



**ROPENET**

# WORKBOOK LIFTING

**YOUR LIFTING SOLUTION PROVIDER**

WEBBING SLING ROUND SLING HEAVY DUTY SLING CHAFE GUARD



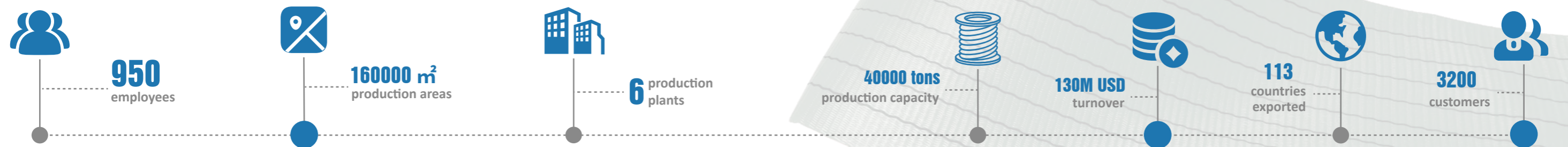


**THE LEADING SYNTHETIC FIBER SLINGS AND ROPES MANUFACTURER**

ROPENET is a leading manufacturer and solution provider of synthetic mooring, towing, lifting slings and ropes for Shipping, Offshore, Oil and Gas, Lifting and Industrial applications. Driven by a spirit of innovation, we provide optimal solutions for the customer dealing with the difficult challenges.

A commitment to the highest levels of product performance, quality of service, sustainability and innovation guides all our actions. Each sling is manufactured according to EN1492,AS13531/AS4497 or ASMEB30.9. Every single rope is produced in accordance with OCIMF recommendations and ISO standards.

In order to support the business, we have established a strategic global network at major key-ports, including Singapore, Dubai, Rotterdam, Houston, Brisbane, Panama, and main ports of China. Combined with technical expertise, robust inventory and consistent service, ROPENET creates optimized value and maintains enduring relationships with our customers.





## QUALITY

ROPENET implements a quality management system according to the requirements of the ISO 9001:2015 standard in order to guarantee the conception, development and production of products respected. The production process is meticulously controlled and quality controls can be carried out during each phase, whether initial, intermediate or final. Aware of the importance of investigation and technological innovation applied to quality control, we have our own laboratories for measuring and testing in a scientific and reliable way. These laboratories are completely capable of testing our range of products. In one of our labs, we test the physical property and the other one we conduct testing the chemical performance. We also have a test bench which is able to measure loads of up to 2000 Tons.



<b>WEBBING SLING</b>	5-6
EUROPEAN STANDARD WEBBING SLING	7-9
AMERICAN STANDARD WEBBING SLING	10-12

<b>ROUND SLING</b>	13-14
EUROPEAN STANDARD ROUND SLING	15
AMERICAN STANDARD ROUND SLING	16

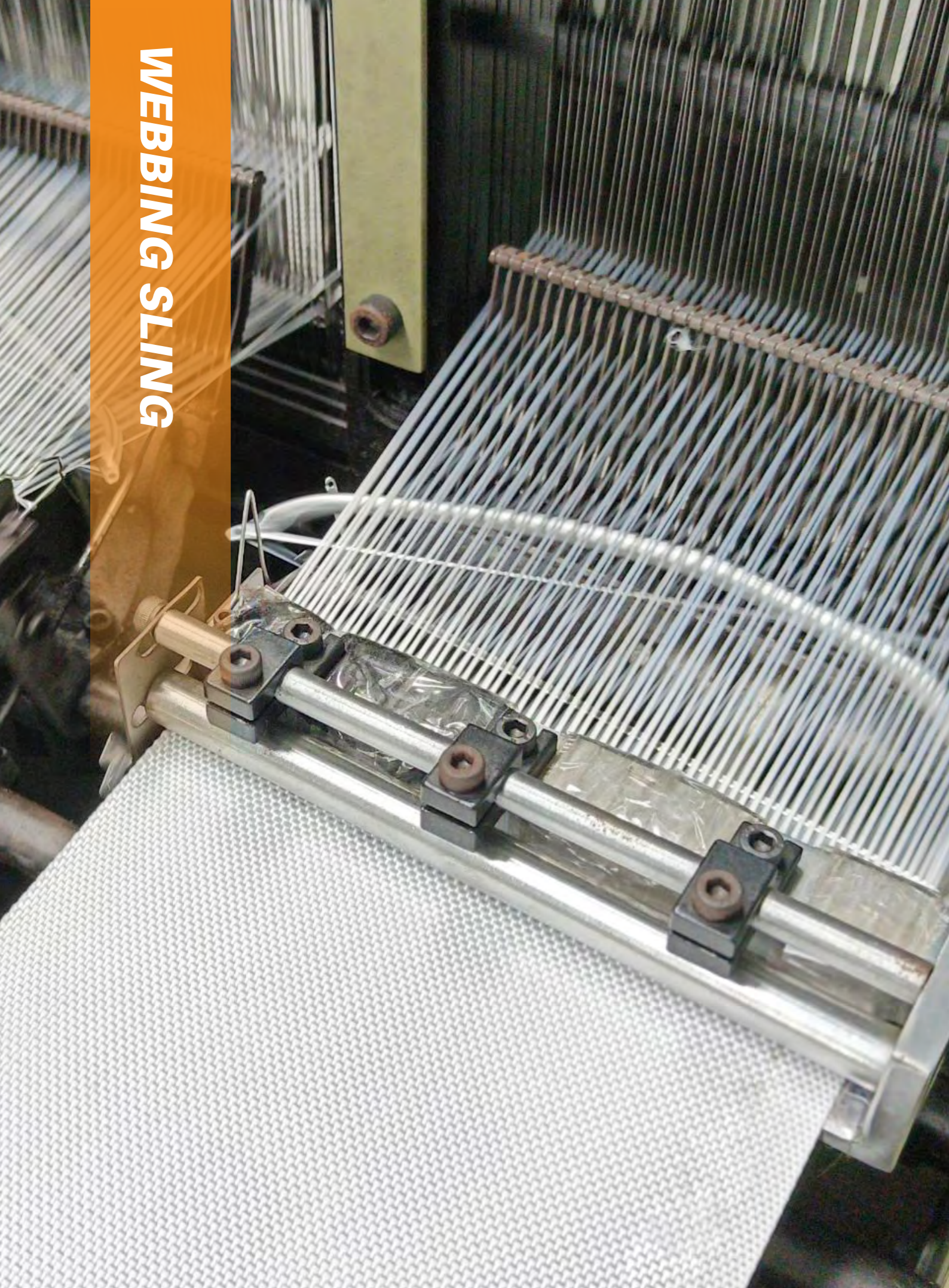
<b>HEAVY DUTY ROUND SLING</b>	17-18
EUROPEAN STANDARD HEAVY DUTY ROUND SLING	19
AMERICAN STANDARD HEAVY DUTY ROUND SLING	20

<b>HEAVY DUTY ROPE SLING</b>	21-25
------------------------------	-------

<b>CHAFE PROTECTION</b>	26-27
-------------------------	-------

<b>INSPECTION</b>	28-29
-------------------	-------

# WEBBING SLING



## Webbing Sling - W-FORCE™

The W-FORCE™ Flat Eye Slings are versatile and essential tools in the lifting and rigging industry, designed to securely hoist and move heavy loads with efficiency and safety. These slings are constructed from high-quality polyester webbing material, renowned for its strength, durability, and flexibility.

### Key Features

**Material Strength:** Webbing slings are crafted from durable polyester, engineered to withstand high levels of stress and load-bearing capacities. This ensures reliability and safety during lifting operations.

**Flexibility:** The webbing construction of these slings provides excellent flexibility, allowing them to conform to the shape of the load being lifted. This flexibility enhances stability and minimizes the risk of damage to the load.

**Lightweight and Portable:** Compared to traditional wire rope or chain slings, webbing slings are lightweight and easy to handle, making them ideal for various lifting applications where portability is essential.

**Non-Abrasive Surface:** The smooth surface of webbing slings helps prevent damage to delicate surfaces of the load, reducing the risk of scratches, dents, or abrasions during lifting and transport.

**Versatility:** Webbing slings are available in a variety of configurations, including flat or endless loops, making them suitable for a wide range of lifting tasks, from simple hoisting to complex rigging operations.

**Color-Coded for Safety:** Many webbing slings are color-coded based on their load capacity, providing easy identification and ensuring compliance with safety standards during use.



### Applications

Construction sites

Warehouses and distribution centers

Manufacturing facilities

Shipping and logistics industries

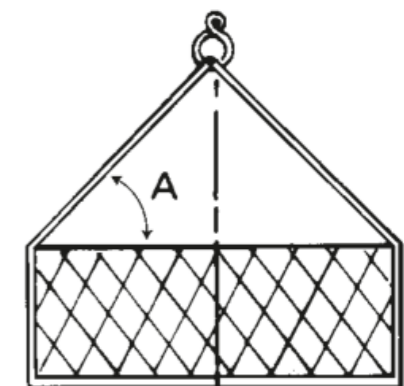


**WARNING**



Slings shall not be loaded in excess of rated capacity. Consideration shall be given to the sling angle, which affects sling tension.

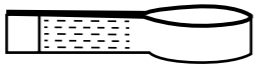
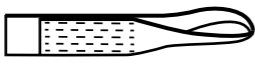

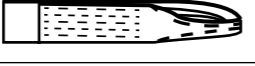

SLING ANGLE CHART	
Angle from Horizontal	Capacity Reduction Factor
90°	1.000
85°	0.996
80°	0.985
75°	0.966
70°	0.940
65°	0.906
60°	0.866
55°	0.819
50°	0.766
45°	0.707
40°	0.643
35°	0.574
30°	0.500



### Sling Angle Chart

Reduction in lifting capacity when lifting with basket hitch due to sling angle. Sling capacity decreases as angle increases.

## EUROPEAN STANDARD

Type	Specific Description	Review of the eye type
TYPE A	Flat eye	
TYPE B	Reversed eye	
TYPE C	Folded eye 1/2 width from one side	
TYPE D	Folded eye 1/2 width from two sides	
TYPE E	Folded eye 1/3 width	



## W-FORCE™ Single-Ply Webbing Sling

100% high tenacity polyester single ply of Webbing.

According to EN 1492-1:2000

Safety Factor 7:1

Flat & wide load bearing surface.




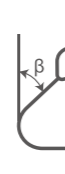





Low elongation 3-7%.

Colour coded for easy identification.

Service temperature range: From -40 °C up to +100 °C.

Anti-abrasion sleeves and anti-cutting sleeves protection(optional).

### RATED CAPACITY FOR SINGLE-PLY WEBBING SLING IN KGS

WLL	Color Code	Width MM	Working Load Limits								
			Vertical Hitch	Choker Hitch	Basket Hitch		Two Legs		Three and Four Legs		
					Parallel	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$
											
			M=1.0	M=0.8	M=2.0	M=1.4	M=1.0	M=1.4	M=1.0	M=2.1	M=1.5
0.5 T	VIOLET	30	500	400	1000	700	500	700	500	1050	750
1.0 T	GREEN	60	1000	800	2000	1400	1000	1400	1000	2100	1500
1.5 T	YELLOW	90	1500	1200	3000	2100	1500	2100	1500	3150	2250
2.0 T	GREY	120	2000	1600	4000	2800	2000	2800	2000	4200	3000
2.5 T	RED	150	2500	2000	5000	3500	2500	3500	2500	5250	3750
3.0 T	BROWN	180	3000	2400	6000	4200	3000	4200	3000	6300	4500
4.0 T	BLUE	240	4000	3200	8000	5600	4000	5600	4000	8400	6000
5.0 T	ORANGE	265	5000	4000	10000	7000	5000	7000	5000	10500	7500
6.0 T	ORANGE	300	6000	4800	12000	8400	6000	8400	6000	12600	9000

## W-FORCE™ Double-Ply Webbing Sling

100% high tenacity polyester double ply of Webbing.

According to EN 1492-1:2000.

Safety factor 7:1

Flat & wide load bearing surface.

High strength to weight ratio : Weight 80% less than equivalent wire or chain slings.

Low elongation 3-7%.




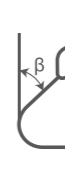





Colour coded for easy identification.

Service temperature range: From -40 °C up to +100 °C.

Anti-abrasion sleeves and anti-cutting sleeves protection(optional).



### RATED CAPACITY FOR DOUBLE-PLY WEBBING SLING IN KGS

WLL	Color Code	Width MM	Working Load Limits								
			Vertical Hitch	Choker Hitch	Basket Hitch		Two Legs		Three and Four Legs		
					Parallel	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$
											
			M=1.0	M=0.8	M=2.0	M=1.4	M=1.0	M=1.4	M=1.0	M=2.1	M=1.5
1.0T	VIOLET	30	1000	800	2000	1400	1000	1400	1000	2100	1500
2.0T	GREEN	60	2000	1600	4000	2800	2000	2800	2000	4200	3000
3.0T	YELLOW	90	3000	2400	6000	4200	3000	4200	3000	6300	4500
4.0T	GREY	120	4000	3200	8000	5600	4000	5600	4000	8400	6000
5.0T	RED	150	5000	4000	10000	7000	5000	7000	5000	10500	7500
6.0T	BROWN	180	6000	4800	12000	8400	6000	8400	6000	12600	9000
8.0T	BLUE	240	8000	6400	16000	11200	8000	11200	8000	16800	12000
10T	ORANGE	265	10000	8000	20000	14000	10000	14000	10000	21000	15000
12T	ORANGE	300	12000	9600	24000	16800	12000	16800	12000	25200	18000

## W-FORCE™ 4-Ply Webbing Sling

100% high tenacity polyester 4 ply of Webbing.  
 According to EN 1492-1:2000  
 Safety factor 7:1  
 Flat & wide load bearing surface.  
 High strength to weight ratio : weight 80% less than equivalent wire or chain slings.  
 Low Elongation 3-7%.  
 Colour coded for easy identification.  
 Service temperature range: From -40 °C up to +100 °C.  
 Anti-abrasion sleeves and anti-cutting sleeves protection(optional).



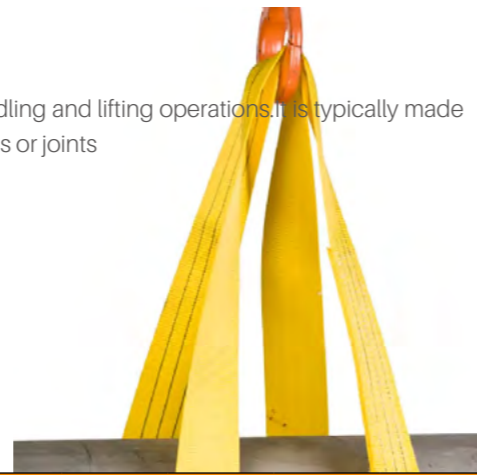
### RATED CAPACITY FOR 4-PLY WEBBING SLING IN KG

WLL	Color Code	Width MM	Working Load Limits								
			Vertical Hitch	Choker Hitch	Basket Hitch			Two Legs		Three and Four Legs	
					Parallel	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$
			M=1.0	M=0.8	M=2.0	M=1.4	M=1.0	M=1.4	M=1.0	M=2.1	M=1.5
2.0T	VIOLET	30	2000	1600	4000	2800	2000	2800	2000	4200	3000
4.0T	GREEN	60	4000	3200	8000	5600	4000	5600	4000	8400	6000
6.0T	YELLOW	90	6000	4800	12000	8400	6000	8400	6000	12600	9000
8.0T	GREY	120	8000	6400	16000	11200	8000	11200	8000	16800	12000
10T	RED	150	10000	8000	20000	14000	10000	14000	10000	21000	15000
12T	BROWN	180	12000	9600	24000	16800	12000	16800	12000	25200	18000
16T	BLUE	240	16000	12800	32000	22400	16000	22400	16000	33600	24000
20T	ORANGE	265	20000	16000	40000	28000	20000	28000	20000	42000	30000
24T	ORANGE	300	24000	19200	48000	33600	24000	33600	24000	50400	36000

## W-FORCE™ Endless Webbing Sling

Endless webbing sling is a type of lifting sling commonly used in material handling and lifting operations. It is typically made of synthetic materials is designed to form a continuous loop without any seams or joints

100% high tenacity polyester single ply of Webbing.  
 Safety Factor 7:1  
 Simplex design.  
 Low elongation 3-7%.  
 WLL stripes, each stripe is 1 ton  
 Service temperature range: From -40 °C up to +100 °C.  
 Anti-abrasion sleeves and anti-cutting sleeves protection(optional).



### RATED CAPACITY FOR ENDLESS WEBBING SLING IN KGS

WLL	Color Code	Width MM	Working Load Limits								
			Vertical Hitch	Choker Hitch	Basket Hitch			Two Legs		Three and Four Legs	
					Parallel	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$	$\beta=0^\circ-45^\circ$	$\beta=45^\circ-60^\circ$
			M=1.0	M=0.8	M=2.0	M=1.4	M=1.0	M=1.4	M=1.0	M=2.1	M=1.5
1.0T	VIOLET	30	1000	800	2000	1400	1000	1400	1000	2100	1500
2.0 T	GREEN	60	2000	1600	4000	2800	2000	2800	2000	4200	3000
3.0T	YELLOW	90	3000	2400	6000	4200	3000	4200	3000	6300	4500

## AMERICAN STANDARD

### STANDARD WEB SLING TYPES

Hardware Slings	TYPE I (TC) - Web sling made with a triangle fitting on one end and a slotted triangle choker fitting on the other end.	
	TYPE II (TT) - Web sling made with a triangle fitting on both ends.	
Eye/Eye Type	TYPE III (EE) - Web sling made with a flat loop eye on each end with loop eye opening on same plane as sling body.	
	TYPE IV (EE) - Web Sling made with both loop eyes formed as in Type III, except that the loop eyes are turned to form a loop eye, which is at a right angle to the plane of the sling body.	
Endless Type	TYPE V (EN) - Endless web sling, sometimes referred to as a grommet.	
Reverse Eye Type	TYPE VI (RE) - Return eye (reversed eye) web sling is formed by using multiple widths of webbing held edge to edge.	

### EYE LENGTH - APPLIES TO ALL WEBBING SLINGS

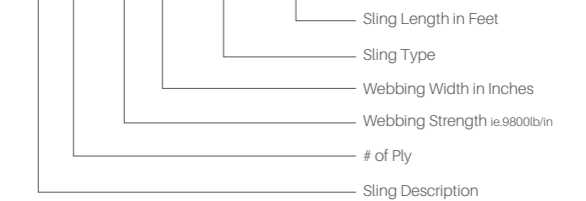
Plies of Web	Sling Width (in.)							
	1	2	3	4	6	8	10	12
1	8.5	10	11	12	16	20	24	24
2	8.5	10	11	12	16	20	24	24
3	10	12	14	16	18	24	24	24
4	10	12	14	16	18	24	24	24

**WARNING** Do not exceed rated capacities. Sling tension increases as the angle from horizontal decreases. Slings should not be used at angles of less than 30°. Refer to the Effect of Angle chart in the HELP section.

### HOW TO ORDER WEBBING SLINGS

#### WEB SLING CLASSIFICATION CODE

EE 2 - 9 0 2 - 3 x 08

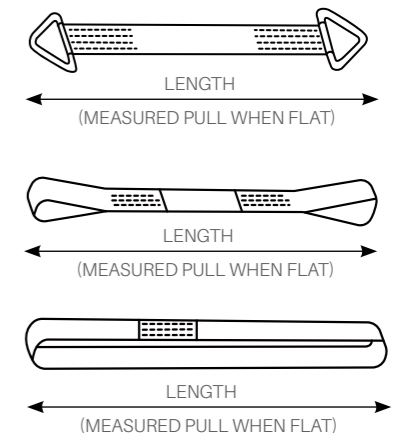


TC = Triangle / Choker, Type 1 TT = Triangle/Triangle, Type 2 EE = Eye & Eye, Types 3 & 4 EN = Endless, Type 5 RE = Reversed Eye, Type 6

### LENGTH OF WEBBING SLING

Slings always measured pull to pull when flat as shown. The distance between the extreme and bearing points of the web sling, including fittings if applicable.

Roundsling Size / Vertical Capacity Range	Tolerance
30,000 lbs. or Less	± (1" + 1% of sling length)
Higher than 30,000 lbs., up to 90,000 lbs.	± (2" + 1% of sling length)
Higher than 90,000 lbs., up to 175,000 lbs.	± (3.0" + 1% of sling length)
Higher than 175,000 lbs.	± (Sling Body Diameter + 1% of sling length)



## Webbing Sling - W-FORCE™

100% high tenacity polyester or nylon

According to ASME B30.9, WSTDA-WS-1 and OSHA

Safety factor 5:1

Flat & wide load bearing surface.









High strength to weight ratio : weight 80% less than equivalent wire or chain slings.

Low Elongation 3-7%.

Service temperature range: From -40 °C up to +100 °C.

Anti-abrasion sleeves and anti-cutting sleeves protection(optional).

### RATED CAPACITY FOR SYNTHETIC WEBBING SLING IN LBS - CLASS 5









Width (inches)	Types I , II , III and IV Single Leg			Two Legs or Single Basket				Type V
	Hitch Types			Horizontal Angles				Hitch Type
	Vertical	Chocker	Vertical Basket	Vertical	60°	45°	30°	Endless Vertical
								
Working Load Limits 1 PLY								
	M=1.0	M=0.8	M=2.0	M=2.0	M=1.7	M=1.4	M=1.0	M=2.0
1	1,100	880	2,200	3,200	1,905	1,555	1,100	2,200
2	2,200	1,760	4,400	6,200	3,810	3,111	2,200	4,400
3	3,300	2,640	6,600	9,400	5,716	4,666	3,300	6,600
4	4,400	3,520	8,800	12,400	7,621	6,222	4,400	8,800
5	5,500	4,400	11,000	15,600	9,526	7,777	5,500	11,000
6	6,600	5,280	13,200	18,600	11,431	9,332	6,600	13,200
Working Load Limits 2 PLY								
	M=1.0	M=0.8	M=2.0	M=2.0	M=1.7	M=1.4	M=1.0	M=2.0
1	2,200	1,760	4,400	4,400	3,810	3,111	2,200	4,400
2	4,400	3,520	8,800	8,800	7,621	6,222	4,400	8,800
3	6,600	5,280	13,200	13,200	11,431	9,332	6,600	13,200
4	8,200	6,560	16,400	16,400	14,202	11,595	8,200	16,400
5	10,200	8,160	20,400	20,400	17,666	14,423	10,200	20,400
6	12,300	9,840	24,600	24,600	21,304	17,392	12,300	24,600

1) The rated capacities are based on stuffer weave construction webbing with a minimum certified tensile strength of 6800lbs per inch of webbing width.

2) Rated capacities for Type III and IV slings apply to both tapered and non-tapered eye constructions. Rated capacities for Type V slings are based on non-tapered webbing.

3) For Type VI slings, consult ROPENET for rated capacities. (As per ASME B30.9-2003 slings)

### RATED CAPACITY FOR SYNTHETIC WEBBING SLING IN LBS - CLASS 7

Width (inches)	Types I , II , III and IV Single Leg			Two Legs or Single Basket				Type V
	Hitch Types			Horizontal Angles				Hitch Type
	Vertical	Chocker	Vertical Basket	Vertical	60°	45°	30°	Endless Vertical
								
Working Load Limits 1 PLY								
	M=1.0	M=0.8	M=2.0	M=2.0	M=1.7	M=1.4	M=1.0	M=2.0
1	1,600	1,280	3,200	3,200	2,771	2,262	1,600	3,200
2	3,100	2,480	6,200	6,200	5,369	4,383	3,100	6,200
3	4,700	3,760	9,400	9,400	8,140	6,646	4,700	9,400
4	6,200	4,960	12,400	12,400	10,738	8,767	6,200	12,400
5	7,800	6,240	15,600	15,600	13,510	11,029	7,800	15,600
6	9,300	7,440	18,600	18,600	16,108	13,150	9,300	18,600
8	11,750	9,400	23,500	21,150	20,438	16,685	11,800	21,150
10	14,700	11,760	29,400	26,450	25,460	20,786	14,700	26,450
12	17,600	14,080	35,200	31,750	30,483	24,886	17,600	31,750
Working Load Limits 2 PLY								
	M=1.0	M=0.8	M=2.0	M=2.0	M=1.7	M=1.4	M=1.0	M=2.0
1	3,100	2,480	6,200	6,200	5,369	4,383	3,100	6,200
2	6,200	4,960	12,400	12,400	10,738	8,767	6,200	12,400
3	8,800	7,040	17,600	17,600	15,242	12,443	8,800	17,600
4	11,000	8,800	22,000	22,000	19,052	15,554	11,000	22,000
5	13,700	10,960	27,400	27,400	23,728	19,372	13,700	27,400
6	16,500	13,200	33,000	33,000	28,578	23,331	16,500	33,000
8	22,750	18,200	42,350	45,500	39,316	32,098	22,700	45,500
10	28,400	22,720	52,900	56,800	49,189	40,158	28,400	56,800
12	34,100	27,280	63,500	68,200	59,061	48,217	34,100	68,200
Working Load Limits 4 PLY								
	M=1.0	M=0.8	M=2.0	M=2.0	M=1.7	M=1.4	M=1.0	M=2.0
1	5,500	4,400	11,000	11,000	9,526	7,777	5,500	11,000
2	11,000	8,800	22,000	22,000	19,052	15,554	11,000	22,000
3	16,450	13,160	32,900	32,900	28,405	23,190	16,400	32,900
4	20,400	16,320	40,800	40,800	35,333	28,846	20,400	40,800
5	25,500	20,400	51,000	51,000	44,166	36,057	25,500	51,000
6	30,600	24,480	61,200	61,200	52,999	43,268	30,600	61,200

1) The rated capacities are based on stuffer weave construction webbing with a minimum certified tensile strength of 9800lbs per inch of webbing width.

2) Rated capacities for Type III and IV slings apply to both tapered and non-tapered eye constructions. Rated capacities for Type V slings are based on non-tapered webbing.

3) For Type VI slings, consult ROPENET for rated capacities. (As per ASME B30.9-2003 slings)

# ROUND SLING



## Round Sling - R-FORCE™

The R-FORCE™ round sling is a type of lifting sling used in material handling and lifting operations. Unlike flat slings, which have a flat surface, round slings are made of a continuous loop of synthetic fibers to form a round shape. The round sling designed to be strong, flexible, and lightweight, making them suitable for a wide range of lifting applications.

### Key Features

**Flexibility:** Round slings are highly flexible and can conform to the shape of the load, making them ideal for lifting irregularly shaped or delicate objects.

**Load Protection:** The soft, flexible surface of round slings helps distribute the load evenly and reduces the risk of damage to the load.

**Versatility:** Round slings can be used in various lifting configurations, including vertical, choker, and basket hitches. This versatility makes them suitable for lifting a wide range of loads.

**Lightweight:** Round slings are lightweight and easy to handle, reducing the strain on workers during lifting operations.

**Durability:** Round slings are typically made from durable materials that are resistant to abrasion, UV degradation, and chemical exposure, ensuring a long service life even in harsh environments.

**Easy Inspection:** Round slings do not have seams or joints, making them easier to inspect for damage or wear. Regular inspections can help identify any issues early and prevent accidents or equipment failures.

### Applications

- Heavy-duty lifting      Material handling      Cargo transport
- Construction support      Logistics assistance      Machinery relocation

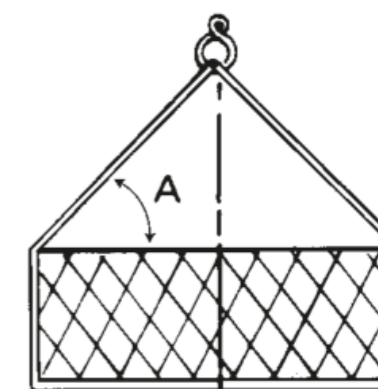


### WARNING



Slings shall not be loaded in excess of rated capacity. Consideration shall be given to the sling angle, which affects sling tension.

SLING ANGLE CHART	
Angle from Horizontal	Capacity Reduction Factor
90°	1.000
85°	0.996
80°	0.985
75°	0.966
70°	0.940
65°	0.906
60°	0.866
55°	0.819
50°	0.766
45°	0.707
40°	0.643
35°	0.574
30°	0.500



### Sling Angle Chart

Reduction in lifting capacity when lifting with basket hitch due to sling angle. Sling capacity decreases as angle increases.





# HEAVY DUTY ROUND SLING



## Heavy Duty Round Sling - ULTRA R-FORCE™

The construction of the high performance round sling is based on parallel laid fiber technology that make up the core. The core is made of 100% high performance HMPE fibers. This makes the slings up to 15 times stronger than steel on a weight for weight basis. Endless-loop construction to ensure very low elongation under load, prevent 'load bounce' when hoisting very heavy weights. It is used worldwide in place of steel rigging for heavy lifts. The right jacket, sleeve or cover mainly serves to keep the core yarn strands together, protects the core material from getting damaged.

### Key Features

- Extremely lighter, safer, and easier to handle than steel
- Low elongation
- No water absorption
- Good chemical resistance
- Possibility to repair the damaged slings
- Convenient storage
- Quick & easy rigging

### Applications

- Heavy-duty lifting
- Material handling
- Cargo transport
- Construction support
- Logistics assistance
- Machinery relocation

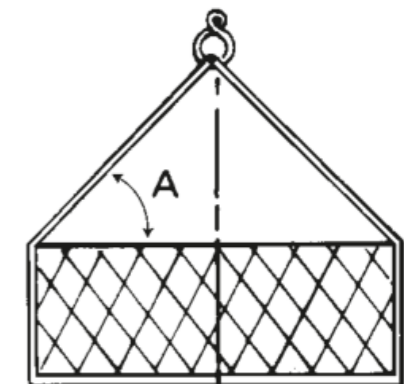


**WARNING**



Slings shall not be loaded in excess of rated capacity. Consideration shall be given to the sling angle, which affects sling tension.

Sling Angle Chart	
Angle from Horizontal	Capacity Reduction Factor
90°	1.000
85°	0.996
80°	0.985
75°	0.966
70°	0.940
65°	0.906
60°	0.866
55°	0.819
50°	0.766
45°	0.707
40°	0.643
35°	0.574
30°	0.500



### Sling Angle Chart

Reduction in lifting capacity when lifting with basket hitch due to sling angle. Sling capacity decreases as angle increases.

### STORAGE AND MAINTENANCE OF SLINGS

In order to prevent damage to slings when not in use, you should store slings in a cool, dry and dark location. Slings should be stored in an area free from environmental or mechanical sources of damage, such as: weld spatter, splinters from grinding or machining, heat sources, chemical exposure, etc. Also keep slings clean and free of dirt, grime and foreign materials. Do not wash web slings as loss of strength is possible due to mechanical/chemical damage.

## EUROPEAN STANDARD

### Heavy Duty Round Sling - ULTRA R-FORCE™

The core made of 100%HMPE fiber, with jacket Dyneema, Nylon or Polyester

According to EN 1492-2

Safety factor 7:1

8 to 10 times lighter than quality steel.

Specific Gravity (g/cm3): 0.97 (floats on water).

Elongation in use: ~ 0,5% elongation at W.L.L.

Capacity upto 3,500 ton.

Available in lengths up to 50m.

Working temperature range: From -50 °C up to +70 °C.

Weight reduction: Up to 80% compared to wire rope slings & up to 60% compared to polyester round (and rope) slings.

Effects on chemical exposure: Excellent on (sea) water, moisture (contact us for further details).

Good resistant against acids and alkali.

RATED CAPACITY FOR ULTRA R-FORCE™ ROUND SLING IN KGS										
Color Code	Core Dia. MM	Working Load Limits					Working Load Limits			
		Vertical Hitch	Choker Hitch	Basket Hitch			Two Legs		Three and four Legs	
				Parallel	β=0°-45°	β=45°-60°	β=0°-45°	β=45°-60°	β=0°-45°	β=45°-60°
		M=1.0	M=0.8	M=2.0	M=1.4	M=1.0	M=1.4	M=1.0	M=2.1	M=1.5
ORANGE	26	5000	4000	10000	7000	5000	14000	10000	10500	7500
ORANGE	34	10000	8000	20000	14000	10000	28000	20000	21000	15000
ORANGE	44	20000	16000	40000	28000	20000	56000	40000	42000	30000
ORANGE	50	30000	24000	60000	42000	30000	84000	60000	63000	45000
ORANGE	64	40000	32000	80000	56000	40000	112000	80000	84000	60000
ORANGE	75	50000	40000	100000	70000	50000	140000	100000	105000	75000
ORANGE	106	100000	80000	200000	140000	100000	280000	200000	210000	150000
ORANGE	128	150000	120000	300000	210000	150000	420000	300000	315000	225000
ORANGE	150	200000	160000	400000	280000	200000	560000	400000	420000	300000
ORANGE	168	250000	200000	500000	350000	250000	700000	500000	525000	375000
ORANGE	184	300000	240000	600000	420000	300000	840000	600000	630000	450000
ORANGE	198	350000	280000	700000	490000	350000	980000	700000	735000	525000
ORANGE	212	400000	320000	800000	560000	400000	1120000	800000	840000	600000
ORANGE	225	450000	360000	900000	630000	450000	1260000	900000	945000	675000
ORANGE	237	500000	400000	1000000	700000	500000	1400000	1000000	1050000	750000

## AMERICAN STANDARD

### Heavy Duty Round Sling - ULTRA R-FORCE™

The core made of 100%HMPE fiber, with jacket Dyneema, Nylon or Polyester

According to ASME B30.9, WSTDA-RS-1HP and OSHA

Safety factor 5:1

8 to 10 times lighter than quality steel.

Specific Gravity (g/cm3): 0.97 (floats on water).

Elongation in use: ~ 0,5% elongation at W.L.L.

Capacity upto 1,000,000 lbs.

Available in lengths up to 150 ft.

Working temperature range: From -50 °C up to +70 °C.

Weight reduction: Up to 80% compared to wire rope slings & up to 60% compared to polyester round (and rope) slings.

Effects on chemical exposure: Excellent on (sea) water, moisture (contact us for further details).

Good resistant against acids and alkali.

RATED CAPACITY FOR ULTRA R-FORCE™ ROUND SLING IN LBS										
Part Number	Working Load Limits					Min. Length (ft.)	Approximate Measurements			
	Vertical Hitch	Choker Hitch	Basket Hitch				Wt. (lbs per ft.)	Body Dia. Relaxed (in.)	Width at Load (in.)	Minimum Hardware Diameter (in.)
			90°	60°	45°					
	M=1.0	M=0.8	M=2.0	M=1.7	M=1.4					
RN10K	10,000	8,000	20,000	17,300	14,000	3	0.25	1.00	1.56	0.69
RN15K	15,000	12,000	30,000	25,950	21,000	3	0.38	1.13	1.75	0.88
RN20K	20,000	16,000	40,000	34,600	28,000	3	0.44	1.25	2.00	1.06
RN25K	25,000	20,000	50,000	43,250	35,000	3	0.54	1.25	2.13	1.25
RN30K	30,000	24,000	60,000	51,900	42,000	3	0.66	1.38	2.13	1.44
RN40K	40,000	32,000	80,000	69,200	56,000	3	0.79	1.75	2.75	1.50
RN50K	50,000	40,000	100,000	86,500	70,000	5	1.16	1.88	2.88	1.75
RN60K	60,000	48,000	120,000	103,800	84,000	5	1.31	2.00	3.13	2.00
RN70K	70,000	56,000	140,000	121,100	98,000	5	1.47	2.13	3.25	2.19
RN80K	80,000	64,000	160,000	138,400	112,000	5	1.59	2.25	3.50	2.38
RN90K	90,000	72,000	180,000	155,700	126,000	5	1.94	2.50	3.88	2.38
RN100K	100,000	80,000	200,000	173,000	140,000	5	2.06	2.75	4.25	2.50
RN125K	125,000	100,000	250,000	216,250	175,000	8	2.60	3.00	4.88	2.63
RN150K	150,000	120,000	300,000	259,500	210,000	8	3.24	3.25	5.25	2.88
RN175K	175,000	140,000	350,000	302,750	245,000	8	3.51	3.50	5.75	3.13
RN200K	200,000	160,000	400,000	346,000	280,000	8	3.90	3.75	6.13	3.38
RN225K	225,000	180,000	450,000	389,250	315,000	10	4.52	3.92	6.39	4.22
RN250K	250,000	200,000	500,000	432,500	350,000	10	5.15	4.58	7.47	4.25
RN275K	275,000	220,000	550,000	475,750	385,000	10	5.65	4.96	8.08	4.64
RN300K	300,000	240,000	600,000	519,000	420,000	10	6.15	5.45	8.88	5.09
RN400K	400,000	320,000	800,000	692,000	560,000	10	7.98	5.95	9.70	5.56
RN500K	500,000	400,000	1,000,000	865,000	700,000	10	10.17	6.68	10.89	6.24
RN600K	600,000	480,000	1,200,000	1,038,000	840,000	10	12.43	7.45	12.14	6.96
RN700K	700,000	560,000	1,400,000	1,211,000	980,000	12	14.38	7.82	12.75	7.31
RN800K	800,000	640,000	1,600,000	1,384,000	1,120,000	12	16.45	8.04	13.11	7.51
RN900K	900,000	720,000	1,800,000	1,557,000	1,260,000	12	17.74	8.98	14.64	8.39
RN1000K	1,000,000	800,000	2,000,000	1,730,000	1,400,000	12	20.42	9.96	16.23	9.31

# HEAVY DUTY ROPE SLING



Securely whipped for eye protection and to bundle the rope strands along the free length.

Eye protection with special treatment strengthens the Sling's abrasion resistance during operation. The dimensionally stable cross-section ensures safe connection to attachment points with minimal contact surfaces.

Different eyes color design for different attachment points promise operation with well-aligned and efficiency.



## HEAVY DUTY ROPE SLING- HOPEX™ SLING

HOPEX™ sling is made of UHMWPE rope with high flex fatigue and abrasion resistance. As an excellent solution to customization requirements, it offers all the benefits of a wire rope sling, but the same size Fast-sling weighs only one seventh comparison with the wire rope. Tensile Strengths are determined in accordance with Cordage Institute 1500. Safety Factor 7:1 and 5:1.

Nominal Size			Eye & Eye sling						Endless Grommets sling					
			Sling Capacity Ratings at Work Load Limits in Tons						Sling Capacity Ratings at Work Load Limits in Tons					
Dia.MM	Dia. Inch	Spliced MBL Tons	Vertical		Choker		Basket		Vertical		Choker		Basket	
			SF7:1	SF5:1	SF7:1	SF5:1	SF7:1	SF5:1	SF7:1	SF5:1	SF7:1	SF5:1	SF7:1	SF5:1
12	1/2	13.8	2.0	2.8	1.5	2.1	3.9	5.5	3.3	4.6	2.4	3.4	6.5	9.1
14	9/16	18.4	2.6	3.7	2.0	2.8	5.3	7.4	4.3	6.1	3.3	4.6	8.7	12.1
16	5/8	23.5	3.4	4.7	2.5	3.5	6.7	9.4	5.5	7.8	4.2	5.8	11.1	15.5
18	3/4	29.1	4.2	5.8	3.1	4.4	8.3	11.6	6.9	9.6	5.1	7.2	13.7	19.2
20	13/16	34.7	5.0	6.9	3.7	5.2	9.9	13.9	8.2	11.5	6.1	8.6	16.4	22.9
22	7/8	41.3	5.9	8.3	4.4	6.2	11.8	16.5	9.7	13.6	7.3	10.2	19.5	27.3
24	1	48	6.9	9.6	5.1	7.2	13.7	19.2	11.3	15.8	8.5	11.9	22.6	31.7
26	1-1/16	55.1	7.9	11.0	5.9	8.3	15.7	22.0	13.0	18.2	9.7	13.6	26.0	36.4
28	1-1/8	62.8	9.0	12.6	6.7	9.4	17.9	25.1	14.8	20.7	11.1	15.5	29.6	41.4
30	1-1/4	71.4	10.2	14.3	7.7	10.7	20.4	28.6	16.8	23.6	12.6	17.7	33.7	47.1
32	1-5/16	79.6	11.4	15.9	8.5	11.9	22.7	31.8	18.8	26.3	14.1	19.7	37.5	52.5
36	1-1/2	98.5	14.1	19.7	10.6	14.8	28.1	39.4	23.2	32.5	17.4	24.4	46.4	65.0
40	1-5/8	118	16.8	23.6	12.6	17.7	33.7	47.2	27.8	38.9	20.8	29.2	55.6	77.8
44	1-3/4	140	20.0	28.1	15.0	21.0	40.1	56.1	33.1	46.3	24.8	34.7	66.1	92.6
48	2	163	23.3	32.7	17.5	24.5	46.7	65.3	38.5	53.9	28.9	40.4	77.0	108
52	2-1/8	188	26.8	37.6	20.1	28.2	53.7	75.1	44.3	62.0	33.2	46.5	88.5	124
56	2-1/4	214	30.5	42.8	22.9	32.1	61.1	85.5	50.4	70.6	37.8	52.9	101	141
60	2-1/2	242	34.5	48.4	25.9	36.3	69.1	96.7	57.0	79.8	42.7	59.8	114	160
64	2-5/8	271	38.7	54.2	29.0	40.6	77.4	108	63.9	89.4	47.9	67.0	128	179
68	2-3/4	302	43.1	60.3	32.3	45.2	86.1	121	71.1	99.5	53.3	74.6	142	199
72	3	334	47.7	66.7	35.8	50.1	95.3	134	78.7	110	59.0	82.6	157	220
76	3-1/8	367	52.5	73.5	39.4	55.1	105	147	86.6	121	64.9	90.9	173	242
80	3-1/4	402	57.4	80.4	43.1	60.3	115	161	94.8	133	71.1	99.5	190	265
88	3-5/8	476	67.9	95.1	50.9	71.3	136	190	112	157	84.1	118	224	314
96	4	555	79.2	111	59.4	83.2	158	222	131	183	98.0	137	261	366
100	4-1/8	596	85.2	119	63.9	89.5	170	239	141	197	105	148	281	394
104	4-1/4	639	91.3	128	68.5	95.9	183	256	151	211	113	158	301	422
108	4-1/2	683	97.6	137	73.2	103	195	273	161	226	121	169	322	451
112	4-5/8	729	104	146	78.1	109	208	291	172	240	129	180	343	481
116	4-3/4	775	111	155	83.0	116	221	310	183	256	137	192	365	512
120	5	823	118	165	88.2	124	235	329	194	272	145	204	388	543

## HEAVY DUTY ROPE SLING- HOPEX™ SLING

### Key Features

- Highest Strength
- Lowest Stretch
- Soft Hand Easy Splicing
- Low Creep
- Torque Free
- Floats

### Applications

- HeavyLift
- Vessel Mooring
- Tug
- Winch
- Marine Engineering
- Wind Power Industry

### Eye & Eye Sling

For Eye & Eye sling, UHMWPE will essentially act as a size-for-size replacement for a traditional steel wire rope sling in terms of strength. Each end is terminated using a approved splice which becomes locked in place after proof load testing. There is a minimum length requirement for eye and eye slings, due to the splice length and free span requirements.

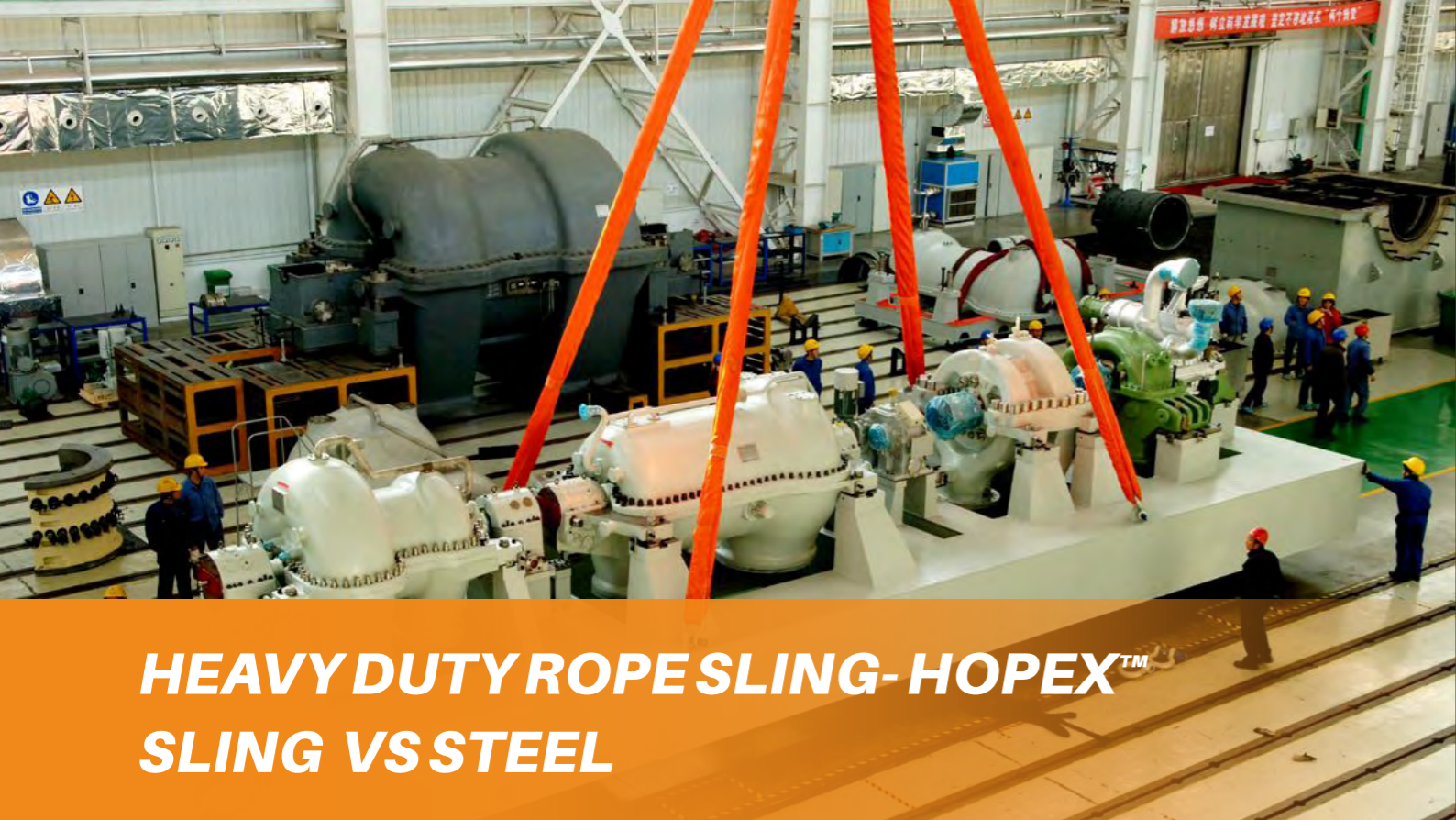


### Endless Grommets sling

For Endless Grommet Sling, they are manufactured by taking the base rope and splicing the ends together to form a continuous loop.

Compared to Eye & Eye sling, they have increased strength with little to no increase in the chosen rope diameter due to two legs holding the load. They can also be manufactured in shorter lengths because extra material to build the eyes is not needed, which saves the cost and supports clients at the utmost. But the challenge of Endless Grommet Sling is that their minimum breaking load is directly controlled by the diameter of the pin that they are mounted on.





# HEAVY DUTY ROPE SLING- HOPEX™ SLING VS STEEL

Lighter: Only 1/7 times lighter than steel wire  
 Strong: Same strength as steel wire  
 Safer: Lightweight solutions, easier rigging, prevent injuries

## Key Features

Below is the two different slings weight comparison based on same MBL 1500 Tons.  
 Length: 6 M

	Hopex™ Sling	Steel Cable Grommet/7 x 6 x 19 WC
Weight	110 KG	915 KG
Diameter	120 MM	135 MM
Operating temp. 100% WLL	-40 to + 70 °C	-40 to + 100 °C



CHAFE PROTECTION



## CHAFE PROTECTION-SHIELD™

Protecting your slings and ropes from abrasion and wear is essential to maintaining their integrity and ensuring safe lifting operations. We offer a range of chafe protection solutions specifically designed to safeguard your slings and ropes and extend their service life in demanding environments.

### V-SHIELD™--PVC PROTECTIVE HOSE

Applicable product	Webbing sling / Round sling
Flattening width	25 MM - 300 MM



### VV-SHIELD™--VELCRO PVC PROTECTION

Applicable product	Webbing sling / Round sling / Rope sling
Flattening width	25 MM - 400 MM



### P-SHIELD™--PES PROTECTIVE HOSE

Applicable product	Webbing sling / Round sling
Flattening Width	25 MM - 300 MM



### VP-SHIELD™--VELCRO PES PROTECTION

Applicable product	Webbing sling / Round sling / Rope sling
Flattening Width	25 MM - 400 MM



### D-SHIELD™--HMPE PROTECTIVE HOSE

Applicable product	Webbing sling / Round sling / Rope sling
Flattening Width	25 MM - 300 MM



### VD-SHIELD™--VELCRO HMPE PROTECTION

Applicable product	Webbing sling / Round sling / Rope sling
Flattening Width	25 MM - 400 MM



## SLING INSPECTION

Slings must be inspected regularly and properly. Even a seemingly "minor" damage of a webbing sling will reduce its capacity to hold or lift objects significantly, also increase the risk of failure in using. For example, a sling manufacturer has shown that a 3/8" cut, which is smaller than the cut shown in Table 2, caused a sling to break under the load at almost half of its non-damaged capacity. Therefore, it is very important to inspect webbing slings regularly and properly. If you are not sure whether a sling is damaged or not, DO NOT USE IT.

### Webbing Sling Removal From Service Criteria

The entire web sling must be inspected regularly and it must be removed from service if ANY of the following are detected:

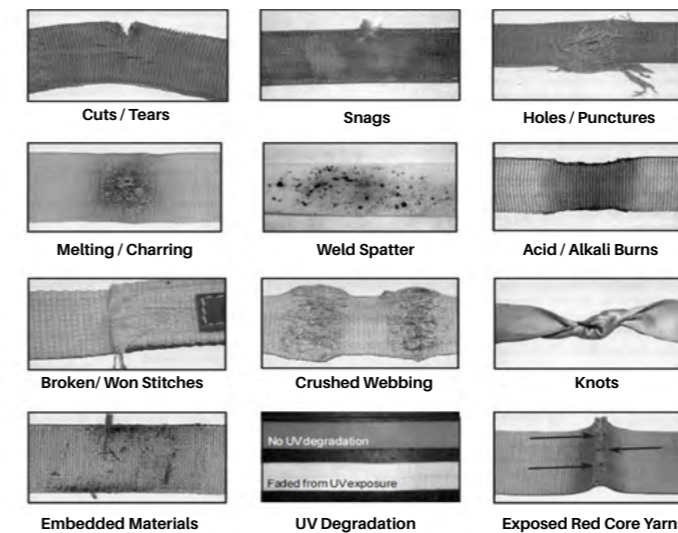
- If sling identification tag is missing or not readable.
- Holes, tears, cuts, snags or embedded materials.
- Broken or worn stitches in the load bearing splices.
- Knots in any part of the sling webbing.
- Acid or alkali burns.
- Melting, charring or weld spatter on any part of the web sling.
- Excessive abrasive wear or crushed webbing.
- Signs of Ultraviolet (UV) light degradation.
- Distortion, excessive pitting, corrosion or other damage to fitting(s).
- If provided, exposed red core yarn. However if damage is present and red yarns are not exposed DO NOT USE the sling. Any conditions which cause doubt as to the strength of the web sling.

### Round Sling Removal From Service Criteria

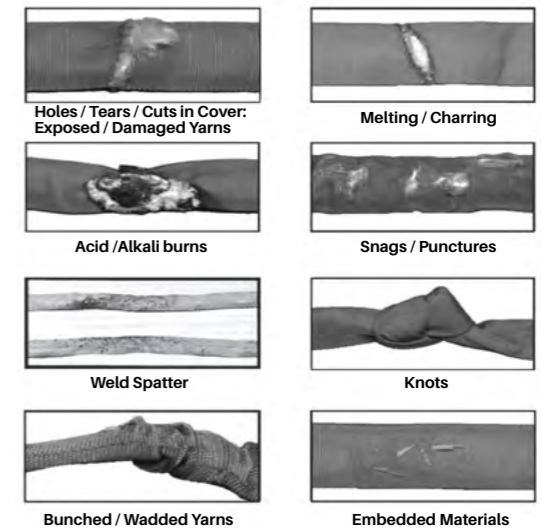
Removal Criteria - A round Sling shall be removed from service if any of the following forms of damage are visible:

- Holes, tears, cuts, embedded particles, excessive abrasive wear or snags that expose the core fibers of the round sling.
- If round sling identification tag is missing or not readable.
- If round sling has been tied into one or more knots or has been joined by knotting.
- Melting, charring or weld spatter of any part of the round sling.
- Acid or alkali burns of the round sling.
- Broken or worn stitching in the cover that exposes the core fibers.
- Distortion, excessive pitting, corrosion or other damage to fitting(s).
- Any evidence of a broken core yarn(s) present in the form of a substantial reduction of core yarn within any area of the roundsling and/or by a substantial accumulation of core yarn bundle within any section of the round sling.
- Any conditions which cause doubt as to the strength of the round sling.

### Types of Damage You Should Look and Feel for in Webbing Slings



### Types of Damage You Should Look and Feel for in Round Slings



# HOW TO READ A SLING IDENTIFICATION TAG

Each sling shall have legible identification and be marked by the manufacturer to include:

- A. Name or trademark of the manufacturer, or if repaired, the entity performing the repairs.
- B. Manufacturer's code or stock number.
- C. Rated load for at least one hitch type and the angle upon which it is based.
- D. Core material and cover material, if different from core.

			DM2006/42 EN 1942-1
45-60°		LENGTH(L <sub>1</sub> ) 1M	
7-45°		LENGTH(L <sub>1</sub> × 2) 2M	
		<b>WLL</b> <b>4 ton</b> S.F.7:1	
POLYESTER WEBBING SLING CODE WDA00704 DATE 06-06-2022			
<b>ROPENET</b>			

**WARNING**

**Read and follow all use and safety information provided with this sling.**  
Failure to comply with this warning may result in sling failure or personal INJURY or DEATH.  
The following six points briefly summarize some important safety issues:

- All users must be trained** in sling cautions to personnel, environmental effects and rigging practices.
- Inspect sling for damage before each use.** A sling shall be removed from service if you see any of the conditions listed on the back of this table. If you have any doubts about the condition of a sling, do not use or repair it.
- Protect sling from damages.** Always protect slings in contact with sharp corners, edges, protrusions and abrasive surfaces with materials of sufficient strength, thickness and construction to prevent damages.
- Do not exceed a sling's rated capacity.** Always consider the effect of sling angle and tension on the sling's capacity.
- Do not stand on, under or near a load with the sling under tension.** All personnel should be alert to dangers of falling or uncontrolled loads.
- Maintain and store slings properly.** Slings should be protected from mechanical, chemical and environmental damage. Do not use slings in temperature above 194 degree F (90 degree C). Consult manufacturers sling load chart for capacity reduction due to sling configuration and angle.

ROPENET GROUP  
[www.ropenet.com](http://www.ropenet.com)

Manufacture Date: Feb, 2022	<b>(A)</b> <b>ROPENET</b>		<b>(D)</b> POLYESTER ROUND SLING		
	<b>(B)</b> CODE		LENGTH	SERIAL #	
			6 FT		
<b>RATED CAPACITY (lbs.) (C)</b>					
	VERTICAL		CHOKER		BASKET
	21,200 lbs		17000 lbs		42400 lbs
CONFORMS TO ASME B30.9-2021 MANUFACTURED BY ROPENET UNDER THE WORKING LOAD LIMITS					

**WARNING**

**Read and follow all use and safety information provided with this sling.**  
Failure to comply with this warning may result in sling failure or personal INJURY or DEATH.  
The following six points briefly summarize some important safety issues:

- All users must be trained** in sling cautions to personnel, environmental effects and rigging practices.
- Inspect sling for damage before each use.** A sling shall be removed from service if you see any of the conditions listed on the back of this table. If you have any doubts about the condition of a sling, do not use or repair it.
- Protect sling from damages.** Always protect slings in contact with sharp corners, edges, protrusions and abrasive surfaces with materials of sufficient strength, thickness and construction to prevent damages.
- Do not exceed a sling's rated capacity.** Always consider the effect of sling angle and tension on the sling's capacity.
- Do not stand on, under or near a load with the sling under tension.** All personnel should be alert to dangers of falling or uncontrolled loads.
- Maintain and store slings properly.** Slings should be protected from mechanical, chemical and environmental damage. Do not use slings in temperature above 194 degree F (90 degree C). Consult manufacturers sling load chart for capacity reduction due to sling configuration and angle.

ROPENET GROUP  
[www.ropenet.com](http://www.ropenet.com)







*STRENGTH BEYOND*

**ROPENET**

[www.ropenet.com](http://www.ropenet.com)

Email: [info@ropenet.com](mailto:info@ropenet.com) Tel: 86- 538- 8669566  
No.67, Leigushi Street, Taian, Shandong, China.