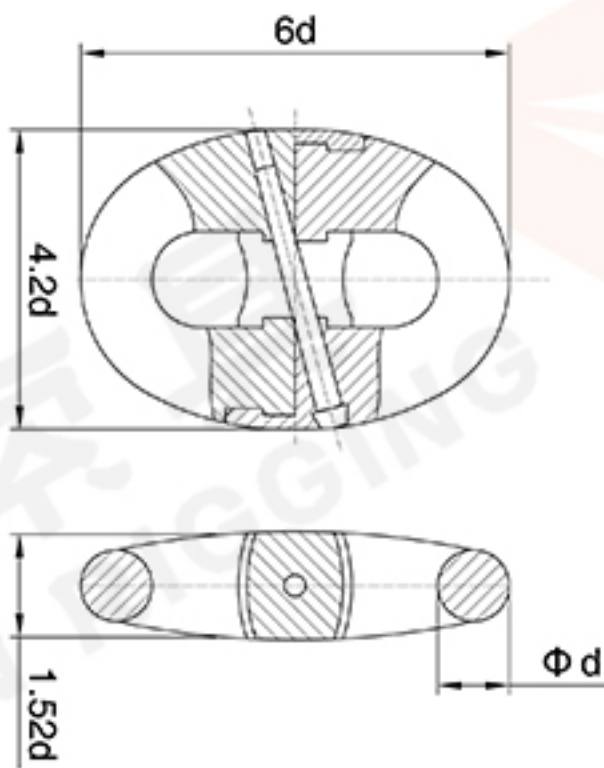


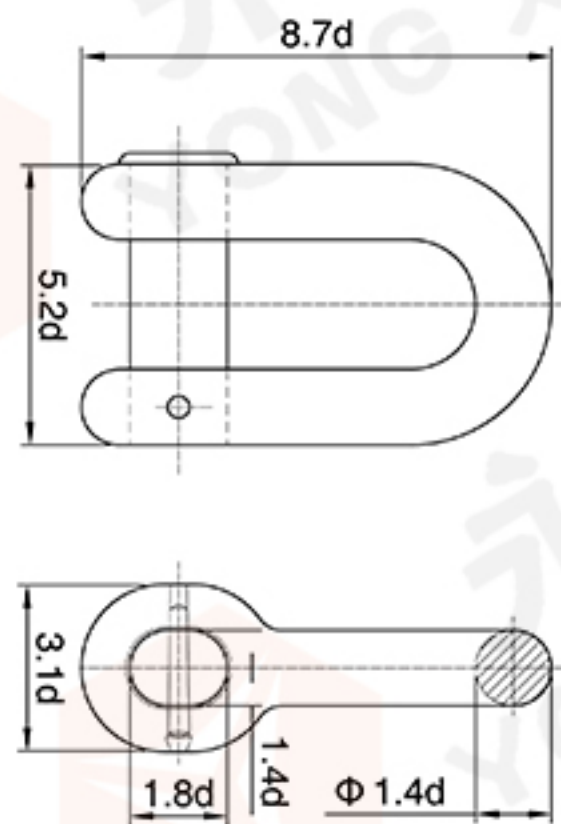
DRAWING OF PRODUCTS



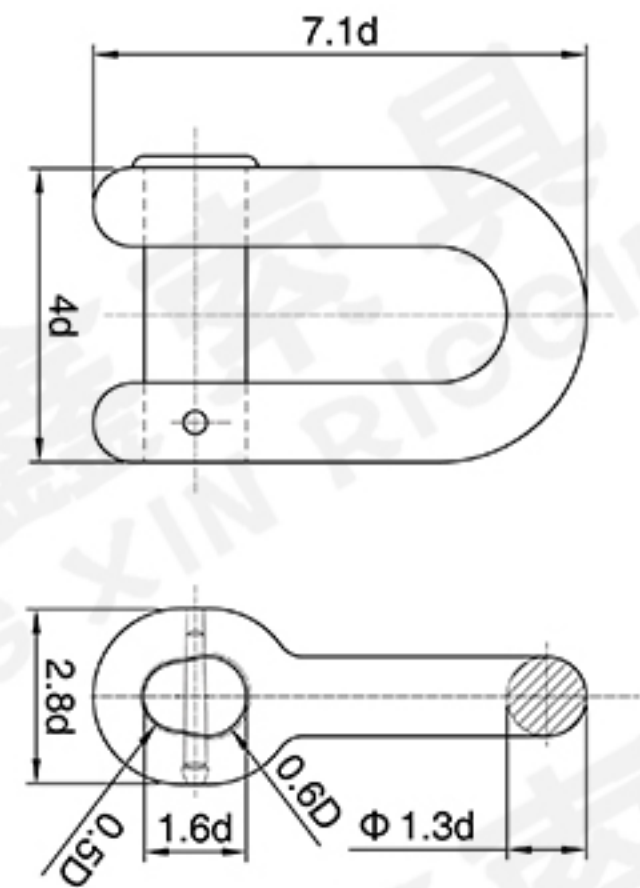
KENTER SHACKLE = KS



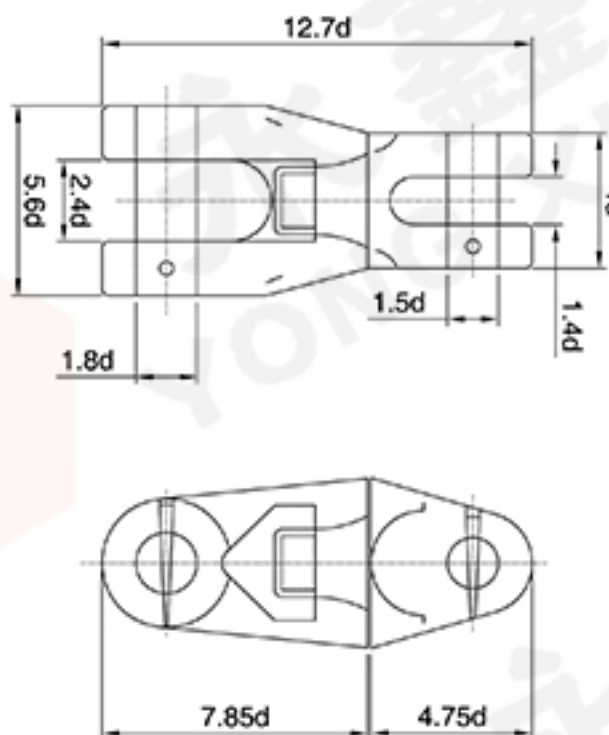
ANCHOR SHACKLE = A.S



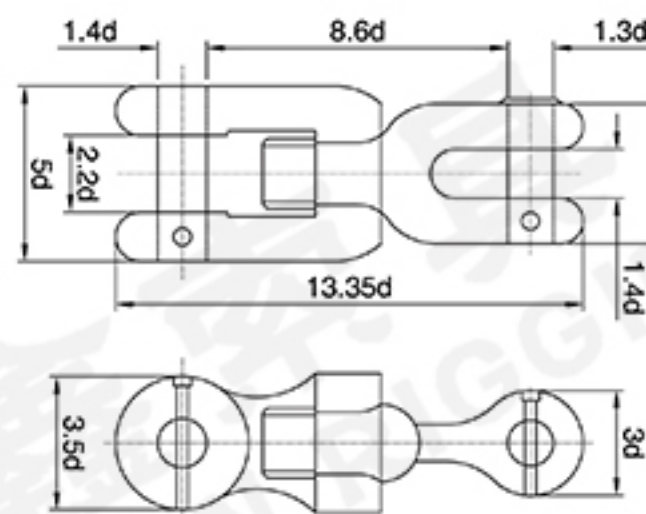
JOINING SHACKLE = JS



ANCHOR SWIVEL SHACKLE
(a) = A.SW.Sb(a)



ANCHOR SWIVEL SHACKLE
(b) = A.SW.Sb(b)



Buoy Shackle Type "A"

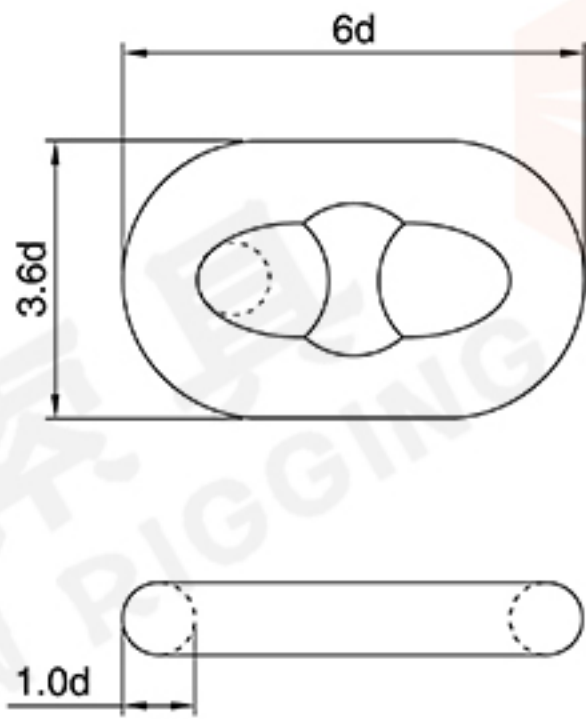


Buoy Shackle Type "B"

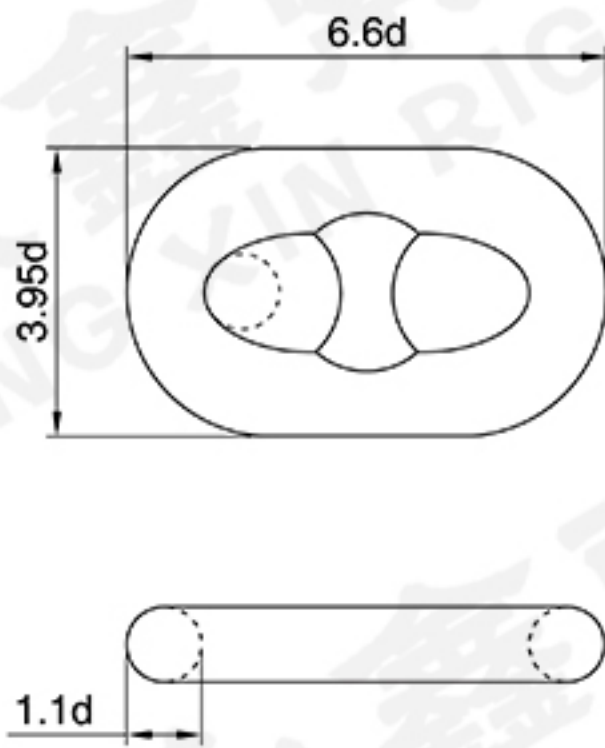
DRAWING OF PRODUCTS



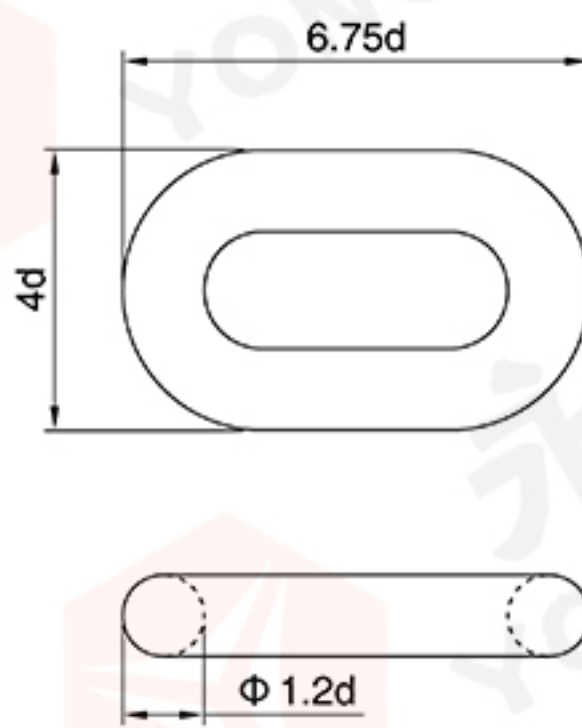
COMMON LINK = C



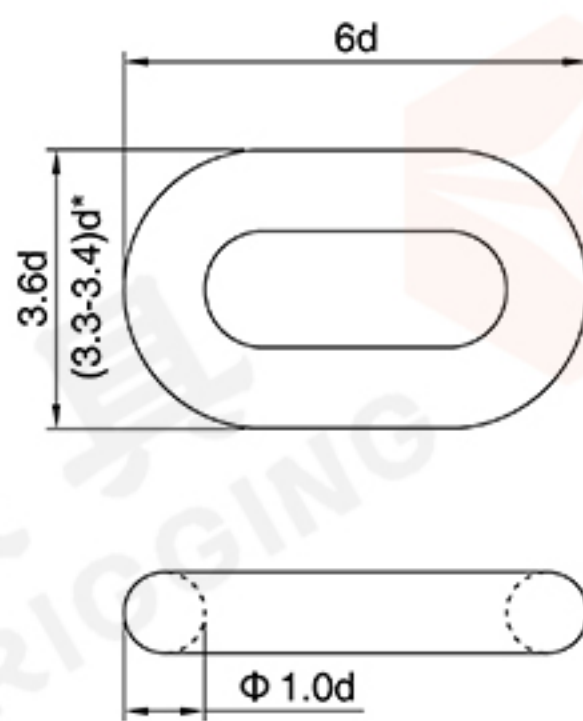
ENLARGED LINK = EL



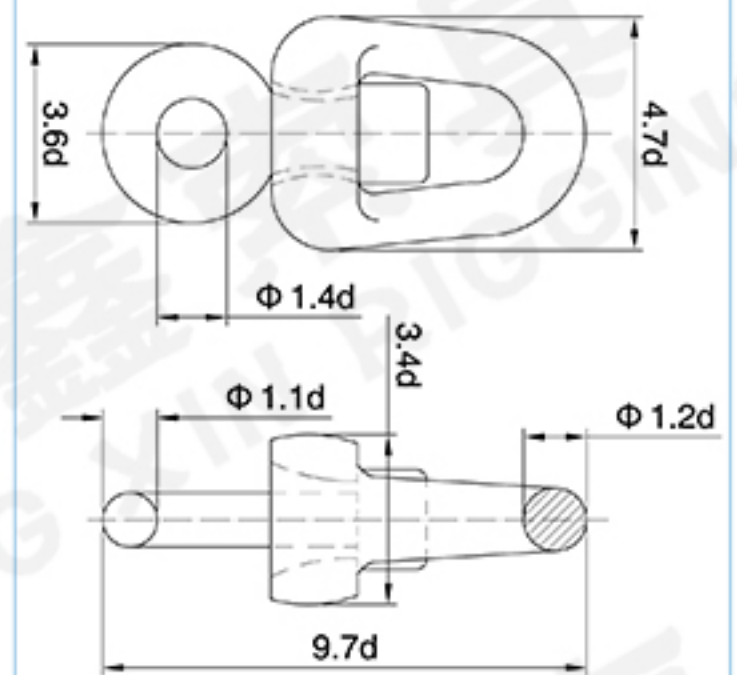
END LINK = E



STUDLESS LINK = SL



SWIVEL = SW



PEAR SHAPED LINK



TRIANGLE PLATE = TP

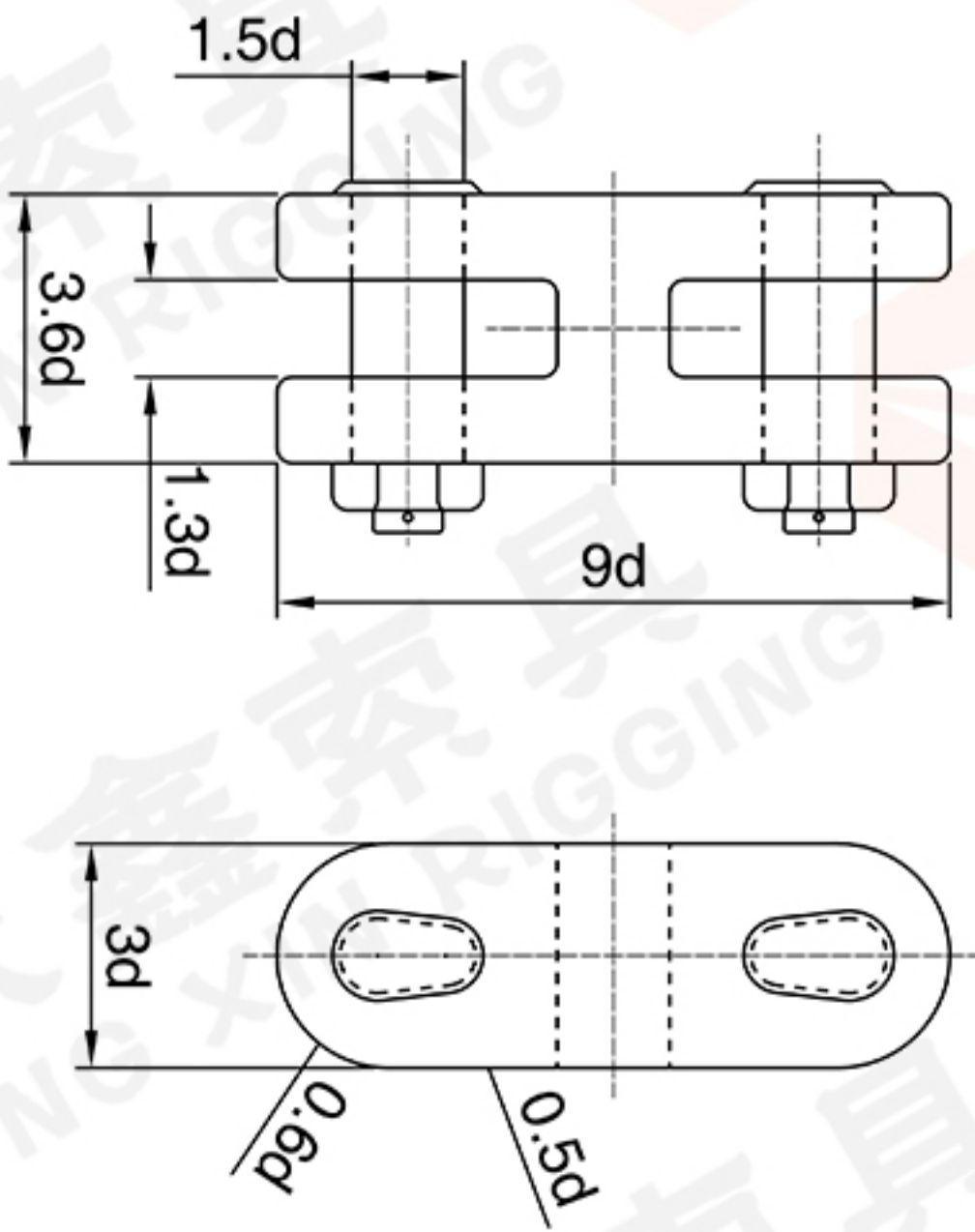


ROUND LINK = RL

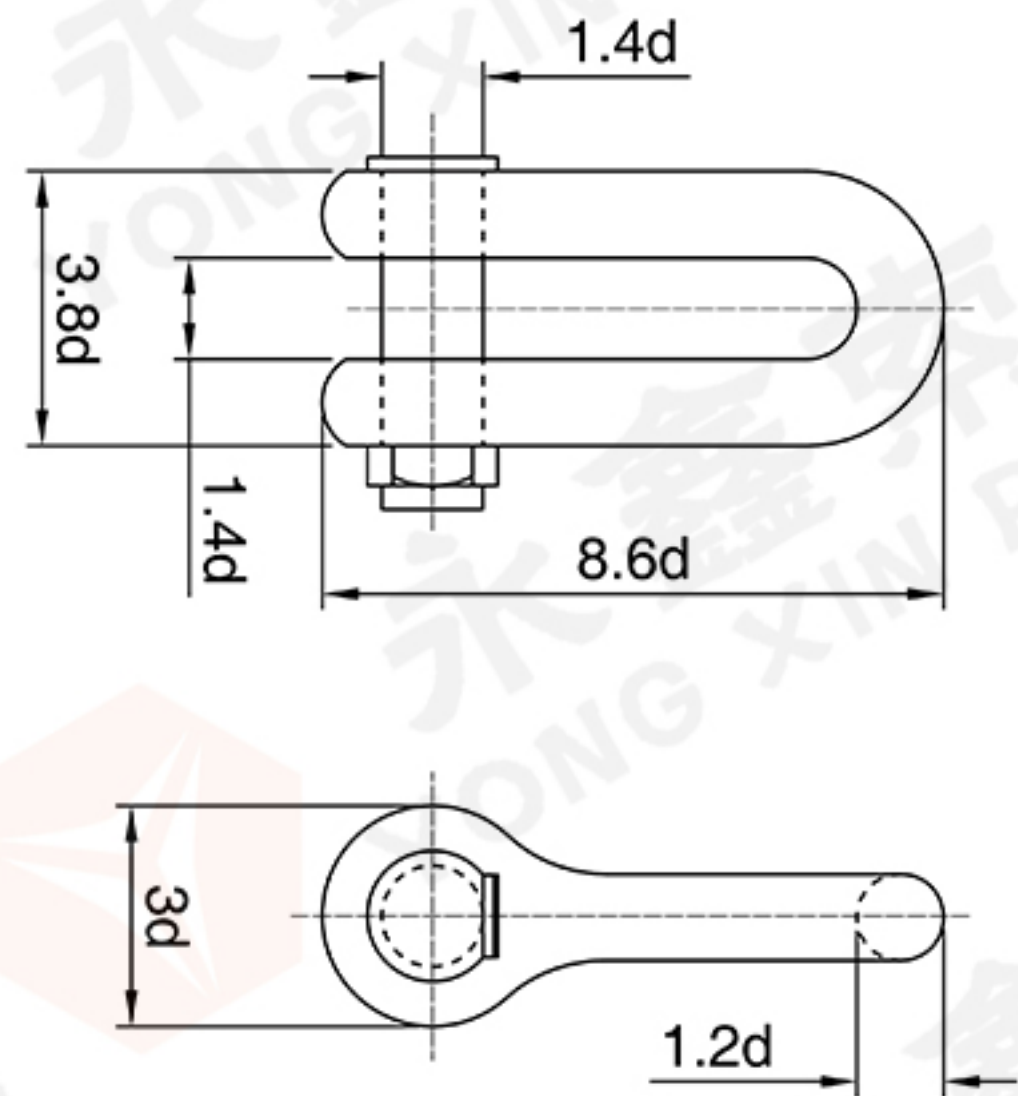
DRAWING OF PRODUCTS



LTM H-TYPE JOINING SHACKLE = LTM HJS



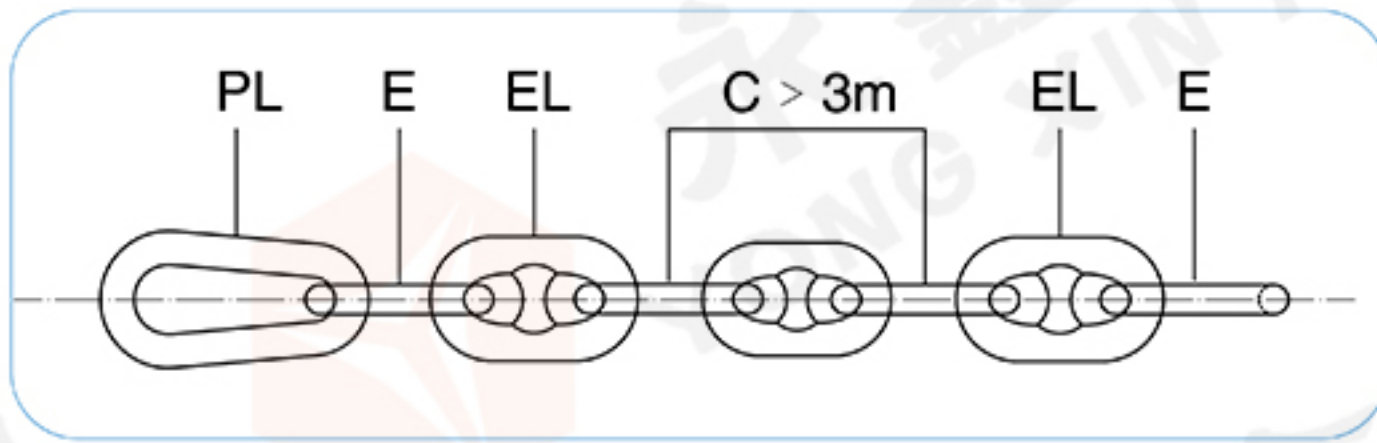
LTM END JOINING SHACKLE = LTM EJS



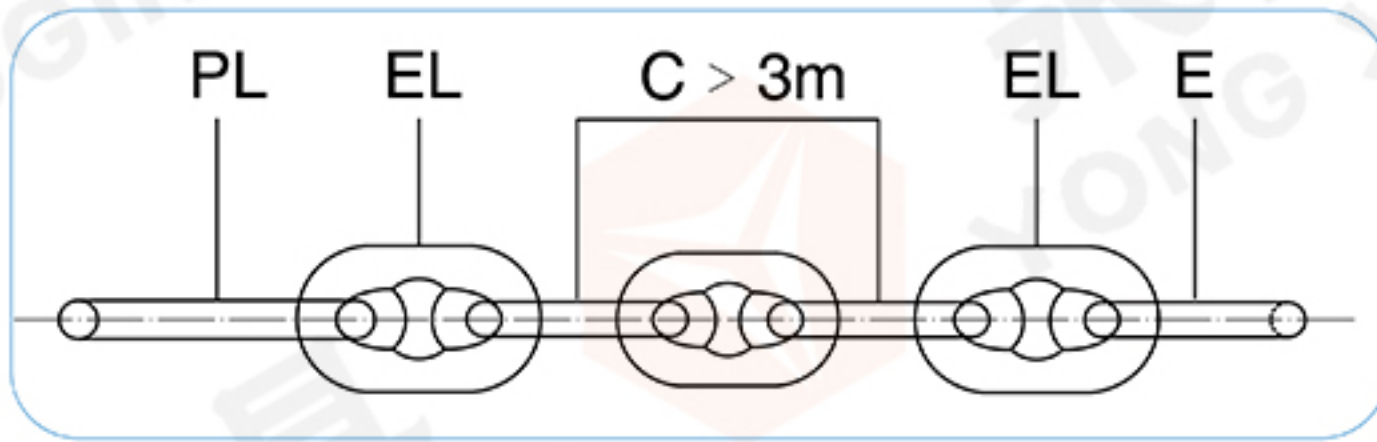
PEAR SHAPED KENTER SHACKLE

DRAWING OF PRODUCTS

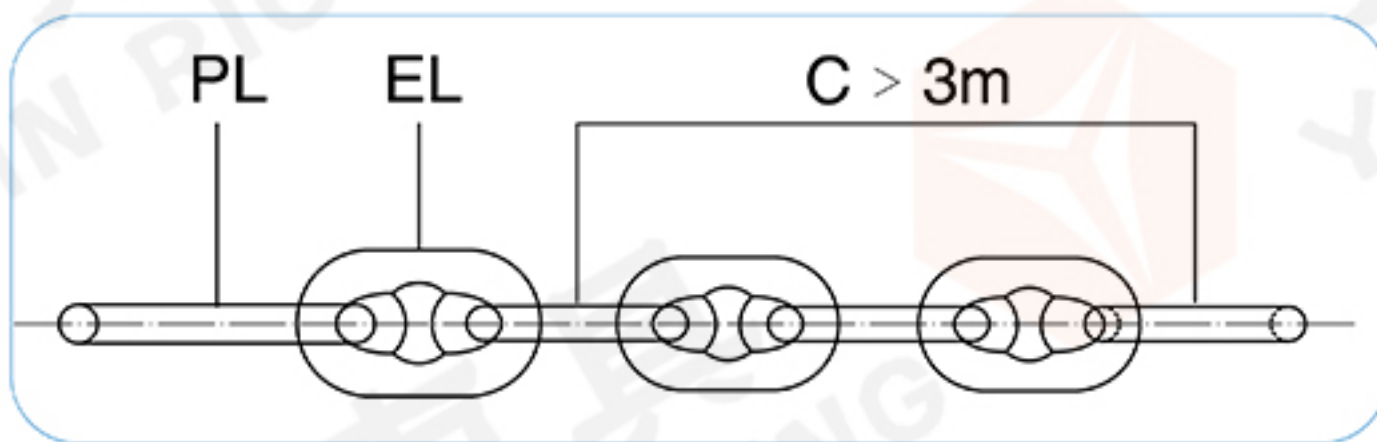
22cc



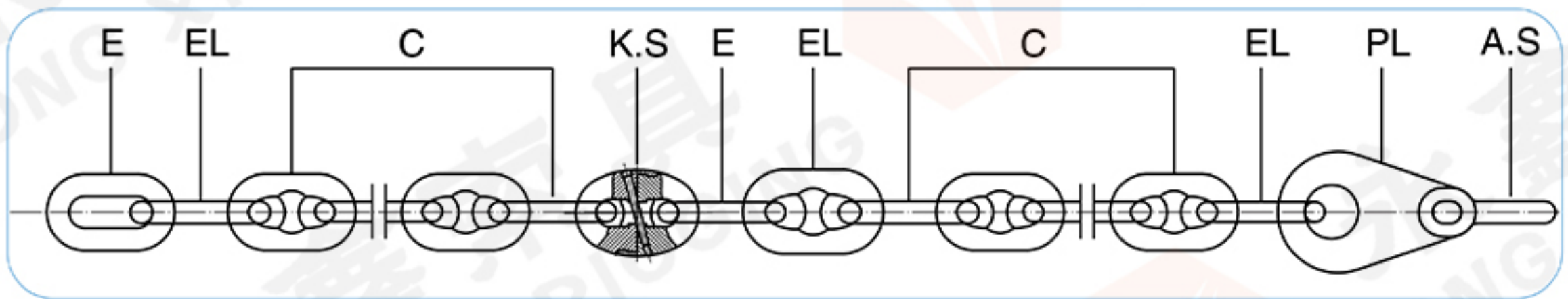
23cc



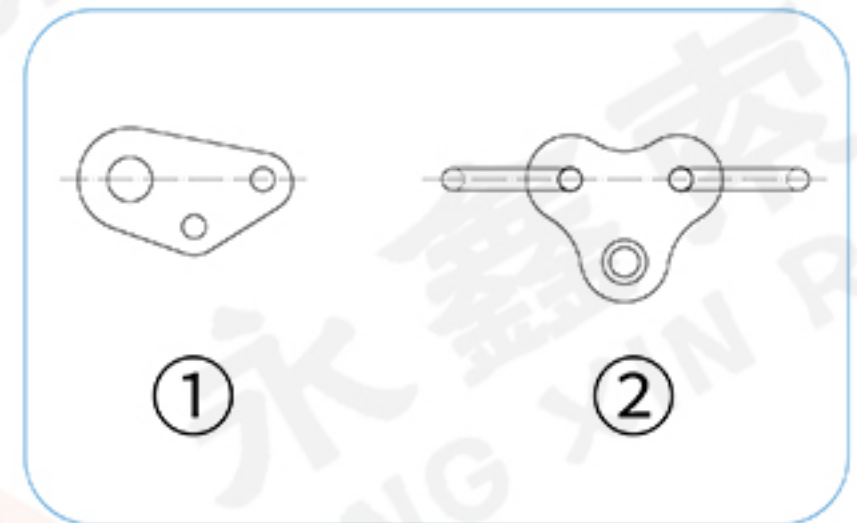
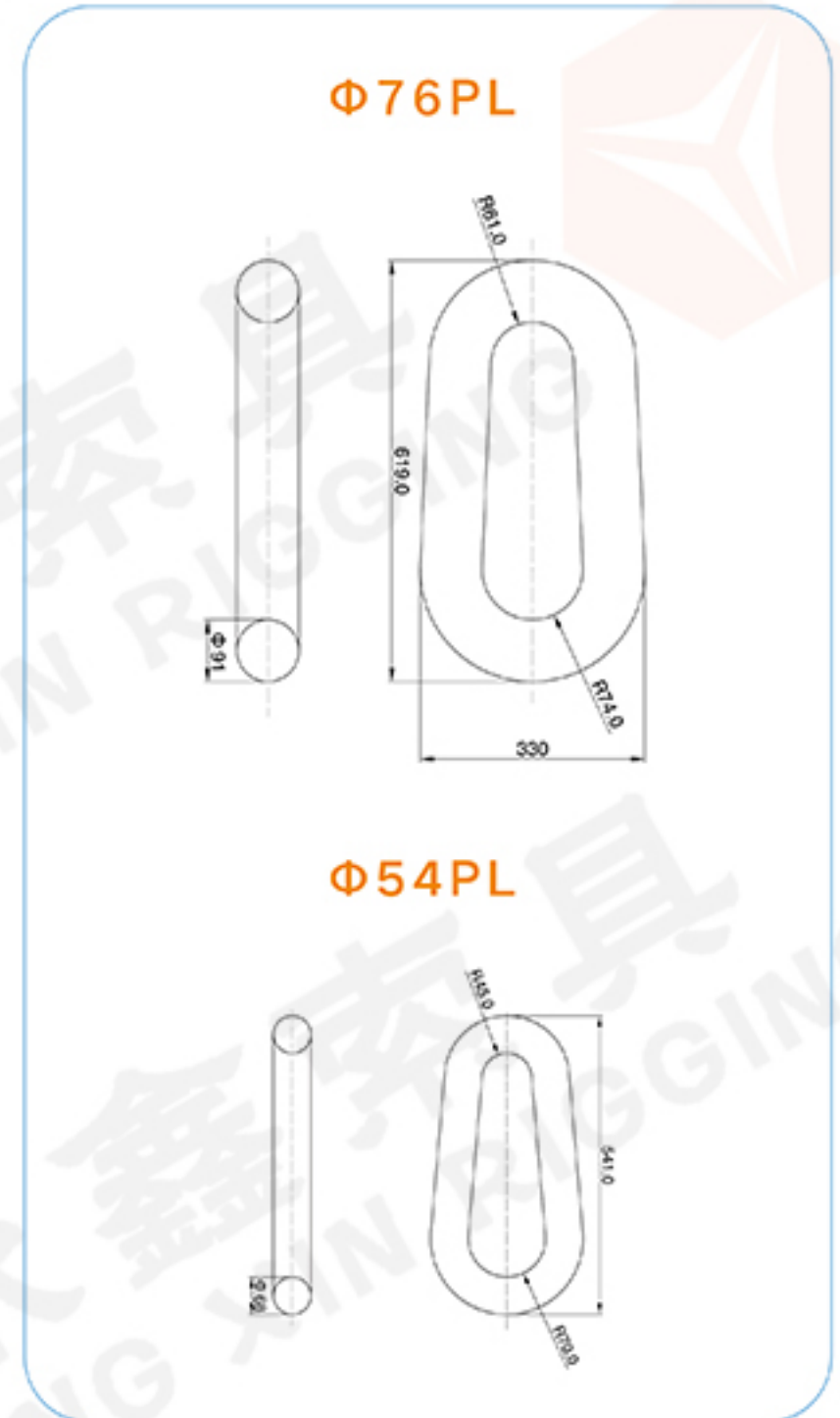
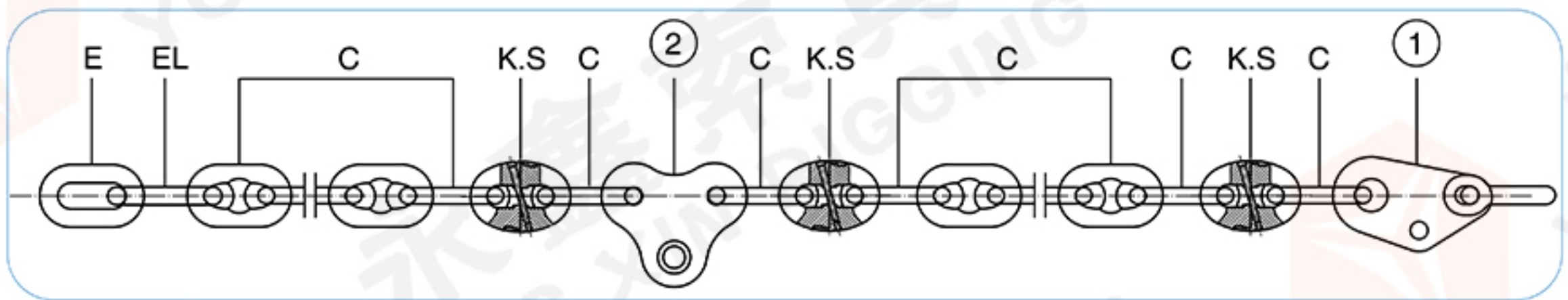
24cc



25cc



26cc



TEST LOAD OF ANCHOR CHAIN AND ACCESSORIES & MOORING CHAIN

DIA. OF CHAIN	ANCHOR CHAIN						OFFSHORE MOORING CHAIN								
	ABS,BV,CCS,CR,DNV,GL, KR,LR,NK,RINA,RMRS		API		ABS		DNV/ ABS	ABS/ DNV	ABS/DNV			ABS/DNV			
	C/EL /E		C/EL/E/ SL		C/EL/ /E		C/EL/ /E	SL	C/EL/ E/SL	C/EL/ E	SL	C/EL/ E/SL	C/EL/ E/SL		
	GRADE 2	GRADE 3	OPQ		RQ3	NVR3/ RQ3	NVR3/ RQ3	RQ3S/NVR3S			RQ4/NVR4				
	PL C=0.098	BL C=0.0137	PL C=0.0137	BL C=0.0196	PL C=0.014	BL C=0.0211	PL C=0.0148	PL C=0.0148	BL C=0.0223	PL C=0.0180	PL C=0.0174	BL C=0.0249	PL C=0.0216	PL C=0.0192	BL C=0.0274
MM	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN
12.5	66	92	92	132											
14	82	116	116	165	---	---	---	---	---	---	---	---	---	---	---
16	107	150	150	216	---	---	---	---	---	---	---	---	---	---	---
17.5	127	179	179	256	---	---	---	---	---	---	---	---	---	---	---
19	150	211	211	301	---	---	---	---	---	---	---	---	---	---	---
20.5	175	244	244	349	---	---	---	---	---	---	---	---	---	---	---
22	200	280	280	401	---	---	---	---	---	---	---	---	---	---	---
24	237	332	332	476	---	---	---	---	---	---	---	---	---	---	---
26	278	389	389	556	---	---	---	---	---	---	---	---	---	---	---
28	321	449	449	642	---	---	---	---	---	---	---	---	---	---	---
30	368	514	514	735	---	---	---	---	---	---	---	---	---	---	---
32	417	583	593	833	---	---	---	---	---	---	---	---	---	---	---
34	468	655	655	937	668	1007	706	745	1064	859	831	1188	1031	916	1308
36	523	732	732	1050	746	1124	789	832	1189	960	928	1327	1151	1022	1460
38	581	812	812	1160	828	1248	876	923	1319	1065	1029	1473	1278	1135	1621
40	640	896	896	1280	914	1376	967	1019	1456	1176	1136	1626	1411	1253	1789
42	703	981	981	1400	999	1513	1056	1114	1592	1285	1242	1777	1542	1370	1956
44	768	1080	1080	1540	1097	1654	1160	1223	1748	1411	1364	1951	1693	1503	2147
46	837	1170	1170	1680	1194	1800	1263	1331	1902	1535	1484	2124	1843	1636	2337
48	908	1270	1270	1810	1295	1952	1369	1443	2063	1665	1610	2304	2037	1775	2535
50	981	1370	1370	1960	1400	2110	1480	1561	2230	1800	1743	2490	2160	1918	2740
52	1060	1480	1480	2110	1508	2273	1594	1682	2402	1939	1877	2682	2327	2066	2952
54	1140	1590	1590	2270	1620	2441	1712	1806	2580	2083	2017	2881	2499	2219	3170
56	1220	1710	1710	2430	1735	2615	1834	1935	2764	2231	2160	3086	2677	2378	3396
58	1290	1810	1810	2600	1851	2794	1960	2068	2953	2383	2308	3297	2860	2540	3628
60	1380	1940	1940	2770	1976	2978	2089	2203	3147	2540	2460	3514	3048	2708	3867
62	1470	2060	2060	2940	2101	3166	2221	2343	3347	2701	2616	3737	3242	2879	4112
64	1560	2190	2190	3130	2230	3360	2357	2486	3551	2867	2776	3965	3440	3055	4364
66	1660	2310	2310	3300	2361	3559	2496	2633	3761	3036	2940	4200	3643	3235	4621
68	1750	2450	2450	3500	2496	3762	2639	2784	3976	3209	3108	4440	3851	3420	4885
70	1840	2580	2580	3690	2631	3970	2785	2938	4196	3387	3289	4685	4064	3610	5156
73	1990	2790	2790	3990	2847	4291	3010	3175	4535	3660	3545	5064	4392	3900	5572
76	2150	3010	3010	4300	3066	4621	3242	3419	4884	3942	3818	5454	4731	4206	6001
78	2260	3160	3160	4500	3216	4847	3400	3587	5123	4135	4004	5720	4962	4411	6295
81	2410	3380	3380	4820	3446	5194	3643	3843	5490	4431	4291	6130	5317	4727	6745
84	2580	3610	3610	5160	3683	5550	3893	4107	5866	4725	4585	6550	5682	5051	7208
87	2750	3850	3850	5500	3925	5916	4149	4377	6252	5046	4887	6981	6056	5383	7682
90	2920	4090	4090	5840	4173	6289	4412	4653	6647	5365	5196	7422	6439	5724	8167
92	3040	4260	4260	6080	4242	6544	4590	4842	6916	5582	5405	7722	6699	5955	8497

TEST LOAD OF ANCHOR CHAIN AND ACCESSORIES & MOORING CHAIN

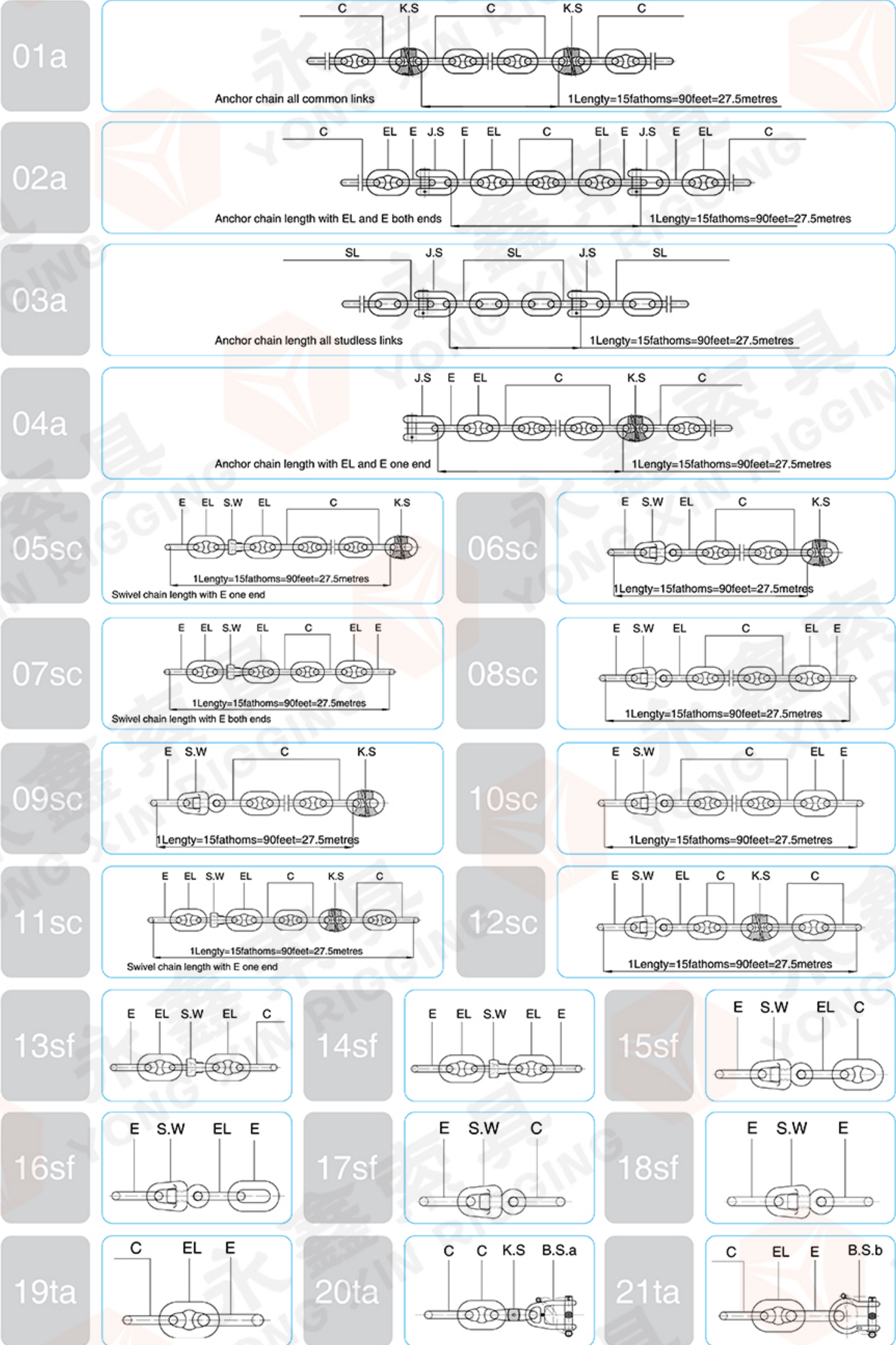
DIA. OF CHAIN	ANCHOR CHAIN						OFFSHORE MOORING CHAIN									
	ABS,BV,CCS,CR,DNV,GL, KR,LR,NK,RINA,RMRS						API	ABS	DNV/ ABS	ABS/ DNV	ABS/DNV			ABS/DNV		
	GRADE 2		GRADE 3		OPQ			C/EL /E	C/EL/ E/SL	C/EL/ E/SL	C/ EL/E	SL	C/EL/ E/SL	C/EL/ E	SL	C/EL/ E/SL
	RQ3		NVR3/ RQ3		NVR3/ RQ3		RQ3S/NVR3S			RQ4/NVR4						
	PL C=0.098	BL C=0.0137	PL C=0.0137	BL C=0.0196	PL C=0.014	BL C=0.0211	PL C=0.0148	PL C=0.0148	BL C=0.0223	PL C=0.0180	PL C=0.0174	BL C=0.0249	PL C=0.0216	PL C=0.0192	BL C=0.0274	
MM	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	KN	
95	3230	4510	4510	6440	4599	6932	4862	5128	7326	5913	5726	8180	7096	6308	9001	
97	3340	4680	4680	6690	4774	7195	5047	5323	7604	6138	5943	8490	7365	6547	9343	
100	3530	4940	4940	7060	5040	7596	5328	5620	8028	6480	6275	8964	7776	6912	9864	
102	3660	5120	5120	7320	5220	7868	5519	5821	8315	6712	6500	9285	8054	7160	10217	
105	3850	5390	5390	7700	5495	8282	5809	6128	8753	7065	6842	9773	8478	7536	10754	
107	3980	5570	5570	7960	5681	8561	6005	6334	9048	7304	7072	10103	8764	7791	11118	
111	4250	5940	5940	8480	6058	9130	6401	6755	9650	7789	7543	10775	9347	8309	11856	
114	4440	6230	6230	8890	6346	9565	6709	7077	10109	8159	7901	11287	9791	8704	12420	
117	4650	6510	6510	9300	6639	10005	7018	7402	10574	8535	8265	11807	10242	9105	12993	
120	4850	6810	6810	9720	6953	10452	7331	7733	11047	8916	8634	12334	10700	9511	13573	
122	5000	7000	7000	9990	7135	10753	7542	7956	11365	9173	8883	12690	11008	9785	13964	
124	5140	7200	7200	10280	7336	11057	7755	8175	11688	9433	9134	13048	11319	10062	14358	
127	5350	7490	7490	10710	7641	11516	8078	8515	12172	9825	9514	13951	11790	10480	14955	
130	5570	7800	7800	11140	7950	11981	8404	8858	12663	10222	9898	14140	12266	10903	15559	
132	5720	8000	8000	11420	8157	12294	8623	9090	12994	10488	10157	14509	12586	11187	15965	
137	6080	8510	8510	12160	8682	13085	9178	9674	13829	11163	10809	15442	13395	11907	16992	
142	6450	9030	9030	12910	9214	13887	9740	10268	14677	11847	11472	16389	14217	12637	18034	
147	6840	9560	9560	13660	9753	14670	10310	10869	15536	12540	12144	17348	15049	13377	19089	
152	7220	10100	10100	14430	10299	15522	10887	11477	16405	13242	12823	18318	15890	14125	20157	
157	7600	10640	10640	15200	11126	16768	11762	12090	17282	13950	13508	19297	16740	14880	21234	
162	7990	11180	11180	15980	11405	17189	12057	12708	18166	14663	14199	20284	17596	15641	22320	

NOTE: TEST LOAD = c × d² (44-0.08×d)

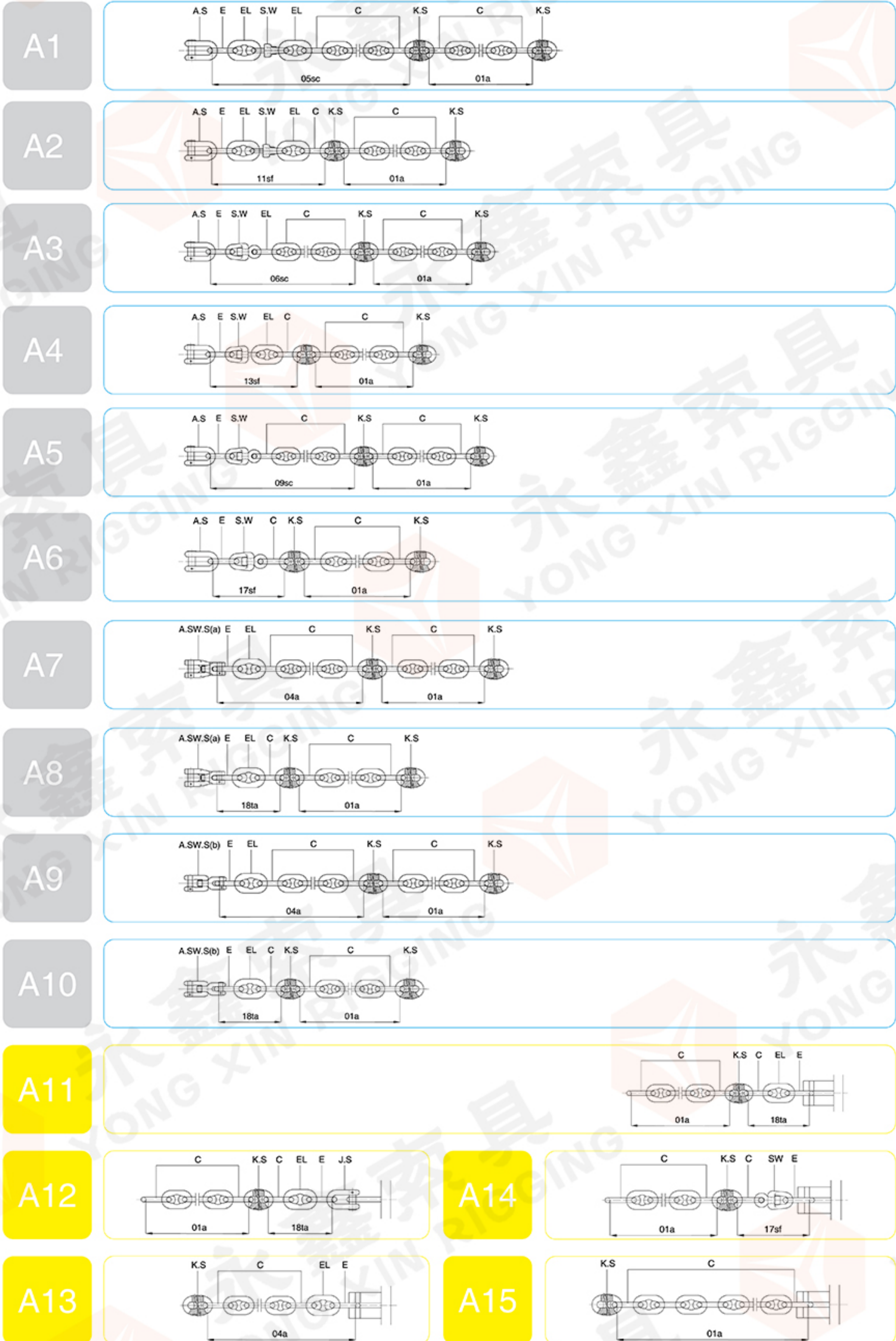
TEST LOAD OF STUDLESS CHAIN

DIAMETER OF CHAIN	GRADE 1		GRADE 2		GRADE 3		APPROX. MASS (22.5M)
	PL	BL	PL	BL	PL	BL	
MM	KN	KN	KN	KN	KN	KN	KG
6	6.62	13.32	9.30	18.60			21.45
7	9.02	18.13	12.60	25.20			29.15
8	11.78	23.68	16.50	33.00			38.23
9	14.90	29.97	20.90	41.80			48.40
10	18.40	37.00	25.80	51.60			59.68
11	22.26	44.70	31.20	62.40			72.33
12.5	28.75	57.81	41.20	82.60			93.5
14	34.78	69.93	51.00	101.90			117.15
16	47.10	94.72	66.20	132.30	92.42	184.83	152.9
17.5	56.35	113.31	78.89	157.78	110.55	221.10	182.8
19	66.42	133.57	93.60	187.20	130.32	260.64	249.5
20.5	77.33	155.49	108.64	217.27	151.70	303.42	275.4
22	89.06	179.08	125.40	250.90	174.40	349.40	328.6
24	105.98	213.25	149.90	298.90	207.90	415.80	385.0
26	124.38	250.12	175.40	350.80	244.00	488.80	449.1
28	144.26	290.08	203.80	406.70	283.00	566.00	516.7
30	165.60	333.00	234.20	467.50	324.90	649.80	589.4
32	188.42	378.88	265.60	531.20	369.60	739.30	664.6
34	212.70	427.72	299.90	599.80	417.30	834.60	752.9
36	238.46	479.52	336.10	672.30	467.80	935.70	861.2
38	265.70	534.28	374.40	748.70	521.30	1042.50	957.5
40	249.40	592.00	414.50	829.10	577.60	1155.20	1056.2
42	324.58	652.68	457.70	915.30	636.80	1273.60	1166.5
44	356.22	716.32	502.70	999.60	698.90	1398.00	1270.4
46	389.34	782.92	548.80	1097.6	763.90	1527.80	1396.6
48	423.94	852.48	597.80	1195.6	831.70	1663.50	1520.6
50	460.00	926.09	648.80	1239.6	902.50	1805.00	1650.0

ARRANGEMENT OF ANCHOR CHAIN

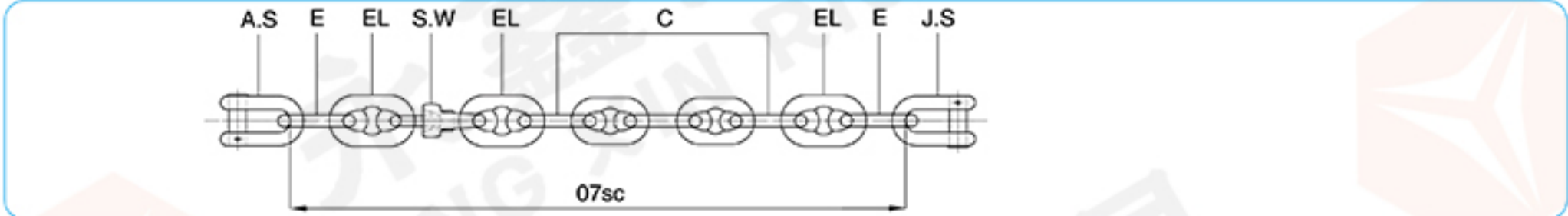


JOINING FORMS (K.S) TO ANCHOR AND LOKER ENDS



JOINING FORMS (J.S) TO ANCHOR AND LOKER ENDS

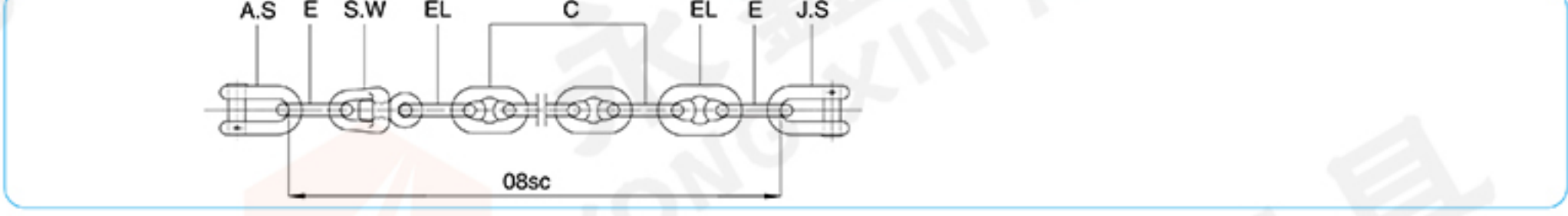
B1



B2



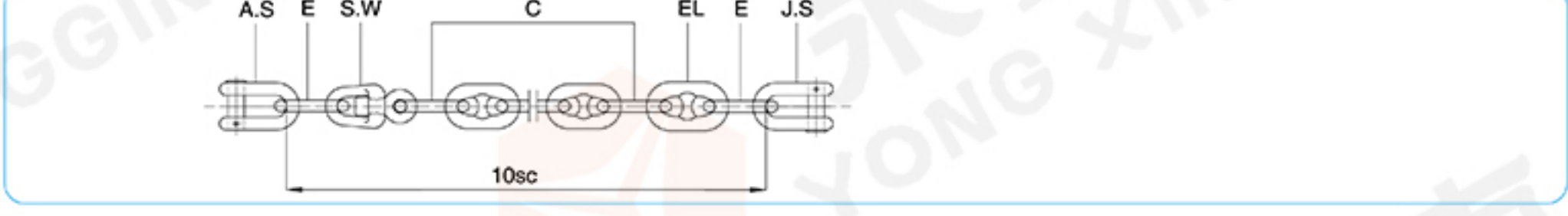
B3



B4



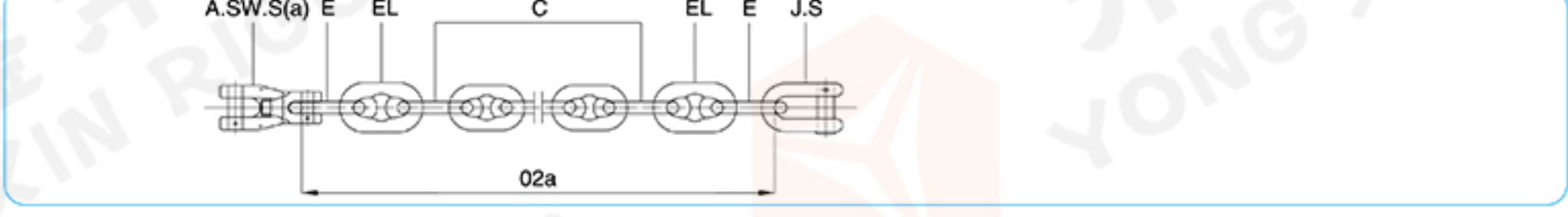
B5



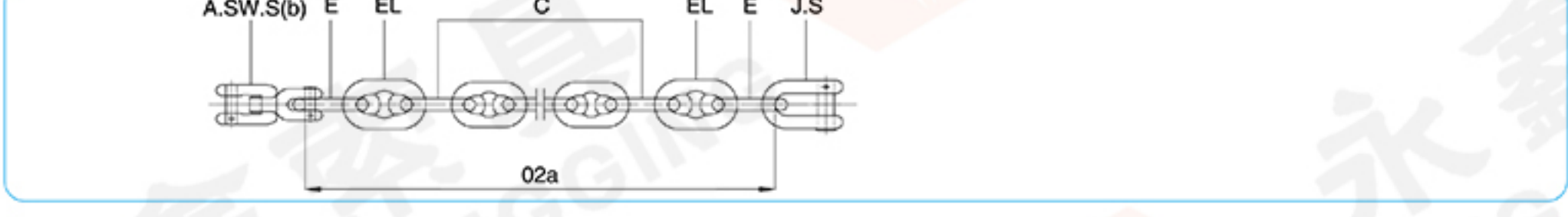
B6



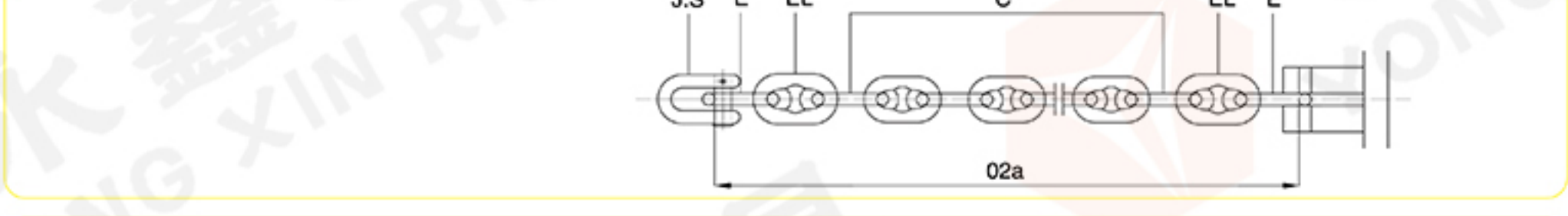
B7



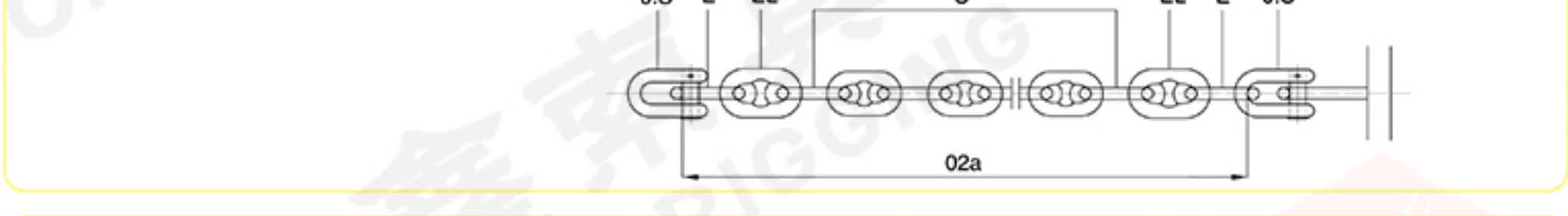
B8



B9



B10



B11

