

MARINE

Anchors, Chains & Accessories

MARINE

For the shipping industry, Adamallys supply a wide range of chains, anchors and fittings, available from stock.



GRADE 1 - 2 and 3 SHIPS AND MARINE						
MECHANICAL PROPERTIES						
	Grade 1		Grade 2		Grade 3	
Quality assurance	N. R.		N. R.		N. R.	
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		⑤	
	*		*		0 °C	
					43,5 ftlbs	59 J

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.

MPa = N/mm².

FOR MORE DETAILS CHECK THE RULES



MARINE

Equipment Number		Equipment Letter				Stud Link Chain Cables for Bower Anchor				Stockless Bower Anchor	
Exceeding	Not Exceeding	LR	ABS	DNV	GL	Total Length m.	Diameter			Number	Weight per Anchor Kg.
							Grade 1 mm.	Grade 2 mm.	Grade 3 mm.		
50	70	A		a	102	220	14	12.5	-	2	180
70	90	B		b	103	220	16	14	-	2	240
90	110	C		c	104	247.5	17.5	16	-	2	300
110	130	D		d	105	247.5	19	17.5	-	2	360
130	150	E		e	106	275	20.5	17.5	-	2	420
150	175	F	U6	f	107	275	22	19	-	2	480
175	205	G	U7	g	108	302.5	24	20.5	-	2	570
205	240	H	U8	h	109	302.5	26	22	20.5	3	660
240	280	I	U9	i	110	330	28	24	22	3	780
280	320	J	U10	j	111	357.5	30	26	24	3	900
320	360	K	U11	k	112	357.5	32	28	24	3	1020
360	400	L	U12	l	113	385	34	30	26	3	1140
400	450	M	U13	m	114	385	36	32	28	3	1290
450	500	N	U14	n	115	412.5	38	34	30	3	1440
500	550	O	U15	o	116	412.5	40	34	30	3	1590
550	600	P	U16	p	117	440	42	36	32	3	1740
600	660	Q	U17	q	118	440	44	38	34	3	1920
660	720	R	U18	r	119	440	46	40	36	3	2100
720	780	S	U19	s	120	467.5	48	42	36	3	2280
780	840	T	U20	t	121	467.5	50	44	38	3	2460
840	910	U	U21	u	122	467.5	52	46	40	3	2640
910	980	V	U22	v	123	495	54	48	42	3	2850
980	1060	W	U23	w	124	495	56	50	44	3	3060
1060	1140	X	U24	x	125	495	58	50	46	3	3300
1140	1220	Y	U25	y	126	522.5	60	52	46	3	3540
1220	1300	Z	U26	z	127	522.5	62	54	48	3	3780
1300	1390	A†	U27	A	128	522.5	64	56	50	3	4050
1390	1480	B†	U28	B	129	550	66	58	50	3	4320
1480	1570	C†	U29	C	130	550	68	60	52	3	4590
1570	1670	D†	U30	D	131	550	70	62	54	3	4890
1670	1790	E†	U31	E	132	577.5	73	64	56	3	5250
1790	1930	F†	U32	F	133	577.5	76	66	58	3	5610
1930	2080	G†	U33	G	134	577.5	78	68	60	3	6000
2080	2230	H†	U34	H	135	605	81	70	62	3	6450
2230	2380	I†	U35	I	136	605	84	73	64	3	6900
2380	2530	J†	U36	J	137	605	87	76	66	3	7350
2530	2700	K†	U37	K	138	632.5	90	78	68	3	7800
2700	2870	L†	U38	L	139	632.5	92	81	70	3	8300
2870	3040	M†	U39	M	140	632.5	95	84	73	3	8700
3040	3210	N†	U40	N	141	660	97	84	76	3	9300
3210	3400	O†	U41	O	142	660	100	87	78	3	9900
3400	3600	P†	U42	P	143	660	102	90	78	3	10500
3600	3800	Q†	U43	Q	144	687.5	105	92	81	3	11100
3800	4000	R†	U44	R	145	687.5	107	95	84	3	11700
4000	4200	S†	U45	S	146	687.5	111	97	87	3	12300
4200	4400	T†	U46	T	147	715	114	100	87	3	12900
4400	4600	U†	U47	U	148	715	117	102	90	3	13500
4600	4800	V†	U48	V	149	715	120	105	92	3	14100
4800	5000	W†	U49	W	150	742.5	122	107	95	3	14700
5000	5200	X†	U50	X	151	742.5	124	111	97	3	15400
5200	5500	Y†	U51	Y	152	742.5	127	111	97	3	16100
5500	5800	Z†	U52	Z	153	742.5	130	114	100	3	16900
5800	6100	A*	U53	A*	154	742.5	132	117	102	3	17800
6100	6500	B*	U54	B*	155	742.5	137	120	107	3	18800
6500	6900	C*	U54	C*	156	770	-	124	111	3	20000
6900	7400	D*	U56	D*	157	770	-	127	114	3	21500
7400	7900	E*	U57	E*	158	770	-	132	117	3	23000
7900	8400	F*	U58	F*	159	770	-	137	122	3	24500
8400	8900	G*	U59	G*	160	770	-	142	127	3	26000
8900	9400	H*	U60	H*	161	770	-	147	132	3	27500
9400	10000	I*	U61	I*	162	770	-	152	132	3	29000
10000	10700	J*	U62	J*	163	770	-	157	137	3	31000
10700	11500	K*	U63	K*	164	770	-	157	142	3	33000
11500	12400	L*	U64	L*	165	770	-	162	147	3	35500
12400	13400	M*	U65	M*	166	770	-	-	152	3	38500
13400	14600	N*	U66	N*	167	770	-	-	157	3	42000
14600	16000	O*	U67	O*	168	770	-	-	162	3	46000



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Chain Diameter mm.	GRADES "1-2 AND 3"						Minimum Weight Kg. per length of 27,5 m.
	PROOF LOAD			BREAK LOAD			
	Grade 1 kN	Grade 2 kN	Grade 3 kN	Grade 1 kN	Grade 2 kN	Grade 3 kN	
16	76	107	150	107	150	216	160
17,5	89	127	179	127	179	256	190
19	105	150	211	150	211	301	225
20,5	123	175	244	175	244	349	265
22	140	200	280	200	280	401	300
24	167	237	332	237	332	476	360
26	194	278	389	278	389	556	420
28	225	321	449	321	449	642	490
30	257	368	514	368	514	735	565
32	291	417	583	417	583	833	635
34	328	468	655	468	655	937	720
36	366	523	732	523	732	1050	800
38	406	581	812	581	812	1160	895
40	448	640	896	640	896	1280	995
42	492	703	981	703	981	1400	1100
44	538	769	1080	769	1080	1540	1200
46	585	837	1170	837	1170	1680	1320
48	635	908	1280	908	1280	1810	1440
50	686	981	1370	981	1370	1960	1560
52	739	1060	1480	1060	1480	2110	1675
54	794	1140	1590	1140	1590	2270	1820
56	851	1220	1710	1220	1710	2430	1935
58	909	1290	1810	1290	1810	2600	2075
60	969	1380	1940	1380	1940	2770	2220
62	1030	1470	2060	1470	2060	2940	2365
64	1100	1560	2190	1560	2190	3130	2550
66	1160	1660	2310	1660	2310	3300	2695
68	1230	1750	2450	1750	2450	3500	2890
70	1290	1840	2580	1840	2580	3690	3030
73	1390	1990	2790	1990	2790	3990	3290
76	1500	2150	3010	2150	3010	4300	3555
78	1580	2260	3160	2260	3160	4500	3755
81	1690	2410	3380	2410	3380	4820	4035
84	1810	2580	3610	2580	3610	5160	4395
87	1920	2750	3850	2750	3850	5500	4760
90	2050	2920	4090	2920	4090	5840	5005
92	2130	3040	4260	3040	4260	6080	5200
95	2260	3230	4510	3230	4510	6440	5570
97	2340	3350	4680	3350	4680	6690	5760
100	2470	3530	4940	3530	4940	7060	6130
102	2560	3660	5120	3660	5120	7320	6505
105	2700	3860	5390	3860	5390	7700	6885
107	2790	3980	5570	3980	5570	7960	7140
111	2970	4250	5940	4250	5940	8480	7715
114	3110	4440	6230	4440	6230	8890	8085
117	3260	4650	6510	4650	6510	9300	8445
120	3400	4860	6810	4860	6810	9720	9110
122	3500	5000	7000	5000	7000	9990	9240
124	3600	5140	7200	5140	7200	10280	9700
127	3750	5350	7490	5350	7490	10710	10040
130	3900	5570	7800	5570	7800	11140	10420
132	4000	5720	8000	5720	8000	11420	10910
137	4260	6080	8510	6080	8510	12160	11720
142	4520	6450	9030	6450	9030	12910	12515
147	4790	6840	9560	6840	9560	13660	13295
152	5050	7220	10100	7220	10100	14430	14695
157	5320	7600	10640	7600	10640	15200	15475
162	5590	7990	11170	7990	11170	15970	16210

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Ø Dia.	PROOF LOAD			BREAK LOAD			MASS POUNDS
	GRADE 1	GRADE 2	GRADE 3	GRADE 1	GRADE 2	GRADE 3	Per 15 fathoms
INCHES	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
3/4	23800	34000	47600	34000	47600	68000	480
13/16	27800	39800	55700	39800	55700	79500	570
1.	41800	59700	83600	59700	83600	119500	860
1.1/8	52600	75000	105000	75000	105000	150000	1080
1.1/4	54500	92200	129000	92200	129000	184000	1350
1.3/8	77500	111000	155000	111000	155000	222000	1630
1.1/2	91700	131000	183500	131000	183500	262000	1940
1.5/8	108000	153000	214000	153000	214000	306000	2240
1.3/4	123500	176000	247000	176000	247000	352000	2590
1.7/8	140500	201000	281000	201000	281000	402000	2980
2.	159000	227000	318000	227000	318000	454000	3360
2.1/16	168500	241000	337000	241000	337000	482000	3570
2.1/8	178500	255000	357000	255000	357000	510000	3790
2.3/16	188500	269000	377000	269000	377000	538000	4020
2.1/4	198500	284000	396000	284000	396000	570000	4250
2.5/16	209000	299000	418000	299000	418000	598000	4490
2.3/8	212000	314000	440000	314000	440000	628000	4730
2.1/2	142000	356000	484000	356000	484000	692000	5270
2.5/8	265000	379000	530000	379000	530000	758000	5820
2.11/16	277000	396000	554000	396000	554000	792000	6110
2.3/4	289000	413000	578000	413000	578000	826000	6410
2.7/8	314000	449000	628000	449000	628000	897000	7020
3.	340000	485000	697000	485000	679000	970000	7650
3.1/16	353000	504000	705000	504000	705000	1008000	7980
3.1/8	366000	523000	732000	523000	732000	1046000	8320
3.3/16	380000	542000	759000	542000	759000	1084000	8660
3.1/4	393000	562000	787000	562000	787000	1124000	9010
3.5/16	407000	582000	814000	582000	814000	1163000	9360
3.3/8	421000	602000	843000	602000	843000	1204000	9730
3.1/2	450000	643000	900000	643000	900000	1285000	10500
3.9/16	465000	664000	929000	664000	929000	1327000	10900
3.5/8	479000	685000	958000	685000	958000	1369000	11300
3.3/4	509000	728000	1019000	728000	1019000	1455000	12000
3.13/16	524500	750000	1049500	750000	1049500	1499000	12450
3.7/8	540000	772000	1080000	772000	1080000	1543000	12900
3.15/16	556000	794000	1111000	794000	1111000	1587000	13300
4.	571000	816000	1143000	816000	1143000	1632000	13700
4.1/8	603000	862000	1207000	862000	1207000	1724000	14600
4.1/4	636000	908000	1272000	908000	1272000	1817000	15400
4.3/8	669000	956000	1338000	956000	1338000	1911000	16200
4.1/2	703000	1004000	1405000	1004000	1405000	2008000	17100
4.5/8	737000	1053000	1474000	1053000	1474000	2105000	18000
4.3/4	772000	1102000	1543000	1102000	1543000	2204000	18900
4.7/8	807000	1153000	1613000	1153000	1613000	2305000	19900
5.	842000	1203000	1685000	1203000	1685000	2407000	20900
5.1/8	878000	1255000	1757000	1255000	1757000	2509000	22000
5.1/4	914500	1307000	1830000	1307000	1830000	2613500	23000
5.3/8	951000	1359000	1903000	1359000	1903000	2718000	24000
5.1/2	988500	1412500	1977500	1412500	1977500	2825000	25050
5.5/8	1026000	1466000	2052000	1466000	2052000	2932000	26100
5.3/4	1064000	1520000	2128000	1520000	2128000	3039000	27000
5.7/8	1102000	1574500	2204000	1574500	2204000	3148000	28050
6.	1140000	1629000	2280000	1629000	2280000	3257000	29100
6.1/8	1179000	1684000	2357000	1684000	2357000	3367000	30200
6.1/4	1217500	1739500	2434500	1739500	2434500	3478000	31300
6.3/8	1256000	1795000	2512000	1795000	2512000	3589000	32400

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DETACHABLE CONNECTING LINK "KENTER" TYPE

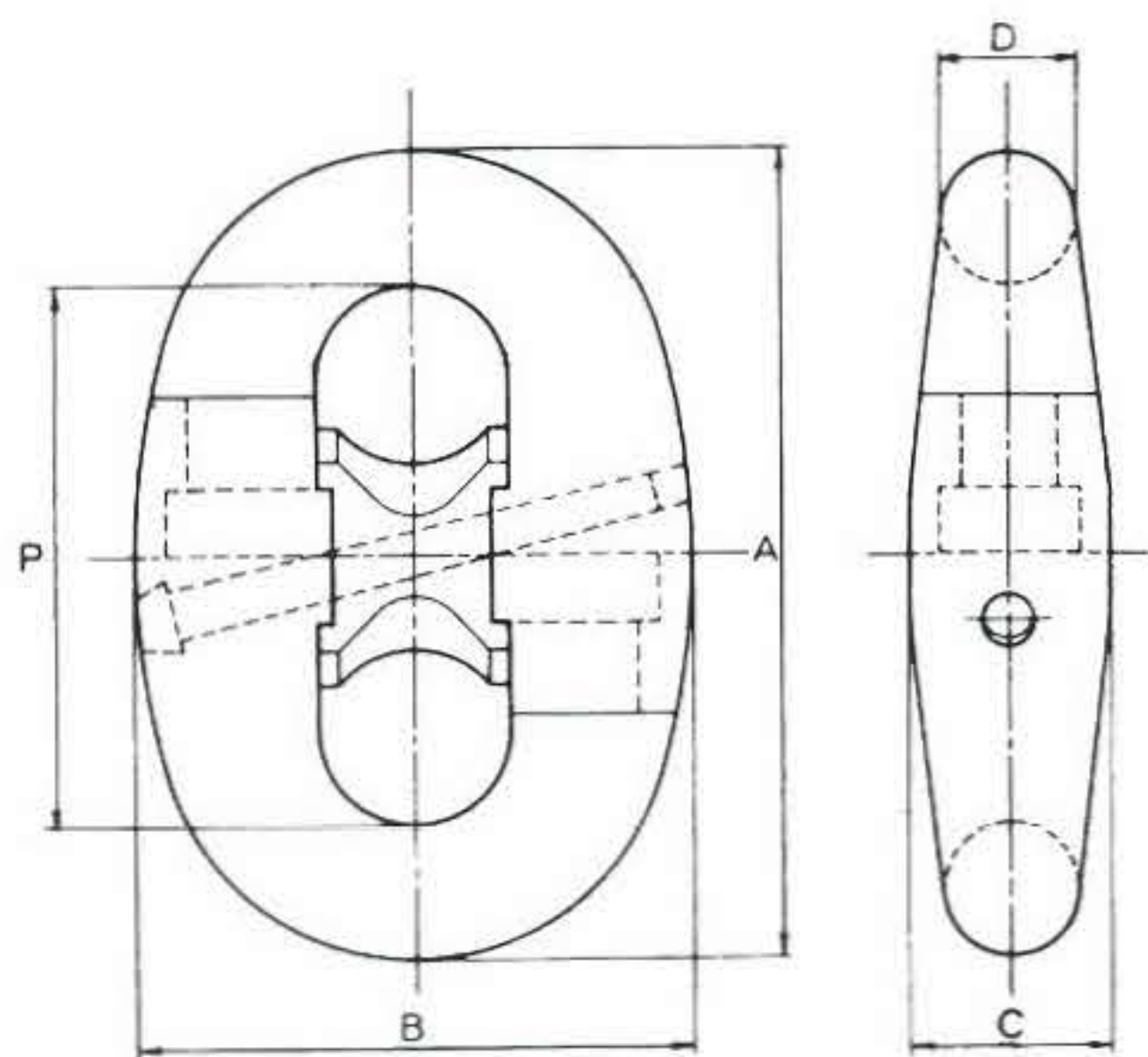
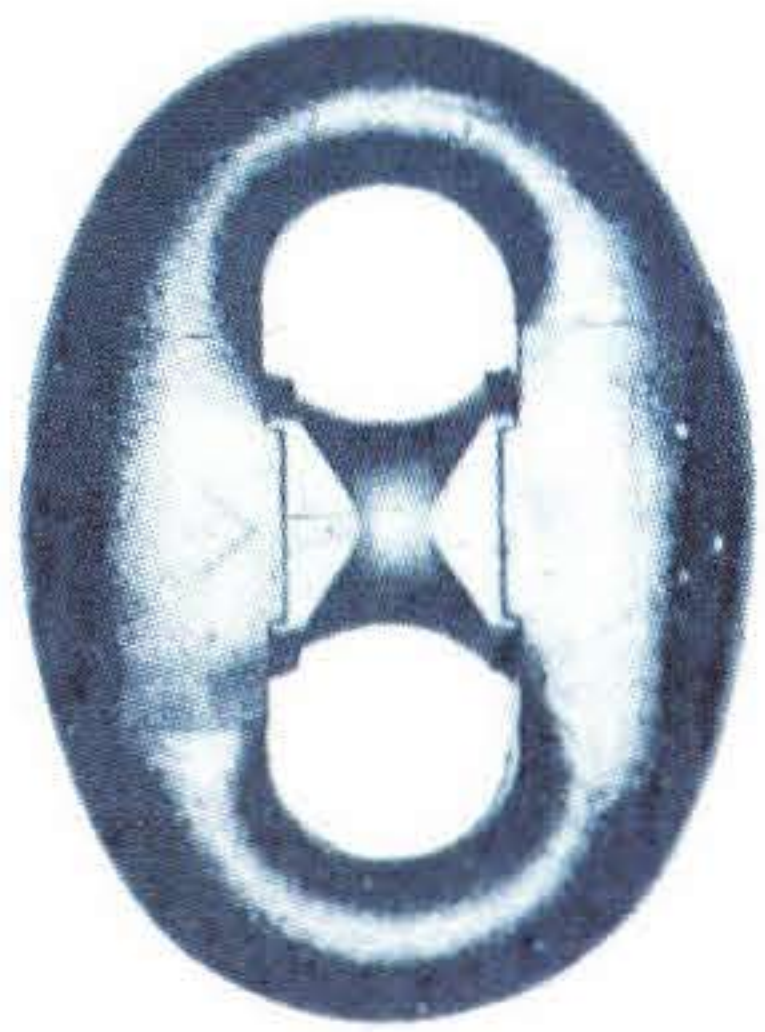
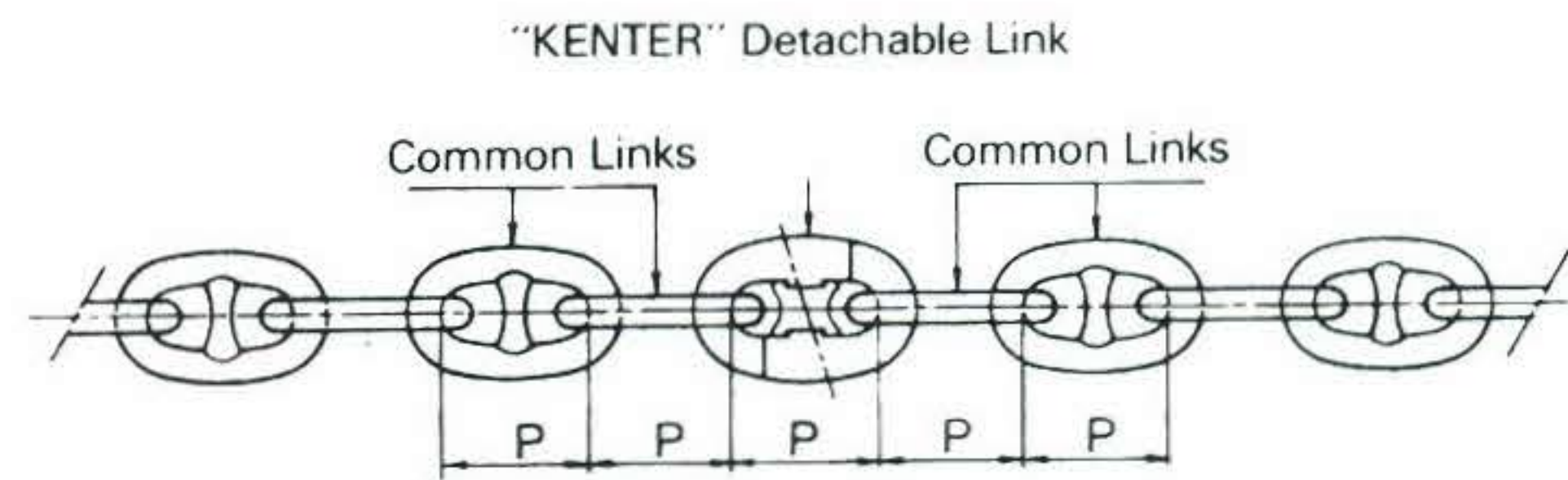


Fig. 105

- A = 6 d
- B ≈ 4,2 d
- C ≈ 1,52 d
- D = 1 d
- P = 4 d

d = Chain Nominal Diameter
P = Chain Nominal Pitch



JOINING SHACKLE "D" TYPE

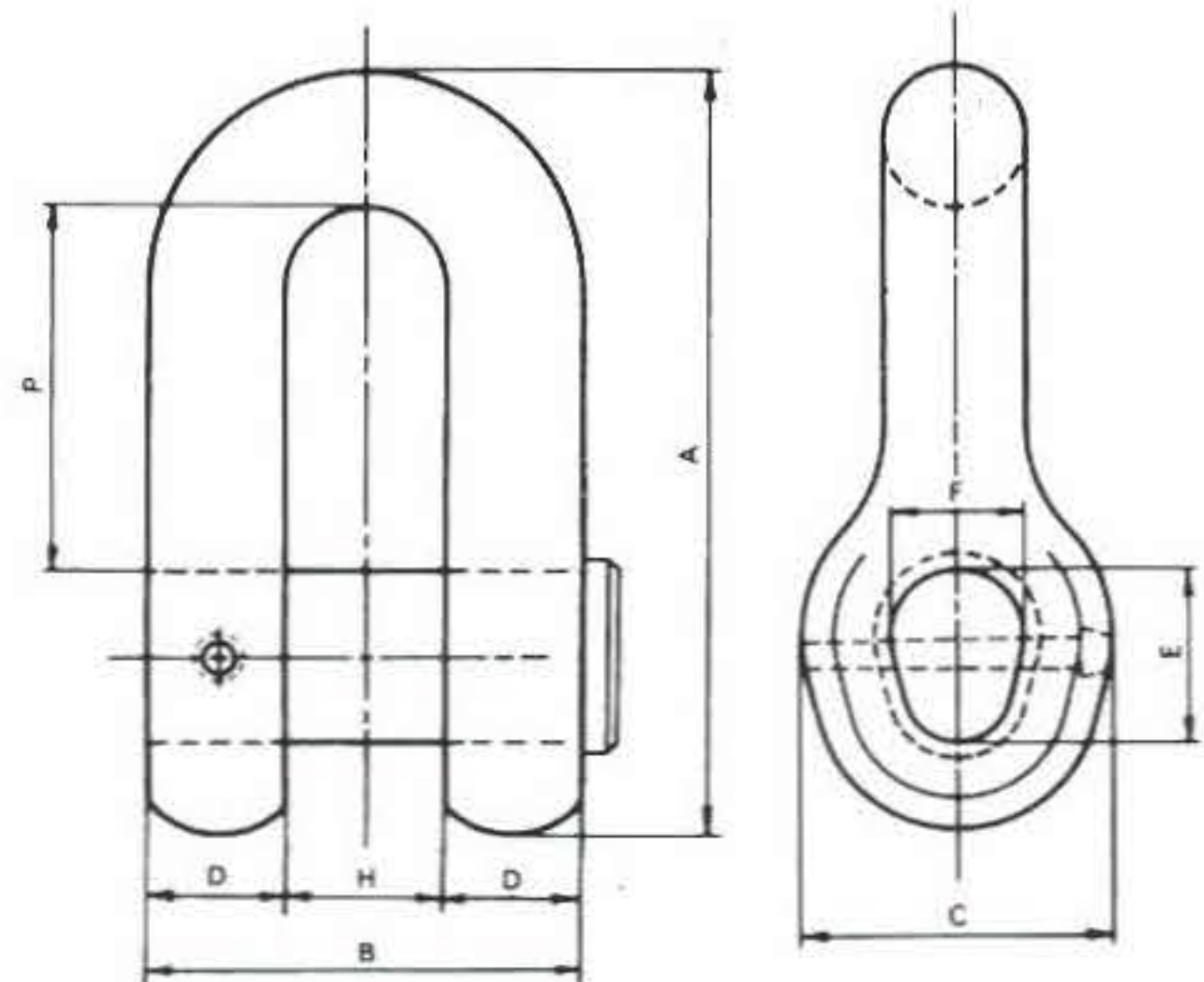
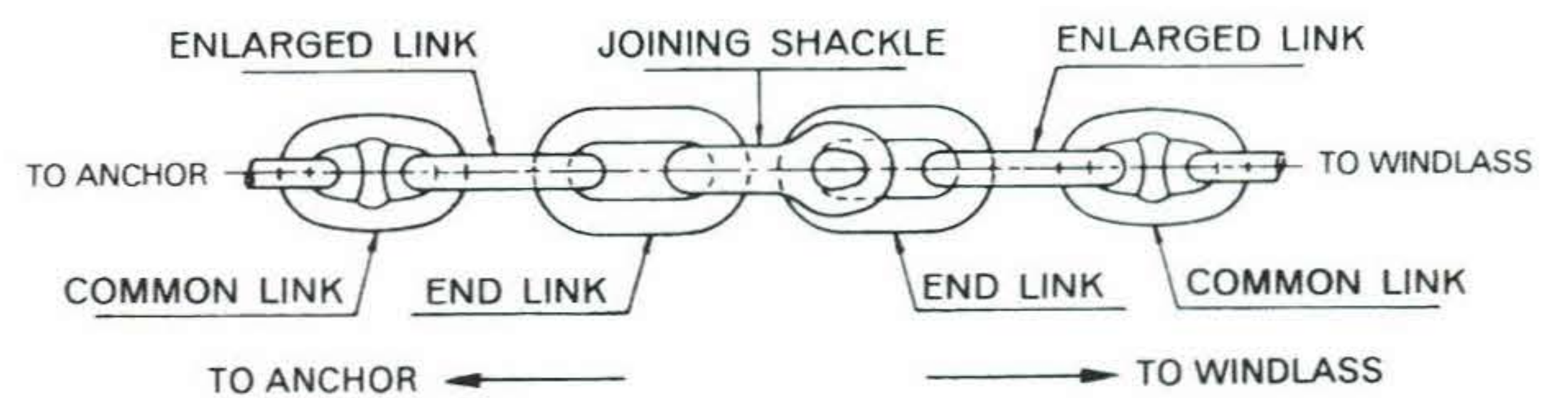


Fig. 107

- A ≈ 7,1 d
- B ≈ 4,0 d
- C ≈ 2,8 d
- D ≈ 1,3 d
- E ≈ 1,6 d
- F ≈ 1,2 d
- H ≈ 1,4 d
- P ≈ 3,4 d



ANCHOR SHACKLE "D" TYPE-ISO STANDARD

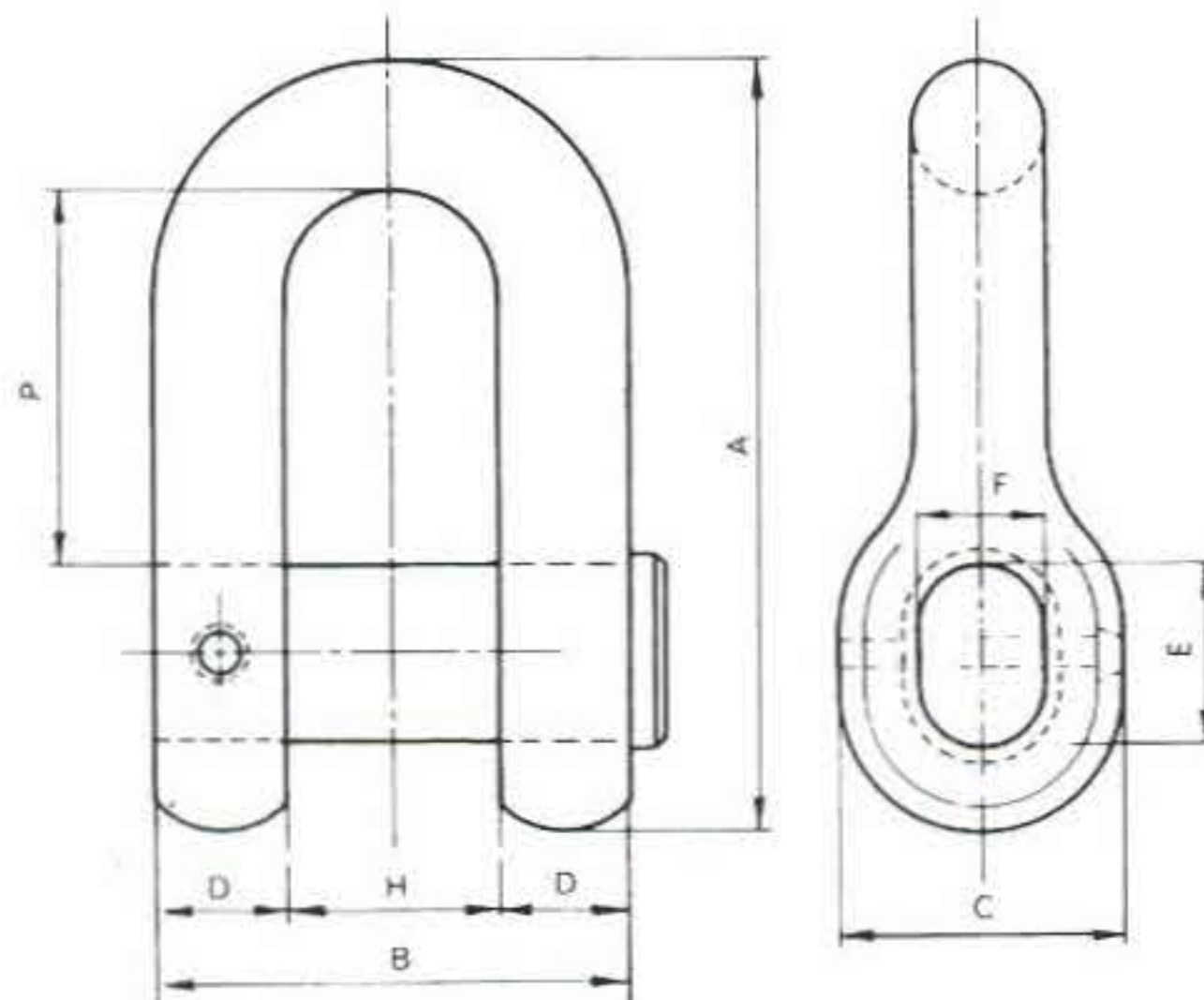
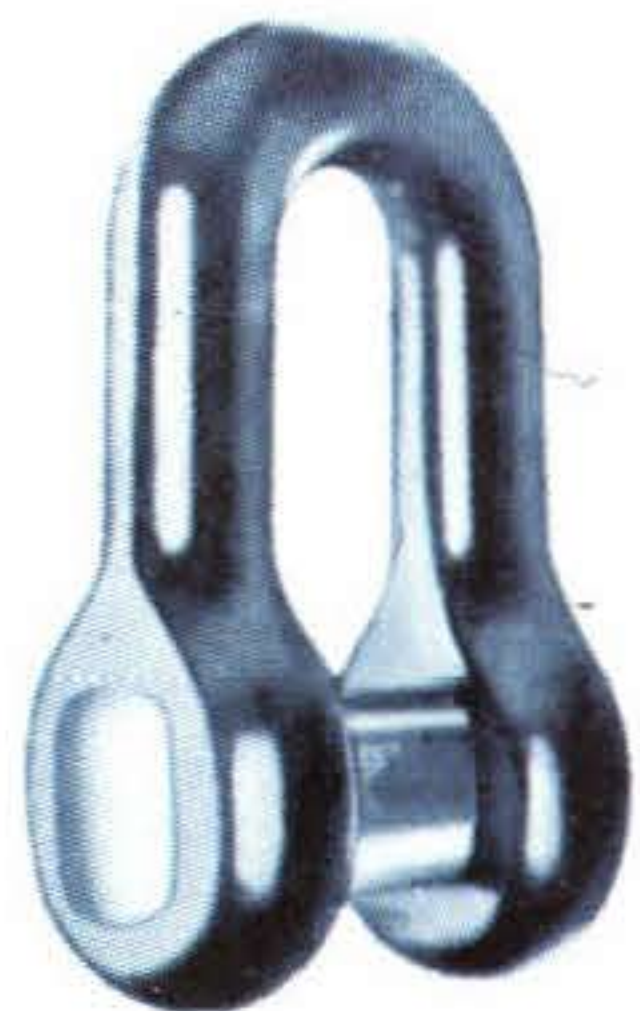
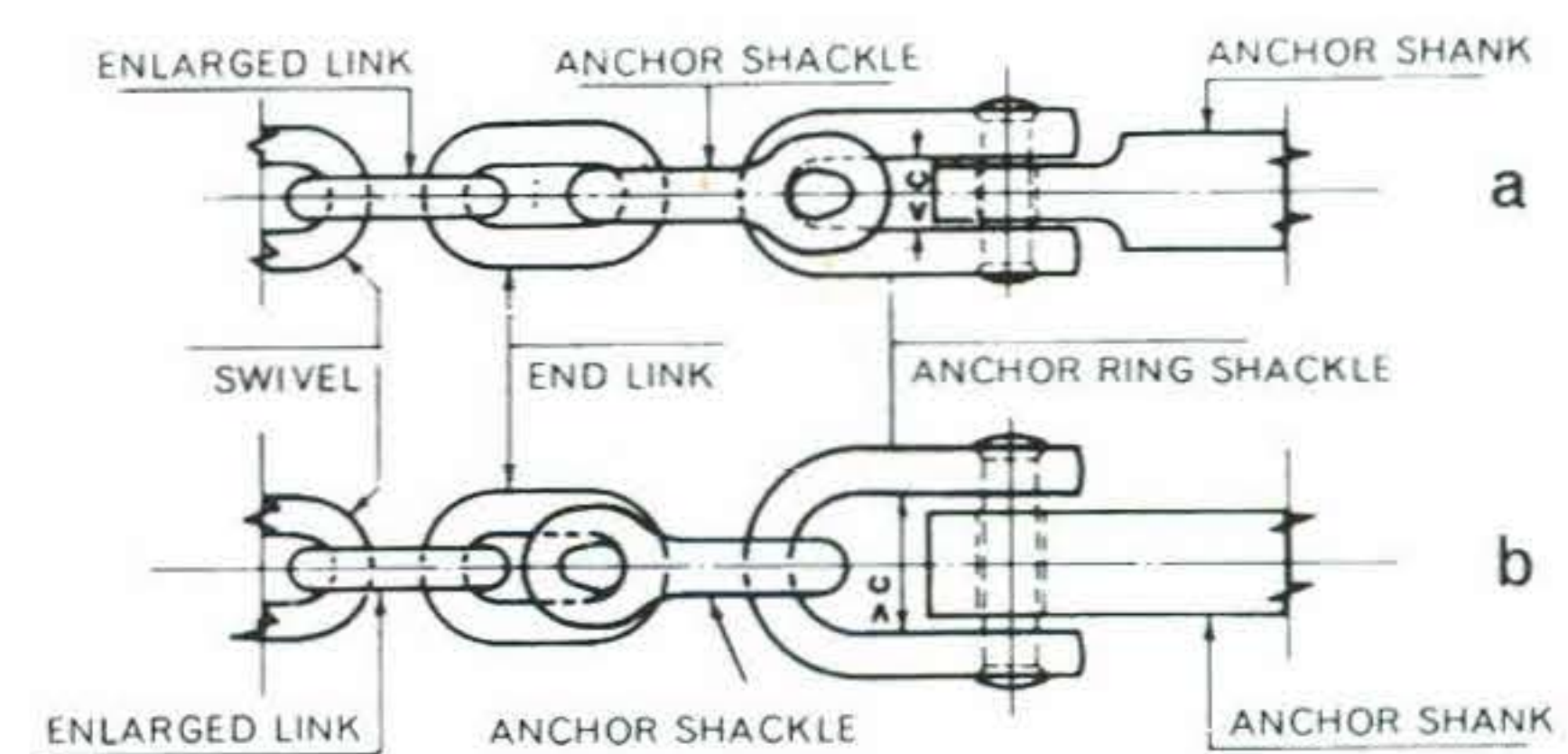


Fig. 108 ISO

- A ≈ 8,7 d
- B ≈ 5,2 d
- C ≈ 3,1 d
- D ≈ 1,4 d
- E ≈ 1,8 d
- F ≈ 1,4 d
- H ≈ 2,4 d
- P ≈ 4,6 d



END JOINING SHACKLE

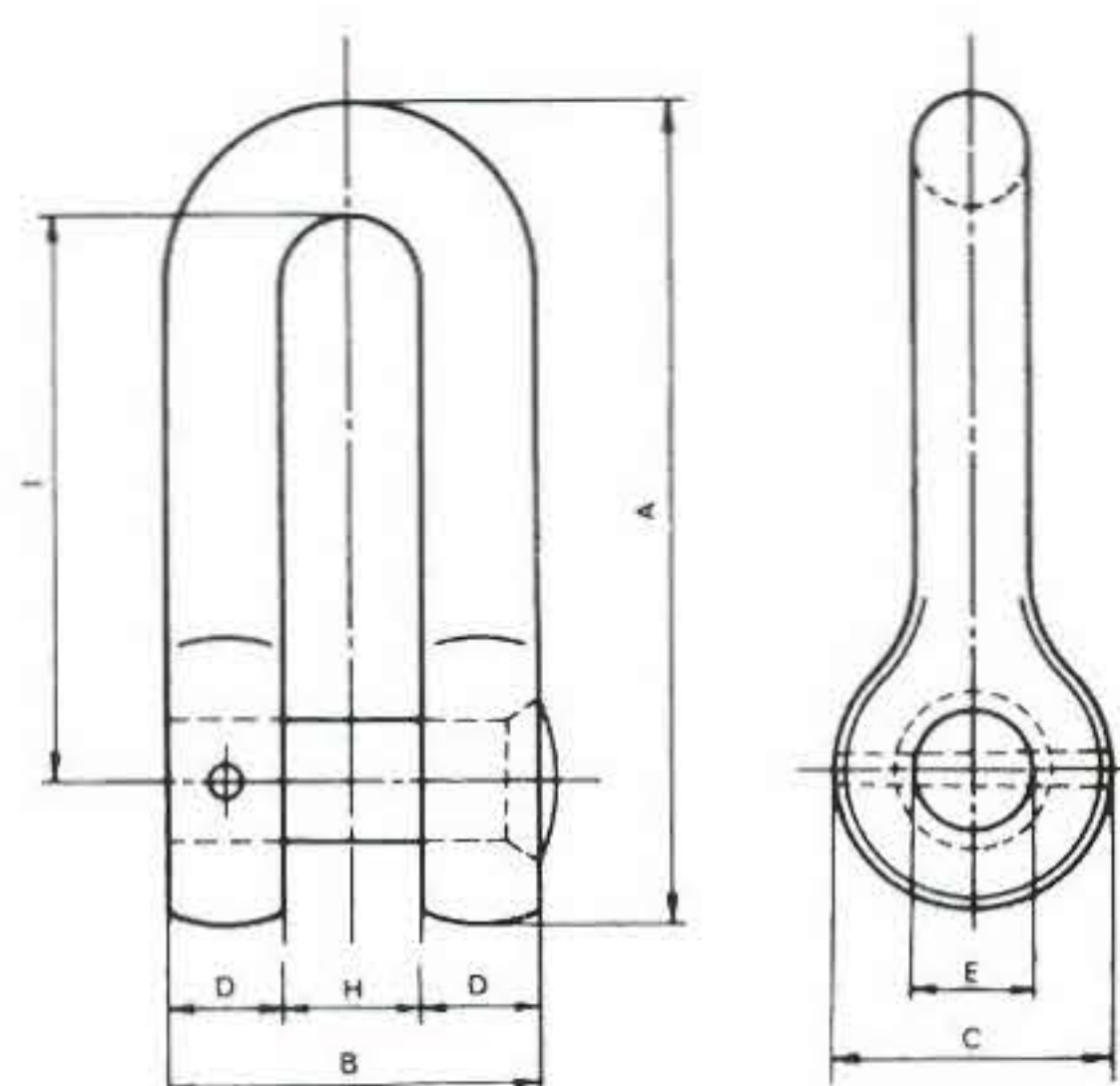
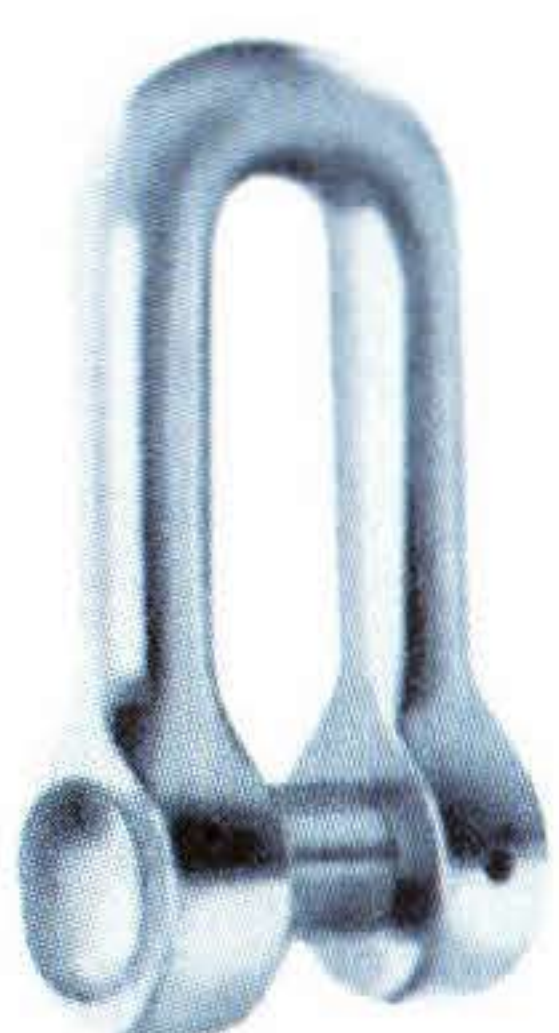
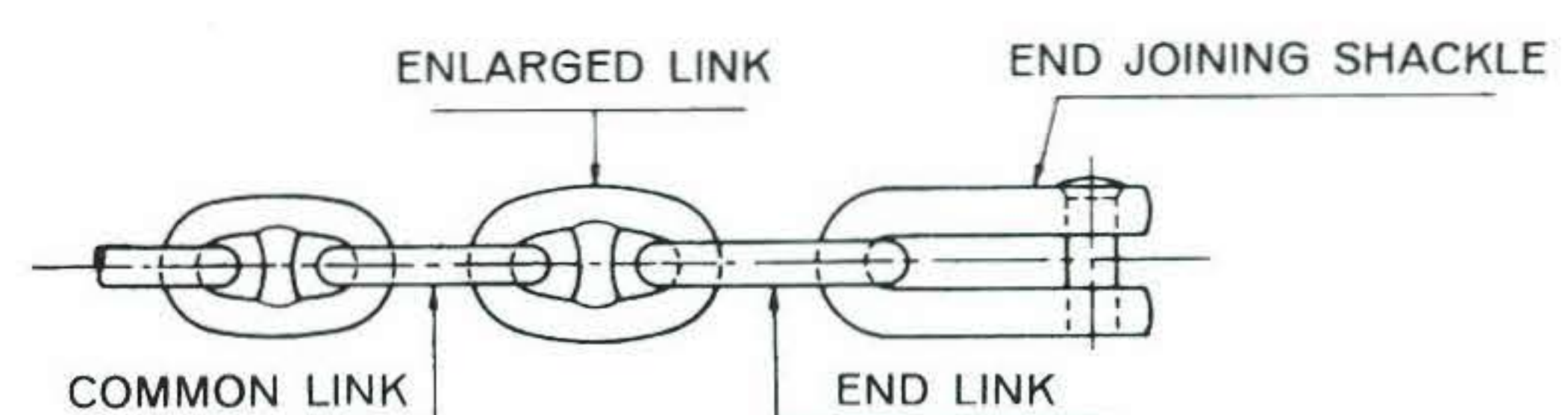


Fig. 109

- A ≈ 8,6 d
- B ≈ 3,8 d
- C ≈ 3,0 d
- D ≈ 1,2 d
- E ≈ 1,4 d
- H ≈ 1,4 d
- I ≈ 5,9 d



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DETACHABLE ANCHOR CONNECTING LINK

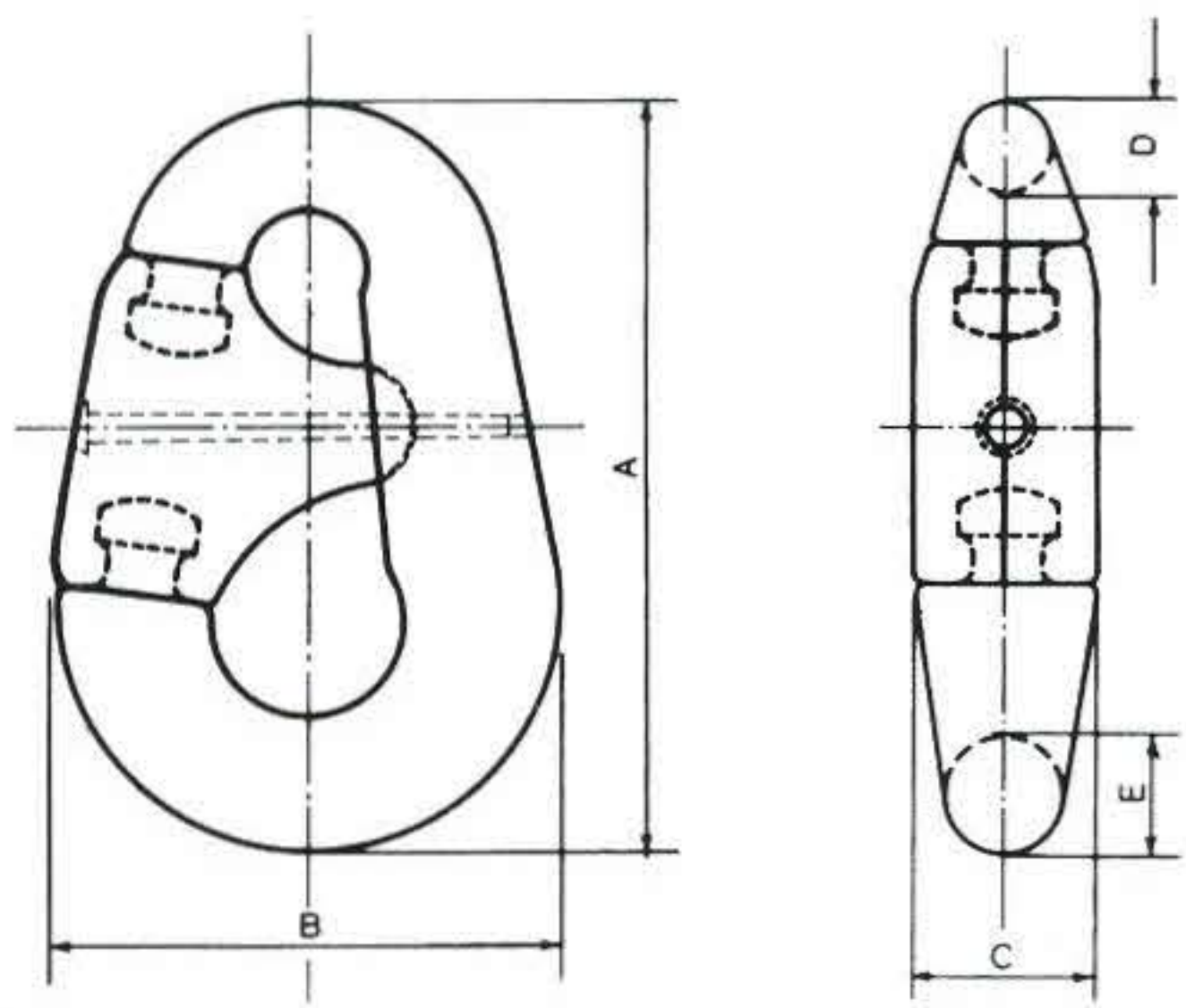
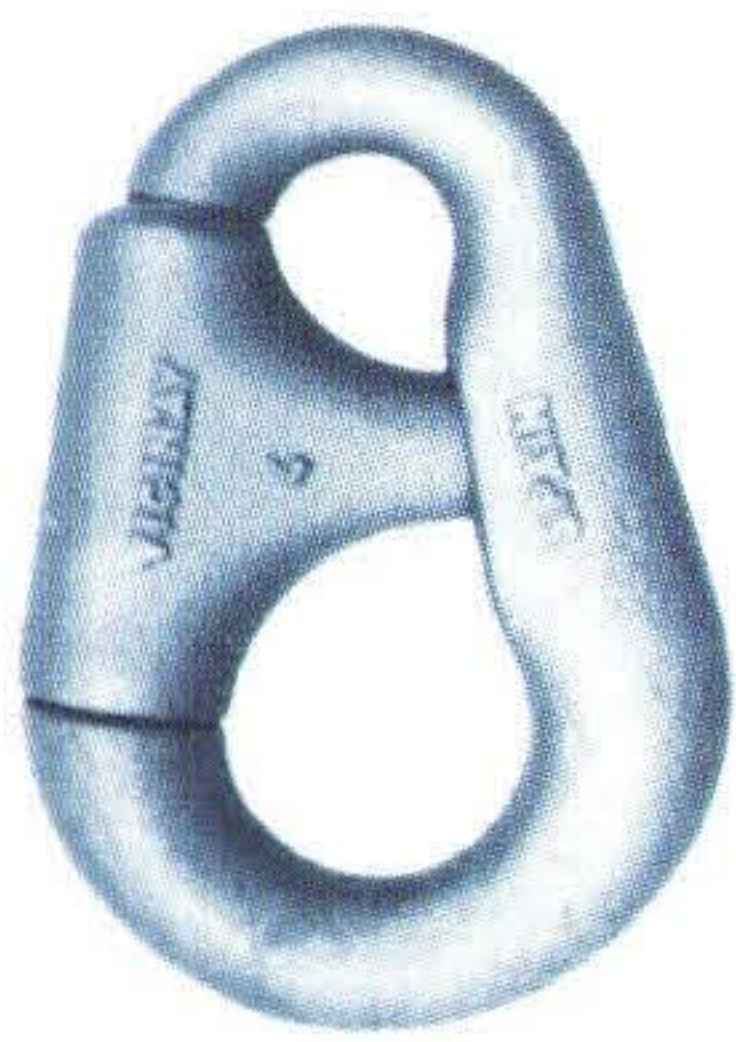


Fig. 108 bis

SWIVEL

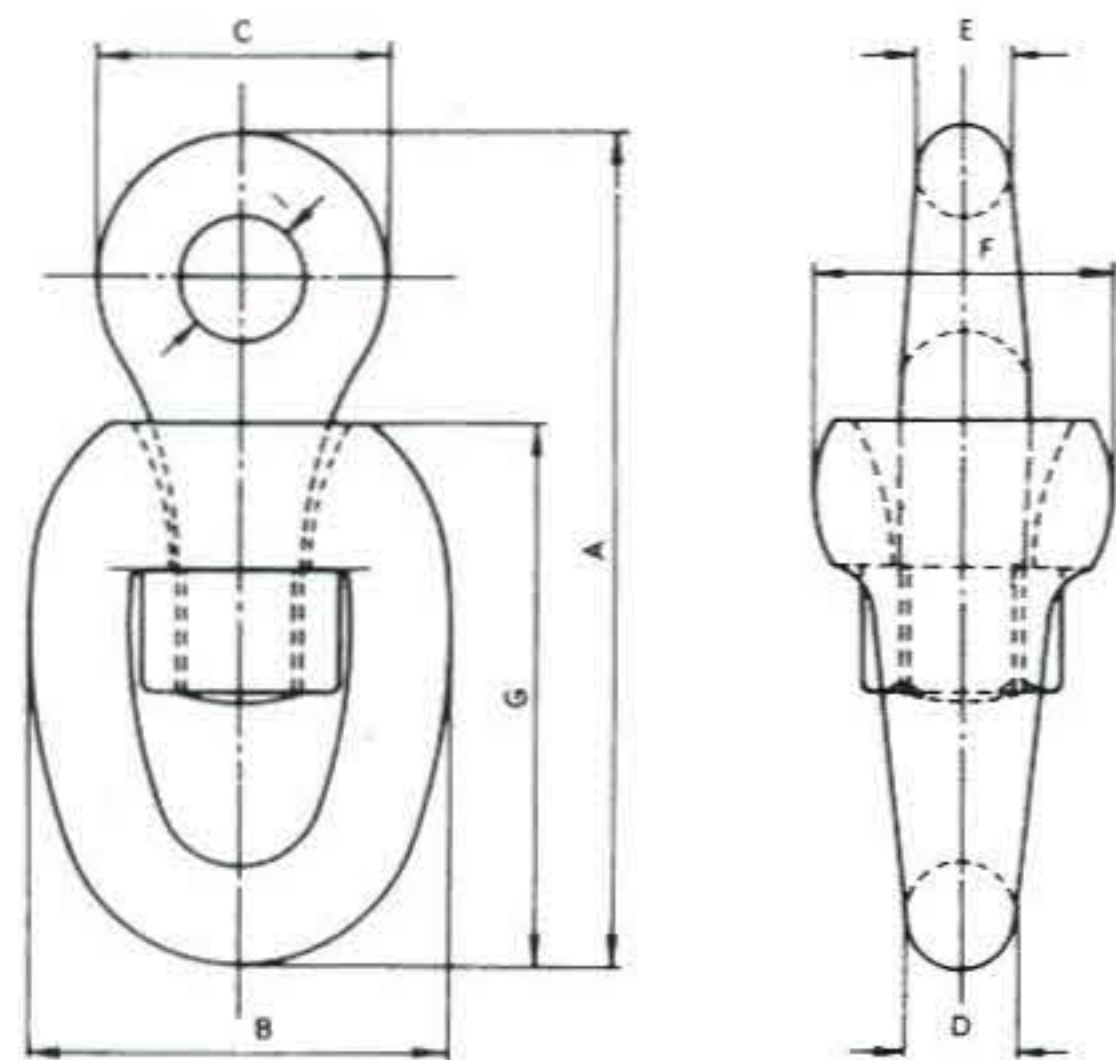
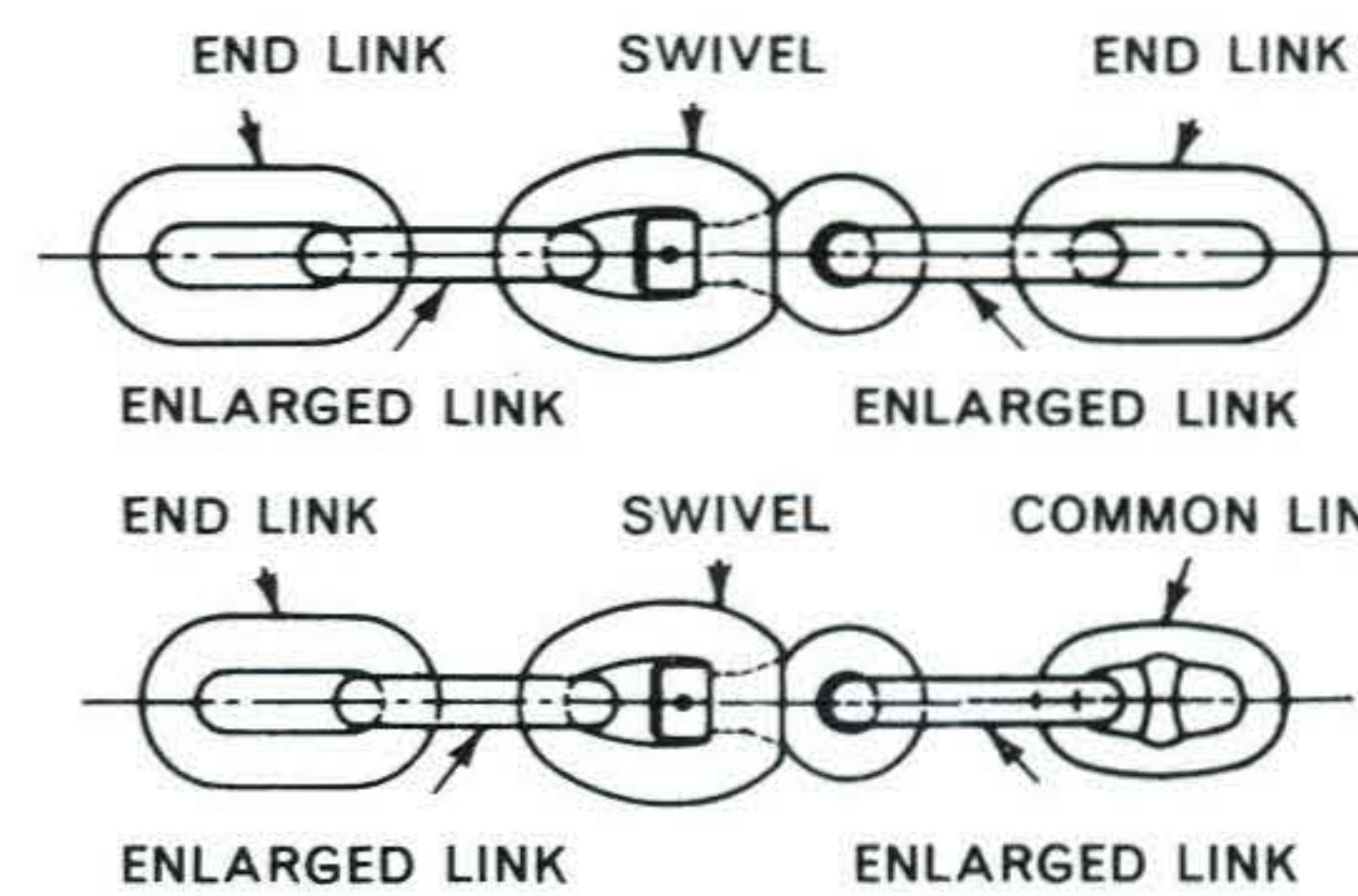


Fig. 110

- A ≈ 9,7 d
- B ≈ 4,7 d
- C ≈ 3,8 d
- D ≈ 1,2 d
- E ≈ 1,2 d
- F ≈ 3,8 d
- G ≈ 6,3 d
- I ≈ 1,4 d



SWIVEL SHACKLE

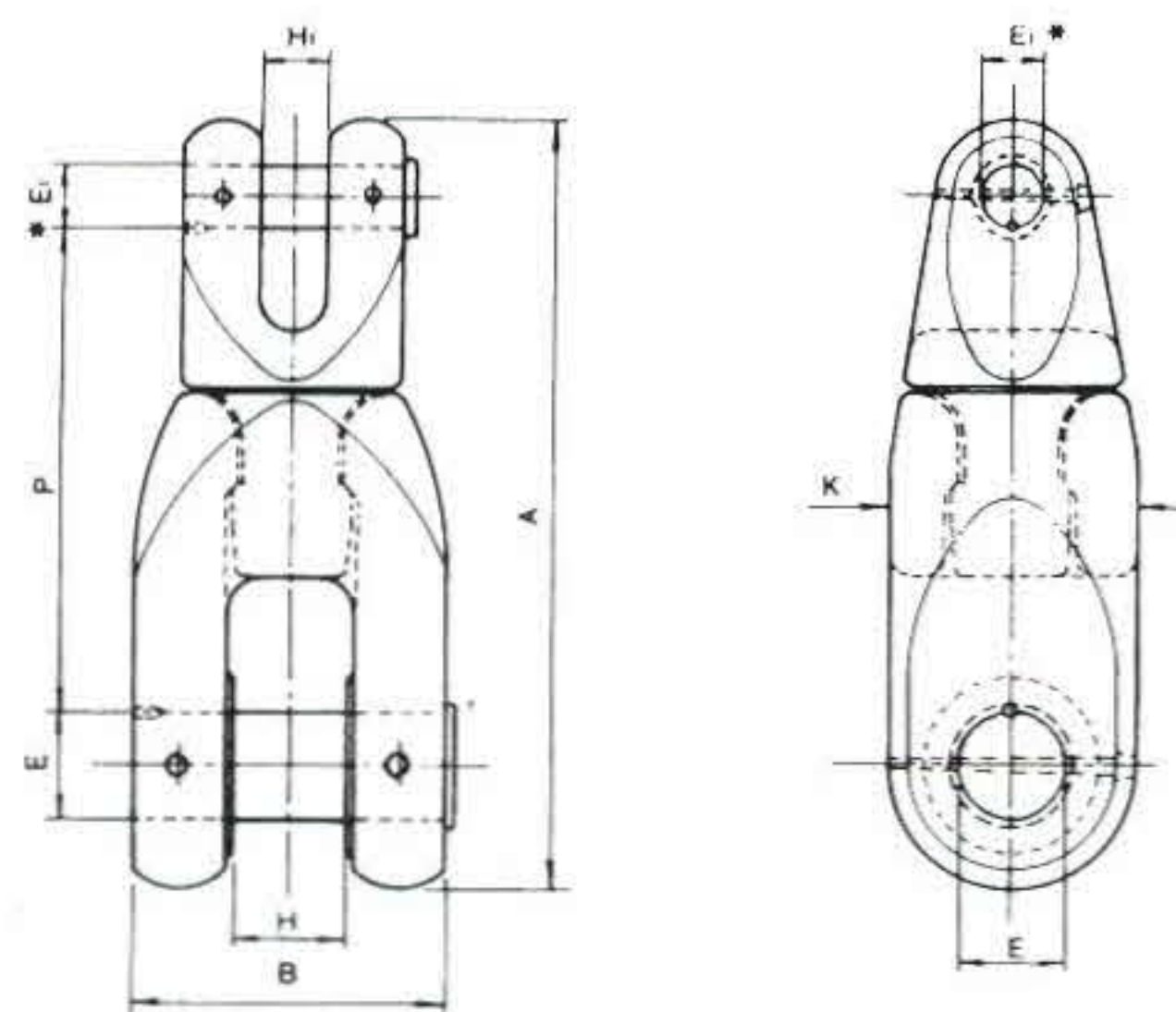


Fig. 507

*OBLONG ON K4

SWIVEL SHACKLE

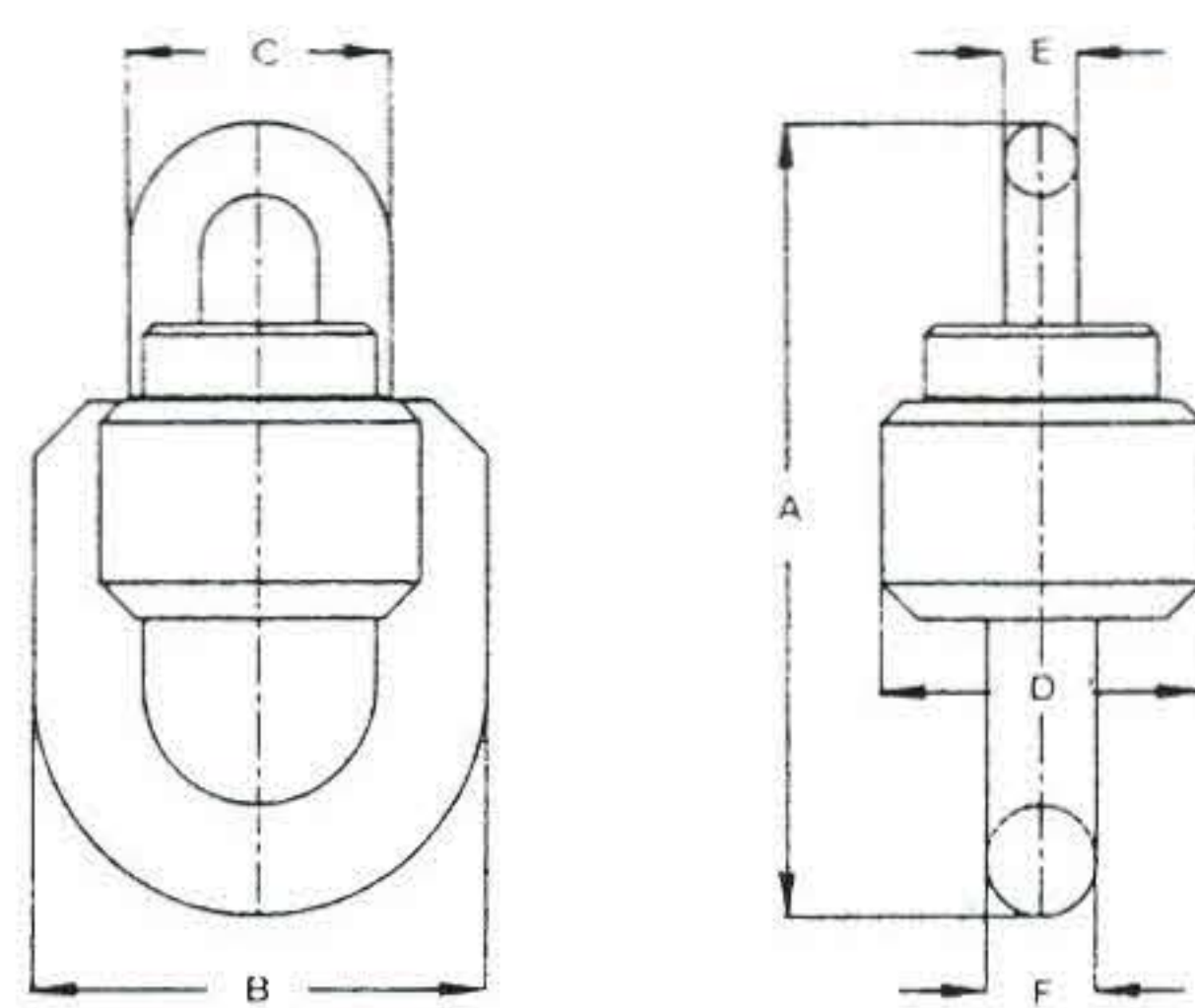
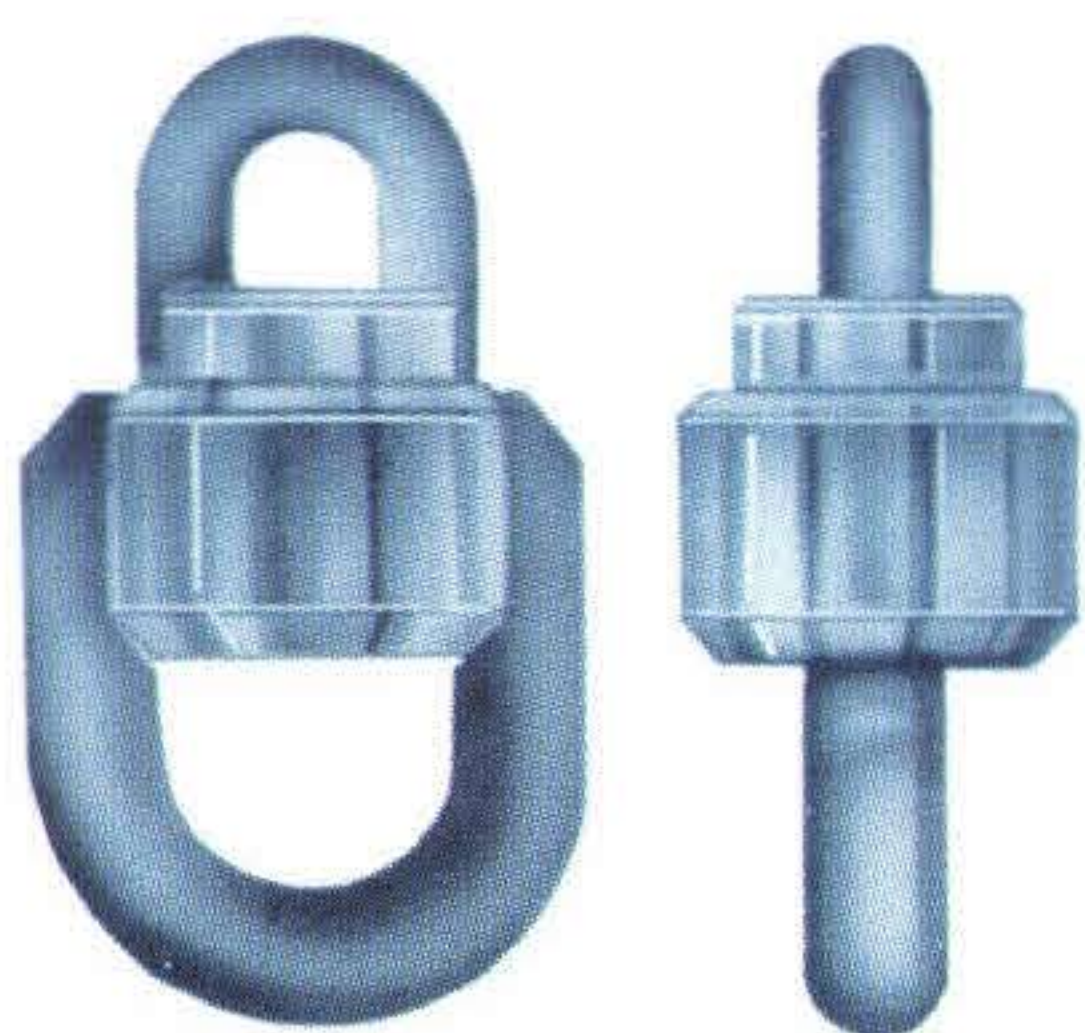


Fig. 710

- A ≈ 10,85 d
- B ≈ 6,2 d
- C ≈ 3,6 d
- D ≈ 4,4 d
- E ≈ 1 d
- F ≈ 1,5 d



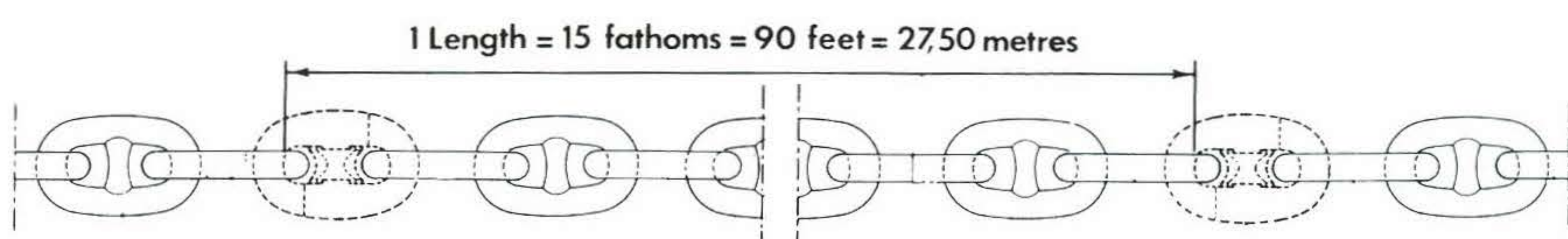
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Chain Diameter Ø		Kenter Shackle Fig.105	Joining Shackle Fig.107	Anchor Shackle Fig.108	End Shackle Fig.109	Swivel Fig. 110	Complete Swivel Fig. 08 F	Swivel Shackle Fig.507
Inches	mm.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.	Kg.
3/4	19	1,1	1,7	2,5	1,6	2,8	6,4	9
13/16	20,5	1,3	2,2	3,1	1,9	3,5	7,8	11,3
7/8	22	1,6	2,7	3,8	2,4	4,4	9,8	13,9
15/16	24	2,1	3,5	5	5	5,6	12,8	18,1
1	25,5	2,6	4,2	6	3,8	6,8	15,4	20,9
1. 1/16	27	3	5	7,1	4,5	8	18,2	25,8
1. 1/8	28,5	3,5	5,8	8,4	5,2	9,4	21,9	30,6
1. 3/16	30	4,2	6,8	9,8	6,1	11	24,9	35,4
1. 1/4	31,5	4,8	7,8	11,3	7,1	12,7	28,4	40,9
1. 5/16	33,5	5,8	9,4	13,6	8,5	15,3	34,7	49,2
1. 3/8	35	6,5	10,8	15,5	9,8	17,5	39,6	56,2
1. 7/16	36,5	7,5	12,2	17,6	11	19,8	44,8	63,7
1. 1/2	38	8,4	13,8	19,8	12,4	22,5	50,7	71,9
1. 9/16	39,5	9,5	15,5	22,3	14	25	56,6	80,7
1. 5/8	41,5	11	17,9	25,8	16,2	29	65,4	93,6
1. 11/16	43	12,3	20	28,7	18	32,5	72,3	104
1. 3/4	44,5	13,5	22,1	31,9	20	36	81,4	115
1. 13/16	46	15	24,4	35,2	22,1	39,5	89,2	128
1. 7/8	47,5	16,5	26,9	38,8	24,3	43,5	99	140
1. 15/16	49	18	29,5	42,5	26,7	48	109	154
2	51	20,5	33,3	48	30	54	122	174
2. 1/16	52,5	22,3	36,3	52,3	32,8	59	134	190
2. 1/8	54	24,2	39,5	57	35,7	64	147	206
2. 3/16	55,5	26,3	43	61,8	38,8	69,5	158	224
2. 1/4	57	28,5	46,5	67	42	75,5	173	243
2. 5/16	58,5	30,8	50,3	72,4	45	81,5	185	262
2. 3/8	60,5	34	55,6	80,1	50,2	90	204	290
2. 7/16	62	36,7	59,8	86,2	54	97	220	312
2. 1/2	63,5	39,4	64,3	92,6	58	104,5	237	335
2. 9/16	65	42,3	69	99,3	62,4	112	254	360
2. 5/8	66,5	45,3	73,8	106,4	66,7	120	272	385
2. 11/16	68	48,3	78,9	113,6	71,3	128	292	412
2. 3/4	69,5	51,6	84,3	121,4	76,1	137	311	440
2. 13/16	71,5	56,2	91,8	132,2	82,9	149	338	479
2. 7/8	73	59,8	97,6	140,7	88,2	159	361	510
2. 15/16	74,5	63,6	103,8	149	93,8	169	383	542
3	76	67,5	110	159	100	179	406	575
3. 1/16	77,5	71,6	117	168	106	190	431	610
3. 1/8	79,5	77,3	126	182	114	205	465	658
3. 3/16	81	81,8	133	192	121	217	492	696
3. 1/4	82,5	86,4	141	203	128	229	520	736
3. 5/16	84	91,2	149	214	135	242	548	776
3. 3/8	86	97,5	159	230	144	259	588	833
3. 7/16	87,5	103	168	242	152	273	619	878
3. 1/2	89	108	177	255	160	287	651	924
3. 9/16	90,5	114	186	268	168	302	685	971
3. 5/8	92	119	195	281	177	317	719	1020
3. 11/16	93,5	125	205	295	185	333	756	1071
3. 3/4	95	131	215	310	195	349	792	1123
3. 13/16	97	140	229	330	207	372	844	1196
3. 7/8	98,5	147	240	345	217	289	883	1252
3. 15/16	100	154	251	361	227	407	923	1310
4	101,5	161	262	378	237	426	967	1370
4. 1/8	105	179	291	418	263	471	1069	1516
4. 1/4	108	194	316	455	286	513	1164	1650
4. 3/8	111	211	343	494	311	557	1264	1792
4. 1/2	114,5	231	377	544	341	611	1386	1966
4. 5/8	117,5	250	407	586	369	660	1498	2125
4. 3/4	120,5	270	439	632	397	712	1616	2292
4. 7/8	124	294	479	688	433	776	1761	2498
5	127	316	514	739	465	834	1892	2683
5. 1/8	130	339	551	793	499	894	2028	2878
5. 1/4	133,5	367	597	859	540	969	2199	3117
5. 3/8	136,5	392	638	918	577	1035	2348	3332
5. 1/2	140	423	689	991	623	1117	2534	3595
5. 5/8	143	451	734	1056	664	1190	2700	3831
5. 3/4	146	480	781	1123	706	1267	2875	4077
5. 7/8	149,5	515	839	1206	758	1360	3086	4377
6	152,5	546	890	1280	805	1443	3274	4646
6. 1/8	155,5	579	944	1357	854	1530	3472	4926
6. 1/4	159	619	1009	1451	912	1636	3712	5266
6. 3/8	162	655	1067	1535	965	1730	3925	5570
6. 1/2	165	692	1128	1622	1020	1828	4148	5885
6. 5/8	168	730	1190	1712	1076	1930	4379	6212
6. 3/4	171,5	777	1266	1821	1145	2053	4658	6608
6. 7/8	174,5	818	1334	1918	1206	2163	4908	6961
7	178	869	1416	2036	1280	2295	5207	7388

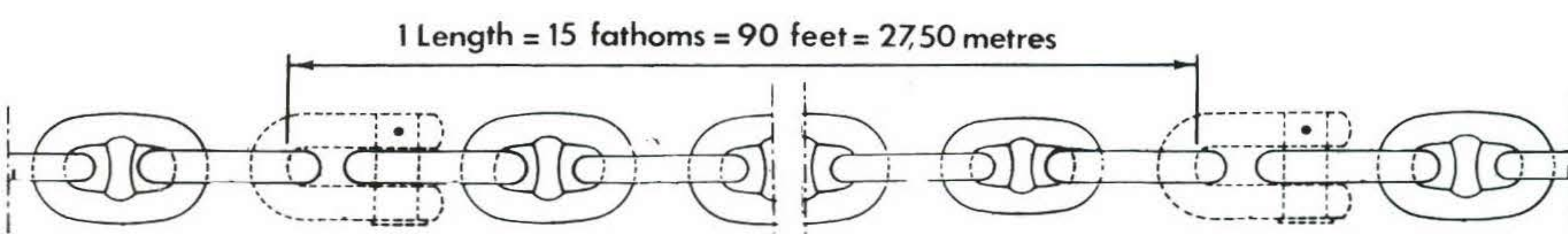
Conversion from Kg. to pounds 1 Kg. = 2,2 lbs.

MARINE

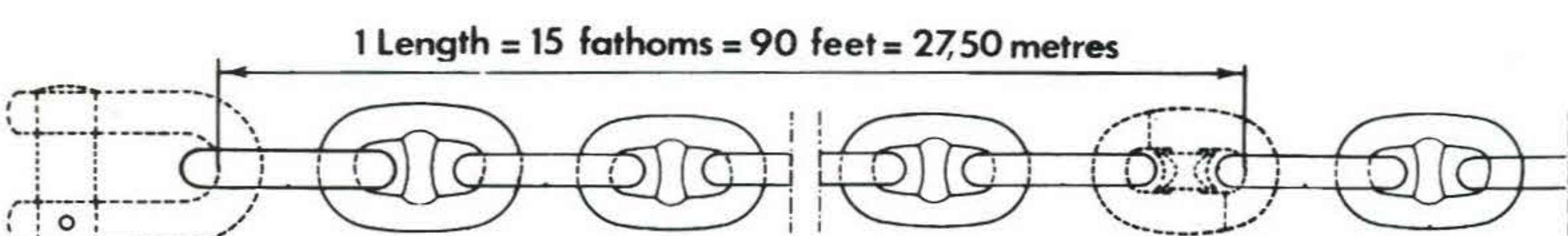
STANDARD ARRANGEMENTS



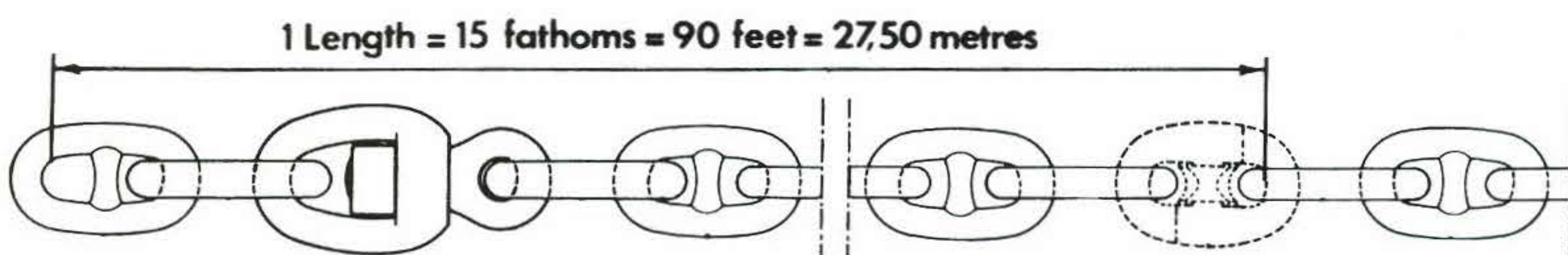
01L Length with normal links only. Connection by kenter joining shackle.



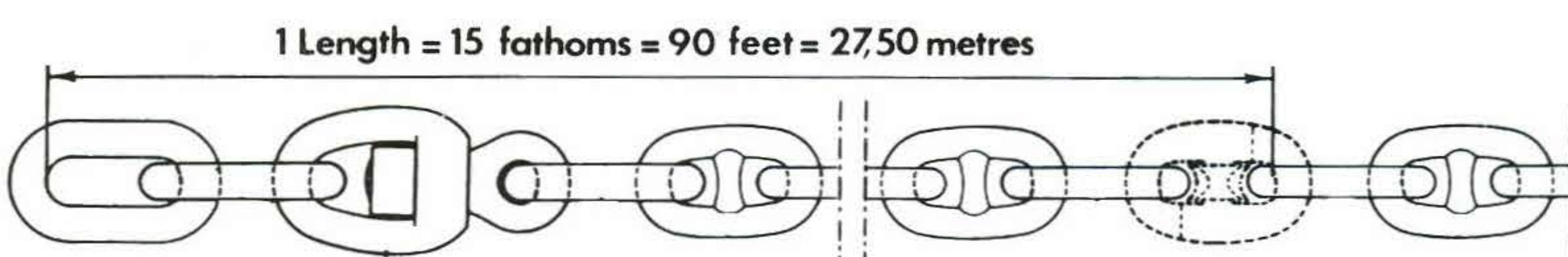
02L Length with enlarged and end links at both ends. Connection by joining shackle "D" type.



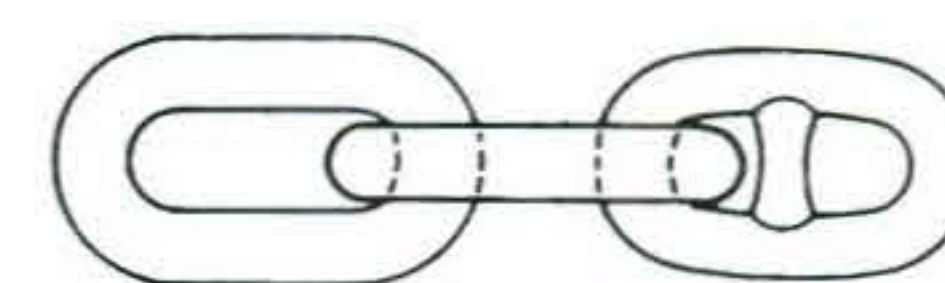
03L Length with enlarged and end link at one end.



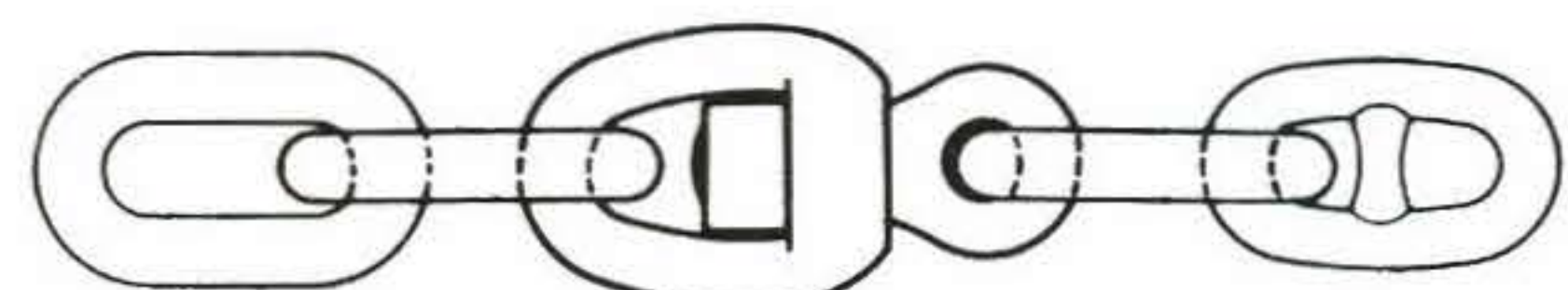
04L Length with swivel with normal links at both ends.



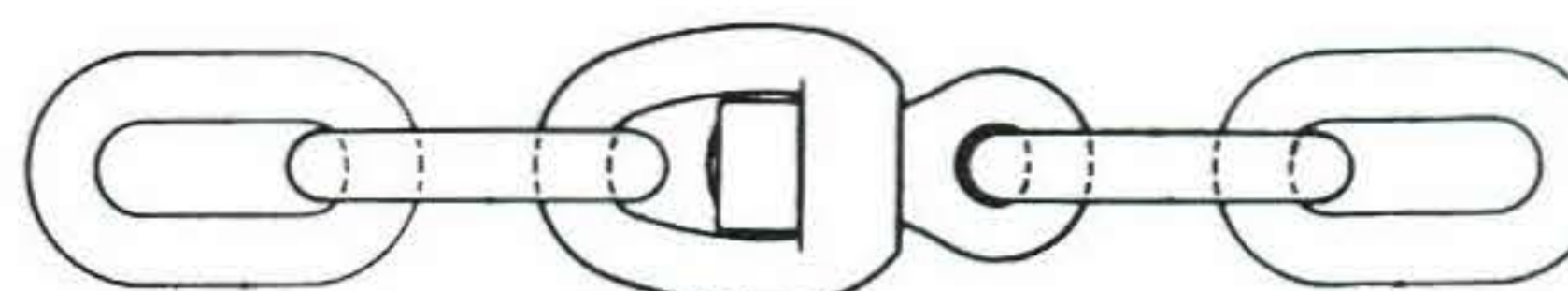
05L Length with swivel with end link at one end.



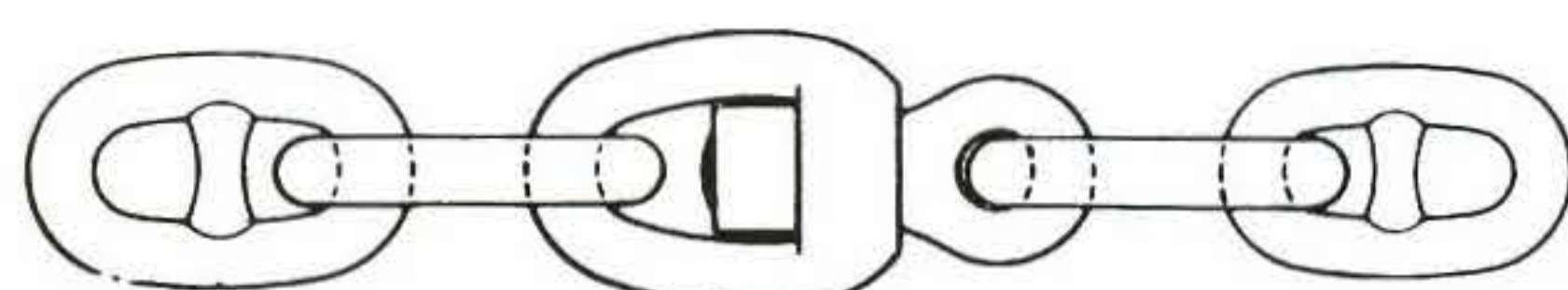
06A Normal adaptor piece.



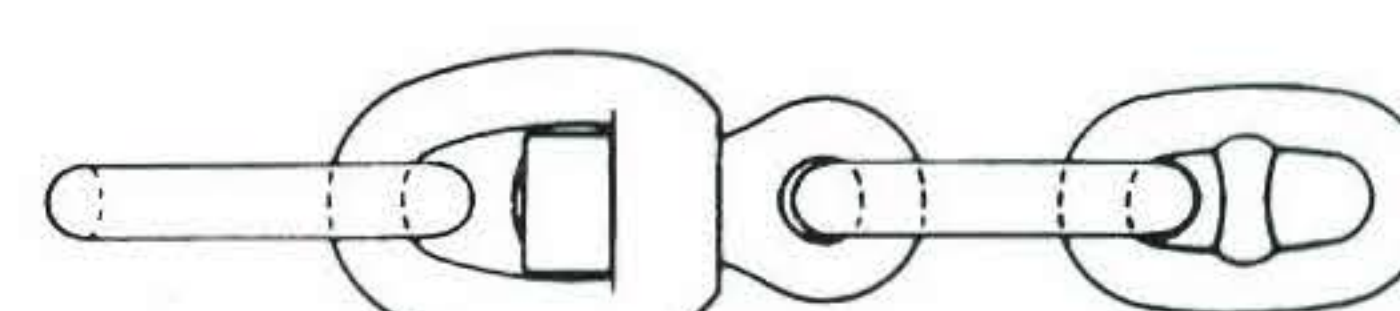
08F Swivel with 4 links (forerunner).



09F Swivel with 4 links (forerunner).

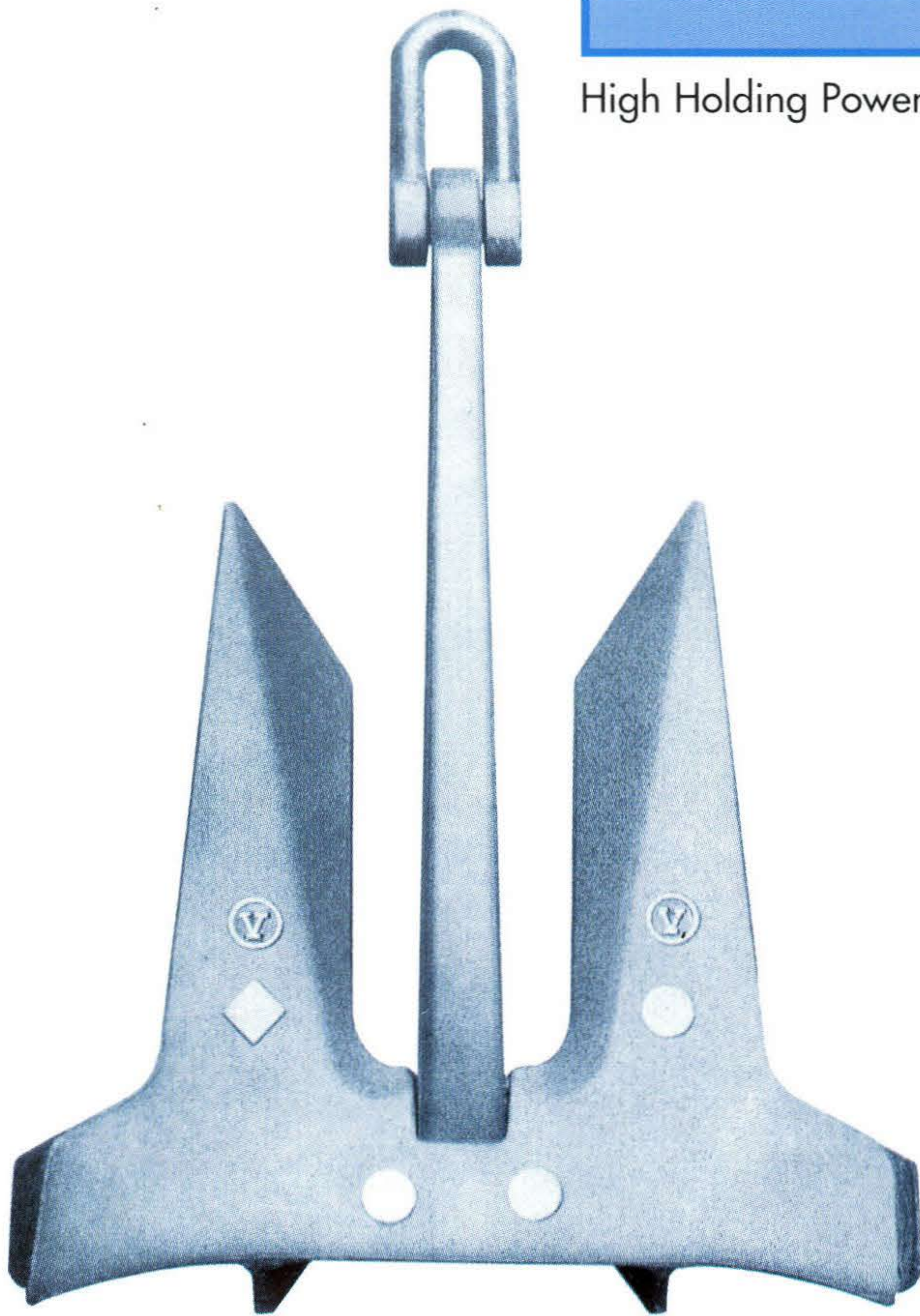


10F Swivel with 4 links (forerunner).



11F Swivel with 3 links (forerunner).

MARINE



AC-14

High Holding Power Stockless Anchor with weight reduction

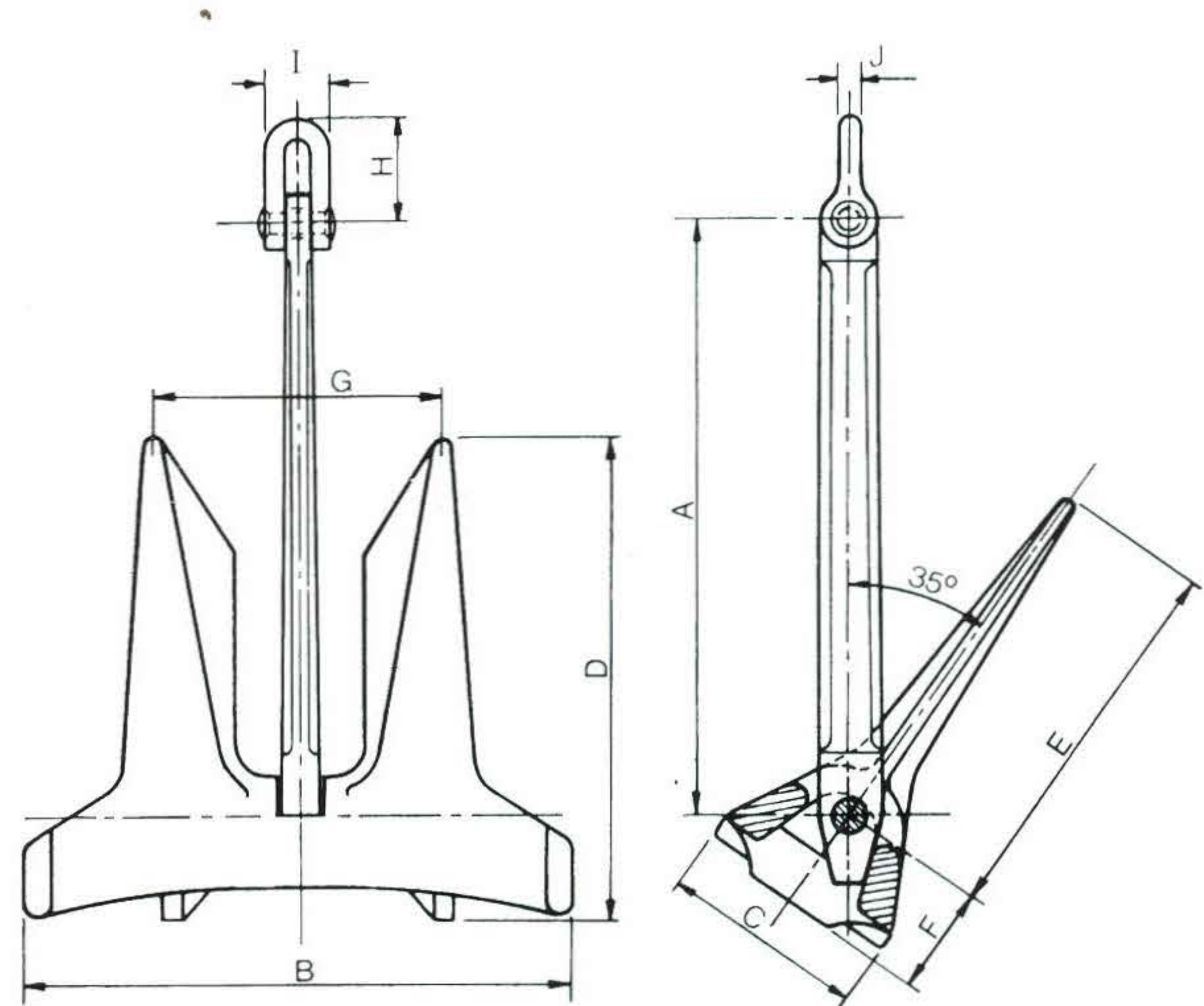


Fig. 402

Highest holding power available, providing $2\frac{1}{2}$ to 3 times that of conventional stockless anchors.

International Classification Societies Lloyd's Register, American Bureau, det Norske Veritas, Bureau Veritas, Germanischer Lloyd, etc. allow a weight reduction up to 25% of the nominal required weight.

Increased efficiency over conventional anchors is maintained on most bottoms including clay, pebbly sand, etc.

Experience has proven a 35° fluke angle to be effective on all type bottoms.

The flukes are shaped to ensure an immediate grip into the seabed.

Holding power in normal conditions is 7 to 10 times the anchor weight, reaching 12 times its weight under ideal conditions.

The small flukes on either side will right the anchor to its proper position.

By using these reduced weight anchors and extra high strength U-3 chain, a reduction in the vessel deadweight is effected and payload is increased accordingly.

Dimensional drawings available upon request.



MARINE

HALL

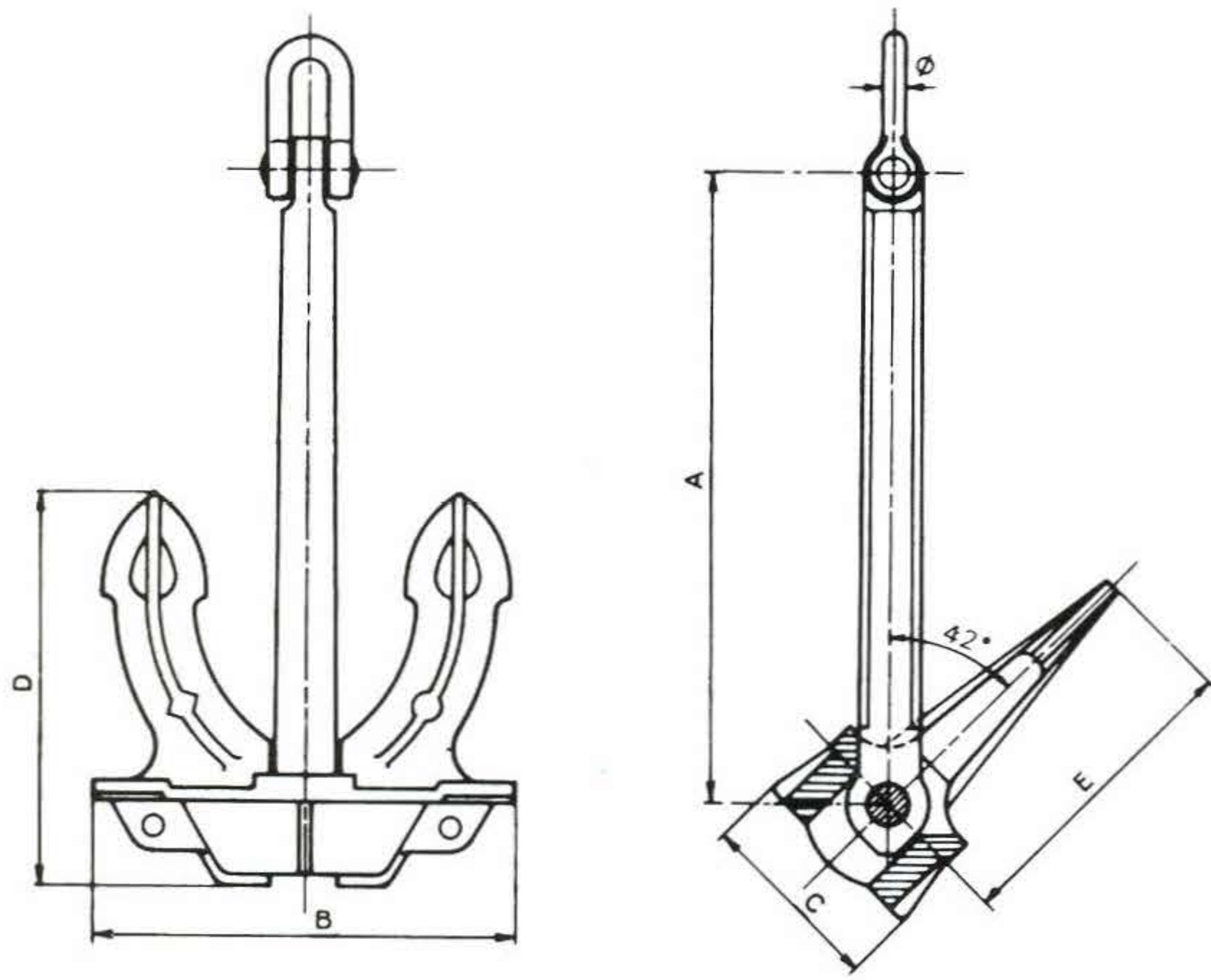


Fig. 113

BOWER ANCHOR

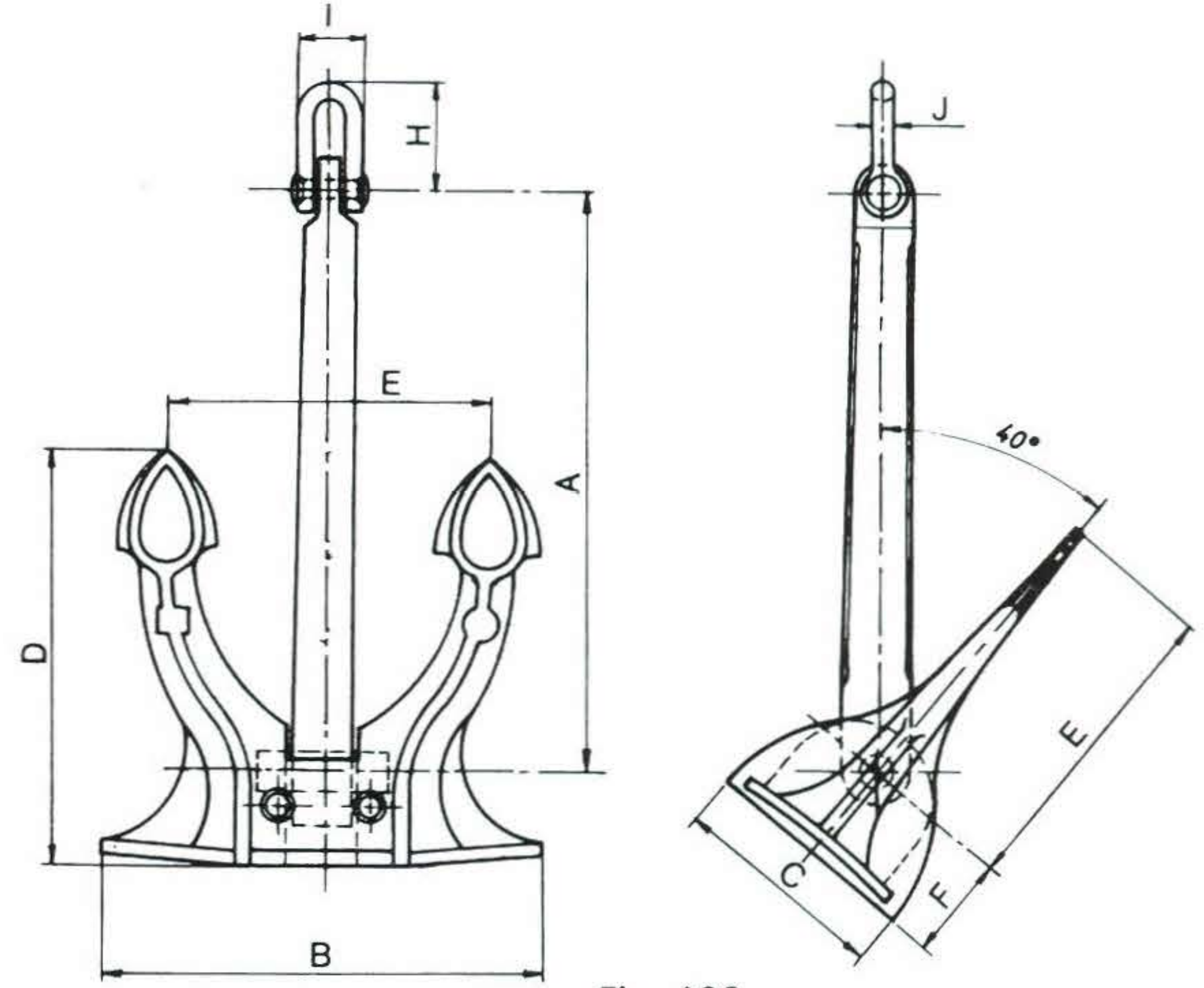


Fig. 603

A. B. STOCKLESS

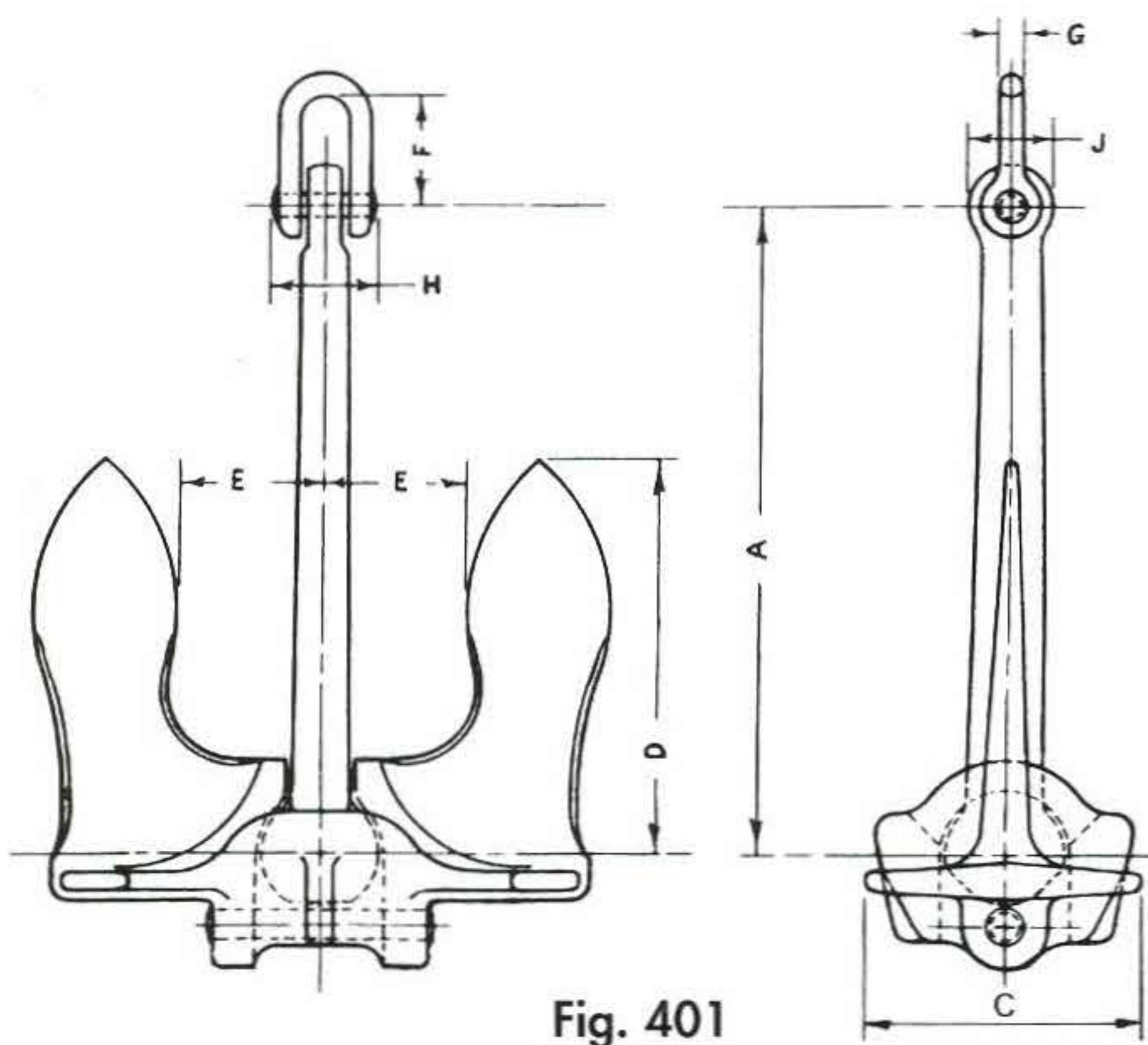


Fig. 401

U.S. NAVY STOCKLESS

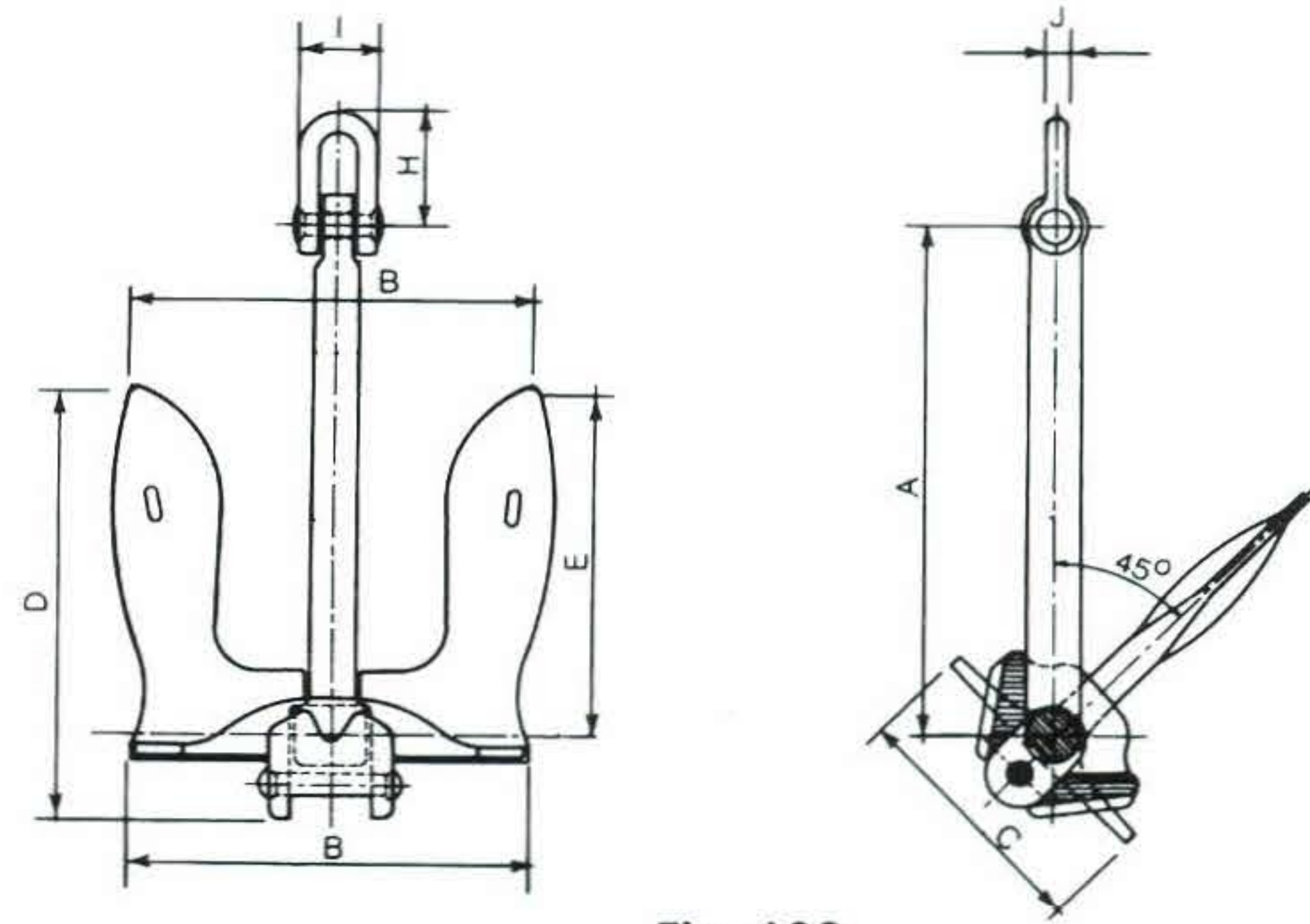


Fig. 602

BYERS

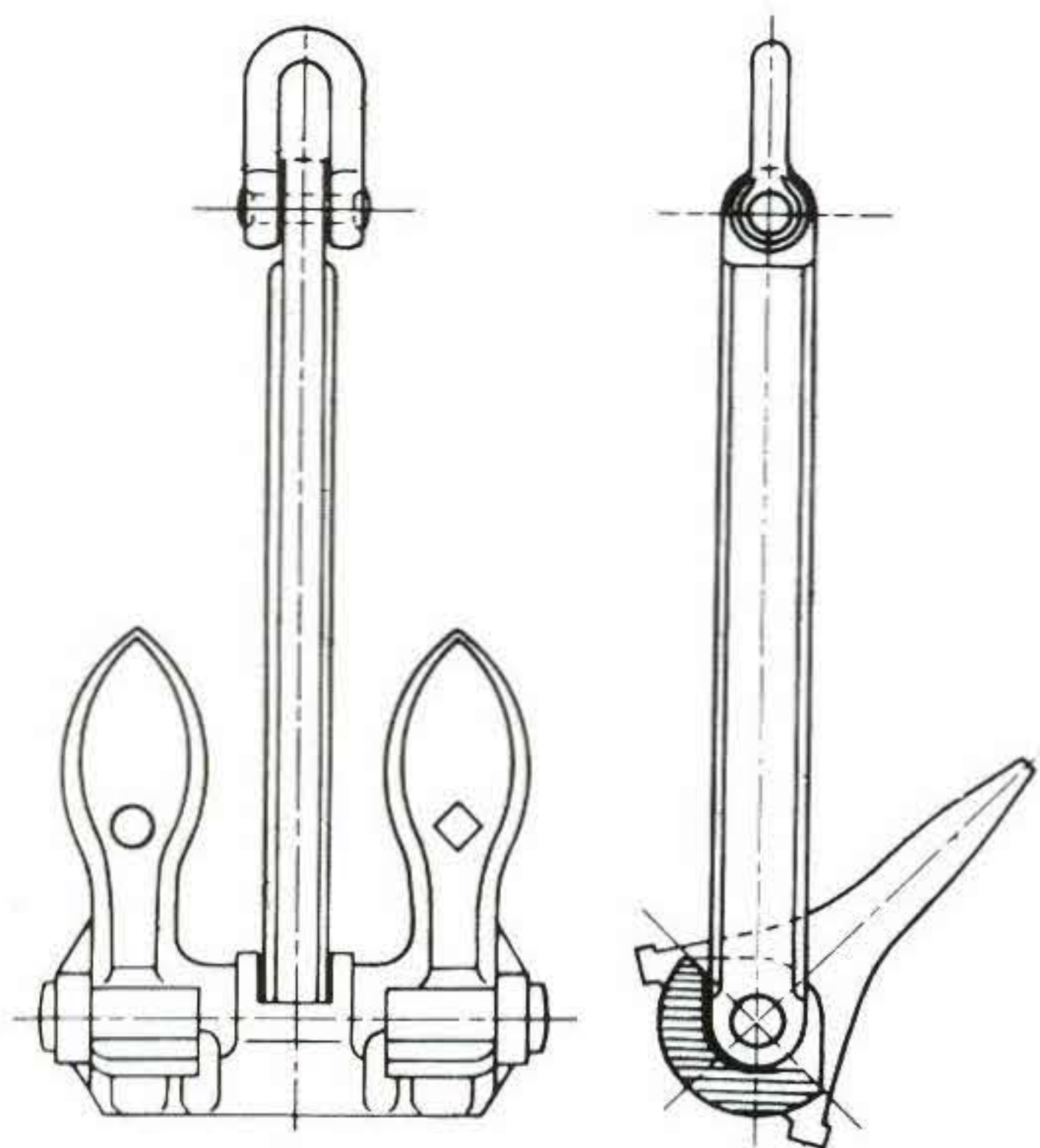


Fig. 115

UNION UNIVERSAL

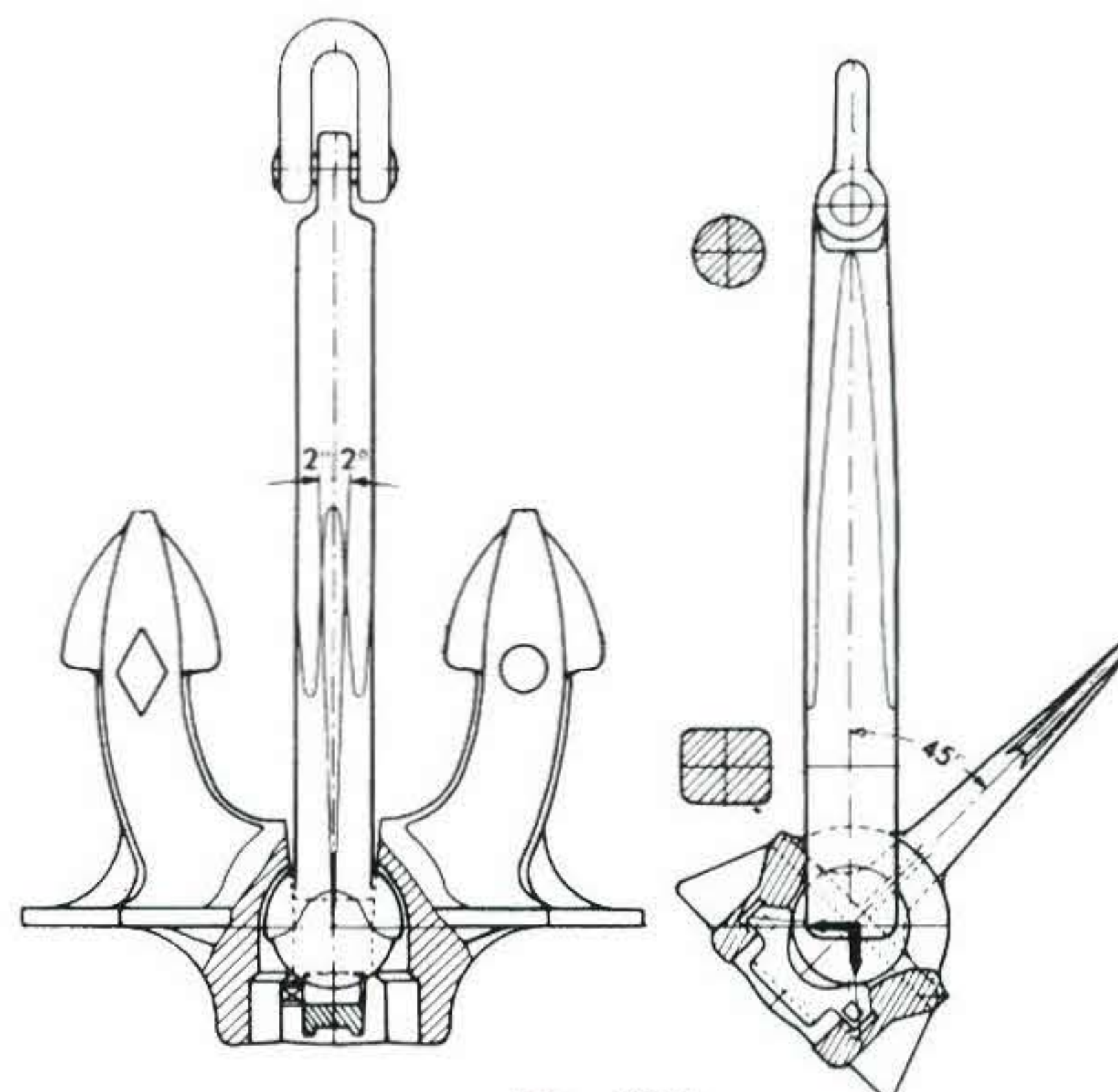


Fig. 600

ANSALDO

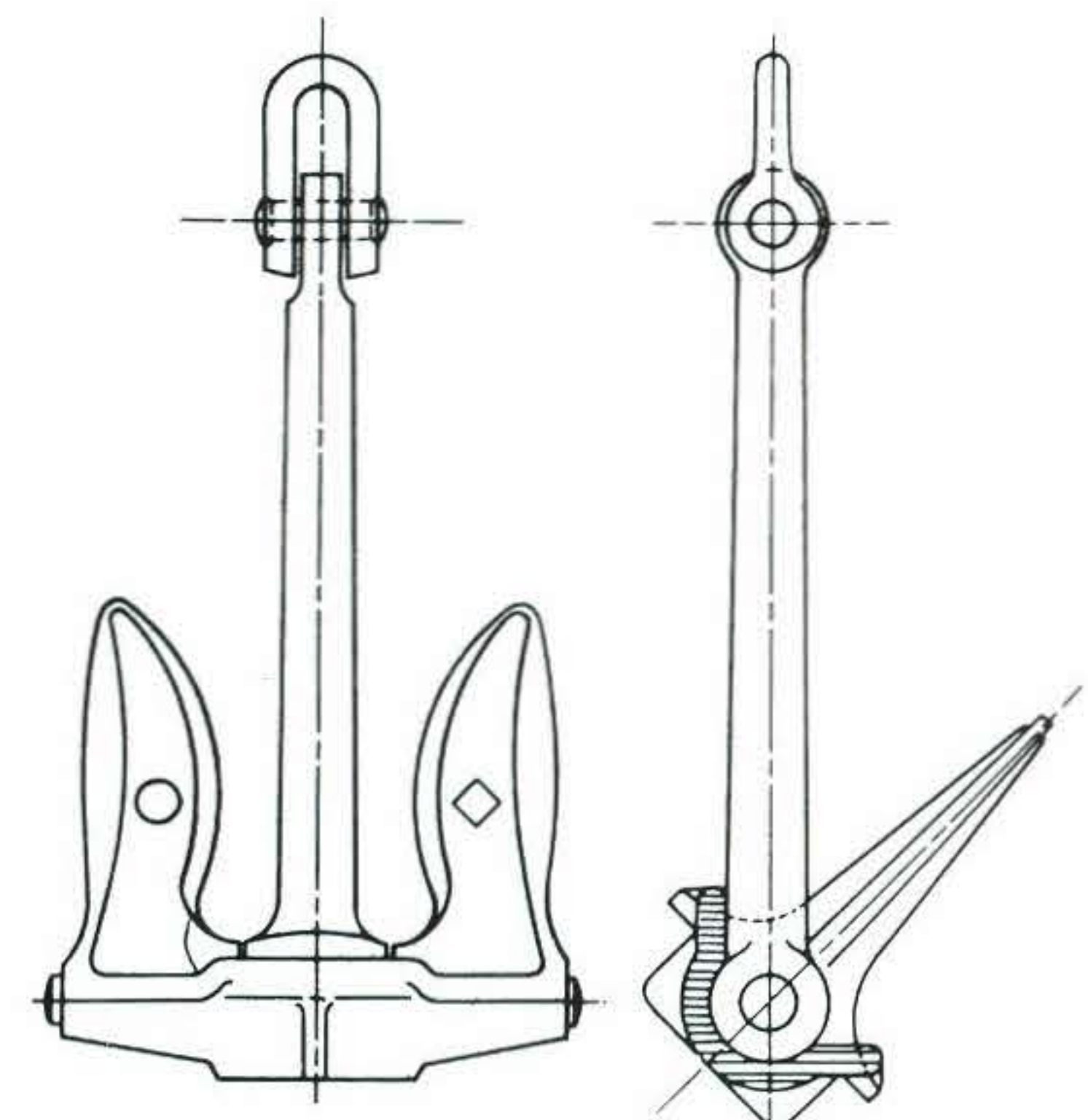


Fig. 116



MARINE

PROOF TEST LOAD FOR STANDARD ANCHORS											
Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN
50	23,2	550	125	2.200	376	4.800	645	7.800	861	17.500	1.390
55	25,2	600	132	2.300	388	4.900	653	8.000	877	18.000	1.410
60	27,1	650	140	2.400	401	5.000	661	8.200	892	18.500	1.440
65	28,9	700	149	2.500	414	5.100	669	8.400	908	19.000	1.470
70	30,7	750	158	2.600	427	5.200	677	8.600	922	19.500	1.490
75	32,4	800	166	2.700	438	5.300	685	8.800	936	20.000	1.520
80	33,9	850	175	2.800	450	5.400	691	9.000	949	21.000	1.570
90	36,3	900	182	2.900	462	5.500	699	9.200	961	22.000	1.620
100	39,1	950	191	3.000	474	5.600	706	9.400	975	23.000	1.670
120	44,3	1.000	199	3.100	484	5.700	713	9.600	987	24.000	1.720
140	49,1	1.050	208	3.200	495	5.800	721	9.800	999	25.000	1.770
160	53,3	1.100	216	3.300	506	5.900	728	10.000	1.010	26.000	1.800
180	57,4	1.150	224	3.400	517	6.000	735	10.500	1.040	27.000	1.850
200	61,3	1.200	231	3.500	528	6.100	740	11.000	1.070	28.000	1.900
225	66,8	1.250	239	3.600	537	6.200	747	11.500	1.090	29.000	1.940
250	70,4	1.300	247	3.700	547	6.300	754	12.000	1.110	30.000	1.990
275	74,9	1.350	255	3.800	557	6.400	760	12.500	1.130	31.000	2.030
300	79,6	1.400	262	3.900	567	6.500	767	13.000	1.160	32.000	2.070
325	84,2	1.450	270	4.000	577	6.600	773	13.500	1.180	34.000	2.160
350	88,8	1.500	278	4.100	586	6.700	779	14.000	1.210	36.000	2.250
375	93,4	1.600	292	4.200	595	6.800	786	14.500	1.230	38.000	2.330
400	97,9	1.700	307	4.300	604	6.900	795	15.000	1.260	40.000	2.410
425	103	1.800	321	4.400	613	7.000	804	15.500	1.270	42.000	2.490
450	107	1.900	335	4.500	622	7.200	818	16.000	1.300	44.000	2.570
475	112	2.000	349	4.600	631	7.400	832	16.500	1.330	46.000	2.650
500	116	2.100	362	4.700	638	7.600	845	17.000	1.360	48.000	2.730

PROOF TEST LOAD FOR H.H.P. ANCHORS											
Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN	Mass of anchor Kg	Proof test load kN
38	23,2	413	125	1.650	376	3.600	645	5.850	861	13.125	1.390
41	25,2	450	132	1.725	388	3.675	653	6.000	877	13.500	1.410
45	27,1	488	140	1.800	401	3.750	661	6.150	892	13.875	1.440
49	28,9	525	149	1.875	414	3.825	669	6.300	908	14.250	1.470
53	30,7	563	158	1.950	427	3.900	677	6.450	922	14.625	1.490
56	32,4	600	166	2.025	438	3.975	685	6.600	936	15.000	1.520
60	33,9	638	175	2.100	450	4.050	691	6.750	949	15.750	1.570
68	36,3	675	182	2.175	462	4.125	699	6.900	961	16.500	1.620
75	39,1	713	191	2.250	474	4.200	706	7.050	975	17.250	1.670
90	44,3	750	199	2.325	484	4.275	713	7.200	987	18.000	1.720
105	49,1	788	208	2.400	495	4.350	721	7.350	999	18.750	1.770
120	53,3	825	216	2.475	506	4.425	728	7.500	1.010	19.500	1.800
135	57,4	863	224	2.550	517	4.500	735	7.875	1.040	20.250	1.850
150	61,3	900	231	2.625	528	4.575	740	8.250	1.070	21.000	1.900
169	66,8	938	239	2.700	537	4.650	747	8.625	1.090	21.750	1.940
188	70,4	975	247	2.775	547	4.725	754	9.000	1.110	22.500	1.990
206	74,9	1.013	255	2.850	557	4.800	760	9.375	1.130	23.250	2.030
225	79,6	1.050	262	2.925	567	4.875	767	9.750	1.160	24.000	2.070
244	84,2	1.088	270	3.000	577	4.950	773	10.125	1.180	25.500	2.160
263	88,8	1.125	278	3.075	586	5.025	779	10.500	1.210	27.000	2.250
281	93,4	1.200	292	3.150	595	5.100	786	10.875	1.230	28.500	2.330
300	97,9	1.275	307	3.225	604	5.175	795	11.250	1.260	30.000	2.410
319	103	1.350	321	3.300	613	5.250	804	11.625	1.270	31.500	2.490
338	107	1.425	335	3.375	622	5.400	818	12.000	1.300	33.000	2.570
356	112	1.500	349	3.450	631	5.550	832	12.375	1.330	34.500	2.650
375	116	1.575	362	3.525	638	5.700	845	12.750	1.360	36.000	2.730