Plasma® Synthetic Fiber Rope Slings
for long length lifts

As an originator of fiber braiding technology, Cortland has more than 25 years of experience engineering certified synthetic lifting sling solutions that safely and efficiently perform to exacting standards. Lifting slings made from Cortland's Plasma® 12-strand and 12x12 ropes are excellent lightweight lifting tools and safe alternatives to traditional wire rope slings. When trying to meet the technical lift specifications of larger and more challenging lifts, synthetic rope lifting solutions surpass traditional steel wire sling solutions through strength, weight, handling, and storage efficiencies.

Unlike wire ropes and jacketed round slings, Plasma rope slings are easy to inspect and repair if needed. The unique 12x12 construction offers the ability to repair and even replace worn strands. These slings are popular in material handling and installation lifting systems because of their light weight and ease in handling.

Cortland synthetic fiber slings adhere to all key global standards; e.q. ASME B30.9 and BS EN 1492. All slings are tagged appropriately and backed by extensive process control documentation. Engineered and proof-loaded to meet precise length tolerances, Cortland slings use secure construction with efficient splice terminations. Our slings are also available with innovative integrated hardware solutions.

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

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.

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

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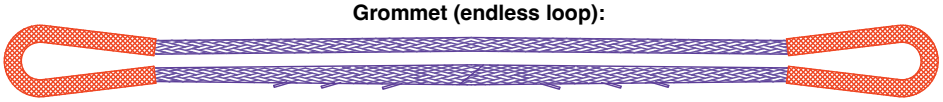
Rope Sling Configuration
Selecting the correct configuration will further enhance the performance of any sling. There are two primary configurations for fiber rope slings:

- Eye and Eye
- Endless Grommet

Each configuration has its own features and benefits.

Eye-and-Eye fabrication with splice-terminated eyes each end:

Grommet (endless loop):



Grommet (endless loop) with formed eyes each end:

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.

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