



stud link chain and ship's anchors

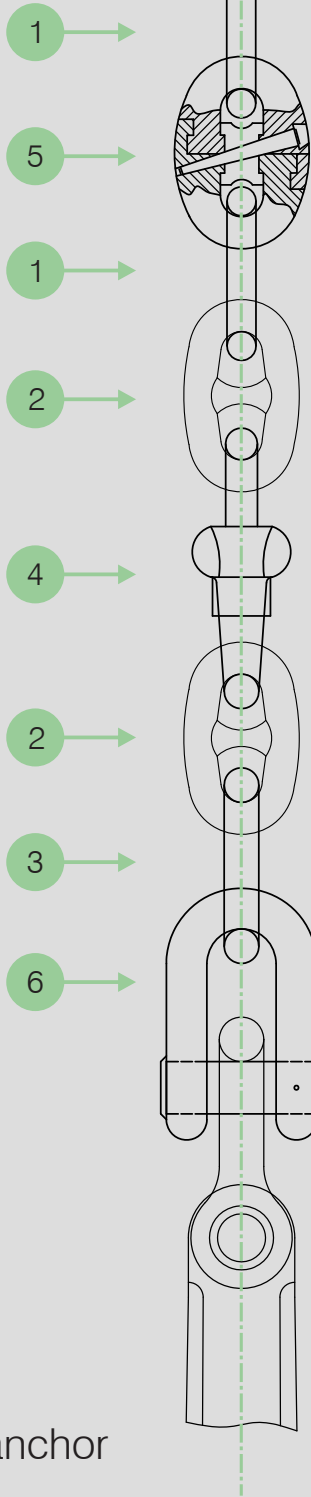


Equipment tables
according to IACS Req. 2014



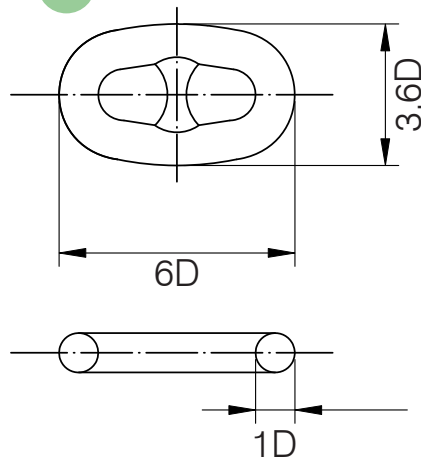
Equipment Number	Anchor			Stud link chain			
	Number required	Stockless weight	High holding weight	Total length	Diameter grade 1	Diameter grade 2	Diameter grade 3
		[kgs]	[kgs]	[mtrs]	[mm]	[mm]	[mm]
50-70	2	180	135	220.0	14.0	12.5	-
70-90	2	240	180	220.0	16.0	14.0	-
90-100	2	300	225	247.5	17.5	16.0	-
110-130	2	360	270	247.5	19.0	17.5	-
130-150	2	420	315	275.0	20.5	17.5	-
150-175	2	480	360	275.0	22.0	19.0	-
175-205	2	570	430	302.5	24.0	20.5	-
205-240	3	660	495	302.5	26.0	22.0	20.5
240-280	3	780	585	330.0	28.0	24.0	22.0
280-320	3	900	675	357.5	30.0	26.0	24.0
320-360	3	1020	765	357.5	32.0	28.0	24.0
360-400	3	1140	855	385.0	34.0	30.0	26.0
400-450	3	1290	970	385.0	36.0	32.0	28.0
450-500	3	1440	1080	412.5	38.0	34.0	30.0
500-550	3	1590	1193	412.5	40.0	36.0	30.0
550-600	3	1740	1305	440.0	42.0	36.0	32.0
600-660	3	1920	1440	440.0	44.0	38.0	34.0
660-720	3	2100	1575	440.0	46.0	40.0	36.0
720-780	3	2280	1710	467.5	48.0	42.0	36.0
780-840	3	2460	1845	467.5	50.0	44.0	38.0
840-910	3	2640	1980	467.5	52.0	46.0	40.0
910-980	3	2850	2140	495.0	54.0	48.0	42.0
980-1060	3	3060	2295	495.0	56.0	50.0	44.0
1060-1140	3	3300	2475	495.0	58.0	50.0	46.0
1140-1220	3	3540	2655	522.5	60.0	52.0	45.0
1220-1300	3	3780	2835	522.5	62.0	54.0	48.0
1300-1390	3	4050	3040	522.5	64.0	56.0	50.0
1390-1480	3	4320	3240	550.0	66.0	58.0	50.0
1480-1570	3	4590	3445	550.0	68.0	60.0	52.0
1570-1670	3	4890	3670	550.0	70.0	62.0	54.0
1670-1790	3	5250	3940	577.5	73.0	64.0	56.0
1790-1930	3	5610	4210	577.5	76.0	66.0	58.0
1930-2080	3	6000	4500	577.5	78.0	68.0	60.0
2080-2230	3	6450	4840	605.0	81.0	70.0	62.0
2230-2380	3	6900	5175	605.0	84.0	73.0	64.0
2380-2530	3	7350	5515	605.0	87.0	76.0	66.0
2530-2700	3	7800	5850	632.5	90.0	78.0	68.0
2700-2870	3	8300	6225	632.5	92.0	81.0	70.0
2870-3040	3	8700	6525	632.5	95.0	84.0	73.0
3040-3210	3	9300	6975	660.0	97.0	84.0	76.0
3210-3400	3	9900	7425	660.0	100.0	87.0	78.0
3400-3600	3	10500	7875	660.0	102.0	90.0	78.0
3600-3800	3	11100	8325	687.5	105.0	92.0	81.0
3800-4000	3	11700	8775	687.5	107.0	95.0	84.0
4000-4200	3	12300	9225	687.5	111.0	97.0	87.0
4200-4400	3	12900	9675	715.0	-	100.0	87.0
4400-4600	3	13500	10125	715.0	-	102.0	90.0
4600-4800	3	14100	10575	715.0	-	105.0	92.0
4800-5000	3	14700	11025	742.5	-	107.0	95.0
5000-5200	3	15400	11550	742.5	-	111.0	97.0
5200-5500	3	16100	12075	742.5	-	111.0	97.0

chain locker

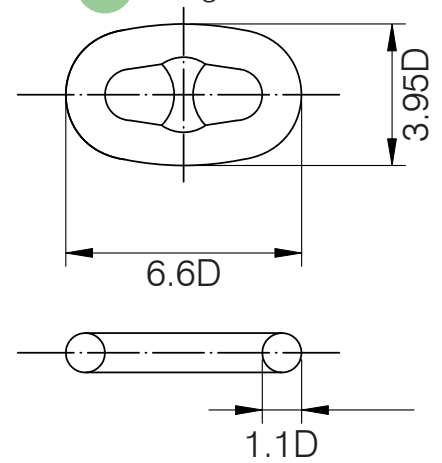


anchor

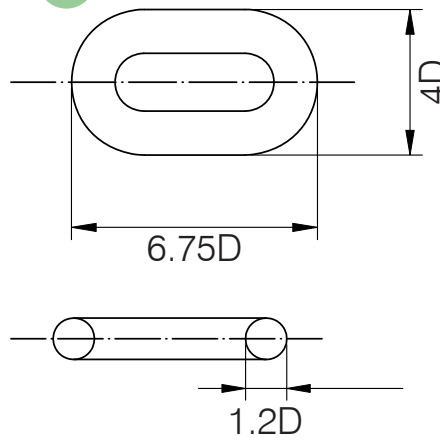
1. common link



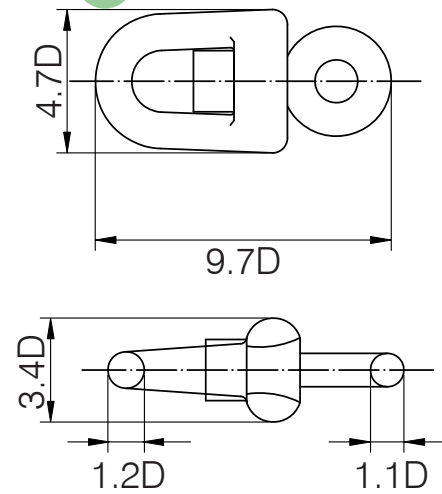
2. enlarged link



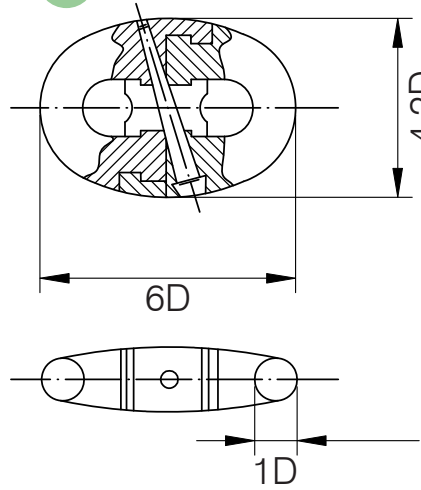
3. end link



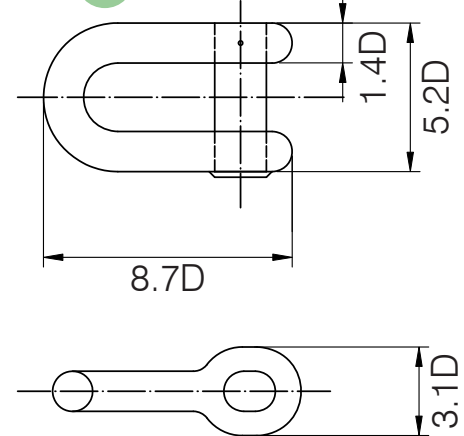
4. swivel



5. kenter joining shackle



6. end shackle



D = chain size in mm



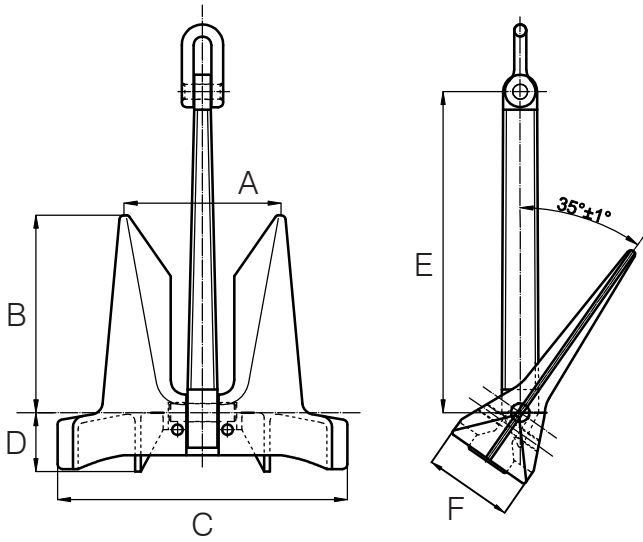
Test loads for stud link chain

according to IACS Req. 2014

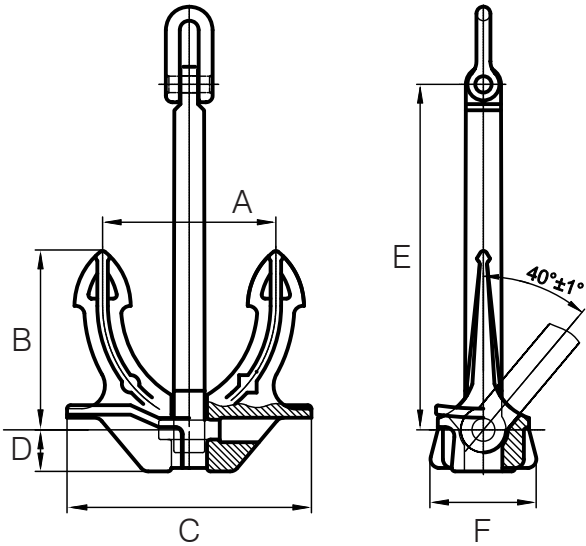
Diameter		Number of links per 27.5mtrs	Weight per 27.5mtrs [kgs]	Grade1		Grade2		Grade3	
[mm]	[in]			proof load [kN]	break load [kN]	proof load [kN]	break load [kN]	proof load [kN]	break load [kN]
12.5	1/2	549	110	46.1	65.7	65.7	92.2	92.2	132
14	9/16	491	130	57.9	82.4	82.4	116	116	165
16	5/8	429	170	75.5	107	107	150	150	216
17.5	11/16	391	180	89.2	127	127	179	179	256
19	3/4	357	220	105	150	150	211	211	301
20.5	13/16	329	260	123	175	175	244	244	349
22	7/8	305	300	140	200	200	280	280	401
24	15/16	285	340	167	237	237	332	332	476
26	1	259	405	194	278	278	389	389	556
28	1 1/8	245	475	225	321	321	449	449	642
30	1 3/16	225	545	257	368	368	514	514	735
32	1 1/4	213	615	291	417	417	583	583	833
34	1 5/16	195	690	328	468	468	655	655	937
36	1 7/16	187	775	366	523	523	732	732	1050
38	1 1/2	179	860	406	581	581	812	812	1060
40	1 9/12	171	950	448	640	640	896	896	1280
42	1 5/8	165	1040	492	703	703	981	981	1400
44	1 3/4	153	1130	538	769	769	1080	1080	1540
46	1 13/16	147	1240	585	837	837	1170	1170	1680
48	1 7/8	143	1345	635	908	908	1270	1270	1810
50	2	137	1455	686	981	981	1370	1370	1960
52	2 1/16	129	1575	739	1060	1060	1480	1480	2110
54	2 1/8	125	1690	794	1140	1140	1590	1590	2270
56	2 3/16	123	1810	851	1220	1220	1710	1710	2430
58	2 5/16	119	1945	909	1290	1290	1810	1810	2600
60	2 3/8	113	2075	969	1380	1380	1940	1940	2770
62	2 7/16	111	2220	1030	1470	1470	2060	2060	2940
64	2 1/2	107	2370	1100	1560	1560	2190	2190	3130
66	2 5/8	105	2525	1160	1660	1660	2310	2310	3300
68	2 11/16	99	2685	1230	1750	1750	2450	2450	3500
70	2 3/4	97	2850	1290	1840	1840	2580	2580	3690
73	2 7/8	93	3100	1390	1990	1990	2790	2790	3990
76	3	89	3360	1500	2150	2150	3010	3010	4300
78	3 1/16	87	3535	1580	2260	2260	3160	3160	4500
81	3 3/16	85	3820	1690	2410	2410	3380	3380	4820
84	3 5/16	81	4105	1800	2580	2580	3610	3610	5160
87	3 7/16	79	4405	1920	2750	2750	3850	3850	5500
90	3 9/16	77	4705	2050	2920	2920	4090	4090	5840
92	3 5/8	73	4905	2130	3040	3040	4260	4260	6080
95	3 3/4	71	5210	2260	3230	3230	4510	4510	6440
97	3 13/16	71	5425	2340	3340	3340	4680	4680	6690
100	3 15/16	69	5745	2470	3530	3530	4940	4940	7060
102	4	67	5970	2560	3660	3660	5120	5120	7320
105	4 1/8	65	6320	2700	3850	3850	5390	5390	7700
107	4 3/16	63	6575	2790	3980	3980	5570	5570	7960
111	4 3/8	61	7080	2970	4250	4250	5940	5940	8480
114	4 1/2	59	7475	3110	4440	4440	6230	6230	8890
117	4 5/8	57	7870	3260	4650	4650	6510	6510	9300
120	4 3/4	57	8270	3400	4850	4850	6810	6810	9720
122	4 13/16	57	8550	3500	5000	5000	7000	7000	9990
124	4 7/8	55	8835	3600	5140	5140	7200	7200	10280

standard length is 27.5mtrs = 90 feet = 15 fathoms

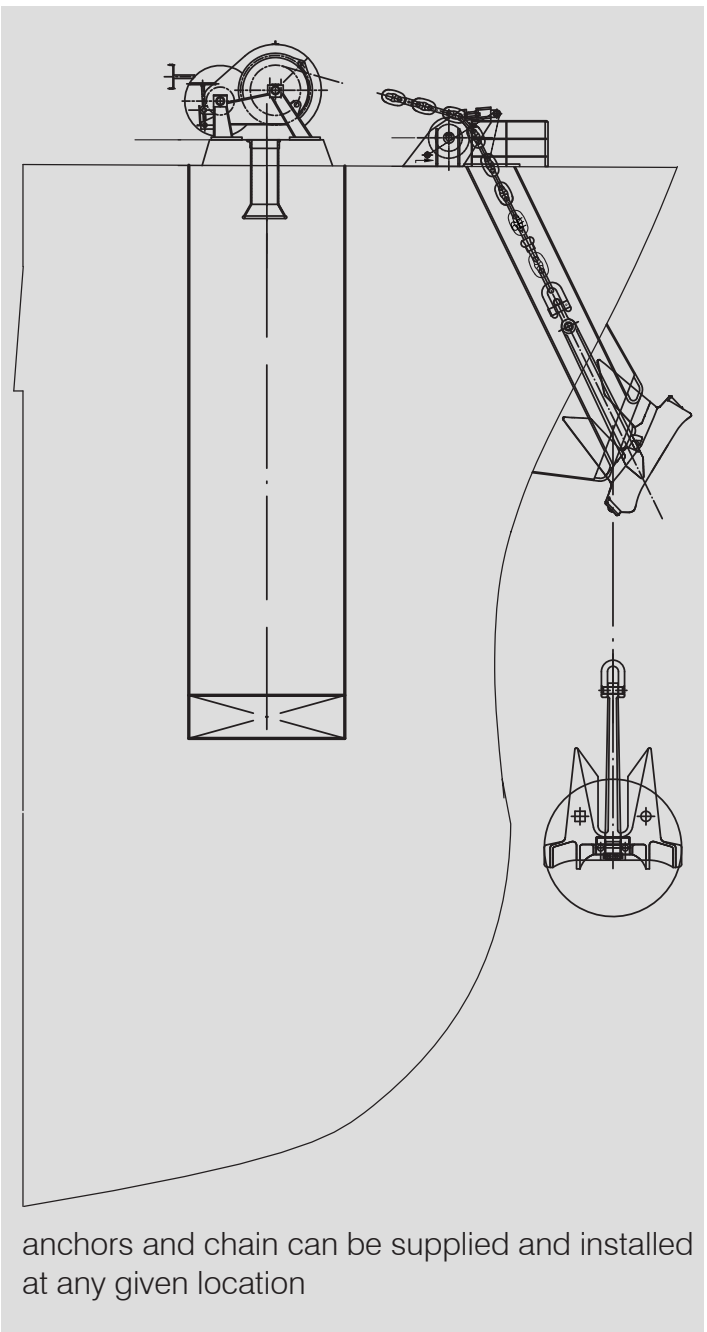
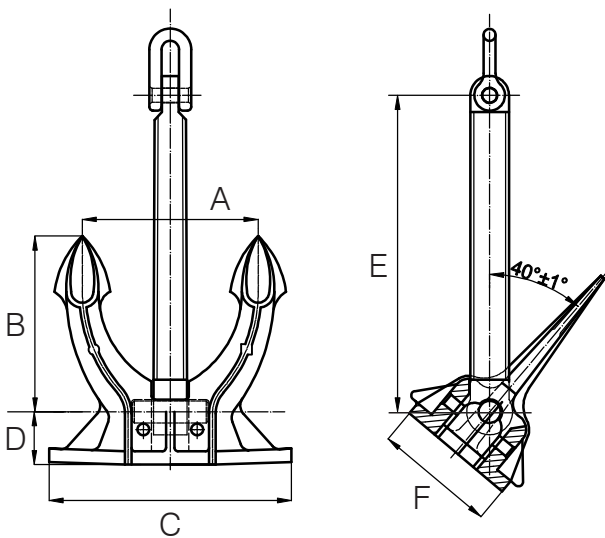
● AC-14 type anchor
high holding power



● Hall type anchor
stockless

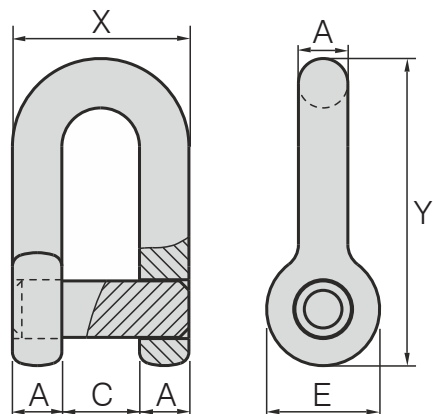


● Spek type anchor
stockless



anchors and chain can be supplied and installed at any given location

● Crown shackle
for stockless and HHP anchors
sold separately



Requirements concerning mooring, anchoring and towing



Design of the anchoring equipment

The anchoring equipment in this brochure is intended for temporary mooring of a vessel within a harbour or sheltered area when the vessel is awaiting berth, tide, etc.

The equipment is therefore not designed to hold a ship off fully exposed coasts in rough weather or to stop a ship which is moving or drifting. In these conditions the loads on the anchoring equipment increase to such a degree that its components may be damaged or lost owing to the high energy forces generated, particularly in large ships.

The anchoring equipment is designed to hold a ship in good holding ground in conditions such as to avoid dragging the anchor. In poor holding ground the holding power of the anchors will be significantly reduced.

Anchors

Ordinary anchors of "stockless" type are to be generally adopted and they are to be of appropriate design in compliance with the rules or practice of each individual Society.

The mass of the heads of stockless anchors including pins and fittings are not to be less than 60% of the total mass of the anchor.

The mass of individual anchors may vary to 7% provided that the total mass of anchors is not less than that required for anchors of equal mass.

A "high holding power" anchor is to be suitable for ship's use and is not to require prior adjustment or special placement on the sea bottom.

When special type of anchors designated "high holding power anchor" of proven superior holding ability are used as bower anchors, the mass of each anchor may be 75% of the mass required for ordinary stockless bower anchors.

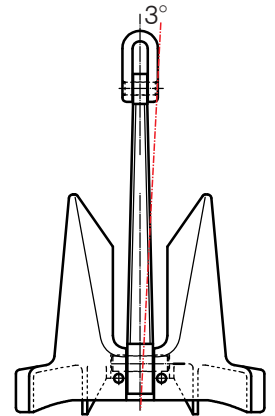
Two bower anchors of the three anchors in the equipment table are to be connected to their cables and positioned on board ready for use while the third is intended as a spare bower anchor. Installation of the spare on board is not compulsorily required. Each Classification Society is free to permit other arrangements as its discretion or not to require the spare anchor as a conditions of classification.

When inspecting anchors, the clearance either side of the shank within the shackle jaws is to be no more than 3mm for anchors up to 3t, 4mm for anchors up to 5t, 6mm for anchors up to 7t and is

not to exceed 12mm for larger anchors. The shackle pin is to be push fit in the eyes of the shackle, which are to be chamfered on the outside to ensure a good tightness when the pin is clenched over a fitting.

The trunnion pin is to be a snug fit within the chamber and be long enough to prevent horizontal movement. The gap is to be no more than 1% of the chamber length.

The lateral movement of the shank is not to exceed 3°.

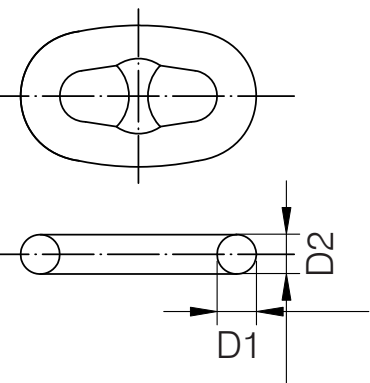


Chain cables for bower anchors

When a vessel may anchor in areas where the current exceeds 2.5m/s, the need to provide a length of heavier chain cable locally between the anchor and the rest of the chain to enhance anchor bedding may be required at the discretion of the Classification Society.

For certain restricted services the use of steel wire rope may be accepted in place of chain cable at the discretion of the Classification Society.

When a length of chain cable is so worn that the mean diameter of a link, at its most worn part, is reduced by 12% or more from its required nominal diameter it should be replaced. The mean diameter is half the value of the sum of the minimum diameter found in one cross-section of the link and of the diameter measured in a perpendicular direction in the same cross-section.



Locking pins in detachable connecting links are to have taper contact at both top and bottom in the link halves. Lead or other acceptable material is to be used for plugging the locking pin hole which is to contain an appropriate undercut recess or equivalent arrangement to secure the plug.

Printed from the International Association of Classification Societies - requirements concerning mooring, anchoring and towing. IACS Req. 2014

