



"Quality. Strength. Focus."



Premier Wire Rope is an American owned and operated company with a focus on supplying high quality specialty wire ropes to distributors in the North American marketplace.

Our sales team has extensive experience with both general purpose and specialty type wire ropes. At Premier Wire Rope you will find in most cases that we are familiar with not only our products but also the equipment that our product will be used with and the equipments' application. When application specific specialty or high performance wire ropes are required, THINK PREMIER WIRE ROPE.

Premier Wire Rope is strong on customer service and client satisfaction. We understand that Distributors demand that their suppliers not only supply the correct, proven product but also have the proper product knowledge required to support the product. Our view is that with wire ropes and, especially with specialty wire ropes, what sets Premier Wire Rope apart is that we focus exclusively on high performance specialty wire ropes. Furthermore, we aim to be among the leaders in the field in North America when it comes to product knowledge and training.

When technical support and service is required CALL PREMIER WIRE ROPE

We at Premier Wire Rope have a STRICT no "end user" sales policy, and all of our products and services reach the end user solely through our clients or distributor base.

Our distributors benefit from this when our direct assistance with any wire rope project is required or more in depth help is needed with their end user accounts. Another benefit is when our distributors require end fittings or terminations applied to our products. Many types of end fittings can be fitted in house using modern European fabrication equipment and in conformance with applicable European standards. We can provide many of the correct end fittings, of European manufacture, using proven, and tested methods. WE INVITE YOU TO INQUIRE.

For further information about Premier Wire Rope, product availability, service, or general enquires kindly contact us. We invite you to put out team and our products to the test!





Contents



Hylift K16

Telescopic Crane, Truck Crane, Crawler Crane, Loader Crane, Tower Crane, Piledriving Equipment, Overhead Traveling Crane, Deck Crane, Offshore Crane



Hylift K16S

Telescopic Crane, Crawler Crane, Offshore Crane



Hyfi K16S

Offshore Crane



Hylift K16E

Tower Crane



Hyfi K18

Piledriving Equipment, Deck Crane



Hylift K18

Telescopic Crane, Crawler Crane



Hylift K4

Deck Crane



Hyfi K8

Crawler Crane, Tower Crane, Piledriving Equipment, Overhead Traveling Crane, Ladle Crane, Gantry Crane, RTGC/TMGC, Mobile Harbour Crane, Deck Crane, Offshore Crane



Hyfi R8

Tower Crane, Overhead Traveling Crane, Ladle Crane, Gantry Crane, RTGC/TMGC, Mobile Harbour Crane, Deck Crane, Offshore Crane



Hyfi K8T

Crawler Crane, Overhead Traveling Crane, Gantry Crane, Mobile Harbour Crane, Deck Crane, Offshore Crane

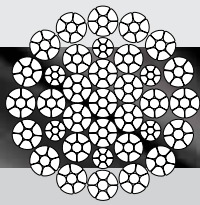


Hyfi K6

Ladle Crane, Gantry Crane

NEPTUNE

N2 HYROPE



Hylift K16

- Rotation Resistant Rope
- Should be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted



TELESCOPIC CRANE



TRUCK CRANE



CRAWLER CRANE



LOADER CRANE



TOWER CRANE



PILEDRIVING EQUIPMENT



OFFSHORE CRANE



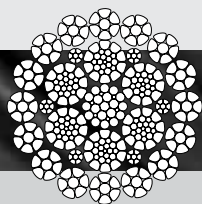
OVERHEAD TRAVELING CRANE



DECK CRANE

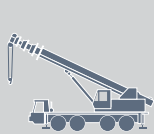
Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength						Minimum Breaking Force (Fmin, MBF)					
						Metric unit						Metric unit					
		min.	max.			1770 Grade		1960 Grade		2160 Grade		1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)
8		8.0	8.3	0.42	0.330	64.41	6.57	65.81	6.71	72.19	7.36	52.84	5.39	58.51	5.97	62.75	6.40
9		9.0	9.4	0.48	0.409	81.52	8.31	66.81	6.81	73.19	7.46	66.88	6.82	74.05	7.55	79.42	8.10
10		10.0	10.4	0.53	0.505	100.6	10.26	111.5	11.36	122.8	12.52	82.56	8.42	91.42	9.32	98.05	10.00
11		11.0	11.4	0.58	0.611	121.8	12.42	134.9	13.75	148.6	15.15	99.90	10.19	110.6	11.28	118.6	12.10
11.5		11.5	12.0	0.61	0.668	133.1	13.57	147.4	15.03	162.4	16.56	109.19	11.13	120.9	12.33	129.7	13.22
12		12.0	12.5	0.64	0.727	144.9	14.78	160.5	16.36	176.9	18.03	118.9	12.12	131.7	13.42	141.2	14.40
12.7	1/2	12.7	13.2	0.67	0.814	162.3	16.55	179.8	18.33	198.1	20.20	133.2	13.58	147.5	15.04	158.1	16.13
13		13.0	13.5	0.69	0.853	170.1	17.34	188.4	19.21	207.6	21.17	139.5	14.23	154.5	15.76	165.7	16.90
14		14.0	14.6	0.74	0.990	197.3	20.12	218.4	22.27	240.7	24.55	161.8	16.50	179.2	18.27	192.2	19.60
14.3	9/16	14.3	14.9	0.76	1.031	205.5	20.95	227.5	23.20	250.7	25.57	168.5	17.19	186.6	19.03	200.1	20.41
15		15.0	15.6	0.80	1.136	226.5	23.09	250.8	25.57	276.4	28.18	185.8	18.94	205.7	20.98	220.6	22.50
16		16.0	16.6	0.85	1.293	257.7	26.27	285.3	29.09	314.4	32.06	211.4	21.55	234.0	23.87	251.0	25.60
17		17.0	17.7	0.90	1.459	290.9	29.66	322.1	32.84	355.0	36.19	238.6	24.33	264.2	26.94	283.4	28.89
18		18.0	18.7	0.96	1.636	326.1	33.25	361.1	36.82	397.9	40.58	267.5	27.28	296.2	30.21	317.7	32.39
19	3/4	19.0	19.8	1.01	1.823	363.3	37.05	402.3	41.03	443.4	45.21	298.1	30.39	330.0	33.66	354.0	36.09
20		20.0	20.8	1.06	2.020	402.6	41.05	445.8	45.46	491.3	50.10	330.2	33.68	365.7	37.29	392.2	39.99
21		21.0	21.8	1.12	2.227	443.9	45.26	491.5	50.12	541.7	55.23	364.1	37.13	403.2	41.11	432.4	44.09
22		22.0	22.9	1.17	2.444	487.1	49.67	539.4	55.00	594.5	60.62	399.6	40.75	442.5	45.12	474.6	48.39
22.2	7/8	22.2	23.1	1.18	2.494	497.1	50.69	550.5	56.13	606.7	61.86	407.8	41.59	451.6	46.05	484.3	49.39
23		23.0	23.9	1.22	2.671	532.4	54.29	589.6	60.12	649.7	66.25	436.8	44.54	483.6	49.32	518.7	52.89
24		24.0	25.0	1.27	2.908	579.7	59.11	642.0	65.46	707.5	72.14	475.6	48.49	526.6	53.70	564.8	57.59
25		25.0	26.0	1.33	3.156	629.0	64.14	696.6	71.03	767.6	78.28	516.0	52.62	571.4	58.27	612.8	62.49
25.4	1	25.4	26.4	1.35	3.258	649.3	66.21	719.0	73.32	792.4	80.80	532.7	54.32	589.8	60.15	632.6	64.50
26		26.0	27.0	1.38	3.413	680.4	69.38	753.4	76.82	830.3	84.66	558.1	56.91	618.0	63.02	662.8	67.59
27		27.0	28.1	1.43	3.681	733.7	74.82	812.5	82.85	895.4	91.30	601.9	61.37	666.5	67.96	714.8	72.89
28		28.0	29.1	1.49	3.959	789.1	80.46	873.8	89.10	962.9	98.19	647.3	66.01	716.8	73.09	768.7	78.38
28.6	1-1/8	28.6	29.7	1.52	4.123	821.8	83.80	910.0	92.79	1003	102.3	674.1	68.74	747.8	76.25	802.0	81.78
29		29.0	30.2	1.54	4.247	846.4	86.31	937.3	95.57	1033	105.3	694.3	70.80	768.9	78.40	824.6	84.08
30		30.0	31.2	1.59	4.544	905.8	92.37	1003	102.3	1105	112.7	743.1	75.77	822.8	83.90	882.4	89.98
31		31.0	32.2	1.65	4.852	967.2	98.63	1071	109.2	1180	120.4	793.4	80.91	878.6	89.59	942.2	96.08
31.5		31.5	32.8	1.67	5.010	999	101.8	1106	112.8	1219	124.3	819.2	83.54	907.2	92.51	972.9	99.21
31.8	1-1/4	31.8	33.0	1.69	5.090	1015	103.5	1123	114.6	1238	126.3	832.3	84.87	921.6	93.98	988.4	100.8
32		32.0	33.3	1.70	5.171	1031	105.1	1141	116.4	1258	128.2	845.4	86.2	936.2	95.5	1004	102.4
33		33.0	34.3	1.75	5.499	1096	111.8	1214	123.8	1338	136.4	899.1	91.7	995.6	101.5	1068	108.9
33.5		33.5	34.8	1.78	5.667	1130	115.2	1251	127.5	1378	140.6	927	94.5	1026	104.6	1100	112.2
34		34.0	35.4	1.81	5.837	1163	118.6	1288	131.4	1420	144.8	954	97.3	1057	107.8	1133	115.6
35	1-3/8	35.0	36.4	1.86	6.186	1233	125.7	1365	139.2	1505	153.4	1011	103.1	1120	114.2	1201	122.5
35.5		35.5	36.9	1.89	6.364	1268	129.3	1405	143.2	1548	157.8	1040	106.1	1152	117.5	1236	126.0
36		36.0	37.4	1.91	6.544	1304	133.0	1444	147.3	1592	162.3	1070	109.1	1185	120.8	1271	129.6
37		37.0	38.5	1.96	6.913	1378	140.5	1526	155.6	1681	171.5	1130	115.3	1252	127.6	1342	136.9
37.5		37.5	39.0	1.99	7.101	1415	144.3	1567	159.8	1727	176.1	1161	118.4	1286	131.1	1379	140.6
38	1-1/2	38.0	39.5	2.02	7.291	1453	148.2	1609	164.1	1774	180.8	1192	121.6	1320	134.6	1416	144.4
39		39.0	40.6	2.07	7.680	1531	156.1	1695	172.9	1868	190.5	1256	128.1	1391	141.8	1491	152.1
40		40.0	41.6	2.12	8.079	1610	164.2	1783	181.8	1965	200.4	1321	134.7	1463	149.2	1569	160.0

Larger diameters available upon request



Hylift K16S

- Rotation Resistant Rope
- Should be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted



TELESCOPIC CRANE



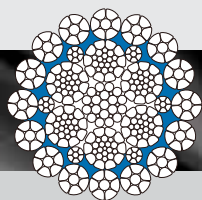
CRAWLER CRANE



OFFSHORE CRANE

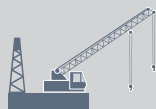
Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength				Minimum breaking force (Fmin, MBF)			
						Metric unit				Metric unit			
		min.	max.			1960 Grade		2160 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)	kN	t(metric)	kN	t(metric)
12		12.0	12.5	0.63	0.720	158.8	16.19	175.0	17.84	137.3	14.00	144.4	14.72
12.7	1/2	12.7	13.2	0.67	0.807	177.8	18.13	196.0	19.99	153.8	15.68	161.7	16.49
13		13.0	13.5	0.69	0.846	186.3	19.00	205.4	20.94	161.1	16.43	169.4	17.28
14		14.0	14.6	0.74	0.981	216.1	22.04	238.2	24.29	186.9	19.06	196.5	20.04
14.3	9/16	14.3	14.9	0.75	1.021	225.1	22.95	248.1	25.29	194.6	19.85	204.6	20.87
15		15.0	15.6	0.79	1.126	248.1	25.30	273.4	27.88	214.5	21.88	225.6	23.00
16		16.0	16.6	0.84	1.281	282.3	28.78	311.1	31.72	244.1	24.89	256.6	26.17
17		17.0	17.7	0.90	1.446	318.7	32.49	351.2	35.81	275.6	28.10	289.7	29.54
18		18.0	18.7	0.95	1.621	357.3	36.43	393.7	40.15	308.9	31.50	324.8	33.12
19	3/4	19.0	19.8	1.00	1.806	398.1	40.59	438.7	44.73	344.2	35.10	361.9	36.90
20		20.0	20.8	1.06	2.001	441.1	44.97	486.1	49.56	381.4	38.89	401.0	40.89
21		21.0	21.8	1.11	2.207	486.3	49.58	535.9	54.64	420.5	42.88	442.1	45.08
22		22.0	22.9	1.16	2.422	533.7	54.42	588.1	59.97	461.5	47.06	485.2	49.48
22.2	7/8	22.2	23.1	1.17	2.471	544.7	55.54	600.2	61.20	471.0	48.03	495.2	50.49
23		23.0	23.9	1.21	2.647	583.3	59.48	642.8	65.55	504.4	51.43	530.3	54.08
24		24.0	25.0	1.27	2.882	635.1	64.76	699.9	71.37	549.2	56.00	577.4	58.88
25		25.0	26.0	1.32	3.127	689.2	70.27	759.5	77.44	595.9	60.77	626.6	63.89
25.4	1	25.4	26.4	1.34	3.228	711.4	72.54	784.0	79.94	615.2	62.73	646.8	65.95
26		26.0	27.0	1.37	3.382	745.4	76.01	821.5	83.76	644.6	65.73	677.7	69.10
27		27.0	28.1	1.43	3.648	803.8	81.97	885.9	90.33	695.1	70.88	730.8	74.52
28		28.0	29.1	1.48	3.923	864.5	88.15	952.7	97.14	747.6	76.23	786.0	80.14
28.6	1-1/8	28.6	29.7	1.51	4.085	900.4	91.81	992.2	101.2	778.6	79.39	818.6	83.47
29		29.0	30.2	1.53	4.208	927.3	94.56	1022	104.2	801.9	81.77	843.1	85.97
30		30.0	31.2	1.58	4.503	992.4	101.2	1094	111.5	858.2	87.50	902.2	92.00
31		31.0	32.2	1.64	4.808	1060	108.1	1168	119.1	916.3	93.44	963.4	98.24
31.5		31.5	32.8	1.66	4.965	1094	111.6	1206	122.9	946.1	96.47	994.7	101.43
31.8	1-1/4	31.8	33.0	1.68	5.044	1112	113.3	1225	124.9	961.2	98.01	1011	103.0
32		32.0	33.3	1.69	5.124	1129	115.1	1244	126.9	976.4	99.56	1027	104.7
33		33.0	34.3	1.74	5.449	1201	122.4	1323	134.9	1038	105.9	1092	111.3
33.5		33.5	34.8	1.77	5.615	1237	126.2	1364	139.1	1070	109.1	1125	114.7
34		34.0	35.4	1.79	5.784	1275	130.0	1405	143.2	1102	112.4	1159	118.2
35	1-3/8	35.0	36.4	1.85	6.129	1351	137.7	1489	151.8	1168	119.1	1228	125.2
35.5		35.5	36.9	1.87	6.306	1390	141.7	1531	156.2	1202	122.5	1263	128.8
36		36.0	37.4	1.90	6.484	1429	145.7	1575	160.6	1236	126.0	1299	132.5
37		37.0	38.5	1.95	6.850	1510	153.9	1664	169.6	1305	133.1	1372	139.9
37.5		37.5	39.0	1.98	7.036	1551	158.1	1709	174.2	1341	136.7	1410	143.8
38	1-1/2	38.0	39.5	2.01	7.225	1592	162.4	1755	178.9	1377	140.4	1448	147.6
39		39.0	40.6	2.06	7.610	1677	171.0	1848	188.5	1450	147.9	1525	155.5
40		40.0	41.6	2.11	8.006	1764	179.9	1944	198.3	1526	155.6	1604	163.6

● Larger diameters available upon request



Hyfil K16S

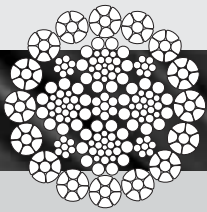
- Rotation Resistant Rope
- Should be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted
- Steel Plastic Combination



OFFSHORE CRANE

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength				Minimum breaking force (Fmin, MBF)			
						Metric unit				Metric unit			
		min.	max.			1960 Grade		2160 Grade		1960 Grade		2160 Grade	
mm	inch	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)	kN	t(metric)	kN	t(metric)
12		12.0	12.5	0.65	0.743	162.5	16.57	179.1	18.26	134.7	13.74	143.8	14.67
12.7	1/2	12.7	13.2	0.68	0.832	182.0	18.56	200.6	20.46	150.9	15.39	161.1	16.43
13		13.0	13.5	0.70	0.872	190.7	19.45	210.2	21.43	158.1	16.12	168.8	17.21
14		14.0	14.6	0.75	1.011	221.2	22.56	243.8	24.86	183.4	18.70	195.8	19.96
14.3	9/16	14.3	14.9	0.77	1.053	230.4	23.49	253.9	25.89	191.0	19.48	203.9	20.79
15		15.0	15.6	0.81	1.161	253.9	25.89	279.9	28.54	210.5	21.47	224.7	22.92
16		16.0	16.6	0.86	1.321	288.9	29.46	318.4	32.47	239.5	24.42	255.7	26.07
17		17.0	17.7	0.91	1.491	326.2	33.26	359.5	36.65	270.4	27.57	288.7	29.43
18		18.0	18.7	0.97	1.672	365.7	37.29	403.0	41.09	303.2	30.91	323.6	33.00
19	3/4	19.0	19.8	1.02	1.863	407.4	41.55	449.0	45.79	337.8	34.44	360.6	36.77
20		20.0	20.8	1.08	2.064	451.5	46.03	497.5	50.73	374.3	38.16	399.5	40.74
21		21.0	21.8	1.13	2.275	497.7	50.75	548.5	55.93	412.6	42.07	440.5	44.91
22		22.0	22.9	1.18	2.497	546.3	55.70	602.0	61.39	452.9	46.18	483.4	49.29
22.2	7/8	22.2	23.1	1.20	2.549	557.5	56.85	614.4	62.65	462.2	47.13	493.4	50.31
23		23.0	23.9	1.24	2.729	597.1	60.88	658.0	67.09	495.0	50.47	528.4	53.88
24		24.0	25.0	1.29	2.972	650.1	66.29	716.4	73.05	538.9	54.95	575.3	58.66
25		25.0	26.0	1.35	3.225	705.4	71.93	777.4	79.27	584.8	59.63	624.2	63.65
25.4	1	25.4	26.4	1.37	3.329	728.2	74.25	802.5	81.83	603.6	61.55	644.4	65.71
26		26.0	27.0	1.40	3.488	763.0	77.80	840.8	85.74	632.5	64.50	675.2	68.85
27		27.0	28.1	1.45	3.761	822.8	83.90	906.7	92.46	682.1	69.55	728.1	74.24
28		28.0	29.1	1.51	4.045	884.9	90.23	975.2	99.43	733.6	74.80	783.1	79.85
28.6	1-1/8	28.6	29.7	1.54	4.213	921.6	93.97	1016	103.6	764.0	77.90	815.5	83.16
29		29.0	30.2	1.56	4.339	949.2	96.79	1046	106.7	786.9	80.24	840.0	85.65
30		30.0	31.2	1.61	4.644	1016	103.6	1119	114.1	842.1	85.87	898.9	91.66
31		31.0	32.2	1.67	4.958	1085	110.6	1195	121.9	899.2	91.69	959.8	97.87
31.5		31.5	32.8	1.70	5.120	1120	114.2	1234	125.8	928.4	94.7	991.1	101.1
31.8	1-1/4	31.8	33.0	1.71	5.201	1138	116.0	1254	127.9	943.2	96.2	1007	102.7
32		32.0	33.3	1.72	5.283	1156	117.8	1274	129.9	958.1	97.7	1023	104.3
33		33.0	34.3	1.78	5.619	1229	125.3	1355	138.1	1019	103.9	1088	110.9
33.5		33.5	34.8	1.80	5.790	1267	129.2	1396	142.3	1050	107.1	1121	114.3
34		34.0	35.4	1.83	5.964	1305	133.0	1438	146.6	1082	110.3	1155	117.7
35	1-3/8	35.0	36.4	1.88	6.320	1383	141.0	1524	155.4	1146	116.9	1224	124.8
35.5		35.5	36.9	1.91	6.502	1422	145.0	1568	159.8	1179	120.2	1259	128.3
36		36.0	37.4	1.94	6.687	1463	149.2	1612	164.4	1213	123.6	1294	132.0
37		37.0	38.5	1.99	7.063	1545	157.6	1703	173.6	1281	130.6	1367	139.4
37.5		37.5	39.0	2.02	7.256	1587	161.8	1749	178.4	1316	134.2	1405	143.2
38	1-1/2	38.0	39.5	2.04	7.450	1630	166.2	1796	183.1	1351	137.8	1442	147.1
39		39.0	40.6	2.10	7.848	1717	175.0	1892	192.9	1423	145.1	1519	154.9
40		40.0	41.6	2.15	8.255	1806	184.1	1990	202.9	1497	152.7	1598	163.0

Larger diameters available upon request



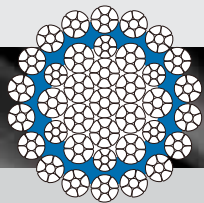
Hylift K16E

- The most suitable rope for high lifting height application.
- A rotation resistant rope, made with compacted both parts of outer strands and inner strands
- Has an extremely high breaking strength with a very strong resistance against drum crushing.
- The rope is fully lubricated and made of galvanized/ungalvanized wires.



TOWER CRANE

Nominal Rope Diameter	Unit Wt.	Minimum Breaking Force (Fmin, MBF)							
		Calculated Breaking Strength				Minimum Breaking Strength			
		1960 Grade		2160 Grade		1960 Grade		2160 Grade	
mm	kg/m	kN	t(metric)	kN	t(metric)	klb	t(metric)	klb	t(metric)
8	0.311	68.55	6.99	75.55	7.70	55.00	5.61	60.24	6.14
9	0.394	86.76	8.85	95.61	9.75	69.61	7.10	76.24	7.77
10	0.486	107.1	10.92	118.0	12.04	85.94	8.76	94.12	9.60
11	0.589	129.6	13.22	142.8	14.56	104.0	10.60	113.9	11.61
12	0.700	154.2	15.73	170.0	17.33	123.8	12.62	135.5	13.82
13	0.822	181.0	18.46	199.5	20.34	145.2	14.81	159.1	16.22
14	0.953	209.9	21.41	231.4	23.59	168.4	17.18	184.5	18.81
15	1.094	241.0	24.57	265.6	27.08	193.4	19.72	211.8	21.59
16	1.245	274.2	27.96	302.2	30.81	220.0	22.43	241.0	24.57
18	1.576	347.0	35.39	382.4	39.00	278.5	28.39	305.0	31.10
19	1.756	386.7	39.43	426.1	43.45	310.3	31.64	339.8	34.65
20	1.945	428.4	43.69	472.2	48.15	343.8	35.05	376.5	38.39
22	2.354	518.4	52.86	571.3	58.26	416.0	42.41	455.5	46.45
23	2.573	566.6	57.78	624.4	63.67	454.6	46.36	497.9	50.77
24	2.801	617.0	62.91	679.9	69.33	495.0	50.48	542.1	55.28
25	3.040	669.4	68.26	737.7	75.23	537.1	54.77	588.3	59.98
26	3.288	724.1	73.83	797.9	81.37	581.0	59.24	636.3	64.88
27	3.546	780.8	79.62	860.5	87.74	626.5	63.89	686.1	69.96
28	3.813	839.7	85.63	925.4	94.36	673.8	68.71	737.9	75.4
29	4.090	900.8	91.85	992.7	101.2	722.8	73.70	791.6	80.71
30	4.377	964.0	98.30	1062	108.3	773.5	78.87	847.1	86.38
32	4.980	1097	111.8	1209	123.3	880.1	89.74	963.8	98.28
34	5.567	1226	125.0	1351	137.8	983.8	100.3	1077	109.9
35	5.900	1299	132.5	1432	146.0	1043	106.3	1142	116.4
36	6.242	1375	140.2	1515	154.5	1103	112.5	1208	123.2
38	6.955	1532	156.2	1688	172.1	1229	125.3	1346	137.2
40	7.706	1697	173.0	1870	190.7	1362	138.8	1491	152.1

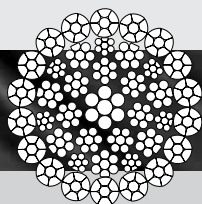


Hyfil K18

- Rotation Resistant Rope
- Should be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted
- Steel Plastic Combination

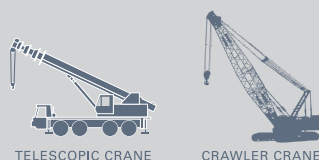


Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength				Minimum breaking force (Fmin, MBF)			
						Mertic unit				Mertic unit			
		min.	max.			1960 Grade		2160 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)	kN	t(metric)	kN	t(metric)
16		16.0	16.6	2.45	1.277	282.2	28.78	309.6	31.57	234.0	23.86	248.7	25.36
17		17.0	17.7	2.60	1.442	318.6	32.48	349.5	35.63	264.2	26.94	280.8	28.63
18		18.0	18.7	2.76	1.616	357.2	36.42	391.8	39.95	296.2	30.20	314.8	32.10
19	3/4	19.0	19.8	2.91	1.801	397.9	40.58	436.5	44.51	330.0	33.65	350.7	35.76
20		20.0	20.8	3.06	1.995	440.9	44.96	483.7	49.32	365.6	37.28	388.6	39.63
21		21.0	21.8	3.22	2.200	486.1	49.57	533.3	54.38	403.1	41.10	428.4	43.69
22		22.0	22.9	3.37	2.415	533.5	54.40	585.3	59.68	442.4	45.11	470.2	47.95
22.2	7/8	22.2	23.1	3.40	2.464	544.5	55.52	597.3	60.90	451.5	46.04	479.9	48.93
23		23.0	23.9	3.52	2.639	583.1	59.46	639.7	65.23	483.5	49.30	513.9	52.41
24		24.0	25.0	3.68	2.873	635.0	64.74	696.5	71.02	526.5	53.69	559.6	57.06
25		25.0	26.0	3.83	3.118	689.0	70.25	755.8	77.06	571.3	58.25	607.2	61.92
25.4	1	25.4	26.4	3.89	3.219	711.2	72.52	780.1	79.55	589.7	60.13	626.8	63.91
26		26.0	27.0	3.98	3.372	745.2	75.99	817.4	83.35	617.9	63.01	656.8	66.97
27		27.0	28.1	4.13	3.637	803.6	81.94	881.5	89.89	666.3	67.95	708.2	72.22
28		28.0	29.1	4.29	3.911	864.2	88.13	948.0	96.67	716.6	73.07	761.7	77.67
28.6	1-1/8	28.6	29.7	4.38	4.073	900.1	91.78	987.4	100.7	746.3	76.10	793.3	80.89
29		29.0	30.2	4.44	4.195	927.1	94.53	1017	103.7	768.7	78.38	817.1	83.31
30		30.0	31.2	4.59	4.490	992.1	101.2	1088	111.0	822.6	83.88	874.4	89.16
31		31.0	32.2	4.75	4.794	1059	108.0	1162	118.5	879.9	89.72	933.6	95.20
31.5		31.5	32.8	4.82	4.950	1094	111.5	1200	122.3	880.9	89.82	964.0	98.30
31.8	1-1/4	31.8	33.0	4.87	5.029	1111	113.3	1219	124.3	921.4	93.95	979.4	99.86
32		32.0	33.3	4.90	5.108	1129	115.1	1238	126.3	936.0	95.44	994.9	101.4
33		33.0	34.3	5.05	5.433	1200	122.4	1317	134.3	995.4	101.5	1058	107.9
33.5		33.5	34.8	5.13	5.599	1237	126.1	1357	138.4	1026	104.6	1090	111.2
34		34.0	35.4	5.21	5.767	1274	129.9	1398	142.5	1057	107.7	1123	114.5
35	1-3/8	35.0	36.4	5.36	6.111	1350	137.7	1481	151.0	1120	114.2	1190	121.4
35.5		35.5	36.9	5.44	6.287	1389	141.7	1524	155.4	1152	117.5	1224	124.8
36		36.0	37.4	5.51	6.465	1429	145.7	1567	159.8	1185	120.8	1259	128.4
37		37.0	38.5	5.67	6.830	1509	153.9	1655	168.8	1251	127.6	1330	135.6
37.5		37.5	39.0	5.74	7.015	1550	158.1	1700	173.4	1285	131.1	1366	139.3
38	1-1/2	38.0	39.5	5.82	7.204	1592	162.3	1746	178.0	1320	134.6	1403	143.1
39		39.0	40.6	5.97	7.588	1677	171.0	1839	187.5	1390	141.8	1478	150.7
40		40.0	41.6	6.13	7.982	1764	179.8	1935	197.3	1462	149.1	1554	158.5



Hylift K18

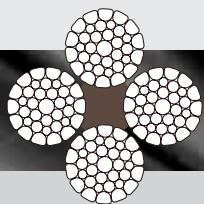
- Rotation Resistant Rope
- Should be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted



TELESCOPIC CRANE

CRAWLER CRANE

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength				Minimum breaking force (Fmin, MBF)			
						Metric unit				Metric unit			
		min.	max.			1960 Grade		2160 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)	kN	t(metric)	kN	t(metric)
10		10.0	10.4	0.48	0.481	105.6	10.76	116.3	11.86	89.22	9.10	95.17	9.70
11		11.0	11.4	0.53	0.583	127.7	13.02	140.8	14.35	108.0	11.01	115.2	11.74
11.5		11.5	12.0	0.55	0.637	139.6	14.23	153.8	15.69	118.0	12.03	125.9	12.83
12		12.0	12.5	0.57	0.693	152.0	15.50	167.5	17.08	128.5	13.10	137.0	13.97
12.7	1/2	12.7	13.2	0.61	0.777	170.3	17.36	187.6	19.13	143.9	14.67	153.5	15.65
13		13.0	13.5	0.62	0.814	178.4	18.19	196.6	20.05	150.8	15.38	160.8	16.40
14		14.0	14.6	0.67	0.944	206.9	21.10	228.0	23.25	174.9	17.83	186.5	19.02
14.3	9/16	14.3	14.9	0.68	0.983	215.5	21.97	237.5	24.21	182.1	18.57	194.3	19.81
15		15.0	15.6	0.72	1.083	237.5	24.22	261.7	26.69	200.7	20.47	214.1	21.84
16		16.0	16.6	0.76	1.233	270.2	27.56	297.8	30.37	228.4	23.29	243.6	24.84
17		17.0	17.7	0.81	1.391	305.1	31.11	336.2	34.28	257.8	26.29	275.0	28.05
18		18.0	18.7	0.86	1.560	342.0	34.87	376.9	38.43	289.1	29.48	308.4	31.44
19	3/4	19.0	19.8	0.91	1.738	381.1	38.86	420.0	42.82	322.1	32.84	343.6	35.03
20		20.0	20.8	0.96	1.926	422.2	43.05	465.3	47.45	356.9	36.39	380.7	38.82
21		21.0	21.8	1.00	2.123	465.5	47.47	513.0	52.31	393.5	40.12	419.7	42.80
22		22.0	22.9	1.05	2.330	510.9	52.10	563.0	57.41	431.8	44.03	460.6	46.97
22.2	7/8	22.2	23.1	1.06	2.378	521.4	53.17	574.6	58.59	440.7	44.94	470.1	47.94
23		23.0	23.9	1.10	2.547	558.4	56.94	615.4	62.75	472.0	48.13	503.5	51.34
24		24.0	25.0	1.15	2.773	608.0	62.00	670.1	68.33	513.9	52.40	548.2	55.90
25		25.0	26.0	1.19	3.009	659.7	67.27	727.1	74.14	557.6	56.86	594.8	60.65
25.4	1	25.4	26.4	1.21	3.106	681.0	69.44	750.5	76.53	575.6	58.70	614.0	62.61
26		26.0	27.0	1.24	3.255	713.6	72.76	786.4	80.19	603.1	61.50	643.4	65.60
27		27.0	28.1	1.29	3.510	769.5	78.47	848.1	86.47	650.4	66.32	693.8	70.75
28		28.0	29.1	1.34	3.775	827.6	84.39	912.0	93.00	699.5	71.33	746.1	76.08
28.6	1-1/8	28.6	29.7	1.37	3.931	861.9	87.89	949.9	96.86	728.5	74.29	777.1	79.24
29		29.0	30.2	1.39	4.049	887.8	90.52	978.3	99.76	750.3	76.51	800.4	81.62
30		30.0	31.2	1.43	4.333	950.0	96.87	1047	106.76	803.0	81.88	856.5	87.34
31		31.0	32.2	1.48	4.627	1014	103.4	1118	113.99	857.4	87.43	914.6	93.26
31.5		31.5	32.8	1.50	4.777	1047	106.8	1154	117.70	885.3	90.27	944.3	96.29
31.8	1-1/4	31.8	33.0	1.52	4.854	1064	108.5	1173	119.58	899.4	91.71	959.4	97.83
32		32.0	33.3	1.53	4.930	1081	110.2	1191	121.47	913.6	93.16	974.5	99.38



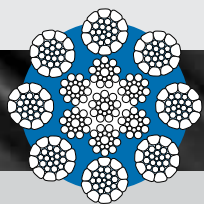
Hylift K4

- Rotation Resistant Rope
- Should not be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted



DECK CRANE

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength		Minimum Breaking Force (Fmin, MBF)	
						Metric unit		Metric unit	
		min.	max.			1960 Grade		1960 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)
16	5/8	16.0	16.6	1.19	1.076	248.7	25.36	216.6	22.08
17	3/4	17.0	17.7	1.26	1.215	280.7	28.62	244.5	24.93
18		18.0	18.7	1.34	1.362	314.7	32.09	274.1	27.95
19		19.0	19.8	1.41	1.517	350.7	35.76	305.4	31.14
20		20.0	20.8	1.49	1.681	388.5	39.62	338.4	34.50
21	7/8	21.0	21.8	1.56	1.853	428.4	43.68	373.0	38.04
22		22.0	22.9	1.64	2.034	470.1	47.94	409.4	41.75
22.2		22.2	23.1	1.65	2.076	479.8	48.92	417.8	42.61
23		23.0	23.9	1.71	2.223	513.8	52.40	447.5	45.63
24	1	24.0	25.0	1.78	2.421	559.5	57.05	487.2	49.68
25		25.0	26.0	1.86	2.627	607.1	61.90	528.7	53.91
25.4		25.4	26.4	1.89	2.711	626.7	63.90	545.7	55.65
26		26.0	27.0	1.93	2.841	656.6	66.96	571.8	58.31
27	1-1/8	27.0	28.1	2.01	3.064	708.1	72.20	616.7	62.88
28		28.0	29.1	2.08	3.295	761.5	77.65	663.2	67.62
28.6		28.6	29.7	2.13	3.438	794.5	81.02	691.9	70.55
29		29.0	30.2	2.16	3.534	816.9	83.30	711.4	72.54
30	1-1/4	30.0	31.2	2.23	3.782	874.2	89.14	761.3	77.63
31		31.0	32.2	2.31	4.039	933.5	95.18	812.9	82.89
31.5		31.5	32.8	2.34	4.170	963.8	98.28	839.3	85.59
31.8		31.8	33.0	2.36	4.236	979.2	99.85	852.7	86.95
32	1-3/8	32.0	33.3	2.38	4.303	994.7	101.42	866.2	88.32
33		33.0	34.3	2.45	4.577	1058	107.86	921.2	93.93
33.5		33.5	34.8	2.49	4.716	1090	111.15	949.3	96.80
34		34.0	35.4	2.53	4.858	1123	114.50	977.9	99.71
35	1-1/2	35.0	36.4	2.60	5.148	1190	121.33	1036	105.7
35.5		35.5	36.9	2.64	5.296	1224	124.82	1066	108.7
36		36.0	37.4	2.68	5.447	1259	128.36	1096	111.8
37		37.0	38.5	2.73	5.658	1308	133.36	1139	116.1
37.5	1-1/2	37.5	39.0	2.77	5.812	1343	136.99	1170	119.3
38		38.0	39.5	2.80	5.968	1380	140.67	1201	122.5



Hyfil K8

- Non-Rotation Resistant Rope
- Should not be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted
- Steel Plastic Combination



CRAWLER CRANE



TOWER CRANE



PILEDIVING EQUIPMENT



OVERHEAD TRAVELING CRANE



LADLE CRANE



GANTRY CRANE



RTGC / RMGC



MOBILE HARBOUR CRANE

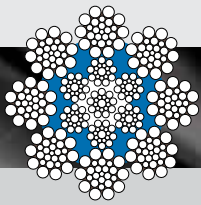


DECK CRANE



OFFSHORE CRANE

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength						Minimum Breaking Force (Fmin, MBF)					
						Metric unit						Metric unit					
		min.	max.			1770 Grade		1960 Grade		2160 Grade		1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)
8		8.0	8.3	0.50	0.293	58.65	5.98	64.94	6.62	71.57	7.30	51.75	5.28	56.98	5.81	59.99	6.12
9		9.0	9.4	0.57	0.371	74.23	7.57	82.20	8.38	90.58	9.24	66.00	6.73	73.00	7.44	75.93	7.74
10		10.0	10.4	0.63	0.459	91.64	9.34	101.5	10.35	111.8	11.40	80.86	8.25	89.04	9.08	93.74	9.56
11		11.0	11.4	0.69	0.555	110.9	11.31	122.8	12.52	135.3	13.80	97.84	9.98	107.7	10.99	113.4	11.57
11.5		11.5	12.0	0.72	0.606	121.2	12.36	134.2	13.68	147.9	15.08	106.9	10.90	117.8	12.01	124.0	12.64
12		12.0	12.5	0.75	0.660	132.0	13.46	146.1	14.90	161.0	16.42	116.4	11.87	128.2	13.07	135.0	13.76
12.7	1/2	12.7	13.2	0.80	0.740	147.8	15.07	163.7	16.69	180.4	18.39	130.4	13.30	143.6	14.64	151.2	15.42
13		13.0	13.5	0.82	0.775	154.9	15.79	171.5	17.49	189.0	19.27	136.7	13.93	151.3	15.43	158.4	16.15
14		14.0	14.6	0.88	0.899	179.6	18.31	198.9	20.28	219.2	22.35	158.5	16.16	174.8	17.82	183.7	18.73
14.3	9/16	14.3	14.9	0.90	0.936	187.1	19.07	207.1	21.12	228.3	23.28	165.1	16.83	181.8	18.53	191.3	19.51
15		15.0	15.6	0.94	1.032	206.2	21.02	228.3	23.28	251.6	25.66	183.1	18.67	202.7	20.67	210.9	21.51
16	5/8	16.0	16.6	1.01	1.174	234.6	23.92	259.8	26.49	286.3	29.19	207.2	21.13	229.4	23.39	240.0	24.47
17		17.0	17.7	1.07	1.325	264.8	27.00	293.3	29.90	323.2	32.96	233.7	23.83	257.3	26.24	270.9	27.62
18		18.0	18.7	1.13	1.486	296.9	30.28	328.8	33.53	362.3	36.95	262.0	26.71	288.5	29.42	303.7	30.97
19	3/4	19.0	19.8	1.19	1.655	330.8	33.73	366.3	37.35	403.7	41.17	292.1	29.78	323.5	32.99	338.4	34.50
20		20.0	20.8	1.26	1.834	366.6	37.38	405.9	41.39	447.3	45.61	323.4	32.98	356.2	36.32	374.9	38.23
21		21.0	21.8	1.32	2.022	404.1	41.21	447.5	45.63	493.2	50.29	356.6	36.36	392.7	40.04	413.4	42.15
22		22.0	22.9	1.38	2.219	443.5	45.23	491.1	50.08	541.3	55.19	391.7	39.94	433.7	44.22	453.7	46.26
22.2	7/8	22.2	23.1	1.40	2.265	452.7	46.16	501.2	51.11	552.4	56.33	399.4	40.73	439.8	44.85	463.0	47.21
23		23.0	23.9	1.45	2.426	484.8	49.43	536.8	54.74	591.6	60.32	427.8	43.62	471.0	48.03	495.9	50.56
24		24.0	25.0	1.51	2.641	527.8	53.82	584.5	59.60	644.1	65.68	465.8	47.49	514.3	52.44	539.9	55.05
25		25.0	26.0	1.57	2.866	572.7	58.40	634.2	64.67	698.9	71.27	505.4	51.53	558.2	56.92	585.9	59.74
25.4	1	25.4	26.4	1.60	2.958	591.2	60.29	654.7	66.76	721.5	73.57	521.7	53.20	574.4	58.57	604.7	61.66
26		26.0	27.0	1.63	3.100	619.5	63.17	686.0	69.95	756.0	77.09	548.9	55.97	607.8	61.98	633.7	64.61
27		27.0	28.1	1.70	3.343	668.0	68.12	739.8	75.43	815.2	83.13	589.5	60.11	649.1	66.19	683.3	69.68
28		28.0	29.1	1.76	3.595	718.4	73.26	795.6	81.12	876.8	89.40	634.0	64.64	698.1	71.18	734.9	74.94
28.6	1-1/8	28.6	29.7	1.80	3.744	748.3	76.30	828.6	84.49	913.1	93.11	652.3	66.51	727.0	74.13	765.4	78.04
29		29.0	30.2	1.82	3.856	770.7	78.59	853.4	87.02	940.5	95.90	678.8	69.22	738.5	75.30	788.3	80.38
30		30.0	31.2	1.89	4.127	824.8	84.10	913.3	93.13	1006	102.6	727.1	74.14	790.3	80.58	843.6	86.02
31		31.0	32.2	1.95	4.407	880.7	89.80	975.2	99.4	1075	109.6	776.8	79.21	843.8	86.05	900.8	91.85
31.5		31.5	32.8	1.98	4.550	909.3	92.72	1007	102.7	1110	113.1	791.3	80.69	871.3	88.84	930.1	94.84
31.8	1-1/4	31.8	33.0	2.00	4.623	923.8	94.20	1023	104.3	1127	115.0	803.9	81.97	885.2	90.26	944.9	96.35
32		32.0	33.3	2.01	4.696	938.4	95.69	1039	106.0	1145	116.8	828.0	84.43	911.0	92.89	959.9	97.88
33		33.0	34.3	2.07	4.994	997.9	101.8	1105	112.7	1218	124.2	875.2	89.24	956.2	97.51	1021	104.1
33.5		33.5	34.8	2.11	5.146	1028	104.9	1139	116.1	1255	128.0	895.0	91.26	985.4	100.5	1052	107.3
34		34.0	35.4	2.14	5.301	1059	108.0	1173	119.6	1293	131.8	936.4	95.48	1025	104.5	1084	110.5
35	1-3/8	35.0	36.4	2.20	5.617	1123	114.5	1243	126.8	1370	139.7	976.9	99.61	1076	109.7	1148	117.1
35.5		35.5	36.9	2.23	5.779	1155	117.8	1279	130.4	1409	143.7	1005	102.5	1107	112.8	1181	120.5
36		36.0	37.4	2.26	5.943	1188	121.1	1315	134.1	1449	147.8	1033	105.3	1138	116.0	1215	123.9
37		37.0	38.5	2.33	6.278	1255	127.9	1389	141.7	1531	156.1	1092	111.3	1202	122.6	1283	130.9
37.5		37.5	39.0	2.36	6.448	1289	131.4	1427	145.5	1573	160.4	1121	114.4	1235	125.9	1318	134.4
38	1-1/2	38.0	39.5	2.39	6.622	1323	134.9	1465	149.4	1615	164.7	1163	118.6	1268	129.3	1354	138.0
39		39.0	40.6	2.45	6.975	1394	142.1	1543	157.4	1701	173.4	1213	123.7	1336	136.2	1426	145.4
40		40.0	41.6	2.51	7.337	1466	149.5	1624	165.6	1789	182.5	1286	131.1	1405	143.3	1500	152.9



Hyfil R8

- Non-Rotation Resistant Rope
- Should not be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Steel Plastic Combination



TOWER CRANE



OVERHEAD TRAVELING CRANE



LADLE CRANE



GANTRY CRANE



RTGC / RMGC



MOBILE HARBOUR CRANE

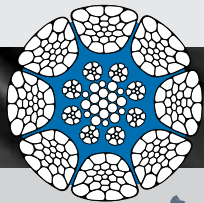


DECK CRANE



OFFSHORE CRANE

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength						Minimum Breaking Force (Fmin, MBF)					
						Metric unit						Metric unit					
		min.	max.			1770 Grade		1960 Grade		2160 Grade		1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)	kN	t(M)
8		8.0	8.3	0.48	0.279	53.82	5.49	59.59	6.08	65.68	6.70	47.69	4.86	52.81	5.38	56.22	5.73
9		9.0	9.4	0.54	0.352	68.11	6.95	75.42	7.69	83.12	8.48	60.36	6.15	66.84	6.82	71.15	7.26
10		10.0	10.4	0.60	0.435	84.09	8.57	93.12	9.49	102.6	10.46	74.51	7.60	82.51	8.41	87.84	8.96
11		11.0	11.4	0.66	0.527	101.7	10.38	112.7	11.49	124.2	12.66	90.16	9.19	99.84	10.18	106.3	10.84
11.5		11.5	12.0	0.69	0.576	111.2	11.34	123.1	12.56	135.7	13.84	98.54	10.05	109.1	11.13	116.2	11.85
12		12.0	12.5	0.72	0.627	121.1	12.35	134.1	13.67	147.8	15.07	107.3	10.94	118.8	12.12	126.5	12.90
12.7	1/2	12.7	13.2	0.76	0.702	135.6	13.83	150.2	15.31	165.5	16.88	120.2	12.25	133.1	13.57	141.7	14.45
13		13.0	13.5	0.78	0.735	142.1	14.49	157.4	16.05	173.4	17.68	125.9	12.84	139.4	14.22	148.5	15.14
14		14.0	14.6	0.84	0.853	164.8	16.81	182.5	18.61	201.1	20.51	146.0	14.89	161.7	16.49	172.2	17.56
14.3	9/16	14.3	14.9	0.85	0.888	171.7	17.50	190.1	19.38	209.5	21.36	152.1	15.51	168.4	17.17	179.3	18.28
15		15.0	15.6	0.90	0.979	189.2	19.29	209.5	21.36	230.9	23.54	167.7	17.10	185.6	18.93	197.6	20.15
16	5/8	16.0	16.6	0.95	1.114	215.3	21.95	238.4	24.31	262.7	26.79	190.8	19.45	211.2	21.54	224.9	22.93
17		17.0	17.7	1.01	1.258	243.0	24.78	269.1	27.44	296.6	30.24	215.3	21.96	238.5	24.31	253.9	25.89
18		18.0	18.7	1.07	1.410	272.5	27.78	301.7	30.76	332.5	33.90	241.4	24.62	267.3	27.26	284.6	29.02
19	3/4	19.0	19.8	1.13	1.571	303.6	30.95	336.2	34.28	370.5	37.77	269.0	27.43	297.9	30.37	317.1	32.33
20		20.0	20.8	1.19	1.741	336.4	34.30	372.5	37.98	410.5	41.86	298.1	30.39	330.0	33.65	351.4	35.83
21		21.0	21.8	1.25	1.919	370.8	37.81	410.6	41.87	452.5	46.15	328.6	33.51	363.9	37.10	387.4	39.50
22		22.0	22.9	1.31	2.106	407.0	41.50	450.7	45.96	496.7	50.64	360.6	36.77	399.4	40.72	425.2	43.35
22.2	7/8	22.2	23.1	1.33	2.150	415.4	42.35	460.0	46.90	506.9	51.69	368.1	37.53	407.6	41.56	433.9	44.24
23		23.0	23.9	1.37	2.302	444.8	45.36	492.6	50.23	542.9	55.35	394.2	40.19	436.5	44.51	464.7	47.38
24		24.0	25.0	1.43	2.507	484.4	49.39	536.4	54.69	591.1	60.27	429.2	43.76	475.3	48.46	506.0	51.59
25		25.0	26.0	1.49	2.720	525.6	53.59	582.0	59.34	641.4	65.40	465.7	47.49	515.7	52.58	549.0	55.98
25.4	1	25.4	26.4	1.52	2.808	542.5	55.32	600.8	61.26	662.1	67.51	480.7	49.02	532.3	54.28	566.7	57.79
26		26.0	27.0	1.55	2.942	568.5	57.96	629.5	64.19	693.7	70.74	504.7	51.46	558.8	56.98	593.8	60.55
27		27.0	28.1	1.61	3.172	613.0	62.51	678.8	69.22	748.1	76.28	543.2	55.39	601.5	61.33	640.4	65.30
28		28.0	29.1	1.67	3.412	659.3	67.22	730.0	74.44	804.5	82.04	584.2	59.57	646.9	65.96	688.7	70.22
28.6	1-1/8	28.6	29.7	1.71	3.553	686.6	70.01	760.3	77.53	837.9	85.44	609.5	62.15	673.7	68.70	717.3	73.14
29		29.0	30.2	1.73	3.660	707.2	72.11	783.1	79.85	863.0	88.00	626.7	63.90	693.9	70.76	738.7	75.33
30		30.0	31.2	1.79	3.917	756.8	77.17	838.1	85.45	923.6	94.17	670.6	68.38	742.6	75.72	790.6	80.61
31		31.0	32.2	1.85	4.182	808.1	82.40	894.9	91.25	986.2	100.6	716.1	73.02	793.0	80.86	844.2	86.08
31.5		31.5	32.8	1.88	4.318	834.4	85.08	924.0	94.21	1018	103.8	739.4	75.39	818.7	83.48	871.6	88.88
31.8	1-1/4	31.8	33.0	1.89	4.387	847.7	86.44	938.7	95.72	1034	105.5	751.1	76.59	831.8	84.81	885.5	90.29
32		32.0	33.3	1.91	4.456	861.1	87.80	953.5	97.23	1051	107.1	763.0	77.80	844.9	86.15	899.5	91.72
33		33.0	34.3	1.97	4.739	915.7	93.38	1014	103.4	1118	114.0	811.4	82.74	898.6	91.63	956.6	97.54
33.5		33.5	34.8	2.00	4.884	943.7	96.23	1045	106.6	1152	117.4	836.2	85.27	926.0	94.42	985.8	100.5
34		34.0	35.4	2.03	5.031	972.1	99.12	1076	109.8	1186	121.0	861.4	87.83	953.8	97.26	1015	103.5
35	1-3/8	35.0	36.4	2.09	5.331	1030	105.0	1141	116.3	1257	128.2	912.8	93.07	1011	103.1	1076	109.7
36		35.5	36.9	2.12	5.484	1060	108.1	1174	119.7	1293	131.9	939.0	95.75	1040	106.0	1107	112.9
36		36.0	37.4	2.15	5.640	1090	111.1	1207	123.1	1330	135.6	965.7	98.47	1069	109.0	1138	116.1
37		37.0	38.5	2.21	5.958	1151	117.4	1275	130.0	1405	143.2	1020	104.0	1130	115.2	1203	122.6
37.5		37.5	39.0	2.24	6.120	1183	120.6	1309	133.5	1443	147.1	1048	106.8	1160	118.3	1235	126.0
38	1-1/2	38.0	39.5	2.27	6.284	1214	123.8	1345	137.1	1482	151.1	1076	109.7	1191	121.5	1268	129.3
39		39.0	40.6	2.33	6.619	1279	130.4	1416	144.4	1561	159.2	1133	115.6	1255	128.0	1336	136.2
40		40.0	41.6	2.39	6.963	1345	137.2	1490	151.9	1642	167.4	1192	121.6	1320	134.6	1405	143.3



Hyfil K8T

- Non-Rotation Resistant Rope
- Should not be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted
- Rotary Swaged
- Steel Plastic Combination



CRAWLER CRANE



OVERHEAD TRAVELING CRANE



GANTRY CRANE



MOBILE HARBOUR CRANE



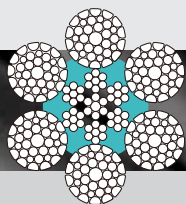
DECK CRANE



OFFSHORE CRANE

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength		Minimum breaking force (Fmin, MBF)	
						Metric unit		Metric unit	
		min.	max.			1960 Grade		1960 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)
12		12.0	12.5	0.78	0.719	164.7	16.79	144.1	14.70
12.7	1/2	12.7	13.2	0.82	0.806	184.5	18.81	161.4	16.46
13		13.0	13.5	0.84	0.844	193.3	19.71	169.1	17.25
14		14.0	14.6	0.91	0.979	224.2	22.86	196.2	20.00
14.3	9/16	14.3	14.9	0.93	1.020	233.5	23.81	204.3	20.83
15		15.0	15.6	0.97	1.124	257.3	26.24	225.2	22.96
16		16.0	16.6	1.04	1.279	292.8	29.86	256.2	26.12
17		17.0	17.7	1.10	1.443	330.5	33.70	291.8	29.75
18		18.0	18.7	1.17	1.618	370.6	37.79	324.3	33.06
19	3/4	19.0	19.8	1.23	1.803	412.9	42.10	364.4	37.16
20		20.0	20.8	1.30	1.998	457.5	46.65	400.3	40.82
21		21.0	21.8	1.36	2.203	504.4	51.43	441.4	45.00
22		22.0	22.9	1.43	2.417	553.6	56.45	485.2	49.47
22.2	7/8	22.2	23.1	1.44	2.467	565.0	57.61	494.3	50.41
23		23.0	23.9	1.49	2.642	605.0	61.69	529.4	53.98
24		24.0	25.0	1.56	2.877	658.8	67.18	576.5	58.78
25		25.0	26.0	1.62	3.121	714.8	72.89	625.5	63.78
25.4	1	25.4	26.4	1.65	3.222	737.9	75.24	645.7	65.84
26		26.0	27.0	1.69	3.376	773.2	78.84	676.5	68.99
27		27.0	28.1	1.75	3.641	833.8	85.02	729.6	74.39
28		28.0	29.1	1.82	3.916	896.7	91.43	784.6	80.01
28.6	1-1/8	28.6	29.7	1.85	4.078	933.9	95.23	818.6	83.47
29		29.0	30.2	1.88	4.200	961.9	98.08	841.7	85.82
30		30.0	31.2	1.95	4.495	1029	105.0	902.2	92.00
31		31.0	32.2	2.01	4.800	1099	112.1	961.8	98.07
31.5		31.5	32.8	2.04	4.956	1135	115.7	993.0	101.3
31.8	1-1/4	31.8	33.0	2.06	5.035	1153	117.6	1009	102.9
32		32.0	33.3	2.07	5.114	1171	119.4	1025	104.5
33		33.0	34.3	2.14	5.439	1246	127.0	1090	111.1
33.5		33.5	34.8	2.17	5.605	1284	130.9	1123	114.5
34		34.0	35.4	2.20	5.773	1322	134.8	1157	118.0
35	1-3/8	35.0	36.4	2.27	6.118	1401	142.9	1226	125.0
35.5		35.5	36.9	2.30	6.294	1441	147.0	1261	128.6
36		36.0	37.4	2.33	6.473	1482	151.1	1297	132.3
37		37.0	38.5	2.40	6.837	1566	159.7	1370	139.7
37.5		37.5	39.0	2.43	7.023	1608	164.0	1407	143.5
38	1-1/2	38.0	39.5	2.46	7.212	1652	168.4	1446	147.4
39		39.0	40.6	2.53	7.596	1740	177.4	1522	155.2
40		40.0	41.6	2.59	7.991	1830	186.6	1601	163.3

● Larger diameters available upon request

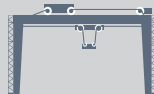


Hyfil K6

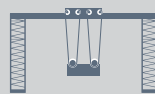
- Non-Rotation Resistant Rope
- Should not be used with a Swivel
- Zinc Coated / Alumar Coated / Bright
- Compacted
- Plastic Filler



LADLE CRANE



GANTRY CRANE



RTGC / RMGC

Nominal Rope Diameter		Diameter tolerance		Outer wire Diameter	Approx. Weight	Calculated Breaking Strength				Minimum breaking force (Fmin, MBF)			
						Metric unit				Metric unit			
		min.	max.			1770 Grade		1960 Grade		1770 Grade		1960 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(metric)	kN	t(metric)	kN	t(metric)	kN	t(metric)
8		8.0	8.3	0.47	0.294	58.961	6.01	65.3	6.66	49.52	5.05	53.63	5.47
9		9.0	9.4	0.52	0.373	74.623	7.61	82.6	8.43	62.67	6.39	67.87	6.92
10		10.0	10.4	0.58	0.460	92.127	9.39	102.0	10.40	77.37	7.89	83.80	8.54
11		11.0	11.4	0.64	0.557	111.5	11.37	123.4	12.59	93.62	9.55	101.4	10.34
11.5		11.5	12.0	0.67	0.608	121.8	12.42	134.9	13.76	102.3	10.43	110.8	11.30
12		12.0	12.5	0.70	0.662	132.7	13.53	146.9	14.98	111.4	11.36	120.7	12.30
12.7	1/2	12.7	13.2	0.74	0.742	148.6	15.15	164.5	16.78	124.8	12.72	135.2	13.78
13		13.0	13.5	0.76	0.777	155.7	15.88	172.4	17.58	130.8	13.33	141.6	14.44
14		14.0	14.6	0.81	0.901	180.6	18.41	200.0	20.39	151.6	15.46	164.2	16.75
14.3	9/16	14.3	14.9	0.83	0.939	188.1	19.18	208.2	21.23	157.9	16.10	171.1	17.44
15		15.0	15.6	0.87	1.035	207.3	21.14	229.5	23.41	174.1	17.75	188.5	19.23
16		16.0	16.6	0.93	1.177	235.8	24.05	261.2	26.63	198.1	20.20	214.5	21.87
17		17.0	17.7	0.99	1.329	266.2	27.15	294.8	30.06	223.6	22.80	242.2	24.69
18		18.0	18.7	1.05	1.490	298.5	30.44	330.5	33.70	250.7	25.56	271.5	27.68
19	3/4	19.0	19.8	1.11	1.660	332.6	33.91	368.3	37.55	279.3	28.48	302.5	30.85
20		20.0	20.8	1.16	1.840	368.5	37.58	408.1	41.61	309.5	31.56	335.2	34.18
21		21.0	21.8	1.22	2.028	406.3	41.43	449.9	45.87	341.2	34.79	369.5	37.68
22		22.0	22.9	1.28	2.226	445.9	45.47	493.8	50.35	374.5	38.18	405.6	41.36
22.2	7/8	22.2	23.1	1.29	2.272	455.1	46.40	503.9	51.38	382.2	38.97	413.9	42.21
23		23.0	23.9	1.34	2.433	487.4	49.69	539.7	55.03	409.3	41.73	443.3	45.20
24		24.0	25.0	1.40	2.649	530.6	54.11	587.6	59.92	445.6	45.44	482.7	49.22
25		25.0	26.0	1.45	2.875	575.8	58.71	637.6	65.01	483.6	49.31	523.7	53.40
25.4	1	25.4	26.4	1.48	2.967	594.4	60.61	658.2	67.11	499.1	50.90	540.6	55.13
26		26.0	27.0	1.51	3.109	622.8	63.50	689.6	70.32	523.0	53.33	566.5	57.76
27		27.0	28.1	1.57	3.353	671.6	68.48	743.7	75.83	564.0	57.51	610.9	62.29
28		28.0	29.1	1.63	3.606	722.3	73.65	799.8	81.55	606.6	61.85	657.0	66.99
28.6	1-1/8	28.6	29.7	1.66	3.756	752.2	76.70	833.0	84.94	631.7	64.42	684.2	69.77
29		29.0	30.2	1.69	3.868	774.8	79.00	858.0	87.48	650.7	66.35	704.7	71.86
30		30.0	31.2	1.74	4.139	829.1	84.55	918.1	93.62	696.3	71.00	754.2	76.90
31		31.0	32.2	1.80	4.420	885.3	90.28	980.4	100.0	743.5	75.81	805.3	82.11
31.5		31.5	32.8	1.83	4.564	914.1	93.21	1012	103.2	767.7	78.28	831.5	84.78
31.8	1-1/4	31.8	33.0	1.85	4.636	928.7	94.70	1028	104.9	779.9	79.53	844.7	86.13
32		32.0	33.3	1.86	4.710	943.4	96.19	1045	106.5	792.2	80.78	858.1	87.50
33		33.0	34.3	1.92	5.009	1003	102.3	1111	113.3	842.5	85.91	912.5	93.05
33.5		33.5	34.8	1.95	5.162	1034	105.4	1145	116.7	868.3	88.53	940.4	95.89
34		34.0	35.4	1.98	5.317	1065	108.6	1179	120.3	894.4	91.20	968.7	98.77
35	1-3/8	35.0	36.4	2.04	5.634	1129	115.1	1250	127.4	947.8	96.64	1027	104.7
35.5		35.5	36.9	2.06	5.796	1161	118.4	1286	131.1	975.0	99.42	1060	108.1
36		36.0	37.4	2.09	5.961	1194	121.7	1322	134.8	1000	102.0	1090	111.1
37		37.0	38.5	2.15	6.297	1261	128.6	1397	142.4	1059	108.0	1147	117.0
37.5		37.5	39.0	2.18	6.468	1296	132.1	1435	146.3	1090	111.1	1180	120.3
38	1-1/2	38.0	39.5	2.21	6.641	1330	135.6	1473	150.2	1120	114.2	1210	123.4
39		39.0	40.6	2.27	6.996	1401	142.9	1552	158.2	1177	120.0	1275	130.0
40		40.0	41.6	2.33	7.359	1474	150.3	1632	166.4	1240	126.4	1340	136.6

✶ Larger diameters available upon request

premier



- 12 **Product Advantages**
- Wire Quality
 - Compacted and rotary Swaged Strands
 - Comparison of Breaking Load

- 14 **Product Advantages**
- Plastic Layer
 - Bending Fatigue
 - Torque Factor



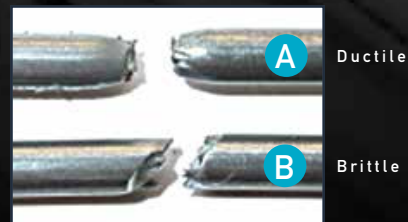
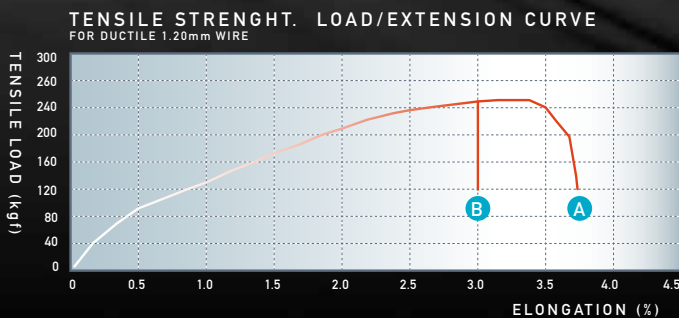
hyrope


Kiswire

PRODUCT ADVANTAGES

Wire Quality

- The quality and performance of Hyrope is fundamentally determined by the quality of component wires. It is absolutely impossible to achieve high performance when the rope is produced with inferior quality wires.
- The process of controlling the quality of wire begins with selection of high quality steel wire rods that can be manufactured by handful of world-class steel mills. Any defect or inconsistent microstructure of the rod is difficult to remove during wire production process, and could affect the quality of the final rope product.
- The wires are produced on modern, well cooled wire drawing machines, enabling the wires to retain the highest possible level of ductility. This is essential in order to deliver the maximum possible translation of wire strength into rope breaking load. Ductility of component wires is also a key factor in prolonged service life of rope.

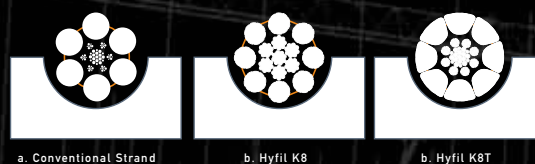


Compacted and Rotary Swaged Strands

Most Hyrope products are made out of compacted strands. The strands are properly Breaking Load of Hyrope roller-compacted during the production process to improve the contact conditions between both the strands and the individual wires.

Benefits of Hyrope compacted strands

- Smooth Surface
- Linear contact between individual wires
- Much higher breaking load with higher metallic area
- Better contact between the rope surface and the sheaves
- Far more resistant to abrasion and corrosion
- Good constructional stability for the multi-layer spooling system

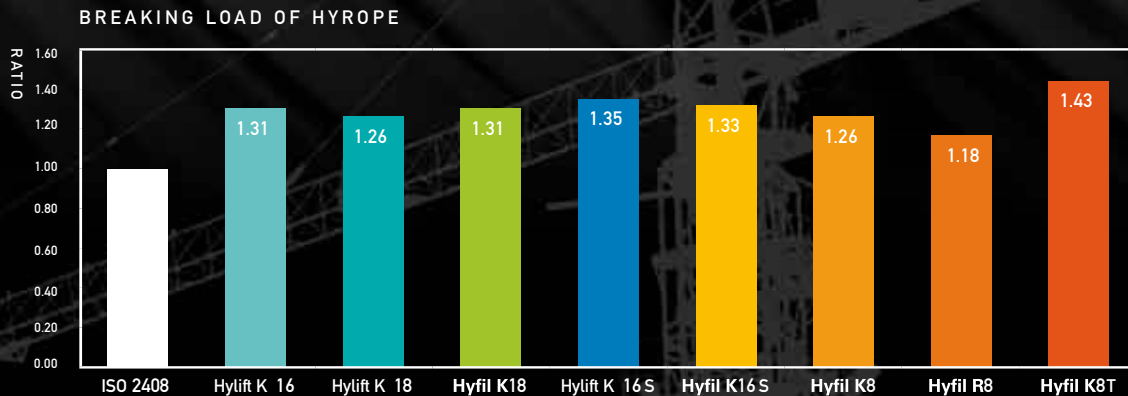


Comparison of Breaking Load

Hyrope products are designed not only to achieve greater tensile strength of the individual wires but also a combination of relative factors with high technology.

- Used only high quality wires that are produced in Kiswire's own drawing factory.
- Increased fill factor/metallic area of the rope through optimal compacting of the strands.
- Parallel lay with a plastic layer that substantially reduces the internal stresses of the rope. Standard breaking strength of Hyrope is around 20~40% higher than a conventional rope to international standards of the same tensile grade and construction categories.

Items	ISO2408	Hylift K16	Hylift K18	Hyfil K18	Hylift K16S	Hyfil K16S	Hyfil K8	Hyfil R8	Hyfil K8T
Ratio	1.00	1.31	1.26	1.31	1.35	1.33	1.26	1.18	1.43



Plastic Layer

Steel-Plastic combination Long fatigue life

The plastic layer of Hyrope acts as a cushion between the layers.

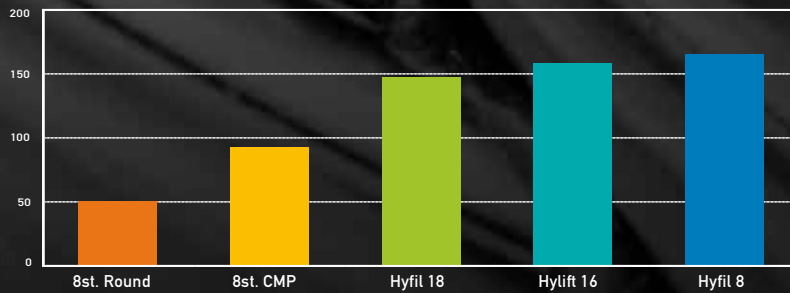
This plastic layer has many advantages :

- Prevents direct metal-to-metal contact
- Stabilizes the rope construction during installation and actual service
- Keeps out water and harmful elements
- Seals in rope lubricant
- Removes the incidence of birdcaging
- Prevents internal wire breaks
- Absorbs dynamic energy
- Extremely reduces internal stress

Bending Fatigue

8st. Round	8st. CMP	Hyfil K18	Hyfil K16	Hyfil K8T
50	95	149	153	162

FATIGUE TEST RESULT OF HYROPE (IN-HOUSE TEST)



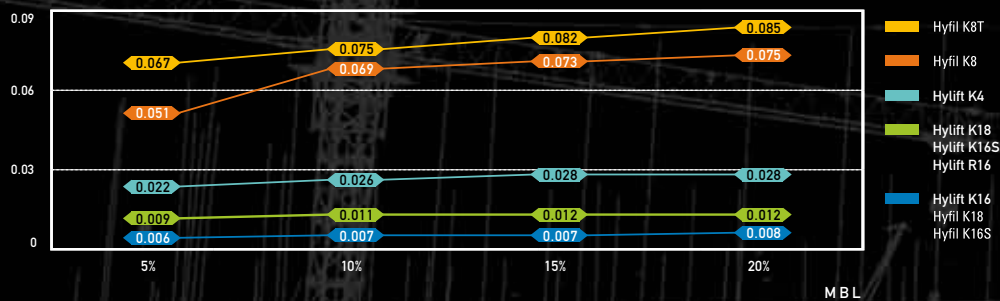
Relationship between service life of the wire rope and the grooves is shown in the figure. Experience has clearly demonstrated that the service life of the wire rope will be materially increased by strict adherence to these standards.

Torque Factor

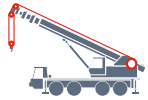
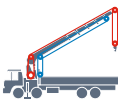
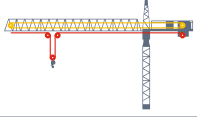
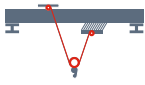
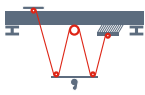
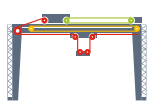
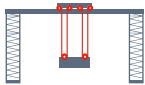
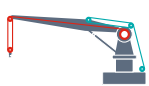
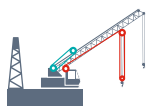
- Hyfil K16, Hyfil K18 and Hyfil K18 are rotation-resistant ropes with a steel core closed in the opposite direction to the outer strands.
- When a load is applied, the core has the tendency to twist in one direction while the outer strands tend to rotate in the opposite direction.
- The created moments in the core versus the created moments in the outer strands add to zero over a wide load spectrum.

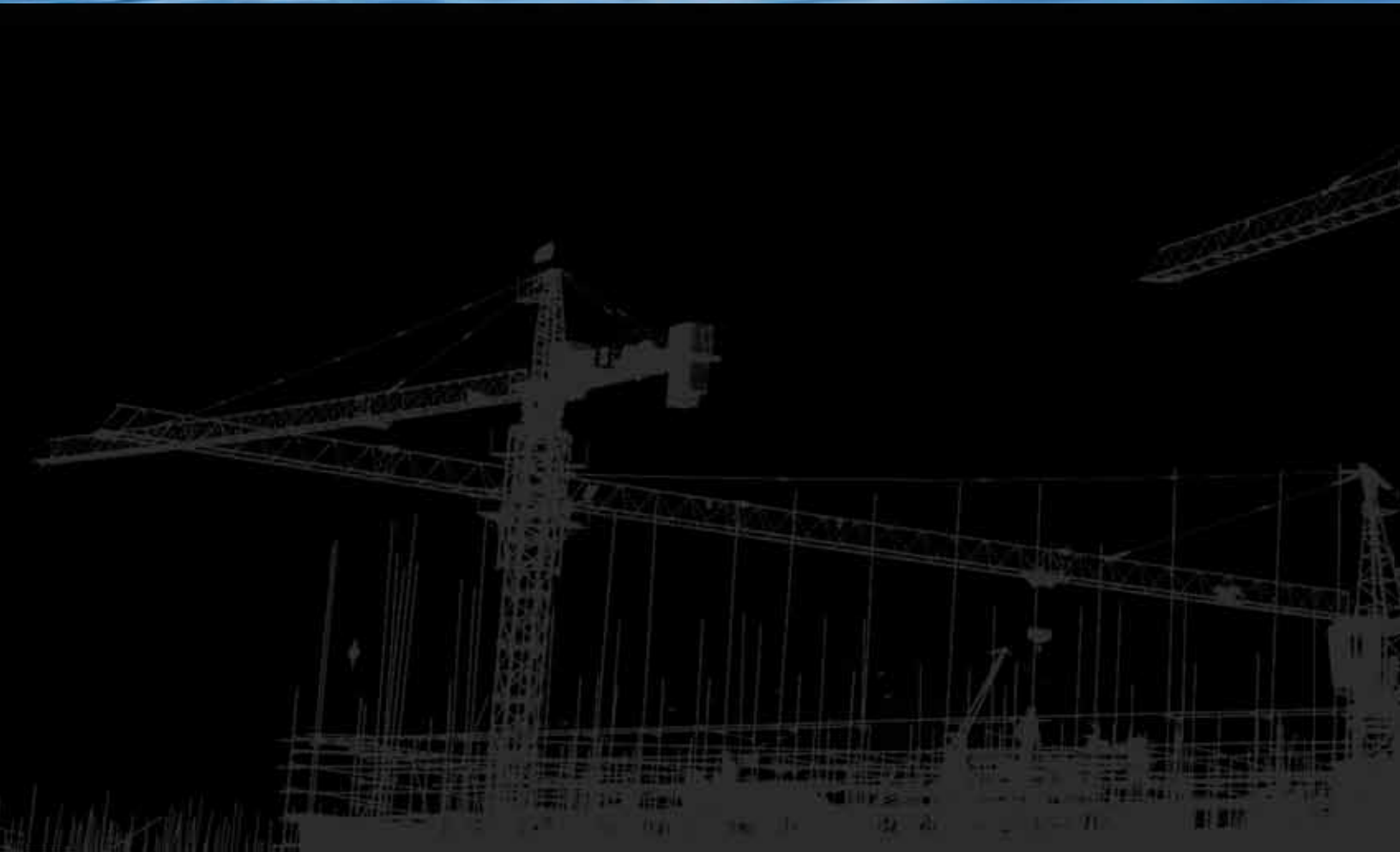
of MBL	Hyfil K16 Hyfil K18 Hyfil K16S	Hyfil K18 Hyfil K16S Hyfil R16	Hyfil K4	Hyfil K8	Hyfil K8T
5%	0.006	0.009	0.022	0.051	0.067
10%	0.007	0.011	0.026	0.069	0.075
15%	0.007	0.012	0.028	0.073	0.082
20%	0.008	0.012	0.028	0.075	0.085

TORQUE FACTOR OF HYROPE



PRODUCT SELECTION

Crane	Crane Picture	Main Hoist Rope	Trolley Rope	Boom Hoist Rope	Boom Extension Rope	Luffing Rope	Pipe Handling Rope
Telescopic Crane		Hylift K16 Hylift K18 Hylift K16S					
Truck Crane		Hylift K16			Hylift K8		
Crawler Crane		Hylift K16 Hylift K18 Hylift K16S				Hyfil K8 Hyfil K8T Hylift K8	
Loader Crane		Hylift K16					
Tower Crane		Hylift K16 Hylift K16E	Hyfil K8 Hyfil R8				
Piledriving Equipment		Hylift K16 Hyfil K18					Hyfil K8
Overhead Traveling Crane		Hylift K16 Hyfil K8 Hyfil R8 Hyfil K8T					
Ladle Crane		Hyfil K8 Hyfil R8 Hyfil K6					
Gantry Crane		Hyfil K8 Hyfil R8 Hyfil K6	Hyfil K8 Hyfil K6	Hyfil K8 Hyfil R8 Hyfil K8T Hyfil K6			
RTGC / RMGC		Hyfil K8 Hyfil R8 Hyfil K6					
Mobile Harbour Crane		Hyfil K8 Hyfil R8 Hyfil K8T		Hyfil K8 Hyfil R8 Hyfil K8T			
Deck Crane		Hylift K16 Hylift K18 Hylift K4				Hyfil K8 Hyfil R8 Hyfil K8T	
Offshore Crane		Hylift K16 Hylift K16S Hyfil K16S		Hyfil K8 Hyfil R8 Hyfil K8T			





neptune




Kiswire



High strength wire rope for the offshore oil & gas industry

Kiswire LTD

The World's largest manufacturer of steel wire rope.

Kiswire was established in 1945 Busan, Korea. The company has grown into a major international operation with a global sales and marketing presence, and manufacturing facilities in Korea, Malaysia, China and the USA.

NEPTUNE Wire Ropes

In 1997 KISWIRE established a dedicated manufacturing operation in Johor, Malaysia for a complete range of wire ropes for use by the oil and gas industry, with unit weights for 6-strand rope up to 120t.

Through continuous improvement, product development and expansion, NEPTUNE wire ropes have grown into leading products for use offshore.

Planned investment will see Neptune unit weights go beyond 300t, and its manufacturing capacity double.

A silhouette of an offshore oil rig is visible against a warm, orange-hued sunset sky. The rig's complex lattice structure, including a tall derrick and several cranes, is clearly outlined. The sun is low on the horizon, creating a strong backlighting effect and reflecting light on the water's surface.

The NEPTUNE product range includes:

- Anchor Lines
- A & R Winch Ropes
- Drilling Lines
- Marine Riser Tensioner Lines
- Large Diameter Offshore Crane Ropes

Key Product Features:

The highest breaking strengths and fatigue resistance in round and compacted strand rope made possible by the use of special, high quality steel, high technology wire drawing machinery coupled with special die and lubrication practices; optimum rope designs to minimise spinning loss.

Outstanding resistance to corrosion through heavy, uniform thickness zinc and zinc aluminum alloy (ALUMAR) coatings in combination with highly effective water repellent blocking compounds developed specifically for use with NEPTUNE products.

Excellent packaging and product protection by careful control of rope spooling and the use of strong steel reels and protective wrapping.

Rigorous quality assurance through procedures and practices strictly applied according to internationally accredited standards.

Wire Rope Selection

When replacing a wire rope, refer to the relevant Original Equipment Manufacturers recommendation and rope test certification.

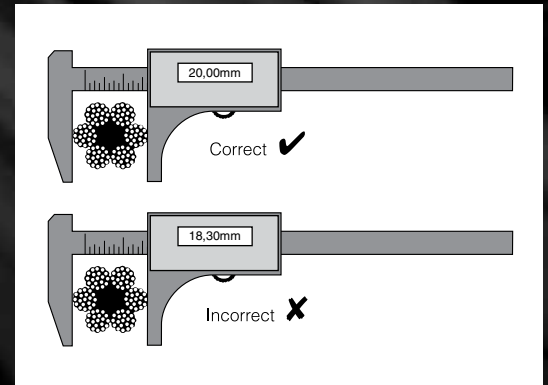
To ensure safe and efficient operation, replacement ropes should conform to the specified nominal rope diameter and be at least equal to the required strength originally specified. Additionally, the wire rope construction selected should provide similar or improved working properties for resistance to rotation, bend fatigue, crushing, abrasion and corrosion.

Where an original wire rope is to be supplied, or where the required working conditions have changed, KISWIRE should be consulted to obtain the best possible advice and recommendations.

Rope Diameter

Correct and consistent rope diameter is essential for optimum working performance. Ensure that the rope diameter is correctly measured and that the resulting diameter is appropriate for the working system.

Incorrect diameter can reduce performance and cause unsafe working conditions.



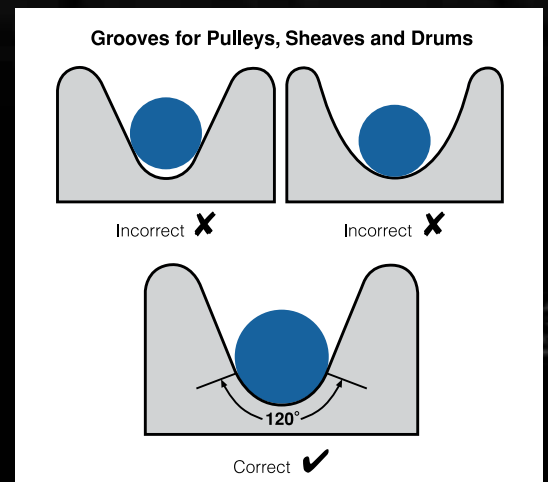
Strength

Rope strength should be specified as Minimum Breaking Strength or Minimum Breaking Force.

The breaking strength of the rope is determined by the wire tensile strength and steel cross sectional area.

The steel fill factor and rope construction can be varied to suit the operating conditions.

Strand compaction can be used for increased rope strength and service life.



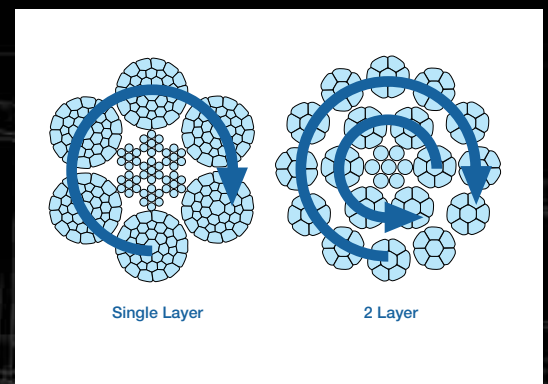
Rope Torsion

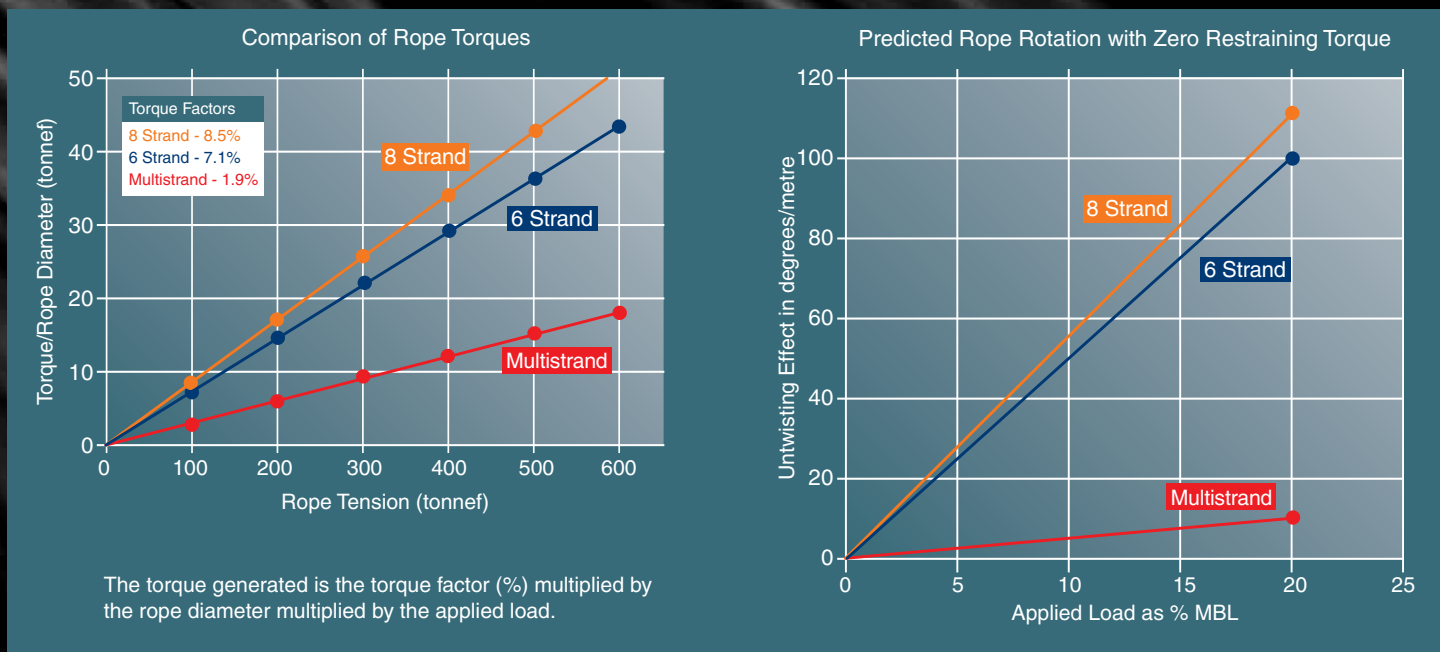
All wire ropes have inherent rotation characteristics that will produce a turning moment in the rope. With both rope ends fixed and unable to rotate, the turning moment will generate a TORQUE force at the fixed points. Whereas, if one end of the rope is free to rotate, the generated force will result in rope TURN and therefore load rotation.

Wire ropes can be designed to achieve the desired rotational properties required by the application.

Single layer ropes such as the 6 and 8 strand have a much greater tendency to rotate under load, whereas multistrand ropes, which depend upon the opposing torsional values of the various layers of strands, offer much greater torsional stability.

As the wire rope construction options are numerous, KISWIRE would be pleased to offer technical advice on rope selection.





Axial Stiffness (EA)

Axial Stiffness (EA) is determined by $E \times A \times 10^{-3}$, MN, where;

- E** - is the apparent modulus of the rope in kN/mm^2 , shown below for 6x37 IWRC group constructions.
- A** - is the cross sectional area of the circumscribed circle (mm^2) based on the nominal rope diameter.

Flexural Stiffness (EI)

Flexural Stiffness (EI) is determined by $E \times I \times 10^{-6}$, in N.m^2 , where:

- E** - is the Stiffness Factor in N/mm^2 , shown below for appropriate 6x37 IWRC group constructions
- I** - is the Second Moment of Area of the rope (d^4), using Nominal Diameter d.

Construction 6x37 IWRC API classification	E kN/mm^2
6x36, 6x41 and 6x49	58.86
6xK36, 6xK41 and 6xK49	63.77

e.g. EA for 76.2mm dia. 6x36: $58.86 \times 4560 \times 10^{-3} = 268\text{MN}$

Construction 6x37 IWRC API classification	Stiffness Factor N/mm^2
6x36	15.6
6xK36	18.8
6x41	14.5
6xK41	17.6
6x49	12.6
6xK49	14.4

e.g. EI for 76.2mm dia. 6x36: $15.6 \times 76.2^4 \times 10^{-6} = 526 \text{N.m}^2$

N.B. In both cases the Stiffness values apply to new rope with little or no applied load.

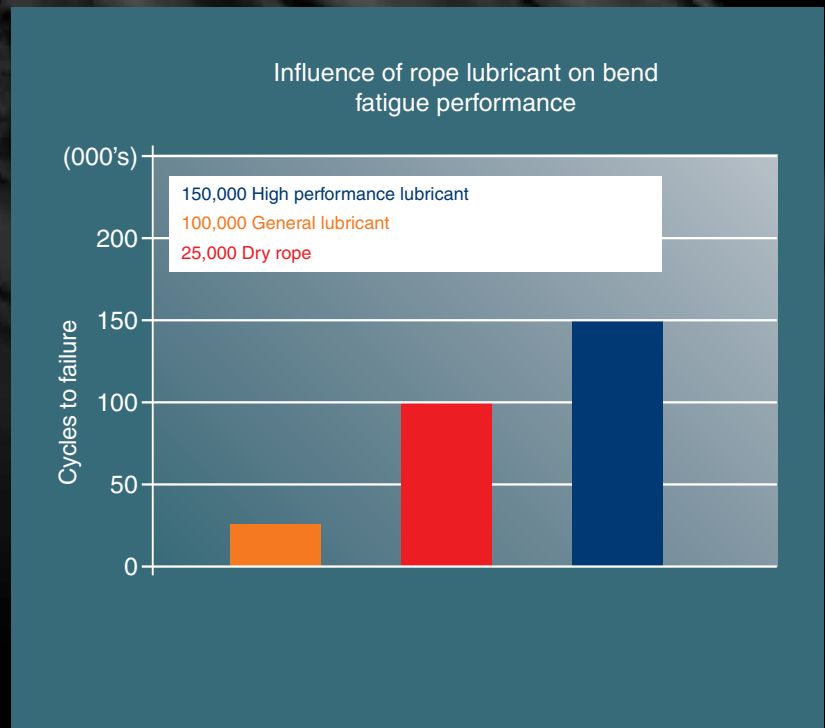
On all technical queries and parameters, it is always best to verify your requirements with the KISWIRE QA Dept.

Rope Lubrication

Effective rope lubrication during manufacture by the selection and application of the optimum lubricant can increase fatigue life, minimise wear and provide corrosion resistance to extend the service life of wire rope.

All Neptune ropes are filled with an impermeable, semi solid, anti-corrosion blocking compound. This provides lubrication for the rope which reduces internal abrasion damage, as well as increasing rope service life through resistance to penetration of the rope by seawater.

A range of manufacturing lubricants is available to satisfy particular seawater salinity and temperature.



Corrosion

Where the rope is working in a corrosive environment, protection of the individual wires should be considered, especially if the rope life is expected to be in excess of 12 months. In such cases, it is essential to safeguard the integrity of the smaller, inner wires of the rope in order to maintain the constructional stability and also the working safety of the rope. Zinc has been the conventional coating on wire, but KISWIRE is now offering a much superior coating based on a Zinc/Aluminum alloy - ALUMAR. (See the details overleaf.)

In applications such as Riser Lines, additional corrosion protection can be achieved by the use of a plastic impregnated core. The plastic will give added protection to the centre wires and also offer greater support to the outer strands, resulting in extended rope life.

All information and data provided are for guidance only and it is recommended that individual requirements be discussed with KISWIRE.

Neptune ALUMAR

Neptune ALUMAR features a special zinc/aluminum alloy coating.

Neptune ALUMAR is an exciting new development, stemming from a major investment programme led by KISWIRE's R&D Center.

Neptune ALUMAR has excellent corrosion resistance and superior rope fatigue performance compared to conventional galvanising.

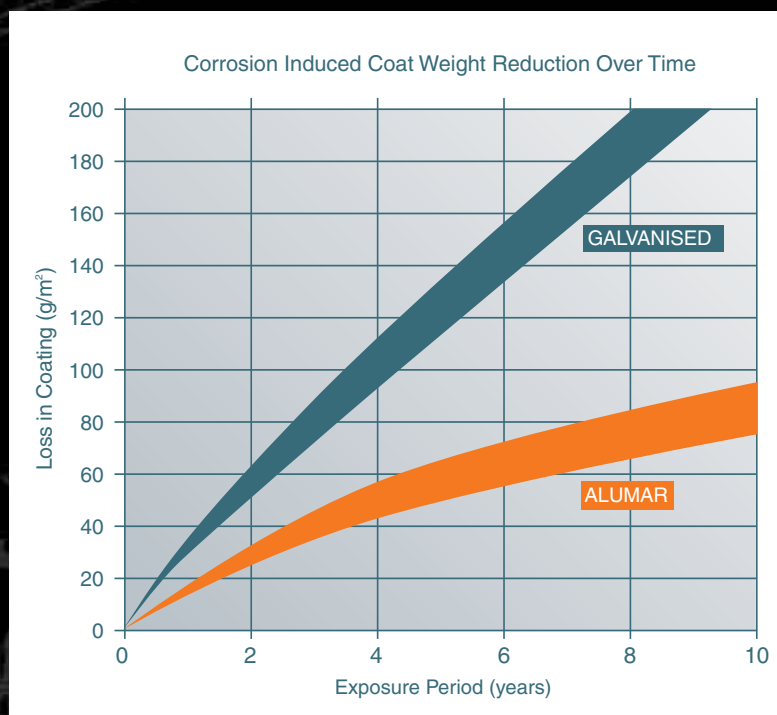
The special, ductile zinc/aluminum coating, combined with highly effective, water repellent blocking compounds, provide three times greater life in sea water than the conventional product.

This powerful combination of corrosion resistance, durability and highest strength rope, significantly extends useful life of rope in a marine environment.

Neptune ALUMAR provides a 21st century solution for the offshore oil and gas industry.

- Unparalleled high strength to weight ratio
- Extended tension-tension and bend fatigue life
- Remarkable corrosion resistance

A quality assured product from design through to installation.



Coat Loss in g/m ² /year				
Coating	Rural	Industrial	Marine	Severe Marine
ALUMAR	7	9	10	12
Galvanised	14	21	19	24

Anchor Lines

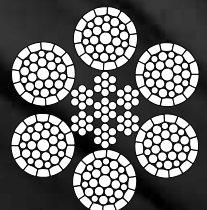
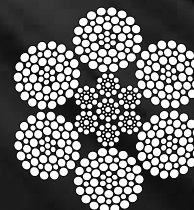
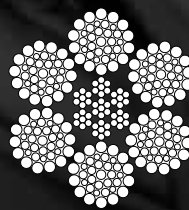
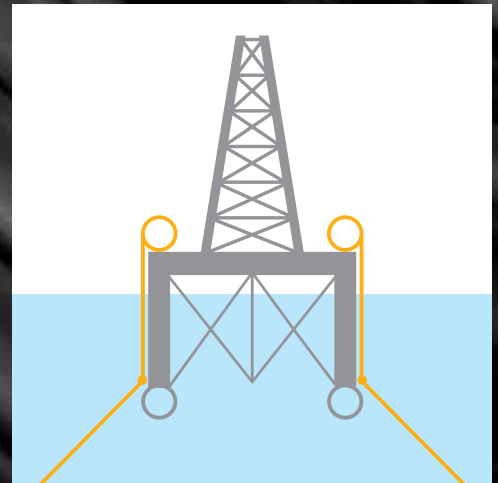
Rope construction

Class 6x36 IWRC and greater.

Large diameter outer wires for optimum resistance to wear and corrosion.

Wire protection by galvanizing or ALUMAR.

Compact strand (CMP) for increased strength, improved contact area, reduced tread pressures and sheave wear.



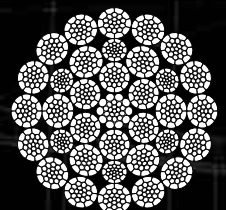
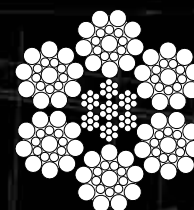
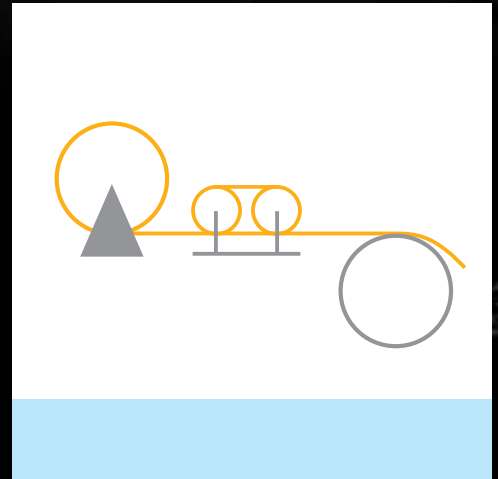
A&R Winch Ropes

Optimum flexibility to allow efficient rope operation around sheaves, drums and capstans.

Effective protection of all wires by galvanising/ALUMAR

Appropriate lubrication during manufacture.

Rope selection should be determined through consultation with KISWIRE.



Anchor Lines & A&R Winch Ropes

Nominal Rope Diameter		Estimated Rope Mass in air		EEIPS			ALPHA			DELTA			OMEGA		
				Minimum Breaking Force											
mm	ins	kg/m	lb/ft	kN	metric tonnes	short tons	kN	metric tonnes	short tons	kN	metric tonnes	short tons	kN	metric tonnes	short tons
NEPTUNE CONVENTIONAL - LARGE DIAMETER SIX STRAND ROPE															
50.8	2	11.3	7.6	1930	197	217	2216	226	249	2285	233	257	2384	243	268
54.0	2 1/8	12.8	8.6	2160	220	243	2363	241	266	2471	252	278	2578	263	290
57.2	2 1/4	14.3	9.6	2420	247	272	2697	275	303	2834	289	319	2957	302	332
63.5	2 1/2	17.8	11.9	2950	301	332	3295	336	370	3462	353	389	3612	369	406
66.7	2 5/8	19.7	13.2	3240	330	364	3629	370	408	3815	389	429	3980	406	448
69.9	2 3/4	21.4	14.4	3530	360	397	4011	409	451	4207	429	473	4394	448	494
73.0	2 7/8	23.5	15.8	3840	392	432	4384	447	493	4599	469	517	4805	490	540
76.2	3	25.4	17.1	4170	425	469	4815	491	541	5060	516	569	5276	538	593
79.4	3 1/8	27.6	18.5	4490	458	505	5119	522	575	5374	548	604	5610	572	630
82.6	3 1/4	29.9	20.1	4840	494	544	5462	557	614	5737	585	645	5992	611	673
85.7	3 3/8	32.2	21.6	5180	528	582	5953	607	669	6247	637	702	6531	666	734
88.9	3 1/2	34.8	23.4	5520	563	620	6463	659	726	6786	692	763	7090	723	797
95.3	3 3/4	39.9	26.8	6280	640	706	7002	714	787	7355	750	827	7698	785	865
102.0	4	45.3	30.5	7060	720	794	7806	796	877	8199	836	922	8554	873	962
108.0	4 1/4	51.1	34.3	7730	788	869	8287	845	931	8699	887	978	9076	926	1021
114.0	4 1/2	57.4	38.6	8590	876	966	9209	939	1035	9670	986	1087	10089	1029	1134
121.0	4 3/4	63.9	42.9	9480	967	1066	10160	1036	1142	10670	1088	1199	11132	1136	1252
127.0	5	70.8	47.5	10430	1064	1172	11160	1138	1254	11719	1195	1317	12226	1248	1375
NEPTUNE CMP - LARGE DIAMETER SIX STRAND ROPE															
50.8	2	12.1	8.1	2141	218	241	2458	251	276	2535	259	285	2575	263	290
54.0	2 1/8	13.8	9.3	2396	244	269	2621	267	295	2741	280	308	2784	284	313
57.2	2 1/4	15.5	10.4	2684	274	302	2992	305	336	3144	321	353	3193	326	359
63.5	2 1/2	19.1	12.8	3272	334	368	3655	373	411	3840	392	432	3901	398	439
66.7	2 5/8	21.1	14.2	3594	367	404	4025	411	453	4232	432	476	4299	439	483
69.9	2 3/4	23.1	15.5	3916	400	440	4449	454	500	4667	476	525	4742	484	533
73.0	2 7/8	25.2	16.9	4260	435	479	4863	496	547	5101	521	574	5186	529	583
76.2	3	27.4	18.4	4626	472	520	5341	545	601	5613	573	631	5694	581	640
79.4	3 1/8	29.8	20.2	4981	508	560	5678	579	639	5961	608	670	6055	618	681
82.6	3 1/4	32.3	21.7	5369	548	604	6059	618	681	6364	649	716	6467	660	727
85.7	3 3/8	34.8	23.4	5746	586	646	6603	674	743	6929	707	779	7049	719	793
88.9	3 1/2	37.6	25.3	6123	625	689	7169	732	806	7527	768	846	7652	781	860
95.3	3 3/4	43.0	28.9	6966	711	783	7767	793	873	8159	833	917	8308	848	934
102.0	4	48.9	32.9	7831	799	881	8659	884	974	9095	928	1023	9238	943	1039

Estimated Rope Mass in Sea Water = 0.87x Rope Mass in Air.

All ropes manufactured in accordance with API Standards

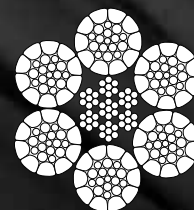
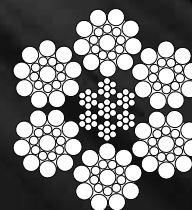
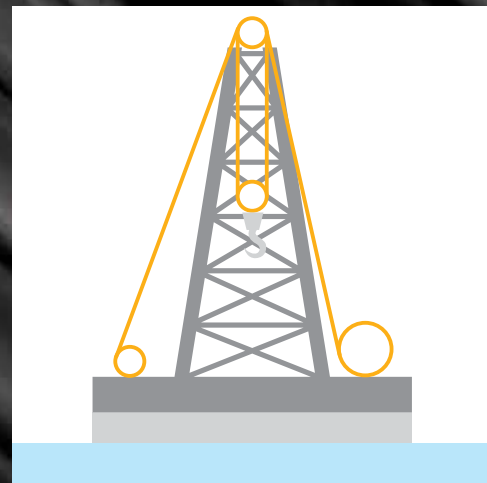
Drilling Lines

Rope construction:

6x19 and 6x26 for constructional stability.

Compacted strand (CMP) provides:

- Improved spooling on the drawworks
- Greater contact area for reduced sheave and groove wear
- High resistance to abrasion and pressure
- Higher strength
- Improved fatigue life



Nominal Rope Diameter		Estimated Rope Mass in air		EIPS			EEIPS			ALPHA		
				Minimum Breaking Force								
mm	ins	kh/m	lb/ft	kN	metric tonnes	short tons	kN	metric tonnes	short tons	kN	metric tonnes	short tons
NEPTUNE CONVENTIONAL - CLASS 6x19 STEEL CORE												
25.4	1	2.8	1.91	460	47	52	506	52	57	575	59	65
28.6	1 1/8	3.6	2.41	578	59	65	636	65	71	723	74	81
31.8	1 1/4	4.4	2.98	711	73	80	782	80	88	889	91	100
34.9	1 3/8	5.3	3.59	854	87	96	943	96	106	1072	109	120
38.1	1 1/2	6.4	4.28	1010	103	114	1110	113	125	1259	128	142
41.3	1 5/8	7.5	5.03	1170	119	132	1300	133	146	1471	150	165
44.5	1 3/4	8.7	5.83	1360	139	153	1500	153	169	1697	173	191
47.6	1 7/8	9.9	6.68	1550	158	174	1710	174	192	1932	197	217
50.8	2	11.3	7.61	1760	180	198	1930	197	217	2216	226	249
54.0	2 1/8	12.8	8.59	1970	201	221	2160	220	243	2363	241	266
57.2	2 1/4	14.3	9.63	2200	224	247	2420	247	272	2697	275	303
63.5	2 1/2	17.8	11.95	2655	271	298	2950	301	332	3295	336	370
NEPTUNE CMP - CLASS 6x19 STEEL CORE												
25.4	1	3.05	2.05	475	48	53	523	53	59	594	61	67
28.6	1 1/8	3.79	2.54	597	61	67	657	67	74	747	76	84
31.8	1 1/4	4.85	3.25	734	75	83	808	82	91	919	94	103
34.9	1 3/8	5.90	3.96	882	90	99	974	99	109	1108	113	124
38.1	1 1/2	6.64	4.45	1043	106	117	1147	117	129	1301	133	146
41.3	1 5/8	7.90	5.30	1211	123	136	1345	137	151	1520	155	171
44.5	1 3/4	9.20	6.17	1454	148	163	1604	164	180	1812	185	204
47.6	1 7/8	10.60	7.11	1688	172	190	1862	190	209	2104	215	237
50.8	2	12.10	8.12	1948	199	219	2136	218	240	2414	246	271
54.0	2 1/8	13.70	9.19	2206	225	248	2419	247	272	2733	279	307
57.2	2 1/4	15.50	10.40	2463	251	277	2709	276	304	3061	325	358
63.5	2 1/2	19.10	12.82	2974	303	334	3304	337	371	3734	418	461

All ropes manufactured in accordance with API Standards

Marine Riser Tensioner Lines

Rope construction:

Flexible constructions (6x41 and 6x49) to achieve optimum fatigue life.

Lang's lay to provide improved wear resistance to rope and sheaves.

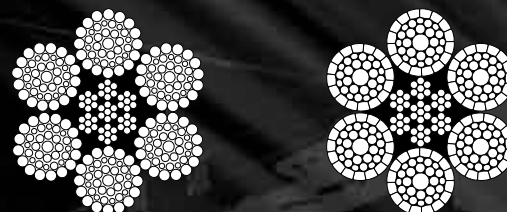
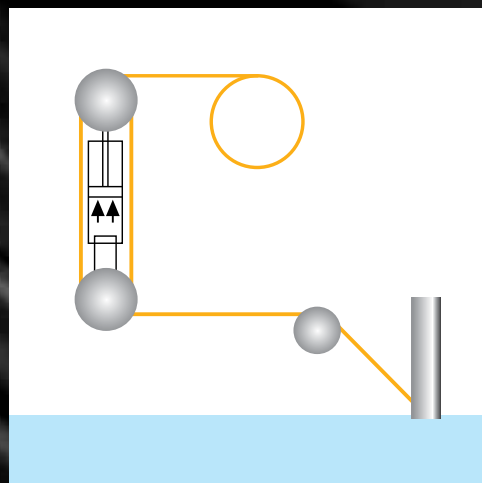
Corrosion protection by galvanising or ALUMAR.

The IWRC can be Plastic impregnated to:

- Protect the inner small wires
- Improve strand support and reduce internal wire stresses

Compact Strand (CMP) offers:

- Greater contact area
- Reduced tread pressures and sheave wear



Nominal Rope Diameter		Estimated Rope Mass in air		EIPS			EEIPS			ALPHA		
				Minimum Breaking Force								
mm	ins	kh/m	lb/ft	kN	metric tonnes	short tons	kN	metric tonnes	short tons	kN	metric tonnes	short tons
NEPTUNE CONVENTIONAL - CLASS 6x36 STEEL CORE												
44.5	1 3/4	8.7	5.83	1360	138.7	153	1500	153.0	169	1695	173	191
50.8	2	11.3	7.61	1760	179.5	198	1930	196.9	217	2216	226	249
54.0	2 1/8	12.8	8.59	1970	200.9	221	2160	220.3	243	2363	241	266
57.2	2 1/4	14.3	9.63	2200	224.4	247	2420	246.8	272	2697	275	303
63.5	2 1/2	17.8	11.95	2682	273.5	301	2950	300.9	332	3295	336	370
66.7	2 5/8	19.6	13.18	2945	300.4	331	3240	330.5	364	3629	370	408
69.9	2 3/4	21.5	14.42	3209	327.3	361	3530	360.0	397	4011	409	451
73.0	2 7/8	23.5	15.76	3491	356.1	392	3840	391.7	432	4384	447	493
76.2	3	25.4	17.10	3782	385.7	425	4160	424.3	468	4815	491	541
NEPTUNE CMP - CLASS 6x36 STEEL CORE												
44.5	1 3/4	9.2	6.0	1448	147.6	163	1608	164	181	1812	185	204
50.8	2	12.1	7.9	1924	196.2	216	2138	218	240	2414	246	271
54.0	2 1/8	13.8	9.0	2180	222.3	245	2422	247	272	2733	279	307
57.2	2 1/4	15.5	10.1	2436	248.4	274	2707	276	304	3061	312	344
63.5	2 1/2	19.1	12.4	2974	303.3	334	3305	337	371	3734	381	420
66.7	2 5/8	21.1	13.7	3257	332.1	366	3619	369	407	4088	417	459
69.9	2 3/4	23.1	15.0	3548	361.8	399	3942	402	443	4452	454	500
73.0	2 7/8	25.2	16.4	3831	390.6	430	4256	434	478	4814	491	541
76.2	3	27.4	17.8	4140	422.1	465	4599	469	517	5195	530	584

All ropes manufactured in accordance with API Standards

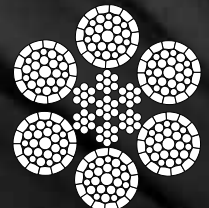
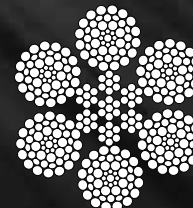
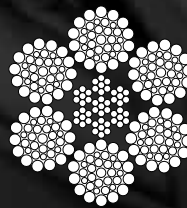
Large Diameter Crane Ropes

Appropriate rope constructions to achieve optimum fatigue life.

Whenever the expected working life is in excess of 1 year, ALUMAR protection is recommended.

Compact Strand (CMP) offers:

- Higher strength and improved spooling properties
- Greater contact area for reduced sheave wear
- Improved fatigue performance

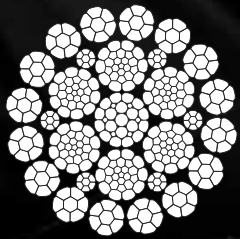
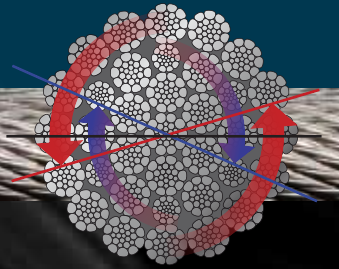


Nominal Rope Diameter		Estimated Rope Mass in air		EEIPS			ALPHA			DELTA			OMEGA		
				Minimum Breaking Force											
mm	ins	kh/m	lb/ft	kN	metric tonnes	short tons	kN	metric tonnes	short tons	kN	metric tonnes	short tons	kN	metric tonnes	short tons
NEPTUNE CONVENTIONAL ROPE - CLASS 6x36 STEEL CORE															
41.3	1 5/8	7.5	5.0	1300	133	146	1469	150	165	1547	158	174	1612	164	181
44.5	1 3/4	8.7	5.8	1500	153	169	1695	173	191	1785	182	201	1860	190	209
47.6	1 7/8	9.9	6.7	1710	174	192	1932	197	217	2035	208	229	2120	216	238
50.8	2	11.3	7.6	1930	197	217	2216	226	249	2285	233	257	2381	243	268
54.0	2 1/8	12.8	8.6	2160	220	243	2363	241	266	2471	252	278	2575	263	289
57.2	2 1/4	14.3	9.6	2420	247	272	2697	275	303	2834	289	319	2953	301	332
63.5	2 1/2	17.8	11.9	2950	301	332	3295	336	370	3462	353	389	3607	368	405
66.7	2 5/8	19.7	13.2	3240	330	364	3629	370	408	3815	389	429	3975	405	447
69.9	2 3/4	21.4	14.4	3530	360	397	4011	409	451	4207	429	473	4394	448	494
73.0	2 7/8	23.5	15.8	3840	392	432	4384	447	493	4599	469	517	4805	490	540
76.2	3	25.4	17.1	4170	425	469	4815	491	541	5060	516	569	5276	538	593
NEPTUNE CMP ROPE - CLASS 6x36 STEEL CORE															
41.3	1 5/8	7.9	5.3	1345	137	151	1520	155	171	1601	163	180	1668	170	187
44.5	1 3/4	9.2	6.2	1604	164	181	1812	185	204	1909	195	215	1989	203	224
47.6	1 7/8	10.6	7.1	1862	190	209	2104	215	237	2216	226	249	2309	235	260
50.8	2	12.2	8.2	2136	218	240	2414	246	271	2542	259	286	2649	270	298
54.0	2 1/8	13.7	9.2	2419	247	272	2733	279	307	2878	293	324	2999	306	337
57.2	2 1/4	15.5	10.4	2709	276	305	3061	312	344	3224	329	362	3359	343	378
63.5	2 1/2	19.0	12.8	3304	337	371	3734	381	420	3932	401	442	4097	418	461
66.7	2 5/8	21.0	14.1	3618	369	407	4088	417	460	4306	439	484	4486	457	504
69.9	2 3/4	23.1	15.5	3940	402	443	4452	454	500	4689	478	527	4886	498	549
73.0	2 7/8	25.2	16.9	4260	434	479	4814	491	541	5069	517	570	5282	539	594
76.2	3	27.4	18.4	4598	469	517	5195	530	584	5471	558	615	5701	581	641

All Ropes manufactured in accordance with API Standards

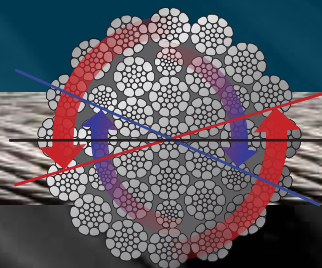
N2
HYROPE

beyond anything



hyrope


Kiswire



Kiswire is the largest wire rope producer in the world. Annually, about 130,000 tons of wire rope are delivered worldwide. For decades, Kiswire has specialized in the development and production of wire rope. The company has acquired a reputable and leading position in a great variety of markets, in literally all corners of the world. The offshore industry in particular has been a main market for Kiswire for 25 years.

Crane Ropes



Single and multiple part reeving

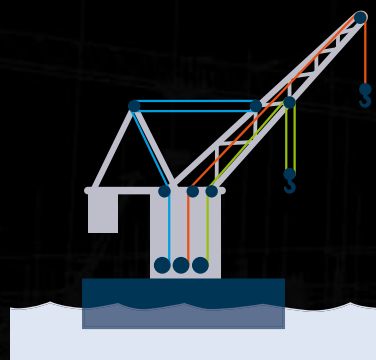
Pedestal cranes may come in different ways as to rope reeving lay outs. We are speaking of multiple part reeved ropes and single part reeved main hoist and whip hoist systems. The multiple part systems may allow to be equipped with six or eight strand ropes in right and left lay version in a tandem, whereas single part systems are almost exclusively equipped with multi strand non rotating ropes.

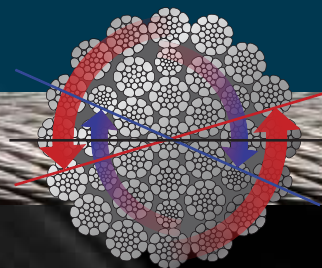
Compacted crane ropes

By compacting hoist ropes the resistance to crushing improves substantially. Especially on multi layer drums, wire ropes could interlock between the different layers. By compacting a wire rope, one makes the surface of the outer layers (outer wires) of the rope more flat. This flatter surface leaves the rope with less grip to get hold of. Consequently, layers slide more smooth along each other. Besides, compacted ropes perform better on the surface pressure issue and brings consequently a higher resistance to fatigue.

Plastic infill

In order to improve constructional stability of a rope, the IWRC is extruded with a special plastic medium. When eventually the strands are laid around the IWRC, the plastic finds its final position between strands and IWRC and strands among each other. The plastic infill prevents excessive internal rope wear and prevents dirt and water to penetrate into the rope, at the same time.





Crane Ropes

Special lubricants

For a perfect conservation of wire ropes in harsh environments, it is recommended to protect the rope from corrosion by providing the rope with a special sea water resistant lubricant. Wire rope lubricants are applied to smoothen rope bending and axial torsion as well. Contact between rope and sheave or drum is enhanced by rope lubricants too.



ALUMAR® aluminized ropes

The aluminizing of steel wire and steel wire ropes is made by KISWIRE under the brand name ALUMAR®. We have applied this technology for over 10 years, beginning in 1999. Initially, the ALUMAR® technology was developed for products applied in the aviation and car industry - the core demand was to extend the life time of the wires by sustaining the steel wire quality. Apart from many different kinds of improvement we could establish in this respect, it was obvious that an important improvement was to be made by protecting the wires from corrosion as long as possible. The ALUMAR® zinc/aluminum coating was developed as an alternative for the regular galvanizing of wire. Many tests have been done in the meantime, showing that the ALUMAR® wires stay corrosion-free 3.8 times longer than galvanized products. Third party Salt Spray Tests are available.

The offshore industry, both oil and gas as well as fishing, could benefit from ALUMAR® ropes substantially, as sea water is a corrosive environment.

BOOM HOIST ROPES

6xK36WS+IWRC

MAIN HOIST ROPES

6XK36WS+IWRC

N2 35xK7,
N2 35xK19S,
N2 35xK26WS,
N2 55xK7,
N2 55xK19S,
N2 55xK26WS,
N2 55xK31WS

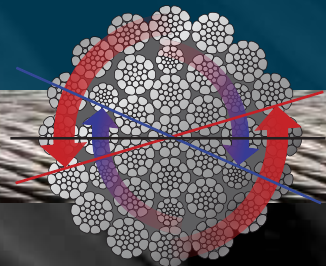
WHIP HOIST ROPES

N2 35xK7
N2 35xK19S
N2 55xK26WS

Average torque factors for the following rope constructions are:

35xK7 non-rotating	torque 0.020
35xK26WS non-rotating	torque 0.018
55xK7 non-rotating	torque 0.018
55xK31WS non rotating	torque 0.018





Crane Ropes

N2® Crane Ropes Non-Rotating 35 xK19S Compacted

Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs N.m	Regular N.m	mm ²
40		782	1327	1463	89	132	101	903
42		861	1463	1612	98	153	116	995
44.5	1 3/4	988	1677	1848	112	188	143	1141
48	1 7/8	1123	1908	2103	128	228	174	1298
50.8	2	1270	2156	2377	144	274	209	1467
54	2 1/8	1424	2418	2665	162	325	248	1645
57.2	2 1/4	1578	2695	2969	180	383	291	1833
63.5	2 1/2	2001	3399	3745	227	542	412	2312
66.7	2 5/8	2259	3834	4225	257	649	494	2608
69.9	2 3/4	2393	4065	4479	272	709	539	2765
73	2 7/8	2606	4419	4870	296	803	611	3006
76.2	3	2825	4789	5278	320	907	690	3258
79.4	3 1/8	3132	5318	5861	355	1060	806	3618

N2® Crane Ropes Non-Rotating 35 xK26WS Compacted

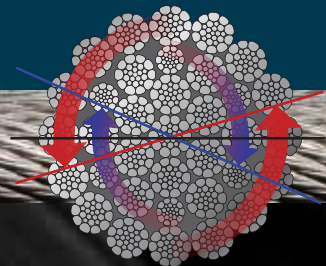
Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs N.m	Regular N.m	mm ²
82.6	3 1/4	3382	5737	6030	382	1076	861	3903
85.7	3 3/8	3631	6164	6478	410	1198	958	4193
88.9	3 1/2	3978	6750	7095	449	1373	1098	4592
95.3	3 3/4	4524	7682	8074	511	1667	1333	5226
102	4	5112	8673	9116	577	1999	1599	5900

Torque generated based on 2160 grade

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass.

All ropes manufactured in accordance with API/EN Standards.





Crane Ropes

N2® Crane Ropes Non-Rotating 55 xK31WS Compacted

Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs	Regular	mm ²
154	6 1/8	11744	19738	20745	1316	2236	1981	13427
158	6 3/8	12367	20784	21845	1385	2416	2140	14139
160	6 1/4	12677	21308	22395	1420	2508	2222	14495
165	6 1/2	13481	22659	23815	1510	2751	2436	15414
174	6 7/8	14991	25194	26480	1680	3225	2857	17139
178	7	15681	26356	27683	1758	3449	3055	17929
180	7 1/8	16028	26939	28296	1797	3565	3158	18326

N2® Crane Ropes Non-Rotating 55 xK26WS Compacted

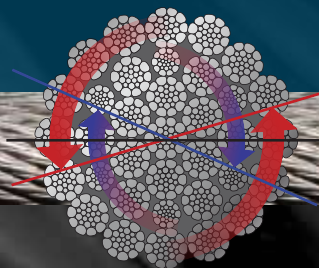
Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs	Regular	mm ²
108	4 1/4	5731	9554	10041	647	759	672	6499
114	4 1/2	6392	10658	11201	721	894	792	7250
121	4 3/4	7204	11995	12607	812	1068	946	8160
127	5	7934	13434	14120	895	1255	1112	9139
133	5 1/4	8702	14510	15251	981	1420	1258	9871
140	5 1/2	9642	16097	16918	1087	1658	1468	10950
142	5 5/8	9919	16795	17652	1119	1755	1554	11425
146	5 3/4	10486	17755	18661	1182	1907	1689	12078
148	5 7/8	10775	18244	19175	1215	1987	1759	12411
152	6	11366	19244	20226	1282	2152	1906	13091

Torque generated based on 2160 grade

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass.

All ropes manufactured in accordance with API/EN Standards.



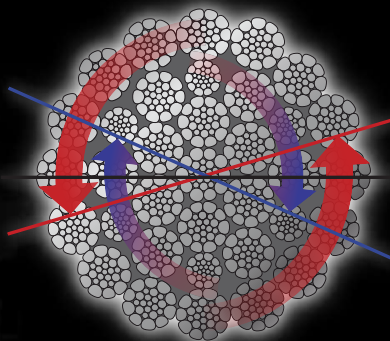


SubSea Hoisting Ropes

Pipe Lay Barges manufacture oil and gas pipes, which are laid on the bottom of the sea. For several reasons, the manufactured pipe has to be disconnected from the barge, and laid down on the seabed for a certain time (abandon) once in a while. Eventually, the same pipe needs to be taken up from the seabed and lifted onboard again to continue the manufacturing process (recovery). Both S-lay and J-lay barges operate with A&R systems as described. Depending on water depth and subsequently the length of A&R ropes required, a choice of rope is made out of the following available rope constructions..



6x36WS+IWRC in single or dual use.
Dual use of A&R ropes consist of a right and a left laid rope, operating as a pair. In the event of greater working depths, multi strand, low rotating ropes are applied. For instance, 35xK7, 35xK19S, 35xK26WS, 55xK7, 55xK19S, 55xK26WS, 55xK31WS.

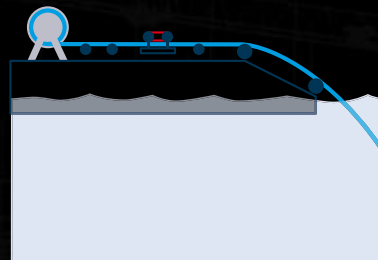


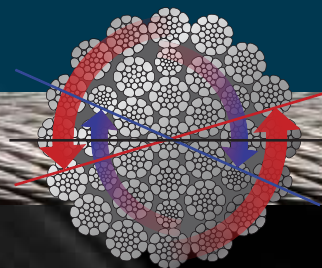
Single layer ropes, such as 6 and 8 strand constructions, have a much greater tendency to rotate under load than multi strand ropes. In fact, a multi strand rope is designed and manufactured to not rotate at all, or minimally.

The longer the ropes, the deeper the operation depths, the higher the tendency to rotate.

Torque

All wire ropes have inherent rotation characteristics that will produce a turning moment in the rope. With both ends fixed and unable to rotate, the turning moment will generate a TORQUE at the fixed points. Whereas, if one end of the rope is free to rotate, the generated force will result in rope TURN and therefore load rotation.





SubSea Hoisting Ropes

Average torque factors for the following rope constructions are :

35xK7 non-rotating	torque 0.020
35xK26WS non-rotating	torque 0.018
55xK7 non-rotating	torque 0.018
55xK31WS non rotating	torque 0.018

Torque calculation

Now what we really want to know about a rope is how much torque is generated when a load is applied. The amount of torque generated by a rope under load is :

the applied load x torque value

Example :

100 mm rope, loaded by 20% of its MBL (160.000 kg)

The generated torque is

$160.000 \text{ kg} \times 0.076 \text{ (6x36WS+IWRC)} = 12.160 \text{ kg/mm}^2$

Traction winches

The A&R winch ropes are commonly stored on a storage drum onboard the vessel. To generate the power to abandon and recover the pipe, traction winches are applied. A twin drum winch device, requiring precise diameter/groove ratios, stabile rope constructions, superior rope bending fatigue properties, excellent resistance to abrasion and rope crushing.



ALUMAR® aluminized ropes

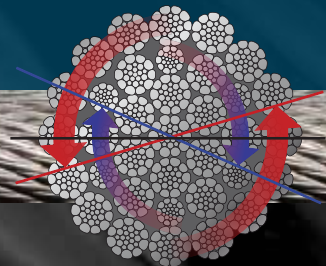
The aluminizing of steel wire and steel wire ropes is made by KISWIRE under the brand name ALUMAR®. We have applied this technology for over 10 years, beginning in 1999. Initially, the ALUMAR® technology was developed for products applied in the aviation and car industry - the core demand was to extend the life time of the wires by sustaining the steel wire quality. Apart from many different kinds of improvement we could establish in this respect, it was obvious that an important improvement was to be made by protecting the wires from corrosion as long as possible. The ALUMAR®zinc/aluminum coating was developed as an alternative for the regular galvanizing of wire. Many tests have been done in the meantime, showing that the ALUMAR® wires stay corrosion-free 3.8 times longer than galvanized products. Third party Salt Spray Tests are available.

The offshore industry, both oil and gas as well as fishing, could benefit from ALUMAR® ropes substantially, as sea water is a corrosive environment.

N2

HYROPE

beyond anything

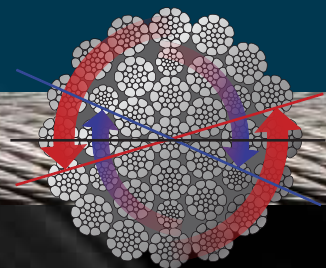


SubSea Hoisting Ropes

N2® Non-Rotating 35 xK19S Compacted								
Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	N.m	N.m	mm²
40		782	1327	1463	89	132	101	903
42		861	1463	1612	98	153	116	995
44.5	1 3/4	988	1677	1848	112	188	143	1141
48	1 7/8	1123	1908	2103	128	228	174	1298
50.8	2	1270	2156	2377	144	274	209	1467
54	2 1/8	1424	2418	2665	162	325	248	1645
57.2	2 1/4	1578	2695	2969	180	383	291	1833
63.5	2 1/2	2001	3399	3745	227	542	412	2312
66.7	2 5/8	2259	3834	4225	257	649	494	2608
69.9	2 3/4	2393	4065	4479	272	709	539	2765
73	2 7/8	2606	4419	4870	296	803	611	3006
76.2	3	2825	4789	5278	320	907	690	3258
79.4	3 1/8	3132	5318	5861	355	1060	806	3618

N2® Non-Rotating 35 xK26WS Compacted								
Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	N.m	N.m	mm²
82.6	3 1/4	3382	5737	6030	382	1076	861	3903
85.7	3 3/8	3631	6164	6478	410	1198	958	4193
88.9	3 1/2	3978	6750	7095	449	1373	1098	4592
95.3	3 3/4	4524	7682	8074	511	1667	1333	5226
102	4	5112	8673	9116	577	1999	1599	5900





SubSea Hoisting Ropes

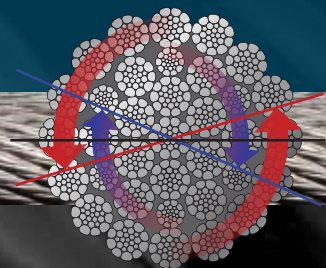
N2® Non-Rotating 35 xK7 Compacted

Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs N.m	Regular N.m	mm²
83	3 1/4	3180	5803	5417	382	1098	838	3685
86	3 3/8	3411	6085	5809	410	1193	911	3953
90	3 1/2	3737	6543	6366	449	1343	1025	4331
96	3 3/4	4255	7142	7248	511	1563	1193	4931
102	4	4808	7863	7773	577	1829	1396	5572
108	4 1/4	5388	8700	8711	647	2142	1635	6244

N2® Non-Rotating 55 xK26WS Compacted

Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs N.m	Regular N.m	mm²
108	4 1/4	5731	9554	10041	647	759	672	6499
114	4 1/2	6392	10658	11201	721	894	792	7250
121	4 3/4	7204	11995	12607	812	1068	946	8160
127	5	7934	13434	14120	895	1255	1112	9139
133	5 1/4	8702	14510	15251	981	1420	1258	9871
140	5 1/2	9642	16097	16918	1087	1658	1468	10950
142	5 5/8	9919	16795	17652	1119	1755	1554	11425
146	5 3/4	10486	17755	18661	1182	1907	1689	12078
148	5 7/8	10775	18244	19175	1215	1987	1759	12411
152	6	11366	19244	20226	1282	2152	1906	13091





SubSea Hoisting Ropes

N2® Non-Rotating 55 xK7 Compacted

Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs	Regular	mm²
114	4 1/2	5966	10385	10076	721	894	758	6854
121	4 3/4	6715	11198	10672	812	921	867	7715
127	5	7392	11971	11847	895	1034	973	8492
133	5 1/4	8117	13072	13009	981	1182	1113	9326
140	5 1/2	8988	14276	13707	1087	1359	1279	10326
142	5 5/8	9258	14402	14119	1119	1391	1309	10636
146	5 3/4	9778	15097	14912	1182	1499	1411	11233
148	5 7/8	10054	15455	15333	1215	1555	1464	11550

N2® Non-Rotating 55 xK19S Compacted

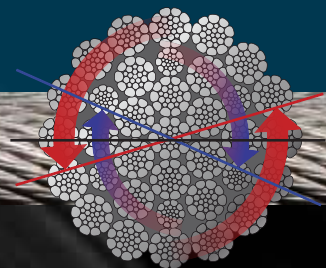
Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs	Regular	mm²
152	6	11244	19640	17963	1282	2030	1911	12877
154	6 1/8	11523	19656	18408	1316	2058	1937	13195
158	6 3/8	12133	20657	19382	1385	2219	2089	13894
160	6 1/4	12444	20717	19879	1420	2254	2121	14250
165	6 1/2	13244	22033	21157	1510	2472	2327	15166
174	6 7/8	14726	24658	23524	1680	2918	2746	16863
178	7	15406	25544	24612	1758	3092	2910	17643
180		15769	25884	25190	1797	3168	2982	18057

N2® Non-Rotating 55 xK31WS Compacted

Nominal Diameter		Approx Weight	MBL 1960	MBL 2160	Axial Stiffness @ 20% MBL	Torque Generated @ 20% MBL		Metallic Area
mm	inch	kg/100m	kN	kN	MN	Langs	Regular	mm²
154	6 1/8	11744	19738	20745	1316	2236	1981	13427
158	6 3/8	12367	20784	21845	1385	2416	2140	14139
160	6 1/4	12677	21308	22395	1420	2508	2222	14495
165	6 1/2	13481	22659	23815	1510	2751	2436	15414
174	6 7/8	14991	25194	26480	1680	3225	2857	17139
178	7	15681	26356	27683	1758	3449	3055	17929
180	7 1/8	16028	26939	28296	1797	3565	3158	18326

Torque generated based on 2160 grade
 Estimated Rope Mass in Sea Water = 0.87 x Rope Mass.
 All ropes manufactured in accordance with API/EN Standards.



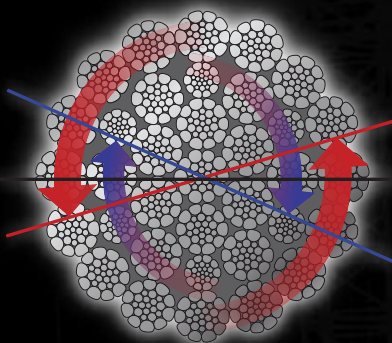


A&R Winch Ropes

Pipe Lay Barges manufacture oil and gas pipes, which are laid on the bottom of the sea. For several reasons, the manufactured pipe has to be disconnected from the barge, and laid down on the seabed for a certain time (abandon) once in a while. Eventually, the same pipe needs to be taken up from the seabed and lifted onboard again to continue the manufacturing process (recovery). Both S-lay and J-lay barges operate with A&R systems as described. Depending on water depth and subsequently the length of A&R ropes required, a choice of rope is made out of the following available rope constructions..



6x36WS+IWRC in single or dual use. Dual use of A&R ropes consist of a right and a left laid rope, operating as a pair. In the event of greater working depths, multi strand, low rotating ropes are applied. For instance, 24x36WS, 31x31WS, 35x19S, 35x36WS.

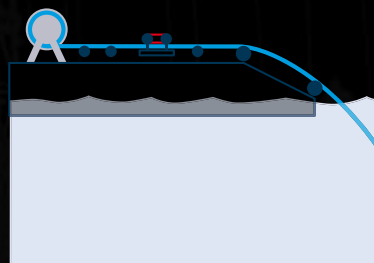


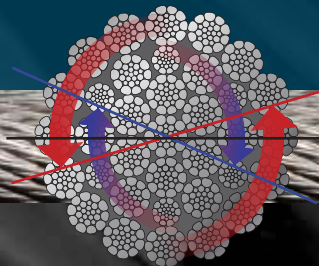
Single layer ropes, such as 6 and 8 strand constructions, have a much greater tendency to rotate under load than multi strand ropes. In fact, a multi strand rope is designed and manufactured to not rotate at all, or minimally.

The longer the ropes, the deeper the operation depths, the higher the tendency to rotate.

Torque

All wire ropes have inherent rotation characteristics that will produce a turning moment in the rope. With both ends fixed and unable to rotate, the turning moment will generate a TORQUE at the fixed points. Whereas, if one end of the rope is free to rotate, the generated force will result in rope TURN and therefore load rotation.





A&R Winch Ropes

Average torque factors for the following rope constructions are :

4x39WS+IWRC	torque 0.022
6x36WS+IWRC	torque 0.076
8x36WS+IWRC	torque 0.086
35x7 non rotating	torque 0.020
35x26WS non rotating	torque 0.018

Torque calculation

Now what we really want to know about a rope is how much torque is generated when a load is applied. The amount of torque generated by a rope under load is :

the applied load x torque value

Example :

100 mm rope, loaded by 20% of its MBL (160.000 kg)

The generated torque is

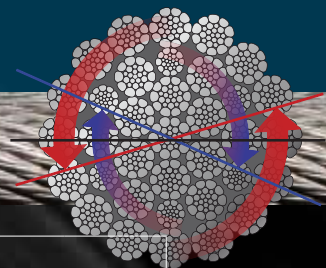
$160.000 \text{ kg} \times 0.076 \text{ (6x36WS+IWRC)} =$

12.160 kg/mm²

Traction winches

The A&R winch ropes are commonly stored on a storage drum onboard the vessel. To generate the power to abandon and recover the pipe, traction winches are applied. A twin drum winch device, requiring precise diameter/groove ratios, stable rope constructions, superior rope bending fatigue properties, excellent resistance to abrasion and rope crushing.





A&R Winch Ropes

A & R Winch Ropes

6x36WS+IWRC / 8x36WS+IWRC

Grade				EEIPS		ALPHA		DELTA		OMEGA	
nominal diameter		weight of rope		MBL		MBL		MBL		MBL	
mm	inch	kg/m	kg/m	kN	tonnes	kN	tonnes	kN	tonnes	kN	tonnes
		6x36	8x36								
50,8	2	11,3	11,5	1.930	197	2.216	226	2.285	233	2.384	243
54,0	2 1/8	12,8	13,0	2.160	220	2.363	241	2.471	252	2.578	263
57,2	2 1/4	14,3	14,6	2.420	247	2.697	275	2.834	289	2.957	302
63,5	2 1/2	17,8	18,1	2.950	301	3.295	336	3.462	353	3.612	369
66,7	2 5/8	19,7	20,0	3.240	330	3.629	370	3.815	389	3.980	406
69,9	2 3/4	21,4	21,8	3.530	360	4.011	409	4.207	429	4.394	448
73,0	2 7/8	23,5	23,9	3.840	392	4.384	447	4.599	469	4.805	490
76,2	3	25,4	25,9	4.170	425	4.815	491	5.060	516	5.276	538
79,4	3 1/8	27,6	28,1	4.490	458	5.119	522	5.374	548	5.610	572
82,6	3 1/4	29,9	30,5	4.840	494	5.462	557	5.737	585	5.992	611
85,7	3 3/8	32,2	32,7	5.180	528	5.953	607	6.247	637	6.531	666
88,9	3 1/2	34,8	35,4	5.520	563	6.463	659	6.786	692	7.090	723
95,3	3 3/4	39,9	40,6	6.280	640	7.002	714	7.355	750	7.698	785
102,0	4	45,3	46,0	7.060	720	7.806	796	8.199	836	8.554	873
108,0	4 1/4	51,1	52,1	7.730	788	8.287	845	8.699	887	9.076	926
114,0	4 1/2	57,4	58,4	8.590	876	9.209	939	9.670	986	10.089	1.029
121,0	4 3/4	63,9	65,0	9.480	967	10.160	1.036	10.670	1.088	11.132	1.136
127,0	5,0	70,8	72,0	10.430	1.064	11.160	1.138	11.719	1.195	12.226	1.248

A & R Winch Ropes

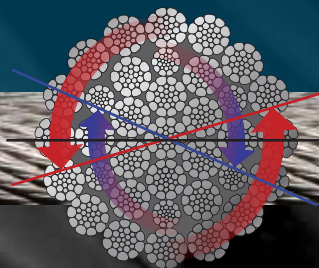
6xK36WS+IWRC / 8xK36WS+IWRC compacted

Grade				EEIPS		ALPHA		DELTA		OMEGA	
nominal diameter		weight of rope		MBL		MBL		MBL		MBL	
mm	ins	kg/m	kg/m	kN	tonnes	kN	tonnes	kN	tonnes	kN	tonnes
		6x36	8x36								
50,8	2	12,1	12,3	2.141	218	2.458	251	2.535	259	2.575	263
54,0	2 1/8	13,8	14,0	2.396	244	2.621	267	2.741	280	2.784	284
57,2	2 1/4	15,5	15,7	2.684	274	2.992	305	3.144	321	3.193	326
63,5	2 1/2	19,1	19,3	3.272	334	3.655	373	3.840	392	3.901	398
66,7	2 5/8	21,1	21,5	3.594	367	4.025	411	4.232	432	4.299	439
69,9	2 3/4	23,1	23,5	3.916	400	4.449	454	4.667	476	4.742	484
73,0	2 7/8	25,2	25,7	4.260	435	4.863	496	5.101	521	5.186	529
76,2	3	27,4	28,5	4.626	472	5.341	545	5.613	573	5.694	581
79,4	3 1/8	29,8	31,0	4.981	508	5.678	579	5.961	608	6.055	618
82,6	3 1/4	32,3	33,4	5.369	548	6.059	618	6.364	649	6.467	660
85,7	3 3/8	34,8	36,0	5.746	586	6.603	674	6.929	707	7.049	719
88,9	3 1/2	37,6	38,8	6.123	625	7.169	732	7.527	768	7.652	781
95,3	3 3/4	43,0	44,3	6.966	711	7.767	793	8.159	833	8.308	848
102,0	4	48,9	50,3	7.831	799	8.659	884	9.095	928	9.238	943

Estimated Rope Mass in Sea Water = 0.87x Rope Mass in Air. All Ropes manufactured in accordance with API/EN Standards

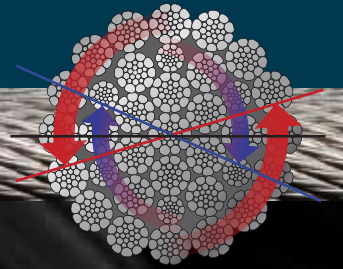
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