



### **Nisku**

2801 - 5<sup>th</sup> Street  
Nisku, AB T9E 0C2  
Ph: 780-955-7222  
Fax: 780-955-2433

### **Calgary**

4865 - 35A Street SE  
Calgary, AB T2B 3M7  
Ph: 403-720-3210  
Fax: 403-720-3215

### **Cranbrook**

857 Industrial Rd #1  
Cranbrook, BC V1C 4C7  
Ph: 250-426-4294  
Fax: 250-489-4104

### **Sparwood**

Elk Valley Industrial Rd  
Sparwood, BC V0B 2G0  
Ph: 250-425-2119  
Fax: 250-425-0557

### **Kamloops**

1272 Dalhousie Drive  
Kamloops, BC V2C 6G3  
Ph: 250-374-8955  
Fax: 250-374-5858



## **WIRE ROPE, RIGGING & INDUSTRIAL SUPPLIES**

### **SHAW'S ENTERPRISES LTD. ("SEL")**

Shaw's Enterprises Ltd. "SEL" was incorporated under the provisions of the Business Corporations Act (Alberta) on January 6th, 1997 and is part of the Shaw's group of Companies where Shaw's has been servicing customers for 52 years, since 1959.

### **Business Background**

SEL manufactures, sells, and services a wide array of Wire Rope, Rigging, & Industrial Products. The company services a wide range of industrial sectors including mines and drilling contractors in both Alberta and British Columbia and has a customer base of well over 700 active customers.

### **Sales Network**

SEL's sales representatives and staff have a combined experience of over 100 years. They have concentrated on forming a strong relationship between the company and the customers, resulting in quality service at a competitive price. Our sales and technical staff will work with you to design and manufacture custom lifting slings or devices to fit your applications.

### **Manufacturing**

SEL manufactures wire rope slings and products as well as nylon web and synthetic slings for various applications. Our pledge to quality, service and support make SEL the right company for all your rigging and wire rope requirements. The raw materials and inventory required by SEL to service its customers are purchased from both Canadian and International manufacturers / vendors.

### **Company Facilities**

The head office of Shaw's is located in Nisku, Alberta and operates with management and administrative staff from the Shaw's group of companies. The Shaw's Group has a total of five operating locations in Alberta and British Columbia. (AB. - Calgary & Nisku, B.C. - Cranbrook, Kamloops, & Sparwood).

**Nisku** - This location operates out of a 30,000 square foot building on a 4 - acre site.

**Calgary** - This location operates out of a 13,000 square foot building on a 1 - acre site.

# INSPECTION OF RIGGING HARDWARE

## INSPECTION FREQUENCY PER ASME B30.26

A VISUAL INSPECTION SHALL BE PERFORMED BY THE USER OR DESIGNATED PERSON EACH DAY BEFORE THE RIGGING HARDWARE IS USED.

A PERIODIC INSPECTION SHALL BE PERFORMED BY A DESIGNATED PERSON, AT LEAST ANNUALLY. THE RIGGING HARDWARE SHALL BE EXAMINED AND A DETERMINATION MADE AS TO WHETHER THEY CONSTITUTE A HAZARD. WRITTEN RECORDS ARE NOT REQUIRED.

SEMI-PERMANENT AND INACCESSIBLE LOCATIONS WHERE FREQUENT INSPECTIONS ARE NOT FEASIBLE SHALL HAVE PERIODIC INSPECTIONS PERFORMED.

## REJECTION CRITERIA PER ASME B30.26

MISSING OR ILLEGIBLE MANUFACTURER'S NAME OR TRADEMARK AND/OR RATED LOAD IDENTIFICATION  
(OR SIZE AS REQUIRED)

A 10% OR MORE REDUCTION OF THE ORIGINAL DIMENSION

BENT, TWISTED, DISTORTED, STRETCHED, ELONGATED, CRACKED OR BROKEN LOAD BEARING COMPONENTS.

EXCESSIVE NICKS, GOUGES, PITTING & CORROSION.

INDICATIONS OF HEAT DAMAGE INCLUDING WELDING SPATTER OR ARC STRIKES, EVIDENCE OF UNAUTHORIZED WELDING.

LOOSE OR MISSING NUTS, BOLTS, COTTER PINS, SNAP RINGS, OR OTHER FASTENERS AND RETAINING DEVICES.

ADDITIONALLY INSPECT WIRE ROPE CLIPS FOR:

1. INSUFFICIENT NUMBER OF CLIPS
2. INCORRECT SPACING BETWEEN CLIPS
3. IMPROPERLY TIGHTENED CLIPS
4. INDICATIONS OF DAMAGED WIRE ROPE OR WIRE ROPE SLIPPAGE
5. IMPROPER ASSEMBLY

ADDITIONALLY, INSPECT WEDGE SOCKETS FOR:

1. INDICATIONS OF DAMAGED WIRE ROPE OR WIRE ROPE SLIPPAGE
2. IMPROPER ASSEMBLY

## ADDITIONAL REJECTION CRITERIA PER ASME B30.10 - HOOKS

ANY VISIBLY APPARENT BEND OR TWIST FROM THE PLANE OF THE UNBENT HOOK

ANY DISTORTION CAUSING AN INCREASE IN THROAT OPENING OF 5%, NOT TO EXCEED 1/4"

## INSPECTION OF SLINGS

### INSPECTION FREQUENCY PER ASME B30.9

A VISUAL INSPECTION FOR DAMAGE SHALL BE PERFORMED BY THE USER PR DESIGNATED PERSON EACH DAY OR SHIFT THE SLING IS USED.

A COMPLETE INSPECTION FOR DAMAGE SHALL BE PERFORMED PERIODICALLY BY A DESIGNATED PERSON, AT LEAST ANNUALLY.

WRITTEN RECORDS OF MOST RECENT PERIODIC INSPECTION SHALL BE MAINTAINED.

### REJECTION CRITERIA PER ASME B30.9

MISSING OR ILLEGIBLE SLING IDENTIFICATION; EVIDENCE OF HEAT DAMAGE; SLINGS THAT ARE KNOTTED; FITTINGS THAT ARE PITTED, CRACKED, BENT, TWISTED, GOUGED, OR BROKEN; OTHER CONDITIONS, INCLUDING VISIBLE DAMAGE, THAT CAUSE DOUBT AS TO THE CONTINUED USE OF THE SLING.

WIRE ROPE SLINGS	CHAIN SLINGS	WEB SLINGS	ROUNDSLINGS
EXCESSIVE BROKEN WIRES, FOR STRAND -LAID AND SINGLE PART SLINGS, TEN RANDOMLY DISTRIBUTED BROKEN WIRES IN ONE ROPE LAY OR FIVE BROKEN WIRES IN ONE STRAND IN ONE ROPE LAY	CRACKS OR BREAKS	ACID OR CAUSTIC BURNS	ACID OR CAUSTIC BURNS
SEVERE LOCALIZED ABRASION OR SCRAPING, KINKING, CRUSHING, BIRDCAGING	EXCESSIVE WEAR, NICKS, OR GOUGES	MELTING OR CHARRING OF ANY PART OF THE SLING	EVIDENCE OF HEAT DAMAGE
ANY OTHER DAMAGE RESULTING IN DAMAGE TO THE ROPE STRUCTURE	STRETCHED CHAIN LINKS OR COMPONENTS	HOLES, TEARS, CUTS, OR SNAGS	HOLES, TEARS, CUTS, ABRASIVE WEAR OR SNAGS THAT EXPOSE THE CORE YARNS
SEVERE CORROSION OF THE ROPE OR END ATTACHMENTS	BENT, TWISTED OR DEFORMED CHAIN LINKS OR COMPONENTS	BROKEN OR WORN STITCHING IN LOAD BEARING SPLICES	BROKEN OR DAMAGED CORE YARNS
	EXCESSIVE PITTING OR CORROSION	EXCESSIVE ABRASIVE WEAR	WELD SPLATTERS THAT EXPOSES CORE YARNS
	LACK OF ABILITY OF CHAIN OR COMPONENTS TO HINGE FREELY	DISCOLORATION AND BRITTLE OF STIFF AREAS ON ANY PART OF THE SLINGS, WHICH MAY MEAN CHEMICAL OR ULTRAVIOLET / SUNLIGHT DAMAGE	DISCOLORATION AND BRITTLE OR STIFF AREAS ON ANY PART OF THE SLINGS, WHICH MAY MEAN CHEMICAL OR OTHER DAMAGE
	WELD SPLATTER		

## RESPONSIBILITY

### USER RESPONSIBILITY

1. UTILIZE APPROPRIATE RIGGING GEAR SUITABLE FOR OVERHEAD LIFTING
2. UTILIZE THE RIGGING GEAR WITHIN INDUSTRY STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS
3. CONDUCT REGULAR INSPECTION AND MAINTENANCE OF THE RIGGING GEAR
4. PROVIDE EMPLOYEES WITH TRAINING TO MEET OSHA AND ASME (B30.9, B30.26, ETC.) REQUIREMENTS

### MANUFACTURER'S RESPONSIBILITY



1. PRODUCT AND APPLICATION INFORMATION
2. PRODUCT THAT IS CLEARLY IDENTIFIED; NAME OR LOGO; LOAD RATING AND SIZE; TRACEABILITY
3. PRODUCT PERFORMANCE; WORKING LOAD LIMIT; DUCTILITY; FATIGUE PROPERTIES; IMPACT PROPERTIES
4. PRODUCT TRAINING AND TRAINING; RESOURCES

### CROSBY © SHACKLES

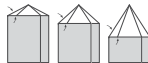
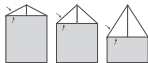
NOMINAL SIZE (IN) DIAMETER OF BOW	CARBON MAXIMUM WORKING LOAD (TONS)	ALLOY MAXIMUM WORKING LOAD (TONS)	INSIDE WIDTH AT PIN (INCHES)	DIAMETER OF PIN (INCHES)
3/16	1/3	-	.38	.25
1/4	1/2	-	.47	.31
5/16	3/4	-	.53	.38
3/8	1	2	.66	.44
7/16	1 - 1/2	2.6	.75	.50
1/2	2	3.3	.81	.63
5/8	3 - 1/4	5	1.06	.75
3/4	4 - 3/4	7	1.25	.88
7/8	6 - 1/2	9.5	1.44	1.00
1	8 - 1/2	12.5	1.69	1.13
1 - 1/8	9 - 1/2	15	1.81	1.25
1 - 1/4	12	18	2.03	1.38
1 - 3/8	13 - 1/2	21	2.25	1.50
1 - 1/2	17	30	2.38	1.63

USE SCREW PIN SHACKLES  
WHEN PICKING AND PLACING,  
TIGHTEN PIN BEFORE EACH LIFT

VISUAL VERIFICATION OF  
PROPER HOOK ENGAGEMENT IS  
REQUIRED IN ALL CASES

USE BOLT SHACKLES IN  
PERMANENT OR LONG TERM  
INSTALLATIONS

MAKE SURE SLINGS ARE IN  
BASE OF THE HOOK AND THAT  
THE LATCH IS NOT FOULED



					2 LEG BRIDLE			3 LEG BRIDLE			4 LEG BRIDLE		
WIRE ROPE	LBS. PER FT.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.	W.L.L. LBS.
DIA.		VERT.	CHOKER	BASKET	30 DEG.	45 DEG.	60 DEG.	30 DEG.	45 DEG.	60 DEG.	30 DEG.	45 DEG.	60 DEG.
1/4"	0.116	1,300	960	2,600	1,300	1,820	2,200	1,940	2,800	3,400	2,600	3,600	4,400
5/16"	0.18	2,000	1,480	4,000	2,000	2,800	3,400	3,000	4,200	5,200	4,000	4,600	7,000
3/8"	0.26	2,800	2,200	5,600	2,800	4,000	5,000	4,400	6,000	7,400	5,800	8,200	10,000
7/16"	0.35	3,800	2,800	7,600	3,800	5,400	6,800	5,800	8,200	10,000	7,800	11,000	13,400
1/2"	0.46	5,000	3,800	10,000	5,000	7,200	8,800	7,600	10,800	12,200	10,200	14,200	17,600
9/16"	0.59	6,400	4,800	12,800	6,400	9,000	11,000	9,600	13,600	16,600	12,800	18,000	22,000
5/8"	0.72	7,800	5,800	15,600	7,800	11,000	13,600	11,800	16,600	20,000	15,600	22,000	28,000
3/4"	1.04	11,200	8,200	22,400	11,200	15,800	19,400	16,800	24,000	30,000	22,000	32,000	38,000
7/8"	1.42	15,200	11,200	30,400	15,200	22,000	26,000	22,000	32,000	40,000	30,000	42,000	52,000
1"	1.85	19,600	14,400	39,200	19,600	28,000	34,000	30,000	42,000	52,000	40,000	56,000	68,000
1-1/8"	2.34	24,000	18,200	48,000	24,000	34,000	42,000	36,000	52,000	62,000	48,000	68,000	84,000
1-1/4"	2.89	30,000	22,000	60,000	30,000	42,000	52,000	44,000	62,000	76,000	60,000	84,000	102,000
1-3/8"	3.50	36,000	26,000	72,000	36,000	50,000	62,000	54,000	76,000	92,000	72,000	100,000	124,000
1-1/2"	4.16	42,000	32,000	84,000	42,000	60,000	74,000	64,000	90,000	110,000	84,000	120,000	146,000
1-5/8"	4.88	48,000	36,000	98,000	48,000	70,000	84,000	74,000	104,000	126,000	98,000	138,000	170,000
1-3/4"	5.67	56,000	42,000	112,000	56,000	80,000	98,000	84,000	120,000	148,000	114,000	160,000	196,000
1-7/8"	6.50	64,000	48,000	128,000	64,000	92,000	112,000	96,000	136,000	168,000	128,000	182,000	224,000
2"	7.39	74,000	56,000	148,000	74,000	104,000	126,000	110,000	156,000	190,000	146,000	208,000	254,000

WORKING LOAD LIMITS ARE BASED ON CATALOGUE  
BREAKING STRENGTHS OF NEW EIPS IWRC WIRE ROPE  
(1/4"-7/8") 6X19 CLASS (1"-2") 6X37 CLASS

NEVER EXCEED THE WORKING LOAD LIMIT  
INSPECT EACH SLING BEFORE USE  
AVOID SHOCK-LOADING

RATED CAPACITIES ARE BASED ON A SAFETY FACTOR OF 5-1  
4 LEG BRIDLE CAPACITIES ONLY VALID AS AN ENGINEERED ASSEMBLY

[www.shaws-industrial.com](http://www.shaws-industrial.com)

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**Nisku, AB, T9E 0C2**  
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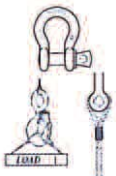
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# WIRE ROPE SLING CONNECTIONS AND HITCHES

## CONNECTION TO FITTINGS

USE A THIMBLE TO PROTECT SLING AND INCREASE  $D/d$

NEVER PLACE EYE OVER A FITTING SMALLER DIAMETER OR WIDTH THAN THE ROPE'S DIAMETER.



NEVER PLACE A SLING EYE OVER A FITTING WITH A DIAMETER OR WIDTH GREATER THAN ONE HALF THE LENGTH OF THE EYE

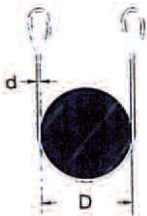


## CHOKER CAPACITY

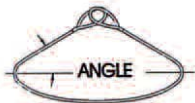
A CHOKER HITCH HAS 75% OF THE CAPACITY OF A SINGLE LEG SLING ONLY IF THE ANGLE OF CHOKE IS 120 DEGREES OR GREATER. A CHOKE ANGLE LESS THAN 120 DEGREES CAN RESULT IN A CAPACITY AS 40% OF A SINGLE LEG.



## BASKET HITCH CAPACITY



A BASKET HITCH HAS TWICE THE CAPACITY OF A SINGLE LEG ONLY IF  $D/d$  RATIO IS 25/1 AND THE LEGS ARE VERTICAL.



CAPACITY % OF ANGLE SINGLE LEG	
90	200%
60	170%
45	140%
30	100%

## MULTIPLE LEG SLINGS

TRIPLE LEG SLINGS HAVE 50% MORE CAPACITY THAN DOUBLE LEG SLINGS (AT THE SAME SLING ANGLE) ONLY IF THE CENTER OF GRAVITY IS IN CENTER OF CONNECTION POINTS AND LEGS ARE ADJUSTED PROPERLY (THEY MUST HAVE AN EQUAL SHARE OF THE LOAD).

QUAD (4 LEG) SLINGS OFFER IMPROVED STABILITY BUT PROVIDE INCREASED CAPACITY ONLY IF ALL LEGS SHARE AN EQUAL SHARE OF THE LOAD.



## GRADE 80

### SINGLE LEG

### 2 LEG BRIDLE

### 3 & 4 LEG BRIDLE

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

DIA.

VERT.

30 DEG.\*

45 DEG.\*

60 DEG.\*

30 DEG.

45 DEG.

60 DEG.

9/32" (7mm)

3,500

3,500

4,900

6,100

5,200

7,400

9,100

3/8" (10mm)

7,100

7,100

10,000

12,300

10,600

15,100

18,400

1/2" (13mm)

12,000

12,000

17,000

20,800

18,000

25,500

31,200

5/8" (16mm)

18,100

18,100

25,600

31,300

27,100

38,400

47,000

3/4" (20mm)

28,300

28,300

40,000

49,000

42,400

60,000

73,500

7/8" (22mm)

34,200

34,200

48,000

59,200

51,300

72,500

88,900

RATED CAPACITIES ARE BASED ON A SAFETY FACTOR OF 4:1

# GRADE 80



## GRADE 100

### SINGLE LEG

### 2 LEG BRIDLE

### 3 & 4 LEG BRIDLE

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

W.L.L.  
LBS.

DIA.

90 DEG.

60 DEG.

45 DEG.

30 DEG.

60 DEG.

45 DEG.

30 DEG.

5/16" (8mm)

5,700

9,900

8,100

5,700

14,800

12,100

8,500

3/8" (10mm)

8,800

15,200

12,400

8,800

22,900

18,700

13,200

1/2" (13mm)

15,000

26,000

21,200

15,000

39,000

31,800

22,500

5/8" (16mm)

22,600

39,100

32,000

22,600

58,700

47,900

33,900

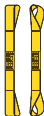
RATED CAPACITIES ARE BASED ON A SAFETY FACTOR OF 4:1

# GRADE 100



# Web Slings

## Type 3&4



WEB WIDTH	SINGLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET	WEB WIDTH	DOUBLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET
1"	EE1-901	1,600	1,200	3,200	1"	EE2-901	3,200	2,500	6,400
2"	EE1-902	3,200	2,500	6,400	2"	EE2-902	6,400	5,000	12,800
3"	EE1-903	4,800	3,800	9,600	3"	EE2-903	8,860	7,000	17,720
4"	EE1-904	6,400	5,000	12,800	4"	EE2-904	11,400	9,000	22,800
5"	EE1-905	8,000	6,000	16,000	5"	EE2-905	14,250	11,400	28,500
6"	EE1-906	9,600	7,600	19,200	6"	EE2-906	17,000	13,000	34,000
8"	EE1-908	12,800	10,250	25,600	8"	EE2-908	22,800	18,000	45,600
10"	EE1-910	15,000	12,000	30,000	10"	EE2-910	24,000	19,000	48,000
12"	EE1-912	19,000	15,000	38,000	12"	EE2-912	30,000	24,000	60,000

## Type 5



WEB WIDTH	SINGLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET	WEB WIDTH	DOUBLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET
1"	EN1-901	3,200	2,500	6,400	1"	EN2-901	6,400	5,000	12,800
2"	EN1-902	6,400	5,000	12,800	2"	EN2-902	12,500	10,000	25,000
3"	EN1-903	9,600	7,600	19,200	3"	EN2-903	17,500	14,000	35,000
4"	EN1-904	12,500	10,000	25,000	4"	EN2-904	23,500	18,000	47,000
5"	EN1-905	16,000	12,800	32,000	5"	EN2-905	27,500	22,000	55,000
6"	EN1-906	19,200	15,300	38,400	6"	EN2-906	32,500	26,000	65,000
8"	EN1-908	25,600	20,000	51,200	8"	EN2-908	40,960	32,700	81,920
10"	EN1-910	32,000	25,600	64,000	10"	EN2-910	48,000	38,000	96,000
12"	EN1-912	38,000	30,720	76,000	12"	EN2-912	53,000	43,000	106,000

## STEEL FITTINGS

### Type 1



WEB WIDTH	SINGLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET	WEB WIDTH	DOUBLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET
2"	TC1-902	3,200	2,500	6,400	2"	TC2-902	6,400	5,000	12,800
3"	TC1-903	4,800	3,800	9,600	3"	TC2-903	8,860	7,000	17,720
4"	TC1-904	6,400	5,000	12,800	4"	TC2-904	11,400	9,000	22,800
5"	TC1-905	8,000	6,000	16,000	5"	TC2-905	14,250	11,400	28,500
6"	TC1-906	9,600	7,600	19,200	6"	TC2-906	17,000	13,000	34,000
8"	TC1-908	12,800	10,250	25,600	8"	TC2-908	22,800	18,000	45,600
10"	TC1-910	15,000	12,000	30,000	10"	TC2-910	24,000	19,000	48,000
12"	TC1-912	19,000	15,000	38,000	12"	TC2-912	30,000	24,000	60,000






### Type 2



WEB WIDTH	SINGLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET	WEB WIDTH	DOUBLE PLY SLING TYPE	LBS VERTICAL	LBS CHOKER	LBS BASKET
2"	TT1-902	3,200		6,400	2"	TT2-902	6,400		12,800
3"	TT1-903	4,800		9,600	3"	TT2-903	8,860		17,720
4"	TT1-904	6,400		12,800	4"	TT2-904	11,400		22,800
5"	TT1-905	8,000		16,000	5"	TT2-905	14,250		28,500
6"	TT1-906	9,600		19,200	6"	TT2-906	17,000		34,000
8"	TT1-908	12,800		25,600	8"	TT2-908	22,800		45,600
10"	TT1-910	15,000		30,000	10"	TT2-910	24,000		48,000
12"	TT1-912	19,000		38,000	12"	TT2-912	30,000		60,000

**WORKING LOADS ARE CALCULATED ON A 5:1 SAFETY FACTOR**

# Polyester Round Slings

CODE NUMBER	COLOUR						APPROX. DIA. INCHES	APPROX. WEIGHT/FT. IN POUNDS
		VERTICAL	CHOKER	90° BASKET	30° BASKET	45° BASKET		
SL 30	Purple	3,000	2,400	6,000	5,200	4,200	.75	.25
SL 40	Black	4,000	3,200	8,000	6,900	5,600	.80	.35
SL 60	Green	6,000	4,800	12,000	10,300	8,400	.90	.40
SL 90	Yellow	9,000	7,200	18,000	15,500	12,600	1.00	.50
SL 120	Tan	12,000	9,600	24,000	20,600	16,800	1.25	.75
SL 140	Red	14,000	11,200	28,000	24,100	19,600	1.30	.85
SL 170	Orange	17,000	13,600	34,000	29,300	23,800	1.60	.95
SL 230	Blue	23,000	18,400	46,000	39,500	32,200	1.65	1.25
SL 260	Orange	26,000	20,800	52,000	44,700	36,400	1.75	1.45
SL 320	Grey	32,000	25,600	64,000	55,000	44,800	2.15	1.75
SL 400	Orange	40,000	32,000	80,000	68,800	56,000	2.45	2.25
SL 540	Brown	54,000	43,200	108,000	92,900	75,600	3.00	2.75
SL 680	Olive Green	68,000	54,400	136,000	117,000	95,200	3.25	3.60
SL 900	Black	90,000	72,000	180,000	155,000	126,000	3.75	4.10

**Rated Capacities in Pounds**  
**DO NOT EXCEED RATED CAPACITIES**

# WIRE ROPE CLIPS



G-450  
U-Bolt Clip

NEVER SADDLE A DEAD HORSE. NEVER USE  
MALLEABLE CLIPS FOR ANY CRITICAL APPLICATION.

SIZE (INCHES)	NUMBER OF CLIPS	TURNBACK LENGTH (IN)	TORQUE FT - LBS.
1/8	2	3 - 1/4	4.5
3/16	2	3 - 3/4	7.5
1/4	2	4 - 3/4	15
5/16	2	5 - 1/4	30
3/8	2	6 - 1/2	45
7/16	2	7	65
1/2	3	11 - 1/2	65
9/16	3	12	95
5/8	3	12	95
3/4	4	18	130
1	5	26	225

FOR SCAFFOLD, PERSONNEL HOIST, AND SCAFFOLD APPLICATIONS,  
ANSI A17.1 AND A10.4. DO NOT RECOMMEND U-BOLT CLIPS. CROSBY  
RECOMMENDS FIST GRIP CLIPS FOR TIE OFF LINES FOR FALL PROTECTION.



G-429  
Fist Grip  
Clip

SIZE (INCHES)	NUMBER OF CLIPS	TURNBACK LENGTH (IN)	TORQUE FT - LBS.
3/16	2	4	30
1/4	2	4	30
5/16	2	5	30
3/8	2	5 - 1/4	45
7/16	2	6 - 1/2	65
1/2	3	11	65
9/16	3	12 - 3/4	130
5/8	3	13 - 1/2	130
3/4	3	16	225
1	5	37	225

SOME STANDARDS MAY REQUIRE A MINIMUM OF 3 WIRE ROPE CLIPS. THE NUMBER OF CLIPS  
SHOWN IS BASED UPON USING RRL OR RLL WIRE ROPE, 6 X 19 OR 6 X 37 CLASS, FC OR IWRC; IPS  
OR XIP, XXIP, ALSO APPLIES TO ROTATION-RESISTANT RRL WIRE ROPE, 19 X 7 CLASS, IPS, XIP, XXIP  
SIZES 1 - 3/4 INCH AND SMALLER. IF A PULLEY (SHEAVE) IS USED FOR TURNING BACK THE WIRE  
ROPE, ADD ONE ADDITIONAL CLIP. CLIPS ARE 80% EFFICIENT UNDER 1" AND 90% 1" AND ABOVE.



**1** APPLY FIRST CLIP ONE  
BASE WIDTH FROM  
DEAD END



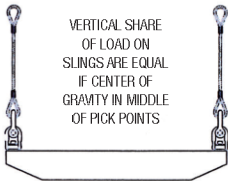
**2** APPLY SECOND CLIP AS  
NEAR THE THIMBLE AS  
POSSIBLE



**3** APPLY ALL ADDITIONAL  
CLIPS EVENLY BETWEEN  
THE FIRST TWO

## SLING ANGLES

### TWO LEGGED SLING - WIRE ROPE, CHAIN, SYNTHETICS



VERTICAL SHARE  
OF LOAD ON  
SLINGS ARE EQUAL  
IF CENTER OF  
GRAVITY IN MIDDLE  
OF PICK POINTS

HORIZONTAL SLING  
ANGLE (A) DEGREE

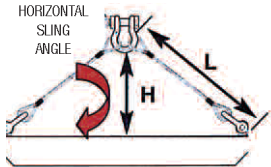
90

60

50

45

30



LOAD ANGLE  
FACTOR = L/H

1.000

1.155

1.305

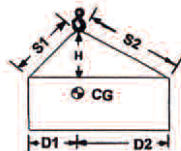
1.414

2.000

**LOAD ON EACH LEG OF SLING = VERTICAL SHARE OF LOAD X LOAD ANGLE FACTOR**

**HORIZONTAL SLING ANGLES OF LESS THAN 30 DEGREES ARE NOT RECOMMENDED**  
REFER TO ANSI B30.9 FOR FULL INFORMATION

LOAD ON SLING CALCULATED  
TENSION 1 =  $\text{LOAD} \times D2 \times S1 / (H(D1+D2))$   
TENSION 2 =  $\text{LOAD} \times D1 \times S2 / (H(D1+D2))$



LOAD ON SLING CALCULATED  
TENSION 1 =  $\text{LOAD} \times D2 \times S1 / (H(D1+D2))$   
TENSION 2 =  $\text{LOAD} \times D1 \times S2 / (H(D1+D2))$

