

# CHAIN & ANCHOR FITTINGS

- DETACHABLE CHAIN CONNECTING LINKS
- KENTER JOINING SHACKLES
- JAW & JAW SWIVEL SHACKLES
- ROUND PIN ANCHOR SHACKLES
- DETACHABLE ANCHOR CONNECTING LINKS
- OVAL PIN JOINING SHACKLES
- PAWL TYPE CHAIN STOPPERS
- PELICAN HOOK CHAIN STOPPER ASSEMBLIES
- DEVIL'S CLAW CHAIN STOPPER ASSEMBLIES
- END SHACKLES
- END LINKS
- SWIVELS
- HINGE LINKS

**We also maintain a large inventory of used and surplus, imported and domestic, anchor chain attachments.**

## **GIVE US A CALL**

**310.522.9698**

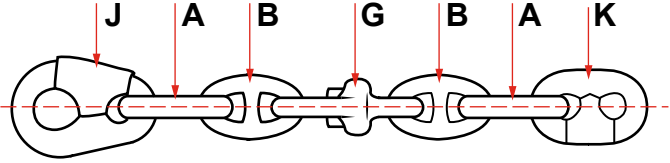
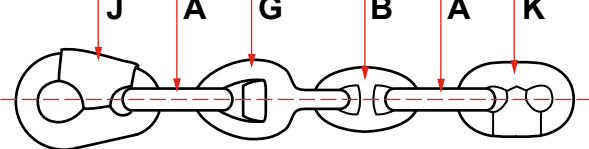
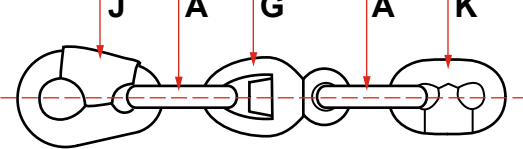
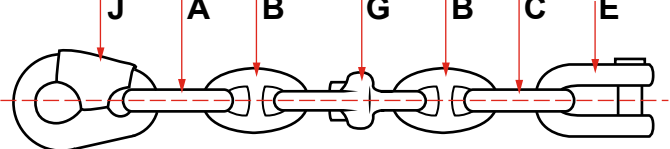
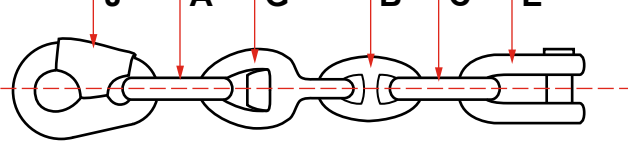
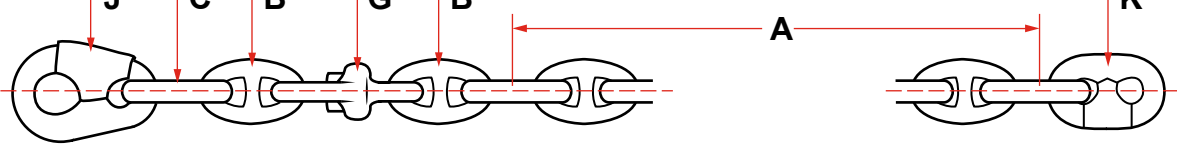
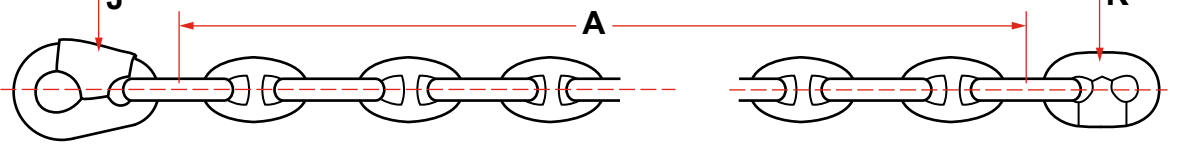
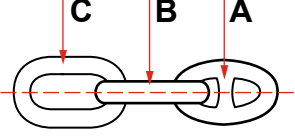
**FAX 310.522.1043**



**COUPLING TO THE ANCHOR**

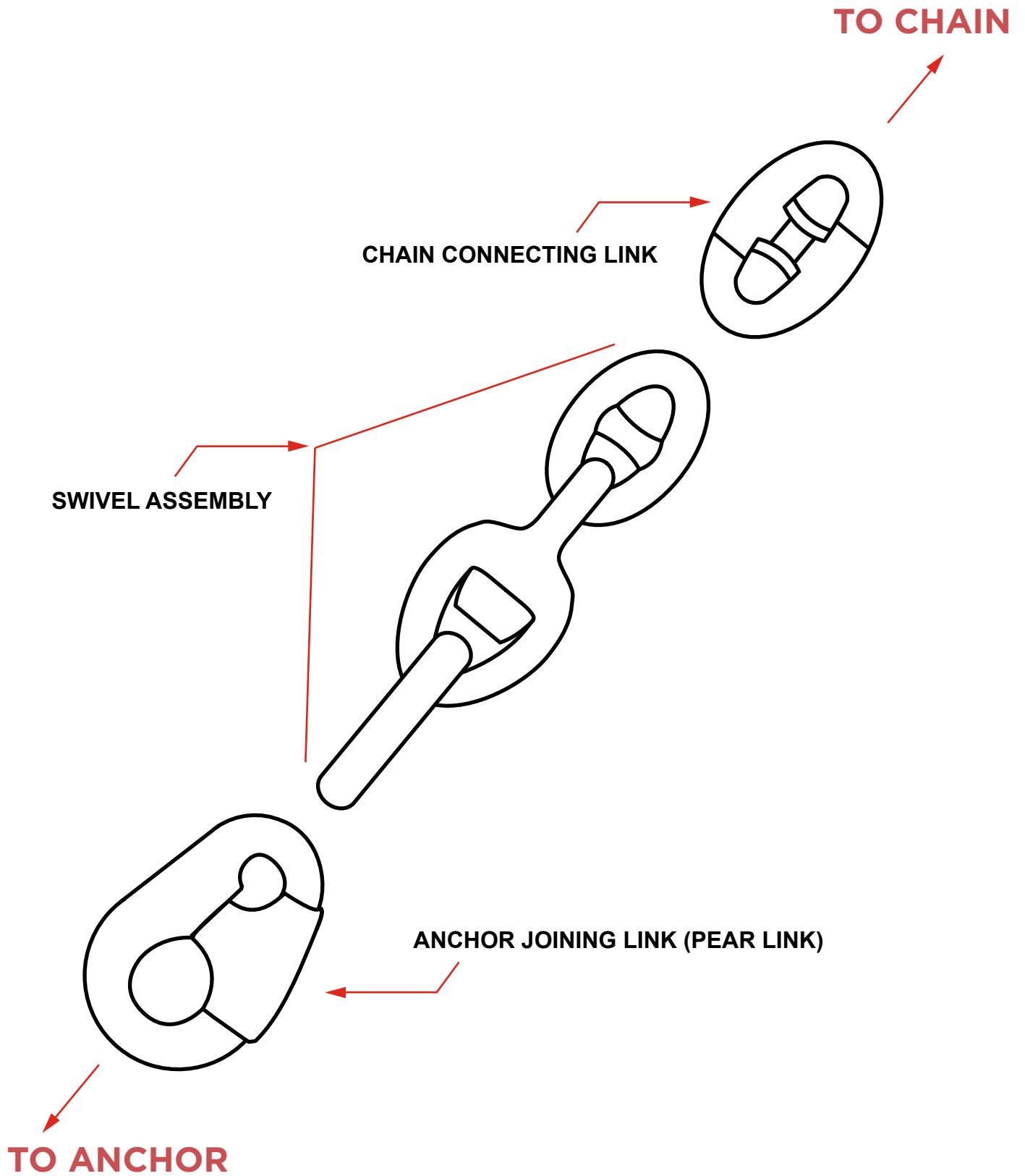
<b>A1</b>		<p>A) COMMON LINK B) ENLARGED LINK C) END LINK D) KENTER LINK E) JOINING SHACKLE F) END SHACKLE G) SWIVEL ASSEMBLY H) JAW &amp; JAW SWIVEL SHACKLE J) PEAR ANCHOR JOINING LINK K) DETACHABLE CONNECTING LINK</p>
<b>A2</b>		
<b>A3</b>		
<b>A4</b>		
<b>A5</b>		
<b>A6</b>		
<b>A7</b>		
<b>A8</b>		

**COUPLING TO THE ANCHOR**

<p><b>A9</b></p>		<p>A) COMMON LINK B) ENLARGED LINK C) END LINK D) KENTER LINK E) JOINING SHACKLE F) END SHACKLE G) SWIVEL ASSEMBLY H) JAW &amp; JAW SWIVEL SHACKLE J) PEAR ANCHOR JOINING LINK K) DETACHABLE CONNECTING LINK</p>
<p><b>A10</b></p>		
<p><b>A11</b></p>		
<p><b>A12</b></p>		
<p><b>A13</b></p>		
<p><b>A14</b></p>		
<p><b>A15</b></p>		
<p><b>A16</b></p>	 <p>Normal adaptor piece</p>	

# COUPLING IN THE CHAIN LOCKER

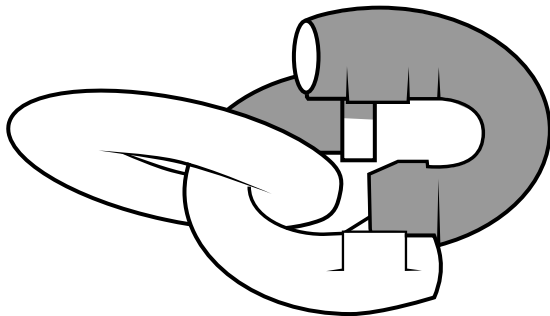
<p>A) COMMON LINK B) ENLARGED LINK C) END LINK D) KENTER LINK E) JOINING SHACKLE F) END SHACKLE G) SWIVEL ASSEMBLY H) JAW &amp; JAW SWIVEL SHACKLE J) PEAR ANCHOR JOINING LINK K) DETACHABLE CONNECTING LINK</p>		<p><b>B1</b></p>
		<p><b>B2</b></p>
		<p><b>B3</b></p>
		<p><b>B4</b></p>
		<p><b>B5</b></p>
		<p><b>B6</b></p>
		<p><b>B7</b></p>



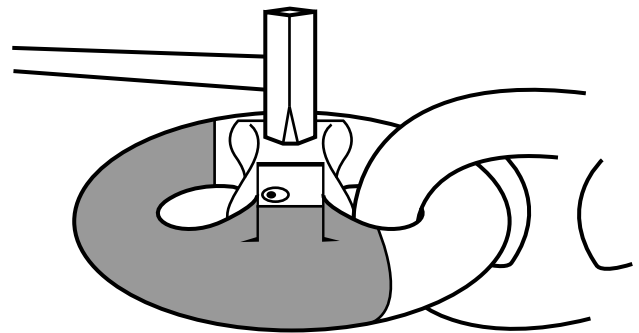
## KENTER JOINING LINK ASSEMBLY

The Kenter-type joining link contains three parts plus taper pin and lead plug. The two main halves have numbers to be matched and arrows to be lined up for ease of assembly with the third piece (stud). The two main parts are attached to the ends of the chain in a vertical position and then fitted together (1), and the stud is then slid into place (2), which locks the link. The stud is secured by hammering a tapered pin into the hole drilled diagonally (3) through all three parts of the joining link. This hole is tapered, and when the pin is driven home, a small conical recess (called the “dovetail chamber”) is left clear above its head. A lead pellet is hammered broad end first into this chamber (4) so as to fill it completely and thereby keep the pin in place. Precaution must be used to prevent flat, small pieces of lead from flying off the joining link into the face or eyes.

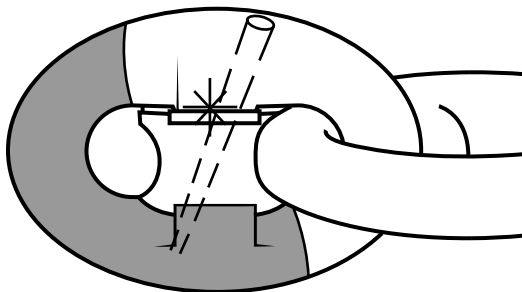
Prior to assembly, the internal mating surfaces should be coated with molybdenum disulphide grease (MIL-G-23529) or an equivalent lithium based grease. When assembling and before inserting the new lead, any remaining lead must be reamed out. When disassembling, the locking pin is driven out with a “drift.” To part the link, a top swage (shaped to the curvature of the link) must always be used between the hammer and link so as to avoid damaging the machined surfaces.



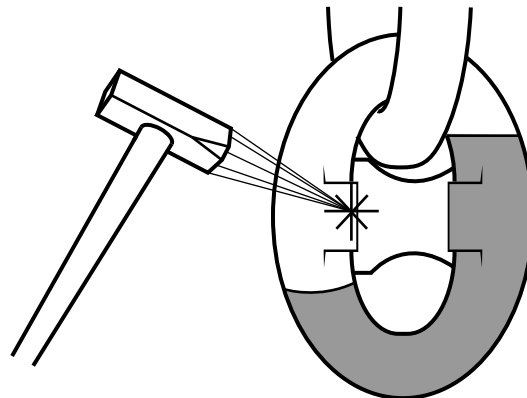
(1) After inserting the first half of the link through chain, the other link is inserted in the other and driven together.



(2) The center stud is inserted.

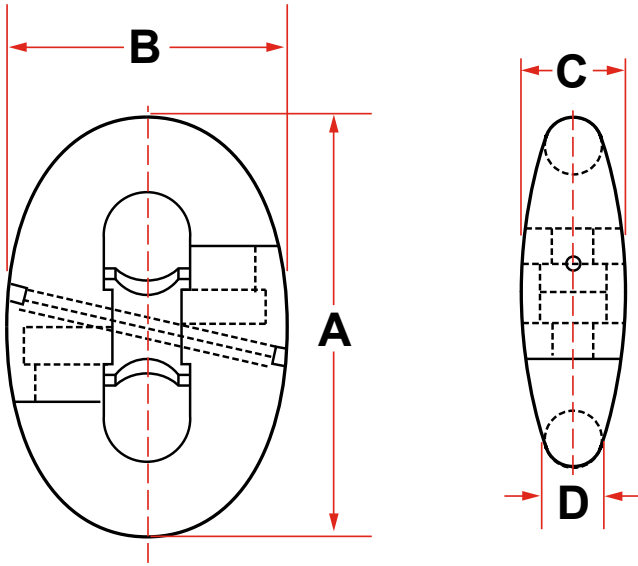


(3) When the center chock is in correct position the taper pin can without a hammer be inserted as shown on the figure which also shows the center chock in correct position.



(4) The taper pin is driven in and is secured by the lead pellet which is inserted into place with a hammer.

**KENTER JOINING SHACKLE**  
**(METRIC)**



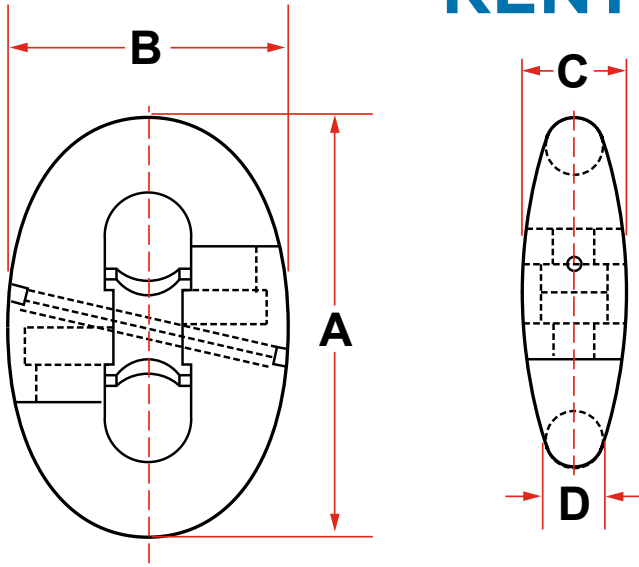
NOMINAL DIAMETER (D)	A	B	C	WEIGHT
mm	mm	mm	mm	kg
12.5	75	53	19	0.45
14	84	59	21	0.6
16	96	67	24	0.65
17.5	105	74	27	0.88
19	114	80	29	1.13
20.5	123	86	31	1.36
22	132	92	33	1.64
24	144	101	36	2.13
26	156	109	40	2.58
28	168	118	43	3.3
30	180	126	46	4.15
32	192	134	49	5.06
34	204	143	52	6.01
36	216	151	55	6.89
38	228	160	58	8.4
40	240	168	61	9.63
42	252	176	64	11
44	264	185	67	12.45
46	276	193	70	14.1
48	288	202	73	16.7
50	300	210	76	19
52	312	218	79	20.3
54	324	227	82	23.7
56	336	235	85	26.7

Continued

NOMINAL DIAMETER (D)	A	B	C	WEIGHT
mm	mm	mm	mm	kg
58	348	244	88	27.2
60	360	252	91	27.7
62	372	260	94	35
64	384	269	97	38.4
66	396	277	100	42.3
68	408	286	103	46
70	420	294	106	48.7
73	438	307	111	53
76	456	319	116	60.7
78	468	328	119	65.5
81	486	340	123	75
84	504	353	128	90
87	522	365	132	96
90	540	378	137	108
92	552	386	140	114
95	570	399	144	128
97	582	407	147	133
100	600	420	152	146
102	612	428	155	158
105	630	441	160	160
107	642	449	163	180
111	666	466	169	198
114	684	479	173	204

Loads match that of same diameter SLAC.

## KENTER JOINING SHACKLE (IMPERIAL)



NOMINAL DIAMETER (D)	A	B	C	WEIGHT
In	In	In	In	Lbs
1/2	3.0	2.1	0.8	1.0
9/16	3.4	2.4	0.9	1.3
5/8	3.8	2.6	1.0	1.4
11/16	4.1	2.9	1.0	1.9
3/4	4.5	3.2	1.1	2.4
13/16	4.9	3.4	1.2	2.9
7/8	5.3	3.7	1.3	3.5
15/16	5.6	3.9	1.4	4.6
1	6.0	4.2	1.5	5.7
1 1/16	6.4	4.5	1.6	6.6
1 1/8	6.8	4.7	1.7	7.7
1 3/16	7.1	5.0	1.8	9.2
1 1/4	7.5	5.3	1.9	10.6
1 5/16	7.9	5.5	2.0	12.8
1 3/8	8.3	5.8	2.1	14.3
1 7/16	8.6	6.0	2.2	16.5
1 1/2	9.0	6.3	2.3	18.5
1 9/16	9.4	6.6	2.4	21.0
1 5/8	9.8	6.8	2.5	24.2
1 11/16	10.1	7.1	2.6	27.1
1 3/4	10.5	7.4	2.7	29.8
1 13/16	10.9	7.6	2.8	33.0
1 7/8	11.3	7.9	2.9	36.4
1 15/16	11.6	8.1	2.9	39.7
2	12.0	8.4	3.0	45.2
2 1/16	12.4	8.7	3.1	49.2
2 1/8	12.8	8.9	3.2	53.4
2 3/16	13.1	9.2	3.3	58.0
2 1/4	13.5	9.5	3.4	62.8
2 5/16	13.9	9.7	3.5	67.9

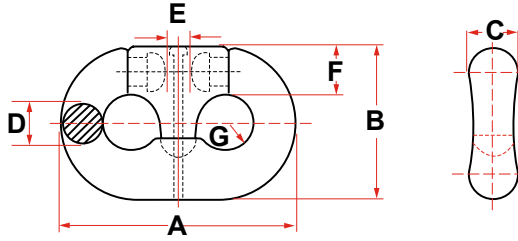
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NOMINAL DIAMETER (D)	A	B	C	WEIGHT
In	In	In	In	Lbs
2 3/8	14.3	10.0	3.6	75.0
2 7/16	14.6	10.2	3.7	80.9
2 1/2	15.0	10.5	3.8	86.8
2 9/16	15.4	10.8	3.9	93.3
2 5/8	15.8	11.0	4.0	99.9
2 11/16	16.1	11.3	4.1	107
2 3/4	16.5	11.6	4.2	114
2 13/16	16.9	11.8	4.3	124
2 7/8	17.3	12.1	4.4	132
2 15/16	17.6	12.3	4.5	140
3	18.0	12.6	4.6	149
3 1/16	18.4	12.9	4.7	158
3 1/8	18.8	13.1	4.8	170
3 3/16	19.1	13.4	4.8	180
3 1/4	19.5	13.7	4.9	191
3 5/16	19.9	13.9	5.0	201
3 3/8	20.3	14.2	5.1	215
3 7/16	20.6	14.4	5.2	227
3 1/2	21.0	14.7	5.3	238
3 9/16	21.4	15.0	5.4	251
3 5/8	21.8	15.2	5.5	262
3 3/4	22.5	15.8	5.7	289
3 7/8	23.3	16.3	5.9	324
3 15/16	23.6	16.5	6.0	340
4	24.0	16.8	6.1	355
4 1/8	7.5	5.3	1.9	395
4 1/4	25.5	17.9	6.5	428
4 3/8	26.3	18.4	6.7	465
4 1/2	27.0	18.9	6.8	509

Loads match that of same diameter SLAC.



## DETACHABLE CHAIN CONNECTING LINK

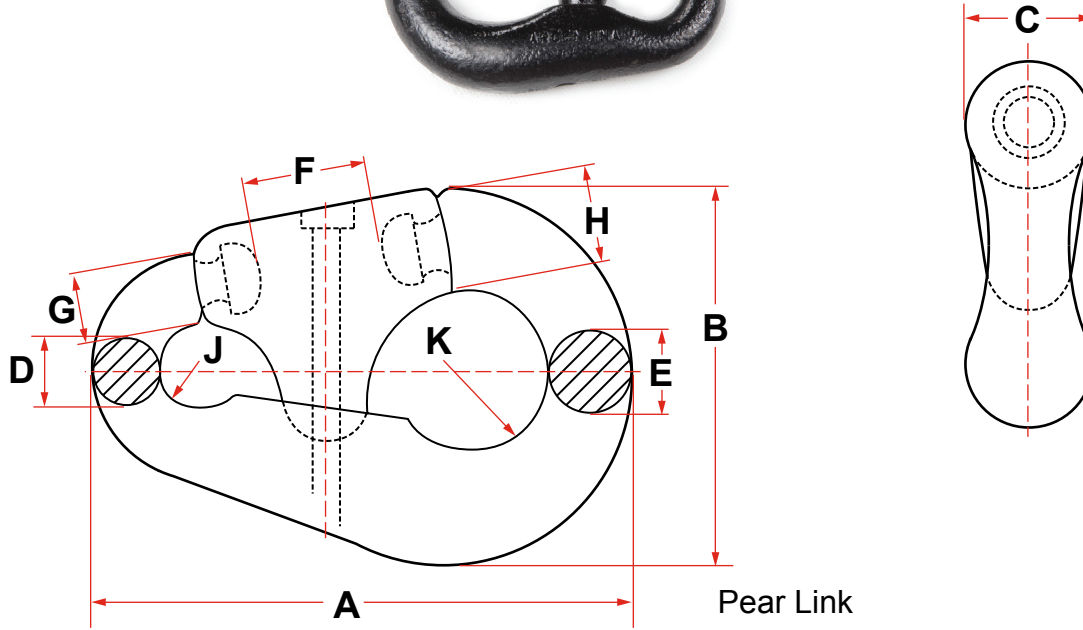


**GRADE 3**

CHAIN SIZE		A	B	C	D	E	F	G	WEIGHT		PROOF TEST	BREAK TEST
MM	INCHES	MM	MM	MM	MM	MM	MM	MM	KG.	LBS.	KGf	KGf
13 - 16	1/2 - 5/8	95	63	22	16	19	21	12	0.5	1.0	14651	23668
19	3/4	114	74	24	19	22	24	13	1.0	2.0	21771	34020
21 - 22	13/16 - 7/8	133	86	28	22	25	28	16	1.5	3.5	29030	44452
24 - 25	15/16 - 1	152	102	35	25	29	31	17	2.3	5.1	38000	54300
27 - 29	1-1/16 - 1-1/8	172	114	40	29	32	35	19	3.3	7.3	49200	70400
30 - 32	1-3/16 - 1-1/4	191	127	44	32	36	39	21	4.6	10.1	59500	84900
33 - 35	1-5/16 - 1-3/8	210	140	48	35	40	43	23	6.2	13.7	70700	101300
36 - 38	1-7/16 - 1-1/2	229	152	53	38	43	47	26	7.9	17.4	83300	118900
40 - 42	1-9/16 - 1-5/8	248	165	57	42	47	50	28	10.0	22.0	102000	143400
43 - 44	1-11/16 - 1-3/4	267	178	62	44	50	56	30	12.5	27.6	111900	159900
46 - 48	1-13/16 - 1-7/8	286	191	64	48	55	60	32	14.5	32.0	130000	185100
50 - 51	1-15/16 - 2	305	197	64	51	59	64	34	16.3	35.9	145400	207700
52 - 54	2-1/16 - 2-1/8	324	209	67	54	63	68	36	20.0	44.1	162000	231500
56 - 58	2-3/16 - 2-1/4	343	222	71	58	66	71	38	23.6	52.0	185400	265000
59 - 60	2-5/16 - 2-3/8	364	235	78	60	70	76	41	28.0	61.7	199600	285200
62 - 64	2-7/16 - 2-1/2	381	246	79	64	74	79	43	32.2	71.0	223000	319000
66 - 67	2-9/16 - 2-5/8	400	259	83	67	77	83	45	37.0	81.6	242900	347000
68 - 70	2-11/16 - 2-3/4	419	271	87	70	81	87	47	45.0	99.2	263500	376400
71 - 73	2-13/16 - 2-7/8	438	283	91	73	85	91	49	49.0	108.0	285000	407000
75 - 76	2-15/16 - 3	457	296	95	76	88	95	51	55.0	121.0	308200	440200
78 - 79	3-1/16 - 3-1/8	476	308	99	79	92	99	53	63.0	139.0	332100	474500
81 - 83	3-3/16 - 3-1/4	495	320	103	83	96	103	55	73.0	161.0	360400	514800
84 - 86	3-5/16 - 3-3/8	514	333	107	86	99	107	57	80.0	176.0	384400	549100
87 - 89	3-7/16 - 3-1/2	533	345	111	89	103	111	60	93.0	205.0	409000	584300
90 - 92	3-9/16 - 3-5/8	553	357	115	92	107	115	62	97.6	215.0	434800	621200
94 - 95	3-11/16 - 3-3/4	572	370	119	95	111	119	64	116.2	256.0	462300	660100
97 - 98	3-13/16 - 3-7/8	591	382	128	98	114	123	66	123.0	271.0	490000	700000
100 - 102	3-15/16 - 4	610	394	132	102	118	127	68	131.0	289.0	522100	746000
105	4-1/8	629	419	147	105	127	132	70	175.0	386.0	550000	785000
111	4-3/8	667	456	167	111	138	140	75	208.0	459.0	607000	867200
114	4-1/2	686	480	190	114	147	144	77	227.0	500.0	637300	910900

To convert to lbs., multiply by 2.2046

# PEAR SHAPED ANCHOR JOINING LINK



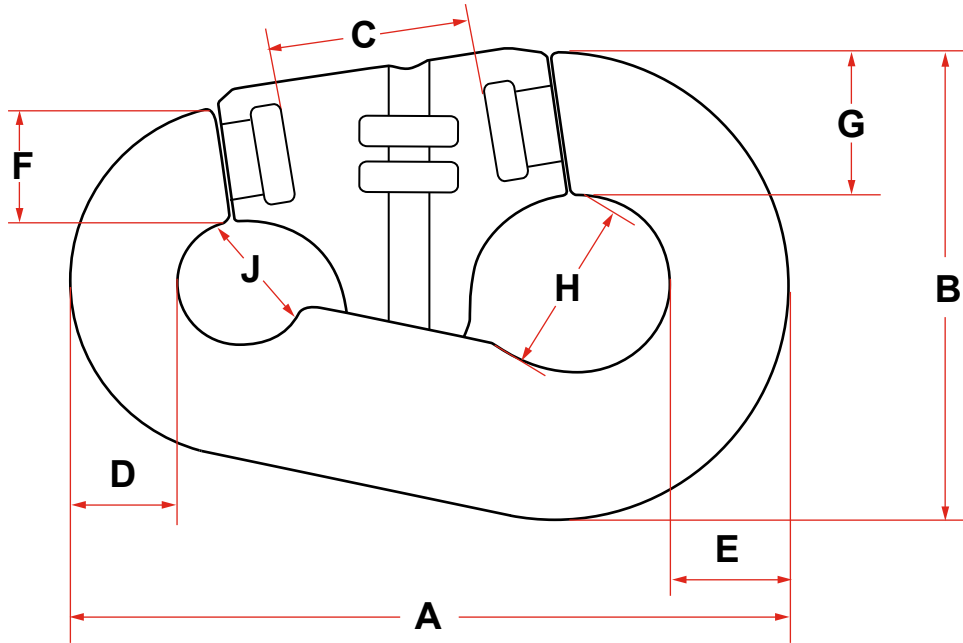
Pear Link

## GRADE 3

No.	CHAIN SIZE		A	B	C	D	E	F	G	H	J	K	WEIGHT		PROOF TEST	BREAK TEST
	MM	INCHES	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	KG	LBS	KGf	KGf
2	19-24	3/4 - 15/16	194	132	38	24	32	57	24	35	17	30	3.6	8	34000	48500
3	25-30	1 - 1-3/16	238	167	46	30	38	66	33	45	19	35	6.5	14	53000	75700
4	32-40	1-1/4 - 1-9/16	299	206	59	40	48	83	40x45	56	26	43	14.5	32	91400	131000
5	42-51	1-5/8 - 2	378	260	76	51	64	100	51x60	74	32	52	27.0	60	145400	207700
6	52-60	2-1/16 - 2-3/8	454	313	92	60	76	121	62x73	88	37	64	49.0	107	199600	285200
7	62-79	2-7/16 - 3-1/8	562	376	121	79	95	149	86x79	111	48	76	92.0	203	332100	474500
8	81-92	3-3/16 - 3-5/8	654	419	133	92	124	149	111x102	130x133	54	79	149.0	328	434800	621200
9	94-95	3-11/6 - 3-3/4	692	435	146	98	130	159	124x137	141	57	83	236.0	520	462300	660100
10	97-102	3-13/16 - 4	889	572	191	121	165	191	130x148	181	73	108	386.0	850	522100	746000
11	103-108	4-1/16 - 4-1/4	940	610	203	127	175	203	156	200	76	111	418.0	920	577000	825000
12	110-114	4-5/16 - 4-1/2	991	648	216	133	184	216	165x167	210x200	105	114	459.0	1010	637300	910900

To convert to lbs., multiply by 2.2046

## PEAR SHAPED ANCHOR JOINING LINKS GRADE ORQ & R4



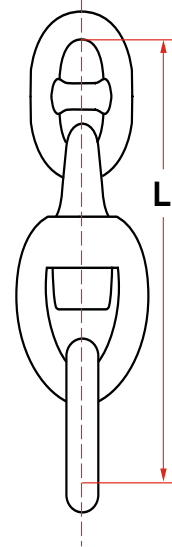
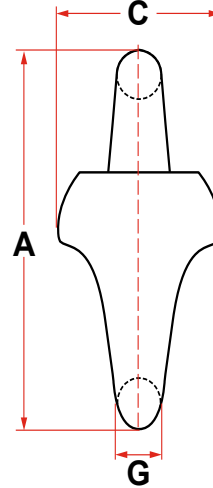
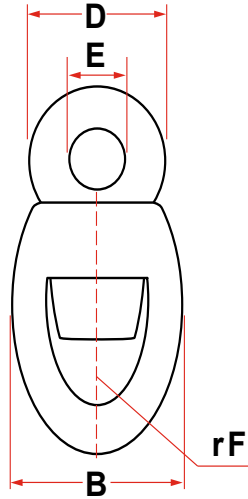
NO.	CHAIN SIZE (MM)	DIMENSIONS (MM)								
		A	B	C	D	E	F	G	H	J
4	32 - 40	298	207	89	41	50	45	60	83	52
5	42 - 51	380	264	100	52	65	60	84	109	65
6	52 - 60	480	337	125	66	83	81	103	142	86
7	62 - 79	570	370	155	85	96	92	113	140	98
8	81 - 92	655	430	162	99	129	119	131	162	115
10	97 - 102	900	580	192	127	168	151	181	207	150

NO.	GRADE R4		GRADE ORQ	
	PROOF LOAD (KN)	BREAK LOAD (KN)	PROOF LOAD (KN)	BREAK LOAD (KN)
4	1410	1789	914	1377
5	2243	2845	1454	2191
6	3048	3867	1976	2978
7	5079	6443	3292	4962
8	6699	8497	4342	6544
9	7096	9001	4599	6932
10	8054	10217	5220	7868

To convert to lbs., multiply by 225

# SWIVEL FORERUNNER (2-LINK)

## ABS CERTIFICATES



### GRADE 3

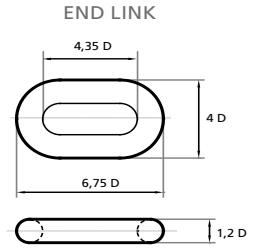
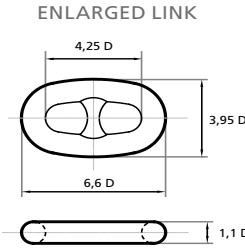
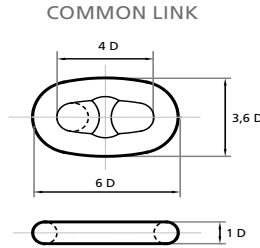
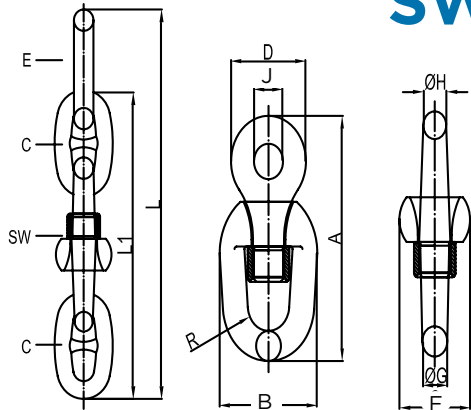
CHAIN SIZE		A	B	C	D	E	F	G	L	WEIGHT (C+SW+C)		PROOF TEST	BREAK TEST
mm	Inches	mm	mm	mm	mm	mm	mm	mm	mm	kg	Lbs	KGF	KGF
30-35	1-3/16 - 1-3/8	290	160	124	116	46	25	36	499	21.0	46.3	70700	101300
36-42	1-7/16 - 1-5/8	373	202	146	145	63	32	46	622	39.5	87.1	102000	143400
43-48	1-11/16 - 1-7/8	430	230	165	183	73	36	50	709	66.0	145.5	130000	185100
49-58	1-15/16 - 2-1/4	516	278	200	212	84	39	65	851	104.0	229.3	185400	265000
59-67	2-5/16 - 2-5/8	575	307	230	235	93	46	68	972	142.0	313.1	242900	347000
68-73	2-11/16 - 2-7/8	650	345	260	256	102	50	79	1078	208.0	458.6	285000	407000
75-79	2-15/16 - 3-1/8	757	370	325	281	109	52	94	1209	276.0	608.5	332100	474500
81-86	3-3/16 - 3-3/8	760	420	372	310	122	57	95	1260	336.0	740.8	384400	549100
87-92	3-7/16 - 3-5/8	800	430	390	320	130	60	98	1343	376.0	828.9	434800	621200
94-98	3-11/16 - 3-7/8	882	460	433	354	142	66	118	1442	557.0	1228.0	490000	700000
100-102	3-15/16 - 4	918	480	448	368	148	69	122	1502	612.0	1349.0	522100	746000
105-111	4-1/8 - 4-3/8	1000	530	478	400	160	74	133	1635	797.0	1757.0	607000	867200
114	4-1/2	1026	542	490	417	165	76	137	1675	871.0	1920.0	637300	910900

To convert load to lbs., multiply by 2.2046

Cast Steel  
Made in Argentina

## SWIVEL FORERUNNER (3-LINK)

### ABS CERTIFICATES

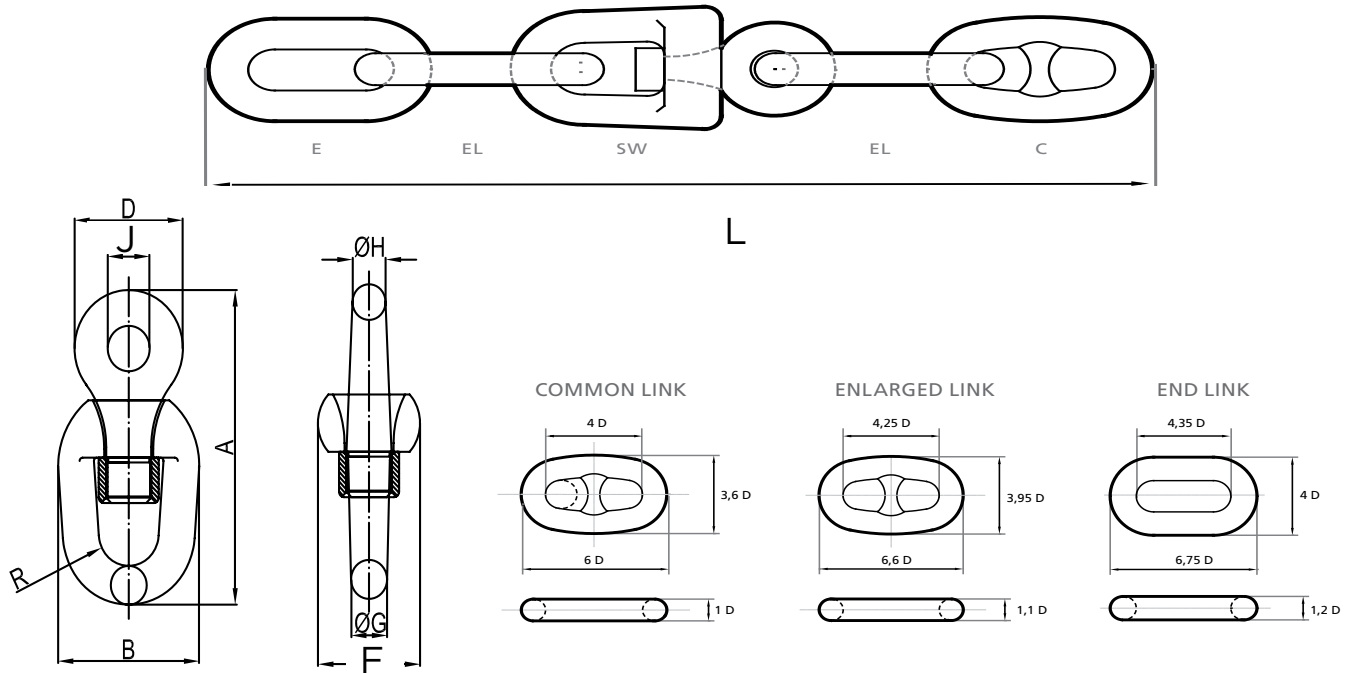


NOMINAL SIZE		A	B	D	J	R	F	G	H	L	L1	APPROX WEIGHT(L)	
Inches	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	KG	LBS
1/2	12.5	121	59	44.8	18	13	43	15	13.5	274	218	1.8	3.9
9/16	14	136	66	50.2	20	14	48	17	15.1	307	244	2.5	5.6
5/8	16	155	75	57.3	23	16	55	19	17	351	278	3.6	7.9
11/16	17.5	170	82	62.7	25	18	60	21	18.9	384	305	4.7	10
3/4	19	184	89	68.1	27	19	65	23	20.5	417	331	5.8	13
7/8	22	214	104	78.8	31	22	75	27	23.8	483	383	7.2	16
15/16	24	233	113	86	34	24	82	29	26	527	418	9.0	20
1	26	252	122	93.2	37	26	89	31	28.1	571	452	12	26
1-1/8	28	272	132	100	40	28	96	34	30.3	615	487	15	32
1-3/8	30	291	141	108	43	30	103	36	32.5	659	522	18	39
1-1/4	32	310	151	115	45	32	109	39	34.6	702	557	21	46
1-5/16	34	330	160	122	48	34	116	41	36.8	746	592	25	56
1-3/8	36	349	170	129	51	36	123	44	39	790	626	31	67
1-1/2	38	369	179	136	54	38	130	46	41.1	834	661	35	77
1-5/8	42	407	198	151	60	42	144	51	45.5	922	731	48	106
1-3/4	44	427	207	158	62	44	150	53	47.6	966	766	54	118
1-7/8	48	466	226	172	68	48	164	58	52	1054	835	71	156
2	52	504	245	186	74	52	178	63	56.3	1141	905	89	197
2-1/8	54	524	254	194	77	54	185	65	58.5	1185	940	100	219
2-1/4	58	563	273	208	82	58	198	70	62.8	1273	1009	126	277
2-3/8	60	582	283	215	85	60	205	73	65	1317	1044	140	308
2-1/2	64	621	301	229	91	64	219	77	69.3	1405	1114	163	359
2-5/8	68	660	320	244	96	68	232	82	73.6	1493	1183	196	432
2-3/4	70	679	330	251	99	70	239	85	75.8	1537	1218	214	471
2-7/8	73	708	344	262	103	73	249	88	79.0	1602	1270	245	541
3	76	737	358	272	108	76	260	92	82.3	1668	1322	279	615
3-1/16	78	757	367	280	111	78	267	94	84.5	1712	1357	302	666
3-1/8	79	766	372	283	112	79	270	95	85.5	1734	1375	315	694
3-1/4	84	815	396	301	119	84	287	102	91	1844	1462	380	838
3-5/8	92	892	433	330	130	92	314	111	99.6	2019	1601	495	1091
4	102	989	480	366	145	102	349	123	110.5	2239	1775	669	1476

Loads match that of same diameter SLAC. Intermediate sizes will fit the next size up. Alternate configurations and specific sizes are available upon request. Exact dimensions may vary.

1/2" - 15/16" Available in Grade 2.  
3/4" and up available in Grade 3.

## SWIVEL FORERUNNER (4-LINK) ABS CERTIFICATES

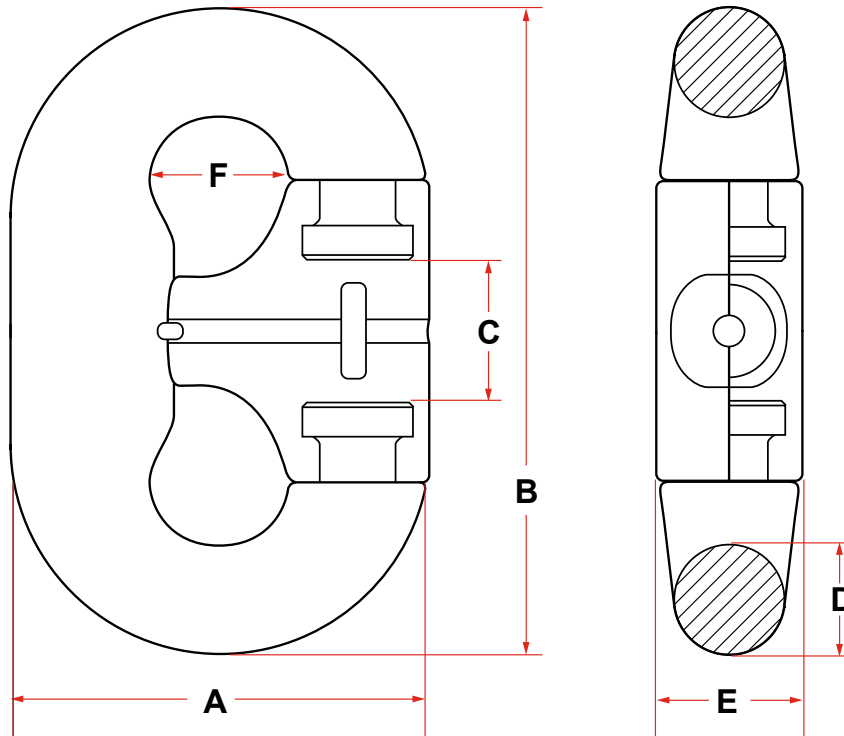


NOMINAL SIZE	A	B	D	J	R	F	G	H	L	APPROX WEIGHT	GRADE 2		GRADE 3	
											PROOF LOAD	BREAKING LOAD	PROOF LOAD	BREAKING LOAD
In	In	In	In	In	In	In	In	In	In	Lbs	Lbf	Lbf	Lbf	Lbf
1/2	4.9	2.4	1.8	0.7	0.5	1.7	0.6	0.6	13.2	4	15300	21400	21400	30600
9/16	5.5	2.6	2.0	0.8	0.6	1.9	0.7	0.6	14.9	6	19300	27000	27000	38600
5/8	6.1	2.9	2.3	0.9	0.6	2.1	0.8	0.7	16.5	8	23700	33200	33200	47500
11/16	6.7	3.2	2.5	1.0	0.7	2.3	0.8	0.8	18.2	10	28600	40100	40100	57300
3/4	7.3	3.5	2.7	1.1	0.8	2.6	0.9	0.8	19.8	13	34000	47600	47600	68000
7/8	8.5	4.1	3.0	3.2	1.2	0.9	1.1	1.0	23.1	18	46000	64400	64400	91800

1/2" - 15/16" Available in Grade 2.  
 3/4" and up available in Grade 3.  
 Loads match that of same diameter SLAC.  
 Intermediated sizes will fit the next size up. Alternate configurations and specific sizes are available upon request. Exact dimensions may vary.

# C-TYPE CHAIN CONNECTING LINK

## GRADE R4

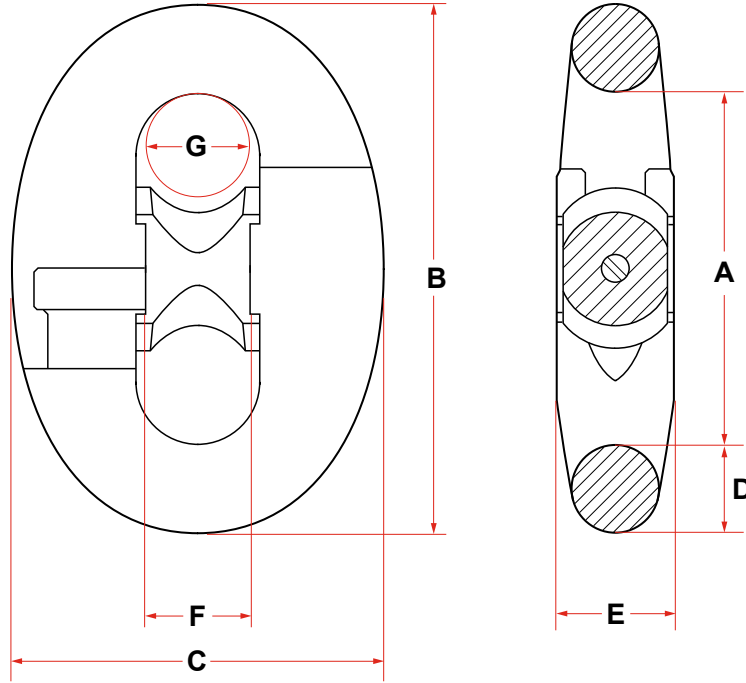


CHAIN SIZE	NOMINAL DIA	GRADE	PL (KN)	BL (KN)	DIMENSIONS (MM)						WEIGHT (KG)
					A	B	C	D	E	F	
52-54	54	R4	2500	3171	216	324	70	54	76	59	20
62-64	64	R4	3440	4364	256	384	83	64	89	70	30
68-70	70	R4	4064	5156	280	420	91	70	98	77	46
74-76	76	R4	4731	6001	304	456	99	76	106	84	62
83-86	83	R4	5559	7052	344	516	111	86	120	95	81
87-89	89	R4	6310	8004	356	534	116	89	125	98	93
95-96	95	R4	7231	9172	384	576	125	96	134	106	116

All measurements may vary slightly due to production but shall be within allowable tolerances to class society specifications.

# KENTER JOINING SHACKLE

## GRADE R4



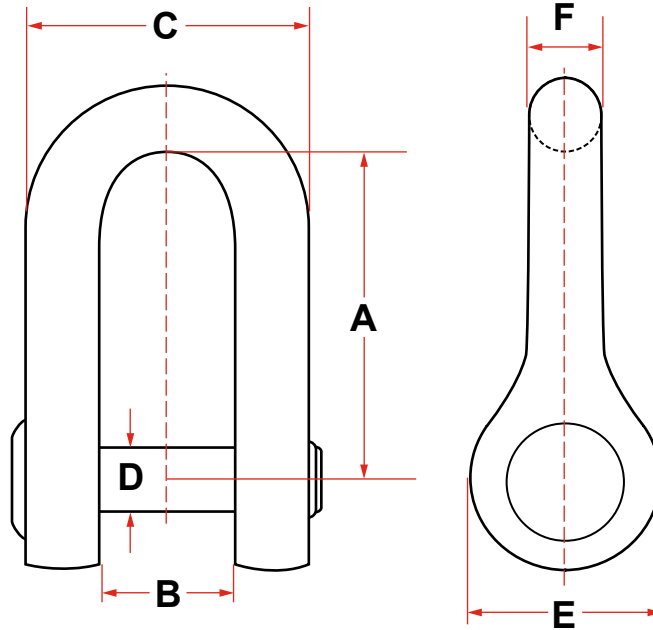
CHAIN SIZE	PL (kN)	BL (kN)	DIMENSIONS (MM)							WEIGHT (KG)
			A	B	C	D	E	F	G	
70	4064	5156	280	420	294	70	106	81	77	58
76	4731	6001	304	456	319	76	116	87	84	67
84	5682	7208	336	504	353	84	128	97	92	88
89	6310	8004	356	534	374	89	135	102	98	99
95	7096	9001	380	570	399	95	144	109	105	150
102	8054	10217	408	612	428	102	155	117	112	168
105	8478	10754	420	630	441	105	160	121	116	175
108	8909	11301	432	648	454	108	164	124	119	193
114	9791	12420	456	684	479	114	173	131	125	205
117	10242	12993	468	702	491	117	178	135	129	219
120	10700	13573	480	720	504	120	182	138	132	241
127	11789	14955	508	762	533	127	193	146	140	280
133	12746	16169	532	798	559	133	202	153	146	322
146	14881	18877	584	876	613	146	222	168	161	425
152	15890	20156	608	912	638	152	231	175	167	480

Tolerances on Forged Surfaces +/- 2.5% - Tolerances on Machined Surfaces + / - 1% - Tolerances on Crown Area +5% / -0%



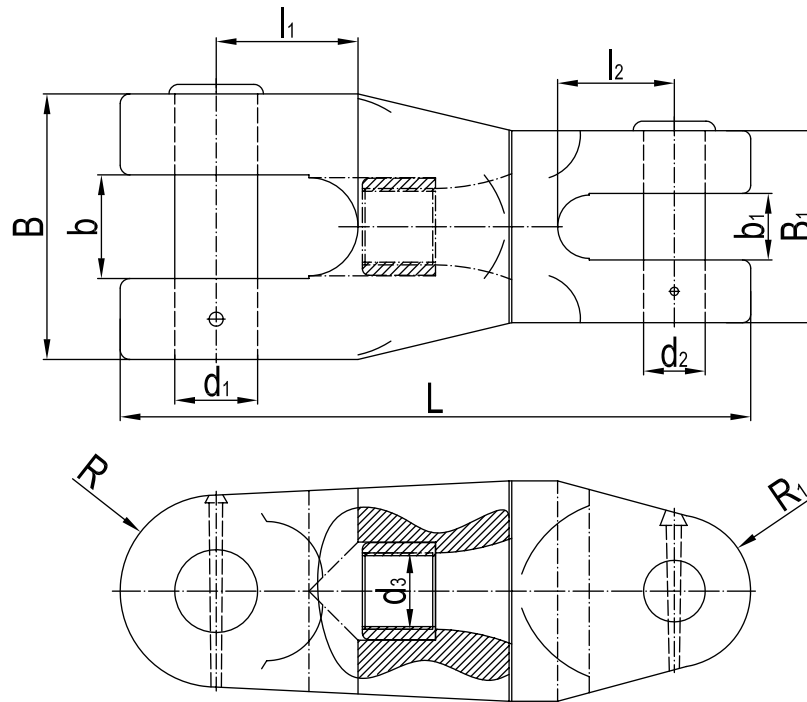
# CROWN ANCHOR SHACKLE

## WITH ABS CERTIFICATION



SHACKLE SIZE		A (MM)	B (MM)	C (MM)	D (MM)	E (MM)	F (MM)	WEIGHT		PROOF LOAD (LBS)
MM	INCHES							KG	LBS.	
51	2	254.0	88.9	190.5	50.8	136.0	50.8	20	44	54,500
64	2-1/2	304.8	111.1	238.1	63.5	168.0	63.5	50	110	90,700
76	3	355.6	152	304	76.2	200.0	76.2	80	176	145,000
89	3-1/2	406.4	165.1	342.9	88.9	230.0	88.9	120	265	165,600
102	4	482.6	194.2	387.4	101.6	265.0	101.6	170	375	230,000
114	4-1/2	558.8	203.2	431.8	114.3	300.0	114.3	240	529	282,500

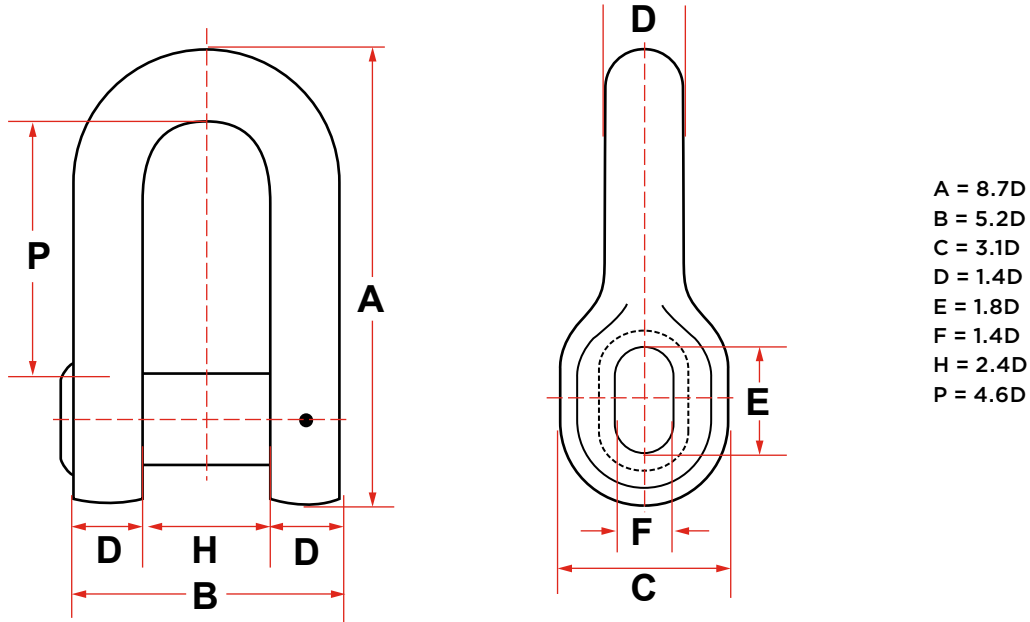
## JAW & JAW SWIVEL SHACKLES TYPE A



CHAIN NOMINAL SIZE	APPLY SIZE	DIMENSIONS (MM)												WEIGHT (KG)
		L	B	B1	B	B1	R	R1	D3	D1	D2	I1	I2	
24	22,24	307	138	96	80	34	48	38	M36	60	31	70	62	18
28	26,28	372	157	116	84	39	58	47	M42	68	36	87	73	38
32	30,32	423	180	124	96	45	62	53	M52	78	42	101	73	91
38	34,36,38	482	213	148	104	53	74	58	M56	82	49	115	94	107
42	40,42	546	235	164	115	59	82	66	M64	90	55	131	106	115
48	44,46,48	615	269	196	125	67	98	75	M76	98	62	145	118	139
52	50,52	712	314	218	130	73	109	88	M90	107	68	168	135	264
56	54,56	712	314	218	138	78	109	88	M90	110	73	168	135	270
62	58,60,62	787	348	252	149	88	126	100	M100	118	82	185	152	294
68	64,66,68	868	380	265	166	95	136	106	M110	128	88	200	150	403
76	70,73,76	965	426	304	168	106	152	120	M120	135	100	225	184	464
81	78,81	1,042	454	328	178	113	164	130	M130	145	105	240	183	749
87	84,87	1,118	487	352	190	122	176	140	M140	152	113	260	214	931
95	90,92,95	1,206	532	380	200	133	190	152	M150	160	124	280	231	1,191
102	100,102	1,308	571	412	220	143	206	164	M165	168	133	300	253	1,464

## D-TYPE ANCHOR SHACKLE

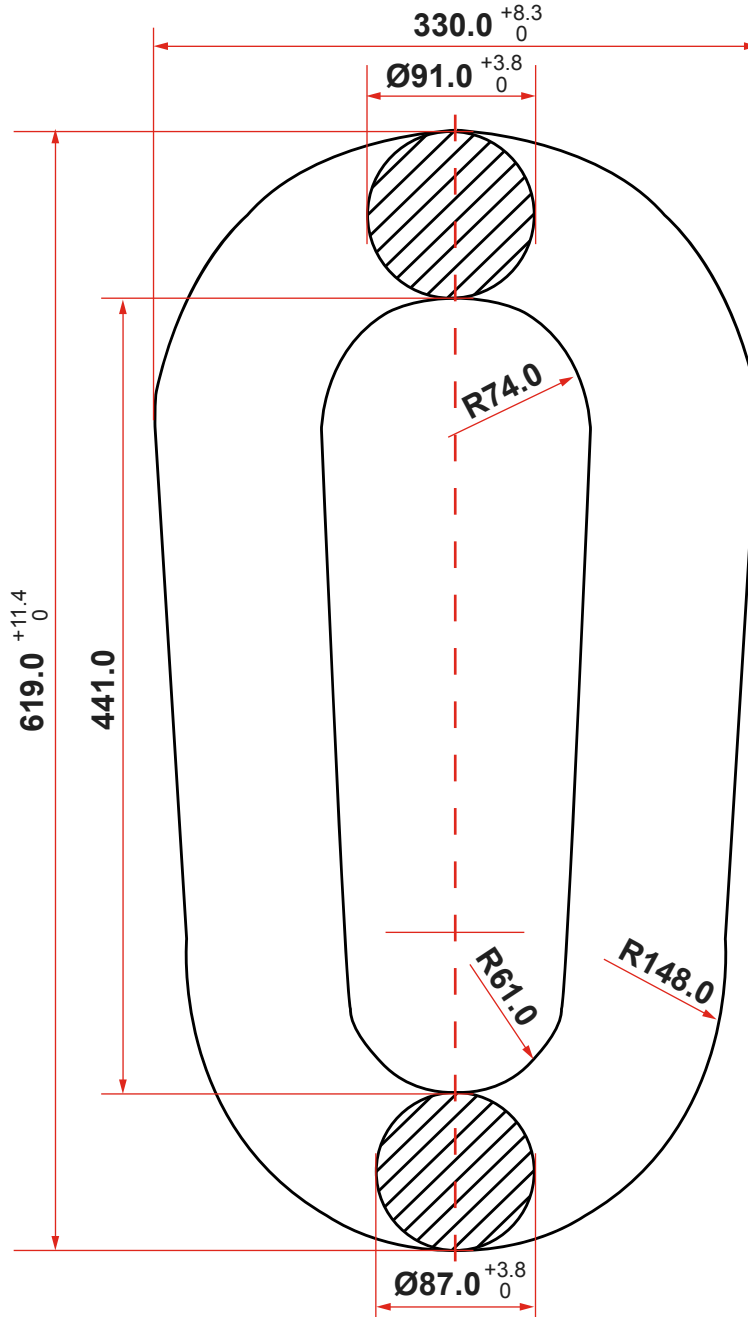
All figures are factors which have to be multiplied with the nominal chain diameter.



SIZE		DIMENSIONS (INCHES)								WEIGHT	
INCHES	MM	A	B	C	D	E	F	H	P	LBS	KG
3/4	19	6-1/2	3-7/8	2-3/8	1	1-3/8	1	1-3/4	3-1/2	5.5	2.5
7/8	22	7-5/8	4-1/2	2-3/4	1-1/4	1-5/8	1-1/4	2-1/8	4	8.4	3.8
1	25	8-3/4	5-1/4	3-1/8	1-3/8	1-3/4	1-3/8	2-3/8	4-5/8	13.2	6
1-1/8	29	9-3/4	5-7/8	3-1/2	1-5/8	2	1-5/8	2-3/4	5-1/8	18.5	8.4
1-1/4	32	10-7/8	6-1/2	3-7/8	1-3/4	2-1/4	1-3/4	3	5-3/4	24.9	11.3
1-3/8	35	12	7-1/8	4-1/4	1-7/8	2-1/2	1-7/8	3-1/4	6-3/8	34.2	15.5
1-1/2	38	13	7-3/4	4-5/8	2-1/8	2-3/4	2-1/8	3-5/8	6-7/8	43.7	19.8
1-5/8	41	14-1/8	8-1/2	5	2-1/4	2-7/8	2-1/4	3-7/8	7-1/2	56.9	25.8
1-3/4	44	15-1/4	9-1/8	5-3/8	2-1/2	3-1/8	2-1/2	4-1/4	8	70.3	31.9
1-7/8	48	16-3/8	9-3/4	5-7/8	2-5/8	3-3/8	2-5/8	4-1/2	8-5/8	85.5	38.8
2	51	17-3/8	10-3/8	6-1/4	2-3/4	3-5/8	2-3/4	4-3/4	9-1/4	105.8	48
2-1/8	54	18-1/2	11	6-5/8	3	3-7/8	3	5-1/8	9-3/4	125.7	57
2-1/4	57	19-5/8	11-3/4	7	3-1/8	4	3-1/8	5-3/8	10-3/8	147.7	67
2-3/8	60	20-5/8	12-3/8	7-3/8	3-3/8	4-1/4	3-3/8	5-3/4	10-7/8	176.6	80.1
2-1/2	64	21-3/4	13	7-3/4	3-1/2	4-1/2	3-1/2	6	11-1/2	204.1	92.6
2-5/8	67	22-7/8	13-5/8	8-1/8	3-5/8	4-3/4	3-5/8	6-1/4	12-1/8	234.6	106.4
2-3/4	70	23-7/8	14-1/4	8-1/2	3-7/8	5	3-7/8	6-5/8	12-5/8	267.6	121.4
2-7/8	73	25	15	8-7/8	4	5-1/8	4	6-7/8	13-1/4	310.2	140.7
3	76	26-1/8	15-5/8	9-1/4	4-1/4	5-3/8	4-1/4	7-1/4	13-3/4	350.5	159

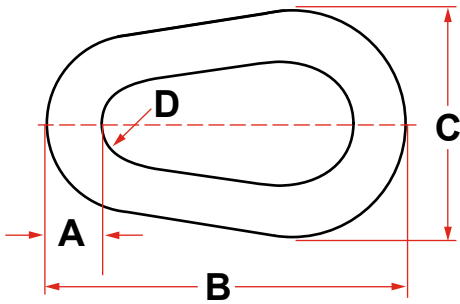
Approximate dimensions shown. Contact us for specific dimensions, as they may differ between manufacturers.

**76MM PEAR SHAPED RING  
 WITH ABS CERTIFICATION**



- Notes:
- 1. Weight            160lbs
  - 2. Proof Load     3066.4 kN
  - 3. Break Load     4621.4 kN

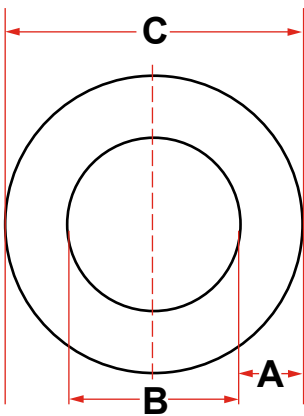
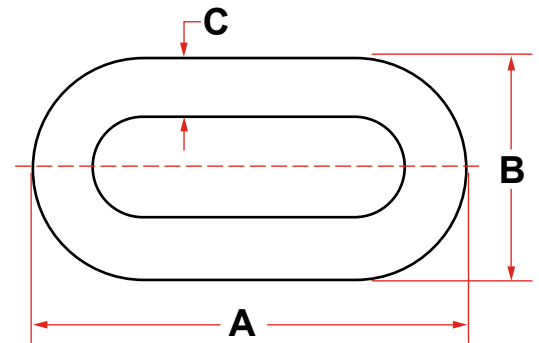
## PEAR RING



CHAIN SIZE		DIMENSIONS								WEIGHT	
		INCHES				MM					
MM	INCHES	A	B	C	D	A	B	C	D	KG	LBS
42	1-5/8	2.10	8.30	3.90	1.30	53	211	99	33	12	26
44	1-3/4	2.25	11.50	4.19	1.38	57	292	106	35	17	38
51	2	2.50	13.73	4.91	1.64	64	349	125	42	26	57
58	2-1/4	2.75	14.50	5.37	1.73	70	368	136	44	33	73
64	2-1/2	3.00	16.16	5.92	1.92	76	410	150	49	43	95
70	2-3/4	3.50	17.70	6.47	2.11	89	450	164	54	65	143
76	3	3.75	19.21	6.82	2.28	95	488	173	58	80	176
89	3-1/2	4.25	23.90	8.77	2.85	108	607	223	72	127	280
102	4	4.75	26.22	9.61	3.13	121	666	244	80	175	385

## END LINK

CHAIN SIZE		DIMENSIONS						WEIGHT	
		INCHES			MM				
MM	INCHES	A	B	C	A	B	C	KG	LBS
42	1-5/8	10.97	6.50	1.95	279	165	50	9	20
44	1-3/4	11.81	6.91	2.10	300	176	53	11	24
51	2	13.50	7.90	2.40	343	201	61	17	37
58	2-1/4	15.19	8.89	2.70	386	226	69	24	53
64	2-1/2	16.88	9.88	3.00	429	251	76	32	71
70	2-3/4	18.56	10.86	3.30	471	276	84	43	95
76	3	20.25	11.85	3.60	514	301	91	55	122
89	3-1/2	23.65	13.83	4.20	601	351	107	90	197
102	4	27.00	15.80	4.80	686	401	122	133	292



## MOORING RING

CHAIN SIZE		DIMENSIONS						WEIGHT		PROOF TEST
		INCHES			MILLIMETERS					
MM	INCHES	A	B	C	A	B	C	LBS	KG	LBS
25	1	2.125	7.2	11.22	54	183	291	26	12	83,600
32	1-1/4	2.5	9.02	14.06	64	229	357	51	23	129,000
38	1-1/2	3	10.79	16.77	76	274	426	86	39	183,500
44	1-3/4	3.5	12.76	19.84	90	324	504	143	65	247,000
51	2	4	14.41	22.44	102	366	570	207	94	318,000
58	2-1/4	4.5	16.18	25.16	114	411	639	291	132	396,000
64	2-1/2	5	17.99	27.99	127	457	711	401	182	484,000
76	3	6	21.57	33.54	152	548	852	688	312	679,000
89	3-1/2	7	25.20	39.21	178	640	996	1107	502	900,000
102	4	8	28.90	44.96	204	734	1142	1664	755	1,143,000

## RETRIEVING HARDWARE

### CHAIN CHASER AND GRAPNEL

Used in the recovery of anchors and mooring lines, J-type chain chasers, permanent chain chasers, detachable permanent chain chasers, and grapnels are manufactured as one-piece units from special cast steel which is annealed for maximum unit strength.

Retrieving hardware is designed for use with 2-3/4 to 3-1/2 in. mooring chain and anchors in the 30,000 to 45,000-lb. class. All hardware is manufactured with rated testing loads which vary from 150 to 250 tons.

All chasing equipment comes standard with welded hard-facing on contact areas to inhibit wear. Optional treatments include Rapid Solidification Plasma Deposition or R.S.P.D. For superior wear and corrosion resistance isolated areas or entire castings can be treated.

### J-TYPE CHAIN CHASER

The J-Type, chain chaser, complete with swivel shackle, is used to retrieve a rig's anchor when the pendant line is broken. It is a highly refined, stronger version of the conventional chain chaser originally developed for use in the North Sea. This unique design uses a sophisticated beam configuration in place of the usual T-type cross section to optimize quality and reliability.

### PERMANENT CHAIN CHASER

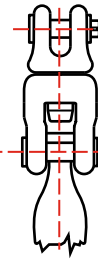
For rigs requiring a permanent-type chain chaser, it offers a stronger, better engineered version of the conventional chain chaser used in the North Sea. This type of anchor retrieval system eliminates the need for a pendant line buoy system. As with the J-type chaser, the permanent chaser incorporates a beam configuration that lessens the possibility of breaking with a significant decrease in eccentric bending.

### DETACHABLE CHAIN CHASER

Engineers have modified the conventional permanent chaser design to make the wear area detachable and replaceable. This innovative design allows the user to hook up easily and replace individual parts that are prone to wear, rather than replacing the entire chain chaser.

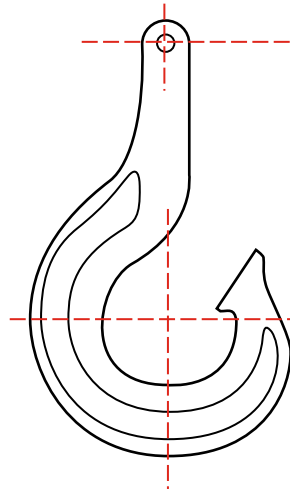
### GRAPNEL

In order to offer a total coverage for a variety of retrieving applications, we offer a four-prong grapnel. This unit is designed to recover lost anchors and mooring lines. The four-prong grapnel reduces the outfitting costs, since it is designed to accommodate the same connecting hardware as the permanent and J-type chain chasers.



Recommended  
Standard Swivel  
Shackle

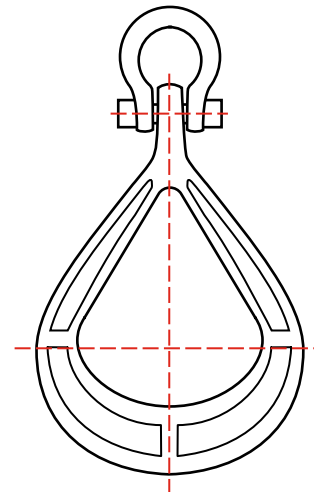
Alternate 3"  
Safety-Type  
Anchor Shackle



J-TYPE CHAIN CHASER

Notes:

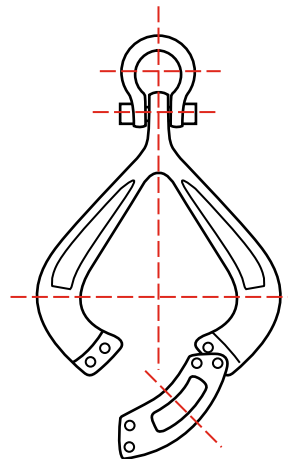
1. Weight - 3,200 lbs. (approx.)
2. Test Load - 250 tons (500,000 lbs.) straight pull



PERMANENT CHAIN CHASER

Notes:

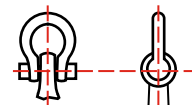
1. Weight - 2,600 lbs. (approx.)
2. Test Load - 250 tons (500,000 lbs.) straight pull



DETACHABLE CHAIN CHASER

Notes:

1. Weight - 2,610 lbs. (approx.)
2. Test load - 250 tons (500,000 lbs.) straight pull
3. Safe Working Load - 110 tons (220,000 lbs.)

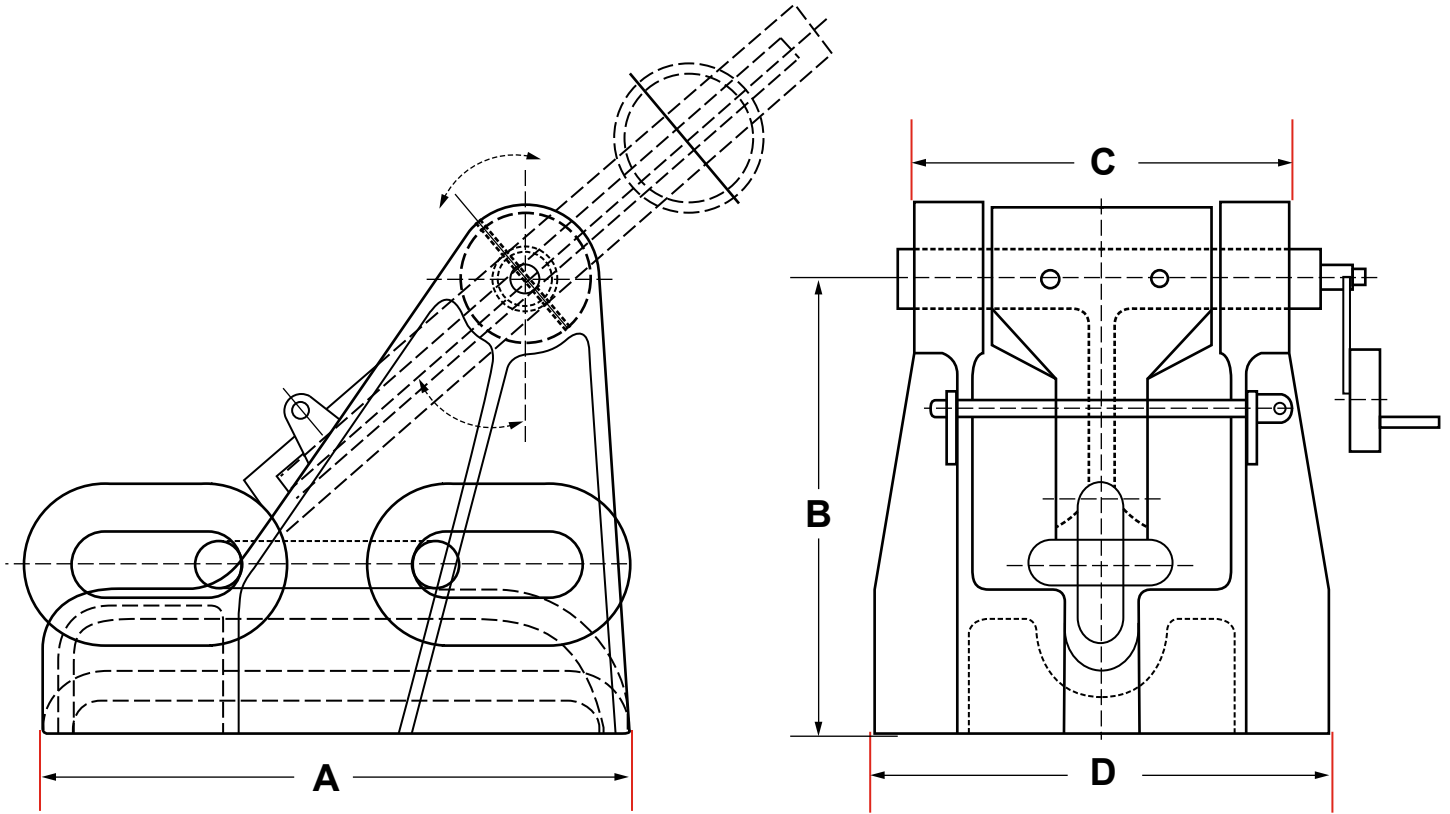


FOUR-PRONG GRAPNEL

Notes:

1. Weight - 4,000 lbs. (approx.)
2. Test Load - 150 tons

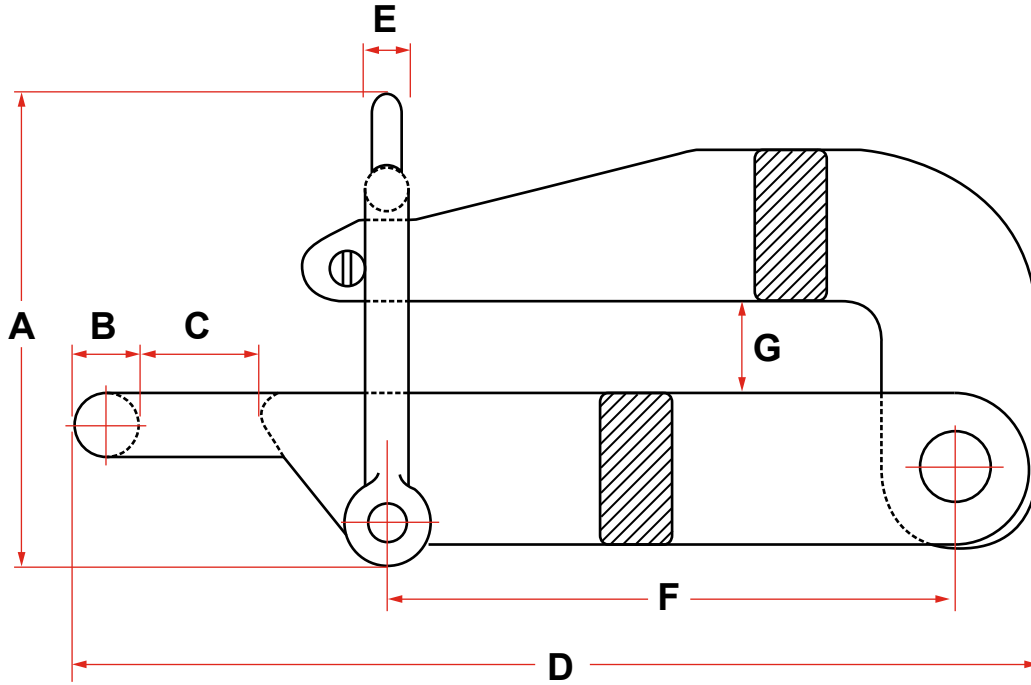
# PAWL TYPE CHAIN STOPPER



NOMINAL NO.	NOMINAL DIA. OF ANCHOR CHAIN	DIMENSIONS (MM)				WEIGHT (KG.)
		A	B	C	D	
42	36-42	530	494	357	422	210
46	42-46	620	538	404	480	396
51	48-51	680	599	438	520	429
56	52-56	730	638	472	560	465
60	58-60	780	670	506	600	480
64	62-64	835	710	538	630	500
68	66-68	885	750	568	660	567
73	70-73	950	801	604	700	682
78	76-78	1015	852	641	750	818
84	81-84	1095	911	686	800	1030
90	87-90	1170	969	732	850	1220
95	92-95	1235	1021	768	900	1420
102	97, 100, 102	1350	1090	816	950	1830
107	105-107	1400	1148	857	1000	2130
114	111-114	1480	1207	902	1050	2410
122	117-122	1585	1280	956	1120	2900

# PELICAN HOOK CHAIN STOPPER

## WITH ABS CERTIFICATION

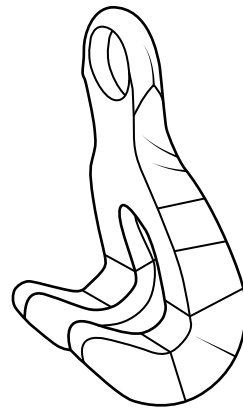
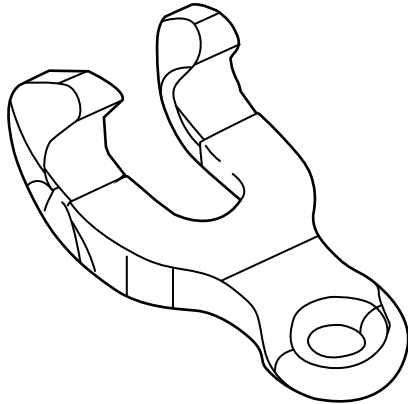


CHAIN SIZE		A	B	C	D	E	F	G	PROOF LOAD	BREAK LOAD	WEIGHT
MM	In	MM	MM	MM	MM	MM	MM	MM	kN	kN	Lbs
19	3/4	176	19	32	266	16	137	25	291.3	388.3	13
22	7/8	193	22	35	337	16	178	31	377.6	509.9	21
25-32	1 - 1-1/4	219	29	41	446	19	260	39	690.4	931.6	41
32-38	1-1/4 - 1-1/2	270	38	48	490	22	267	44	888.5	1,198.9	50
35-41	1-3/8 - 1-5/8	270	38	48	490	22	267	51	941.6	1,271.1	59
41-51	1-5/8 - 2	313	38	54	565	25	305	62	1,057	1,426.9	95
54-60	2-1/8 - 2-3/8	375	41	57	680	32	394	65	1,122	1,514.6	172
64-70	2-1/2 - 2-3/4	410	48	70	780	35	457	79	1,567.2	2,119.3	216
76-83	3 - 3-1/4	454	51	76	860	38	502	95	1,816.5	2,715.9	280
86-89	3-3/8 - 3-1/2	495	64	86	927	41	514	98	2,190.5	3,312.5	357
89-95	3-1/2 - 3-3/4	568	73	108	997	44	533	114	3,137	4,746	440



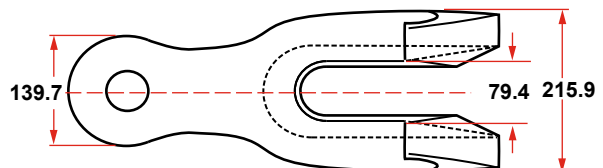
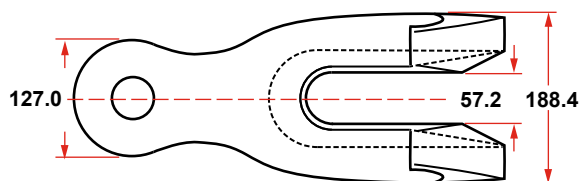
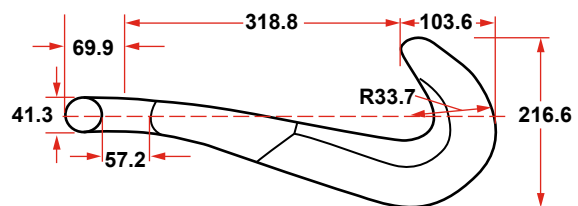
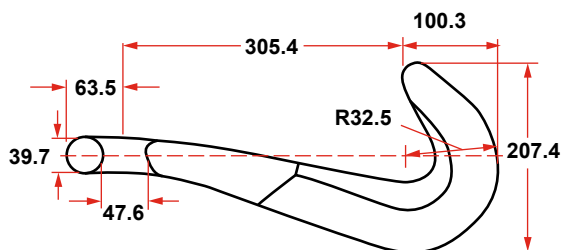
# DEVILS CLAW CHAIN STOPPER

## WITH ABS CERTIFICATION



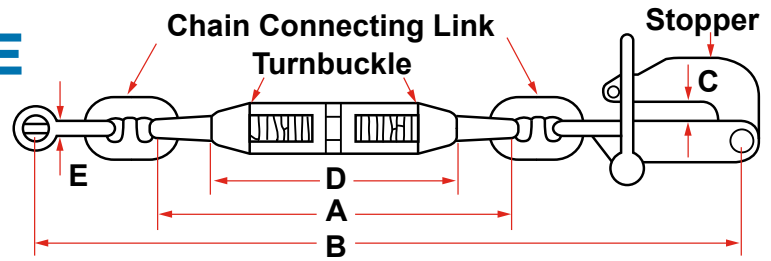
**DEVILS CLAW**  
**33 - 41MM (1-5/16" - 1-5/8")**  
**44 LBS**

**DEVILS CLAW**  
**46 - 60MM (1-11/16" - 2-3/8")**  
**70 LBS**



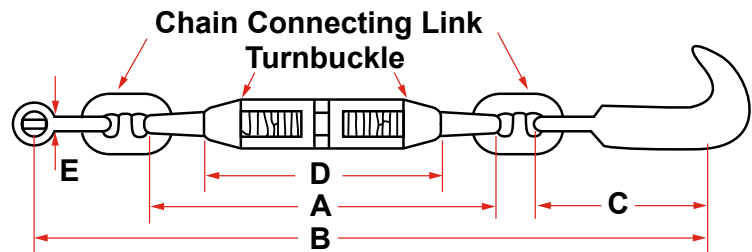
Dimensions in millimeters. Other sizes available upon request.

## PELICAN HOOK TYPE CHAIN STOPPER ASSEMBLY



CHAIN SIZE		INCHES						DET. LINK SIZE	PROOF LOAD LBS	BREAK LOAD LBS
INCHES	MM	A	B MIN.	B MAX.	C	D	E			
3/4	19	16	33-1/4	40-1/2	1	11	7/8	3/4	67,500	91,100
7/8	22	17-1/4	38-7/16	45-9/16	1-7/32	11	1	7/8	88,200	119,000
1 - 1-1/8	25 - 29	19-1/2	46-7/8	55-1/2	1-17/32	13	1-1/8	1-1/8	145,000	195,000
1-1/4	32	19-5/8	48	56-5/8	1-17/32	13	1-1/4	1-1/4	178,200	240,600
1-1/4 HS - 1-1/2	32HS - 38	23-3/4	55-3/16	65-11/16	1-3/4	16	1-1/2	1-3/8	211,500	285,500
1-3/8HS - 1-5/8	34HS - 42	23-3/4	55-3/16	65-11/16	2	16	1-1/2	1-3/8	211,500	285,500
1-5/8HS - 2	42HS - 51	24-1/8	59-3/16	65-11/16	2-7/16	16	1-1/2	1-1/2	252,000	340,200
2-1/8 - 2-3/8	54 - 60	26-1/4	65-3/8	76-1/8	2-9/16	16	1-5/8	1-1/2	252,000	340,200
2-1/2 - 2-5/8	64 - 67	29-3/4	74-3/8	87-1/2	3-1/8	20	1-7/8	1-5/8	292,500	395,000
2-3/4 - 2-3/4HD	70 - 70HD	29-3/4	86-5/8	89-3/4	3-1/8	20	1-7/8	1-3/4	352,000	476,000
3HD - 3-1/4	76HD - 83	36	90-3/4	106-1/2	3-3/4	24	2-3/8	2-1/4	403,000	610,000
3-3/8 - 3-1/2	86 - 89	38-5/8	97-7/16	113-3/16	3-7/8	24	2-5/8	2-1/2	492,000	744,000
3-1/2HD - 3-3/4	89HD - 95	44-3/8	110	128-1/8	4-1/2	27-1/2	2-7/8	3	706,000	1,068,000

## DEVIL'S CLAW TYPE CHAIN STOPPER ASSEMBLY

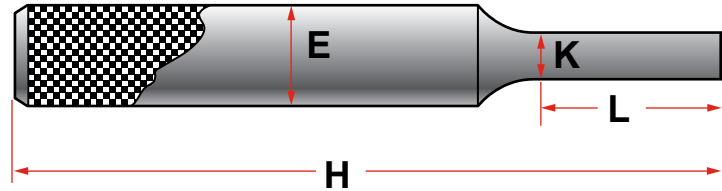


CHAIN SIZE		INCHES						DET. LINK SIZE	PROOF LOAD LBS	BREAK LOAD LBS
INCHES	MM	A	B MIN.	B MAX.	C	D	E			
3/4 - 3/4HS	19 - 19HS	16	35-1/2	42-3/4	10-1/2	11	7/8	3/4	67,500	91,100
7/8 - 7/8HS	22 - 22HS	17-1/4	38-1/4	45-3/8	10-1/2	11	1	7/8	88,200	119,000
1 - 1-1/8	25 - 29	19-1/2	43-1/16	51-11/16	10-1/2	13	1-1/8	1-1/8	145,000	195,000
1-1/4	32	19-5/8	44-3/16	52-13/16	10-1/2	13	1-1/4	1-1/4	178,200	240,600
1-1/4 HS - 1-1/2	32HS - 38	23-3/4	50-1/4	60-3/4	10-1/2	16	1-1/2	1-3/8	211,500	285,500
1-3/8HS - 1-5/8	34HS - 42	23-3/4	50-1/4	60-3/4	10-1/2	16	1-1/2	1-3/8	211,500	285,500
1-5/8HS - 2	42HS - 51	24-1/8	53-1/8	63-5/8	12	16	1-1/2	1-1/2	252,000	340,200
2-1/8 - 2-3/8	54 - 60	26-1/4	56-1/4	66-3/4	12-1/2	16	1-5/8	1-1/2	252,000	340,200
2-1/2 - 2-5/8	64 - 67	29-3/4	65	78-1/8	16	20	1-7/8	1-5/8	292,500	395,000
2-3/4 - 2-3/4HD	70 - 70HD	29-3/4	67-1/4	80-1/4	16	20	1-7/8	1-3/4	352,000	476,000
3HD - 3-1/4	76HD - 83	36	76-1/4	92-3/8	17-1/2	24	2-3/8	2-1/4	403,000	610,000
3-3/8 - 3-1/2	86 - 89	38-5/8	86-1/2	102-1/4	19	24	2-5/8	2-1/2	492,000	744,000
3-1/2HD - 3-3/4	89HD - 95	44-3/8	98-5/8	116-3/4	20-1/2	27-1/2	2-7/8	3	706,000	1,068,000

## DETACHABLE LINK PUNCHES

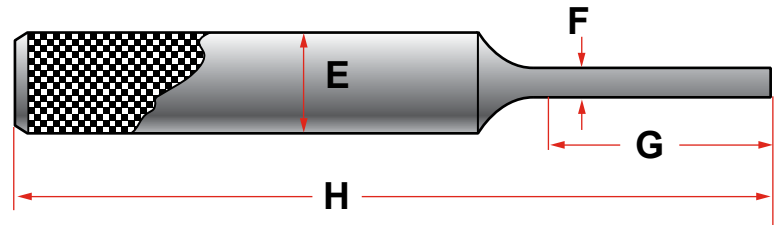
These punches are designed for the assembly and disassembly of detachable chain connecting links, kenter links, and anchor joining links. Sizes will vary for kenters and pear links made from steel, heat treated to 45-50 Rockwell C.

### ASSEMBLING PUNCHES



PUNCH NO.	INCHES					HANDLE
	LINK SIZE	E	K	H	L	
P-1A	5/8 - 3/4	3/4	15/64	5	1-1/8	
P-2A	7/8 - 1	3/4	17/64	5	1-1/8	
P-3A	1-1/8 - 1-3/8	1	3/8	6	1-3/8	
P-4A	1-1/2 - 1-5/8	1	33/64	6-1/2	1-3/8	
P-5A	1-3/4 - 2	1	21/32	6-1/2	1-1/2	X
P-6A	2-1/8 - 2-3/8	1	51/64	6-1/2	1-5/8	X
P-7A	2-1/2 - 2-7/8	1-1/8	61/64	6-1/2	1-5/8	X
P-8A	3	1-1/4	1-9/64	7	1-3/4	X

### DISASSEMBLY PUNCHES



PUNCH NO.	INCHES					HANDLE
	LINK SIZE	E	F	H	G	
P-1D	5/8 - 3/4	3/4	13/64	5	1-1/4	
P-2D	7/8 - 1	3/4	15/64	5	1-1/2	
P-3D	1-1/8 - 1-3/8	1	5/16	6	2-1/2	
P-4D	1-1/2 - 1-5/8	1	15/32	6-1/2	2-7/8	
P-5D	1-3/4 - 2	1	9/16	6-1/2	3-1/4	X
P-6D	2-1/8 - 2-3/8	1	11/16	6-1/2	3-1/2	X
P-7D	2-1/2 - 2-7/8	1-1/8	13/16	6-1/2	3-1/2	X
P-8D	3	1-1/4	1	7	4	X