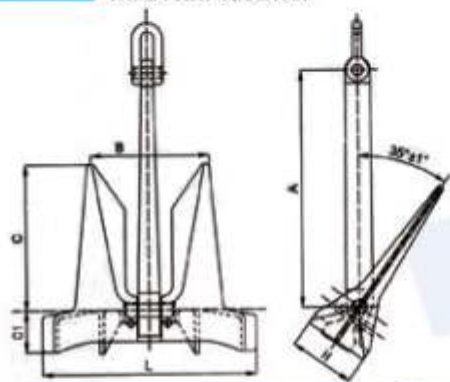


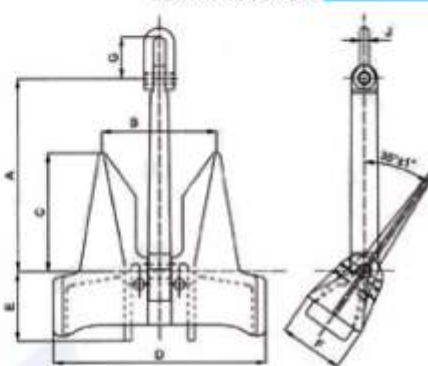
LS-01 AC-14 AC-14 HHP ANCHOR



NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	L	H	C	C1	B
30	491	440	136	299	85	236
45	590	529	164	359	99	283
75	677	605	188	411	122	324
94	718	643	199	437	130	344
113	745	666	207	452	135	357
135	821	737	228	500	143	394
180	904	811	251	550	157	434
225	974	874	270	593	169	468
270	1035	929	287	630	180	497
315	1090	978	302	663	189	524
360	1139	1022	316	694	198	547
428	1194	1071	331	727	206	574
495	1251	1122	347	762	216	602
585	1360	1221	378	828	236	654
675	1398	1254	387	851	242	672
765	1483	1304	404	885	264	698
855	1520	1363	423	925	267	729
968	1590	1425	440	968	275	764
1080	1631	1462	451	993	282	784
1193	1660	1490	465	1011	287	798
1305	1761	1580	488	1072	305	846
1440	1795	1610	497	1093	311	862
1575	1855	1665	514	1130	321	892
1710	1900	1705	526	1157	329	913
1845	1940	1741	538	1182	336	933
1980	1977	1774	548	1203	342	950
2138	2016	1809	559	1227	349	969
2295	2089	1874	579	1272	362	1004
2475	2150	1929	596	1309	373	1033
2655	2201	1975	610	1340	382	1057
2835	2253	2022	624	1372	390	1083
3028	2302	2066	638	1402	399	1107

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	L	H	C	C1	B
3240	2352	2110	652	1432	407	1130
3443	2400	2154	665	1462	415	1154
3668	2451	2200	680	1493	424	1178
3938	2510	2252	696	1529	434	1207
4208	2549	2303	711	1563	444	1234
4500	2624	2355	727	1598	454	1261
4838	2688	2412	745	1637	465	1292
5175	2749	2467	762	1674	476	1321
5513	2808	2520	778	1710	486	1350
5850	2864	2570	794	1744	496	1376
6225	2923	2623	810	1780	506	1405
6525	2970	2665	823	1808	514	1428
6975	3042	2730	843	1853	527	1462
7425	3100	2782	859	1888	537	1490
7875	3162	2837	876	1925	547	1520
8325	3221	2890	893	1961	558	1548
8775	3278	2942	909	1996	567	1576
9225	3333	2991	924	2030	577	1602
9675	3386	3039	939	2062	586	1628
10125	3438	3085	953	2094	595	1653
10575	3488	3130	967	2124	604	1677
11025	3537	3174	981	2154	612	1700
11550	3592	3224	996	2188	622	1727
12075	3646	3272	1011	2220	631	1753
12675	3705	3325	1027	2256	641	1781
13350	3770	3383	1045	2296	653	1812
14100	3839	3445	1064	2338	665	1846
15000	3919	3517	1086	2387	678	1884
16125	4015	3603	1113	2445	695	1930
17250	4106	3685	1138	2501	711	1974
18375	4194	3763	1163	2554	726	2016
19500	4278	3839	1186	2605	740	2056

SB HHP ANCHOR LS-02

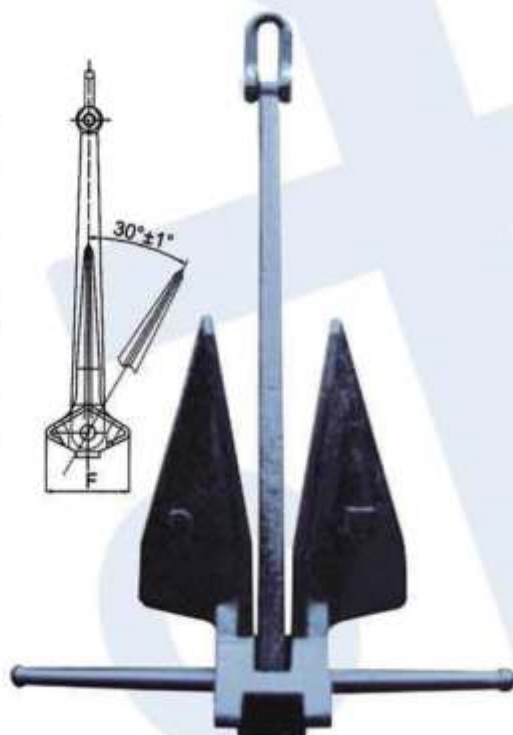
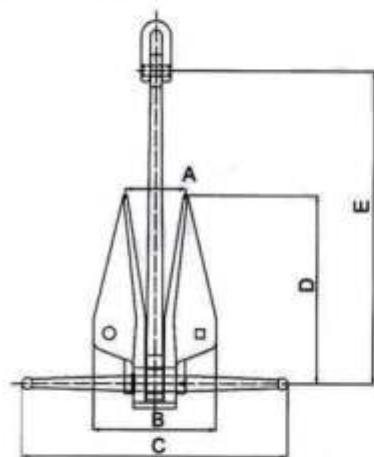


NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
75	550	326	350	606	188	185
100	607	380	385	704	207	200
120	635	380	402	704	217	215
180	742	442	470	822	254	252
225	828	495	525	915	283	277
250	828	495	525	915	283	280
300	882	525	559	975	301	298
340	918	548	582	1012	313	310
360	918	548	582	1015	313	313
430	990	590	628	1098	339	336
495	1025	610	658	1135	350	348
585	1102	658	699	1220	376	375
675	1152	690	731	1278	394	390
765	1205	718	764	1335	411	408
855	1250	745	793	1385	427	420
970	1300	775	826	1445	444	440
1080	1350	805	855	1495	461	455
1200	1400	835	887	1545	478	470
1305	1440	858	913	1595	492	485
1440	1486	885	943	1645	507	505
1575	1534	915	972	1695	523	518
1710	1575	940	998	1745	538	532
1815	1616	965	1025	1785	552	546
1980	1650	985	1048	1830	564	560
2100	1686	1005	1070	1865	575	570
2295	1738	1035	1102	1920	593	588
2475	1780	1062	1128	1970	607	602
2655	1820	1085	1155	2018	621	615
2835	1862	1109	1180	2057	635	625
3040	1896	1130	1204	2100	646	640
3550	2030	1198	1287	2225	693	680
3940	2080	1240	1318	2300	709	705

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
4500	2170	1295	1376	2405	741	735
4840	2225	1330	1410	2465	760	755
5175	2275	1358	1443	2520	777	770
5610	2339	1396	1483	2590	798	790
6000	2390	1426	1515	2646	816	810
6225	2420	1443	1534	2678	826	820
6525	2450	1462	1554	2712	836	830
6975	2507	1496	1589	2775	855	848
7350	2560	1526	1622	2832	873	866
7875	2610	1558	1655	2890	891	884
8325	2665	1590	1689	2950	909	902
8775	2707	1614	1715	2996	924	916
9300	2765	1652	1754	3064	945	936
9675	2805	1674	1778	3104	957	948
10125	2850	1700	1806	3152	972	960
10575	2880	1720	1827	3192	984	976
11025	2930	1750	1859	3247	1001	990
11700	2987	1782	1894	3308	1019	1010
12075	3010	1800	1906	3343	1027	1020
12675	3065	1812	1945	3364	1047	1028
13350	3132	1870	1986	3470	1069	1060
14100	3178	1896	2015	3520	1084	1076
14700	3228	1924	2045	3570	1099	1090
15400	3272	1954	2075	3626	1117	1108
16100	3320	1980	2110	3680	1132	1125
16700	3350	2000	2126	3720	1144	1144
17250	3380	2016	2142	3740	1151	1144
17800	3440	2050	2180	3806	1173	1162
18800	3500	2088	2220	3875	1193	1185
20000	3573	2132	2265	3956	1220	1210
25000	3965	2360	2515	4309	1352	1295
30000	4158	2588	2765	4663	1484	1380

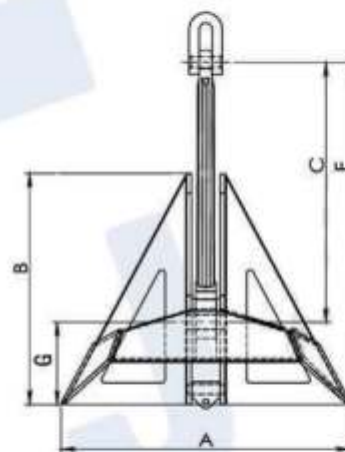
LS-03

Danforth HHP ANCHOR



LS-04

HHP ANCHOR (Delta Anchor)



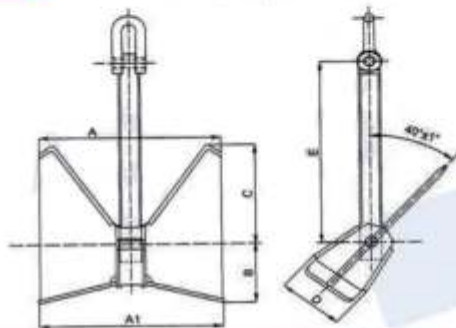
名义重量 NOMINAL WEIGHT (LBS)	尺寸SIZE (mm)						shackle model
	A	B	C	D	E	F	
100	159	322	714	485	800	219	a4
150	183	372	793	560	926	253	a5
200	203	412	874	621	995	281	a6
250	225	457	960	689	1075	312	a6
300	228	461	1000	706	1166	314	a7
400	257	522	1090	788	1284	356	a8
500	274	554	1180	836	1380	378	a9
600	290	588	1253	888	1466	401	a9
750	314	635	1350	958	1578	433	a9
1000	344	694	1488	1060	1739	472	a11
1250	367	741	1603	1135	1864	505	a12
1500	396	800	1703	1207	1988	545	a12
2000	438	888	1875	1336	2190	604	a14
2500	470	950	2020	1432	2300	647	a14
2625	470	950	2020	1432	2300	647	a14
2750	485	960	2120	1432	2335	650	a14
3000	502	1033	2146	1575	2396	710	a14
3500	550	1111	2265	1677	2515	757	a15
4000	552	1114	2365	1680	2623	759	a15
5000	595	1200	2480	1811	2850	818	a16
6000	630	1274	2680	1920	3164	866	a17
6600	652	1317	2792	1986	3260	897	a19
8000	692	1398	2970	2109	3475	971	a19
9000	715	1448	3080	2200	3490	990	a20
10000	735	1484	3200	2270	3591	1010	a21
15000	851	1700	3680	2610	4100	1160	a23
20000	936	1870	4050	2870	4510	1276	a26
30000	1136	2250	4900	3400	5400	1520	a30
35000	1208	2414	5250	3670	5830	1642	a31
40000	1286	2588	5625	3930	6250	1758	a32
45000	1378	2745	5968	4172	6610	1867	a33
50000	1450	2890	6282	4393	6950	1965	a34

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
300	1310	1040	1180	495	1550	370
500	1535	1240	1400	585	1845	445
750	1780	1400	1600	665	2110	510
1000	1960	1560	1755	740	2320	565
1500	2250	1800	2025	840	2660	635
2000	2470	2000	2250	930	2960	710
2500	2660	2130	2395	1005	3150	755
3000	2830	2285	2565	1070	3380	815
4000	3180	2560	2880	1190	3790	910
4500	3194	2575	2900	1220	3820	920
5000	3300	2660	2995	1260	3945	950
6000	3560	2884	3245	1300	4269	1024
7000	3750	2995	3365	1405	4440	1075
9000	4120	3280	3690	1540	4860	1170
10000	4270	3400	3825	1600	5040	1215
13500	4670	3730	4195	1765	5535	1340
15000	4840	3860	4340	1825	5725	1385
18000	5140	4100	4615	1940	6085	1470

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
20000	5320	4240	4775	2010	6300	1525
22500	5535	4420	4970	2090	6560	1590
25000	5730	4575	5140	2160	6780	1640
30000	6100	4880	5486	2305	7225	1739
35000	6424	5138	5775	2426	7605	1830
40000	6715	5370	6036	2536	7948	1912
45000	6986	5588	6184	2640	8270	2086
50000	7230	5785	6500	2730	8560	2060
55000	7470	5975	6715	2820	8840	2125
60000	7690	6150	6910	2940	9100	2190
65000	7900	6315	7100	2980	9350	2250
70000	8095	6475	7275	3060	9580	2305
75000	8235	6590	7405	3110	9750	2345
80000	8460	6770	7610	3195	10020	2410
85000	8625	6900	7750	3255	10210	2460
90000	8800	7040	7910	3325	10420	2510
95000	8960	7170	8055	3385	10610	2555
100000	9110	7285	8190	3440	10780	2590

LS-20

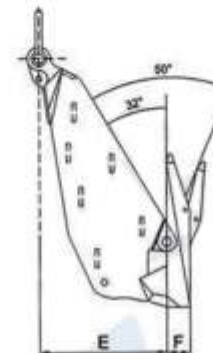
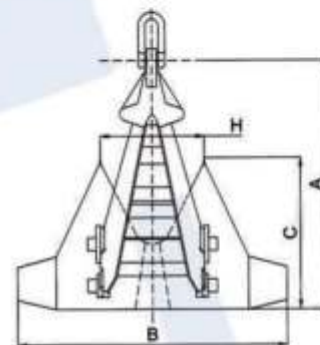
ANCHOR (POOL ANCHOR TYPE tw)



NOMINAL WEIGHT (KG)	SIZE (mm)						Shackle Model
	A	A1	B	C	D	E	
105	640	650	250	422	240	705	a6
135	696	706	273	460	262	815	a6
160	736	746	289	486	277	895	a7
180	766	776	300	506	288	937	a7
225	825	837	324	545	310	982	a8
270	877	890	344	579	329	1080	a8
300	907	922	356	600	340	1080	a8
360	965	980	378	638	362	1175	a9
430	1024	1040	402	676	384	1200	a9
495	1074	1090	420	709	402	1257	a10
565	1122	1138	440	740	436	1318	a11
675	1205	1221	475	801	454	1456	a11
765	1256	1272	476	836	455	1518	a12
855	1306	1327	494	866	496	1575	a13
970	1360	1381	532	896	513	1642	a13
1080	1410	1431	540	910	536	1703	a13
1195	1435	1446	545	955	537	1730	a13
1305	1490	1512	580	981	558	1814	a14
1440	1554	1576	587	1031	585	1875	a14
1575	1594	1618	606	1062	600	1931	a14
1710	1635	1659	622	1092	614	1985	a15
1845	1684	1709	638	1120	638	2035	a15
1980	1733	1758	657	1153	654	2088	a15
2140	1765	1803	671	1177	664	2138	a16
2295	1802	1829	686	1205	678	2190	a16
2475	1860	1887	704	1236	705	2240	a17
2655	1900	1927	720	1263	716	2298	a17
2835	1945	1973	737	1294	730	2350	a17
3040	1984	2012	754	1324	744	2404	a17
3240	2036	2066	770	1351	768	2456	a18
3445	2070	2100	789	1381	782	2507	a18
3670	2110	2142	804	1410	795	2560	a19
3940	2152	2185	820	1440	802	2621	a19
4210	2218	2251	842	1478	838	2680	a20
4500	2264	2297	861	1510	854	2740	a20
4840	2316	2349	879	1543	868	2800	a21
5175	2334	2367	889	1558	876	2829	a22
5290	2363	2397	926	1558	887	2870	a22
5515	2412	2446	926	1608	911	2921	a22
5850	2450	2485	960	1615	920	2985	a23
6225	2509	2543	980	1640	940	3033	a23
6975	2623	2659	1015	1707	990	3145	a23
7875	2695	2735	1050	1773	1012	3264	a24
8148	2744	2771	1067	1805	1030	3320	a24
8420	2794	2822	1087	1838	1049	3381	a24
8710	2823	2851	1098	1857	1060	3416	a25
9000	2852	2881	1109	1876	1071	3451	a25
9340	2885	2914	1122	1898	1083	3491	a25
9680	2918	2947	1135	1919	1096	3531	a26
10090	2947	2976	1146	1939	1107	3566	a26
10500	2977	3007	1158	1958	1118	3602	a26
10765	3008	3038	1170	1979	1130	3640	a26
11030	3039	3069	1182	1999	1141	3677	a27
11365	3063	3094	1192	2015	1150	3706	a27
11100	3087	3118	1201	2031	1159	3735	a27
12075	3124	3155	1215	2055	1173	3780	a28
12450	3161	3193	1230	2079	1187	3825	a28
13200	3233	3265	1258	2127	1214	3912	a29
13950	3305	3338	1286	2174	1241	3999	a29
14850	3350	3384	1303	2204	1258	4054	a30
15750	3395	3429	1321	2233	1275	4108	a30
16295	3457	3492	1345	2274	1298	4183	a31
16840	3520	3555	1369	2315	1322	4259	a31
17420	3556	3592	1383	2339	1335	4303	a32
18000	3593	3629	1398	2363	1349	4348	a32
18680	3634	3670	1414	2390	1365	4397	a32
19360	3676	3713	1430	2418	1380	4448	a33
20000	3713	3750	1444	2442	1394	4493	a33

LS-17

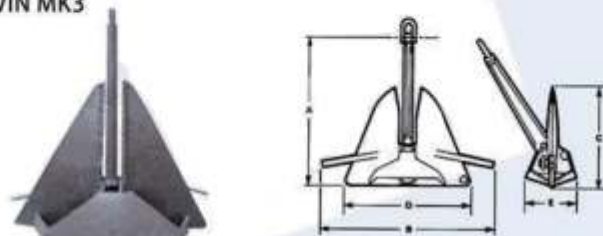
HHP ANCHOR (STEVIN MK5)



NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	E	F	H
300	1828	1968	1101	927	160	757
500	2040	2197	1233	1035	179	845
1000	2570	2770	1562	1304	226	1064
1500	2944	3174	1802	1495	261	1230
2000	3244	3494	1969	1646	285	1343
3000	3711	4001	2279	1886	332	1540
4000	4083	4403	2431	2074	359	1692
5000	4402	4746	2697	2238	396	1835
6000	4680	5040	2941	2374	411	1988
7000	4900	5280	3001	2490	443	2045
8000	5151	5553	3156	2619	464	2139
9000	5359	5772	3253	2719	471	2219
10000	5549	5932	3400	2822	501	2305
12000	5893	6353	3614	3000	533	2450
14000	6209	6694	3805	3159	562	2580
15000	6354	6850	3804	3232	575	2640
16000	6469	6967	3927	3282	569	2673
18000	6753	7280	4139	3436	612	2806
20000	6994	7540	4287	3559	634	2907
22000	7220	7784	4426	3674	654	3001
25000	7535	8123	4619	3834	684	3132
30000	8003	8635	4919	4075	727	3329

LS-18

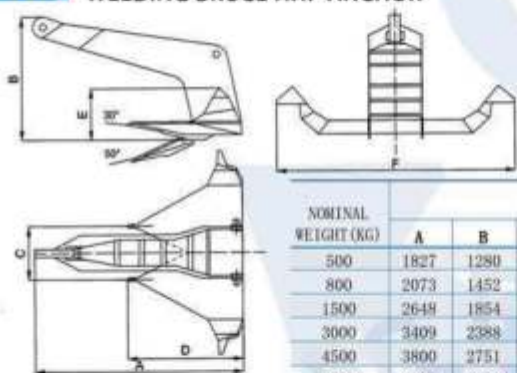
STEVIN MK3



NOMINAL WEIGHT (KG)	SIZE (mm)							
	A	B	C	D	E	F	G	H
1000	2429	2654	1559	2023	737	1010	412	60
1500	2774	3038	1785	2316	843	1156	471	65
3000	3493	3828	2249	2918	1063	1456	504	80
5000	4120	4538	2667	3460	1260	1727	704	80
7000	4002	5077	2983	3871	1409	1932	788	90
9000	5012	5521	3244	4209	1533	2100	857	100
12000	5516	6076	3570	4632	1687	2312	943	110
15000	5942	6545	3846	4990	1817	2490	1016	120
20000	6372	6986	4100	5324	2048	2674	1083	160
30000	7289	7997	4694	6094	2345	3061	1240	180

LS-19

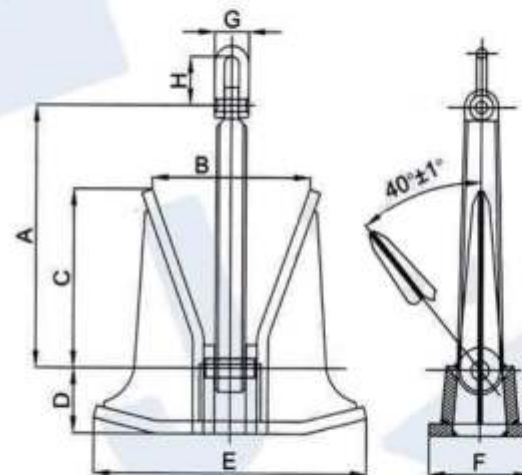
WELDING BRUCE HHP ANCHOR



NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
500	1827	1280	500	1303	606	2188
800	2073	1452	667	1479	688	2484
1500	2648	1854	723	1888	878	3172
3000	3409	2388	931	2431	1131	4085
4500	3800	2751	1047	2733	1298	4605
5000	4029	2822	1100	2873	1336	4828
6000	4227	3028	1161	3031	1430	5104
6500	4326	3131	1192	3110	1478	5242
9000	4846	3394	1324	3456	1607	5806
10000	5287	3563	1390	3628	1687	6095
12000	5437	3808	1486	3878	1803	6514
15000	5728	4012	1566	4085	1900	6864
18000	6129	4292	1674	4371	2031	7343
20000	6319	4426	1726	4507	2096	7571
30000	7225	5060	1974	5153	2396	8656

D-HONG HHP ANCHOR

LS-21

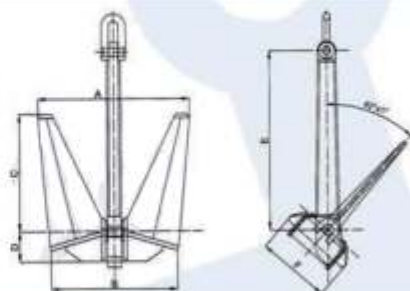


NOMINAL WEIGHT (KG)	SIZE (mm)							
	A	B	C	D	E	F	G	H
200	789	495	566	182	847	313	110	145
300	900	566	648	207	968	358	136	175
400	994	624	710	231	1065	395	151	192
500	1070	670	765	250	1150	425	163	215
550	1105	693	790	257	1185	438	163	215
600	1138	714	815	263	1220	452	163	215
650	1170	733	835	275	1255	465	174	235
700	1200	750	860	275	1285	475	174	235
750	1225	765	875	275	1310	485	174	235
800	1253	780	895	281	1340	495	174	235
850	1280	800	915	295	1370	507	200	255
900	1300	810	927	297	1386	513	200	255
950	1327	830	950	308	1425	527	200	255
1000	1350	840	965	315	1450	536	200	255
1100	1394	875	1000	320	1490	555	215	280
1200	1435	900	1030	330	1540	570	215	280
1300	1475	925	1055	341	1580	585	215	280
1400	1510	945	1080	350	1620	600	215	280
1500	1545	970	1100	365	1660	610	215	280
1600	1578	990	1130	366	1690	627	236	310
1700	1608	1008	1150	373	1725	638	236	310
1800	1640	1030	1175	380	1760	650	236	310
1900	1670	1050	1190	390	1790	660	236	310
2000	1700	1065	1220	390	1825	675	236	310
2200	1750	1100	1250	410	1880	695	256	340
2400	1800	1130	1290	420	1940	717	256	340

NOMINAL WEIGHT (KG)	SIZE (mm)							
	A	B	C	D	E	F	G	H
2600	1855	1160	1330	420	1990	737	279	380
2800	1900	1190	1365	435	2040	755	279	380
3000	1950	1220	1400	445	2090	770	279	380
3250	2000	1250	1430	460	2140	790	284	385
3500	2050	1285	1470	479	2200	810	284	385
4000	2132	1340	1530	490	2280	850	305	410
4500	2224	1395	1590	510	2385	880	310	410
5000	2335	1460	1670	540	2505	927	343	450
5300	2350	1470	1680	540	2520	930	343	450
5800	2430	1525	1745	560	2610	965	343	450
6000	2484	1555	1780	575	2665	986	370	480
6500	2520	1580	1810	580	2710	1002	370	480
7000	2580	1610	1840	595	2755	1020	370	480
7400	2635	1650	1890	605	2825	1045	377	500
8000	2686	1685	1930	615	2880	1065	391	540
8300	2736	1710	1950	635	2926	1085	391	540
8800	2785	1745	1995	643	2990	1105	391	540
9200	2830	1775	2030	650	3030	1120	418	580
9600	2877	1800	2060	660	3080	1140	418	580
10000	2920	1830	2090	670	3126	1157	437	600
10500	2964	1860	2125	685	3180	1180	437	600
12000	3100	1940	2220	715	3320	1230	452	630
13500	3200	2010	2290	740	3435	1270	468	640
14000	3260	2045	2330	760	3495	1294	483	660
15500	3360	2100	2410	770	3600	1330	498	680

LS-22

POOL HHP ANCHOR TYPE N

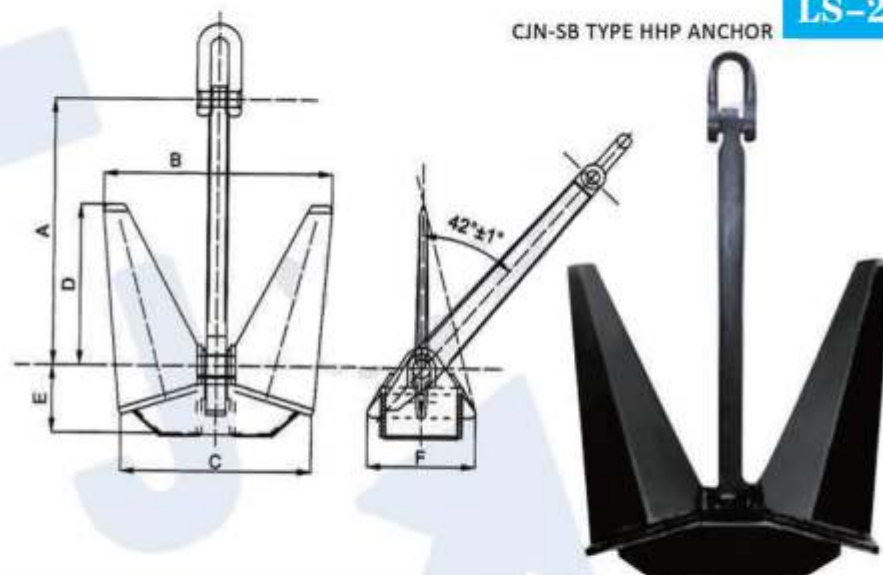


NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
12	323	275	250	65	383	155
20	386	325	300	75	458	185
25	409	350	316	80	485	200
40	479	410	370	95	567	235
50	517	440	400	100	613	255
60	550	470	425	110	652	270
80	608	515	470	120	720	295
100	653	555	505	130	775	320
120	699	595	540	135	825	340
135	723	614	562	139	858	342
160	764	650	590	150	905	370
180	795	675	615	155	940	385
640	825	700	640	160	978	400
225	858	729	666	165	1016	406
240	880	745	680	175	1040	425
280	925	780	715	180	1092	450
320	964	820	745	190	1140	470
360	1005	855	780	195	1190	490
400	1040	885	805	205	1230	505
440	1074	910	830	210	1270	520
480	1105	940	855	215	1305	535
520	1133	960	875	220	1340	550
560	1165	985	900	230	1375	565
600	1191	1010	920	235	1410	580
640	1217	1035	940	240	1440	675
675	1237	1051	960	245	1464	585
720	1262	1075	975	250	1495	615
800	1310	1115	1015	255	1550	635
855	1338	1137	1039	257	1585	633
900	1365	1160	1055	270	1615	665
970	1396	1186	1084	272	1654	660
1000	1410	1200	1090	275	1670	670
1080	1447	1229	1123	278	1713	684
1250	1521	1290	1175	300	1800	740
1305	1541	1309	1196	296	1824	729
1500	1615	1370	1250	315	1910	785
1575	1641	1394	1274	315	1943	776
1750	1705	1445	1320	335	2015	830
1845	1729	1469	1343	340	2049	818
2000	1780	1510	1375	350	2105	865

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
2140	1817	1544	1411	349	2152	860
2250	1850	1570	1430	360	2185	900
2500	1920	1630	1480	375	2265	930
2655	1954	1664	1516	372	2312	925
2835	1996	1700	1550	380	2364	945
3040	2042	1735	1585	390	2418	968
3240	2086	1773	1620	398	2471	988
3445	2129	1809	1653	406	2522	1009
3670	2174	1847	1689	415	2576	1030
3940	2226	1892	1730	425	2640	1055
4210	2276	1934	1768	434	2698	1078
4500	2328	1978	1808	444	2758	1103
4840	2385	2026	1852	455	2825	1130
5175	2439	2072	1894	465	2889	1155
5515	2491	2116	1934	475	2950	1180
5850	2541	2159	1973	485	3009	1204
6225	2594	2204	2014	495	3072	1229
6525	2635	2239	2046	503	3121	1248
6975	2695	2290	2092	514	3191	1276
7425	2751	2337	2136	525	3258	1303
7875	2805	2384	2178	535	3323	1329
8325	2858	2428	2219	545	3385	1354
8775	2908	2471	2258	555	3445	1378
9225	2958	2512	2296	564	3502	1401
9675	3004	2553	2333	573	3558	1423
10215	3050	2592	2369	582	3613	1445
10575	3095	2630	2403	590	3666	1466
11025	3138	2667	2437	599	3717	1486
11550	3187	2708	2475	608	3775	1510
12075	3235	2748	2512	617	3831	1533
12675	3288	2794	2553	628	3894	1557
13350	3345	2842	2598	638	3962	1585
14100	3406	2895	2645	694	4035	1614
15400	3508	2981	2724	669	4155	1662
16125	3563	3027	2766	680	4220	1687
17250	3643	3096	2829	696	4315	1726
18375	3712	3162	2889	710	4407	1762
19500	3795	3225	2947	725	4495	1798
20625	3867	3286	3003	738	4580	1832

LS-23

CIN-SB TYPE HHP ANCHOR

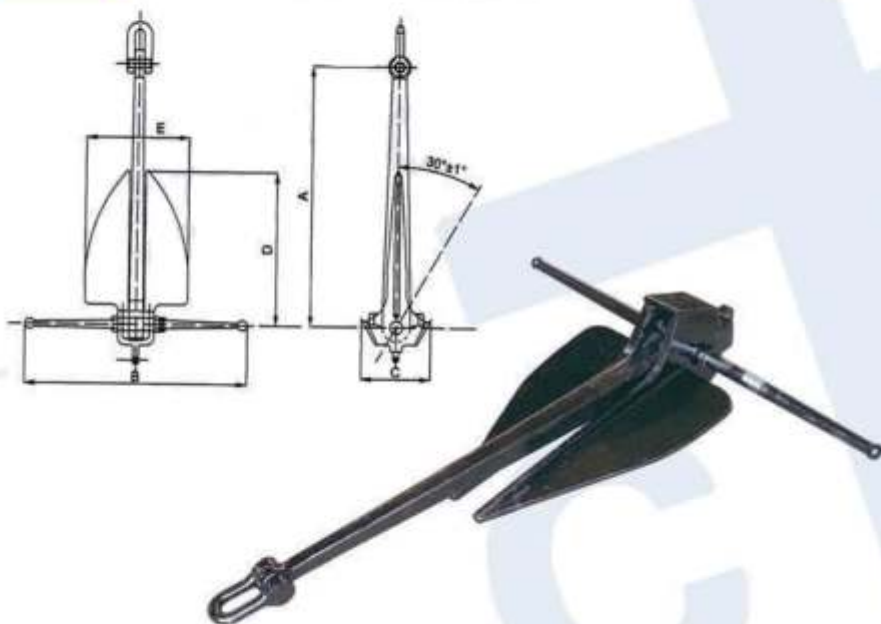


NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
60	590	555	470	364	157	270
80	664	605	515	410	176	295
100	712	655	555	440	190	320
160	835	765	650	516	223	370
200	885	825	700	546	236	400
280	1008	925	780	622	269	450
360	1096	1005	855	677	292	490
480	1186	1105	940	728	314	535
600	1300	1190	1010	802	347	580
765	1410	1290	1096	870	375	610
1000	1526	1395	1185	942	404	660
1080	1580	1446	1230	975	421	685
1195	1636	1485	1270	1010	436	708
1305	1680	1541	1308	1037	448	730
1440	1738	1592	1352	1073	464	754
1575	1769	1640	1386	1092	472	777
1710	1840	1686	1455	1137	491	798
1845	1890	1729	1469	1168	504	819
1980	1935	1770	1504	1195	516	836
2140	1985	1816	1543	1226	530	860
2295	2030	1860	1580	1254	540	880
2655	2140	1954	1684	1322	566	926
2835	2188	1996	1700	1351	580	945
3000	2238	2042	1736	1382	592	968
3240	2287	2086	1773	1412	605	988

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
3940	2442	2226	1892	1508	646	1055
4500	2553	2328	1976	1576	675	1103
5175	2675	2439	2072	1651	708	1155
5515	2730	2491	2116	1686	722	1180
5850	2786	2541	2159	1720	737	1204
6225	2838	2594	2204	1750	756	1229
6525	2880	2635	2239	1780	768	1248
6975	2948	2695	2290	1820	786	1276
7425	3010	2760	2338	1858	802	1303
7875	3069	2805	2384	1895	818	1329
8775	3180	2908	2471	1964	848	1376
9225	3235	2968	2512	1997	862	1401
9675	3286	3004	2553	2029	876	1423
10125	3337	3060	2592	2060	890	1445
10575	3386	3095	2630	2090	902	1468
12075	3538	3236	2748	2184	943	1533
12675	3596	3288	2794	2220	958	1556
13350	3658	3346	2842	2258	975	1585
14100	3726	3406	2894	2300	993	1614
15000	3804	3476	2954	2348	1014	1646
17250	3985	3643	3095	2460	1062	1726
20825	4240	3887	3285	2618	1130	1832
24750	4495	4109	3491	2775	1198	1947
28875	4717	4324	3675	2912	1258	2049

LS-24

GB11579-89 LIGHT WEIGHT ANCHOR

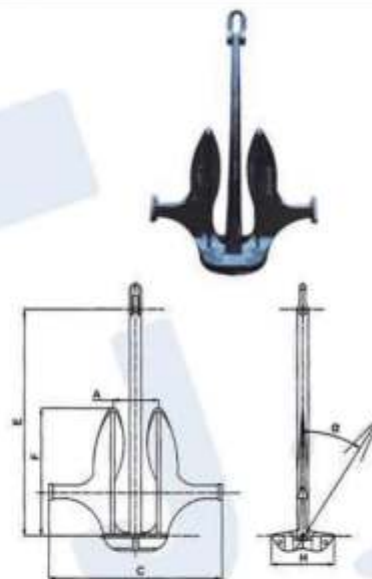


NOMINAL WEIGHT (KG)	SIZE (mm)				
	A	B	C	D	E
14	770	730	222	444	288
23	885	840	252	508	328
34	965	915	279	559	366
45	1055	1000	310	610	396
70	1185	1130	348	686	450
90	1205	1140	360	737	480
140	1345	1270	414	825	540
180	1460	1380	450	896	584
230	1560	1480	482	952	610
340	1750	1640	560	1068	680
450	1910	1800	610	1165	740
680	2190	2080	700	1340	840
910	2350	2200	762	1435	940
1140	2580	2450	825	1575	1000
1360	2750	2600	880	1680	1060
1500	2830	2680	912	1730	1080
1820	2940	2790	952	1800	1120
2270	2990	2840	984	1830	1130
2730	3150	2990	1040	1930	1200
3180	3200	3030	1070	1960	1240

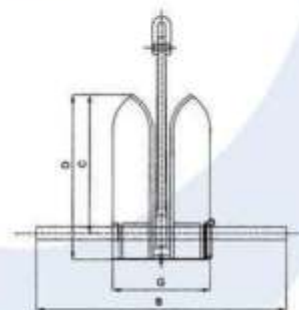
NOMINAL WEIGHT (KG)	SIZE (mm)				
	A	B	C	D	E
3630	3250	3070	1105	1980	1276
4100	3380	3200	1150	2060	1330
4540	3490	3310	1180	2130	1370
5000	3600	3420	1226	2200	1400
5500	3710	3520	1264	2260	1450
5900	3810	3610	1296	2320	1500
6400	3910	3710	1334	2390	1540
6800	3990	3790	1362	2440	1570
7300	4080	3870	1394	2490	1610
7700	4170	3950	1422	2540	1640
8200	4240	4020	1448	2590	1670
8600	4320	4100	1474	2640	1700
9100	4390	4170	1500	2690	1730
10000	4540	4300	1546	2770	1780
11100	4730	4480	1614	2890	1860
12600	5030	4800	1716	3070	1980
15000	5200	4950	1774	3170	2050
16000	5290	5050	1804	3230	2080
18000	5540	5280	1904	3330	2180
20000	5710	5450	1950	3480	2250

GB57-77 MATROSOV HHP ANCHOR

LS-25

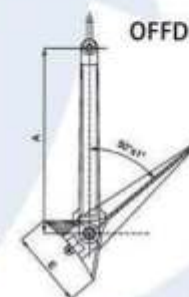


NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	F	H	a
25	130	570	690	385	214	28~30
35	148	620	760	420	230	30~32
50	170	680	840	480	250	30~32
75	190	770	950	540	270	30~32
100	210	830	1060	590	290	30~32
125	226	870	1130	630	310	30~32
150	242	910	1190	670	330	30~32
200	270	980	1300	740	370	30~32
250	294	1040	1380	800	400	33~37
300	312	1090	1480	850	430	33~37
400	342	1190	1630	930	480	33~37
500	366	1280	1750	1000	520	33~37
650	400	1385	1910	1090	565	33~37
750	418	1450	2000	1140	590	33~37
1000	452	1570	2170	1240	630	33~37
1250	488	1660	2280	1300	660	33~37
1500	515	1715	2370	1350	675	33~37



OFFDRILL ANCHOR

LS-28

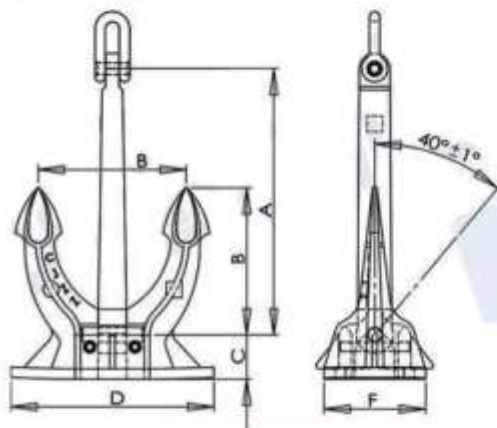


NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	G
227	1205	1330	725	865	395	485
454	1520	1675	915	1090	500	625
680	1770	2120	1050	1250	575	740
908	1950	2340	1160	1380	630	815
1136	2100	2520	1250	1485	680	875
1360	2230	2655	1330	1580	725	930
1590	2350	2820	1400	1665	765	980
1815	2500	2945	1460	1740	800	1020
2045	2555	3065	1520	1805	830	1065
2270	2645	3175	1575	1870	860	1100
2725	2815	3375	1675	1990	910	1170
3180	2950	3540	1755	2090	940	1230
3630	3095	3890	1840	2190	1012	1290

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	G
4540	3335	4000	1985	2360	1070	1390
5445	3540	4250	2110	2505	1140	1475
6350	3730	4500	2220	2640	1228	1555
7260	3900	4750	2320	2760	1280	1625
9080	4200	4900	2500	2975	1385	1750
11350	4500	5165	2680	3205	1530	1875
13620	4810	5335	2860	3405	1545	2000
15000	4900	5390	2955	3515	1585	2070
18160	5120	5635	3090	3675	1692	2165
20430	5330	5865	3215	3850	1760	2250
22700	5600	6150	3360	4025	1900	2365
27240	5950	6535	3570	4250	1955	2515
31780	6260	6875	3755	4470	2055	2645

LS-05

CB711-95 SPEK ANCHOR



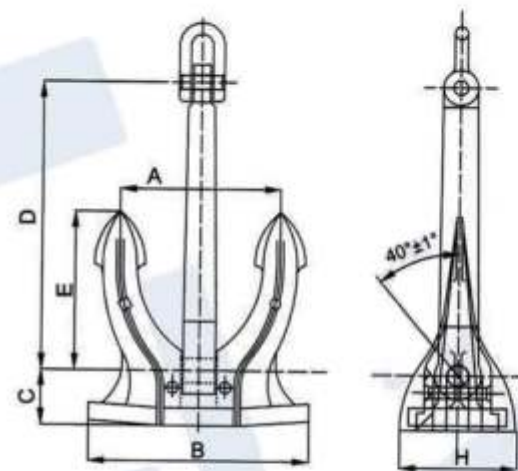
NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
100	672	373	112	515	250	
150	770	428	128	590	290	
180	846	470	140	640	300	
240	900	500	150	690	358	
300	990	550	166	760	398	
360	1065	600	180	828	411	
420	1080	600	180	828	431	
500	1170	650	196	900	450	
570	1170	650	196	900	475	
660	1260	700	210	960	486	
780	1355	750	225	1032	519	
900	1440	800	240	1100	547	
1020	1530	850	252	1170	573	
1140	1620	900	268	1240	591	
1290	1710	900	268	1240	620	
1440	1710	950	279	1300	640	
1590	1710	950	279	1300	671	
1740	1800	1000	300	1378	689	
1920	1850	1050	312	1454	704	
2100	1890	1050	312	1454	717	
2280	2010	1050	312	1454	736	
2460	2010	1100	324	1514	764	
2640	2070	1150	352	1584	794	
2850	2070	1150	352	1584	804	
3060	2160	1200	360	1650	820	
3300	2155	1200	360	1650	834	
3540	2350	1200	360	1650	834	
3780	2430	1350	393	1850	880	
4050	2430	1350	393	1850	917	



NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	F
4320	2520	1400	413	1926	917	
4590	2520	1400	413	1926	951	
4890	2520	1400	413	1926	954	
5250	2610	1450	414	2000	964	
5610	2610	1450	414	2000	981	
6000	2700	1500	446	2060	1006	
6450	2700	1500	446	2060	1028	
6900	2790	1550	456	2138	1034	
7350	2790	1550	456	2138	1062	
7800	2920	1550	456	2138	1091	
8300	3060	1700	510	2332	1126	
8700	3060	1700	510	2332	1156	
9300	3060	1700	510	2332	1169	
9900	3160	1700	510	2332	1188	
10500	3190	1770	531	2440	1188	
11100	3290	1770	531	2440	1212	
11700	3390	1770	531	2440	1237	
12300	3440	1910	573	2632	1279	
12900	3440	1910	573	2632	1279	
13500	3440	1910	573	2632	1316	
14100	3440	1910	573	2632	1353	
14700	3690	2050	615	2824	1369	
15400	3690	2050	615	2824	1369	
16100	3690	2050	615	2824	1387	
16900	3820	2120	636	2922	1415	
17800	3950	2120	636	2922	1431	
18800	3950	2190	657	3018	1461	
20000	4070	2190	657	3018	1493	
26000	4250	2360	716	3256	1618	

LS-06

TYPE M SPEK ANCHOR

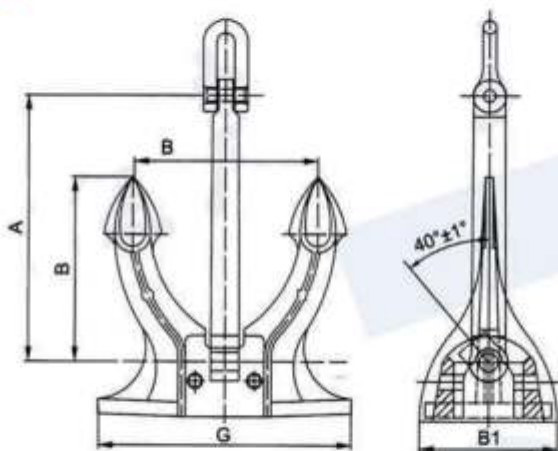


NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	H
80	339	468	108	611	336	222
105	371	512	120	669	336	242
135	371	512	149	669	368	254
240	445	613	182	800	440	304
300	527	727	168	949	522	344
360	527	727	190	949	522	358
420	590	813	188	1062	584	385
480	590	813	211	1062	584	395
570	652	900	208	1175	647	428
660	653	900	208	1175	647	428
780	725	1000	231	1305	718	473
900	725	1000	264	1215	718	485
1020	793	1093	252	1428	785	518
1140	793	1093	277	1428	785	530
1290	858	1183	273	1544	850	561
1440	858	1183	299	1544	850	573
1590	920	1268	293	1655	911	604
1740	920	1268	315	1655	911	611
1920	980	1350	312	1761	970	640
2100	980	1350	337	1761	970	650
2280	1038	1430	331	1866	1027	678
2460	1038	1430	355	1866	1027	688
2640	1090	1500	347	1989	1079	712
2850	1190	1500	380	1950	1079	722
3060	1144	1578	365	2058	1133	748
3300	1144	1578	387	2058	1133	760
3540	1202	1656	383	2159	1189	785
3780	1202	1656	405	2159	1189	797
4050	1257	1732	400	2258	1244	821

NOMINAL WEIGHT (KG)	SIZE (mm)					
	A	B	C	D	E	H
4320	1257	1732	422	2258	1244	831
4590	1257	1732	444	2258	1244	841
4890	1338	1846	426	2405	1325	874
5250	1338	1846	450	2405	1325	888
5610	1432	1974	431	2405	1418	936
6000	1432	1974	457	2577	1418	936
6450	1432	1974	483	2577	1418	950
6900	1533	2112	462	2757	1518	1001
7350	1533	2112	488	2757	1518	1001
7800	1533	2112	514	2757	1518	1015
8300	1621	2234	489	2916	1605	1059
8700	1621	2234	517	2916	1605	1059
9300	1621	2234	545	2916	1605	1074
9900	1726	2380	520	3015	1709	1128
10500	1726	2380	550	3105	1709	1128
11100	1726	2380	580	3105	1709	1138
11700	1819	2507	554	3273	1801	1188
12300	1819	2507	580	3273	1801	1188
12900	1819	2507	607	3273	1801	1200
13500	1904	2624	577	3425	1885	1243
14100	1904	2624	607	3425	1885	1243
14700	1904	2624	630	3425	1885	1243
15400	1904	2624	657	3425	1885	1263
16100	2018	2782	612	3632	1998	1318
16900	2018	2782	638	3632	1998	1318
17800	2018	2782	683	3632	1998	1318
18800	2018	2782	699	3632	1998	1343
20000	2170	2990	652	3905	2148	1416

LS-07

TYPE SR SPEK ANCHOR



NOMINAL WEIGHT (KG)	SIZE (mm)			
	A	B	B1	G
210	900	500	340	690
240	900	550	390	760
300	1080	600	412	828
420	1080	600	412	828
450	1080	600	412	828
480	1170	650	442	900
570	1170	650	442	900
610	1260	700	472	962
660	1260	700	472	962
750	1350	750	508	1032
780	1350	750	519	1032
900	1440	800	547	1100
980	1440	800	547	1100
1020	1530	850	573	1170
1040	1620	900	591	1240
1100	1620	900	620	1240
1200	1710	950	640	1300
1300	1710	950	640	1300
1400	1710	950	671	1300
1500	1710	9500	671	1300
1650	1800	1000	669	1378
1800	1890	1050	704	1454
1920	1890	1050	717	1454
2100	1890	1050	736	1454
2190	1890	1050	736	1454
2280	1980	1100	764	1454
2460	2070	1150	794	1584
2640	2070	1150	804	1584
2850	2160	1200	812	1650
3300	2160	1200	834	1650

NOMINAL WEIGHT (KG)	SIZE (mm)			
	A	B	B1	G
3540	2160	1200	834	1650
3780	2430	1350	880	1850
4050	2430	1350	914	1850
4320	2520	1400	917	1926
4590	2520	1400	931	1926
4890	2520	1400	954	1926
5250	2610	1450	964	2000
5610	2610	1450	981	2000
5800	2700	1500	1006	2060
6000	2700	1500	1006	2060
6450	2700	1500	1023	2060
6900	2790	1550	1034	2138
7350	2790	1550	1062	2138
7800	2790	1550	1091	2138
8000	2790	1550	1091	2138
8300	3060	1700	1125	2332
8700	3060	1700	1166	2332
9300	3060	1700	1188	2332
9900	3060	1700	1188	2332
10500	3186	1770	1197	2440
11100	3186	1770	1212	2440
11700	3186	1770	1237	2440
12300	3438	1910	1260	2632
12900	3438	1910	1260	2632
13500	3438	1910	1316	2632
14700	3690	2050	1369	2824
16900	3816	2120	1415	2922
18800	3942	2190	1461	3018
20000	3942	2190	1493	3018

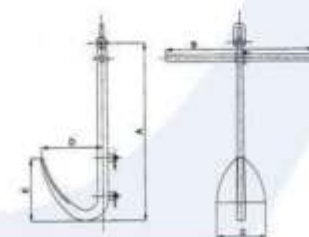
LS-08

GB/T545-1996 ADMIRALTY ANCHOR



NOMINAL WEIGHT (KG)	SIZE (mm)				
	H	h	h1	B	C
50	960	230	42	635	185
75	1105	266	45	710	210
100	1215	293	49	780	230
125	1310	316	52	840	245
150	1395	336	55	900	265
200	1535	370	61	990	290
250	1650	398	65	1065	310
300	1755	423	70	1105	330
400	1930	465	77	1240	365
500	2080	502	84	1335	390

NOMINAL WEIGHT (KG)	SIZE (mm)				
	H	h	h1	B	C
600	2210	533	89	1440	415
700	2330	560	93	1500	440
800	2435	587	97	1570	460
900	2530	610	101	1630	475
1000	2620	633	104	1685	495
1250	2825	680	112	1810	535
1500	3000	725	118	1955	565
2000	3300	797	131	2140	625
2500	3550	857	138	2270	672
3000	3780	912	150	2415	715
3500	3980	960	158	2540	750
4000	4160	1000	155	2650	785
5000	4480	1100	184	2830	800
6000	4740	1113	190	3000	838
7000	5025	1180	200	3165	960
8000	5240	1280	210	3300	980
9000	5450	1330	220	3440	990
10000	5680	1340	230	3600	1085



NOMINAL WEIGHT (KG)	SIZE (mm)				
	A	B	C	D	E
75	1310	1100	360	455	465
100	1445	1200	400	500	510
150	1650	1380	455	575	585
200	1820	1520	505	630	645
300	2080	1740	575	725	735
400	2290	1915	635	800	810
500	2470	2065	680	855	875
600	2620	2190	725	910	930
800	2890	2415	800	1000	1020
1000	3110	2600	860	1080	1100
1250	3350	2800	925	1165	1185
1500	3560	2980	985	1235	1260
1750	3750	3135	1035	1300	1325
2000	3920	3275	1085	1360	1385

SINGLE FLUKE ANCHOR



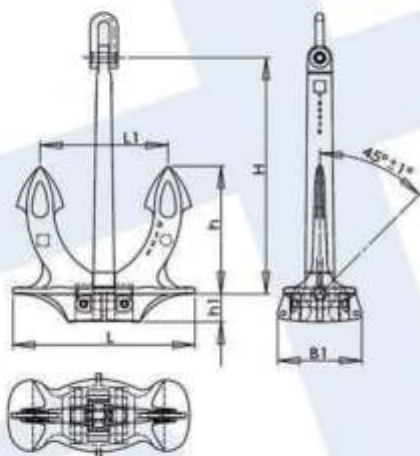
NOMINAL WEIGHT (KG)	SIZE (mm)				
	A	B	C	D	E
3000	4485	3750	1240	1555	1585
4000	4940	4125	1360	1710	1745
5000	5320	4440	1472	1845	1880
6000	5650	4720	1560	1960	1995
7000	5950	4970	1645	2065	2100
8000	6220	5200	1720	2155	2200
9000	6468	5400	1790	2240	2288
10000	6700	5600	1852	2320	2354
12000	7115	5950	1968	2465	2516
15000	7670	6410	2120	2657	2710
18000	8148	6810	2253	2823	2882
20000	8400	7020	2320	2910	2970
22000	8710	7275	2410	3020	3074
25000	9080	7590	2510	3146	3212

LS-09

LS-10

TYPE A,B,C HALL ANCHOR

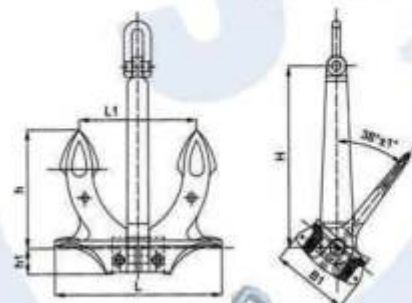
NOMINAL WEIGHT (KG)	SIZE (mm)							
	H			h	h1	L	L1	B1
40	557	557	430	303	87	430	303	198
60	637	637	492	347	76	492	347	227
100	760	760	590	410	90	584	410	227
125	814	814	629	443	97	629	443	290
150	866	866	665	470	103	760	470	308
180	919	919	718	500	109	710	500	327
240	1019	1019	788	552	120	790	552	361
300	1095	1095	850	595	130	844	595	388
360	1160	1160	898	630	138	898	630	412
420	1160	1160	946	660	145	946	660	434
480	1222	1222	986	690	152	988	690	454
570	1355	1355	1042	732	161	1042	732	481
660	1356	1356	1093	769	169	1096	769	506
780	1506	1506	1170	813	178	1160	813	535
900	1580	1580	1215	855	188	1220	855	560
1020	1645	1645	1268	855	188	1220	855	560
1140	1705	1705	1316	926	203	1319	926	605
1290	1778	1778	1378	891	195	1268	891	584
1440	1844	1844	1448	965	203	1379	965	630
1590	1906	1906	1511	1035	226	1475	1035	677
1740	1966	1966	1571	1068	234	1517	1068	698
1920	2031	2031	1602	1104	241	1568	1104	722
2100	2093	2093	1651	1120	245	1560	1120	732
2280	2150	2150	1716	1165	225	1657	1165	763
2460	2207	2207	1785	1194	262	1700	1194	784
2640	2259	2259	1843	1222	265	1730	1222	796
2850	2318	2318	1890	1253	275	1787	1253	822
3060	2374	2374	1935	1283	282	1832	1283	841
3300	2432	2432	1985	1317	288	1880	1317	862
3540	2490	2490	2032	1349	295	1926	1394	883
3780	2547	2547	2077	1376	302	1965	1376	902
4050	2610	2610	2125	1406	309	2008	1406	924
4320	2695	2695	2171	1435	316	2051	1435	943
4590	2712	2712	2216	1465	332	2093	1465	962
4890	2769	2769	2263	1498	329	2135	1498	984
5000	2800	2800	2317	1510	332	2156	1510	992
5610	2899	2899	2369	1569	345	2234	1569	1031
6000	2965	2965	2422	1605	352	2284	1605	1054
6450	3037	3037	2482	1644	361	2340	1644	1080
6900	3100	3100	2538	1681	369	2393	1681	1105
7350	3100	3100	2592	1688	370	2400	1688	1109
7800	3235	3235	2644	1752	385	2493	1752	1152
8300	3363	3363	2699	1788	393	2545	1788	1176



Type B Hall Anchor



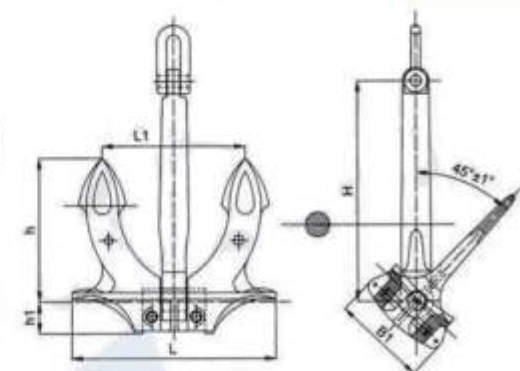
Type A Hall Anchor



Type C Hall Anchor

TYPE A,B,C HALL ANCHOR

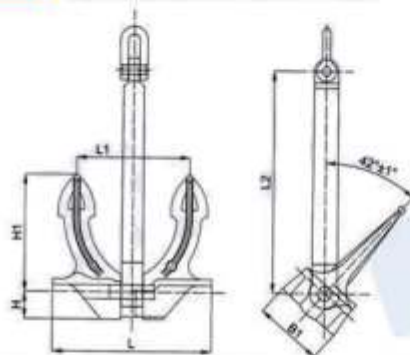
LS-10



NOMINAL WEIGHT (KG)	SIZE (mm)							
	H			h	h1	L	L1	B1
8700	3355	3355	2742	1816	399	2585	1816	1195
9300	3430	3430	2804	1850	417	2632	1850	1226
9900	3502	3502	2863	1896	417	2699	1896	1248
10500	3571	3571	2920	1934	425	2752	1934	1273
11100	3638	3638	2975	1970	433	2803	1970	1297
11700	3702	3702	3028	2005	441	2853	2005	1320
12300	3764	3764	3079	2039	448	2901	2039	1342
12900	3824	3824	3128	2072	455	2947	2072	1363
13500	3882	3882	3176	2104	462	2992	2104	1384
14100	3939	3939	3222	2135	469	3036	2135	1404
14700	3994	3994	3267	2165	476	3078	2165	1424
15400	4056	4056	3318	2199	483	3126	2199	1446
16100	4117	4117	3368	2232	490	3173	2232	1468
16900	4184	4184	3423	2268	498	3225	2268	1492
17800	4252	4252	3479	2308	506	3281	2308	1518
18800	4330	4330	3543	2350	516	3341	2350	1546
20000	4420	4420	3617	2399	526	3411	2399	1578
21500	4528	4528	3705	2458	539	3494	2458	1617
23000	4631	4631	3789	2514	551	3573	2514	1654
24500	4730	4730	3870	2568	563	3649	2568	1689
26000	4825	4825	3947	2619	574	3722	2619	1723
27500	4916	4916	4021	2668	585	3792	2668	1756
29000	5004	5004	4093	2716	595	3860	2716	1787
31000	5126	5126	4188	2774	609	3949	2774	1822
33000	5234	5234	4276	2833	622	4032	2833	1860
35500	5363	5363	4381	2903	637	4132	2903	1906
38500	5510	5510	4502	2982	655	4245	2982	1958
42000	5672	5672	4634	3070	674	4370	3070	2015
46000	5847	5847	4777	3165	695	4505	3165	2078

LS-12

JAPAN STOCKLESS ANCHOR

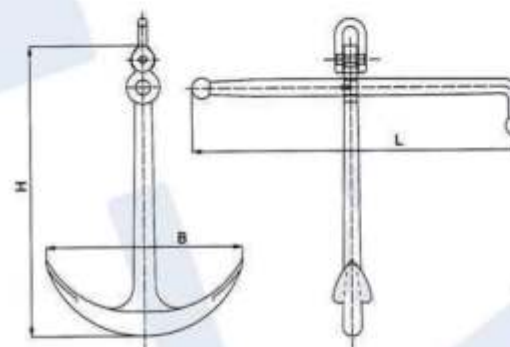


NOMINAL WEIGHT (KG)	SIZE (mm)					
	L	L1	L2	H	H1	B1
180	650	459	910	111	480	280
240	720	510	1010	122	530	310
300	770	540	1080	131	570	331
360	820	580	1150	139	610	353
420	860	610	1200	146	640	370
480	900	640	1260	153	670	387
570	950	670	1330	162	700	408
660	1000	710	1440	170	740	430
780	1060	750	1480	180	780	456
900	1110	780	1550	189	820	477
1020	1160	820	1620	197	860	500
1140	1200	850	1680	204	890	520
1290	1250	880	1750	212	920	540
1440	1300	920	1820	221	960	560
1590	1340	950	1880	228	990	580
1740	1380	980	1930	235	1020	600
1920	1430	1010	2000	243	1060	620
2100	1470	1040	2060	250	1090	640
2280	1510	1070	2110	257	1120	650
2460	1550	1100	2170	264	1150	670
2640	1590	1120	2230	270	1180	690
2850	1630	1150	2280	277	1210	700
3060	1670	1180	2340	284	1240	720
3300	1710	1210	2390	291	1270	740
3540	1750	1240	2450	298	1290	750
3780	1790	1260	2510	304	1320	770
4050	1830	1290	2560	311	1350	790
4320	1870	1320	2620	318	1380	800
4590	1910	1350	2670	325	1410	820
4890	1950	1380	2730	332	1440	840
5250	2000	1410	2800	340	1480	860
5610	2040	1440	2860	347	1510	880
6000	2090	1480	2930	355	1540	900

NOMINAL WEIGHT (KG)	SIZE (mm)					
	L	L1	L2	H	H1	B1
6450	2140	1510	3000	364	1580	920
6900	2190	1550	3070	372	1620	940
7350	2240	1600	3140	380	1660	960
7800	2280	1610	3190	388	1680	980
8300	2330	1650	3260	396	1720	1000
8700	2380	1670	3320	403	1750	1020
9300	2420	1710	3390	411	1790	1040
9900	2470	1740	3460	420	1820	1060
10500	2520	1800	3530	428	1880	1090
11100	2570	1800	3600	437	1880	1090
11700	2610	1855	3650	444	1945	1130
12300	2650	1855	3710	450	1945	1130
12900	2690	1885	3870	457	1975	1170
13500	2740	1885	3840	466	1975	1170
14100	2780	1960	3890	473	2050	1200
14700	2820	1990	3950	479	2080	1210
15400	2860	2020	4000	486	2110	1230
16100	2900	2050	4060	493	2140	1250
16900	2955	2080	4130	500	2180	1270
17800	3000	2120	4200	510	2210	1290
18800	3060	2160	4280	520	2260	1320
20000	3120	2200	4370	530	2300	1340
21500	3200	2260	4480	540	2360	1380
23000	3270	2310	4580	560	2410	1410
24500	3340	2360	4680	570	2460	1440
26000	3410	2410	4770	580	2520	1470
27500	3470	2450	4860	590	2560	1490
29000	3530	2490	4940	600	2600	1550
33000	3690	2610	5170	630	2720	1590
35500	3780	2670	5290	640	2790	1630
38500	3880	2740	5430	660	2860	1670
42000	4000	2820	5600	680	2950	1720
46000	4120	2910	5770	700	3040	1770

JAPAN STOCK ANCHOR

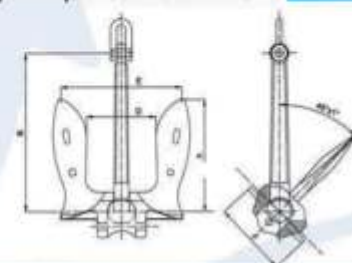
LS-13



NOMINAL WEIGHT (KG)	SIZE (mm)		
	H	L	B
500	2000	2065	1350
700	2280	2335	1510
750	2310	2342	1560
1000	2580	2637	1700
1500	2890	2960	1950
2000	3160	3272	2140
3000	3630	3555	2650
3500	3810	3820	2570
4000	4000	4135	2920
5000	4310	4470	3140
6000	4580	4740	3330
7000	4820	4980	3530
8000	5040	5215	3620

U.S.N. (NAVY) STOCKLESS ANCHOR

LS-14

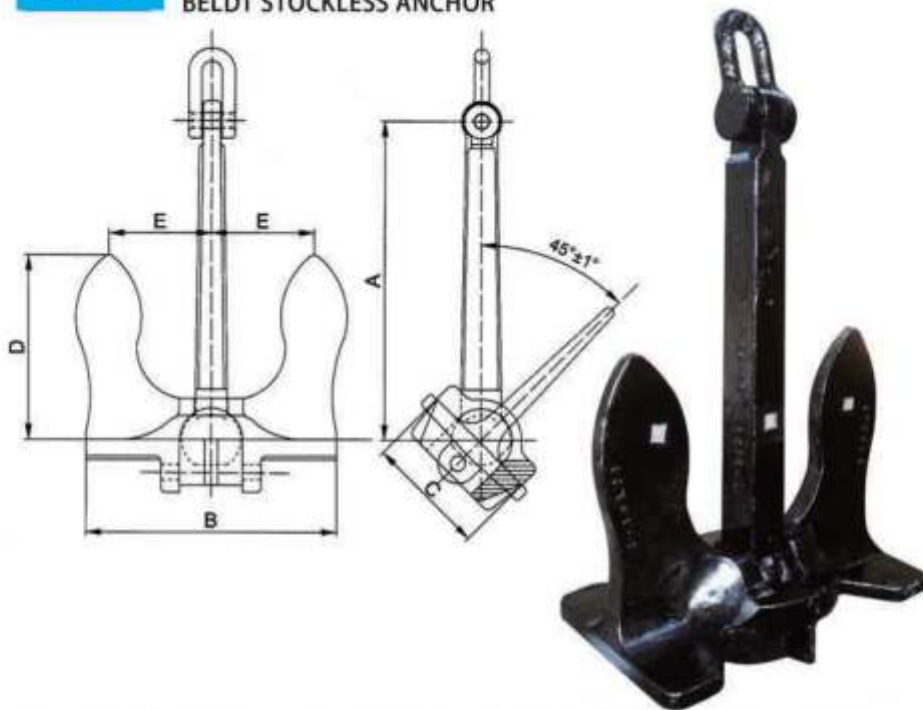


NOMINAL WEIGHT (LBS)	SIZE (mm)				
	B	D	E	F	h
300	727	319	562	348	510
400	800	351	619	364	570
500	863	379	666	412	614
600	914	402	708	438	652
750	984	423	763	461	687
800	1008	443	778	483	710
1000	1071	477	839	520	773
1200	1152	507	892	532	822
1300	1184	521	926	567	844
1500	1244	546	962	596	883
1800	1320	580	1021	632	941
2000	1371	601	1058	655	975
2200	1412	621	1092	676	1006
2500	1473	648	1139	706	1050
3000	1564	704	1270	775	1090
3500	1641	725	1275	790	1175
4000	1724	758	1333	826	1228

NOMINAL WEIGHT (LBS)	SIZE (mm)				
	B	D	E	F	h
5000	1884	816	1436	889	1323
6000	1974	867	1528	947	1403
7000	2082	913	1606	996	1480
8000	2171	955	1679	1040	1547
9000	2257	993	1747	1082	1609
10000	2336	1028	1809	1120	1667
11000	2413	1062	1868	1158	1721
12000	2486	1093	1924	1193	1771
13000	2540	1122	1965	1194	1819
14500	2641	1144	2047	1270	1887
15000	2679	1177	2089	1295	1908
16000	2735	1203	2116	1311	1950
18000	2844	1251	2200	1365	2028
20000	2946	1296	2280	1412	2100
22500	3060	1345	2370	1463	2134
25000	3174	1396	2456	1521	2262
30000	3371	1483	2628	1631	2404

LS-16

BELDT STOCKLESS ANCHOR

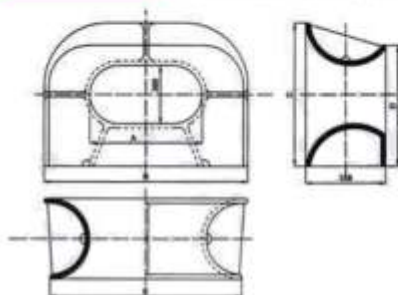


NOMINAL WEIGHT (LBS)	SIZE (mm)				
	A	B	C	D	E
160	634	404	219	336	175
200	685	457	241	366	191
250	749	524	269	404	210
300	812	590	296	442	230
400	812	654	330	482	250
500	900	673	356	530	288
750	965	770	407	584	308
1000	1067	854	457	640	348
1250	1165	923	475	720	370
1500	1232	1005	515	748	392
2000	1370	1092	558	848	430
2100	1370	1092	558	848	436
2500	1473	1136	568	848	448
3000	1625	1194	648	912	483
3500	1625	1340	698	1003	500
4000	1734	1354	705	1054	518
4500	1794	1440	735	1066	563
5000	1930	1460	762	1130	588
6000	1930	1613	844	1194	642
6300	1930	1613	844	1194	642

NOMINAL WEIGHT (LBS)	SIZE (mm)				
	A	B	C	D	E
7000	2082	1691	882	1263	668
8000	2265	1691	894	1276	668
9000	2438	1784	924	1314	695
9500	2438	1851	957	1392	710
10000	2438	1918	990	1470	725
11000	2438	1950	1016	1473	778
12000	2438	1950	1016	1473	778
13000	2489	1949	1016	1473	799
14000	2616	2045	1118	1524	818
15000	2616	2184	1168	1600	875
16000	2738	2184	1168	1651	875
17200	2738	2184	1222	1660	875
18000	2850	2240	1232	1667	888
20000	2840	2440	1270	1866	990
25000	3048	2616	1365	1968	990
30000	3251	2794	1454	2096	1052
35000	3429	2946	1524	2210	1107
40000	3556	3073	1600	2311	1157
45000	3733	3200	1651	2388	1203
50000	3860	3327	1727	2515	1246

LS-C01

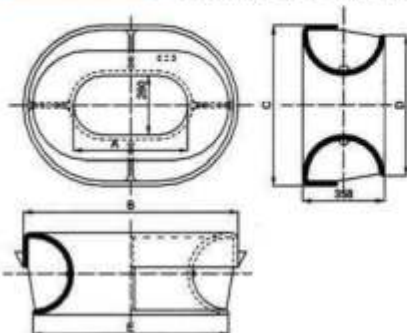
PANAMA CHOCK (TYPE AC)



WEIGHT (KG)	MODELNO	SIZE (mm)				
		A	B	C	D	E
253	310	310	708	639	541	652
289	360	360	760	640	542	704
323	400	400	804	642	545	750
351	450	450	856	643	547	802
395	500	500	908	644	549	854

LS-C02

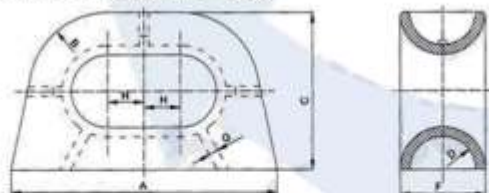
PANAMA CHOCK (TYPE BC)



WEIGHT (KG)	MODELNO	SIZE (mm)				
		A	B	C	D	E
276	310	310	734	684	462	652
305	360	360	788	688	464	704
344	400	400	832	692	470	750
385	450	450	886	696	474	802
422	500	500	940	700	478	854

LS-C03

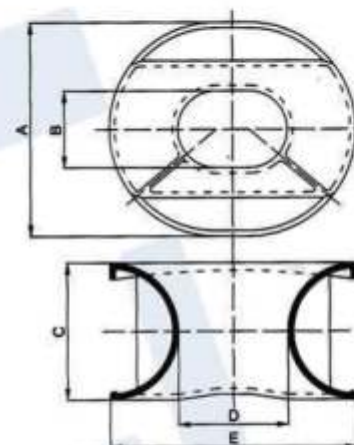
PANAMA CHOCK (TYPE U.S.)



NOMINAL SIZE	MODELNO	SIZE (mm)								WEIGHT (KG)
		A	B	C	D	F	G	H		
6" x 12"	S-1097	558	165	330	61	178	20	76		71
7" x 14"	S-1098	610	187	374	68	196	22	89		93
8" x 16"	S-1105	626	257	414	80	242	25	101		152
9" x 18"	S-1106	762	235	470	83	260	28	114		180
10" x 20"	S-1101	812	257	514	90	260	30	127		225

LS-C07

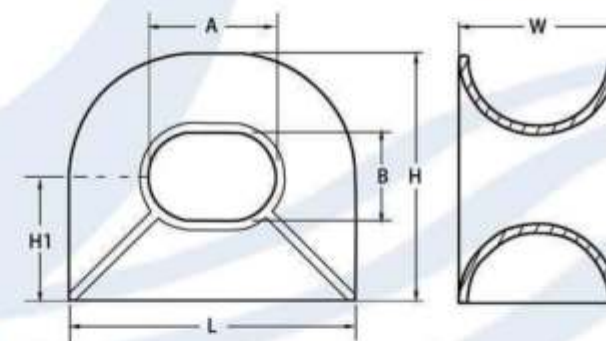
DIN81951 CHOCKS (TYPE A)



WEIGHT (KG)	MODELNO	SIZE (mm)					SWL (KN)
		A	B	C	D	E	
42	A3-GS	390	140	250	200	450	30
74	A3-GS	480	180	300	250	550	50
120	A8-GS	585	225	360	320	680	80
185	A12-GS	710	270	440	400	840	125
285	A20-GS	840	320	520	500	1020	200
795	A32-GS	1100	400	700	600	1300	320

LS-C05

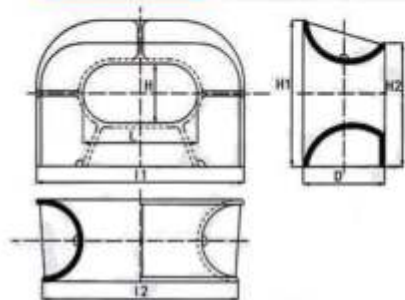
DIN81915 CHOCKS (TYPE C)



WEIGHT (KG)	MODELNO	SIZE (mm)						SWL
		L	W	H	H1	A	B	
29	C2	360	200	316	158	160	115	20
48	C3	450	250	390	195	200	140	30
85	C5	550	300	480	240	250	180	50
136	C8	680	360	586	293	320	225	80
211	C12	840	440	710	355	400	270	125
356	C20	1020	520	840	420	500	320	200
840	C32	1300	700	1100	550	600	400	320

LS-C06

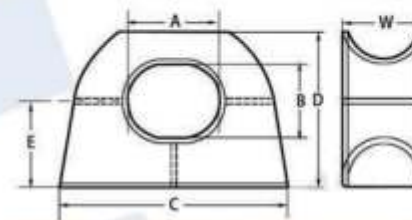
ISO13728 PANAMA CHOCK (TYPE A)



(L×H×D)	SIZE (mm)				SWL (KN)	t	WEIGHT (KG)
	L1	L2	H1	H2			
250×200×214	488	453	427	368	226	23	73
300×250×286	614	565	551	481	422	40	142
350×250×333	716	660	601	525	549	56	222
400×250×381	820	754	652	553	687	70	310
450×250×381	870	804	652	553	706	72	322
500×250×381	920	854	652	553	765	78	337
400×250×428	870	796	701	609	883	90	434
450×250×428	920	846	701	609	912	93	452
500×250×428	970	896	701	609	932	95	472
500×400×428	970	896	851	759	893	91	528
500×250×525A	1068	1000	798	675	1148	117	657
500×400×525A	1068	1000	948	825	1158	118	724
500×250×525B	1074	1000	891	680	1413	144	753
500×400×525B	1074	1000	951	830	1383	141	825

TOWING CHOCK (TYPE EU)

LS-C08

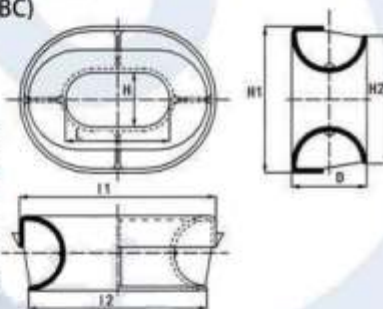


WEIGHT (KG)	MODEL NO	SIZE (mm)					
		A	B	C	D	E	H
230	315×250	315	250	815	620	365	380
378	425×280	425	280	1075	785	450	500
608	500×400	500	400	1340	900	506	560
500	500×400 (L)	500	400	1238	840	467	450
598	600×315	600	315	1360	865	507	560
820	600×450	600	450	1360	1000	575	560
1200	600×450 (L)	600	450	1560	1200	675	760
1430	800×600	800	600	1700	1160	640	580

LS-C07

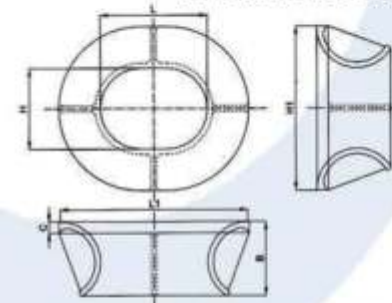
ISO13728 PANAMA CHOCK (TYPE BC)

(L×H×D)	SIZE (mm)				SWL (KN)	t	WEIGHT (KG)
	L1	L2	H1	H2			
250×200×214	516	441	406	306	226	23	49
300×250×286	638	554	588	410	422	40	100
350×250×333	736	646	636	449	549	56	141
400×250×381	834	736	684	450	687	70	184
450×250×381	884	786	684	450	706	72	194
500×250×381	934	836	684	450	765	78	202
400×250×428	882	778	732	515	883	90	264
450×250×428	932	828	732	515	912	93	276
500×250×428	982	878	732	515	932	95	288
500×400×428	982	878	882	665	893	91	311
500×250×525A	1078	976	828	551	1148	117	379
500×400×525A	1078	978	978	701	1158	118	408
500×250×525B	1078	976	828	554	1413	144	405
500×400×525B	1078	976	978	704	1383	141	442



JIS F2030 SINGLE POIT MOORING PIPES (TYPE A)

LS-C09

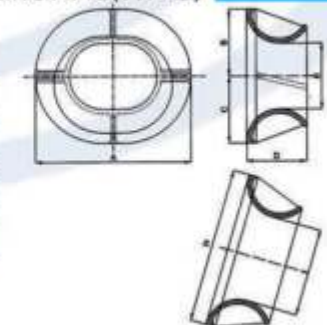


WEIGHT (KG)	SIZE (mm)					
	L	L1	H	H1	B	C
400	400	780	300	680	350	65
500	500	940	400	840	400	70
600	600	1100	450	950	450	75
700	700	1260	500	1060	500	80
800	800	1420	600	1220	550	85

JIS F2030 SINGLE POIT MOORING PIPES (TYPE B)

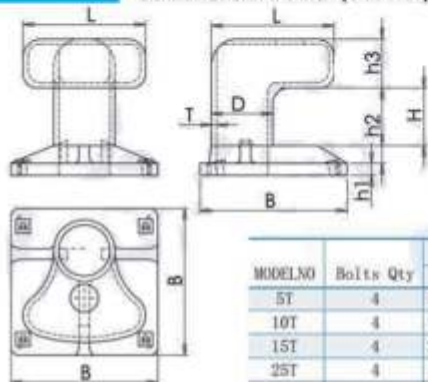
LS-C10

WEIGHT (KG)	MODEL NO	SIZE (mm)				
		A	B	C	D	E
190	400	800	320	300	350	300
310	500	960	370	350	400	400
460	600	1120	420	400	450	450
660	700	1280	470	450	500	500
830	800	1440	520	500	550	600



LS-B01

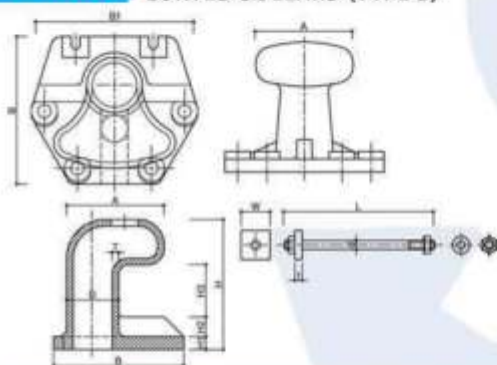
CURVED BOLLARD (TYPE A)



MODELNO	Bolts Qty	SIZE (mm)								
		D	H	T	L	B	h1	h2	h3	
5T	4	150	170	20	300	350	30	60	120	
10T	4	200	210	20	400	480	40	70	160	
15T	4	250	250	20	500	600	50	80	200	
25T	4	300	290	21	600	720	65	95	240	
35T	4	300	290	25	600	810	65	95	240	
50T	4	350	330	29	700	945	70	100	280	
75T	4	400	370	33	800	1130	90	120	320	
100T	4	450	410	39	900	1365	95	125	360	

LS-B02

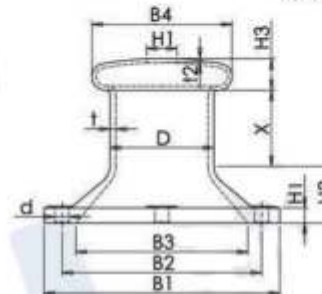
CURVED BOLLARD (TYPE B)



MODELNO	Bolts Qty	SIZE (mm)												
		Bollard									Bolt		Plant	
		D	A	B	B1	H	H1	H2	H3	T	d	L	W	t
5	4	150	300	360	-	380	30	60	170	20	20	450	80	16
10	4	200	400	480	-	480	40	70	210	20	27	600	108	22
15	4	250	500	600	-	580	50	80	250	20	33	700	132	25
25	4	300	600	700	-	690	65	95	290	21	42	850	168	35
35	6	300	600	720	810	690	65	95	290	25	42	850	168	35
50	6	350	700	840	945	790	70	100	330	29	48	1000	192	40
70	6	400	800	1000	1130	900	90	120	370	33	56	1150	225	45
100	6	450	900	1200	1365	990	95	125	410	39	64	1360	256	55
150	6	550	1100	1600	1765	1260	120	145	490	49	80	1450	300	65

SINGLE-BITE BOLLARD (JIS TYPE)

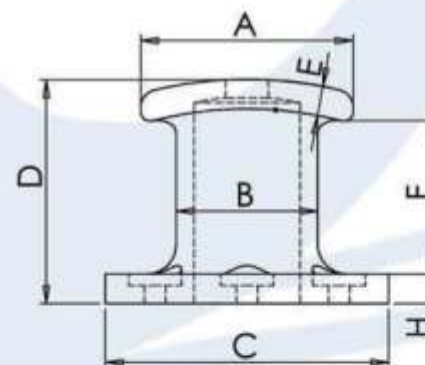
LS-B03



MODELNO	SIZE (mm)												
	D	X	t	B4	H3	t2	H1	H2	B3	B1	B2	d	(KG)
15T	250	290	20	400	87	25	45	100	430	600	500	43	130
25T	300	290	20	480	105	15	60	130	510	725	600	55	220
35T	300	290	25	480	105	16	60	130	510	725	600	55	230
50T	350	330	27	550	122	18	70	160	600	810	700	66	350
70T	400	380	30	610	140	21	80	190	680	900	800	74	530
100T	450	410	35	720	157	25	80	270	860	1180	1000	74	893
150T	530	510	40	880	192	29	100	340	1010	1440	1220	91	1450
200T	750	550	43	1030	227	30	110	410	1240	1700	1440	101	2230

J TYPE DOCK BOLLARD

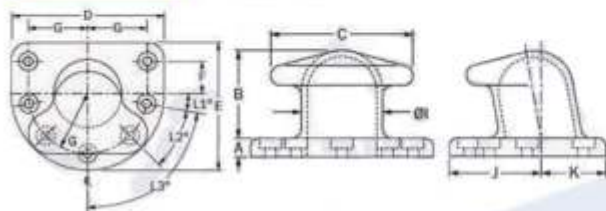
LS-B04



MODELNO	Bolts Qty	SWL (T)	SIZE (mm)							
			A	B	C	D	E	F	G	H
J-01	4	10	180	120	240	190	25	140	180	25
J-02	4	15	215	150	290	220	25	160	220	35
J-03	4	20	280	200	360	260	25	200	280	35
J-04	4	15	290	150	290	220	25	160	220	35
J-05	6	50	460	230	460	380	40	244	340	50

LS-B05

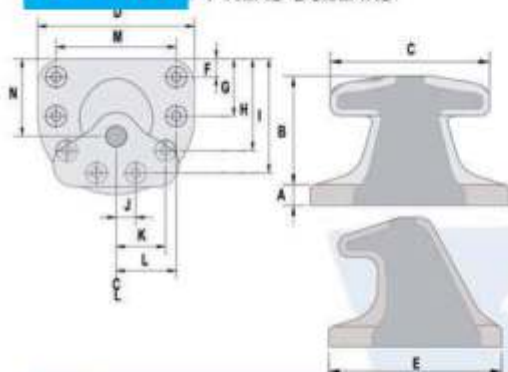
TEE BOLLARD



MODELNO	SIZE (mm)														Bolt size	Bolt Length	Qty
	A	B	C	D	E	F	G	øI	J	K	L1*	L2*	L3*	N/A			
15T	40	235	340	410	335	80	155	160	205	130	30	/	60	M24	500	55	5
30T	40	255	350	450	375	100	175	200	225	150	30	/	60	M30	500	55	5
50T	50	350	500	640	540	150	250	260	320	220	30	/	60	M36	500	65	5
80T	70	380	550	640	550	160	250	280	320	230	15	45	N/A	M42	800	85	6
100T	80	410	600	790	640	175	325	350	395	245	10	40	80	M42	800	95	7
150T	90	435	700	900	750	200	350	400	450	300	10	40	80	M48	1000	105	7
200T	90	500	800	1000	850	225	375	450	500	350	0	36	72	M56	1000	105	8

LS-B06

T-HEAD BOLLARD



MODELNO	SIZE (mm)														Bolt size	Bolt Length	Qty
	A	B	C	D	E	F	G	H	I	J	K	L	M	N			
MT10	47	199	305	381	330	44	-	-	243	103	-	-	292	189	M24	450	4
MT15	52	219	335	419	363	49	-	-	267	114	-	-	321	208	M24	450	4
MT20	54	240	351	438	380	51	-	232	329	0	152	-	336	217	M24	450	5
MT30	57	250	366	457	396	53	-	242	343	0	159	-	351	226	M30	450	5
MT50	70	308	451	564	489	66	-	298	423	0	196	-	432	279	M36	600	5
MT75	80	354	518	648	561	76	-	299	463	105	241	-	497	321	M42	600	6
MT100	80	413	610	762	660	89	305	496	572	0	195	291	584	377	M42	600	7
MT125	87	458	671	838	726	98	335	546	629	0	215	320	643	415	M48	750	7
MT150	93	492	719	899	779	105	360	586	674	0	231	343	689	445	M48	750	7
MT200	97	521	762	952	826	111	349	559	694	119	299	365	730	472	M56	915	8

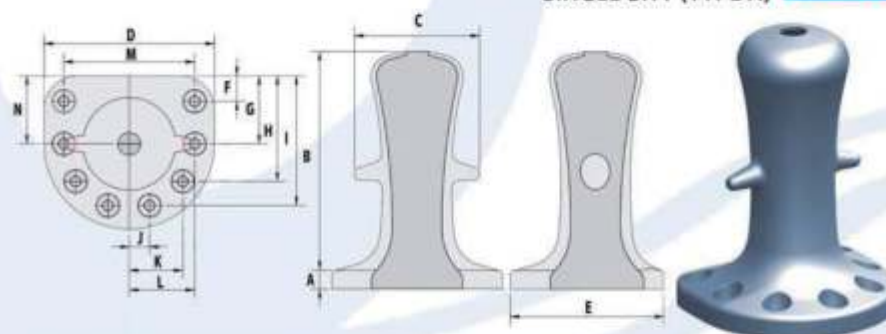


LS-B07

MODELNO	SIZE (mm)														Bolt size	Bolt Length	Qty
	A	B	C	D	E	F	G	H	I	J	K	L	M	N			
10T	41	291	348	381	330	44	/	/	243	103	/	/	291	140	M24	450	4
15T	45	320	394	419	363	49	/	/	267	114	/	/	320	154	M24	450	4
20T	49	349	430	442	381	46	/	234	335	0	159	/	349	160	M24	450	5
30T	55	392	483	497	429	51	/	263	377	0	179	/	393	180	M30	450	5
50T	59	419	516	530	457	55	/	281	402	0	191	/	419	192	M36	600	5
75T	71	489	627	645	556	67	/	287	459	120	250	/	509	233	M42	600	6
100T	81	559	717	737	635	76	292	484	559	0	195	291	582	267	M42	600	7
125T	90	615	788	810	699	84	321	532	615	0	215	320	640	293	M48	750	7
150T	98	671	860	884	762	91	351	581	671	0	235	349	698	320	M48	750	7
200T	102	699	896	921	794	95	333	543	679	119	299	365	727	333	M56	915	8

SINGLE BITT (TYPE A)

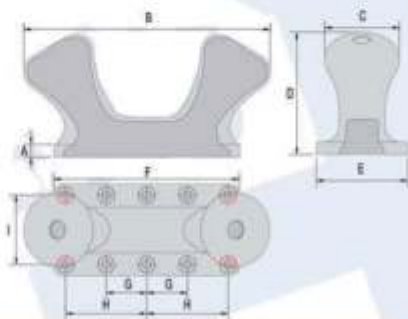
LS-B08



MODELNO	SIZE (mm)														Bolt size	Bolt Length	Qty
	A	B	C	D	E	F	G	H	I	J	K	L	M	N			
10T	44	390	224	325	284	46	/	/	205	83	/	/	234	122	M24	450	4
15T	44	429	246	358	313	50	/	/	225	91	/	/	257	134	M24	450	4
20T	54	454	263	358	322	54	/	201	281	0	124	/	275	143	M24	450	5
30T	60	540	307	419	377	63	/	236	328	0	146	/	321	168	M30	450	5
50T	70	686	391	533	480	80	/	256	394	96	200	/	409	213	M36	600	6
75T	82	829	475	648	583	97	/	311	478	117	243	/	497	259	M42	600	6
100T	89	925	559	762	686	114	330	522	597	0	195	291	584	305	M48	750	7
125T	92	1057	604	823	741	123	357	564	645	0	211	314	631	329	M48	750	7
150T	98	1153	659	899	809	135	390	616	704	0	231	343	689	360	M56	915	7
200T	111	1270	726	991	892	149	396	614	755	124	311	380	759	396	M56	915	8

LS-B09

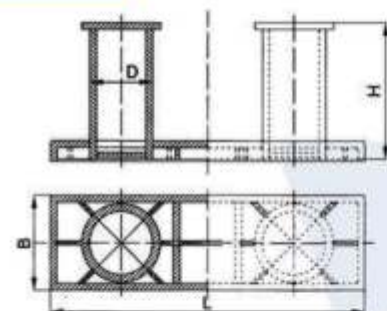
DOUBLE BOLLARD



MODELNO	SIZE (mm)									Bolt size	Bolt Length	Qty.
	A	B	C	D	E	F	G	H	I			
20T	38	673	204	335	267	533	70	222	191	M20	300	8
30T	46	781	236	389	302	604	81	258	221	M22	300	8
50T	56	942	285	469	356	711	98	311	267	M30	450	8
75T	62	1144	346	570	432	864	189	378	324	M36	450	10
100T	3	1346	407	670	508	1016	222	444	381	M42	600	10
125T	80	1548	468	771	584	1168	256	512	438	M42	600	10
150T	91	1683	509	838	635	1270	278	556	476	M48	750	10
200T	98	1885	570	938	702	1422	311	622	533	M56	915	10

LS-B10

GB554-83 BOLLARD

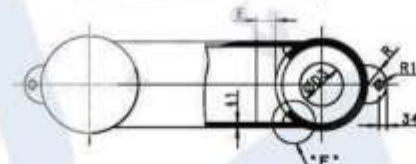
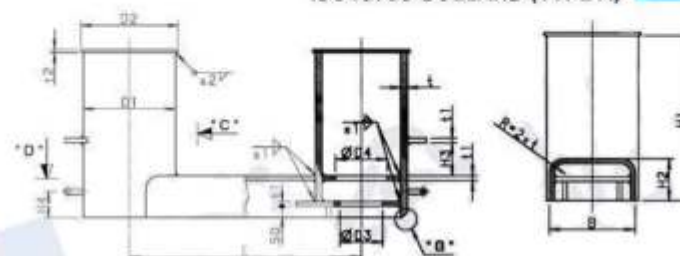


MODELNO	WEIGHT (KG)	SIZE (mm)			
		D	L	B	H
100	19	114	445	165	196
125	29	140	540	195	246
160	45	168	670	225	316
200	80	219	860	290	378
250	141	273	1065	360	470
315	264	325	1300	430	597
355	358	351	1475	480	663
400	499	402	1630	550	749
450	680	450	1840	620	841
500	911	508	1040	690	928
560	1208	560	2240	750	1025
630	1601	610	2510	820	1152
710	2252	712	2840	960	1294
800	3071	813	3240	1100	1480



ISO13795 BOLLARD (TYPE A)

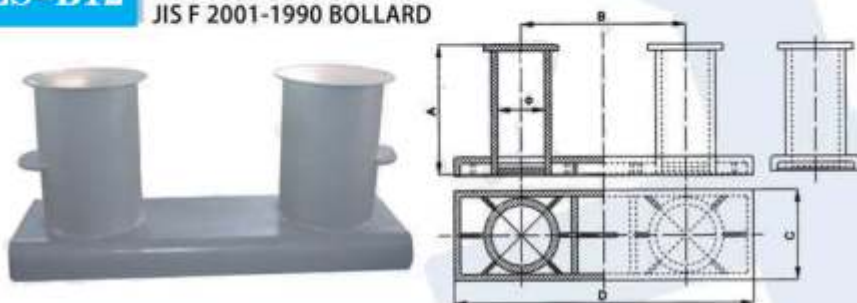
LS-B11



MODELNO	SIZE (mm)								SWL (T)	WEIGHT (KG)
	D1	D2	D3	D4	H1	H2	B	L		
150	165.2	185	-	80	330	90	155	400	5T	29
200	216.3	240	-	130	395	115	205	500	6.7T	46
250A	267.4	290	-	160	505	135	250	630	14T	107
250B	267.4	290	-	160	505	135	250	630	11T	91
300A	318.5	340	150	185	600	150	290	800	31T	281
300B	318.5	340	150	185	600	150	290	800	16T	166
350A	355.6	380	170	200	685	175	340	890	43T	431
350B	355.6	380	170	220	685	175	340	890	35T	241
400A	406.4	430	190	230	730	185	380	1000	53T	570
400B	406.4	430	190	250	730	185	380	1000	27T	322
450A	457.2	480	210	265	770	195	425	1100	62T	712
450B	457.2	480	210	285	770	195	425	1100	30T	379
500A	508	530	235	295	830	230	480	1250	460	777
500B	508	530	235	320	830	230	480	1250	33T	465
550A	558.8	580	255	330	900	270	520	1380	540	837
550B	558.8	580	255	350	900	270	520	1380	55T	787
600	609.4	630	280	365	950	300	560	1550	600	977

LS-B12

JIS F 2001-1990 BOLLARD

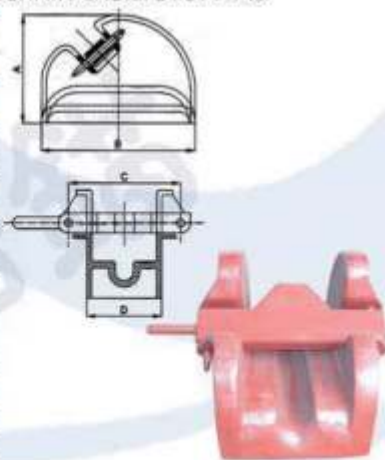


WEIGHT (KG)	MODEL NO	SIZE (mm)				
		A	B	C	D	Φ
100	18.9	196	250	165	445	114.3
125	29.4	246	315	195	540	139.8
160	44.7	316	400	225	670	165.2
200	79.5	378	500	290	860	216.3
250	139	470	630	360	1065	267.4
315	261	597	800	430	1300	318.5
355	361	663	890	480	1475	355.6
400	502	749	1000	550	1630	406.4
450	685	841	1130	620	1840	457.2
500	911	928	1250	690	2040	508
560	1208	1025	1380	750	2240	558.8
630	1601	1152	1570	820	2510	609.6
710	2252	1294	1750	960	2840	711.2
800	3071	1480	2000	1100	3240	812.8

LS-S01

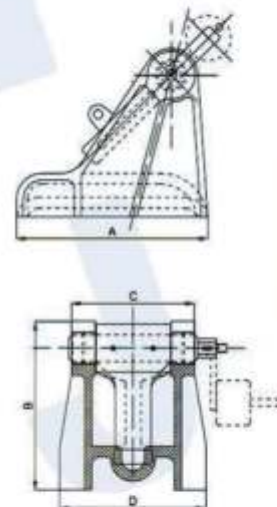
JIS F 2015 CAST STEEL BAR TYPE CHAIN CABLE STOPPERS

MODEL NO	MONINAL DIA. OF ANCHOR CHAIN	SIZE (mm)				WEIGHT (KG)
		A	B	C	D	
19	17~19	190	270	200	134	17
22	20~22	216	310	226	153	24
25	23~25	241	345	256	175	33
28	26~28	270	385	280	193	44
32	29~32	305	435	320	220	68
36	34~36	342	490	354	246	92
40	38~40	378	540	390	276	111
44	42~44	412	590	424	306	139
48	46~48	450	640	460	337	176
52	50~52	491	695	494	378	216
56	54~56	528	745	530	417	261
60	58~60	564	795	564	458	319
64	62~64	600	850	600	517	380
68	66~68	635	900	636	547	452
73	70~73	675	960	678	582	561
78	76~78	715	1020	720	617	682



JIS F 2016-1987 CAST STEEL PAWL TYPE CHAIN STOPPERS FOR GRADE 2 CHAINS

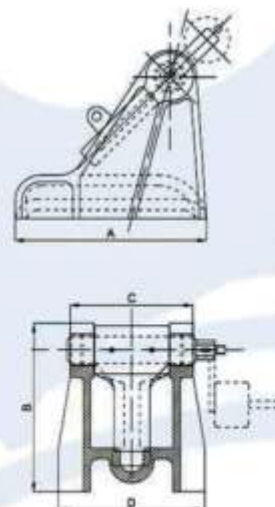
LS-S02



MODEL NO	MONINAL DIA. OF ANCHOR CHAIN	SIZE (mm)				WEIGHT (KG)
		A	B	C	D	
60	58~60	780	670	506	600	306
64	62~64	835	710	538	630	385
68	66~68	885	750	568	660	464
73	70~73	900	801	604	700	549
78	76~78	1015	852	641	750	674
84	81~84	1095	911	686	800	806
90	87~90	1170	969	732	850	1002
95	92~95	1235	1021	768	900	1165
102	97~102	1350	1090	816	950	1443
107	105~107	1400	1148	857	1000	1636
114	111~114	1480	1207	902	1050	1933
120	117~120	1585	1280	956	1120	2239

JIS F 2016-1987 CAST STEEL PAWL TYPE CHAIN STOPPERS FOR GRADE 3 CHAINS

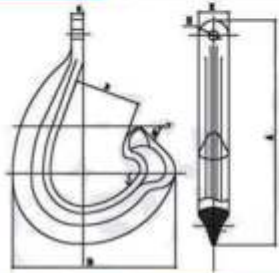
LS-S03



MODEL NO	MONINAL DIA. OF ANCHOR CHAIN	SIZE (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	97~102	1350	1090	816	950	1830
107	105~107	1400	1148	857	1000	2130
114	111~114	1480	1207	902	1050	2410
120	117~122	1585	1280	956	1120	2900

LS-J01

J-CHASER HOOK

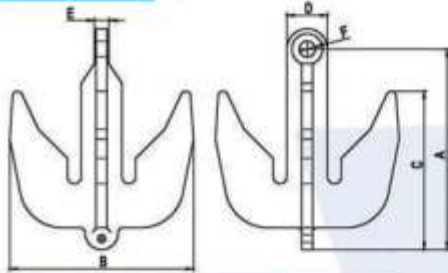


MODELNO	SIZE (mm)					
	A	B	D	E	G	H
10T	782	566	229	105	41	33
20T	1040	759	307	140	55	45
30T	1219	882	357	163	64	52
40T	1267	917	371	170	66	60
50T	1563	1131	458	209	82	67
75T	1912	1384	560	256	100	82
110T	2438	1829	699	306	124	86
130T	2438	1829	699	320	124	86
150T	2528	1832	740	338	132	108
250T	2390	1730	720	350	180	145



LS-G01

GRAPNEL HOOK

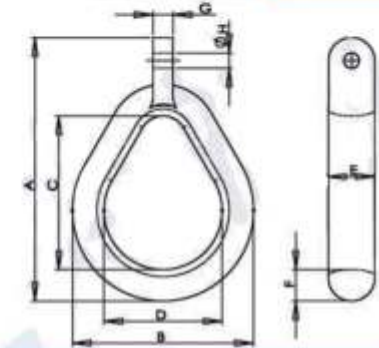


MODELNO	SIZE (mm)					
	A	B	C	D	E	F
10T	605	466	449	102	39	38
20T	800	617	594	135	51	50
30T	889	686	660	150	57	56
40T	1000	768	726	171	64	70
50T	1111	850	793	193	71	76
75T	1389	1054	958	264	89	90
110T	1778	1340	1190	320	114	110
130T	1778	1350	1200	330	114	110
150T	1786	1403	1240	337	117	118
250T	1823	1670	1440	370	130	145



LS-G02

CHASER TYPE SOT

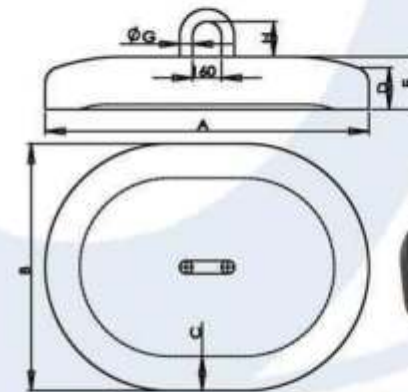


MODELNO	SIZE (mm)							
	A	B	C	D	E	F	G	H
100	1657	1143	991	762	305	191	124	86
130	1702	1168	991	762	381	203	130	99
130	1867	1245	1130	838	330	203	130	99
250	2040	1361	1130	838	406	/	191	144



SINKER

LS-S04



MODELNO	SIZE (mm)							
	A	B	C	D	E	F	G	H
250KG	590	420	100	190	210	130	25	160
500KG	780	590	150	210	250	160	30	160
1000KG	1100	900	150	170	200	160	60	160
1500KG	1250	940	150	210	250	210	70	210
2000KG	1350	1010	150	250	290	210	70	210
2500KG	1450	1035	150	280	320	210	70	210
3000KG	1550	1160	150	280	320	210	70	210
4000KG	1680	1300	150	330	370	210	75	260
5000KG	1830	1370	150	360	400	210	75	260
7000KG	1830	1370	150	500	540	210	75	260





MARINE CASTING STEEL



MARINE CASTING STEEL

Anchor & Cast Steel

Cast Steel



MACHINERY FOR STEELCASTINGS



MACHINERY FOR STEELCASTINGS

