



833-241-LIFT (5438)
www.theliftsolutions.com

Elevator Products Catalog

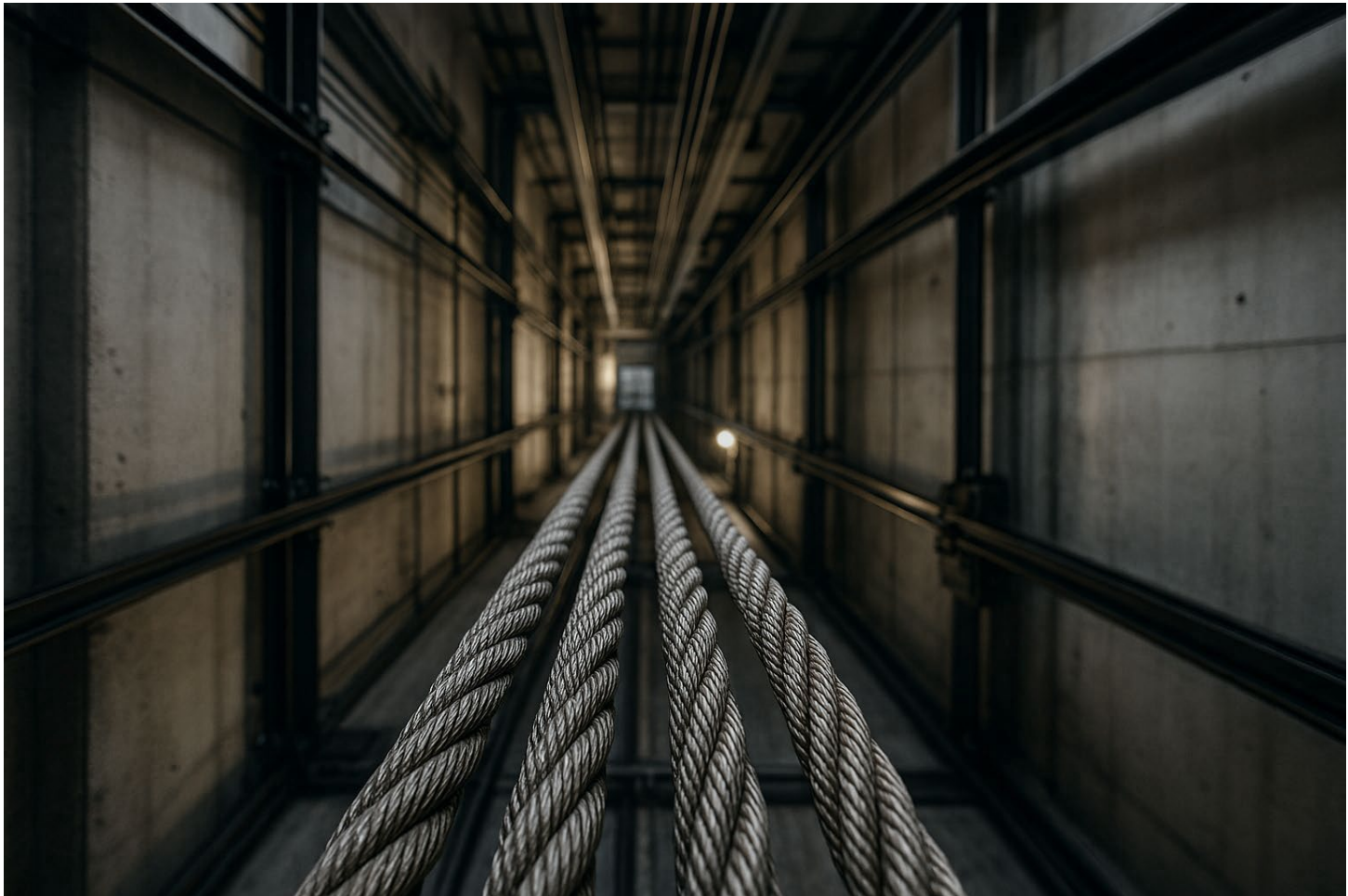


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Lift Solutions Holdings

Lifting America

Yesterday, Today, and Tomorrow

Lift Solutions Holdings is one of the largest distributors of elevator wire rope in the United States. Our 14 branch locations provide quality products, both domestic and non-domestic, at competitive pricing with a focus on exceptional customer service. Our experienced sales personnel and manufacturer representatives also provide elevator wire rope seminars and inspections to help enhance your wire rope service life.

In addition to products related to the elevator industry, Lift Solutions distributes wire rope and slings, lifting chains, synthetic slings, rigging fittings, and below-the-hook items to the commercial, industrial, and construction industries. View our full-product catalog by visiting us on the web at www.theliftsolutions.com.



WARNING: Lifting products can cause DEATH or INJURY resulting from misuse, damage, and excessive wear. Adhere to industry standards and regulations.

Sales & Fabrication Locations

Atlanta, GA 5580 Fulton Industrial Blvd. Atlanta, GA 30336 404-494-9994	Conshohocken, PA 181 Washington Street, Suite #400 Conshohocken, PA 19428	Las Vegas, NV 4401 McGuire Street, N. Las Vegas, NV 89081	New York City (NYC), NY 1049 Zerega Ave. Bronx, NY 10462 718-822-1110	Putnam, CT 58 Highland Drive Putnam, CT 06260 860-928-0475
Brooksville, FL 13031 Ponce DeLeon Bld., Brooksville, FL 34601 352-796-8632	Detroit, MI 1725 E. 14 Mile Road, Suite 100 Troy, MI, 48083	Miami, FL 1828-32 N.W. 82nd Ave. Doral, FL 33126 786-845-8617	North Haven, CT 78 Rebesch Drive North Haven, CT 06473 203-624-0422	Raleigh, NC 2630 Yonkers Road Ste. 106 Raleigh, NC 27603 919-831-2333
Chicago, IL 1406 175th St. East Hazel Crest, IL 60429 708-647-4900	Greenville, SC 164 P S Ct. Duncan, SC 29334 864-968-8900	Neenah - Gillingham 1315 Gillingham Road Neenah, WI 54956 800-236-2554	Pittsburgh, PA 295 Mount Nebo Road Pittsburgh, PA 15237 412-364-3300	
Coatesville, PA 1227 W. Lincoln Highway Coatesville, PA 19320 610-384-1800	Iron Mountain, MI 1400 Cedar Ave., Iron Mountain, MI 49801 800-338-9278	Neenah - Kimberly 1377 Kimberly Drive Neenah, WI 54956 920-722-0101		

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Elevator Wire Rope

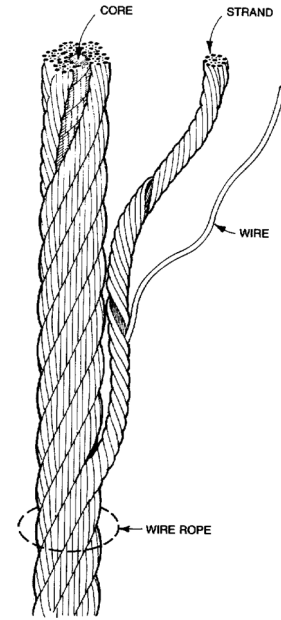
Wire Rope Specification

Elevator Wire Rope is specified by its diameter, construction, finish, grade, lay, preforming, and core.

Diameter is expressed in inches or millimeters and is the diameter of the smallest circle which can be circumscribed about the rope. The rope construction is generally stated as the number of outside strands and the number of wires per strand.

A **Bright** finish, **Right Regular Lay**, and **Fiber Core** are understood to be specified unless otherwise stated.

Prestretching, galvanized finish, left lay, lang lay, special fiber core, non-preformed wire rope, and independent wire rope core are all available for special ordering.



Technical Bulletins

Wirerope Works, Inc. (manufacturer of Bethlehem Elevator Wire Rope®) publishes service and technical bulletins on topics which affect the operation and service life of elevator wire rope. These include:

- | | |
|-------------------------------|-------------------------------------|
| 1. Elevator Rope Nomenclature | 8. Tensioning |
| 2. Elevator Rope Lubrication | 9. Fatigue |
| 3. Elevator Rope Rouging | 10. Sheaves and Grooves |
| 4. Elevator Rope Slippage | 11. Vibration |
| 5. Elevator Rope Stretch | 12. Moisture |
| 6. Lubricant Build-Up | SB1. Elevator Rope Investigation #1 |
| 7. Traction Sheave Hardness | SB2. Elevator Rope Investigation #2 |

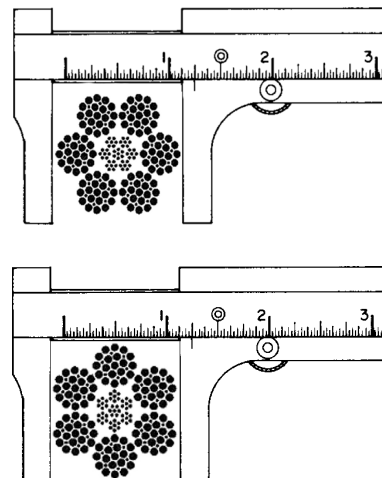


Wire Rope Diameter

The first differentiation of wire rope is by diameter.

The diameter is measured at the diameter of the circle formed by the extreme outer dimensions of the strands (See figs. at right). New wire rope is manufactured to an oversized diameter of approximately 2-1/2%.

This allows for the normal reduction of diameter experienced when a new rope is placed under load because of constructional stretch.



The RIGHT Way

The WRONG Way

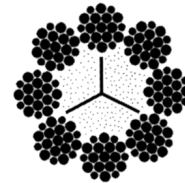
Bethlehem 8-Strand & 6-Strand Elevator Ropes

Wirerope Works, Inc. manufactures Bethlehem Standard Elevator Rope in a variety of diameters, constructions, lays, and grades.

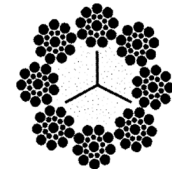


8 x 19 Standard Elevator Rope Technical Data

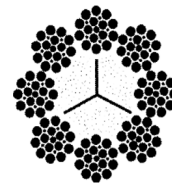
Diameter		8 x 19 Class (8x19 Warrington, 8x19 Seale, 8x21 Filler Wire, 8x25 Filler Wire)			
		Approx. Wt. (lb/ft)	Nominal Strength (lb)		
in	mm		Iron	Traction	EHS Traction
1/4	6.5	0.09	1,800	3,600	4,500
5/16	8.0	0.14	2,900	5,600	6,900
3/8	9.5	0.20	4,200	8,200	9,900
7/16	11.0	0.28	5,600	11,000	13,500
1/2	13.0	0.36	7,200	14,500	17,500
9/16	14.5	0.46	9,200	18,500	22,100
5/8	16.0	0.57	11,200	23,000	27,200
11/16	17.5	0.69	-	27,000	32,800
3/4	19.0	0.82	16,000	32,000	38,900
13/16	20.6	0.96	-	37,000	46,000
7/8	22.0	1.11	21,400	42,000	52,600
15/16	23.5	1.27	-	48,000	60,000
1	26.0	1.45	28,000	54,000	68,400
1-1/16	27.0	1.64	-	61,000	77,000



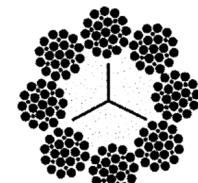
8 x 19 Warrington
through 7/16" diameter



8 x 19 Seale
3/8" diameter and larger



8 x 21 Filler Wire
1/2" diameter and larger

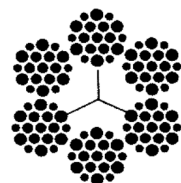


8 x 25 Filler Wire
1/2" diameter and larger

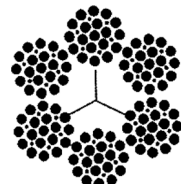
For information about sizes larger than 1-1/16" contact your Lift Solutions Sales Representative.

6 x 19 Standard Elevator Rope Technical Data

Diameter		6 x 19 Class (6x19 Warrington, 6x25 Filler Wire)			
		Approx. Wt. (lb/ft)	Nominal Strength (Tons)		
in	mm		Iron	Traction	EHS Traction
1/4	6.5	0.10	2,200	3,600	6,200
5/16	8.0	0.16	3,200	5,600	8,100
3/8	9.5	0.23	5,000	8,200	11,600
7/16	11.0	0.31	6,400	11,000	15,700
1/2	13.0	0.40	8,400	14,500	20,400
9/16	14.5	0.51	10,600	18,500	25,700
5/8	16.0	0.63	12,800	23,000	31,600
11/16	17.5	0.76	15,500	27,000	38,200
3/4	19.0	0.90	18,200	32,000	45,200
13/16	20.6	1.06	21,500	37,000	52,900
7/8	22.0	1.23	24,800	42,000	61,200
15/16	23.5	1.41	28,500	48,000	70,000
1	26.0	1.60	32,000	54,000	79,500
1-1/16	27.0	1.81	-	61,000	89,400



6 x 19 Warrington
through 5/16" diameter



6 x 25 Filler Wire
3/8" diameter and larger

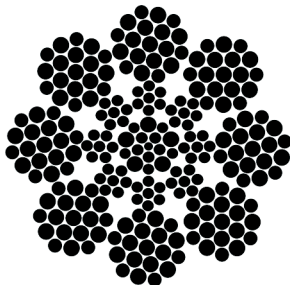
For information about sizes larger than 1-1/16" contact your Lift Solutions Sales Representative.

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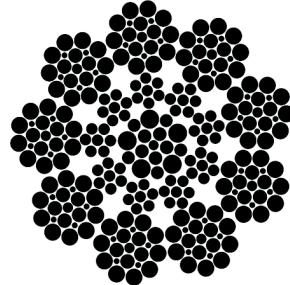
Bethlehem 8-Strand & 9-Strand IWRC Elevator Hoist Ropes

Steel Core Elevator Hoist Ropes are used where additional strength is required without increasing the diameter of the wire rope. An additional benefit of the steel core is that these ropes will exhibit somewhat reduced stretch when compared with that of fiber core ropes.

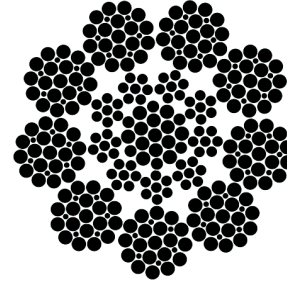
Equipment utilizing steel core elevator hoist ropes are specifically designed with the steel core in mind. Steel core ropes should not be used on equipment designed for fiber core ropes. Likewise fiber core ropes should not be used on equipment designed for steel core ropes.



10 mm 8x19 Warr BRT EHS RR FS IWRC



1/2" 9x21F BRT EHS RR FS IWRC



16 mm 9x25F BRT EHS RR FS IWRC

Elevator Hoist Ropes with Steel Core (IWRC)

Diameter		Construction	Approx. Wt. (lb/ft)	Nominal Strength (lb)	Load on Rope	Diameter Tolerance		Out-of-Round Tolerance
in	mm					Min.	Max.	
5/16	8	8x19 Warr BRT EHS RR FS IWRC	0.184	9,740	0 10%	0% -1%	3% 2%	2.5% 1.5%
	10	8x19 Warr BRT EHS RR FS IWRC	0.285	15,220	0 10%	0% -1%	3% 2%	2.5% 1.5%
1/2	12.7	9x21F BRT EHS RR FS IWRC	0.473	23,820	0 10%	0% -1%	3% 2%	2.5% 1.5%
	13	9x21F BRT EHS RR FS IWRC	0.486	25,200	0 10%	0% -1%	3% 2%	2.5% 1.5%
5/8	16	9x25F BRT EHS RR FS IWRC	0.729	39,120	0 10%	0% -1%	3% 2%	2.5% 1.5%
3/4	19	9x25F BRT EHS RR FS IWRC	1.021	55,200	0 10%	0% -1%	3% 2%	2.5% 1.5%

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Bethlehem Liftpac Elevator Rope

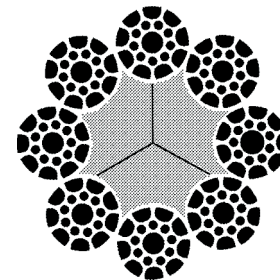
Liftpac is designed for use wherever elevator hoist ropes exhibit short service life. Liftpac is recommended for those applications where 1) adverse operating conditions exist, such as where loads and groove pressures are high; 2) reverse bends exist, and/or; 3) fatigue breakage with minimal surface wear is the primary factor for retirement.

Liftpac is not designed to remedy poor rope performance due to worn sheaves and/or differential groove depths. Under these conditions, unsatisfactory rope performance will still result.



Liftpac Elevator Rope Technical Data

Diameter		Liftpac		
		Approx. Wt. (lb/ft)	Nominal Strength (lb)	
in	mm		Traction	EHS Traction
3/8	9.5	0.23	9,000	11,000
1/2	13.0	0.39	16,000	19,400
5/8	16.0	0.62	25,400	30,800



FEATURES

Fatigue Resistance - The compacted strand surface minimizes the interstrand and interlayer nicking that takes place in elevator ropes, dramatically decreasing the amount of internal breaks. This reduction of internal wire breakage can also be expressed as an increase in reserve strength. By decreasing internal breakage at the interstrand contact points, Liftpac maintains its strength longer than standard elevator rope in severe bending applications.

Abrasion Resistance - Liftpac’s compacted strand design provides improved abrasion resistance when compared with 8-strand ropes because of the increased wire and strand surfaces contacting the sheaves and drums.

Resistance To Diameter Reduction - Liftpac’s compacted design resists diameter reduction due to the higher metallic content and less core deterioration at the strand contact area.

Noise Reduction - Liftpac’s compacted surface passes smoothly over drums and sheaves, allowing for an extremely quiet running rope.

INSPECTION

Due to Liftpac’s compacted strands, its slightly flattened crown appearance should not be misconstrued as wear. Two methods may be used during inspection to make a distinction between Liftpac and a standard worn rope.

1) Check the outer wires in the strand valleys. The crown wires of a worn standard rope will obviously be abraded or worn. As these wires travel into the valleys, however, they resume their normal rounded shape. The wires in a Liftpac rope retain their die drawn state throughout the crown and valleys.

2) Check the ropes at the shackles. If Liftpac is being used, the rope wires at the shackles will have the same flattened crown appearance. If the standard rope is worn, the rope wires at the shackles will be rounded.

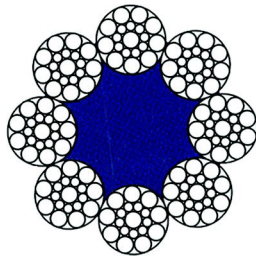
ASME and CAN/CSA inspection and removal criteria apply.

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

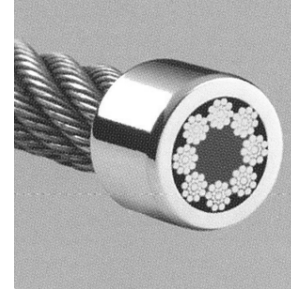
Usha Martin Elevator Wire Rope



Manufactured by Usha Martin Ltd., one of the world’s largest producers of wire and wire rope products.



- Metric & Imperial diameters
- Manufactured to International Standards ISO 4344 or EN 12385-5
- Dual Tensile design to reduce concerns of excessive sheave wear
- Post Production Prestretch to minimize constructional stretch
- Also available in 6-Strand, Galvanized, and Lang Lay upon request

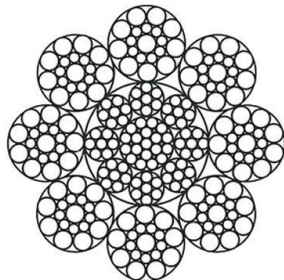


8x19 Class Right Regular Lay Fiber Core

Diameter		Approx. Wt.		Min. Break Force - Traction (1370/1770)		Min. Break Force - EHS (1570/1770)	
mm	in	kg/100m	lb/ft	kN	lb	kN	lb
8	5/16	21.8	0.15	28.1	6,320	30.8	6,920
9.5	3/8	30.7	0.21	39.7	8,930	43.6	9,800
10	-	34.0	-	44.0	-	48.1	-
11	7/16	41.1	0.28	53.2	11,960	58.1	13,060
12.7	1/2	54.8	0.37	70.9	15,940	77.5	17,420
13	-	57.5	-	74.3	-	81.2	-
14.3	9/16	69.5	0.47	82.1*	20,210	98.3	22,100
16	5/8	87.0	0.58	113	25,400	123	27,650
19	3/4	123	0.83	159	35,750	173	38,890

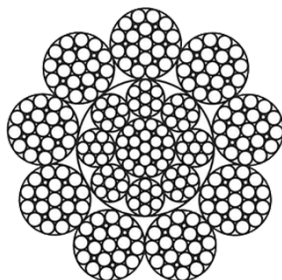
* Available only as 1180/1770 Grade

8x19 Class EHS Right Regular Lay IWRC



Diameter		Approx. Wt.		Min. Break Force - EHS (1570/1770)	
mm	in	kg/100m	lb/ft	kN	lb
8	5/16	26.0	0.17	38.0	8,540
9.5	3/8	36.7	0.25	53.7	12,070
10	-	40.7	--	59.5	-
11	7/16	49.2	0.33	71.9	16,160
12.7	1/2	65.6	0.44	95.9	21,560
13	-	68.8	-	100	-

9x19 Class EHS Right Regular Lay IWRC



Diameter		Approx. Wt.		Min. Break Force - EHS (1570/1770)	
mm	in	kg/100m	lb/ft	kN	lb
11	7/16	52.6	0.35	79.6	17,900
12.7	1/2	70.2	0.47	106	23,860
13	-	73.5	-	111	-
16	5/8	111	0.75	168	37,870
19	3/4	157	1.06	238	53,400

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Tiller Rope

Tiller Rope is one of the most flexible wire ropes made. However, because of its fine wires, it should be used only where loads are light and abrasion and crushing are at a minimum.

The 6x42 construction is comprised of 6 strands of 6x7 fiber core around a fiber core center. Manufactured in both Phosphor Bronze or Galvanized Steel, this rope is used as a hand rope in connection with the operating device of passenger and freight elevators, as steering cable on small boats and steamers, and for industrial and mining signaling devices.

Tiller Rope should NOT be used as a hoisting rope where breakage will endanger life or property.



6x42 Tiller Rope

Diameter in (mm)	Phosphor Bronze			Galvanized Steel		
	P/N	Min. Break Str.	Wt. M/ft	P/N	Min. Break Str.	Wt. M/ft
3/8" (9.5 mm)		2,960	180 lb		2,600	160 lb
7/16" (11 mm)		4,020	240 lb		3,540	210 lb
1/2" (12.7 mm)		5,190	305 lb		4,600	280 lb

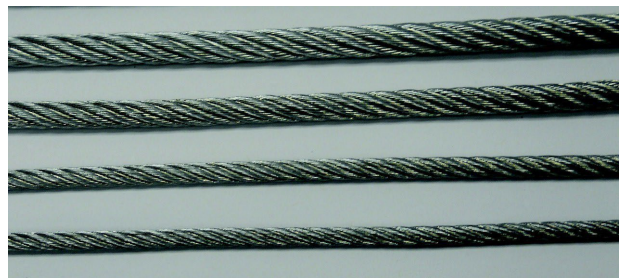
Galvanized Aircord

Small diameter galvanized wire rope, sometimes called **Galvanized Aircord**, is used in many applications including small winch lines, overhead doors, yacht rigging, and, even clothes line.

Selector Cable is a special application of 1/8" 7x19 Galvanized Aircord that has been specially lubricated and conforms to the MIL-W-83420 military specification.

7x19 Galvanized Aircord

Diameter (in)	Nominal Strength (lb)	Approx. Wt. lb/100 ft
1/8"	2,000	2.90
5/32"	2,800	4.50
3/16"	4,200	6.50
7/32"	5,600	8.60
1/4"	7,000	11.0
5/16"	9,800	17.3
3/8"	14,400	24.3



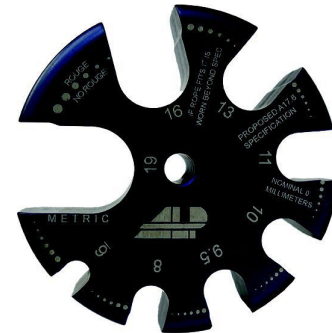
Wire Rope Go-NoGo Gauge

The **Go-NoGo Gauge** is designed for quick checks and is not meant to replace accurate diameter measuring techniques. To use the Go-NoGo Gauge, slip the elevator rope into the corresponding diameter groove. If the rope slides in, the diameter has reduced and the rope should be retired under the criteria established by ASME specifications for diameter reduction. Before final condemnation, use a caliper or other accurate diameter measuring tool to confirm the measurement.

- Manufactured with anodized aluminum for lightweight, durable construction
- More accurate than plastic models - diameter grooves will not wear as readily, nor will the grooves accommodate a rope whose diameter is still within acceptable limits under A17.6 specifications
- Nominal diameter provided on one side, ASME diameter reduction criteria for rope retirement on the other side
- ATL00I is Red in color and has 7 slots designed to gauge wire ropes from 3/8" to 3/4" in 1/16" increments
- ATL00KM is Blue in color and has 8 slots designed to gauge wire rope of 6 mm, 8 mm, 9.5 mm, 10 mm, 11 mm, 13 mm, 16 mm, and 19 mm diameters



ATL00I Wire Rope Gauge
(Imperial - Red)



ATL00KM Wire Rope Gauge
(Metric - Blue)

Wide-Jaw Wire Rope Caliper

- Stainless Steel Digital Caliper with 30 mm x 40 mm faces specifically designed to accurately determine wire rope diameters
- Measuring range is 0 - 150 mm (up to 6 inches)
- Accuracy is to within +/- 0.03 mm (+/- 0.0012")
- Zero setting at any position
- Convenient switch to change from inches to millimeters
- Uses SR 44 Watch Battery (included)



FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Elevator Shackles

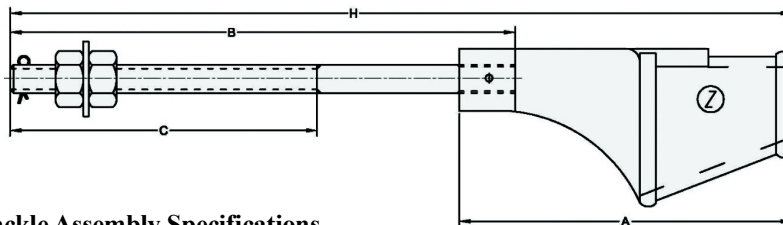
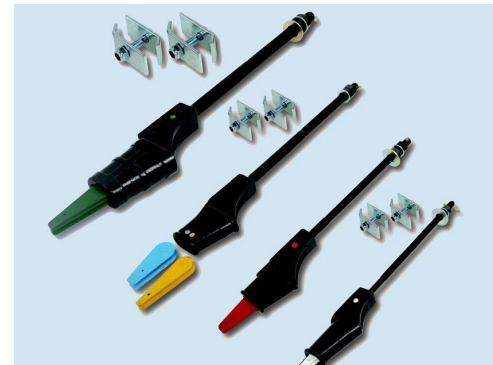
Zzipco Elevator Shackles

ZZWNS Elevator Shackles have been approved by MEA (City of New York, Building Department), the State of California, and TSSA, Canada.

All standard wedge shackles are painted with a black body color coded to match each wedge color for the highest safety standards.

Special wedge shackle assemblies are offered for governor rope applications.

All shackles come with wedge, two rope retaining clips, cotter pin, washer, and two (2) nuts as standard.



Wedge Shackle Assembly Specifications

Part No.	Size	A	B	C	Nut Size	H
ZZWNS8	1/4"-5/16" (6-8mm)	5"	12", 18", 24"	9.05"	M12	17", 23", 29"
ZZWNS10	3/8" (10mm)	6"	12", 18", 24"	9.05"	M14	17", 23", 29"
ZZWNS13	7/16"-1/2" (11-13 mm)	7.5"	12", 18", 24", 30", 36", 42"	9.05"	M20	18", 24", 30", 36", 42", 48"
ZZWNS16	9/16"-5/8" (14-16 mm)	7.5"	12", 18", 24", 30", 36", 42"	9.05"	M20	18", 24", 30", 36", 42", 48"
ZZWNS19	11/16"-3/4" (17.5-19 mm)	9"	12", 18", 24", 30", 36", 42"	9.05"	M24	19.5", 25.5", 31.5", 37.5", 43.5", 49.5"

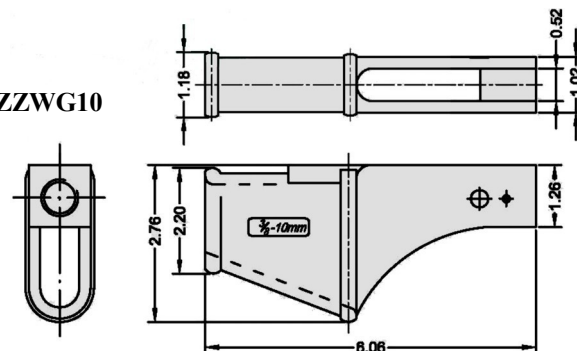
Standard Rod Lengths are listed above. Additional rod Lengths are available.

Governor Wedge Shackle Specifications

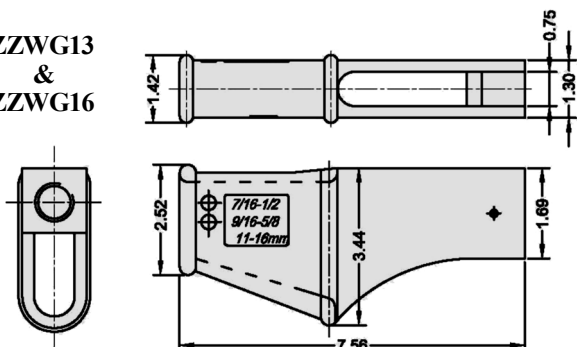
Part No.	Size
ZZWG10	3/8" (10 mm)
ZZWG13	7/16"-1/2" (11-13 mm)
ZZWG16	9/16"-5/8" (14-16 mm)



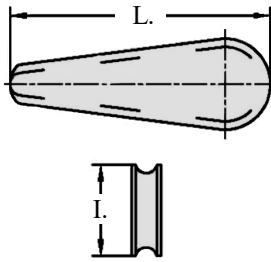
ZZWG10



ZZWG13 & ZZWG16

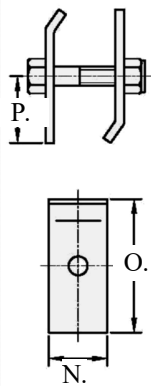
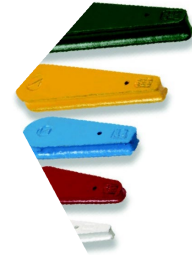


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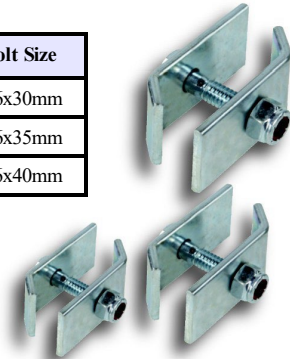
Wedge Insert Specifications

Part No.	Size	L	I	Color
ZZWW8	1/4"-5/16" (6-8mm)	3.25"	0.9"	White
ZZWW10	3/8" (10mm)	3.75"	1.3"	Red
ZZWW13	7/16"-1/2" (11-13 mm)	4"	1.6"	Blue
ZZWW16	9/16"-5/8" (14-16 mm)	4.7"	1.3"	Yellow
ZZWW19	11/16"-3/4" (17.5-19 mm)	5.5"	1.57"	Green



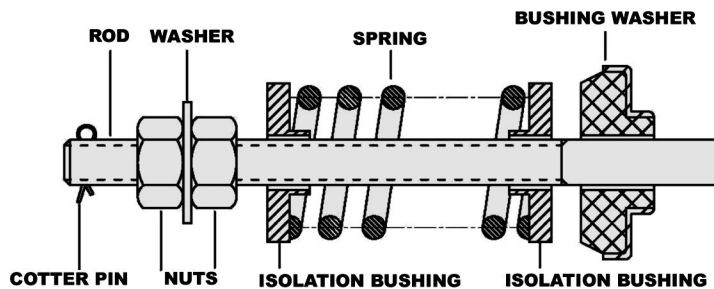
Retaining Clip Specifications

Part No.	Size	N	O	P	Nut Size	Bolt Size
ZZWRC810	1/4"-3/8" (6-10 mm)	1"	1.58"	0.7"	M6	M6x30mm
ZZWRC1316	7/16"-5/8" (11-16 mm)	1"	1.84"	0.94"	M6	M6x35mm
ZZWRC19	11/16"-3/4" (17.5-19 mm)	1"	2.14"	1.06"	M6	M6x40mm



Spring Isolation Bushing Assembly

Spring Isolation Bushing Assemblies assist in providing equal tensioning of all wire rope. In addition, metal parts are isolated to provide noiseless operation between the sockets, spring, and hitch plate.

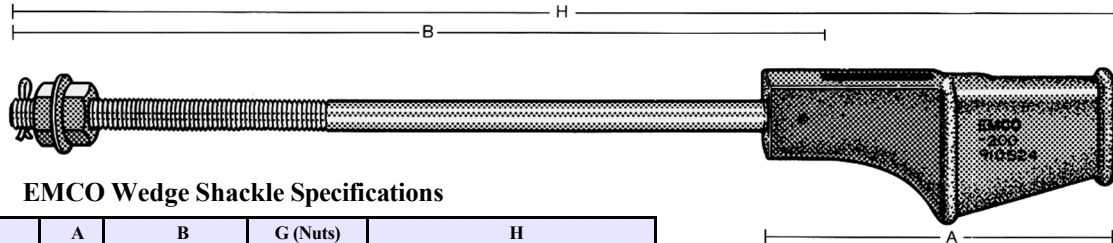


Spring Isolation Bushing Assembly

Part No.	Size
ZZWS10	3/8" (10 mm)
ZZWS13	7/16"-1/2" (11-13 mm)
ZZWS16	9/16"-5/8" (14-16 mm)
ZZWS19	11/16"-3/4" (17.5-19 mm)

EMCO Elevator Shackles

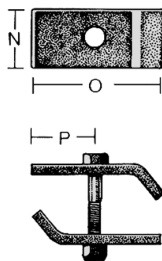
EMCO Series 100, 200, 400, and 500 Wedge Rope Shackles are tested with IWRC INNER WIRE ROPE CORE TRACTION STEEL elevator rope and exceed ANSI A17.1 Section 2.20-2000 Safety Code. All rod threads are rolled for greater tensile strength in the thread area. Standard rod lengths are listed below. Other rod and thread lengths are available. All standard wedge sockets are painted black. Special colors, finishes, or other non-standard features are available as are metric threads. All sockets come with cotter pin, washer, and two (2) nuts as standard.



EMCO Wedge Shackle Specifications

Wedge Socket	A	B	G (Nuts)	H
EM 100 (3/8" - 10mm)	6	12,18,24	1/2-13 UNC	17, 23, 29
EM 200 (7/16" - 13mm)	7.5	12,18,24,30,36,42	3/4-10 UNC	18.25, 24.25,30.25,36.25,42.25,48.25
EM 400 (11/16" - 19 mm)	9	12,18,24,30,36,42	7/8-9 UNC	19.5,25.5,31.5,37.5,43.5,49.5
EM 500 (13/16" - 22 mm)	12	24,30,36,42,48	1-3/8-6 UNC	34.5,40.5,46.5,52.5,58.5

RETAINING CLIPS



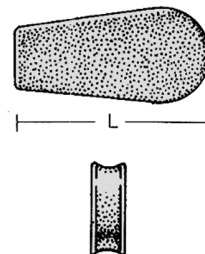
Retaining Clip Specifications

Retaining Clip	N	O	P	Nut Size	Bolt Size
EM 103 (3/8" - 10 mm)	7/8	1.61	0.7	M6	M6 x 35 mm
EM 203 (7/16" - 16 mm)	7/8	1.88	0.94	M6	M6 x 35 mm
EM 403 (11/16" - 19 mm)	1	2.25	1.06	M6	M6 x 40 mm
EM 503 (13/16" - 22 mm)	1-3/16	2.84	1.42	M6	M6 x 45 mm

Wedge Insert Specifications

Wedge Insert	L	Color
EM 101 (3/8" - 10 mm)	3.74	Black
EM 201A (7/16" - 13 mm)	4.00	Blue
EM 202 (9/16" - 16mm)	4.70	Red
EM 401 (11/16" - 19 mm)	5.51	Yellow
EM 501 (13/16" - 22 mm)	6.79	Purple

WEDGE INSERT



EMCO Elevator Rope Shackles

- Performance tested to exceed requirements of ANSI A17.1 Section 2.20-2000 using IWRC Inner Wire Rope Core Traction Steel Elevator Rope.
- Safer than handling molten babbitt or chemicals
- Installation methods are easier to teach
- Proven in thousands of applications
- Save over 50% on cost and labor versus babbitt and resin socketing
- Easy, consistent installation
- Simple adjustment procedure for shortening ropes
- Easy method of inspection to assure correct installation
- Exceeds all OEM Specifications

NOTE: Actual Dimensions and specifications of the products listed on this page and the following page may change without notice to conform with the most recent regulations and standards.

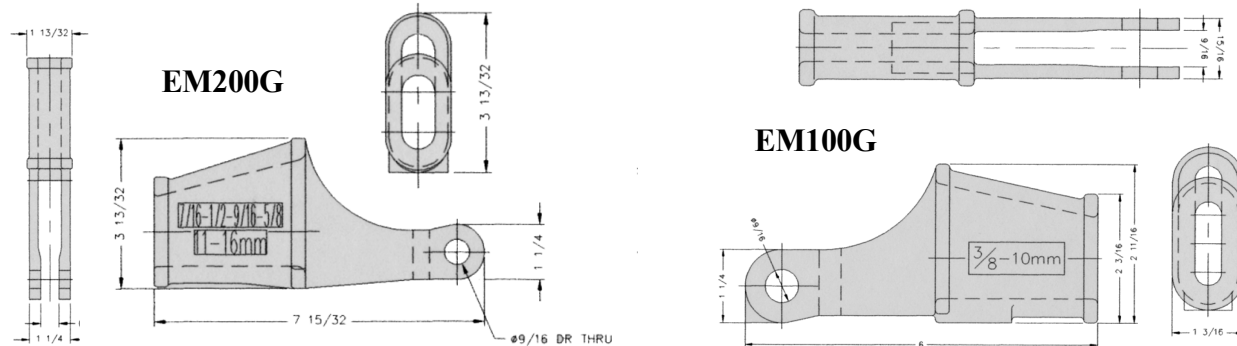
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EMCO Governor Shackles

EM100G and EM200G wedge rope shackles are designed for use on governor ropes.

The EM100G is designed for 3/8" - 10 mm ropes and the EM200G is designed for 7/16" - 16 mm ropes. Governor Rope Shackles should be purchased with wedge inserts and retaining clips as previously shown.

In addition, Part Number EM100/200G Bolt Assembly can be ordered. This item consists of bolt, nut, and cotter pin to insert through the eye in casting and allows for securing the socket to the governor.



EMCO Babbitt Shackles

EMCO Babbitt Shackles are forged, normalized, and tempered. Standard units are painted black and come with cotter pin, washer, and two (2) nuts.

Special colors, finishes, and other non-standard features are available.



Babbitt Socket Specifications

Babbitt Socket	Size	A	B	G (Nuts)
Em 4 (1/2" Rope)	1/2 x 18	6	18	3/4-10 UNC
EM 5 (1/2" Rope)	1/2 x 24	6	24	3/4-10 UNC
EM 7 (5/8" Rope)	5/8 x 18	7	18	7/8-9 UNC
EM 8 (5/8" Rope)	5/8 x 24	7	24	7/8-9 UNC

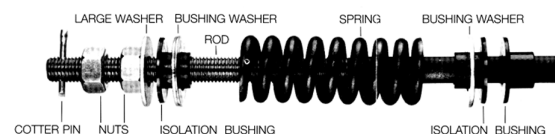
Spring Isolation Bushing Assemblies

Spring Isolation Bushing Assemblies provide:

- Equal tension on all wire ropes
- Isolation of all metal parts between sockets, springs, and hitch plate for noiseless operation.

Spring Isolation Bushing Assemblies are provided complete with springs, bushings, and washers specifically sized for the speed and capacity of the elevator.

Three basic models: EM 901, EM 1001, EM 1101. Other models are available for heavy duty and high rise cars.



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Related Elevator Products

Elevator Belts

INTRODUCING OEM OTIS GEN2 COATED STEEL BELT
 THESE BELTS ARE MANUFACTURED IN THE SAME FACTORY THAT SUPPLY OTIS, MEETING ALL ORIGINAL SPECIFICATIONS
 LAUNCH OFFERING 3 COMMON SIZES: 32KN, 43KN, 64KN



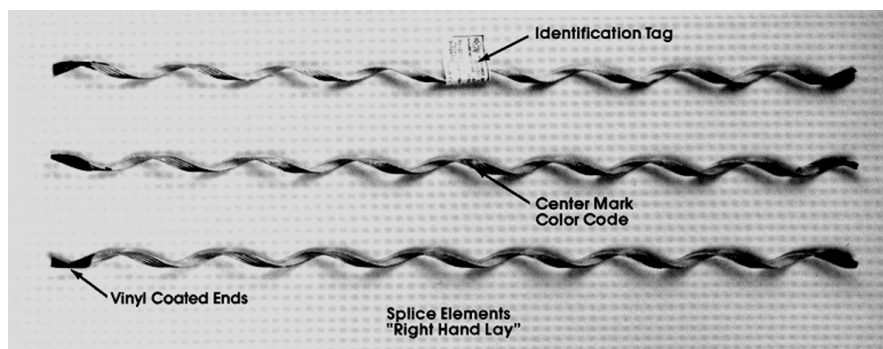
PART NO.	DESCRIPTION	MANUFACTURER
AAA717X1	CSB, 32kN Gen2 Limited Duty, 30mm. Approximate Weight: 0.203kg/m = 0.136 lf/ft. Minimum breaking load 7173 lb	Brugg
AAA717AJ2	CSB, 43kN Gen2, 30mm. Approximate Weight: 0.242 kg/m = 0.163 lf/ft. Minimum breaking load 9666 lb	Contitech
AAA717AD1	CSB, 64kN Gen2 Extended Duty, 60mm. Approximate Weight: 0.406 kg/m = 0.272 lf/ft. Minimum breaking load 14387 lb	Brugg

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Reeving Splices

Reeving Splice Specifications

PIN #	Wire Rope Size (in)	Units per Carton	Wt. per Carton (lb)	Length (in)	Color Code	Overall Diameter of Spliced Rope
RS-2105	1/2	10	8	29	Black	0.64"
RS-2107	5/8	10	13	36	Black	0.797"
RS-2108	11/16	10	17	40	Red	0.887"
RS-2109	3/4	10	18	42	Green	0.95"
RS-2110	13/16	10	24	46	Yellow	1.036"
RS-2111	7/8	10	28	50	Blue	1.113"



Application takes only seconds.

Reeving splices eliminate much of the bother associated with the former method of marrying rope ends.

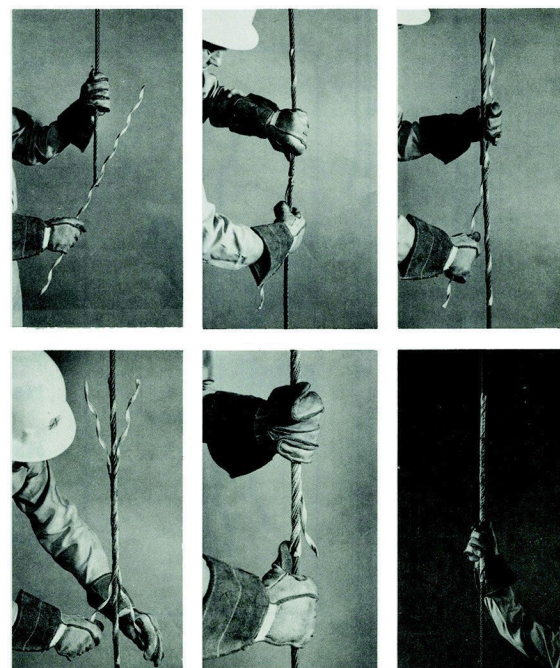
Preformed Reeving Splices are designed to hold working loads from zero to 2,000 pounds.

For safe performance of the product, it is recommended that reeving splices be used for one application and then discarded.

For proper performance and personal safety, be sure to select the proper size Reeving Splice before installation.

Reeving Splices may be used on Galvanized Steel Elevator Wire Rope.

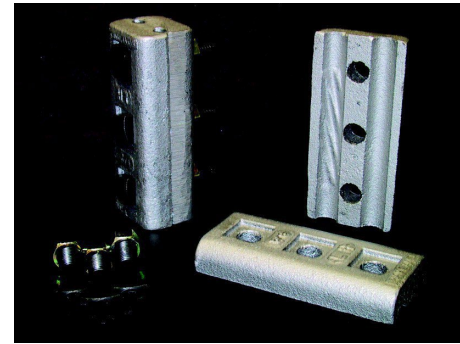
CAUTION: Reeving splices are not designed or intended for full-strength applications. The purpose of their application is for replacing ropes, not for a permanent splice installation.



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Roebing Clamp

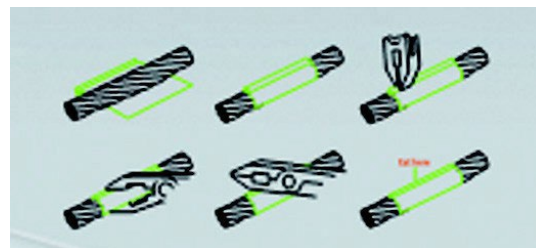
The **Roebing Clamp** utilizes spiral ridges on one side of the groove to resist slippage. Properly applied, the clamp will allow two parallel ropes to share the load during shortening or tensioning applications. The clamps are designed for either 1/2" or 5/8" diameter ropes. When the included bolts are torqued to 50 ft-lbs the clamp maintains a maximum safe working load of 600 lb per rope.



Cable Bands

Cable Bands are made of pliable material indented with a groove and lock seam at one edge. Application of the band is simple, requires no special tools, and may be made in seconds with an ordinary pair of pliers.

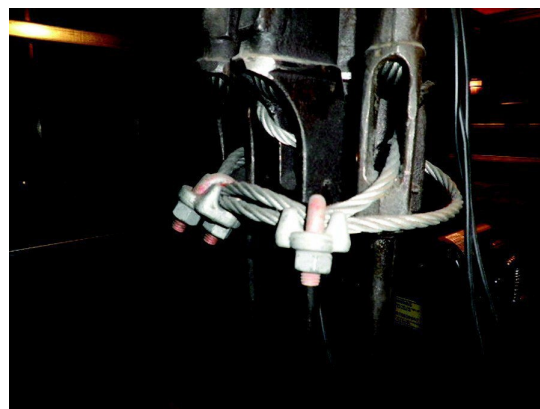
Cable Bands are packaged 50 per box and are designed to fit a particular diameter of rope from 3/16" to 1-1/2".



Shackle Tie Kits

Shackle Tie Kits are used to minimize the rotation of elevator rope wedge sockets under load. Once equal tension has been established, the shackles need to be secured to prevent rotation during the operation of the elevator. A short length of wire rope is laced through the shackles and the ends are joined using wire rope clips. (Local elevator codes vary as to the diameter of the wire rope required.)

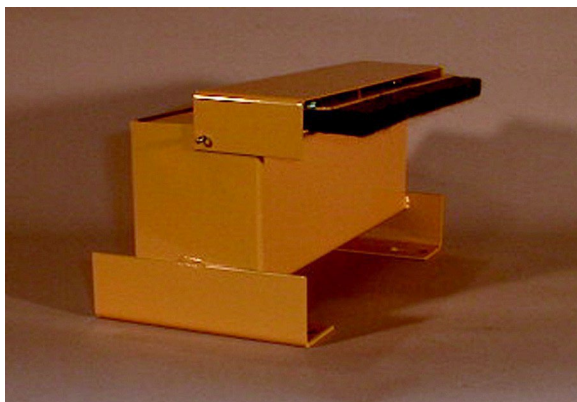
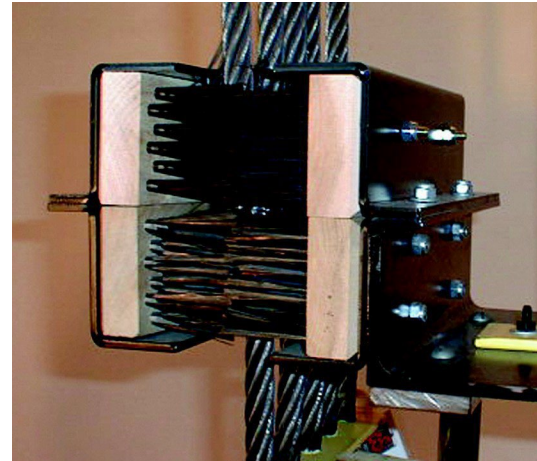
The Shackle Tie Kit contains a short length of wire rope and two (2) wire rope clips.



Wire Rope Cleaner

The **WRC-2000 Wire Rope Cleaner** eliminates the need to clean elevator hoist ropes manually thus saving labor costs and down-time of the elevator. This assembly is designed to clean the elevator hoist ropes passively as the wire rope is used in the elevator's everyday operation.

The WRC-2000 maintains the cleanliness of the wire rope without involving any moving mechanism, thereby increasing the durability and longevity of the wire rope.



Wire Rope Lubricator

The **WRC-2000-LP Wire Rope Lubricator** reduces the friction between the elevator ropes and machine drive sheaves, minimizes corrosion due to atmospheric and/or operating conditions, and reduces bending fatigue by allowing movement between the wires and strands.

Together with the WRC-2000 Wire Rope Cleaner, this is the ultimate in elevator rope maintenance.

Babbitt

Our superior lead alloy **Babbitt** is used for shackling of elevator wire ropes. The combination of lead, tin, and antimony (approx. 88/12/5 ratio) has a melting point of 475 degrees Fahrenheit.

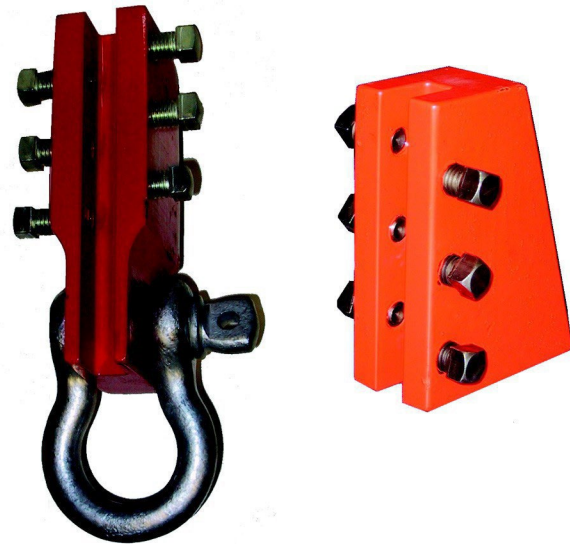
The Babbitt pours (casts) between 725 degrees and 775 degrees Fahrenheit. At ambient temperatures the Babbitt forms an effective cone to secure the wires within the Babbitt socket cavity.



Rail Blocks

Rail Block (left) and **Rail Block with Clevis** (right) are used to hang the elevator car or counter weight at any position in the hoistway. The maximum, safe working load limit is 25,000 lb per pair of Rail Blocks when the bolts have been properly installed to 70 ft-lbs of torque. Rail blocks are available for three rail sizes (5/8" rail, 3/4" rail, & 1-1/8" / 1-1/4" rail).

Rail Blocks MUST be used in pairs.



Seizing Wire

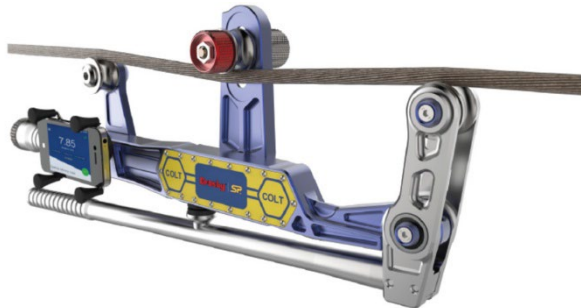
Seizing Wire (sometimes called "Mousing Wire") has a variety of uses where light-duty or temporary securement is required. The 21 gauge (0.0286" dia.) dark annealed steel wire is handy for whipping, bailing, binding, mousing, seizing, and other fastening applications.

These 1/2 lb spools contain approximately 186.5 ft of wire.



Crosby Straightpoint Clamp On Line Tension Meter (COLT)

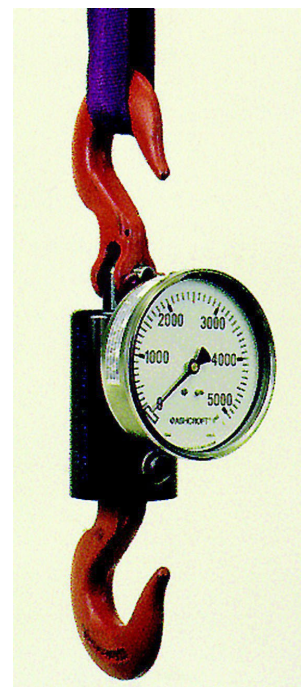
- Lightweight wire rope tension meter for fast and accurate measurement of tensions up to 11,000 lb and up to 1 in diameter.
- Constructed from aerospace grade aluminum.
- Unlimited wire rope calibration database via Android or iOS app.
- Built-in magnetic smart device holder for on board display.
- Main swivel joints fitted with high-quality bearings.
- Lever ratio of 5.3:1 allows effortless, safe, clamping onto pre-tensioned wire ropes.
- Wireless Bluetooth 4.2 enabling operator to stand a safe distance away, up to 328 ft.
- Quick intuitive adjustable center sheave makes changing wire rope sizes fast and easy.
- No easily broken external antenna.
- High waterproof resistant design IP67 or NEMA6 for all weather use.
- Long battery life of 1,000 hrs Bluetooth transmission time.
- As the library of wire rope diameters and constructions is increased each app user will benefit when they update free of charge.
- Max Line Reduction: 7/32“ with a Ø3/8” wire rope
- Wire Rope Database: Infinite via Android or iOS app.
- Battery Type: 2 x ‘C’ cell batteries.
- Operating Temperature: -13°F to +158°F
- Accuracy: ±3% of full scale if wire rope Ø and construction known.
- COLT calibration rod is included as standard.



Dynamometer

- Used to measure governor pull-through tension or empty car weight
- Accuracy at an affordable price (within 2%)
- Choice of 2,000 lb or 5,000 lb gauge
- Solid all-metal construction
- Made in the U.S.A.

Model #	Range
LM2-0900	0 - 900 kg
LM2-2000	0 - 2000 lb
LM2-2200	0 - 2200 kg
LM2-5000	0 - 5000 lb



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Dynaline Tensionometer

The **Dynaline Tensionometer** electronic load cell devices are designed specifically for measuring forces in tensioned wire ropes. An on-board microprocessor corrects the force information to the specific wire rope specification. The standard database will store up to seven different diameter/construction wire rope specifications. The unit is powered by 3 AA Alkaline batteries. The Dynaline can be used on both vertically and horizontally pretensioned ropes.

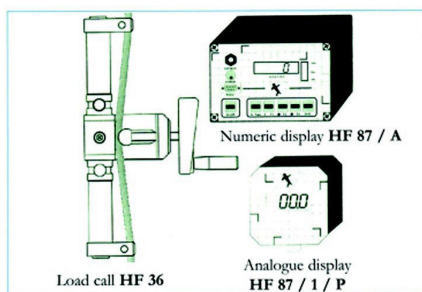
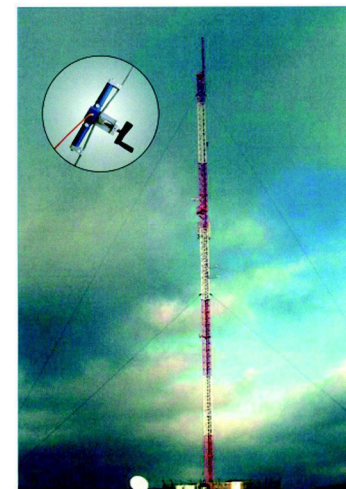


Model	Wire Rope Diameter	Capacity	Length	Weight
HF 36/1	3/16" to 1/2" (4 to 13 mm)	5.5 tons (50 kN)	14.6" (370 mm)	4.4 lb (2 kg)
HF 36/2	3/8" to 1-1/4" (9 to 28 mm)	22 tons (200 kN)	19.7" (500 mm)	8.8 lb (4 kg)
HF 36/3	7/8" to 1-3/4" (20 to 44 mm)	40 tons (365 kN)	31.5 in (800 mm)	43 lb (19.5 kg)
HF 87/1/p	-	-	-	2.2 lb (1 kg)
HF 87/A	-	-	-	0.66 lb (0.3 kg)

Dynarope Tensionometer

The **Dynarope Tensionometer** has been designed for measuring forces in pretensioned wire rope that cannot be dismantled and for which tension must be known or confirmed. It fits directly onto the tensioned wire rope and is simply held in position by turning a handle. This device is comprised of a load cell with strain gauges and a display driven by a microprocessor. Display of force measured by the load cell takes into account the parameters you enter; such as the diameter, composition, and structure of the rope.

Quick Fitting and Removal Operations: For repetitive operations, a simple mechanical lever replaces the threaded handle.



The Dynarope can be programmed to accuracy within a margin of +/- 1%.

NUMERIC DISPLAY

Digital Technology allows the Dynarope to contain an extremely large database of rope types and sizes. When in "special" operation, the user may create his/her own database as a function of specific parameters.

ANALOG DISPLAY

Simple and economical model for repetitive measuring operations and/or for balancing effort in identical wire ropes.

Dynarope Tensionmeter

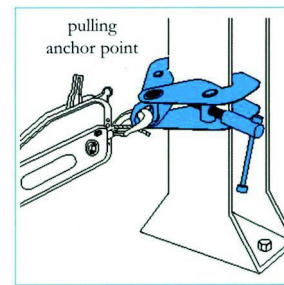
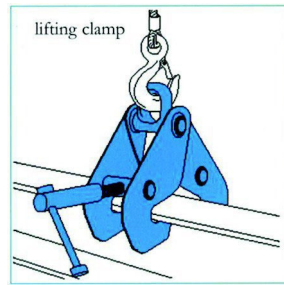
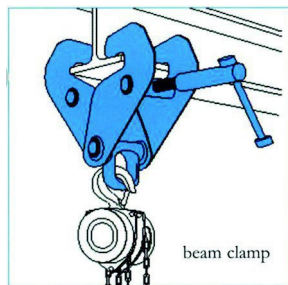
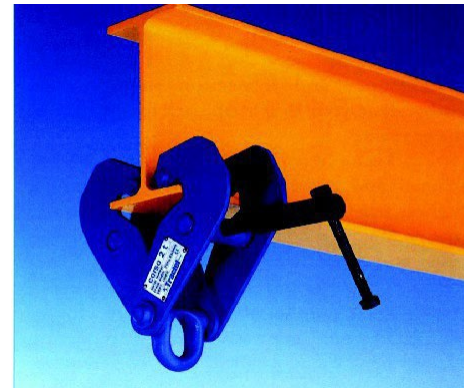
Model	Function	Wire Rope Diameter	Capacities	Length	Width
HF 36/1	Cells	3/16" to 1/2" (4 to 13 mm)	5.5 tons (50 kN)	14.6 in (370 mm)	4.4 lb (2 kg)
HF 36/2	Cells	3/8" to 1-1/4" (9 to 28 mm)	22 tons (200 kN)	19.7 in (500 mm)	8.8 lb (4 kg)
HF 36/3	Cells	7/8" to 1-3/4" (20 to 44 mm)	40 tons (365 kN)	31.5 in (800 mm)	43 lb (19.5 kg)
HF 87/1/P	Monitor	-	-	-	2.2 lb (1 kg)
HF 87/A	Monitor	-	-	-	0.66 lb (0.3 kg)

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Beam Clamps

Beam Clamps are used to suspend manual and electric hoists, as anchor points, or as lifting clamps.

- Available in 1 ton, 2 ton, 3 ton, 5 ton, and 10 ton Working Load Limits
- For use with beam widths from 3” to 13.8” (75 mm to 300 mm) depending upon the working load limit
- Compact, sturdy construction
- Simple and fast adjustment on the “I” Beam



Mini-Hoists

Mini-Hoists are lightweight, compact manual chain hoists. They are ideal for lifting or repositioning items in tight spots.

Features:

- Planetary gearing is used to minimize operator effort and to reduce stress on the brake components
- Small size allows operation and storage in tight places
- Lightweight and durable all steel construction with plated frame components and durable chrome exterior finish to resist corrosion.
- Grade 80 Zinc plated alloy load chain is manufactured in Europe or Japan
- Sleeve bearing used to maximize serviceability and provide good efficiency
- Self-adjusting pawl and disc type mechanical load brake insures positive load control
- Meets ASME/ANSI B30, OSHA, NASA-STD-8719.9 and EU Directives: 98/37/EC
- Rated for limited use in hazardous environments
- All hoists are load tested at 125% of rated capacity



Type	Model	Working Load Limit		Std. Lift	Weight
		Maximum	Minimum *		
Chain Fall	MM003-08-06	1/4 ton / 550 lb	0	8 ft	7.7 lb
Lever	ML003-05	1/4 ton / 550 lb	33 lb	5 ft	4.4 lb
Lever	ML005-05	1/2 ton / 1,100 lb	40 lb	5 ft	7.7 lb

* Lever Min. Capacity is the load required to set the automatic safety brake. The brake will stop a load even if the operator leaves the unit in free chain mode and in neutral, similar to the way a seatbelt reacts.

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Manual Chain Hoist

AMH Manual Hand Chain Hoists offer the ideal lifting solution from 1/4 to 30 metric ton capacity for construction and maintenance applications where portability and easy rigging are critical.

- **Increased efficiency** on MA series by sealed ball bearings on the chain wheel, additional pinion shaft bearing, and close tolerances
- **Bolted hook blocks allowing complete hook inspection** per ASME B30 safety codes (Except MM003 is riveted)
- **Lightweight and durable** all-steel construction with powder-coated finish and plated external components to resist corrosion
- **Zinc plated load chains** are premium Grade 80 alloy manufactured in EU or Japan
- **Operation from any angle** below due to radius hand chain cover
- **Double pawl disc type mechanical load brake** is self-adjusting and ensures positive load control (MM003 has single pawl)
- **Double roller chain guide** ensures tracking and is open for inspection and cleaning of debris
- **Optional overload protection (V)** is by one directional clutch that will only slip in the lift direction insuring that any load lifted can be lowered (Not available on MM003)
- **Meets ASME/ANSI B30.16, OSHA, NASA-STD-8719.9, EU Directives: 98/37/EC and ATEX rated II 3 GD c IIB 50 C X** for limited use in hazardous environments



Lever Chain Hoist

AMH Lever Chain Hoists offer 1/4 to 10 ton capacities of rugged construction having 360° handle operation and free chaining for easy rigging in tight places. Ideally suited for lifting or pulling during construction and maintenance operations where access is limited.

- **More capacity** for more work and better value
- **Bolted Hook blocks allowing complete hook inspection** per ASME B30 safety code (ML003 and ML005 are riveted)
- **Lightweight and durable** all-steel construction with powder-coated finish and plated external components to resist corrosion
- **Zinc plated load chains** are premium Grade 80 alloy made in EU or Japan
- **Horseshoe shape chain guide** allows operation in any orientation
- **Double pawl disc type mechanical load brake** is self-adjusting and ensures positive load control (ML003 and ML005 are single pawl)
- **Optional Overload Protection (V)** is by one directional clutch that will slip in the lift direction ensuring that any load lifted can be lowered (Not available on ML003 and ML005)
- **Meets ASME/ANSI B30.21, OSHA, NASA-STD-8719.9 EU Directives: 98/37/EC and ATEX rated Ex II 3 GD c IIB 50° C X** for limited use in hazardous environments



Manual Chain Hoists

Capacity		Model/Pin #	Falls	Head-room Min. (in)	Pull @ WLL Avg (lb)	Net Weight (lb)	
lb	Tons	8 ft Lift				Extra Lift/Ft	8/10Ft Lift
550	1/4t	MM003-08-06	1	9.1	26	0.44	7.7
		10 Ft Lift					
1100	1/2t	MA005-10-08	1	13.8	56	0.74	20
2200	1t	MA010-10-08	1	15.1	64	0.92	26
3300	1.5t	MA015-10-08	1	17.4	69	1.12	36
4400	2t	MA020-10-08	1	19.1	77	1.30	44
6600	3t	MA030-10-08	1	21.8	84	1.88	72

Lever Chain Hoist

WLL Capacity				Model/Pin #	Model/Pin #	Falls	Head-room Min. (in)	Handle Length Lg. (in)	Pull @ WLL Avg. (lb)	Net Weight (lb)	
Max lb	US Tons	Metric Tons	Min. lb (l)	5 ft Lift	10 ft Lift					Extra Lift/Ft	10 Ft Lift
550	1/4*	0.25	33	ML003-05	ML003-10	1	8.5	6.2	28	0.25	4.4
1100	1/2*	0.5	44	ML005-05	ML005-10	1	10.0	7.1	40	0.36	7.7
1760	3/4*	0.8	44	LA008-05	LA008-10	1	13.4	10.5	47	0.54	14.9
2200	1*	1.0	44	LA010-05	LA010-10	1	13.4	12.1	51	0.54	15.3
3750	1-3/4	1.6	70	LA016-05	LA016-10	1	15.7	14.0	66	0.74	24.1
4500	2-1/4	2.0	88	LA020-05	LA020-10	1	18.1	14.0	66	0.92	36.2
5500	2-3/4	2.5	110	LA025-05	LA025-10	1	19.1	14.0	74	1.25	37.9
7000	3-1/2	3.2	141	LA032-05	LA032-10	1	19.1	14.0	74	1.25	37.9

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Snatch Block

- Forged alloy, heat-treated hooks
- Forged steel swivel tees, yokes, and shackles
- Hook and shackle assemblies on 4-1/2” through 14” sizes can be interchanged
- Can be furnished with bronze bushings or roller bearings
- Opening feature permits insertion of rope while block is suspended from gin-pole
- 3” thru 18” 418 and 419 blocks have exclusive bolt-retaining spring to assure no lost bolts
- Can be furnished with S-4320 hook latch
- Pressure lube fittings
- 3”-10” feature dual-rated wireline sheaves
- Fatigue rated
- 4-1/2” and larger are RFID Equipped



Sheave Diameter (in)	Bearing Code	Stock No.			Wire Rope Size (in)	Working Load Limit* (metric ton)	Weight Each (lb)			Replacement Sheave Stock No.	Replacement Latch Stock No.
		418 with Hook	419 with Shackle	404 Tail Board			418 with Hook	419 with Shackle	404 Tail Board		
*3	BB	-	1090910011	-	5/16-3/8	2	-	4	-	460147	---
**3	BB	1080380011	1090370011	102016	5/16-3/8	2	5	4	3	460147	1096421
**4-1/2	BB	1080650011	1090640011	102025	3/8-1/2	4	12	12	7	2000232	1096468
6	BB	1081270011	1091260011	102098	5/8-3/4	8	27	28	15	460815	1096562
	RB	108154	109153	102114						472688	1096562
8	BB	1082250011	1092240011	102169	5/8-3/4	8	33	34	21	461164	1096562
	RB	108252	109251	102187						473277	1096562

*Ultimate Load is 4 times the Working Load Limit
 ** Available in Bronze Bushed only. 3” and 4-1/2” have self lubricating Bronze Bushing.

Wood Block for Manila & Synthetic Rope

- Laser cut side plates
- Grade 5 bolts secured with lock washers and staked nuts
- Bronze bushed sheaves with larger bearing diameter for extended block life
- Becketts furnished on all blocks

Block Size (in)	Fitting	Single Sheave	Double Sheave	Triple Sheave
		21 B Stock No. Galv.	22 B Stock No. Galv.	23 B Stock No. Galv.
4	HS	6038310	6046340	6054380
5	HS	603859	6046520	6054560
6	HS	6038770	6046700	6054740



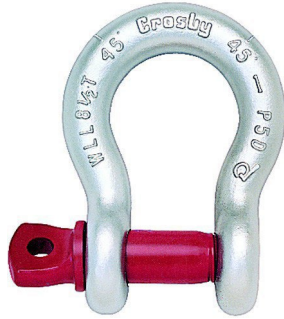
HS-21-B SINGLE

Block Size (in)	Sheave Diameter (in)			Manila Rope Size (in)	Working Load Limit* (lb)			Weight Each (lb)		
	Outside Diam.	Rim Thickness	Center Pin Diam.		21 Single	22 Double	23 Triple	21 Single	22 Double	23 Triple
4	2.25	.63	.38	1/2	1000	1400	1800	1.75	3.00	4.00
5	3.00	.75	.38	5/8	1200	1800	2400	3.25	5.60	6.50
6	3.50	1.00	.50	3/4	1800	2500	3200	5.00	8.50	11.50

*Ultimate Load is 4 times the Working Load Limit.

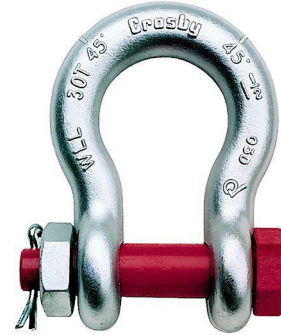
FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Rigging Shackles



G-209 & S-209 Screw Pin Anchor Shackle Specifications

Nominal Size (in)	Working Load Limit (tons)*	Stock No.		Weight Each (lb)
		G-209 Galv.	S-209 S.C.	
3/16	1/3	1018357011	--	.06
1/4	1/2	1018375011	1018384011	.10
5/16	3/4	1018393011	1018400011	.19
3/8	1	1018419011	1018428011	.31
7/16	1-1/2	1018437011	1018446011	.38
1/2	2	1018455011	1018464011	.72
5/8	3-1/4	1018473011	1018482011	1.37
3/4	4-3/4	1018491011	1018507011	2.35
7/8	6/12	1018516011	1018525011	3.62
1	8-12	1018534011	1018543011	5.03



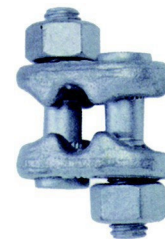
G-2130 & S-2130 Bolt Type Anchor Shackle

Nominal Shackle Size (in)	Working Load Limit* (tons)	Stock No.		2130 Weight Each (lb)
		G-2130 Galv	S2130 S.C.	
3/16	1/3^	1019464	--	.06
1/4	1/2	1019466011	--	.11
5/16	3/4	1019468011	--	.22
3/8	1	1019470011	--	.33
7/16	1-1/2	1019471011	--	.49
1/2	2	1019472011	1019481011	.79
5/8	3-1/4	1019490011	1019506011	1.68
3/4	4-3/4	1019515011	1019524011	2.72
7/8	6-1/2	1019533011	1019542011	3.95
1	8-1/2	1019551011	1019560011	5.66



G-450 Crosby® Clip Specifications

Rope Size (in)	G-450 Stock No. Galv.	Std. Package Qty.	Weight Per 100 (lb)	Minimum No. of Clips	Rope Turnback (in)	Torque (ft lb)
*1/8	1010015011	100	6	2	3-1/4	4.5
*3/16	1010033011	100	10	2	3-3/4	7.5
1/4	1010051011	100	19	2	4-3/4	15
5/16	1010079011	100	28	2	5-1/4	30
3/8	1010097011	100	48	2	6-1/2	45
7/16	1010113011	50	78	2	7	65
1/2	1010131011	50	80	3	11-1/2	65
9/16	1010159011	50	109	3	12	95
5/8	1010177011	50	110	3	12	95
3/4	1010195011	25	142	4	18	130



G429 Fist Grip® Wire Rope Clip Specifications

Rope Size (in)*	G-429 Stock No. Galv.	Std. Package Qty.	Weight Per 100 (lb)	Minimum No. of Clips	Rope Turnback (in)	Torque (ft lb)
3/16-1/4	1010471011	100	23	2	4	30
5/16	1010499011	100	28	2	5	30
3/8	1010514011	50	40	2	5-1/4	45
7/16-1/2	1010532011	50	62	3	11	65
9/16-5/8	1010550011	50	103	3	13-1/2	130
3/4	1010578011	25	175	3	16	225

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Safety Harness

Universal harnesses are lightweight, inexpensive, and simple to use. Size versatility makes the unit cost effective for multiple users. Each Guardian harness incorporates our Impact Indicator to make inspection easier. Meets all applicable OSHA and ANSI standards.

Standard Features:

- Impact Indicator shows if the product has been in a fall
- Comfortable Nylon Webbing
- Notched Pass-Thru Chest Buckles
- Sub-Pelvic Strap distributes the weight of a fall
- No-Loose-Ends Shoulder Strap design



Universal Safety Harness		
01100	SM-LG	Pass-Thru Leg Straps
01105	XL	Pass-Thru Leg Straps
01110	SM-LG	Pass-Thru Leg Straps with Side Positioning Rings
01150	SM-LG	Tongue Buckle Leg Straps
01160	SM-LG	Tongue Buckle Leg Straps with Side Positioning Rings

Lanyard

These lanyards are specially designed to withstand additional free fall distance while maintaining maximum allowable impact forces for up to a 10-ft free fall, per OSHA requirements. The HD lanyard can be used as part of a 400 lb max. worker capacity *per fall arresting system* for free falls of 5' or less.

Item ID	Description	Sales Description
01200	SS60-HD	5 ft Single Leg Shock Absorbing HD Lanyard
01202	SS60-HDR	5 ft Single Leg Shock Absorbing HD Lanyard w/Rebar Hook
01210	SS60-2HD	5 ft Double Leg Shock Absorbing Lanyard
01211	SS60-2RHD	5 ft Double Leg Shock Absorbing Lanyard w/Rebar Hook
*Rebar hooks cannot be used with Beamer Anchors		



Retractable Lifeline

The **Guardian HD Retractable Lifeline** is designed to be used specifically for leading edge work. With an integrated shock pack attached to the cable lifeline, the retractable will keep the arresting forces below 900 lb while at the same time reducing the amount of impact forces on the cable lifeline itself. The ideal position of a retractable, when used as a part of a PFAS, is directly overhead.

Often, contractors will place a retractable on the deck and use it at foot level. Almost all retractables on the market are not allowed to be used in this manner if the worker is exposed to a leading edge hazard.



Retractable Lifelines

Part #	Size	Description	Weight
10900	11'	1" Nylon Webbing w/ Carabiner, Swivel Top & Snap Hook	9 lb
10901	11'	1" Nylon Webbing w/ Carabiner, Swivel Top & Rebar Hook	11 lb
10909	20'	1" Nylon Webbing w// Swivel Top, Swivel Snap Hook, Carabiner & Tag Line	16 lb
10910	20'	3/16" Galvanized Cable w/ Swivel Top, Swivel Snap Hook, Carabiner & Tag Line	18 lb
10915	30'	3/16" Galvanized Cable w/ Swivel Top, Swivel Snap Hook, Carabiner & Tag Line	21 lb



FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

SRLs



Northstar Classic LE Cable SRL
20':FS-FSP9020
50':FS-FSP9050

- External energy absorber for leading edge use
- Swivel attachment point offers wide range of motion
- High strength polymer housing resists impact



Latitude 6' Dual Web SRL-P:
019-5044: Single, Carabiner, Snap Hook
019-5052: Dual, 9013 BWB, Snap Hooks

- Optimized for low-clearance environments where short arrest is critical
- Quick-activating locking system
- 360/180° attachment point offers full range of motion



Northstar Classic 30' Cable SRL
FS-FSP1230-G

- Swivel attachment point offers wide range of motion
- High strength polymer housing resists impact
- Braking system activates quickly to arrest fall



Latitude Edge 8' Cable SRL-P: Snap Hook
023-5350: Single
023-5356: Dual

- Optimized for low-clearance environments where short arrest is critical
- Quick-activating locking system
- 360/180° attachment point offers full range of motion

Anchors



Removable Concrete Anchor
022-4085

- Removable and reusable with reliable durability
- 360° rotating connection point for increased user mobility
- Easy trigger provides quick release for repeated use



Premier Sliding Beam Anchor
021-4055

- 180°/360° swivel connection point
- Reinforced jaw liners for sturdy, smooth sliding action
- Easy trailing for hands-free work



Reinforced Cross Arm Strap 6'
FS810-6FS810-6

- Lightweight and portable, easy install
- Heavyweight strap webbing
- Abrasion resistant sling webbing wear pad



Cross Arm Strap
FS811-3
(3')FS811-3
(FS811-6 (6')

- Lightweight and portable, easy install
- Durable tubular strap webbing
- Multiple lengths: 3' to 20'

Harnesses



V-Line Full Body Harness:
Universal, 1D, MB Chest, TB Legs
FS99185-E

- Dorsal D-ring
- Mating buckle torso adjusters
- Universal sizing



PRO Full Body Harness:
1D, MB Chest, TB Legs
FS185-S/MFS185-S/M
FS185-L/XL

- Dorsal D-ring
- Friction buckle torso adjusters
- Mating buckle chest



V-Select Full Body Harness:
1D, QC Chest, TB Legs
022-1079 (XS/S)
022-1080 (M/L)
022-1081 (XL/2X)

- Fixed dorsal D-ring
- Redesigned, high-strength SRL channel
- Friction buckle torso adjusters



V-Select Construction Harness:
3D, QC Chest, TB Legs
021-1726 (XS/S)
021-1727 (M/L)
021-1728 (XL/2X)

- Fixed dorsal D-ring
- Redesigned, high-strength SRL channel
- Side positioning D-rings

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Confined Space



**7' Adjustable Tripod K
65' Personnel Winch, 6'
Way**
019-11004

- Lightweight aluminum construction
- Quick setup with easy height adjustment
- Two pulleys for use with multiple devices



Bosun Seat
020-11019

- Versatile use with 2 D-ring attachment points
- Rugged multi-ply, sealed wood seat
- Safety strap assembly for added security

Rescue



Quick-Adjust Trauma Relief
022-6047

- Adjustable once deployed for proper step length
- Easily connects to most harnesses in seconds
- Hi-vis webbing step for critical visibility in fall event

Tool Tethers



**15lb. Elasticated Tool
Tether: Carabiner, Cinch**
SW438

- Elasticated web for increased range and energy absorption
- Choker end with cord lock
- 1 aluminum carabiner

Kit



V-Line Bag Roof Kit
020-3113

- V-Line Full Body Harness FS99280-E
- 50' Vertical Lifeline Assembly 7005
- Reusable Roof Anchor FS870
- 20" Duffle Bag FS8150

Accessories

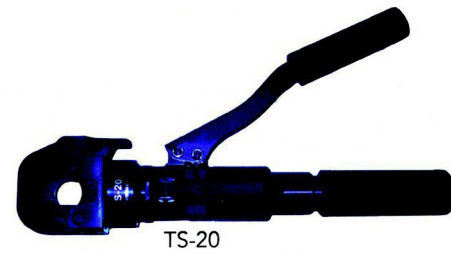


Small Steel Carabiner
FS1015FS1015

- 3,600 lbs. twist lock gate
- Gate opening .75"

Manual Cable Cutter

The **TS-20 Handheld Hydraulic Cable Cutter** is portable, lightweight, and designed to perform for years in the toughest field conditions. This cutter can be used in many applications. However, do not use for telephone & lead sheathed cable, chain, or EHS grade Guy Wire.



TS-20 Handheld Hydraulic Cutter

Output	Weight	Length	Jaw Opg.	Wire Rope	Soft Stl Bolts	Rebar, Ground & Anchor Rod	ACSR	Cu & Al Wire	Std. Guy Wire
4.4 tons	5.75 lb	14"	.75"	3/4" (20 mm)	11/16" (17 mm)	1/2" (13 mm)	3/4" (20 mm)	3/4" (20 mm)	1/2" (14 mm)

Impact Cable Cutter

Actuated by striking with a hammer, these portable **Impact Cable Cutters** are simple to operate and do a superior cutting job with just a few blows. They are precision engineered to deliver a cut without affecting the original roundness of the rope. The blades and dies are made of heat-treated tool steel ground to close tolerances. A firm base is required for operation of the cutter.

ALWAYS WEAR SAFETY GOGGLES AND FOLLOW ALL SAFETY INSTRUCTIONS WHEN OPERATING THE IMPACT CABLE CUTTER.



Model	Capacity	Height	Base	Weight
1	5/8"	6"	3-1/2"	7 lb
1A	1-1/16"	7"	6-1/4"	15 lb
2	1-1/2"	9"	7-3/4"	28 lb

Klein Parallel-Jaw Grip

The **1671-10 Parallel-Jaw Grip** has:

- Longer jaws to achieve a firm hold, reducing the possibility of slippage and damage to the cable
- A design which includes a latch, plus a large diameter eye to accommodate large hooks on hoists, winches, and tackle blocks
- A latch, when closed, that helps maintain cable position in the grip jaws



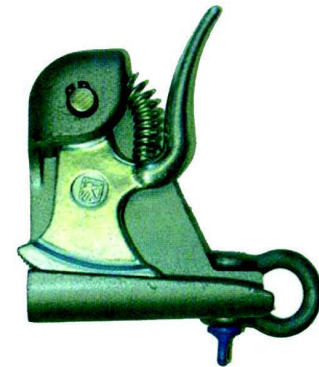
P/N	Min. Diameter	Max. Diameter	Max. Safe Load	Jaw Type	Jaw Length	Approx. Weight
1686-10	0.20" (5.08 mm)	0.40" (10.16 mm)	10,000 lb (4545 kg)	Smooth	4-3/8" (111 mm)	5 lb (2.27 kg)
1686-20	0.20" (5.08 mm)	0.40" (10.16 mm)	10,000 lb (4545 kg)	Knurled	4-3/8" (111 mm)	5 lb (2.27 kg)
1671-10	0.37" (9.40 mm)	0.75" (19.05 mm)	10,000 lb (4545 kg)	Smooth	4-3/8" (111 mm)	5 lb (2.27 kg)
1672-10	0.37" (9.40 mm)	0.75" (19.05 mm)	10,000 lb (4545 kg)	Knurled	4-3/8" (111 mm)	5 lb (2.27 kg)

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Tractel Wire Rope Gripper

The **Tractel Wire Rope Gripper** with a self-gripping jaw will hold a wire rope at any point along its length or take up the tension while fixing or adjusting the slack end.

- Light alloy body
- Complete with shackle for anchoring
- Spring-operated jaw for automatic gripping
- Breech loading



Model	Range of Wire Rope in (mm)	Weight lb (kg)	Capacity lb (kg)	Breaking Load lb (kg)
G2	3/32"-5/16" (2-8 mm)	.64 lb (.28 kg)	900 lb (400 kg)	3,500 lb (1,600 kg)
G3	5/16"-9/16" (7-15 mm)	1.25 lb (.56 kg)	1,300 lb (600 kg)	4,100 lb (1,900 kg)
G4	9/16"-11/16" (14-18 mm)	1.3 lb (.59 kg)	1,750 lb (800 kg)	4,400 lb (2,000 kg)

Tractel Coni-Klam Wire Rope Gripper

The **Coni-Klam Wire Rope Gripper** is held by a pair of slightly serrated jaws providing a positive lock by a self-gripping wedge.

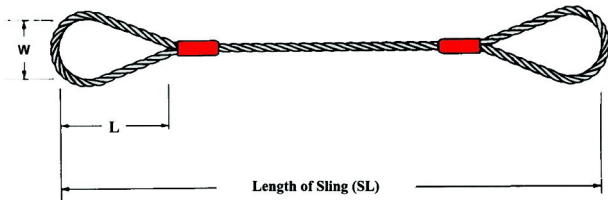
- Manufactured in forged steel
- Breech loading
- Immediate adjustment to the required positions
- Does not damage the rope
- High safety factor



Model	Range of Wire Rope in (mm)	Capacity lb (kg)	Weight w/o Shackle lb (kg)	Weight w/Shackle lb (kg)
EC10	3/16"-3/8" (5-10 mm)	2,200 lb (1,000 kg)	2.6 lb (1.2 kg)	3.5 lb (1.6 kg)
EC14	7/16"-9/16" (10.5-14mm)	4,400 lb (2,000 kg)	5.7 lb (2.6 kg)	3.7 lb (8.1 kg)
EC21	5/8"-13/16" (15-21 mm)	6,600 lb (3,000 kg)	11.9 lb (5.4 kg)	7.5 lb (16.5 kg)

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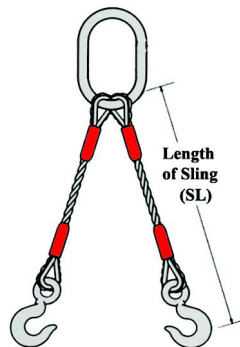
Redi-Grip® Wire Rope Slings



Redi-Grip® Single Leg Flemish Eye Slings

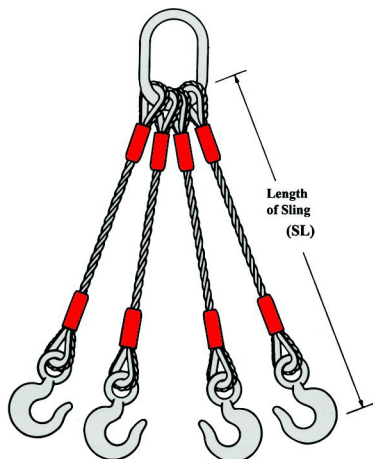
Diam of Rope in	Min. Length (SL) of sling ft in	Loop Dimensions		Rated Capacities in Tons (2000 lb) - 6x19 & 6x37 Class EIPS-IWRC		
		Win	Lin.	Single Leg Vertical	Choker Hitch	Vertical Basket Hitch
1/4	1-6	2	4	.65	.48	1.3
3/8	2	3	6	1.4	1.1	2.9
1/2	2-6	4	8	2.5	1.9	5.1
5/8	3	5	10	3.9	2.9	7.8
3/4	3-6	6	12	5.6	4.1	11
7/8	4	7	14	7.6	5.6	15
1	4-6	8	16	9.8	7.2	20

Redi-Grip® 2 Leg Flemish Eye Sling



Rated Capacities in Tons (2000 lb) IWRC (6x19 & 6x37)

Diam of Rope in	Min. Length (SL) of Sling ft in	EIP IWRC - Rated Capacities Horz. Angle		
		60°	45°	30°
1/4	1-3	1.1	.91	.65
3/8	1-8	2.5	2.0	1.4
1/2	2-0	4.4	3.6	2.5
5/8	2-4	6.8	5.5	3.9
3/4	2-9	9.7	7.9	5.6
7/8	3-3	13	11	7.6
1	3-6	17	14	9.8



Redi-Grip® 4 Leg Flemish Eye Sling

Rated Capacities in Tons (2000 lb) IWRC (6x19 & 6x37)

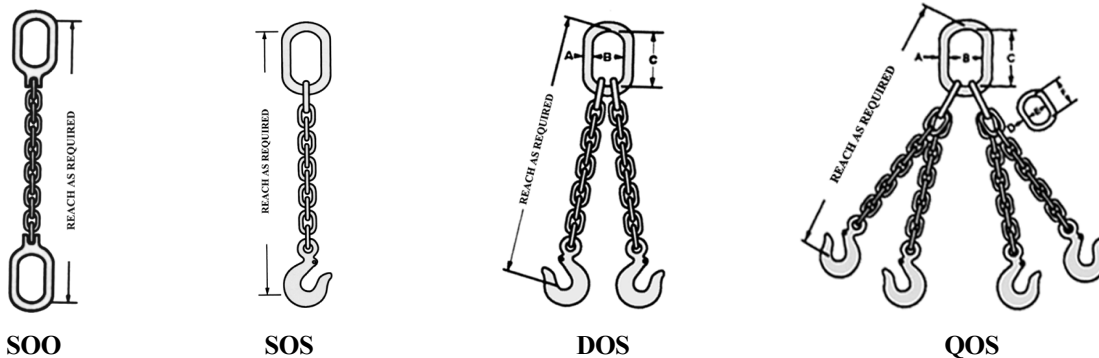
Diam of Rope in	Min. Length (SL) of Sling ft in	EIP IWRC - Rated Capacities Horz. Angle		
		60°	45°	30°
1/4	1-3	2.2	1.8	1.3
3/8	1-8	5.0	4.1	2.9
1/2	2-0	8.8	7.1	5.1
5/8	2-4	14	11	7.8
3/4	2-6	19	16	11
7/8	3-3	26	21	15
1	3-6	34	28	20

GENERAL NOTES

- Rated loads based on minimum D/d ratio of 25/1
- Rated loads based on pin diameter no larger than natural eye width or less the nominal sling diameter
- For choker hitch, the angle of choke shall be 120 degrees or greater

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Alloy Chain Slings



Peerless ACCO® Grade 100 Alloy Chain Sling Working Load Limits

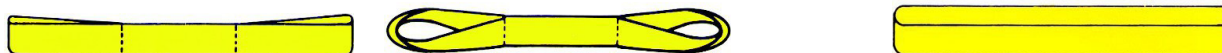
Chain Size		Single Chain at 90° lb	Double (D) Chain Slings /lb			Triple (T) & Quadruple (Q) Chain Slings /lb		
in	mm							
9/32	7	4,300	7,400	6,100	4,300	11,200	9,100	6,400
3/8	10	8,800	15,200	12,400	8,800	22,900	18,700	13,200
1/2	13	15,000	26,000	21,200	15,000	39,000	31,800	22,500
5/8	16	22,600	39,100	32,000	22,600	58,700	47,900	33,900

NOTE: Working Load Limit should not be exceeded
 NOTE: All Sling Hooks are supplied with safety latches installed
 CAUTION: Do not use Grade 80 Fittings with Grade 100 Chain



WARNING: Sling failure can cause DEATH or INJURY resulting from misuse, damage, and excessive wear. Adhere to industry standards and regulations.

Mulox® Heavy Duty Nylon Slings



Type 3 (EEF) & Type 4 (EET) Nylon Slings

	EEF	EET	Vertical	Choke	Basket
NET PLY TO	EEF1-901	EET1-901	1,600	1,250	3,200
	EEF1-902	EET1-902	3,200	2,500	6,400
	EEF1-903	EET1-903	4,800	3,800	9,600
	EEF1-904	EET1-904	6,400	5,000	12,800
PLY	EEF2-901	EET2-901	3,200	2,500	6,400
	EEF2-902	EET2-902	6,400	5,000	12,800
	EEF2-903	EET2-903	8,600	6,900	17,200
	EEF2-904	EET2-904	11,500	9,200	23,000
Other Widths & Plies Available					

Type 5 (EN) Nylon Slings

	EEF	Vertical	Choke	Basket
NET PLY	EN1-901	3,200	2,500	6,400
	EN1-902	6,400	5,000	12,800
	EN1-903	8,600	6,900	17,200
	EN1-904	11,500	9,200	23,000
WO PLY	EN2-901	6,200	4,900	12,400
	EN2-902	12,200	9,800	24,400
	EN2-903	16,300	13,000	32,600
	EN2-904	20,700	16,500	41,400
Other Widths & Plies Available				

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

SUPERTECHLON™ Round Sling

SUPERTECHLON™ Round Slings offer a unique blend of strength and flexibility. They are light weight and have superior abrasion resistance.

Features Include:

- Patented abrasion resistant Techlon™ outer cover delivers up to twice the durability of a standard cover
- Stripe coded to assist in identifying slings capacity (each stripe equals 3,000 lb of vertical capacity)
- Print coded with vertical capacity on outer cover.
- Color coded for easy identification
- Protected tag feature helps protect tag from illegibility
- Individually serialized for traceability
- Highest capacities per color in the industry



Part No.	Color Code	Rated Capacity *			Min. Length
		Vertical	Choker	Basket	
ST-ENR-3000	Purple	3,000 lb	2,400 lb	6,000 lb	3 ft
ST-ENR-6000	Green	6,000 lb	4,800 lb	12,000 lb	3 ft
ST-ENR-9000	Yellow	9,000 lb	7,200 lb	18,000 lb	3 ft
ST-ENR-12000	Tan	12,000 lb	9,600 lb	24,000 lb	3 ft
ST-ENR-15000	Red	15,000 lb	12,000 lb	30,000 lb	3 ft
ST-ENR-18000	White	18,000 lb	14,400 lb	36,000 lb	6 ft
ST-ENR-24000	Blue	24,000 lb	19,200 lb	48,000 lb	6 ft
ST-ENR-30000	Orange	30,000 lb	24,000 lb	60,000 lb	6 ft

NOTE: Larger capacities are available upon request.



WARNING: Sling failure can cause DEATH or INJURY resulting from misuse, damage, and excessive wear. Adhere to industry standards and regulations.

Manila Rope

A good all-purpose rope, **Manila Rope** is used extensively in marine, agricultural, trucking, construction, and oil exploration.



Features:

- Inexpensive
- Strongest of the vegetable fibers - actually stronger when wet
- Low stretch - ideal for applications not requiring high strength or great elasticity
- Absorbs water - swells up to 100% of its weight, making handling more difficult
- Storage - if wet, dry thoroughly to prevent mildew, rot, or loss of strength
- Very poor chemical resistance

PIN #	Nominal Diameter in	Approx. Wt/ *lb / 100 Ft	Minimum Tensile lb
08MANR0000	1/4	1.82	540
10MANR0601	5/16	2.64	900
12MANR0602	3/8	3.79	1215
16MANR0602	1/2	6.96	2380
20MANR0602	5/8	12.7	3960
24MANR0602	3/4	15.9	4860

* Weight will vary slightly.
 ** Stocked in 600Ft. Cartons (some smaller sizes also in 1200 ft Cartons)
 *** Available in other diameters upon request

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Nylon Rope

Nylon was the first of the synthetic fibers to be used in rope. It is still a dominant fiber and finds its greatest use in the marine field. High-energy absorption and strength make nylon ropes superior for towing, mooring, pennants, and anchoring.

Features:

- Strongest of the conventional ropes
- Stretch is about 12x that of manila and double that of polyester
- Nylon is 10-15% weaker when wet than dry - strength returns when dry - will not rot
- Sunlight degrades all synthetic fibers - second only to polyester in resistance but better than polypropylene - protect from sunlight whenever possible
- Excellent resistance to alkalis and most solvents - resistance to acids only fair, particularly sulfuric, hydrochloric, and nitric
- Good to excellent abrasion resistance when dry - less when wet - avoid grit from penetrating into or between strands



Premium Nylon Rope

PIN #	Nominal Diameter in	Approx. Wt/** lb / 100 Ft	Minimum Tensile lb
08NYR33601	1/4	1.57	1490
10NYR33601	5/16	2.45	2300
12NYR33601	3/8	3.55	3340
16NYR33601	1/2	6.3	5750
20NYR33601	5/8	9.9	9000
24NYR34601**	3/4	14.3	11300

*Stocked in 600 Ft Cartons (Some smaller sizes also in 1200 Ft Cartons)

** PIN# for Black - other PIN#s refer to white***
Available in other diameters upon request

D/S Composite Double Braid Rope

D/S Composite is a double braided rope with an inner core made of Spectra® and outer sleeve of polyester.

D/S Composite has very low elongation, high strength, and the feel and handling of polyester double braid.

D/S Composite comes standard with an overlay marine finish and is available on special order with a spliceable polyurethane finish in clear or any of six colors.

- High Strength
- Low Stretch
- Soft Hand
- Torque Free
- Easy Splicing



D/S Composite Double Braid

Nom. Diameter *		Size Number (Circ)	Approx. Weight		Min. Tensile Strength **	
in	mm		lb/100ft	kg/100 M	Pounds	kN
1/2	12	1-1/2	8.3	12.3	13,950	62.0
5/8	16	2	12.5	18.6	24,600	109.4
3/4	18	2-1/4	15.9	23.7	31,500	140.1
7/8	22	2-3/4	24.9	37.1	44,800	199.3
1	24	3	30.8	45.8	51,600	229.5
1-1/8	28	3-1/2	36.8	54.8	65,500	291.4
1-1/4	30	3-3/4	42.6	63.4	72,700	323.4
1-1/2	36	4-1/2	64.0	95.2	100,000	444.8
2	48	6	107	159.2	165,000	734.0

* Available in other diameters.

** Tensile Strengths are determined in accordance with Cordage Institute 1500, Test Methods for Fiber Rope. Weights are calculated at linear density under standard preload (200d2) plus 4%.

FOR MORE INFORMATION, CONTACT THE LIFT SOLUTIONS FACILITY NEAR YOU

Vitalife® 600 Lubricant

Vitalife® 600 Wire Rope Lubricant is specifically designed for elevator applications. It has the ability to penetrate wire rope and displace water and contaminants, thus reducing wear and corrosion throughout the rope.

Features:

- Available in a variety of container sizes
- Provides inner strand preservation and lubricity
- Allows for easy visual inspection of the ropes
- Reduces friction between the strands of wire rope, thus extending rope life
- Adheres to the surface of the strands, forming an outer film which provides excellent corrosion protection
- Non-tacky (will not attract dust)
- Vitalife® 600 in aerosol form is a regulated dangerous good.



Consult MSDS sheet for Shipping Instructions.

Vitalife® 600 Elevator Wire Rope Lubricant

Part No.	Container Size	Weight
1039034	1 Quart	2.00 lb
1039037	1 Gallon	8.20 lb
1039040	5 Gallon	41.0 lb
1039043	55 Gallon	420 lb

TERMS & CONDITIONS

INQUIRIES & QUOTATIONS

Prompt response is given to all written or phone quotations. Our trained personnel will supply technical information, as well as price and delivery to meet your needs.

ORDERS

Contact Lift Solutions for all of your lifting needs. Every order, regardless of size, receives careful and personal attention to ensure customer satisfaction. Minimum order - \$50.00

SERVICE & QUALITY

Our aim is to build long-term customer relationships by offering quality products and prompt service. We will make every effort to guarantee your satisfaction.

TERMS

Net 30 Days subject to credit approval. We reserve the right to add a service charge on all outstanding invoices.

F.O.B. Lift Solutions warehouse or Customer Pick-Up at our dock.

PRICES

Prices, terms and conditions are subject to change without notice. Unfortunately, we cannot control price changes by our suppliers. Shipments will be invoiced at the prices in effect on the date of shipment.

TAXES

All taxes required by law will be added to invoices unless an exemption certificate is on file with us.

RETURNS

Material may only be returned with the written authorization of Lift Solutions. Specially cut, ordered, or fabricated material may not be returned. Freight and restocking charges may be assessed.



LIMITATION OF LIABILITY & ABSENCE OF WARRANTY

WARRANTY: Lift Solutions warrants that goods sold by written description, sample, model, or part number shall substantially conform to such description, sample, model, or part number and that the goods have been made in conformance with the customer's design or specifications, if any, which have been supplied to Lift Solutions by the customer. This warranty shall be limited to repair or replacement of the goods sold and Lift Solutions shall not be liable for any consequential damage. **THERE IS NO WARRANTY THAT THESE GOODS SHALL BE FIT FOR ANY PARTICULAR PURPOSE, NOR IS THERE ANY WARRANTY OF MERCHANTABILITY WITH RESPECT TO THESE GOODS, EXCEPT AS EXPRESSLY SET FORTH IN THIS PARAGRAPH. THERE IS NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THESE GOODS.**



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Sales & Fabrication Locations

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Brooksville, FL 13031 Ponce DeLeon Bld., Brooksville, FL 34601 352-796-8632	Detroit, MI 1725 E. 14 Mile Road, Suite 100 Troy, MI, 48083	Miami, FL 1828-32 N.W. 82nd Ave. Doral, FL 33126 786-845-8617	North Haven, CT 78 Rebesch Drive North Haven, CT 06473 203-624-0422	Raleigh, NC 2630 Yonkers Road Ste. 106 Raleigh, NC 27603 919-831-2333
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Coatesville, PA 1227 W. Lincoln Highway Coatesville, PA 19320 610-384-1800	Iron Mountain, MI 1400 Cedar Ave., Iron Mountain, MI 49801 800-338-9278	Neenah - Kimberly 1377 Kimberly Drive Neenah, WI 54956 920-722-0101		

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