



# xtreme

Yacht Rope Solutions





## LIROS - Ropemakers For XTReMe Solutions

LIROS XTReMe range has confirmed that it is today the best solution both for blue water XTReMe racing, championship sailing and extended long distance cruising.

It is a complete range with zero compromise ensuring maximum potential from both crew and boat is achieved. The success of XTReMe is harnessing stretch which limits the power loss making the difference between winning and loosing.

The XTReMe range is now using the new Dyneema® SK78 with minimized creep characteristics and reduced stretch than its predecessor Dyneema® SK75.

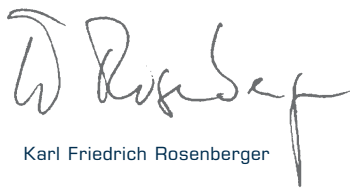
In addition the unique LIROS-Heat-Stretch-System (HSS) is yet another development which further reduces stretch and improves over all strength.

LIROS have also worked hard to improve the abrasion resistance of Zylon® (PBO) and Vectran® covers, on winch drums and jammers. To realise this we created LIROS-Nano-Coating-System (NCS) which has dramatically improved wear characteristics as well as UV resistance by as much as 30%.

LIROS-NCS has also cured the degradation of Zylon® (PBO) which makes it a real option for XTReMe racing yachts. LIROS-NCS is instantly recognized by the new grey colour for Vectran and black gold hue for Zylon® (PBO).

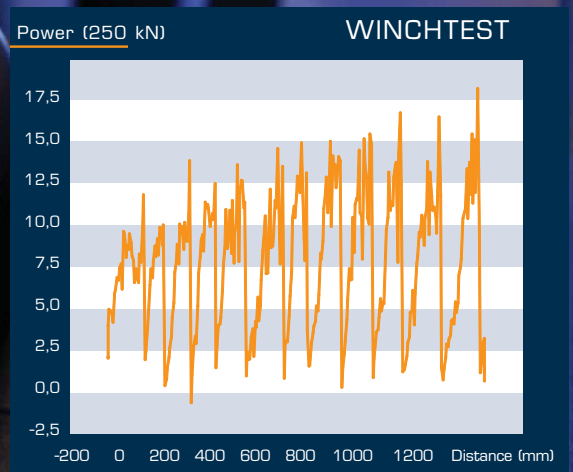
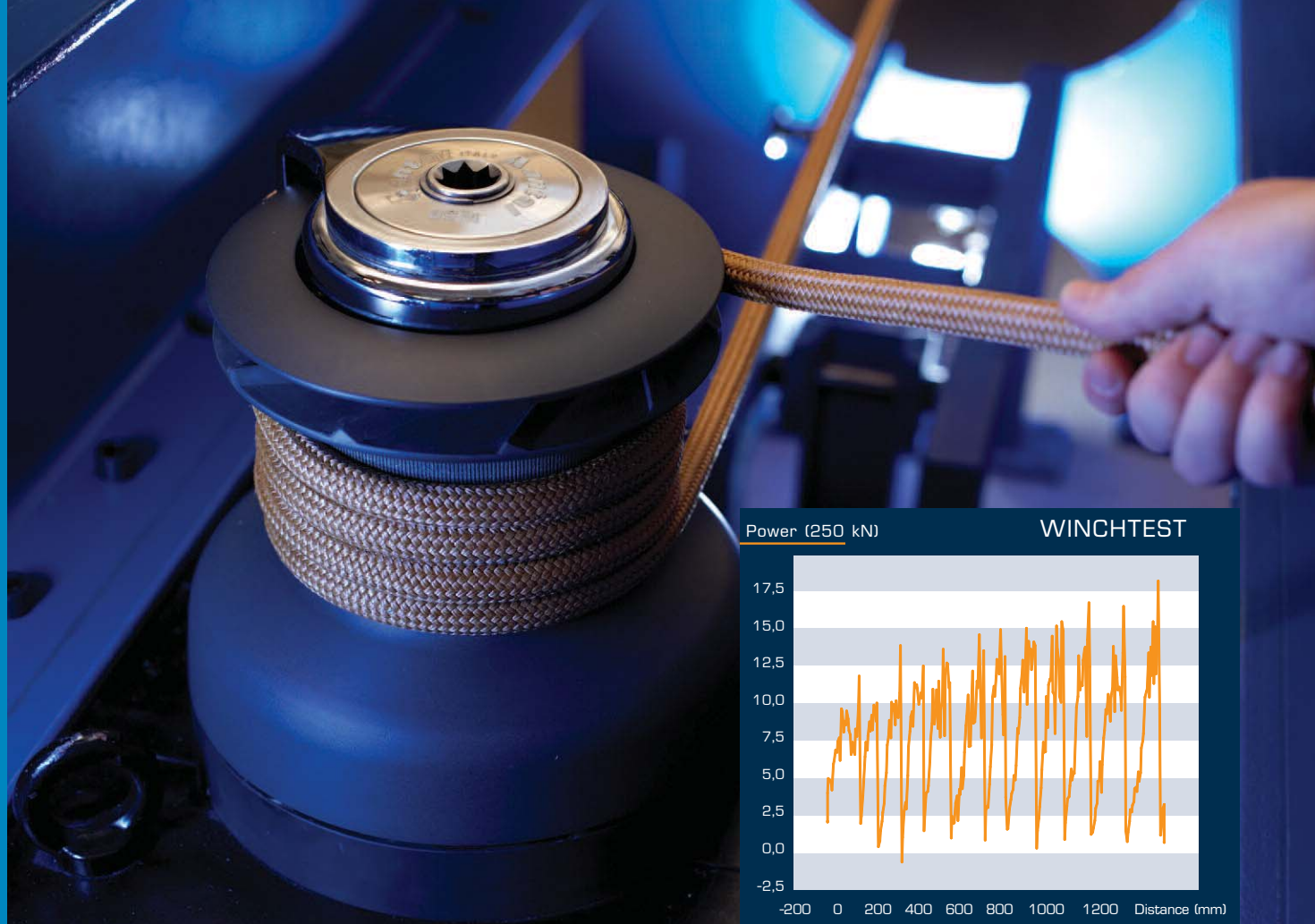
The LIROS flexibility in manufacturing XTReMe ropes means we find custom solutions to all your needs from, choice of material, special constructions, custom lengths and different coatings or colours. – Please contact us.

  
Sven Rosenberger

  
Karl Friedrich Rosenberger

Dyneema® is a registered trademark of Royal DSM N.V.

### Xtreme cover test in the LIROS laboratory



<b>P. 05</b>	<b>Runner PBO - XTR</b>
<b>P. 06</b>	<b>Runner V - XTR</b>
<b>P. 07</b>	<b>Hiload XTR</b>
<b>P. 08 – 09</b>	<b>Racer XTR</b>
<b>P. 10</b>	<b>Mega Pro XTR</b>
<b>P. 11</b>	<b>D - Pro XTR</b>
<b>P. 12</b>	<b>V - Pro XTR</b>
<b>P. 13</b>	<b>Protect XTR</b>
<b>P. 14</b>	<b>Progressive DynaGrip XTR</b>
<b>P. 15</b>	<b>D-Strip XTR</b>
<b>P. 16</b>	<b>XTR-Soft Shackle</b>
<b>P. 17</b>	<b>Accessories</b>

## LIROS NCS

■■■■■■■ Nano Coating System

NCS is the unique LIROS impregnation system which significantly improves the performance of the Xtreme range of ropes.

The facts are amazing:

- extreme improvement on abrasion resistance
- Cures the Zylon® problem of degradation







Thank you Liros  
*[Handwritten signature]*





**NEW**

Cover:  
Zylon® (PBO)

Core: Dyneema® SK78  
XTR-Grip-Coating



**LIROS NCS**

■■■■■■■ Nano Coating System

**Applications**

- RUNNER TAILS
- RUNNING BACKSTAYS
- GENAKER / JIB SHEET
- SPINAKER SHEETS
- AFTERGUYS

**Features**

- New NCS Coating
- Cures degradation of Zylon®
- Xtremely high temperature resistance up to 650°C
- Prevents surface melting
- Excellent power transmission from core to cover due to grip coating
- Xtreme low stretch

RUNNER PBO-XTR is the Formula 1 tyre of racing sail boats. Specially developed for Grand Prix, Match Racing, to prevent surface melting on winches due to an extremely strong Zylon® cover.

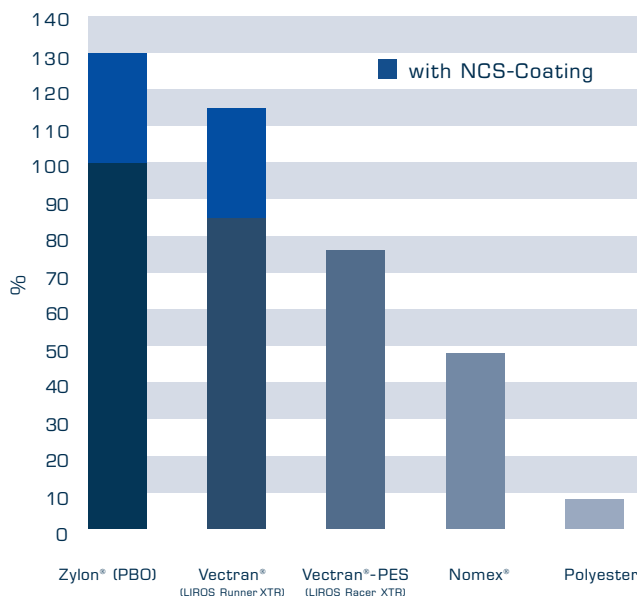
**COVER RESISTANCE TO ABRASION AT HIGH TEMPERATURE**

Cover resistance is measured by easing systematically the ropes at controlled tension on a winch drum, until the cover breaks.

mm	Breaking strength [kg]	Stretch*	Weight g/m
8	4500	< 1,5 %	53
10	6400	< 1,5 %	62
12	9900	< 1,5 %	92
14	12000	< 1,5 %	140
16	14300	< 1,5 %	179
18	17500	< 1,5 %	230
20	20500	< 1,5 %	280
22	24000	< 1,5 %	320
24	27500	< 1,5 %	380

\*Stretch at working load (30% of break)

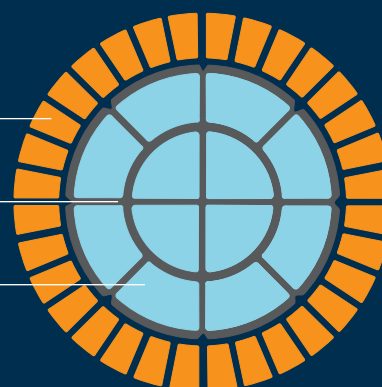
CUSTOM LENGTHS AVAILABLE ON DEMAND



Cover: Zylon® 100 % · 32 plait

Coating: XTR - Grip- Coating

Core: Dyneema® SK78 100 % · 12 plait





**NEW**

Cover: Vectran®

Core: Dyneema® SK78 XTR-Grip-Coating

**LIROS NCS**  
Nano Coating System



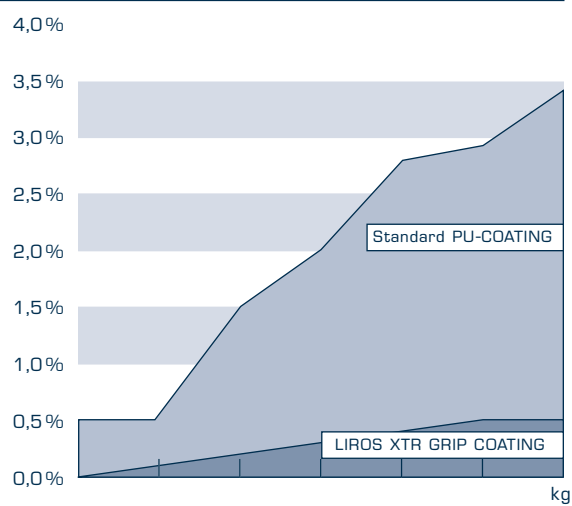
**Applications**

- RUNNER TAILS
- RUNNING BACKSTAYS
- GENAKER / JIB SHEET
- SPINAKEE SHEETS
- AFTERGUY

**Features**

- New NCS Coating
- Excellent resistance against abrasion at high temperatures
- Prevents surface melting
- Excellent power transmission from core to cover
- Minimal stretch

**SLIPPING COVER CORE**  
Graph showing improved performance of grip between cover and core using XTR-Grip-Coating over standard PU



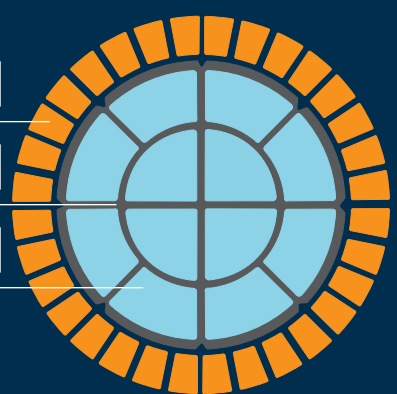
mm	Breaking strength [kg]	Stretch* (%)	Weight g/m
8	4500	< 1,5 %	53
10	6400	< 1,5 %	62
12	9900	< 1,5 %	92
14	12000	< 1,5 %	140
16	14300	< 1,5 %	179
18	17500	< 1,5 %	230
20	20500	< 1,5 %	280
22	24000	< 1,5 %	320
24	27500	< 1,5 %	380

\*Stretch at working load (30% of break)

CUSTOM LENGTHS AVAILABLE ON DEMAND

RUNNER Vectran-XTR is the perfect solution for every high performance yacht. It has been successfully tested on several racing boats, for example on Maxiracer UCA, the fastest boat in offshore racing 'Daimler Chrysler North Atlantic Challenge'.

- Cover: Vectran® 100 % · 32 plait
- Core: Dyneema® SK78 100 % · 12 plait
- Coating: XTR - Grip- Coating





Cover: Polyester

Core: Zylon® (PBO)

**Applications**

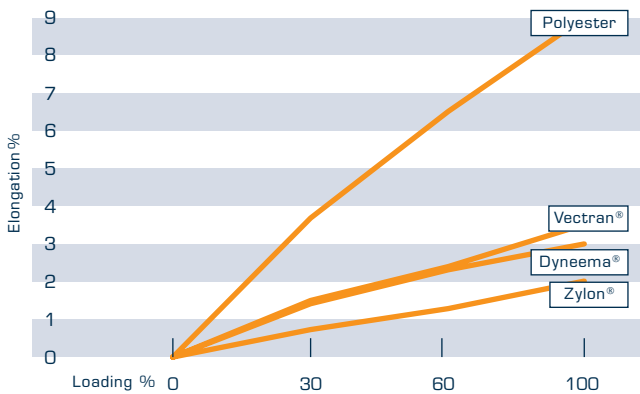
- HALYARDS
- AFTERGUYS
- ALL CONTROL LINES

**Features**

- Xtreme low stretch
- Xtreme UV protection with black cover
- Easy to splice

Hiload-XTR is the ultimate rope for low stretch applications. It can be used for extremely precise control.

**STRETCH VS LOAD %**



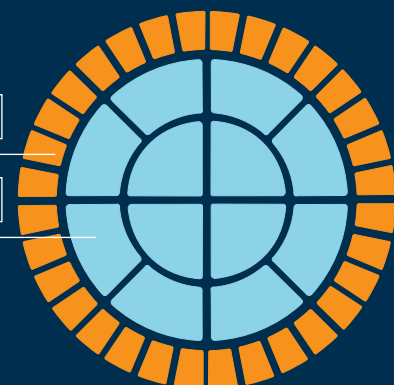
mm	Breaking strength [kg]	Stretch*	Weight g/m
5	2000	< 1%	18
6	3000	< 1%	28
8	6000	< 1%	59
10	8000	< 1%	72
12	13000	< 1%	112
14	15000	< 1%	186
16	18590	< 1%	223
18	22750	< 1%	282
20	26650	< 1%	318
22	31200	< 1%	380
24	35750	< 1%	460

\*Stretch at working load (30% of break)

CUSTOM LENGTHS AVAILABLE ON DEMAND

Cover: Polyester 100% · 32 plait

Core: Zylon® 100% · 12 plait



**LIROS Racer - XTR**



Cover: Vectran®/Polyester

**Applications**

- GENAKER SHEET
- SPINAKER SHEETS
- AFTERGUYS

**Features**

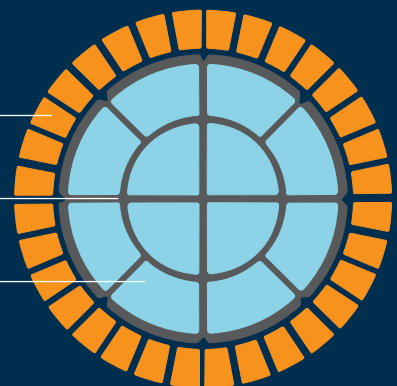
- Strip the cover for xtreme performance
- Excellent high temperature abrasion
- Vectran® prevents cover melting
- Excellent cohesion between cover and core
- Multipurpose usage
- Very low stretch

RACER-XTR is ideal to strip the cover for ultimate weight reduction. It is the multipurpose rope for high tech racing yachts and cruisers. RACER-XTR has an optimal balance resistance between cover and core. The full power transmission from core to cover is guaranteed.

**Cover:** Vectran® 50 % · Polyester 50 %  
32 plait

**Coating:** XTR - Grip- Coating

**Core:** Dyneema® SK78 100 % · 12 plait





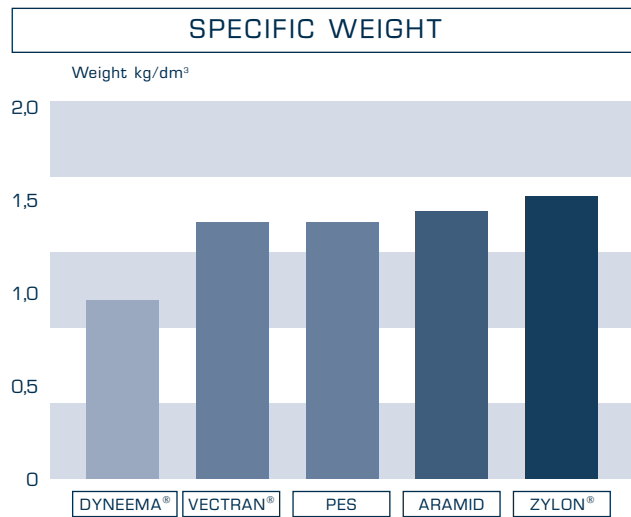


Core: Dyneema® SK78  
XTR-Grip-Coating



mm	Breaking strength [kg]	Stretch*	Weight g/m
8	4500	< 1,5 %	53
10	6400	< 1,5 %	65
12	9900	< 1,5 %	93
14	12000	< 1,5 %	121
16	14300	< 1,5 %	156
18	17500	< 1,5 %	180
20	20500	< 1,5 %	222
22	24000	< 1,5 %	270
24	27500	< 1,5 %	320

\*Stretch at working load (30% of break)



CUSTOM LENGTHS AVAILABLE ON DEMAND

**COLOURS Racer - XTR**



Steelblue - Beige

Orange - Beige

White - Beige

Yellow - Beige

Burgundy - Beige



Cover: Polyester

Inner Cover: Staple PES

Core: Dyneema® SK78



**Applications**

MULTIPURPOSE FOR  
SUPER YACHTS AND  
CLASSIC BOATS  
  
HALYARDS  
  
SHEETS  
  
CONTROL LINES

**Features**

Xtremely strong with a  
highly twisted cover  
for long lasting wear and  
'Super' performance  
  
Excellent cohesion between  
cover and core  
  
Very low stretch

mm	Breaking strength [kg]	Stretch*	Weight g/m
10	5000	< 1,5%	70
12	6900	< 1,5%	100
14	9000	< 1,5%	120
16	11000	< 1,5%	148
18	14000	< 1,5%	198
20	18000	< 1,5%	240
22	20000	< 1,5%	300
24	23000	< 1,5%	350

\*Stretch at working load (30% of break)

LENGTH: 200 m REELS

MEGAPRO-XTR has been used for many years on the J-Class-Yacht 'Velsheda'. A 'Super' strong cover and xtreme cohesion between cover and core optimizes the breaking strength in both the rope and the splice.

Cover: Polyester 100% · 32 plait

Inner cover: STAPLE PES 100% · 8 plait  
(Provides the bond between cover and core)

Core: Dyneema® SK78 100% · 12 plait







Dyneema® SK78  
XTR-Grip-Coating



**Applications**

- STROPS
- RUNNING BACKSTAYS
- AFTERGUYS
- MULTIPURPOSE

**Features**

- Xtreme low stretch
- Very light
- Self splice
- No water absorption
- Easy to cover  
(PROTECT-XTR P. 13)

mm	Breaking strength [kg]	Stretch*	Weight g/m
8	6800	< 1,5 %	47
10	10500	< 1,5 %	72
12	14500	< 1,5 %	94
14	17500	< 1,5 %	118
16	22000	< 1,5 %	143
18	26500	< 1,5 %	190
20	32000	< 1,5 %	235
22	38000	< 1,5 %	283
24	44000	< 1,5 %	350

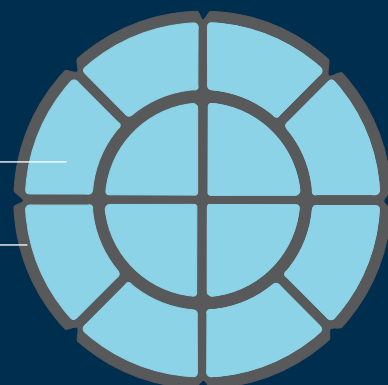
\*Stretch at working load (30% of break)

CUSTOM LENGTHS AVAILABLE ON DEMAND

D-PRO-XTR is a 12-plait Dyneema® hollow braid with Dyneema® and a very strong XTR-Grip-Coating. Excellent as a replacement for wire or heavy terminals. Hiload-XTR is the ultimate rope for low stretch applications. It is a precision rope for demanding applications.

Dyneema® SK78 100% · 12 plait

Coating: XTR - Grip- Coating





**NEW**

Vectran®

## LIROS NCS

■■■■■■ Nano Coating System

### Applications

STROPS  
 RUNNING BACKSTAYS  
 AFTERGUYS  
 MULTIPURPOSE

### Features

New NCS Coating  
 Xtreme low stretch  
 No creep  
 Easy to splice  
 Easy to cover  
 (PROTECT-XTR P. 13)

mm	Breaking strength [kg]	Stretch*	Weight g/m
3	780	< 1,5%	7
4	930	< 1,5%	9
5	1500	< 1,5%	23
6	2700	< 1,5%	32
8	3700	< 1,5%	48
10	5200	< 1,5%	64
12	6800	< 1,5%	80
14	9500	< 1,5%	97
16	12200	< 1,5%	108
18	15500	< 1,5%	145
20	18000	< 1,5%	194
22	22700	< 1,5%	242
24	27000	< 1,5%	290

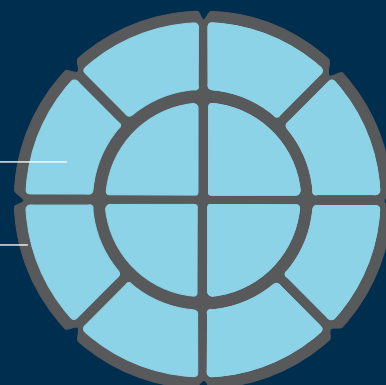
\*Stretch at working load (30% of break)

CUSTOM LENGTHS AVAILABLE ON DEMAND

V-PRO-XTR is a 12-plait Vectran® hollow braid. Excellent as a replacement for wire parts or heavy terminals. It is an excellent rope for low stretch applications. Vectran® provides xtreme precision.

Vectran® 100% · 12 plait

Coating: NCS Coating






Dyneema® SK78

**NEW**

**Applications**

ROPE PROTECTION FOR TOP MAST SHEAVE  
 ROPE PROTECTION FOR BOTTOM MAST SHEAVE  
 MULTIPURPOSE ROPE PROTECTION  
 !! NOT FOR USE ON WINCHES AND JAMMERS !! 

**Features**

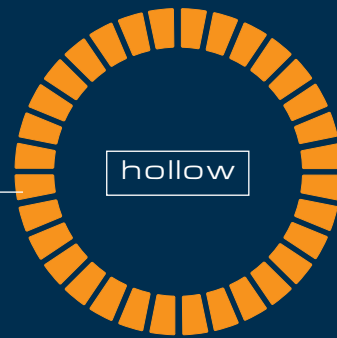
New NCS Coating  
 Excellent protection from low friction Dyneema®  
 Ideal cover for all ropes

**LIROS NCS**  
 Nano Coating System



Cover for following rope Ø	Weight g/m
5/6	8
8/10	16
12/14	32

Dyneema® SK78 100% · 32 plaits



hollow

Vectran

**Applications**

PERFECT ROPE PROTECTION AGAINST ABRASION FROM WINCH DRUMS AND JAMMERS  
 ROPE PROTECTION FOR BOTTOM MAST SHEAVE  
 MULTIPURPOSE ROPE PROTECTION

**Features**

Excellent wear protection at high temperatures  
 Ideal cover for all ropes

Cover for following rope Ø	Weight g/m
5/6	7,5
8/10	22
12/14	45

Vectran® 100% · 32 plait



hollow



**NEW**

Special Grip Fibre

Dyneema®

**Applications**

- SPI SHEET
- JIB SHEET
- MAIN SHEET
- FURLER LINE

**Features**

- Unique LIROS machine made taper system.
- Progressive taper ensures snag free operation.
- No stretch due to the long directional construction and mix of Dyneema® and Grip Fiber Yarns
- Xtreme light weight in both, the thin section as well as the thicker part used for handling
- Excellent Grip characteristics
- Easy to splice

DYNA GRIP-XTR is the ultimate combination of high grip, low weight and minimum stretch.



COLOURS  
PROGRESSIVE  
DYNAGRIP - XTR



Blue - Grey

Orange - Grey

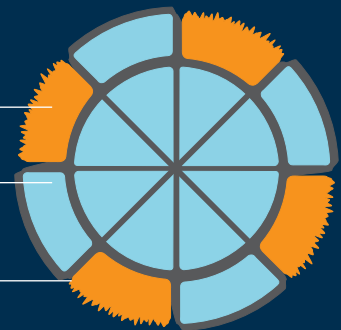
White - Grey

Green - Grey

50% Special Grip Fibre · 8 plait

50% Dyneema® · 8 plait

Coating: SPECIAL COATING against UV



**LIROS -Tapered DYNEEMA® SK78 -SHEETS**  
in individual diameters on demand:

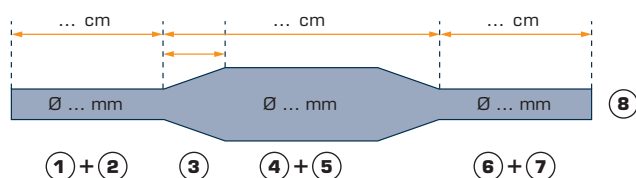
**Possible diameter variations:**

- 4 to 6 mm
- 4 to 8 mm
- 4 to 9 mm
- 5 to 8 mm
- 5 to 9 mm
- 5 to 10 mm
- 5 to 12 mm
- 6 to 8 mm
- 6 to 9 mm
- 6 to 10 mm
- 6 to 12 mm

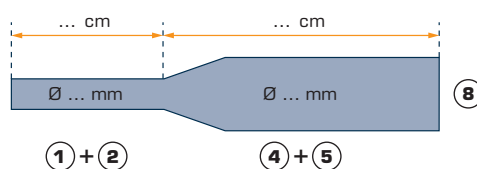
**Required order specifications**

- ① Ø of thin end
- ② Length of thin end
- ③ Length of tapered part\*
- ④ Ø of thick part
- ⑤ Length of thick part
- ⑥ Ø of thin end
- ⑦ Length of thin end
- ⑧ Colour

**symetric**



**asymetric**



\* min. 50 cm, max. 80 cm



**NEW**

**LIROS NCS**  
 ■■■■■■ Nano Coating System



**Features**

- Ready made in 3 breaking strength and 2 lengths
- XTReme light weight
- XTReme high strength for safety on board
- Easy to attach for any application
- XTReme abrasion assistance thanks to LIROS NCS-Coating (see p. 3)

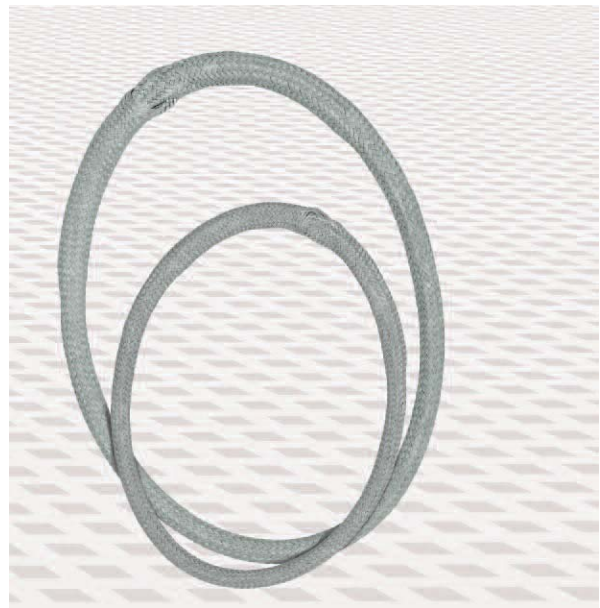
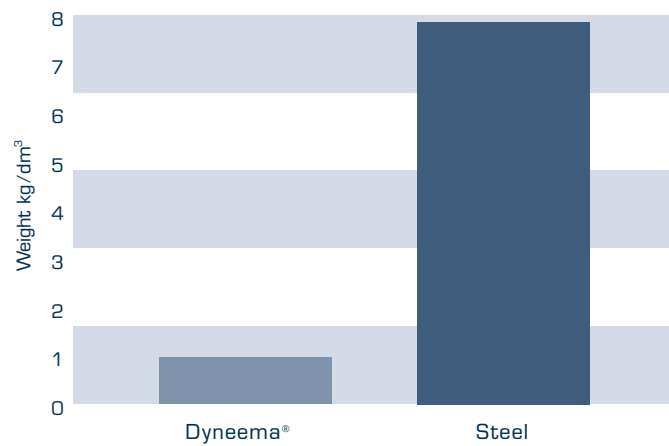
**Applications**

- REPLACE STEEL SHACKLES
- REPLACE PADEYE BLOCK ATTACHEMENT

Ref.-No.	mm	Breaking strength [kg]	Length (flat)
00146-0080	8	3000	150 mm
00146-0081	8	3000	300 mm
00146-0082	10	5000	150 mm
00146-0083	10	5000	300 mm
00146-0084	12	7500	150 mm
00146-0085	12	7500	300 mm

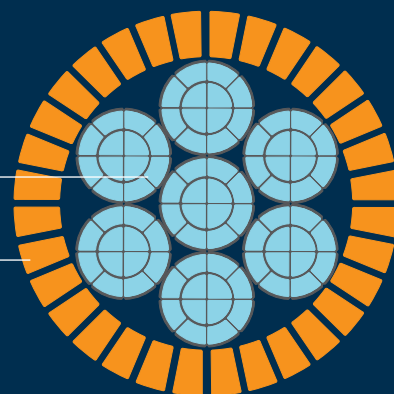
CUSTOM LENGTHS AVAILABLE ON DEMAND

**SPECIFIC WEIGHT**



**Cover:** Dyneema® SK78 100% · 12 plait

**Core:** Dyneema® SK78 100% · 32 plait





Dyneema® SK78



**Features**

Compared to a conventional shackle the new LIROS XTR soft-shackle has the following advantages:

Eliminates damage to the deck and other fragile areas onboard.

No injuries caused by the handling of shackles and other end fittings in extreme conditions.

Ten times lighter compared to equal metal fitting

Very soft and easy to use

LIROS XTR Soft-Shackle will not open accidentally under load

Even after use under extreme load LIROS XTR Soft-Shackle is always easy to release.

A special colour code makes it easy to differentiate the shackle on deck (each strength has a separate colour code).

Top quality and original innovation from LIROS.

**Applications**

REPLACEMENT OF CONVENTIONAL SHACKLES

Ref. No.	Breaking strength [kg]	Safe Working load [kg]	Colour
00146-0066	1000	500	White
00146-0069	2000	1000	Red
00146-0070	4000	2000	Blue
00146-0071	6000	3000	Yellow
00146-0072	8000	4000	Green
00146-0073	10000	5000	Black

Fastening sheets, shackling halyards, attaching blocks – LIROS XTR Soft-Shackle is the optimum solution. The LIROS XTR Soft-Shackle is made from 100 % high tenacity Dyneema® SK 78. The soft-shackle is the ideal replacement for heavy metal shackles and end fittings.



## LIROS Splicing Kit

ref. 00146-0056



Black Whipping Twine With Dyneema®

Wet Notes Block

Swedish Fid

Braid Splicing Fids

Lighter

Tape

Black Marker

Splicing CD

LIROS-Brochure

## LIROS XTR-Finish

00146-0057

Bottle 500 ml

yellow

black

transparent



blue

burgundy

### Applications

For additional protection on all kind of ropes (Polyester, Dyneema®, Vectran®, Zylon®)

For cover and for internal wear protection

### Features

- Ready for use
- Long lasting protection
- UV-protection especially with black PU-colour
- Waterbased solution (easy to clean)
- Reduces friction



