

PLASMA® SYNTHETIC FIBER ROPE SLINGS

FOR LONG LENGTH LIFTS

As a pioneer in advanced fiber braiding technology, Cortland International brings more than 35 years of expertise in engineering certified synthetic lifting sling solutions that perform safely and reliably to exacting industry standards.

Manufactured from Cortland's proprietary high-performance Plasma® 12-strand and 12x12 ropes, these lightweight lifting slings deliver exceptional strength while offering a safer, more efficient alternative to traditional steel wire rope slings. For larger, more complex lifts, synthetic rope solutions outperform steel in key areas including strength-to-weight ratio, handling, installation efficiency, and storage.

Unlike wire rope or jacketed round slings, Plasma rope slings are easy to inspect and maintain. The innovative 12x12 construction allows for strand-by-strand repair, and even strand replacement, extending service life and reducing total cost of ownership. Their lightweight design and ease of handling make them especially popular in material handling and critical installation lifting applications.

Cortland synthetic fiber slings meet all major global standards, including ASME B30.9 and BS EN 1492. Each sling is properly tagged, proof-loaded, and supported by comprehensive process control documentation. Engineered to precise length tolerances and constructed with secure, high-efficiency splice terminations, Cortland slings are also available with integrated hardware solutions for complete, application-specific lifting systems.

Features

- Flexible, torque-free construction
- Easy to inspect and repairable
- Cost-efficient
- Durable and long service life
- 1/10th the weight of steel wire rope at the same strength
- Stronger rated lifting capacities (to ASME B30.9)
- No maintenance

Wear protection can be provided to cover both eye terminations and/or body or portions of the sling body.

Cortland braided rope slings will outlast and outperform synthetic fiber round slings, standard or high-performance.

All Cortland rope slings are proof loaded to 2x rated capacity.

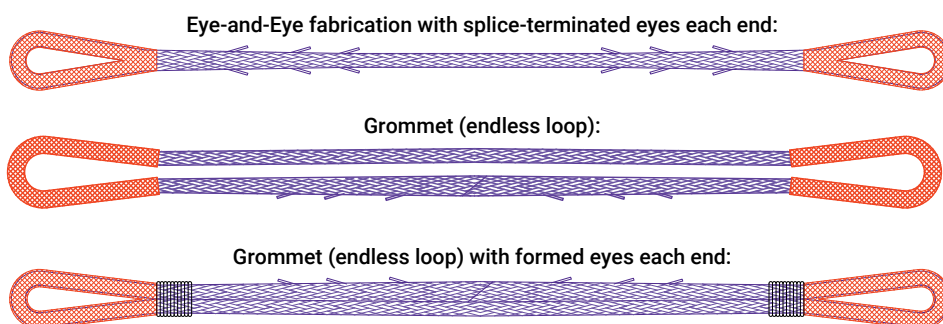
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Rope Sling Configuration

Selecting the correct configuration will further enhance the performance of any sling. There are two primary configurations for fiber rope slings:

- Eye and Eye
- Endless Grommet

Each configuration has its own features and benefits.



The below charts compare the size, strength, and weight of Plasma® 12x12 Strand Slings to high performance (HP) round slings and also to steel wire rope slings.

Comparison of Plasma 12x12 Strand Lifting Slings

		Eye-and-Eye Fabrication			Endless Loop (Grommet)		
		Plasma® 12x12	HP Round Slings	Steel Wire Rope	Plasma® 12x12	HP Round Slings	Steel Wire Rope
Diameter Size		3"	75t	3"	2-1/4"	75t	2-1/4"
Sample Length Comparison		30'	30'	30'	30'	30'	30'
Weight		95 lbs	90 lbs	500 lbs	85 lbs	90 lbs	560 lbs
ASME B30.9 Rated Lifting Capacity @ 5:1 WLL (US Short Tons)	Vertical	78 tons	75 tons	77 tons	79 tons	75 tons	77 tons
	Choker	62 tons	60 tons	60 tons	63 tons	60 tons	54 tons
	Basket @ 90°	156 tons	150 tons	153 tons	159 tons	150 tons	154 tons

		Eye-and-Eye Fabrication			Endless Loop (Grommet)		
		Plasma® 12x12	HP Round Slings	Steel Wire Rope	Plasma® 12x12	HP Round Slings	Steel Wire Rope
Diameter Size		3-5/8"	125t	4"	3"	125t	3"
Sample Length Comparison		30'	30'	30'	30'	30'	30'
Weight		155 lbs	155 lbs	850 lbs	155 lbs	155 lbs	1000 lbs
ASME B30.9 Rated Lifting Capacity @ 5:1 WLL (US Short Tons)	Vertical	125 tons	125 tons	130 tons	129 tons	125 tons	133 tons
	Choker	100 tons	100 tons	101 tons	103 tons	100 tons	93 tons
	Basket @ 90°	250 tons	250 tons	260 tons	258 tons	250 tons	265 tons

Plasma® is an UHMWPE synthetic fiber braided rope—all rope specifications in this chart are only pertinent to Cortland Plasma braided rope and assume use of correct eye size and D:d ratio of eye to connecting point. 12 strand Plasma construction is a 12x1 braid. 12x12 construction is used on diameter sizes of Plasma braided ropes from 1-5/8" diameter through 8-1/4" diameter. High performance (HP) round sling assume a fiber core construction using either UHMPE fibers, or a blend of high-performance fibers, with a woven jacket to encase the core strength yarns. Steel wire rope slings in this comparison chart assume a 6x19 construction wire.

