



LEADS THE WAY
IN HEAVY LIFT
FIBER SLINGS

VERSION 2018



LIFT-TEX INDUSTRIE

We from Lift-Tex Industrie B.V., a Heavy Lift synthetic fibre round sling manufacture company based in the Netherlands, have put all our efforts in establishing a representative and well-known reputation in the Heavy Lift industry with the development of Heavy Lift Extreema® soft slings & protections.

Extreema® soft slings are manufactured on state of the art machinery based on the latest technology. During the past couple of years Lift-Tex® has developed and invested in multiple types of machinery, including:

- Different types of round sling machines
- Sleeve & protection manufacture machines
- Coating & heat setting lines
- Embroiding machinery for personalised purposes (f.i. company logo, user instructions)
- Shrink packaging
- Proof- & break load machine

These investments have made it possible to assure a fully controlled production process from raw material into Extreema® slings.



EXTREEMA HMPE SOFT SLINGS

Extreema® is the Heavy Lift brand of Lift-Tex. Extreema® products, such as round slings, webbing slings and protections are currently being sold worldwide, through our professional dealer and distributor network. Our distributors are well trained and skilled to provide customers with technical information about our heavy lift slings for custom made solutions.

CORE

The construction of an Extreema® round sling is based on parallel laid strands that make up the core. This core is always made of 100% high performance fibers HMPE such as Dyneema®. This makes the slings 15 times stronger than steel, compared to polyester, Extreema® slings are 3 times lighter with a much smaller the diameter.

Dyneema® is a High Modulus PolyEthylene Fiber (HMPE or UHMWPE) which offers maximum strength combined with minimum weight. For this reason Dyneema®, manufactured by DSM

in the Netherlands, is known as "the world's strongest fiber"™.

To ensure the high quality standard of Extreema® round slings Lift-Tex has become an official licensee for DSM Dyneema in 2012. Since the start of this partnership Lift-Tex has done business with multiple high profile companies in the on- and off-shore lifting industry, nuclear, aerospace, automotive and military.



PHYSICAL PROPERTIES

Extremely low in weight	: 8 to 10 times lighter than quality steel : Up to 2,5 times lighter than polyester slings
Small diameter	: 2,5 times smaller than polyester round slings
Maximum capacity produced by Lift-Tex	: 4.000MT MBL (straight pull)
Maximum length produced by Lift-Tex	: 80m
Specific Gravity (g/cm ³)	: 0.97 (floats on water)
Elongation in use	: ~ 0,5% elongation at W.L.L. : Similar to wire rope slings.
Weight reduction in %	: 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 : Good resistant against acids and alkali.

*always contact your distributor or the manufacturer for further details.

ADVANTAGES

Using Dyneema® fibers to build the core of the sling gives multiple advantages:

- The slings are easy to handle because of its light weight and flexible form
- Less than 1% stretch at W.L.L., therefor suitable for calculated lifts
- Small diameter, 2,5 times smaller than regular polyester round slings
- $D:d = 1:1$ for round slings up to 200T, above this $D:d = 1:1,5$
- Resistant against chemicals, but do always inform us if chemicals are involved
- Does not absorb water, Extreema® slings float on water
- Extreema® round slings do not suffer from fatigue like steel wire slings (ropes)
- Less back & hand injuries, no sharp edges
- Extremely ergonomic compared to synthetic or steel ropes
- Extremely high life cycle compared to polyester slings
- No rust or corrosion like on steel wire ropes



JACKET & PROTECTIONS

We offer four different options to cover the round sling.

- 100% Dyneema® (White or black)
- 100% CORDURA® (Black)
- Blend of Dyneema® and CORDURA® (Black and white)
- 100% Polyester

As a result of its high resistance against cuts, abrasions and puncture Dyneema® is already used in many industries, such as military and extreme sports.

Also the super-durable fiber CORDURA® is a primary ingredient in many of the world's leading high-performance gear. Known for its resistance to abrasions, tears and scuffs.

Each version of EXTREEMA has its own characteristics. The CORDURA® variations will be a perfect fit for lifting objects with higher temperatures, while still maintaining extremely cut and puncture resistant. However, 100% Dyneema® jacket will still be a perfect fit for repetitive loadouts of payloads with extremely sharp edges.

Please see features on the next page and let us assist you in ordering the right product for your lifting job.





PHYSICAL PROPERTIES

Dyneema®

Resistance against	: Cuts, abrasion and puncture
Service temperature range	: From -50 °C up to + 70 °C (melting point appr. +150 °C)
Effects of UV exposure	: Extremely resistant to UV
Effects on chemical exposure*	: Excellent on (sea) water, moisture
	: Good resistance against acids and alkali.

CORDURA®

Resistance against	: Abrasions, tears, scuffs and friction(heat)
Service temperature range	: From -40 °C up to +100°C (melting point +255/265 °C)
Effects of UV exposure	: Moderate resistance against long-term UV exposure
Effects on chemical exposure*	: Excellent on (sea) water, moisture
	: Good resistance to many oils, greases and fuels

*always contact your distributor or the manufacturer for further details.

ADVANTAGES

Dyneema®:

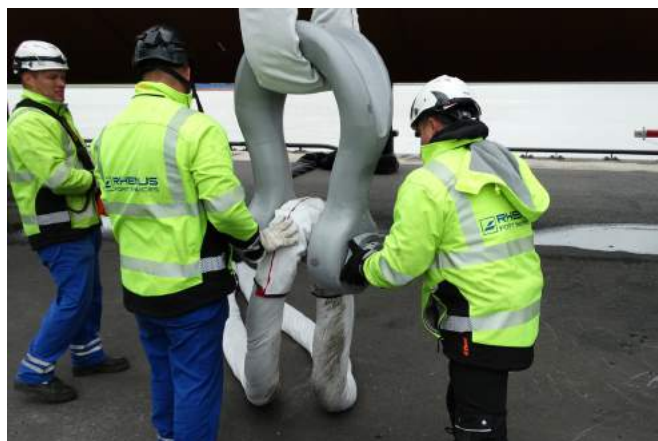
- Extremely durable
- Stretchable
- No damage to payload
- Proven track-record in many industries/applications
- Chemical resistant
- Extremely resistant to cuts, abrasion and puncture

CORDURA®:

- Extremely durable
- Stretchable
- No damage to payload
- Resistant against higher temperatures
- Resistant to frictions and abrasion

D:d ratio

The D:d is the ratio of the diameter (D) around the object which the sling is bent divided by the overall diameter (d) of the sling being used. Rope and wire rope generally have a D:d of 1:4 and polyester slings have a D:d of 1:2,5. Extreema® slings enable you to work with a D:d of 1:1 (>200T D:d = 1:1,5). Making it possible to use regular shackles instead wide body shackles.



EXTREEMA PROTECTIONS

Extreema® protection come in 100% Dyneema®, 100% CORDURA® or a blend. The protection sleeves are equipped with Velcro®, or come as a (not dismountable) tight sleeve.

The main application for these products is the protection lifting equipment and the object that will be lifted. It can be mounted on synthetic round slings, webbing slings, steel wire rope & chains, lashings and synthetic ropes.

- Significantly longer life-time of round slings and webbing slings
- Easy to put on, easy to take of equipped with Velcro



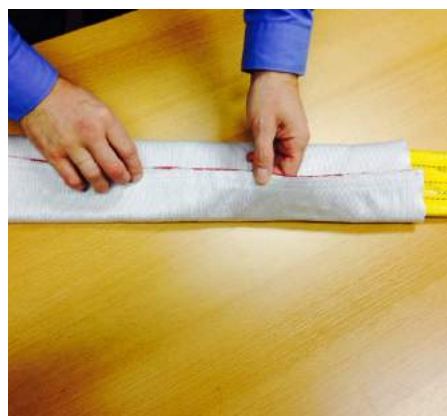
STEP 1



STEP 2



STEP 3



STEP 4



STEP 5



STEP 6

IMPORTANT NOTICE

According to the EN-1492 regulations for safe use of round slings the sling should be protected on the anchoring point (shackles, pins, etc.) as well as the lifting appliance (crane hook).

According EN 1492-1:2000+A1:2008 C.3.6 Slings should be protected from edges, friction and abrasion, whether from the load or the lifting appliance. Where protection against damage from edges and/or abrasion is supplied as part of the sling, this should be correctly positioned. It may be necessary to supplement this with additional protection.

According EN 1492-2:2000+A1:2008 D.3.7 Slings should be protected from edges, friction and abrasion, whether from the load or the lifting appliance. Where reinforcements and protection against damage from edges and/or abrasion is supplied as part of the sling, this should be correctly positioned. It may be necessary to supplement this with additional protection.

EXTREEMA EP-XL & XXL SIZES

For repetitive loadouts with sharp edges around the object the EP-XL or EP-XXL are the perfect solution to protect your sling. The EP-XL has a single thickness of 3mm (6 mm double) and the even more cut resistant EP-XXL is 6 mm thick in single use (12 mm double).

- Made from 100% Dyneema®
- Highest abrasion resistance of any fiber
- Excellent dynamic toughness and very low elongation
- Excellent flex fatigue resistance
- Superior cut, puncture and tear resistance
- Significantly longer life-time of round slings and webbing slings



CORNER PROTECTOR

The Extrema® Corner Protector is made from 100% Dyneema®. Because of the two velcro straps the Corner Protector is extremely easy to mount on the sling. The flexible Dyneema® pad makes it possible to use the sling in any situation, with no fixed angle.

- Made from 100% Dyneema®
- Highest abrasion resistance of any fiber
- Excellent dynamic toughness
- Excellent flex fatigue resistance
- Superior cut, puncture and tear resistance
- Exceptional flexibility, no fixed angle
- Significantly longer life-time of round slings and webbing slings
- Easy to put on, easy to take of equipped with Velcro



OTHER APPLICATIONS

The applications for Extreema® fabric are numerous.

A seamless tubular protective sleeve is the perfect solution to protect a rope from abrasion. This protective cover will also prevent industrial waste to penetrate the rope and damage the core yarns.

Also webbing slings can be easily protected with Extreema® fabric. The fabric can be applied on the entire length of the webbing sling, on the edges of the sling or in the lifting eyes. Webbing slings can also be manufactured from 100% Extreema® fabric, depending on the job at hand.

Please contact our sales team to help you in selecting the perfect lifting sling solution.





CERTIFICATES

CE-Declaration of Origin (machinery directive 2006/42/EG).

Proof load test certificate at 1,3x W.L.L. or according to DNV/ GL offshore lifting appliances (or other independent testing bodies on request).

LIFT-TEX® is an (DNV/GL) ISO 9001:2015 certified organization for sales manufacturing, development and distribution of Heavy Lift High Performance fiber round slings.

DNV approval of manufacture certificate for Dyneema® raw material can be supplied upon request.

VERSATILE APPLICATIONS

Extreema® round slings have found their way in many different industries:

- Heavy Lift & transportation on- & offshore
- Offshore Oil & Gas projects
- OWF; manufacturing, transportation & installation of offshore wind turbines, monopiles, jacket foundations, blades etc.
- Aerospace
- Subsea installation, rigging
- Military & Nuclear Industry
- Pressure vessel transportation and installation
- Coil Lifting projects

More detailed technical information about Extreema® slings and protections can be submitted on request.

COST REDUCTIONS

Extreema® round slings reduce costs for the end user

- Fewer staff to rig
- Reduced sick leave due to easier working conditions (weight & safety)
- Less costs for rigging
- Extremely time saving (on time and on budget projects)
- D:d of 1:1 (>200T D:d = 1:1,5) makes it possible to use regular body shackles
- Eliminates damage to the load
- No additional lifting equipment (forklifts or cranes)
- Smaller sling inventory
- Repairable after inspection
- Re-useable for multiple projects (proven track record)

SPECIALTY PRODUCTS

A large variety of HMPE round sling configurations can be developed and manufactured on demand. At Lift-Tex® we specialize in manufacturing to the customers' needs. Not only for calculated lifting jobs, but also for the repetitive day-to-day business. We evaluate each individual job.

SPECIALS MANUFACTURING

Regular round sling configuration with optional features:

- with single cover sleeve protection
- with double cover sleeve protection
- with red shrinking sock (smaller in diameter and indicates when the outer sleeve is damaged)
- with EPL- Protections on specific lengths
- with 2x Extreema® -EP-L series eye protection (with or without velcro®) on (load) bearing points
- with clear indelible W.L.L. marking on sling
- with clear indelible lifting configurations on sling
- with text: "place at bearing point" in both eyes
- company logo and/or website woven in protections
- with a red instructions pad

Eye and eye (false eye) round sling:

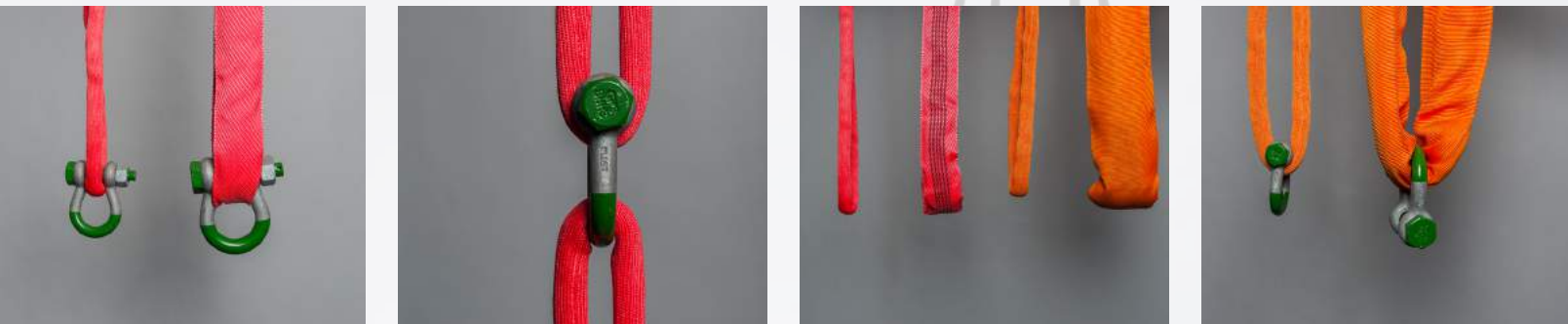
- with Extreema®- XL or XXL Protection against surface wear & tear on complete sling length
- with 2x Extreema® -EP-L series eye protection (with or without velcro®)
- with clear indelible WLL marking on sling
- with clear indelible lifting configurations on sling
- with text: "place at bearing point" in both eyes
- optional company logo, website woven in protections

Different options

Extreema® round slings are available in many different configurations and with supplementary protections for the lifting job at hand.

Do not hesitate to contact the manufacturer or official distributor for more technical information.





SMALL DIAMETER 5T & 10T W.L.L. SLINGS

The extra thin 5T and 10T Extrema® round slings make it possible to lift heavy payloads when you have to work with limited spaces. With an extremely small diameter and a D:d ratio of 1:1 it also enables you to work with regular shackles and lift on the pin, as shown in the picture below.

One size fits all, by making use of the 5T (10T basket) and 10T (20T basket) Extrema® slings you can discard all polyester slings from 1T up to 20T. Saving you costs in storage, logistics, purchasing & disposal, while supplying your employees with a more efficient & faster workflow.

Additionally, you contribute to environmental reduction of pollution as a result of the long life span of Extrema® slings.

The main reasons for purchasing our extra thin Extrema® slings are:

- Less storage
- Access to limited lifting space
- Improving workflow
- Saving costs
- Environment
- Light in weight
- Flexible

For more information on these products please contact our technical sales team.

COIL SLINGS

One of the specialty items that we manufacture regularly is the coil sling. These slings are mainly supplied to stevedoring, transportation and steel companies.

The main reasons for purchasing our coil sling are:

- Improving efficiency
- Easy to handle, in particular for repetitive jobs
- Saving costs

Lifting capacity: from W.L.L. 10T up to W.L.L. 60T per coil in a U-lift.

Length: from 1 meter up to 60 meters working length.

OTHER SERVICES

Proof loading & certification:

Fiber slings (webbing and round slings) should normally be proof load tested before being used for the first time according to DNV offshore lifting regulations. The recommended proof load for fiber slings is $1.3 \times \text{MBL}$. More information about proof load regulations can be drawn from the DNV-OS-H205, Offshore standard for Lifting Operations, (VMO Standard - Part 2-5) APRIL 2014.

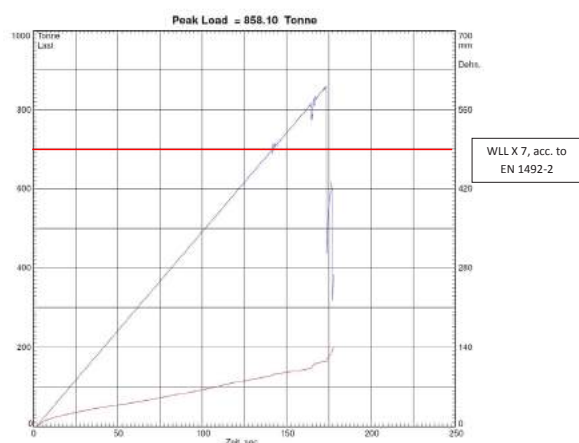
Lift-TeX® can provide the complete procedure for proof load certification of new and used slings.

Engineering support:

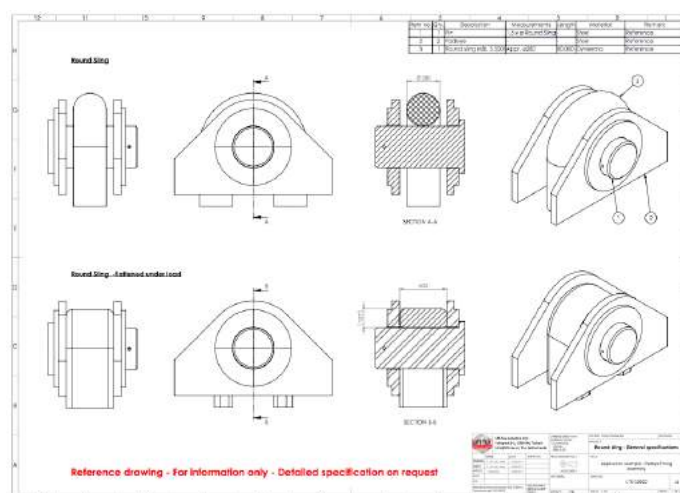
One of the strengths of Lift-TeX® is the effort we put in finding the right product for each individual lifting job. This does not only save costs for the end user, but also increases the safety of the lift (with the right additional components).

Lift-TeX® stands for quality. Supplying the best quality product for the lifting job at hand occasionally requires engineering support. In particular, in case of calculated lifting jobs our engineers can be of great added value in selecting the right product. Specially designed products by our engineers can be supplied with design approval.

Lift-TeX Certificate number : 201506100002
Date and time: 06-10-2015 16:06:41
Kind of test test : Breakload test, pin Ø 200mm
Description : Extreema® Roundsling WLL 100T L1=3.5m
Test bench : AJT304, Type 177 PC, 1200 T.



Tested on an independent test facility in Europe, with a calibrated load cell.



MOBILITY AS A SERVICE & ON-SITE REPAIR

Lift-Tex® strives to deliver the best service in the industry. One of the tools which makes it possible to provide a high service level is our van. On request of the customer we can use the van to deliver products within a tight schedule.

Not only does a combination of our mobility and our highly trained staff enable us to deliver products within a short time range, it also makes it possible to provide on-site service and repair. By making use of this service you can lengthen the lifetime of your EXTREEMA® round slings. A longer lifespan allows you to save costs on the long run. This service has already proven to be a great success with some of our high-profile clients.

TRAINING & TOOLBOX MEETINGS

Our well-trained staff can provide your company with extensive product trainings on the use of synthetic slings for day-to-day use, or on- & offshore projects. Not only will these trainings and toolbox meetings increase the efficiency in your company, it will also increase the safety. We believe safety should always come first within this industry.



INSTRUCTIONS MANUAL

All Extreema® round slings are provided with a useful instructions manual. This manual comes in 14 languages and gives perfect explanations on how to use an Extreema® sling and which cautions needs to be taken. It also comes with a checklist on application for lifting jobs.



TRACK RECORD OFFSHORE WIND

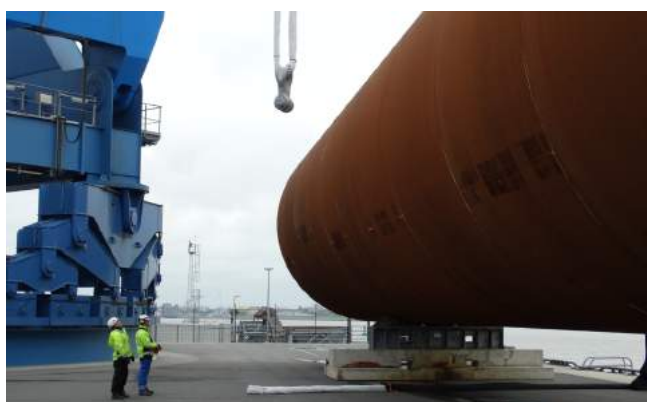
For more information on these projects please see our wind energy folder. Ask us for a hardcopy or download it from our website: www.lift-tex.nl.



Noordoostpolder - The Netherlands - 2015



Hydrohammer lift - 2016



Steelwind - Germany - 2016



VEJA MATE - Germany - 2016



Block Island - USA - 2016



Race Bank - United Kingdom - 2016



Merkur - Germany - 2017



Galloper - United Kingdom - 2017

OTHER USAGES

EXTREEMA® round slings can be provided in many configurations, this makes EXTREEMA® applicable to almost every lifting job. The well-trained staff of Lift-Tex Industrie b.v. can help you select the most suitable products, manufactured to your specific needs. Please do not hesitate to contact us with any questions.



Coil lifting



3&4-leg assembly



Power Vessel lift



Monopile foundations



Waterbag lifting



Concrete modules



Lifting belt sling



Boat lifting



Boat lifting