

# Testing Capabilities

## Objective

The aim of this document is to summarize Cortland’s current testing capabilities at our existing sites in Stafford, TX and Anacortes, WA, USA.

## Tensile Testing Capabilities–Horizontal

Two horizontal tensile testbeds are currently in service at the different Cortland locations in the USA.



Their capabilities are summarized below:

Location	Anacortes, WA	Stafford, TX
Manufacturer	Chant Engineering	Chant Engineering
Number of Cylinders	1	2
Cylinder capacities small/large (Te)	225	68/600
Stroke Length (m)	4.2	4.2
Test length with max stroke available (m)	10.0	25.6

Available pin sizes and pin rated capacities for each testbed are shown in the table below:

Anacortes, WA		Stafford, TX	
Pin Diameter (mm)	Pin Capacity (Te)	Pin Diameter (mm)	Pin Capacity (Te)
152	227	356	600
102	136	254	600
89	181	177	600
76	136	102	600
51	45	89	68
44	34	76	90
—	—	51	600
—	—	38	55
—	—	25	165
—	—	16	55

## Tensile Testing Capabilities—Vertical

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In addition to the horizontal test machines, two additional vertical machines are available in Stafford, TX and Anacortes, WA, USA. The specifications for the vertical tensile test machines are shown below:

Location	Anacortes, WA	Stafford, TX
Manufacturer	ATS Series 1630	United
Frame Capacity (kN)	150	100
Load Cell Capacity (kN)	20kN/100kN	4kN/22kN
Stroke Length (m)	Grip/Sample gauge length dependent	Grip/Sample gauge length dependent

There is also a floor ram located in Stafford TX. The floor ram has a max load capacity of 13.5Te, 61m of maximum testing length, and 6m of stroke.

## Tension Fatigue Testing Capabilities

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The 600Te tensile test machine located in Stafford TX has special seals on the cylinders that allow it to conduct tension fatigue tests without compromising the long-term sealing abilities of the cylinder seals. Additionally, it is equipped with two pumps that can produce a total output of 200 horsepower, enough to be able to move the 600Te cylinder at a speed of 1100mm/min at maximum load capacity, and the 68Te cylinder at 4800mm/min at maximum capacity.

## Bend Over Sheave (CBOS) Testing Capabilities

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Cortland has an in-house testbed for cyclical bend over sheave (CBOS) testing at the Stafford, TX facility. It is a single sheave, chain driven machine capable of applying a maximum load of 6.8Te to the sheave which translates to a rope tension of 3.4Te. The maximum cycling speed is 18 cycles per minute.

## Electrical Testing Capabilities

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Insulation resistance can be tested using a Fluke 1550C.

Cortland is a global designer, manufacturer, and supplier of technologically advanced ropes, slings, and strength members. Collaborating with customers, our team uses its experience in high performance materials and market knowledge to transform ideas into proven products.

For more than 35 years, our custom-built solutions have been developed for work in the toughest environments and to overcome some of the world's greatest challenges. They consistently enable our customers to meet the demands of the aerospace, defense, research, subsea, marine, and energy industries.

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