Tug & Salvage

Synthetic Rope & Pendant Solutions
When a Towline is Your Lifeline
In towing and salvage, the entire operation relies on the strength and dependability of your towline.

No matter if you specialize in offshore, harbor or river operations, the connection between ship and tug – the towline – is of primary importance. In recent years, the industry has seen an expanded global acceptance of high performance synthetic tow lines, offering greater safety, reliability and performance for tug and salvage operators. Cortland has delivered synthetic ropes made from high modulus polyethylene (HMPE) for more than 20 years, specializing in our patented 12x12 braiding technique and Plasma® fiber.

As an originator of fiber braiding technology, Cortland offers a full range of high-performance synthetic rope and pendant combinations. Our patented fiber process and construction is size-for-size equal or greater in strength and 86% lighter than steel wire rope. Fiber towlines will not rust or fish-hook and offer superior flexibility in salt or fresh water.

Lighter rope is easier to handle than steel, which translates to fewer stress-related injuries, lower recoil risk and quicker ‘made’ times on each operation.

Our success is based on close interaction with tug operators. Years of global tug, berthing, lifting and mooring experience means you can trust Cortland for the complete engineering package, analysis and design of trusted synthetic fiber towlines.
Patented 12x12 Plasma®

Patented Strength
The world’s strongest rope for its weight. Cortland’s patented Plasma® 12x12 construction technique creates a neutrally buoyant tug and salvage rope that is stronger than steel yet durable enough for repeated use.

Advanced Technology
Our exclusive Plasma® technology process uses synthetic HMPE fibers to maximize strength efficiency. These fibers are then braided into a torque-free rope with low elongation properties perfect for high-load tug and salvage use.

Unbeatable Materials
Our unique combination of 12x12 rope construction and Plasma® fibers create a truly unique rope. Utilizing the world’s largest 12-strand braidier, Cortland can produce extremely large diameters and lengths to fit your specific needs.
Plasma® 12x12 ropes have no equal. Each is constructed of a 12-strand braided rope in which each of the 12 strands is, in turn, a 12-strand rope, or braided primary strand. In terms of strength and size, this construction technique and advanced Plasma® HMPE fibers produce a finished braid which is firm and flexible, yet highly durable. With the addition of a rope pendant at critical wear points, Cortland tow ropes will easily endure long-term use in the harsh marine environment.

Plasma® rope is manufactured from Honeywell Spectra® Fiber that has been enhanced by Cortland's patented recrystallization process. This process is especially effective in medium to large diameter ropes because it creates strengths that are over 50% higher with significantly lower creep compared to a standard Spectra® 12 strand rope. This design allows for long lay lengths, creating a rope that is more flexible and easier to handle.

Unlike heavy firm construction wire ropes, Plasma® 12x12 ropes are extremely easy to inspect for external or internal wear. If repair is needed, the 12x12 construction also offers the ability to replace worn “strands” to help protect your original investment. Cortland has the world's largest 12-strand braider, so offers the ability to create extremely long lengths produced to your exact specifications.

Unlike steel wire rope slings, Plasma® 12x12 ropes are also neutrally buoyant in water and do not absorb water. This means your towline will remain lightweight and easy to handle no matter what the conditions or how many times it is used in tug and salvage operations.

Firmer, rounder profile than conventional 12-strand rope
Better internal-abrasion-resistance
Easy to inspect, repair and splice
High strength, low stretch, low creep, lightweight, torque-free
A full-range of rope products for tug and salvage operations

Cortland offers a complete line of top quality, high-performance synthetic rope options and has supplied products to tugs all over the world for ship assist, towing, and escort jobs for many years. Our lightweight, technologically advanced products are all extremely flexible making them much easier and safer for the crew to lift and secure.

Durability is also an important factor of overall rope cost. With the addition of anti-chafe gear such as pendant and anti-chafe covers, you can significantly increase the life of your tow rope and create maximum cost efficiency with minimal maintenance. Cortland offers a full range of rope and pendant combinations that can be customized to your needs with the help of our onboard technical service support experts.

Cortland is a global designer and manufacturer of engineered synthetic ropes. We have the broadest range of rope and cable processing capabilities available anywhere in the world and specialize in custom-built applications to maximize performance, safety, and efficiency for our clients.

**Nylon Double Braid** a good choice for long tow applications requiring high strength and excellent shock absorbing properties.

**Polyester** an excellent choice for short tow ropes, and provides an excellent combination of high strength, low stretch excellent weathering and easy handling.

**GT Composite** a braid-on-braid construction using a Plasma® 12 strand core and tough, tightly braided Spectra® jacket. High strength, low stretch, and superior abrasion resistance in a firm round jacketed construction that withstands drum compression and reduces bury.

**Chafe Gear** - from durable chafe guard covers to integral pendants, Cortland offers a full line of chafe protection products designed to protect your investment.
Cortland offers comprehensive, professional services to support our tug and salvage products. This includes the development of custom inspection and maintenance regimes, including testing in independent facilities to provide operators with a clear picture of how the rope is performing, and development of redundancy plans accordingly.

Cortland field technicians and qualified riggers provide on-vessel rigging, service and care advice to ensure proper installation, best practice use and full compliance with project specific requirements. We also offer on-site splice training in-line with our manufacturer’s recommendations, as well as independent, third party rigging audits.

Cortland delivers high performance rope and cable solutions that set marketplace standards. We understand that an idle vessel limits profits, so we focus our attention on providing worldwide support at a local level from our global support centers. Our unique ability to custom engineer rope solutions and service them on-site with technically trained experts familiar with critical tug and salvage operation needs means your tow ropes will be ready as needed, and will perform to your exacting standards every time.

Global resources include:

1 Towing and berthing analysis
2 Mooring analysis and design
3 Marine transportation
4 Rigging inspection and maintenance
5 Marine heavy lift slings
6 Structural design
7 Project risk and hazard reviews
Cortland is driven by innovative thinking, use of high technology materials and attention to detail. Our in-depth understanding of demanding operational environments means we can deliver trusted, proven solutions to our customers worldwide.

Today, Cortland provides innovative, efficient and lightweight rope, slings, cables and umbilicals; along with mooring design, analysis and installation services to the oil and gas, heavy marine, subsea, ROV, seismic, defense, aerostat and medical markets. Cortland is a part of Actuant Corporation (NYSE: ATU), a diversified industrial company with operations in more than 30 countries. cortlandcompany.com