter (Ø)	Studlink Chain (27.5mtr)	Common Link	Enlarge Link	End Link	Kenter Shackle	Joining Shackle	Achor Shackle	Swivel Piece	Complete Swivel Set	Swivel Shackle	Three-link Adapter
mm.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
16	160	0.2	0.5	0.5	0.6	1.1	1.6	1.7	3.6	-	1.5
17.5	193	0.2	0.7	0.7	0.8	1.4	2.0	2.1	4.7	-	2.8
19	223	0.4	0.9	0.9	1	1.7	2.5	2.5	5.8	9	2.4
20.5	275	0.5	1.1	1.1	1.4	2.2	3.3	3.1	7.2	11	3
22	305	0.6	1.3	1.3	1.6	2.7	4	3.5	8.2	14	4
24	366	0.8	1.7	1.8	2	3.5	5	5	11	18	5
26	432	0.9	2.2	2.2	2.7	4.2	6	6	14	24	6
28	503	1.2	2.8	2.9	3.3	5.8	8	7.5	18	30	8
30	578	1.6	3.2	3.3	3.9	6.8	9.5	9.0	21	35	10
32	657	1.9	3.9	4	4.6	7.8	12	11	26	45	12
34	743	2.4	4.7	5	5.8	9.4	14	13.5	31	54	14
36	831	2.9	5.5	5.9	6.6	12	17	16	37	63	17
38	927	3.4	6.1	6.8	7.8	14	20	19	43	72	19
40	1020	4	7.1	8	9.1	16	23	23	51	86	22
42	1114	4.7	8.4	9.6	11	18	26	27	60	100	25
44	1218	5.5	10	11	13	22	29	32	71	114	29
46	1334	6.4	12	13	14	24	33	37	82	128	34
48	1452	7.4	13	15	16	27	37	44	95	148	39
50	1568	8.5	15	17	18	33	41	57	115	167	44
52	1705	9.8	17	20	20	36	45	57	124	187	49
54	1815	11	19	22	20	40	50	67	141	206	55
56	1953	13	21	23	24	43	54	67	148	233	61
58	2118	14	23	25	28	50	65	80	168	259	68
60	2283	16	25	27	28	56	70	95	191	286	75
62	2420	17	28	30	33	60	76	95	202	312	81
64	2585	19	31	34	38	64	82	112	231	345	89
66	2750	21	34	38	38	74	94	130	261	379	101

Conversion from Kg. to pounds 1 kg. = 2.2 Lbs.

MORDEC™ ANCHOR CHAIN & FITTINGS

Weight of Anchor Chain & Fittings (Part 2 of 2)

Chain Diameter (Ø)	Studlink Chain (27.5mtr)	Common Link	Enlarge Link	End Link	Kenter Shackle	Joining Shackle	Achor Shackle	Swivel Piece	Complete Swivel Set	Swivel Shackle	Three-link Adapter
mm.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
68	2943	23	37	42	44	79	101	130	273	412	109
70	3135	25	40	45	44	84	108	152	307	451	119
73	3410	27	45	52	51	98	124	172	348	510	133
76	3713	30	50	59	58	110	141	194	392	575	153
78	3905	34	55	63	65	117	150	194	409	623	161
81	4235	39	61	70	74	133	171	220	458	696	184
84	4565	42	68	78	84	149	193	242	508	776	202
87	4895	46	75	86	94	168	218	270	564	868	230
90	5198	52	82	95	105	186	243	300	623	959	251
92	5473	58	88	100	105	195	256	325	669	1020	271
95	5803	64	98	112	115	215	290	350	733	1123	296
97	6050	68	102	120	135	229	305	350	754	1196	315
100	6435	75	112	130	150	251	335	385	827	1310	347
102	6683	80	120	138	150	262	350	420	891	1397	359
107	7315	88	140	158	175	316	410	495	1042	1616	424
111	7893	93	160	175	200	343	445	535	1150	1792	471
114	8360	109	173	193	225	377	475	570	1239	1959	516
117	8718	120	185	210	225	407	505	610	1332	2126	563
122	9488	130	210	235	267	479	550	650	1465	2405	609
127	10313	142	235	260	315	514	600	720	1632	2683	642
132	11000	160	260	305	370	597	675	760	1790	3095	670
137	11990	182	305	390	390	638	750	900	2030	3508	715
142	12843	205	325	375	450	734	900	1100	2380	3920	814
147	13723	230	395	410	505	781	1055	1200	2680	4333	-
152	14713	255	410	460	545	890	1200	1400	2990	4745	-
157	15675	280	455	510	605	1009	1340	1550	3315	5158	-
162	16775	310	500	560	660	1067	1450	1700	3635	5570	-

ANCHOR
CHAIN &
FITTINGS

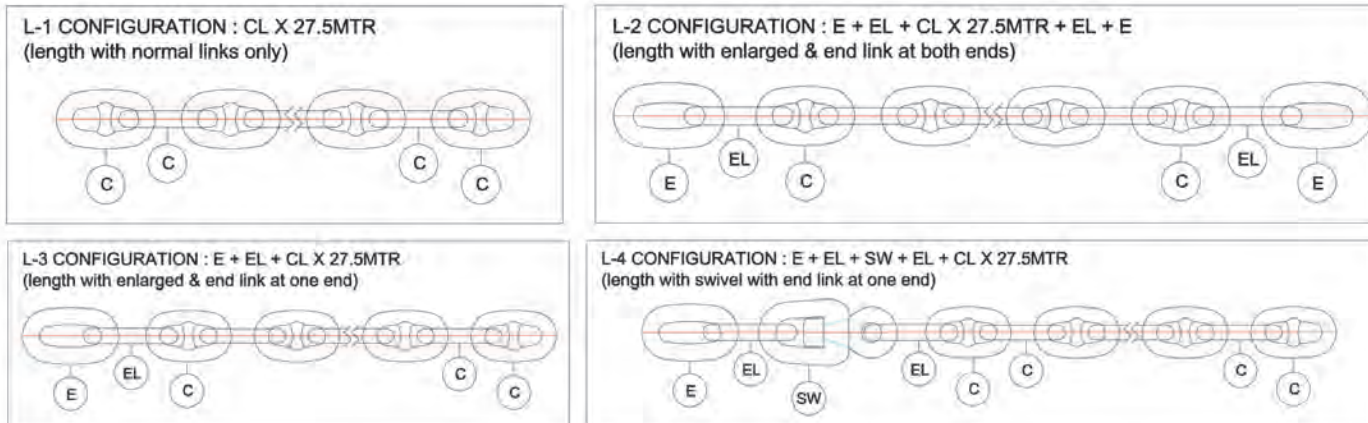
Conversion from Kg. to pounds 1 kg. = 2.2 Lbs.

MORDEC™ ANCHOR CHAIN & FITTINGS

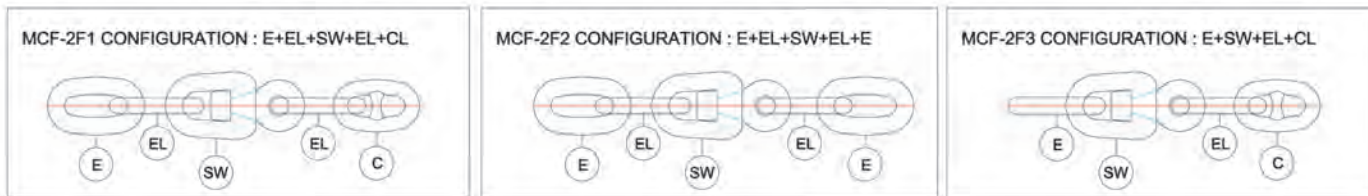
Chain Cable & Fittings For Ships

Grade 2

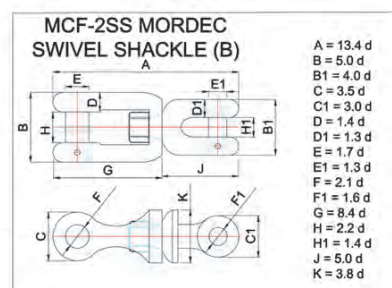
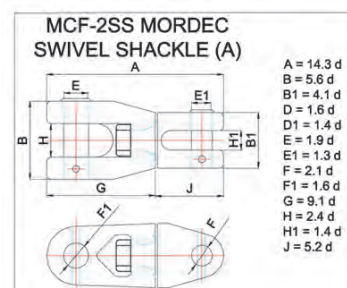
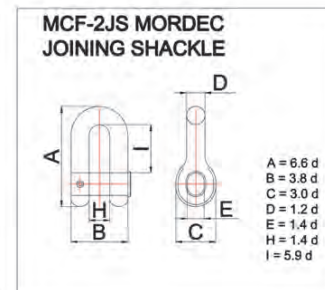
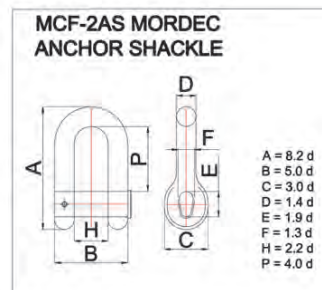
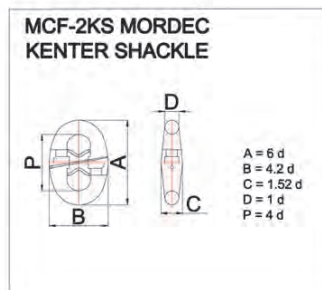
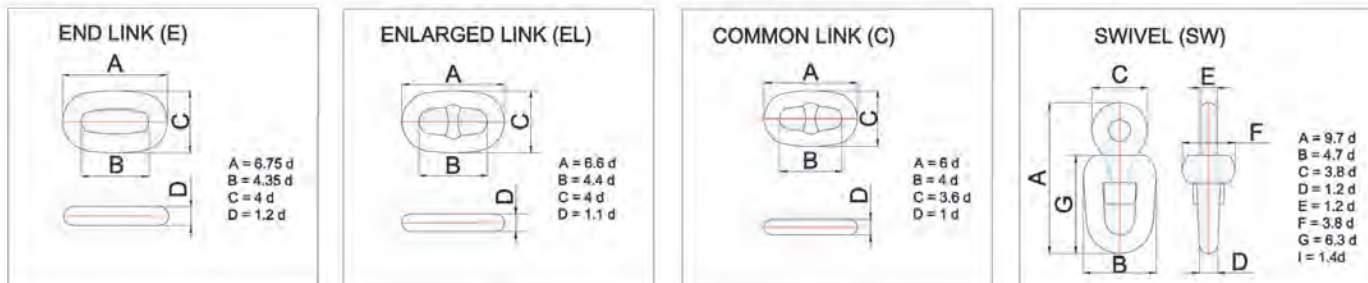
MCN-21 GRADE 2 STUD LINK CHAIN



SWIVEL FORERUNNER



CHAIN FITTINGS

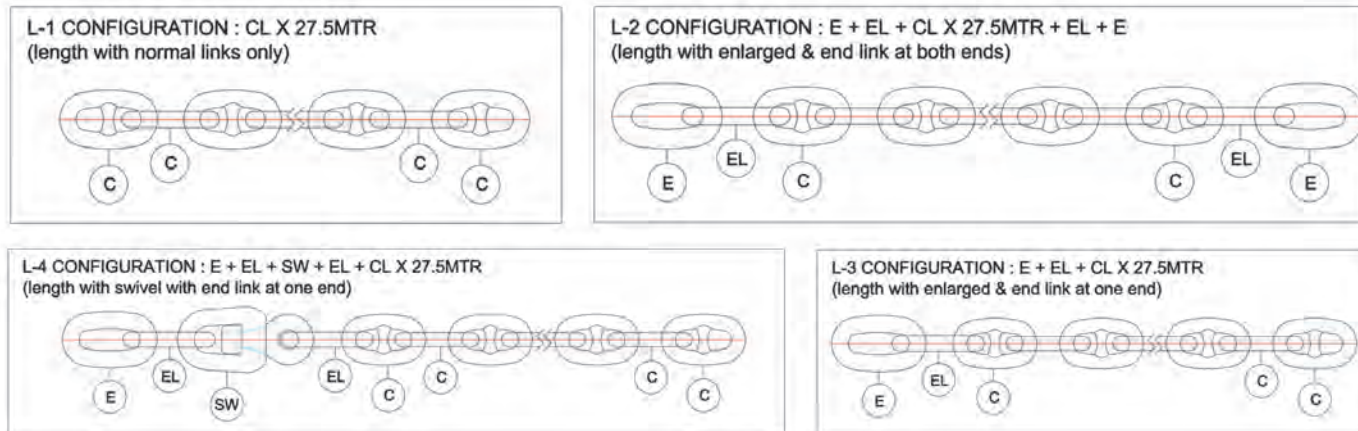


MORDEC™ ANCHOR CHAIN & FITTINGS

Chain Cable & Fittings For Ships

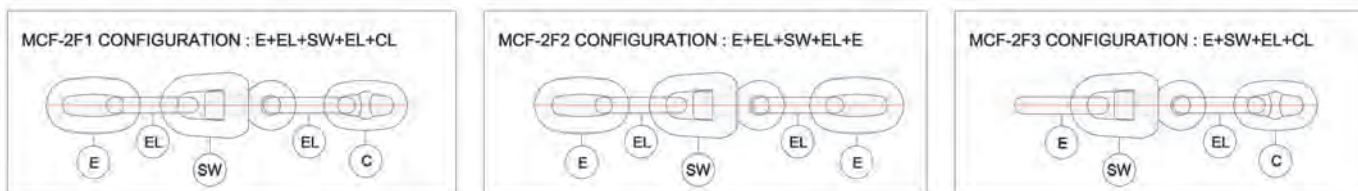
Grade 3

MCN-31 GRADE 3 STUD LINK CHAIN

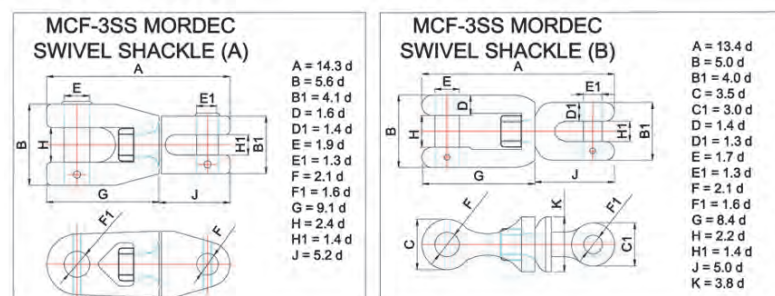
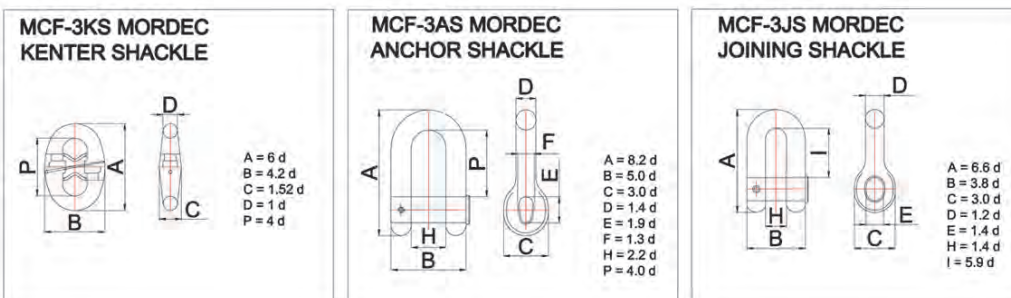
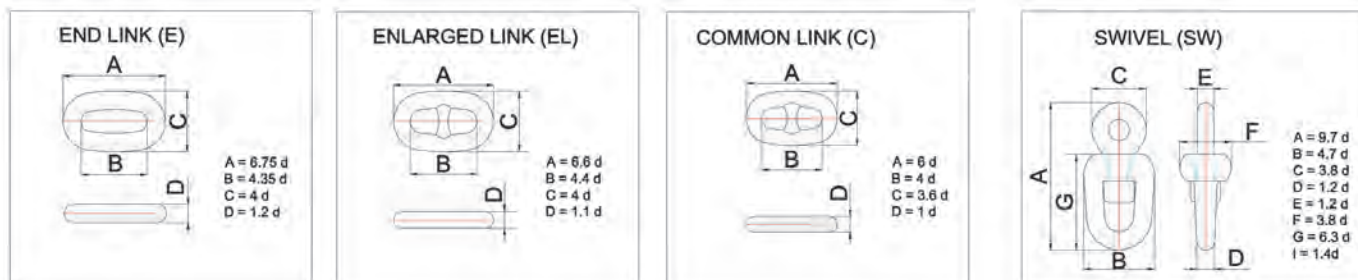


ANCHOR
CHAIN &
FITTINGS

SWIVEL FORERUNNER



CHAIN FITTINGS

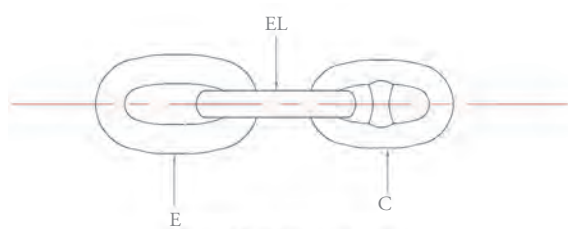
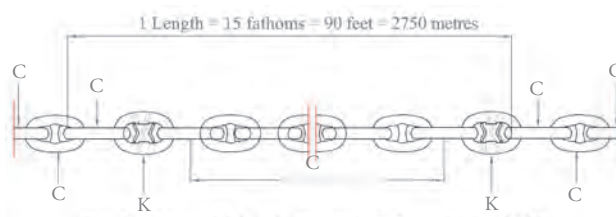
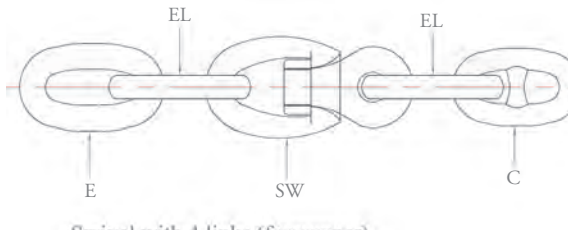
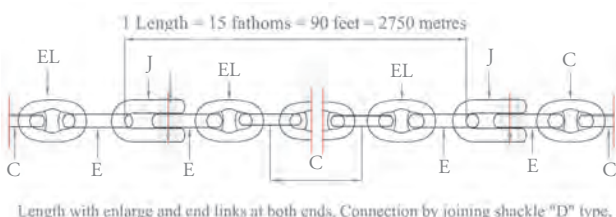
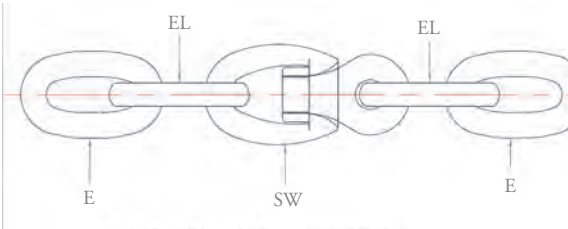
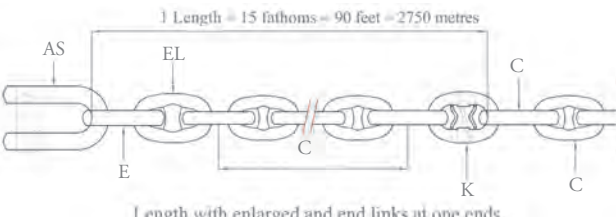
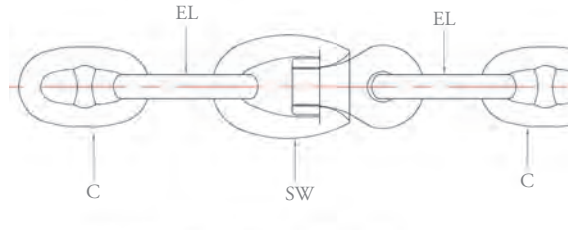
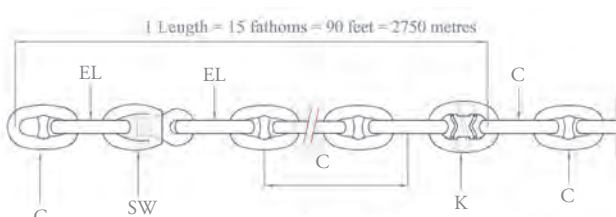
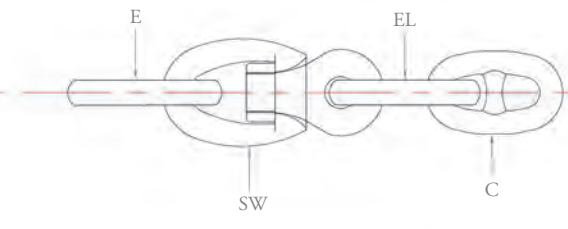
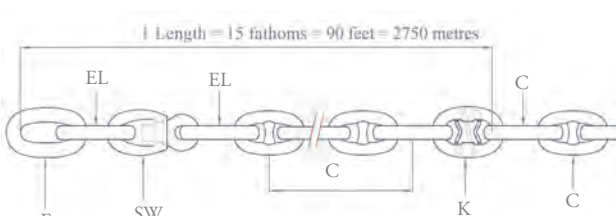


MORDEC™ ANCHOR CHAIN & FITTINGS

Chain Cable & Fittings For Ships

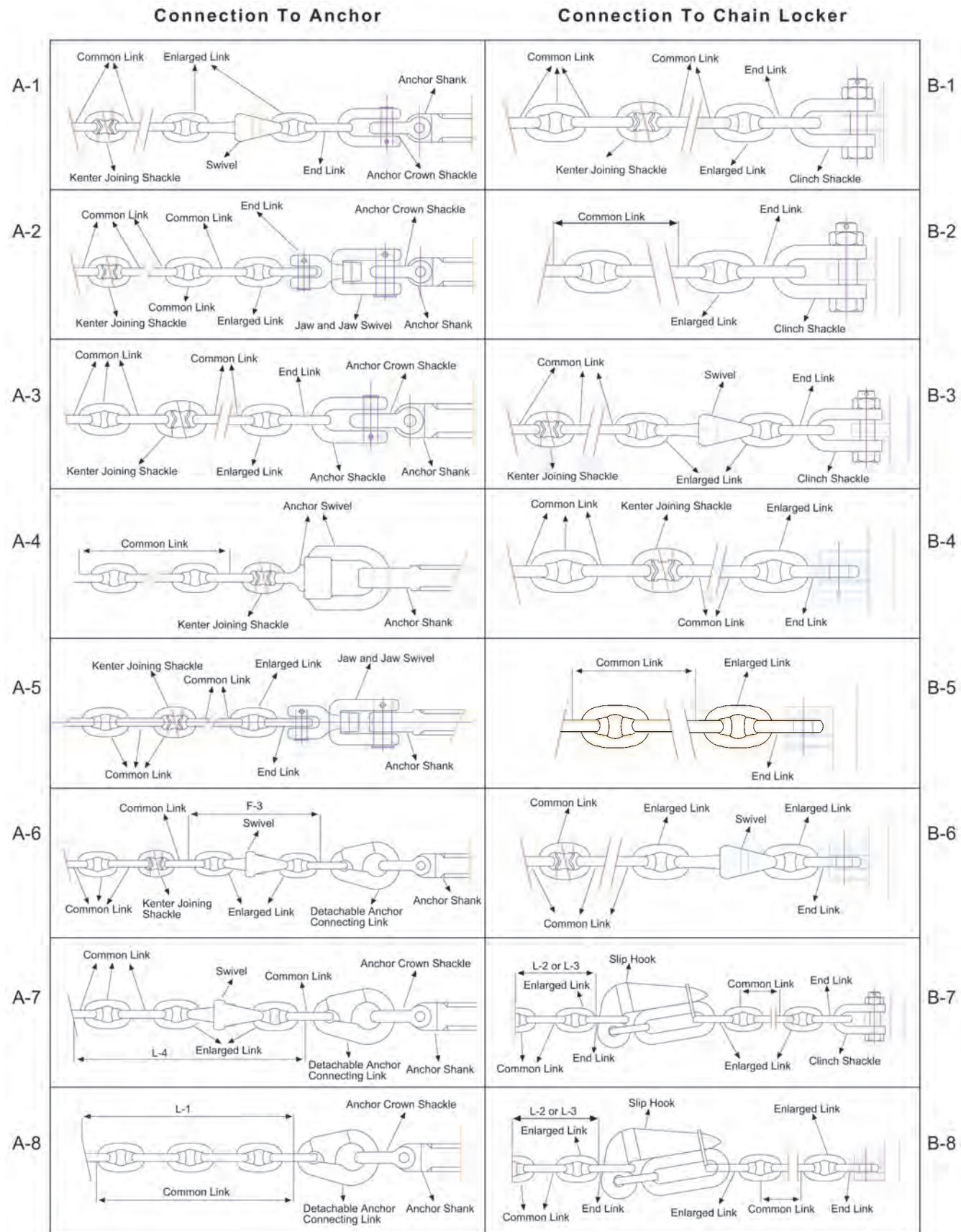
SWIVEL CONNECTION

CHAIN CONNECTION

 Normal adaptor piece	 Length with normal links only. Connection by kenter joining shackle
 Swivel with 4 links (forerunner)	 Length with enlarge and end links at both ends. Connection by joining shackle "D" type.
 Swivel with 4 links (forerunner)	 Length with enlarged and end links at one ends.
 Swivel with 4 links (forerunner)	 Length with swivel with normal links at both end.
 Swivel with 3 links (forerunner)	 Length with swivel with end links at one end.

MORDEC™ ANCHOR CHAIN & FITTINGS

Marine Chain Connection

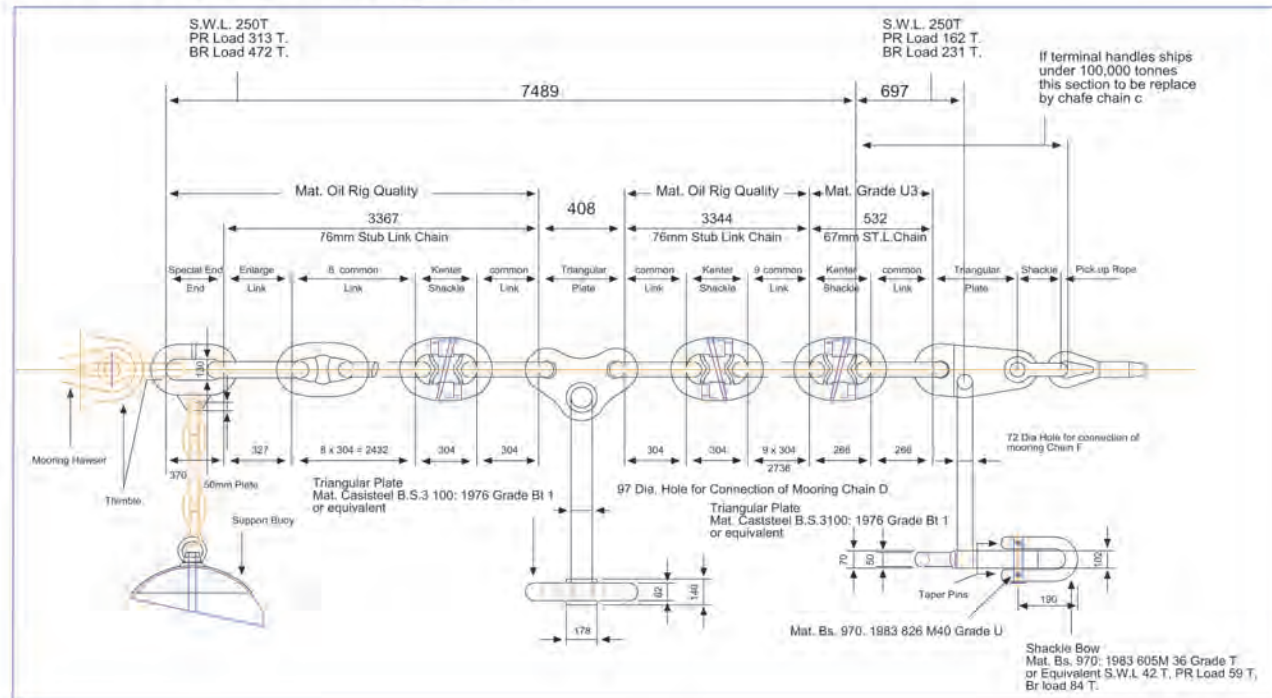


ANCHOR
CHAIN &
FITTINGS

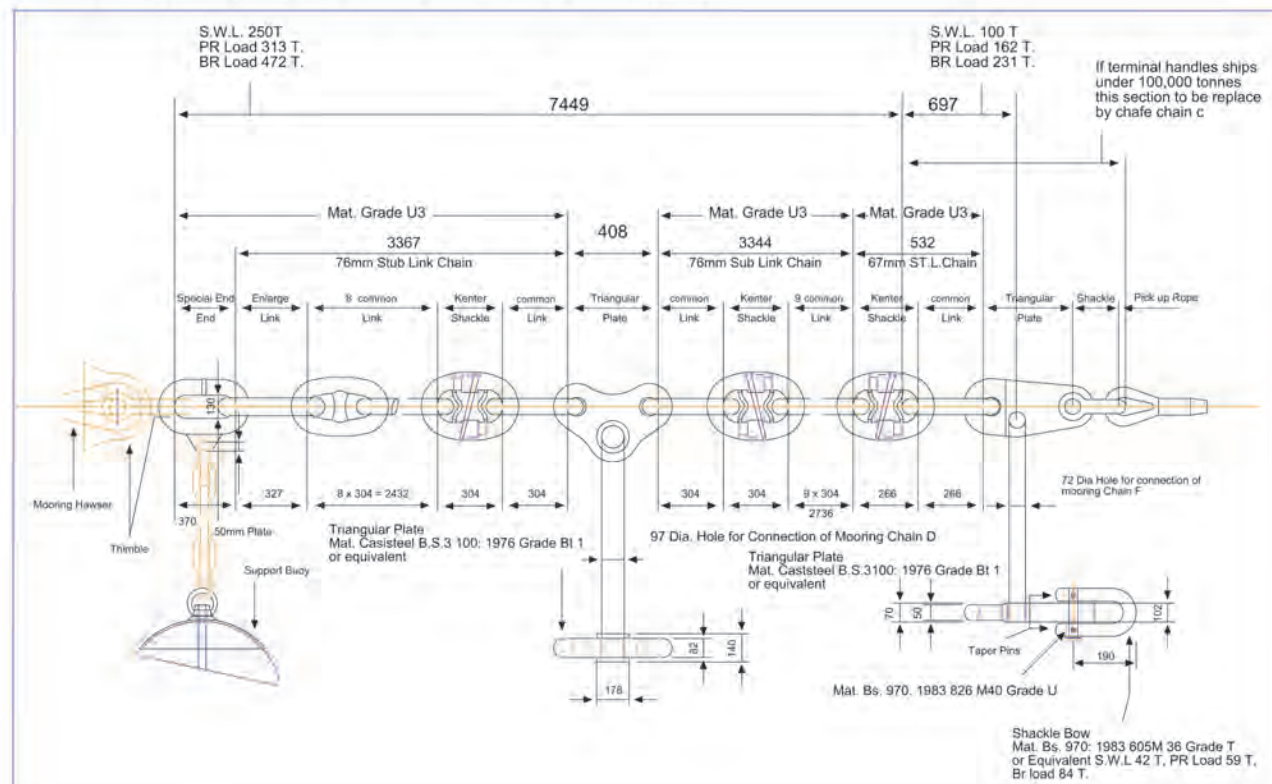
MORDEC™ ANCHOR CHAIN & FITTINGS

Chafe Chain Arrangement

Chafe Chain A for Ship over 350,000 ton DWT



Chafe Chain B for Ship between 100,000 and 350,000 ton DWT



Chafe Chain Arrangement

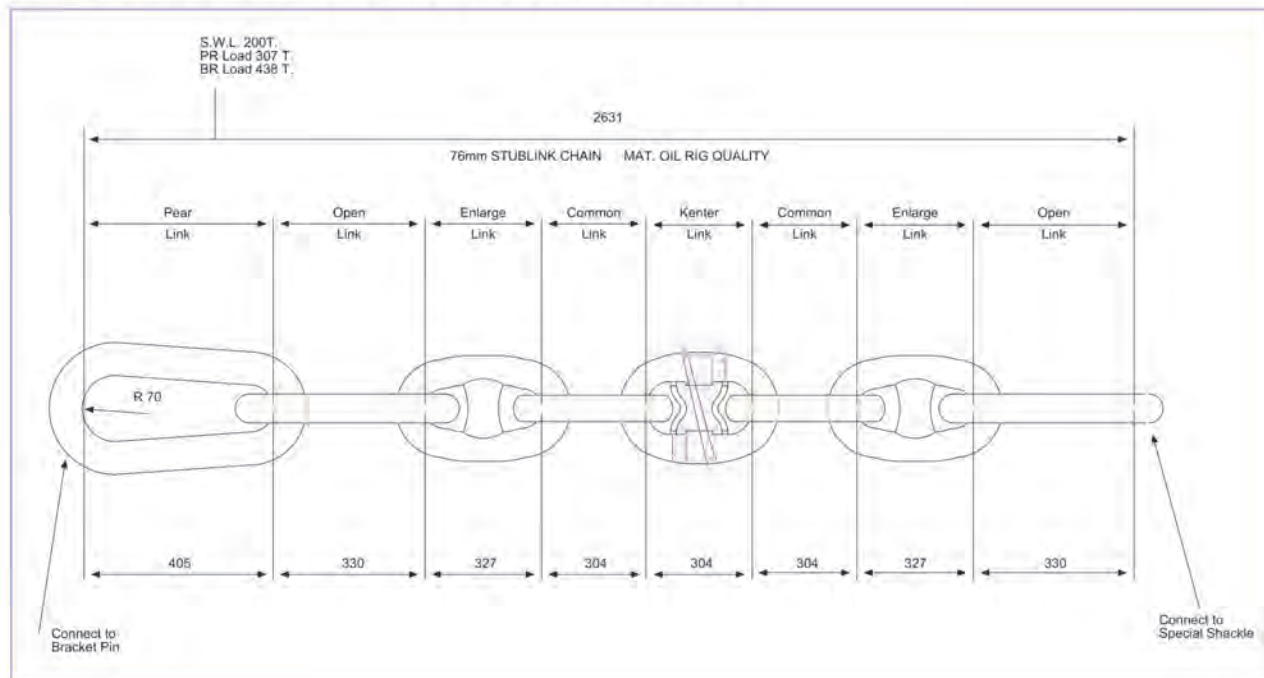
ANCHOR CHAIN & FITTINGS



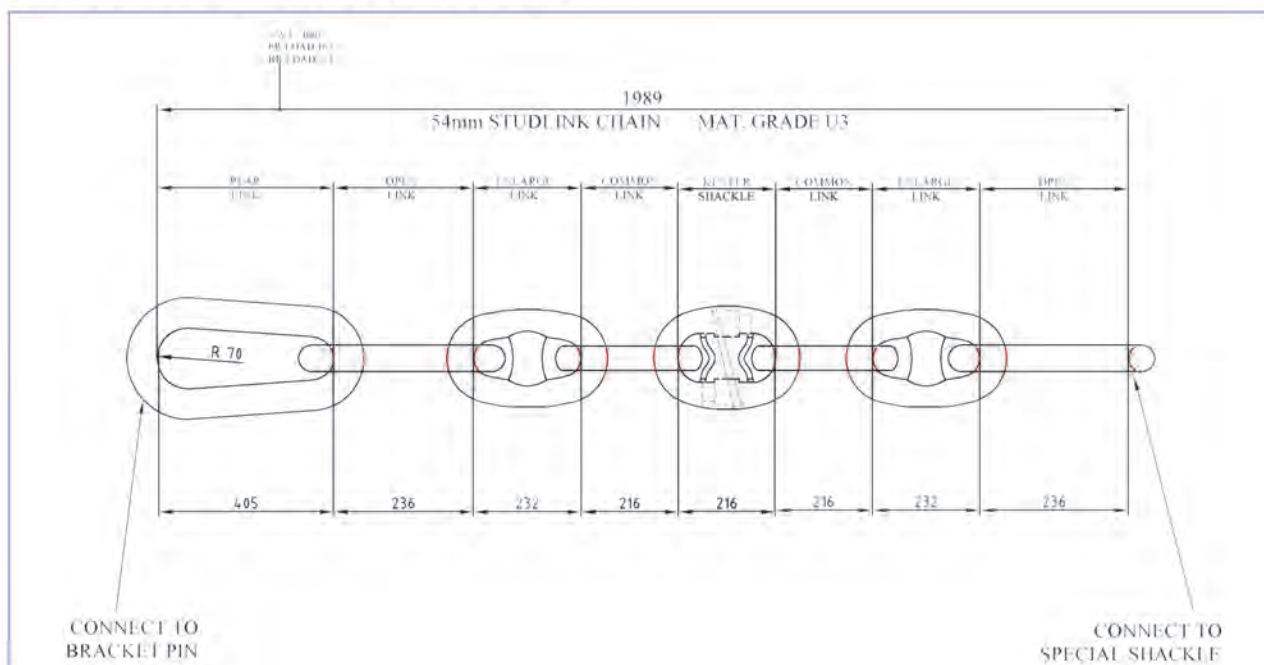
MORDEC™ ANCHOR CHAIN & FITTINGS

Chafe Chain Arrangement

Mooring Chain E for ships between 100,000 and 350,000 ton DWT



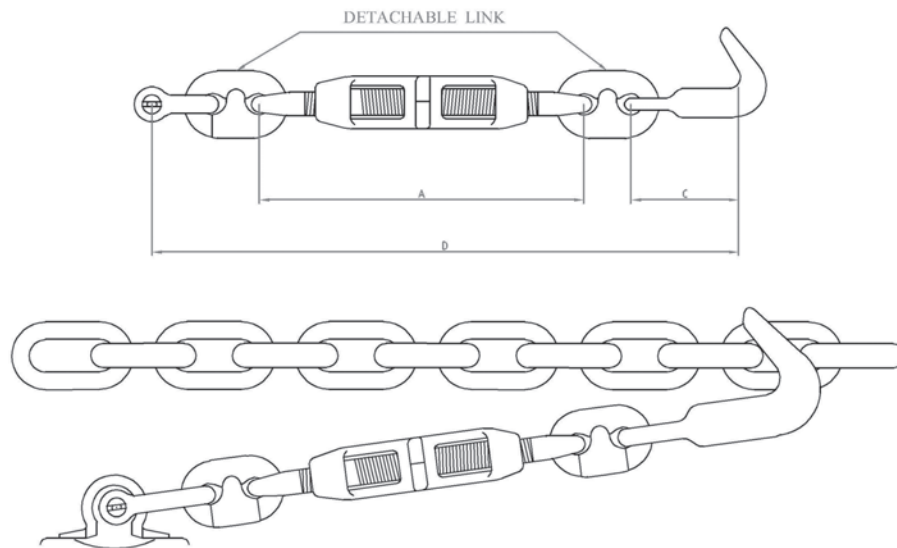
Mooring Chain F for ships less than 100,000 ton DWT



MORDEC™ ANCHOR CHAIN & FITTINGS

Devil's Claw Chain Stopper

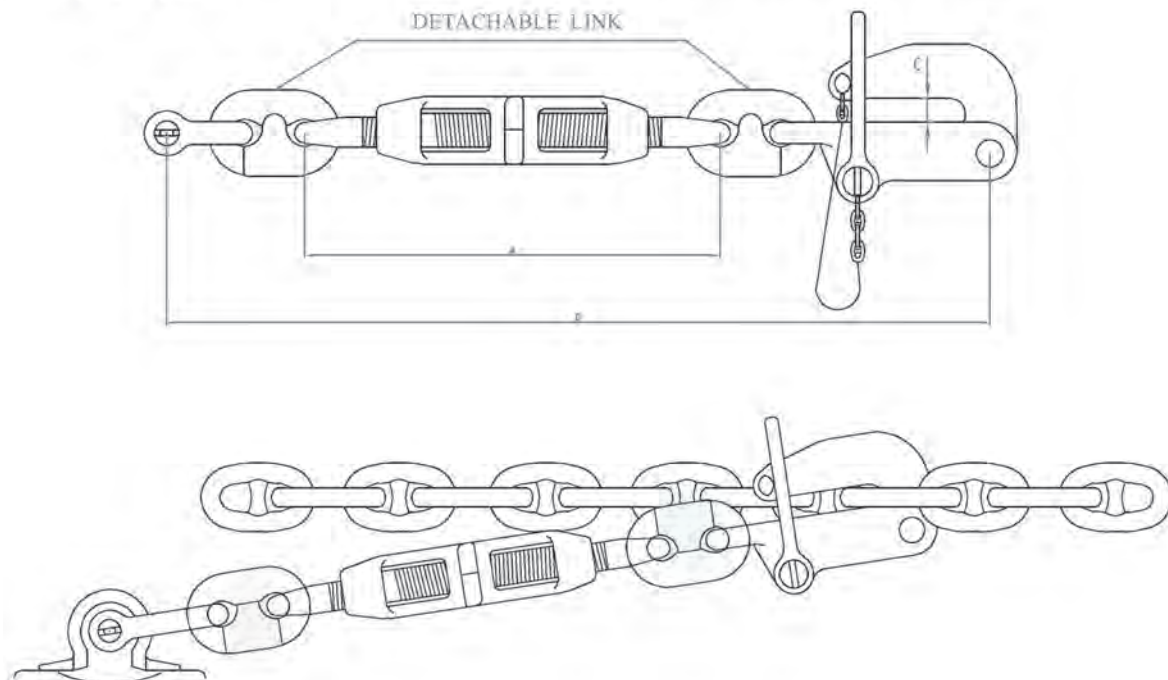
The Devil's Claw Chain Stopper Assembly is design primarily to assist in securing the anchor at the hawse pipe. Additionally, it can be utilized to help retrieve mooring components. The size of the claw and the jaw opening are directly proportional to the chain size which is to be engaged. when the stopper assembly is used to secure mooring chain neither the stopper nor the chain is place in a bending condition; instead, the loads are arranged inline. Each component of the assembly is forged alloy steel which is heat treated to develop a tensile strength of 150,000 psi. As an option, customers can specify additional handles to be placed at the base of the claw, which increase the ease of handling.



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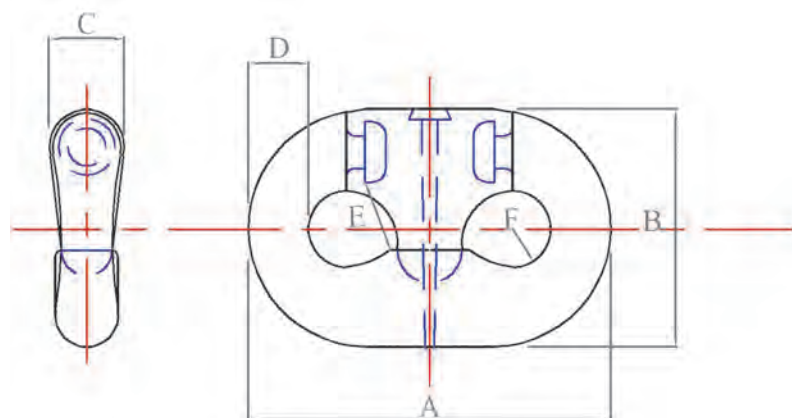
Pelican Hook topper

The Pelican Hook Stopper is Engineered so that its primary function is to secure the ship's anchor at the hawse pipe. The chain can be disengaged from the stopper by manually deflecting the bail. to facilitate handling, additional handles can be added to the base of the hook should the customer desire. The chain stopper assembly consists of a shackle, chain connecting links, turnbuckle and pelican hook. Each component is forged from fine grain heat treated alloyed steel, with a minimum tensile strength of 150,000 psi.



MORDEC™ ANCHOR CHAIN & FITTINGS

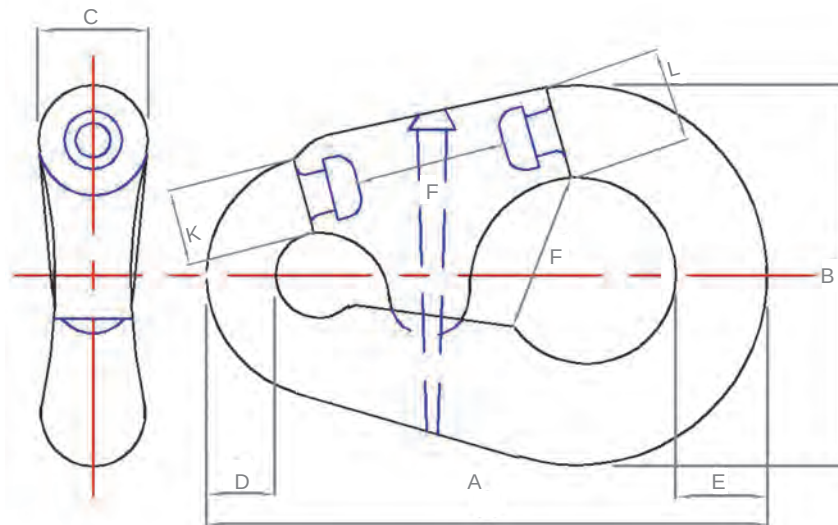
BALT D Detachable Connecting Link



Chain Size mm	A mm	B mm	C mm	D mm	E mm	F mm	Proof Load Ton	Break Load Ton	Weight Kg
19	114	73	23	12	22	23	21.7	34.0	0.9
20~22	133	85	27	22	28	27	29.0	44.4	1.6
23~25	152	98	31	25	29	31	38.1	58.5	2.0
26~29	171	111	35	28	31	35	48.0	73.0	2.7
30~32	190	123	39	31	37	39	58.9	89.8	3.9
33~35	209	134	43	34	41	43	71.2	106.5	5.0
36~38	228	147	47	38	44	47	83.9	127.0	6.8
39~41	247	150	50	41	50	50	97.9	147.4	9.1
42~45	266	172	57	44	52	55	112.9	172.3	10.9
46~48	285	184	63	47	54	59	129.2	195.9	14.5
49~51	304	196	63	50	58	63	146.0	221.3	16.3
52~54	323	209	67	53	63	67	164.2	248.5	20.0
55~57	342	221	71	57	66	71	182.7	276.6	23.6
58~60	361	234	77	60	69	74	202.7	306.1	27.7
61~64	381	246	79	63	73	79	223.1	337.4	32.3
65~67	400	258	82	66	77	82	244.9	368.7	37.2
68~70	419	269	87	69	80	85	267.6	401.4	43.1
71~73	438	282	91	73	84	89	290.2	437.7	48.5
74~76	457	295	95	76	89	95	314.3	474.0	54.4
77~79	476	307	101	79	92	97	339.2	511.6	62.6
80~83	495	320	103	82	92	103	364.7	548.8	73.0
84~86	514	332	107	85	100	107	391.0	587.8	80.3
87~89	533	344	111	88	103	111	418.2	627.3	88.5
90~92	552	355	115	92	106	115	463.1	710.3	97.5
93~95	571	368	119	95	110	119	508.0	793.7	116.1
96~99	590	381	127	98	114	120	546.5	845.2	122.9
100~103	609	393	131	101	117	125	588.7	891.7	130.6
140~106	628	406	133	104	120	133	611.1	935.5	145.1
107~110	647	419	134	107	127	136	632.1	967.9	159.7
111~113	666	431	139	111	128	139	712.0	1,087.7	173.7
114~116	685	444	142	114	133	142	758.4	1,137.6	188.7
117~119	704	454	146	117	136	146	805.1	1,213.3	202.8
120	723	469	155	120	139	149	848.2	1,272.3	221.4

MORDEC™ ANCHOR CHAIN & FITTINGS

Detachable Anchor Connecting Link

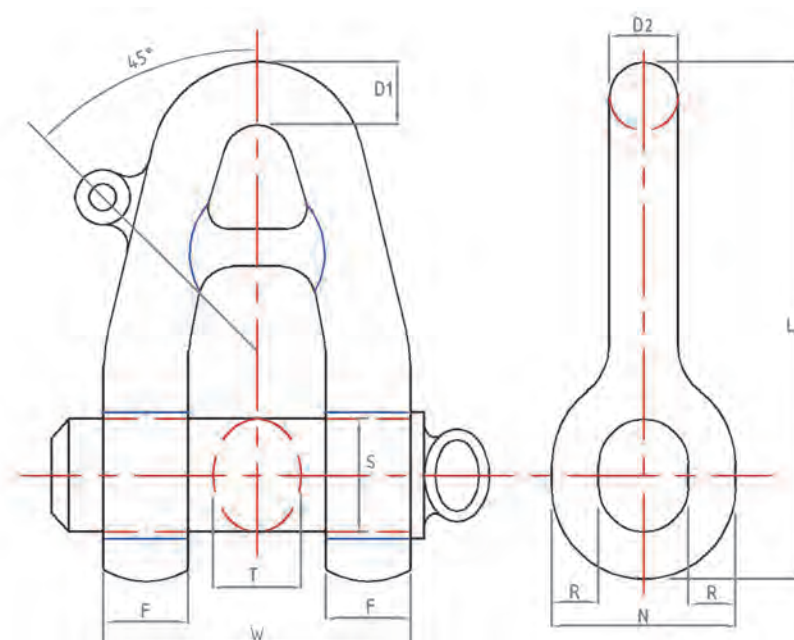


ANCHOR
CHAIN &
FITTINGS

Chain Size	A	B	C	D	E	F	K	L	Proof	Break Load	Weight
mm	mm	mm	mm	mm	mm	mm	mm	mm	Ton	Ton	Kg
19~24	193	131	38	23	31	57	23	34	33.5	51.4	3.2
25~30	238	166	46	30	38	65	33	44	53.5	81.4	6.4
32~40	298	206	58	39	47	82	39 x 44	56	90.9	137.2	12.7
41~51	377	260	76	50	63	100	74 x 60	73	146.0	221.3	27.2
52~60	454	312	92	60	76	120	61 x 73	88	202.7	306.1	48.5
61~80	561	376	117	79	95	149	85 x 79	111	339.2	511.6	94.4
81~92	654	419	133	92	123	149	111 x 101	130	463.1	710.3	148.8
93~95	692	434	146	98	130	158	123 x 136	141	508.0	793.7	192.8
96~102	774	508	158	101	136	177	127 x 139	161	588.7	905.5	249.5
103~111	889	555	174	111	149	193	139 x 152	177	712.0	1,087.7	272.2
112~120	920	603	190	120	161	212	152 x 165	193	848.2	1,272.3	296.2

MORDEC™ ANCHOR CHAIN & FITTINGS

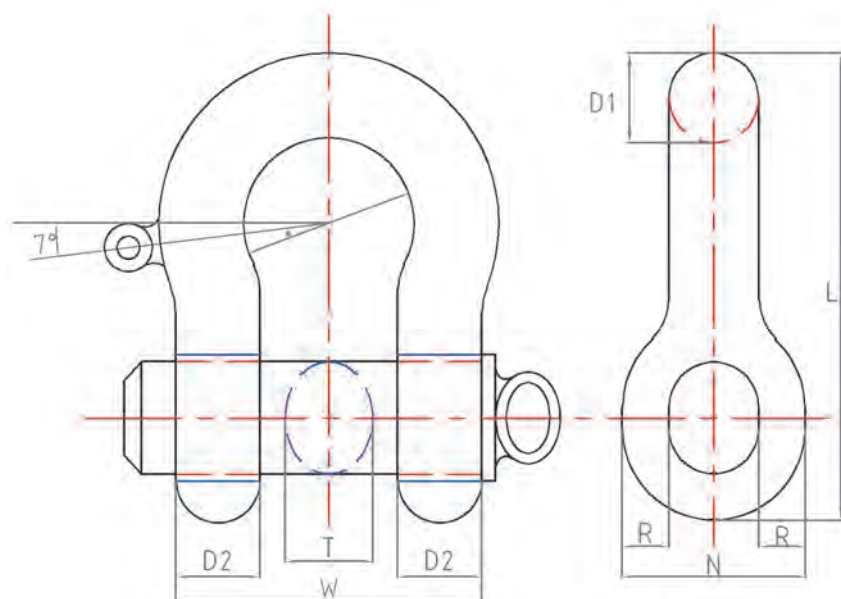
Buoy Shackle (Type A)



Nominal Dia. d	D1	D2	L	W	F	N	R	S	T
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
38	38	42	395	262	56	113	29	80	53
40	40	44	406	266	58	118	30	83	56
42	42	46	416	268	59	125	32	85	59
44	44	48	427	274	62	130	33	88	62
46	46	51	438	278	64	136	35	90	64
48	48	53	458	294	67	141	36	92	67
50	50	55	470	300	70	148	38	95	70
52	52	57	490	316	73	153	39	98	73
54	54	59	504	322	76	161	41	101	76
56	56	62	524	336	78	165	42	104	78
58	58	64	538	342	81	172	44	108	81
60	60	66	549	348	84	177	45	111	84
62	62	68	561	354	87	184	47	115	87
64	64	70	594	380	90	189	48	119	90
66	66	73	606	384	92	195	50	122	92
68	68	75	617	390	95	200	51	125	95
70	70	77	623	396	98	207	53	127	98
72	72	79	639	402	101	212	54	130	101
74	74	81	651	408	104	219	56	133	104
76	76	84	663	412	106	223	57	137	106
78	78	86	675	418	109	230	59	140	109
80	80	88	688	422	111	236	60	144	112
82	82	90	701	426	113	243	62	149	115
85	85	94	718	432	116	251	64	153	119
88	88	97	736	438	119	259	66	158	123
91	91	100	754	446	123	267	68	164	127

MORDEC™ ANCHOR CHAIN & FITTINGS

Buoy Shackle (Type B)



ANCHOR
CHAIN &
FITTINGS

Nominal Dia. d	D1	D2	L	W	N	R	B	S	T
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
38	60	56	375	262	113	29	188	80	53
40	62	58	384	266	118	30	188	83	56
42	63	59	394	268	125	32	188	85	59
44	66	62	401	274	130	33	188	88	62
46	69	64	410	278	136	35	188	90	64
48	72	67	429	294	141	36	200	92	67
50	75	70	440	300	148	38	200	95	70
52	78	73	460	316	153	39	213	98	73
54	81	76	472	322	161	41	213	101	76
56	84	78	491	336	165	42	225	104	78
58	87	81	503	342	172	44	225	108	81
60	90	84	513	348	177	45	225	111	84
62	93	87	525	354	184	47	225	115	87
64	96	90	556	380	189	48	250	119	90
66	99	92	566	384	195	50	250	122	92
68	102	95	576	390	200	51	250	125	95
70	105	98	586	396	207	53	250	127	98
72	108	101	596	402	212	54	250	130	101
74	111	104	607	408	219	56	250	133	104
76	113	106	615	412	223	57	250	137	106
78	116	109	625	418	230	59	250	140	109
80	118	111	635	422	236	60	250	144	112
82	120	113	645	426	243	62	250	149	115
85	123	116	657	432	251	64	250	153	119
88	128	119	671	438	259	66	250	158	123
91	131	123	685	446	267	68	250	164	127

Notes

Lined area for notes.