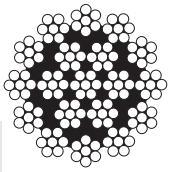
19x7 CLASS ROPES

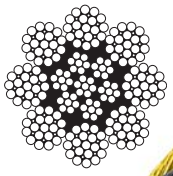


MINIMUM BREAKING FORCE AND WEIGHTS FOR 19x7 ROPES

Diameter (in.)	Approx. wt./ft. (lbs.)	Minimum breaking force (tons of 2,000 lbs.) XIP®IWRC
3/16	0.064	1.57
1/4	0.113	2.77
5/16	0.177	4.30
3/8	0.25	6.15
7/16	0.35	8.33
1/2	0.45	10.8
9/16	0.58	13.6
5/8	0.71	16.8
3/4	1.02	24.0
7/8	1.39	32.5
1	1.82	42.2
1 1/8	2.30	53.1
1 1/4	2.83	65.1
1 3/8	3.43	78.4
1 1/2	4.08	92.8

Should not be used with a swivel.
Category 2 rotation-resistance per ASTM A1023.

8x25 RESISTWIST ROPES

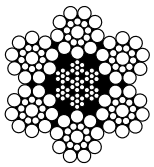


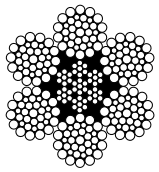
MINIMUM BREAKING FORCE AND WEIGHTS FOR 8x25 RESISTWIST

Diameter (in.)	Approx. wt./ft. (lbs.)	Minimum breaking force (tons of 2,000 lbs.) XIP®IWRC
5/16	0.18	4.63
3/8	0.26	6.63
7/16	0.36	8.97
1/2	0.47	11.6
9/16	0.60	14.7
5/8	0.73	18.1
3/4	1.06	25.9
7/8	1.44	35.0
1	1.88	45.5
1 1/8	2.39	57.3
1 1/4	2.94	70.5
1 3/8	3.56	84.9
1 1/2	4.24	100

Should not be used with a swivel.
Category 3 rotation-resistance per ASTM A1023.

Union





6x19 AND 6x36(37) CLASS ROPES

MINIMUM BREAKING FORCE AND WEIGHTS FOR STANDARD 6x19 AND 6x36 CLASS ROPES

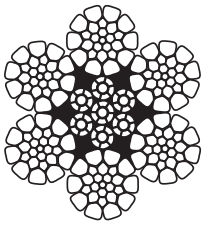
Diameter (in.)	Approx. wt./ft. (lbs.)	IWRC Minimum breaking force (tons of 2,000 lbs.) XIP®	XXIP®
1/4	0.116	3.40	
5/16	0.18	5.27	
3/8	0.26	7.55	8.30
7/16	0.35	10.2	11.2
1/2	0.46	13.3	14.6
9/16	0.59	16.8	18.5
5/8	0.7	20.6	22.7
3/4	1.0	29.4	32.4
7/8	1.42	39.8	43.8
1	1.85	51.7	56.9
1 1/8	2.34	65.0	71.5
1 1/4	2.89	79.9	87.9
1 3/8	3.50	96.0	106
1 1/2	4.16	114	125
1 5/8	4.88	132	146
1 3/4	5.67	153	169
1 7/8	6.50	174	192
2	7.39	198	217
2 1/8	8.35	221	244
2 1/4	9.36	247	272

Should not be used with a swivel.
Available in drawn galvanized at equivalent strengths.

Union

Flex-X® 6: Increased rope stability.

- **Superior performance 6-strand rope**
- **Increased service life**
- **Less sheave and drum wear**



Most applications for wire rope are extremely demanding. Wire rope must resist crushing, bending fatigue and abrasion. For example, clamshell closing lines must resist bending fatigue and boom hoists are subject to pressures that cause crushing. Overhead hoists test the stability and strength of a wire rope. All drum-related applications demand a rope that will spool and operate smoothly and dependably.

For crane applications where rotation-resistance is not required, Flex-X 6 provides users with superior performance and increased service life in many applications compared to the ropes they had previously employed. When compared to conventional 6 strand ropes, Flex-X 6 ropes provide greater surface area and more steel per given diameter, which increases rope stability and strength, too. This results in longer service life and less sheave and drum wear.

MINIMUM BREAKING FORCE AND WEIGHTS FOR FLEX-X 6 ROPES

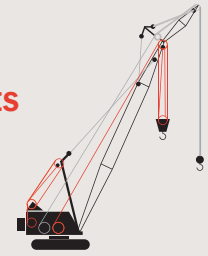
Diameter (in)	Approx. wt/ft (lbs)	Minimum breaking force (tons of 2,000 lbs)
3/8	0.32	8.8
7/16	0.41	11.9
1/2	0.55	15.3
9/16	0.70	19.3
5/8	0.86	22.7
3/4	1.25	32.4
7/8	1.67	43.8
1	2.18	56.9
1 1/8	2.71	71.5
1 1/4	3.43	87.9
1 1/2	5.01	125

Should not be used with a swivel.

FLEX-X 6 is recommended for:

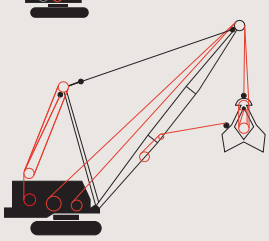
CRAWLER AND TRUCK CRANES

Main hoist rope
Boom hoist rope



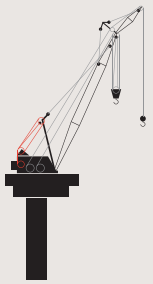
CLAMSHELLS AND GRAPPLES

Holding line
Closing line
Boom hoist rope

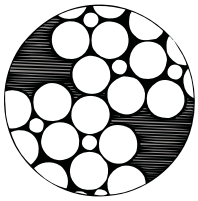


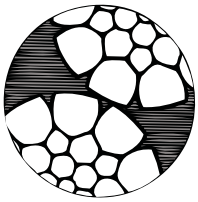
PEDESTAL/TOWER LUFFING CRANES

Boom hoist rope

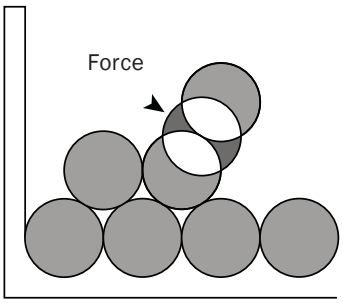


FLEX-X VS STANDARD 6 X 26 WS





Drum scrubbing between the lead line and the previous wrap is reduced.



Smooth contact creates less interference, less metal loss and wire deformation.

Union

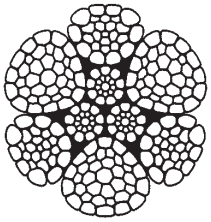
Flex-X® 9:

The best solution when drum crushing is your problem.

EXTRA STRENGTH AND VALUE

Designed to combat drum crushing challenges in boom hoisting applications, Flex-X 9 features compacted strands and swaging for extra drum crushing resistance and increased stability. Its high-density strands deliver extra strength, surprising bendability and a stubborn resistance to abrasion.

Flex-X 9 is manufactured with a dual compaction process to produce a compact cross-section with minimum voids and greater surface area on outer wires that contact drums, sheaves and the rope, itself, during operation. The high-density, compacted strands minimize nicking at strand-to-strand contact points.

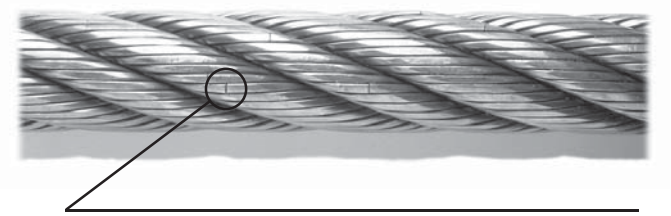


Flex-X 9 features compacted strands and swaging for an extra measure of drum crushing resistance and increased stability.

FLEX-X 9 TAKES THE GUESSING GAME OUT OF ROPE INSPECTION

While standard swaged ropes may develop internal broken wires before they do externally, FLEX-X 9's unique design combines compacted strands and a parallel lay minimizing internal stresses, making external wire breaks more likely to develop first. This makes inspection easier for you.

Removal criteria are more stringent for difficult-to-see interior breaks than for breaks on the outside wires.



Flex-X 9 allows users to stay abreast of rope fatigue with easy-to-locate breaks on its outside wires.

MINIMUM BREAKING FORCE AND WEIGHTS FOR FLEX-X 9

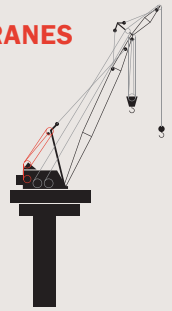
Diameter (in)	**Approx. wt/ft** (lbs)	**Minimum breaking force** (tons of 2,000 lbs)
5/8	0.90	26.2
3/4	1.30	37.4
7/8	1.79	50.6
1	2.33	65.7
1 1/8	2.93	82.7

Should not be used with a swivel.

FLEX-X 9 is recommended for:

CRAWLER AND TRUCK CRANES
Boom hoist rope

PEDESTAL /TOWER LUFFING CRANES
Boom hoist rope

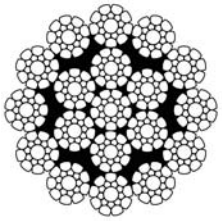


Flex-X® 19:

Union

Designed for single-part hoist systems on cranes.

- **Longer service life**
- **Lower operating costs**
- **Less wear to sheaves and drums**



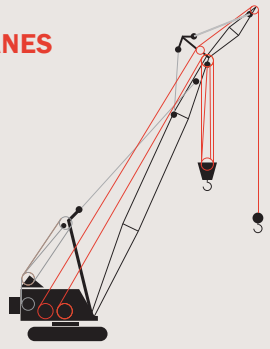
Flex-X 19, is designed for use anywhere the rotation-resistant characteristics of a category 2 rotation-resistant rope are required. Six strands are laid around a core strand in one direction, and then 12 strands are laid around this first operation in the opposite direction. Because of its tightly compacted smooth design, Flex-X 19 offers more crushing resistance than standard 19 x 7 rope, higher strength- to-diameter, resistance to bending fatigue, exceptional stability, reduced wear to sheaves and drums, and improved handling, operating and spooling characteristics.

Flex-X 19 has also demonstrated greater fatigue resistance to substantially cut rope expense and extend service life. It's ideal for multi-part hoist lines wherever you encounter spooling problems, drum crushing, block twisting or have fast line speeds.

FLEX-X 19 is recommended for:

CRAWLER AND TRUCK CRANES

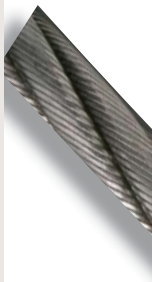
Main hoist rope
Auxiliary hoist rope



MINIMUM BREAKING FORCE AND WEIGHTS FOR FLEX-X 19

Diameter (in)	**Approx. wt/ft** (lbs)	**Minimum breaking force** (tons of 2,000 lbs)
7/16	0.43	11.2
1/2	0.49	14.6
9/16	0.65	18.5
5/8	0.78	22.7
3/4	1.16	32.4
7/8	1.58	43.8
1	2.05	56.9
1 1/8	2.57	71.5

Should not be used with a swivel.

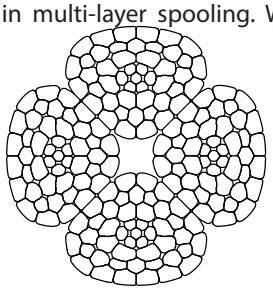


XLT4®: High strength, low torque.

Union

- **Greater lifting capacity, toughness and durability than any rotation-resistant rope you operate.**
- **Higher capacity, less torque, lower cost.**

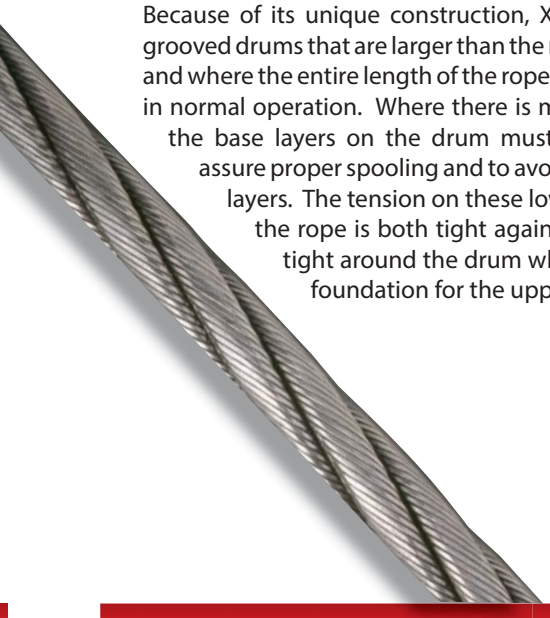
XLT4 ropes are specially designed to provide very low torque, a high minimum breaking force and high resistance to wear in multi-layer spooling. What sets XLT4 apart is its unique design. Double compacted XLT4 packs more high-tensile steel wire into the rope's diameter, resulting in one of the highest strength-to-diameter ratios ever achieved – with a minimum breaking force 33% higher than standard 6-strand XIP ropes.



Under load, XLT4 generates near-zero torque, matching or surpassing the stability of Category 1 35 x 7 class rotation-resistant ropes. Yet, thanks to its unique design, XLT4 is not classified as a "rotation-resistant" rope. It can be used with or without a swivel as a mobile crane hoist rope at design factors as low as 3.5 to 1.

XLT4 rope's compact construction keeps more steel in contact with sheaves and drums for unmatched resistance to crushing and wear – for lower maintenance, less downtime and longer service life. With the rope's high capacity, lifts may be feasible using fewer parts of line – boosting the speed, efficiency and productivity of crane work.

Because of its unique construction, XLT4 performs best on grooved drums that are larger than the minimum required D/d and where the entire length of the rope is subjected to loading in normal operation. Where there is multiple layer spooling, the base layers on the drum must be under tension to assure proper spooling and to avoid "pull-in" of the upper layers. The tension on these lower layers ensures that the rope is both tight against adjacent wraps and tight around the drum which establishes a solid foundation for the upper layers.



MINIMUM BREAKING FORCE AND WEIGHTS FOR XLT4 ROPES

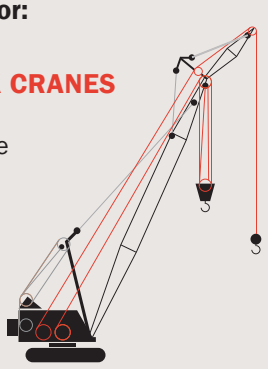
Diameter (in)	Diameter (mm)	Approx. wt/ft (lbs)	Minimum breaking force (tons of 2,000 lbs)
	12	0.45	15.8
1/2		0.51	17.7
	14	0.61	21.4
9/16		0.65	22.3
5/8		0.79	27.4
	16	0.79	27.8
	19	1.1	39.0
3/4		1.1	39.2
	22	1.5	52.0
7/8		1.5	53.0
	23	1.6	56.8
	24	1.8	61.7
1		2.1	68.9
	26	2.1	72.1
	28	2.4	83.3
1-1/8		2.6	86.7

May be used with a swivel.

XLT4 is recommended for:

CRAWLER AND TRUCK CRANES

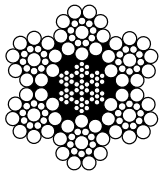
Main hoist rope
Auxiliary hoist rope



Drill Lines

Union

This demanding application requires a rope that is abrasion resistant, crush resistant, fatigue resistant and relatively stable.
Premium ropes may be used for specific applications. PFV cushions the strands, distributes internal stresses, keeps in wire rope lubricant and keeps out dirt and debris, extending the service life.

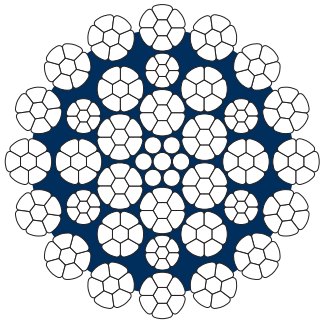


Diameter	Weight (lb/ft)	Minimum Breaking Force	
		XIP	XXIP
7/8	1.42	39.8	43.8
1	1.85	51.7	56.9
1-1/8	2.34	65	71.5
1-1/4	2.89	79.9	87.9
1-3/8	3.50	96	106
1-1/2	4.16	114	125
1-5/8	4.88	132	146
1-3/4	5.67	153	169
1-7/8	6.50	174	192
2	7.39	198	217
2-1/8	8.35	221	244
2-1/4	9.36	247	272

CASAR®
A WireCo® WorldGroup Brand

CASAR
STARLIFT XTRA

A premier hoist rope that provides the highest level strength available for main and auxiliary hoist applications on tower cranes, mobile cranes, and crawler cranes as well as other applications where rotation resistant ropes are required. Especially suited for multiple layer spooling.



Compacted Swivel Lubricated

nominal diameter		weight	minimum breaking force	
inch	mm	lb/ft	t [2000 lbs]	lbs
	14	0.67	23.38	46,760
	15	0.77	26.42	52,830
5/8	16	0.88	30.57	61,148
	17	0.99	33.95	67,892
	18	1.12	38.22	76,435
3/4	19	1.24	42.94	85,877
	20	1.38	47.32	94,645
	21	1.52	51.71	103,412
7/8	22	1.67	57.21	114,428
1	25.4	2.22	75.87	151,746
	26	2.33	79.25	158,490
	28	2.69	91.61	183,219
	30	3.09	104.99	209,972
1 1/4	32	3.51	121.96	243,918
	34	3.97	134.89	269,771
	36	4.46	150.62	301,244

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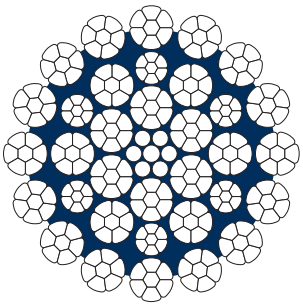
CASAR
STARLIFT PLUS



Compacted Swivel Lubricated

Application:
A premier hoist rope for main and auxilliary hoist applications on tower cranes, mobile cranes, and crawler cranes as well as other applications where rotation resistant ropes are required. Especially suited for multiple layer spooling.

nominal diameter		weight	minimum breaking force			
			1960 N/mm²		2160 N/mm²	
inch	mm	lb/ft	t 2000 lbs]	lbs	t [2000 lbs]	lbs
	10	0.34	10.34	20,682	11.02	22,031
7/16	11	0.40	12.48	24,954	13.38	26,752
	12	0.48	14.84	29,675	16.19	32,372
1/2		0.54	16.64	33,272	18.21	36,419
	13	0.56	17.42	34,845	19.00	37,993
	14	0.65	20.12	40,241	21.92	43,838
	15	0.75	23.16	46,311	25.29	50,582
5/8	16	0.85	26.42	52,830	28.89	57,776
	17	0.95	29.34	58,675	32.04	64,071
	18	1.08	33.50	66,993	36.53	73,063
3/4	19	1.20	36.98	73,962	40.35	80,706
	20	1.34	41.25	82,505	45.07	90,148
	21	1.46	45.19	90,373	49.35	98,691
7/8	22	1.61	49.68	99,366	54.29	108,583
	23	1.75	54.29	108,583	59.24	118,474
	24	1.91	59.01	118,025	64.41	128,815
	25	2.08	64.18	128,366	70.03	140,056
1		2.14	66.21	132,412	72.16	144,327
	26	2.23	69.13	138,257	75.42	150,847
	27	2.43	75.20	150,397	82.06	164,110
	28	2.61	80.82	161,638	88.13	176,250
1 1/8		2.70	83.52	167,033	91.16	182,320
	29	2.79	86.33	172,653	94.19	188,390
	30	3.00	92.96	185,917	101.50	203,002
	31	3.19	98.80	197,607	107.80	215,592
1 1/4	32	3.39	104.99	209,972	114.54	229,080
	33	3.64	112.74	225,483	123.08	246,166
	34	3.83	118.47	236,949	129.27	258,530
	36	4.31	133.42	266,848	145.68	291,352
1 1/2	38	4.80	148.60	297,197	162.20	324,399
	40	5.33	164.90	329,795	179.96	359,919
1 5/8		5.71	176.81	353,624	193.00	385,997
	42	5.87	181.65	363,291	198.28	396,563
	44	6.43	198.96	397,912	217.17	434,331
1 3/4		6.57	203.00	406,005	221.66	443,323
	46	7.03	217.50	435,005	237.40	474,796
1 7/8		7.56	233.91	467,827	255.38	510,766
	48	7.68	237.74	475,471	259.54	519,084
	50	8.34	258.19	516,386	281.80	563,596
2		8.61	266.74	533,472	291.02	582,030
	52	9.02	279.44	558,875	304.95	609,907
	54	9.78	302.93	605,860	330.58	661,163
	56	10.46	323.61	647,225	353.17	706,350

CASAR®
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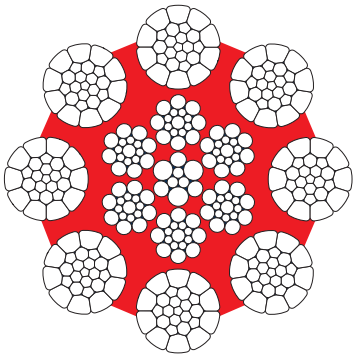
TURBOPLAST



PPI Compacted Lubricated

Applications:
High breaking load and good resistance against crushing. Hoisting rope in multiple part reeving for smaller lifting heights as well as for twin hoist systems with left and right hand lay ropes for greater lifting heights.

nominal diameter		weight	minimum breaking force			
			1770 N/mm²		1960 N/mm²	
inch	mm	lb/ft	t [2000 lbs]	lbs	t [2000 lbs]	lbs
5/16	8	0.19	5.74	11,488	6.36	12,724
	9	0.25	7.42	14,837	8.21	16,411
3/8		0.28	8.23	16,456	9.10	18,210
	10	0.31	9.01	18,030	9.97	19,941
7/16	11	0.38	10.91	21,829	12.08	24,167
	12	0.44	12.94	25,876	14.32	28,641
1/2	12.7	0.50	14.57	29,135	16.13	32,260
	13	0.52	15.35	30,709	17.01	34,014
	14	0.60	17.75	35,497	19.65	39,297
	15	0.70	20.58	41,163	22.78	45,569
5/8	16	0.79	23.29	46,580	25.79	51,571
	17	0.89	25.92	51,841	28.71	57,416
	18	0.99	29.25	58,495	32.39	64,790
3/4	19	1.10	32.83	65,667	36.36	72,726
	20	1.23	36.08	72,164	39.96	79,920
	21	1.32	39.43	78,863	43.67	87,338
7/8	22	1.47	44.03	88,058	48.75	97,500
	23	1.61	47.85	95,701	52.99	105,975
	24	1.75	52.21	104,424	57.81	115,619
	25	1.89	56.67	113,349	62.74	125,488
1		1.97	58.89	117,777	65.21	130,412
	26	2.06	61.70	123,398	68.32	136,639
	27	2.22	65.75	131,491	72.80	145,609
	28	2.37	70.77	141,540	78.38	156,759
1 1/8		2.47	74.09	148,172	80.43	160,851
	29	2.55	76.30	152,600	82.83	165,662
	30	2.76	81.73	163,459	88.72	177,442
	31	2.94	87.32	174,632	94.79	189,581
1 1/4	32	3.12	93.07	186,142	102.40	204,801
	33	3.35	98.38	196,753	106.80	213,591
	34	3.51	105.26	210,511	115.20	230,407
	36	3.92	116.91	233,824	126.93	253,854
1 1/2	38	4.40	130.73	261,453	141.92	283,844
	40	4.90	144.50	288,992	156.86	313,721
1 5/8		5.17	154.42	308,842	167.64	335,280
	42	5.35	159.84	319,678	173.53	347,060
	44	5.91	174.71	349,420	189.67	379,343
1 3/4		6.02	179.90	359,807	195.30	390,605
	46	6.44	192.55	385,098	209.04	418,077
1 7/8		6.91	205.73	411,468	223.36	446,718
	48	7.02	208.94	417,875	226.83	453,664
	50	7.36	223.24	446,470	247.20	494,400
2		7.59	230.33	460,656	255.05	510,091
	52	7.96	241.33	482,665	267.23	534,461
	54	8.58	260.35	520,702	288.31	576,612
	56	9.19	278.77	557,549	308.71	617,415
2 1/4		9.53	289.05	578,096	320.07	640,143
	58	9.82	297.82	595,631	329.78	659,567
	60	10.53	319.50	638,997	353.79	707,586
	62	11.26	341.47	682,947	378.13	756,257
2 1/2		11.85	359.41	718,826	398.00	796,003
	64	12.03	365.12	730,247	404.32	808,638
	66	12.83	389.08	778,154	430.85	861,693
	68	13.57	411.54	823,070	455.71	911,420
	70	14.33	434.52	869,044	481.17	962,339
	72	15.19	460.59	921,177	510.02	1,020,048
	74	16.07	487.52	975,041	539.86	1,079,712

OLIVEIRA
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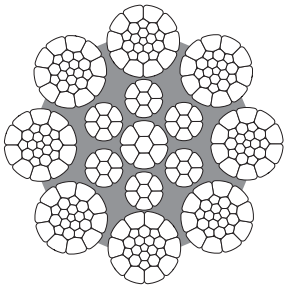
APPLICATIONS

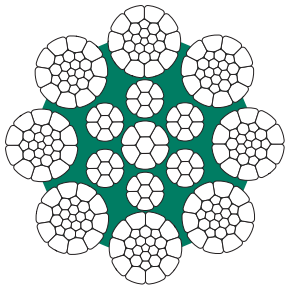
When rotation resistant ropes are not required (twin hoist systems with right and left ropes, small heights). Hoist for steel mill cranes, container cranes, floating cranes and boom hoist for deck cranes, luffing and mobile cranes, grab cranes.

OLIVEIRA
HD 8 K



Compacted Lubricated

OLIVEIRA
HD 8 K PPI



PPI Compacted Lubricated

nominal diameter		weight	minimum breaking force			
			1960 N/mm²		2160 N/mm²	
inch	mm	lb/ft	t[2000 lbs]	lbs	t[2000 lbs]	lbs
	8	0.19			6.52	13,039
	9	0.24			8.27	16,535
3/8"	9.5	0.26			8.95	17,899
	10	0.31			10.39	20,772
7/16"	11	0.37			12.59	25,179
	12	0.44	14.21	28,415	14.90	29,800
1/2"	12.70	0.48	15.51	31,015	16.26	32,526
	13	0.52	16.75	33,491	17.56	35,123
	14	0.60	19.46	38,922	20.41	40,819
9/16"	14.30	0.62	19.93	39,863	20.90	41,805
	15	0.69	22.61	45,228	23.72	47,432
5/8"	16	0.77	24.87	49,734	26.08	52,158
	18	0.99	32.05	64,098	33.61	67,221
3/4"	19	1.10	35.34	70,674	37.06	74,118
	20	1.24	39.85	79,692	41.79	83,576
7/8"	22	1.46	47.07	94,146	49.37	98,734
	24	1.71	57.29	114,577	60.08	120,160
1"	25.40	1.94	62.65	125,290	65.70	131,396
	26	2.05	66.19	132,386	69.42	138,838
	28	2.39	77.08	154,167	80.84	161,680
1 1/8"	28.60	2.46	79.52	159,043	83.40	166,793
	30	2.77	89.29	178,583	93.64	187,286
1 1/4"	32	3.15	101.75	203,499	106.71	213,415
	34	3.54	114.39	228,782	119.97	239,931
1 3/8"	34.93	3.70	118.91	237,823	124.71	249,413
	36	4.01	129.07	258,141	135.36	270,721
1 1/2"	38	4.44	142.82	285,634	149.78	299,553
	40	4.90	158.47	316,946	166.20	332,392
1 5/8"	41	5.09	164.59	329,183	172.61	345,225
	42	5.36	172.92	345,835	181.34	362,688
	44	6.05	195.09	390,183	204.60	409,198
1 3/4"	44.50	6.09	195.97	391,938	205.52	411,038
	46	6.57	211.68	423,356	221.99	443,987
1 7/8"	48	7.17	231.03	462,054	242.29	484,571
	50	7.86	253.23	506,469	265.57	531,150
2"	50.80	7.98	256.66	513,325	269.17	538,340
	52	8.46	272.80	545,594	286.09	572,182
	54	9.10	293.04	586,073	307.32	614,633
	56	9.80	315.29	630,588	330.66	661,318
	58	10.55	339.56	679,120	356.11	712,215
	60	11.23	362.39	724,776	380.05	760,096

OLIVEIRA
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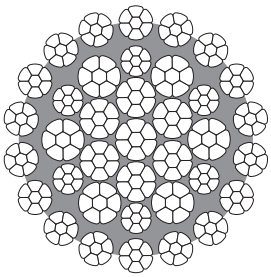
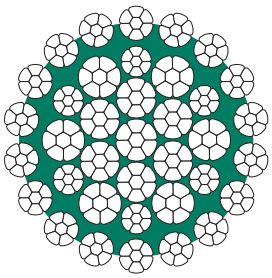
OLIVEIRA
NR MAXIPACT



OLIVEIRA
NR MAXIPACT PPI



APPLICATIONS

Main and auxiliary hoists where superior rotation resistant properties and superior minimum breaking forces (MBF) are required.

Recommend in marine and other severe working environments.

nominal diameter		weight	minimum breaking force			
			1960 N/mm²		2160 N/mm²	
inch	mm	lb/ft	t[2000 lbs]	lbs	t[2000 lbs]	lbs
1/2"	12.7	0.52	16.64	33,272	17.52	35,045
	13	0.55	17.73	35,468	18.62	37,248
	14	0.64	20.60	41,198	21.63	43,266
9/16"	14.3	0.65	21.07	42,142	22.13	44,257
	15	0.73	23.56	47,116	24.80	49,603
5/8"	16	0.84	26.91	53,820	28.26	56,521
	17	0.94	30.32	60,637	31.86	63,719
	18	1.05	34.01	68,015	35.71	71,428
3/4"	19	1.18	38.09	76,180	40.00	80,002
	20	1.30	42.06	84,120	44.17	88,341
	21	1.44	46.33	92,659	48.65	97,309
	22	1.57	50.81	101,610	53.35	106,709
7/8"	22.22	1.59	51.48	102,962	54.06	108,129
	23	1.72	55.62	111,236	58.41	116,818
	24	1.87	60.73	121,461	63.78	127,556
	25	2.04	65.99	131,985	69.30	138,608
1"	25.4	2.07	66.93	133,856	70.29	140,573
	26	2.20	71.29	142,584	74.87	149,739
	27	2.38	76.84	153,670	80.69	161,382
	28	2.55	82.51	165,019	86.65	173,299
1 1/8"	28.6	2.67	86.35	172,710	90.69	181,376
	29	2.73	88.80	177,599	92.67	185,335
	30	2.95	95.13	190,262	99.90	199,809
1 1/4"	32	3.34	107.87	215,730	113.28	226,556
	34	3.75	121.32	242,645	127.35	254,710
1 3/8"	34.93	3.99	128.91	257,820	135.19	270,384
	36	4.24	137.30	274,607	144.19	288,386
1 1/2"	38	4.71	152.01	304,026	159.43	318,869
	40	5.20	168.05	336,094	176.36	352,724
1 5/8"	41.28	5.58	180.08	360,165	189.12	378,238
	42	5.72	184.92	369,850	194.46	388,913
	44	6.32	204.42	408,839	214.68	429,354
1 3/4"	44.45	6.38	206.66	413,326	216.73	433,468
	46	6.97	224.33	448,651	235.58	471,165
1 7/8"	48	7.61	245.52	491,048	257.84	515,689
	50	8.09	262.10	524,194	275.52	551,042
2"	50.8	8.34	269.79	539,572	282.93	565,867
	52	8.89	286.49	572,988	300.84	601,670
	54	9.49	307.00	614,007	322.41	644,818