SoluzioniTessili
RIGGING

GRAND PRIX

ABOUT US

From an initial loads analysis, all the way through to after sales service operations, we specialize in all stages of a running rigging project, whether it is for a performance cruiser, luxury yacht or grand-prix racer.

We believe that the key factors to a project's success lie in its initial stages, which is why we work alongside her owner, captain, designer, mast sail maker as a team and getting involved in the decision making to make sure all technical aspects of the separate areas are well blended together.

This means you'll only get ropes which are tailor made to meet your and your yacht's specific needs.

Continuous technical research, superior craftsmanship and seamless efficiency are an inherent part of our work process.
State of the art solutions and swift delivery are the results.

By working with Soluzioni Tessili Rigging, you can rest assured that you'll get products you can trust and the peace of mind of having a specialized team of expert technicians and craftsmen that have your back in every phase of your projects.

PARTNERS

Armare

We're proud of our long-standing partnership with Armare, a family business which has been at the forefront of rope-design since 1992.

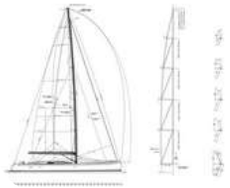
Their 4,000 m2 loft, located in San Giorgio di Nogaro, Italy, is where Armare's accomplished team of rope experts twist, strand, braid, splice, test and hand-finish ropes to the highest standard of quality. A thorough understanding of the grand-prix racing market, two decades of design evolution and the continuous investment in top-talent have put Armare on the international map. What's more, the company offers custom-finished ropes by means of unique processes which set the industry benchmark.

Harken

Soluzioni Tessili is a Harken Authorized Service provider. Harken can pride itself on being the leading manufacturer of sailboat hardware and accessories worldwide.
Their blocks, travelers, winches and hydraulics are used at the globe's most prestigious racing events (such as the America's Cup, the Volvo Ocean Race and the Olympics) and onboard everything from the smallest dinghies to the largest mega yachts.

Brands we distribute and work with:
Close collaboration with different industry leading brands allows us to work alongside the top designers and engineers, cover a vast array of different boats and systems, as well as to guarantee the highest standards of quality.

WORK PROCESS



PREPARATION

A project starts with the analysis of all parts that rely on a yacht's running rigging. We collect in depth data from sail makers, mast makers and shipyards, to name but a few, and combine these findings with our experience and technical know how. This synergistic phase doesn't only put us a cut above the competition but ensures you get top performing ropes, and in accordance with their exact need and function.

PRODUCTION

Production starts once a rope's ideal length, core, cover, color and finish have been determined. Our long standing partnership with Armare Ropes means that we work with top level fibres and customized product lines. By adding superior craftsmanship and meticulous attention to detail to the mix we ensure a delivery of ropes that perform as they where designed to, and are great looking to boot.

DELIVERY ON BOARD

The mounting and tuning of our products is a highly delicate operation which is why we remain involved after delivery. Our experienced team members and/or network of professional rigging partners will be on site to ensure a flawless installation which, in turn, will result in an unsurpassable performance level.

FOLLOW-UP

We believe safety to be of paramount importance. Over the years we have developed a database (incorporating factors such as time, weather conditions and yacht use) which helps us pinpoint when a product's performance may start to decline. Moreover, though NFC Microchip technology we can offer clients real time information and are able to trace each product individually. Quality after sales service has never been more long lasting.

By means of an in-depth collaboration with the yacht's owner, captain, designer, mast and sail-maker we analyze and unify a yacht's technical aspects, a process which ultimately results in top-performing ropes that suit their exact application.

Designer/yard's specs

Principal Dimension	Note	Units	
Mast Height		(m)	35,000
Rake		(dag)	5,5
Mast-Halyards winch		(m)	3,000
P		(m)	32,800
E		(m)	10,250
I		(m)	33,200
J		(m)	9,850
I Stay Sail		(m)	
I Stay Sail		(m)	
BAS		(m)	2,445
Chainplate% windht		(m)	2,898
Chainplate sweep		(deg)	25
# Spreaders			3
RM @25deg		(kgm)	38031

Mast Maker's specs

Rigging Load	Qty	Normal WI (kg)	Extrem WI (kg)	Minimun WI (kg)	Rod Size Equivalent	Minimun EA (MN)	Length (m)
V 1	2	12402	16340	32681	-76	44,3	9,633
V 2	2	9603	12312	24625	-60	39,1	7,748
V 3	2	7376	9445	18890	-48	28,4	8,284
D 1	2	5648	6861	14119	-40	22,1	9,751
D 2	2	7271	4341	10677	-30	16,8	7,984
D 3	2	2846	3014	7116	-22	12,1	8,294
D 4	2	7447	9531	19062	-48	28,4	7,886
Headstay	1	10000		25000	-60	39,1	34,893
StaySail	1	6200		22320	-49	20,1	25,889
Top Mast Beackstay	1	5738		14345	-40	22,1	25,531
Backstay Bridles	2	3012		7531	-22	12,1	13,404
Checkstay	2	3065		11036	-55	7.8	27,489

Sail Maker's Specs

Sail	Note	Unit	Sail Area
Main	full	[m²]	208
	1st Reef	[m²]	171
	2nd Reef	[m²]	132
	3nd Reef	[m²]	75
Jib		[m²]	183
Jib 80%		[m²]	143
Stay sail		[m²]	73
Code 0		[m²]	275
Gennaker		[m²]	500

Line Wear

WINCH Friction Factor	Depends on winch grip
JAMMER Wear Factor	Depends on Jammer load
Speed Factor	Depends of eased speed
Cover Weakness	Depends of the cover material
UV weakness	Depends of the cover material

Sail

Sail Load	Note	Soluzioni Tessili Load	Mast Maker Load	Sail Maker Load
Main Sail				
	Up Wind FullMain Jib 80%	3000	3135	4732
	Up Wind 1st Reef Jib 80%	2400	2659	
	Up Wind 2nd Reef Staysail	3000	3180	
	Up Wind 3nd Reef Staysail	2200	2323	

Line

Purchase	Working Load	ø	Breaking Load	
	(Kg)	(mm)	(Kg)	
2	2366	16	16000	6.75
1	2659	16	16000	6.02
1	3180	16	16000	5.03
1	2323	16	16000	6.89

Jammer/Lock

Model	Cam/Jaw	MWL	Jammer estimated load	Safety Factor
		(Kg)	(Kg)	
Spinlock	25 16 18	3000	2248	1.33
Spinlock	25 16 18	3000	2526	1.19
Spinlock	25 16 18	3000	3021	0.99
Spinlock	25 16 18	3000	2207	1.36

Fittings

Model		MWL	Safety Factor
Tylaska	H202:1	4545	0.96
Tylaska	H202:2	4546	1.71
Tylaska	H202:3	4547	1.43
Tylaska	H202:4	4547	1.96

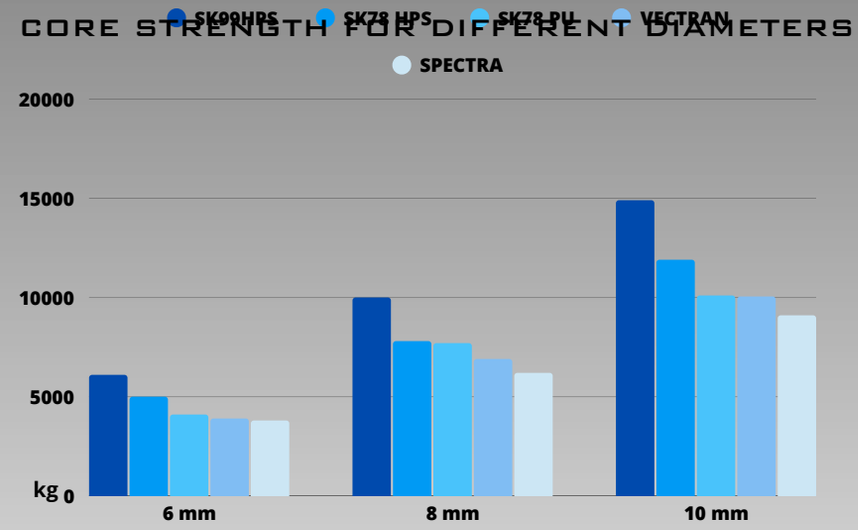
Line Wear

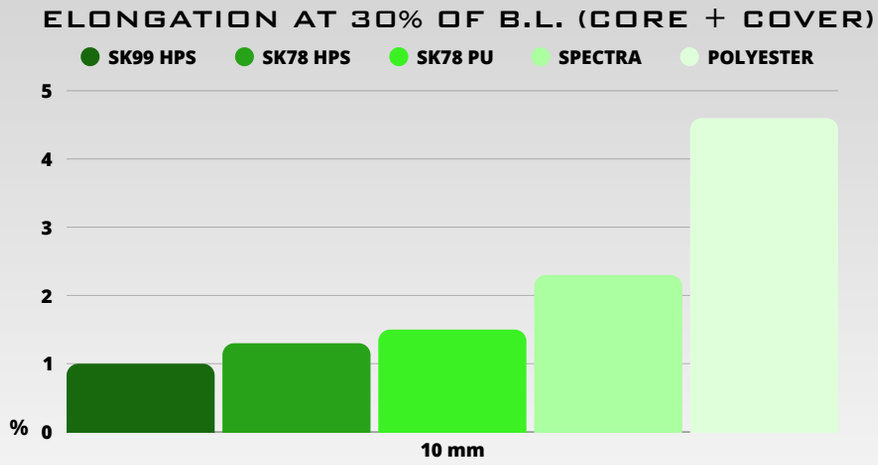
Winch Friction Factor	Jammer Wear Factor	Speed Factor	Frequency of use	Cover Weakness	UV Weakness	Factor
(1:2:3)	(1:2:3)	(1:2:3)	(1:2:3)	(1:2:3)	(1:2:3)	(2,7 MAX)
2.0	3.0	1.0	3.0	2.0	2.0	2.66
2.0	3.0	1.0	2.0	2.0	2.0	1.99
2.0	3.0	1.0	1.0	2.0	2.0	1.19
2.0	3.0	1.0	0.5	2.0	2.0	0.44

CORE TECHNOLOGY

We have handpicked the materials that we consider the most efficient for the nautical industry and worked in developing, alongside our rope making partners, the best combinations of construction parameters to produce light, strong and balanced cores that are also easy to work with.
Here below is a brief description of their main characteristics:
DYNEEMA® (UHMPE) is without a doubt the material with the highest strength/weight ratio on the list. This light-weight polymer fibre has a great resistance to fatigue, abrasion and UV rays. It is ideal for all competitive sailors and it is also conveniently versatile, it comes in different grades and thanks to some special treatments we can improve it's stiffness and durability to make it an interesting option for all kinds of boats.

•SK78 is the most common grade because it has a high breaking load, low water absorption, great flexibility and remains super light. It is very stable under constant loads and is not very susceptible to creep. The low friction coefficient makes it great for tackles and control lines even without a cover.
•SK99 is the highest grade of Dyneema currently available. It shows a 20% increase in tenacity and a 35% higher modulus than SK78 and it is especially designed for applications in which there's need for a very stiff, strong and light-weight solution, such as on sheets and halyards for the new generation of grand prix sails.
VECTRAN® has a great resistance to the effect of long term loads, that may cause permanent deformations of the fibres with time. This braids have almost zero creep for loads up to 50% their designed breaking load, making them ideal for static load applications like steering line systems and guys. Unfortunately it is much more sensible to UV light.
SPECTRA® (HMPE) is a close relative of Dyneema, although not quite as high-performing. Still it has very interesting strength/weight ratio and a very decent stiffness, with a more accessible price, which makes it the most interesting alternative for sailors who would like an alternative from those high-performance braids. This is why it is so common on our performance-cruising lines.
POLYESTER has been used to build ropes for many years now and it is still one of the most common materials used on cruising boats where there's not always the need for stiff and light ropes. It is easy to work with, it's softness makes it comfortable to handle and it is easy to splice and work with. Although it is not as stiff as the other fibres, it still has a very decent strength/weight ratio.





- Load-elongation tested after 10 load-cycles al 20% of declared B.L.

HEAT PRESTRETCH PROCESS TECHNOLOGY

Our Dyneema® cores are heat pre-stretched to minimize elongation (both the elongation that occurs after first use and over extended periods of time). The process involves applying heat to the rope while it's stretched: a method which "stabilizes" the ropes fibers and balances internal tensions. The end result is a much stiffer (elongation-wise), stronger rope compared to the alternative non-treated ropes of the same diameter.
The new HYPER cores undergo a second treatment to further increase this qualities, as well as the LONG-LASTING coating.

HYPER HEAT PRESTRETCH PROCESS (HYPER 99)

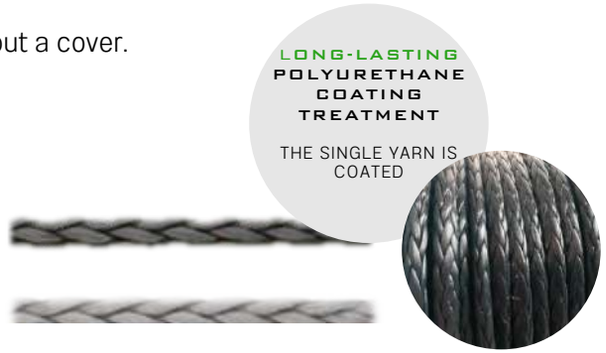
SUPER HEAT PRESTRETCH PROCESS (SUPER GP 99, SUPER GP 78, SUPER GP 20)

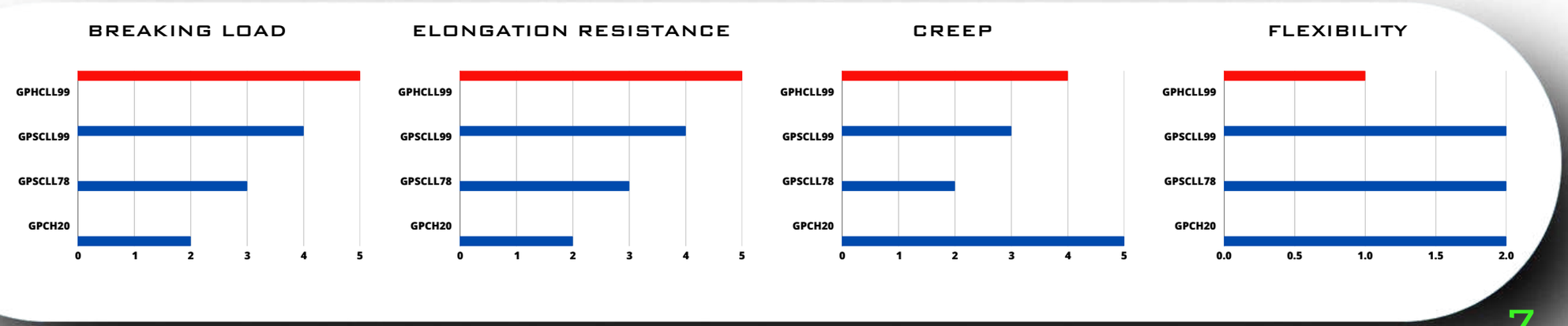
LONG-LASTING POLYURETHANE COATING TREATMENT

This treatment increases abrasion-resistance, tightens the braid and enables the rope to be easily spliced and used without a cover.
The coating is applied on the single yarn, a process which extends rope-life and guarantees color-holding.

BLACK LONG-LASTING POLYURETHANE COATING (HYPER 99, SUPER GP 99, SUPER GP 78)

GREY POLYURETHANE COATING (SUPER GP 99, SUPER GP 78, SUPER GP 20)





MAIN COVER MATERIALS

TECHNORA® / DYNEEMA®

PBO is one of the strongest rope-making materials available. It increases abrasion resistance while Dyneema improves rope fluidity when eased. The best you can ask for on ropes that take on high loads and temperatures with aggressive easing and trimming. They are great as **runners tails, jib sheets and gennaker sheets** for GP racers

PBO-ZYLON® / DYNEEMA®

This carefully blended mix delivers a great balance between the abrasion resistance and low friction of Dyneema and the high friction and heat tolerance of Technora. The result is a hard-wearing, easy to handle rope that will endure the harsh treatment of those aggressive race winches.
Mainly used for **runners tails, jib sheets and gennaker sheets**

TECH/DYN/PET

By adding Polyester fibers to the previous blend we trade some ruggedness for versatility and an increased grip on stoppers. This cover is easily customizable thanks to the wide range of colors available. A great favorite amongst both pro and amateur racers, as well as for performance cruisers. It is especially good for **halyards, but works great also for sheets and furling lines.**

KEVLAR® / DYNEEMA®

The combination of these fibers in appropriate proportions, makes for a top-quality cover. It's also a good alternative to a PBO/DYN cover if loads are lower but tight/ease cycles high in frequency. Tested while match-racing on high-caliber race boats these ropes have proven that the fiber's characteristics compensate each other perfectly. One thing to keep in mind is the sensibility of Kevlar to UV rays.

KEV/DYN/PET

Although similar to TEC/DYN/PET, the KEV/DYN/PET mix is better suited for HIGH-load and HIGH-speed maneuvers where a lot of heat is generated from friction. Kevlar has a better heat resistance than Technora due to its higher melting point and possesses also a powerful grip. Very appreciated on jib and gennaker sheets, as well as for furling lines.

CORDURA® / POLYESTER

Highly versatile and more durable than 100% PET covers thanks to the stronger CORDURA fibers that increase abrasion resistance and hence durability. Great grip on stoppers and lightweight, it is very popular amongst cruisers and casual racers who like to use it for **sheets, halyards and/or general running rigging.**

POLYESTER

One of the most common materials used for cruising ropes. It has good abrasion resistance, grip on stoppers and excellent tolerance to the environment agents like sun and salt. Very easy to customize with various combinations of colors and patterns.

SOFT BRAID COVERS

These covers are specially designed to be lightweight, flexible and with a great grip, in particular for those applications where you need to hold the rope by hand a lot. There are various different material blends to cater for a wide range of necessities. Their softness makes them a great option for **purchase systems, control lines and sheets for smaller boats.**

100%/ DYNEEMA®

This is a light but very resistant cover. It protects the core from abrasion in those areas prone to chafing. Thanks to it's low friction coefficient it helps the rope move with ease around blocks and deviations, in particular the areas close to the splices, keeping them slimmer too.
Extremely versatile, it is used to **protect ropes, but also loops, strops, cables and a great variety of specialized gear.**

100% TECHNORA®

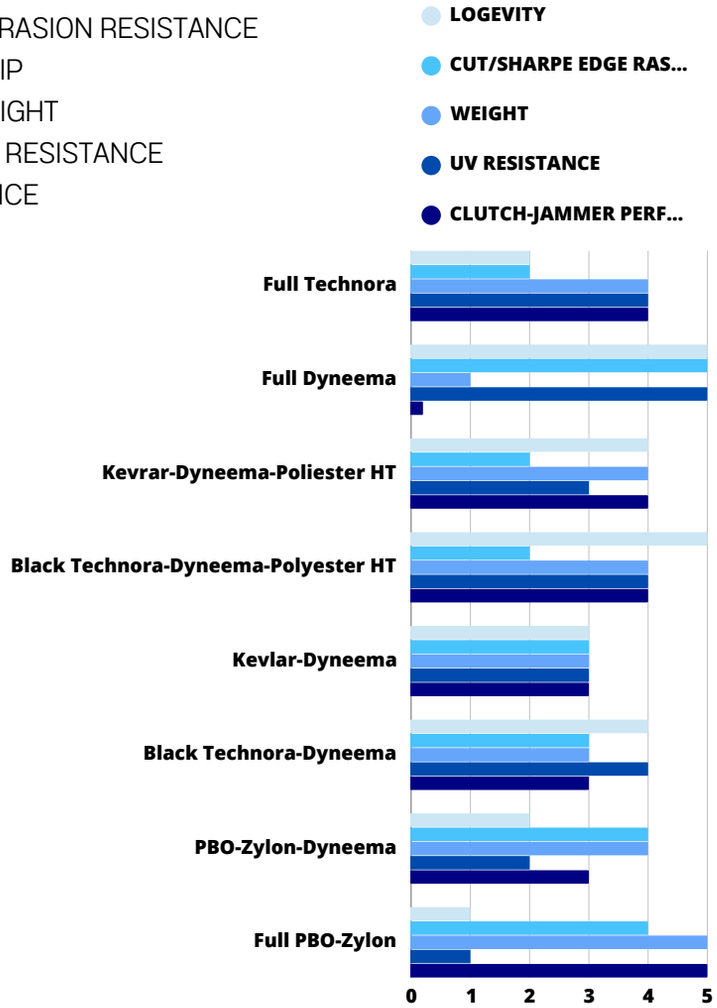
A very particular technical cover for particular uses. It is mostly used to improve the rope's grip or strength on a certain segment, like improving the hold on a stopper with ceramic jaws for a rope with a non-technical cover.

TECHNICAL COVERS STANDARD COVERS SPECIAL COVERS

WHICH COVERS PERFORM BEST?

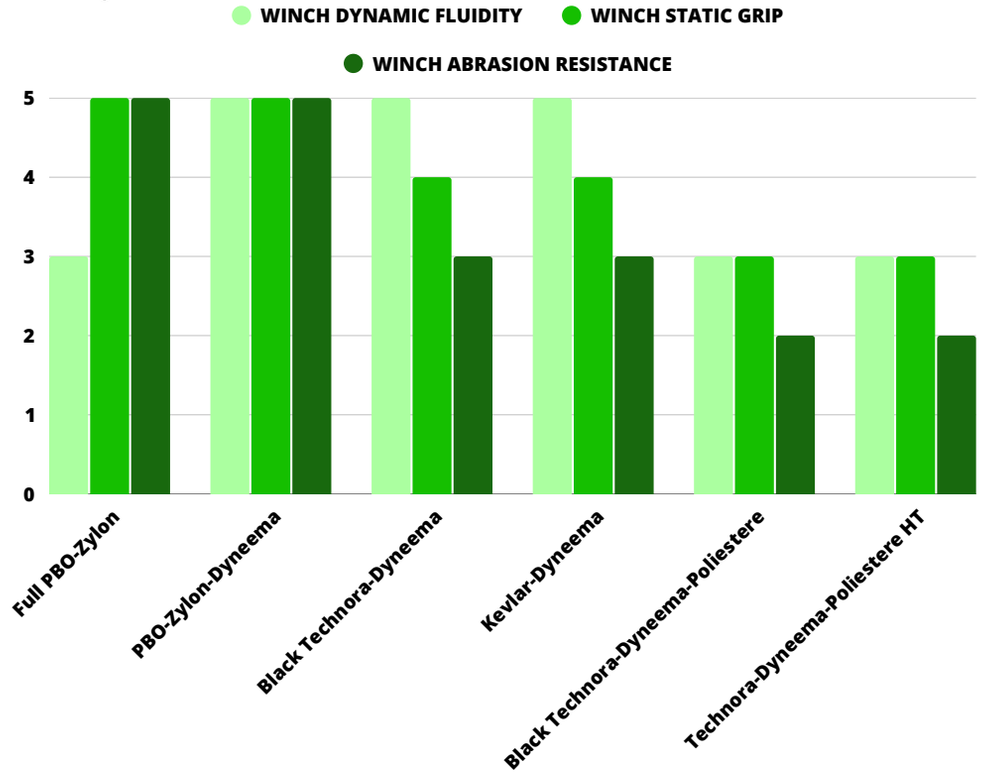
Throughout the years we have researched and tested an extensive range of cover materials, both outdoors (in inshore and offshore sailing), as well as indoors on our test benches.
The key variables we focus on are the cover's exact purpose, the yacht's hardware and their interactions. Another important challenge is was finding the ideal balance between abrasion resistance and grip (STATIC and dynamic LOAD).

- ABRASION RESISTANCE
- GRIP
- WEIGHT
- UV RESISTANCE
- PRICE



GRIP: STATIC OR DYNAMIC?

Our in-depth research has resulted in the design and development of dedicated products, such as balanced blends of covers materials that allow ropes to be eased on a winch with fluidity while maintaining a powerful hold. The combined properties improve ease of use and reduce the amount of stress on the rig.



STATIC GRIP TEST

DYNAMIN FLUIDITY TEST

PBO Zylon + DYNEEMA cover tested at Soluzioni Tessili Rigging work bench

COVER TREATMENTS

In order to further improve the cover fibre's performance we can apply special resin coatings. These act mainly are reinforcements and are especially recommended in those cases where there might be lower safety factors or high abrasion potential.

POLYURETHANE COATINGS

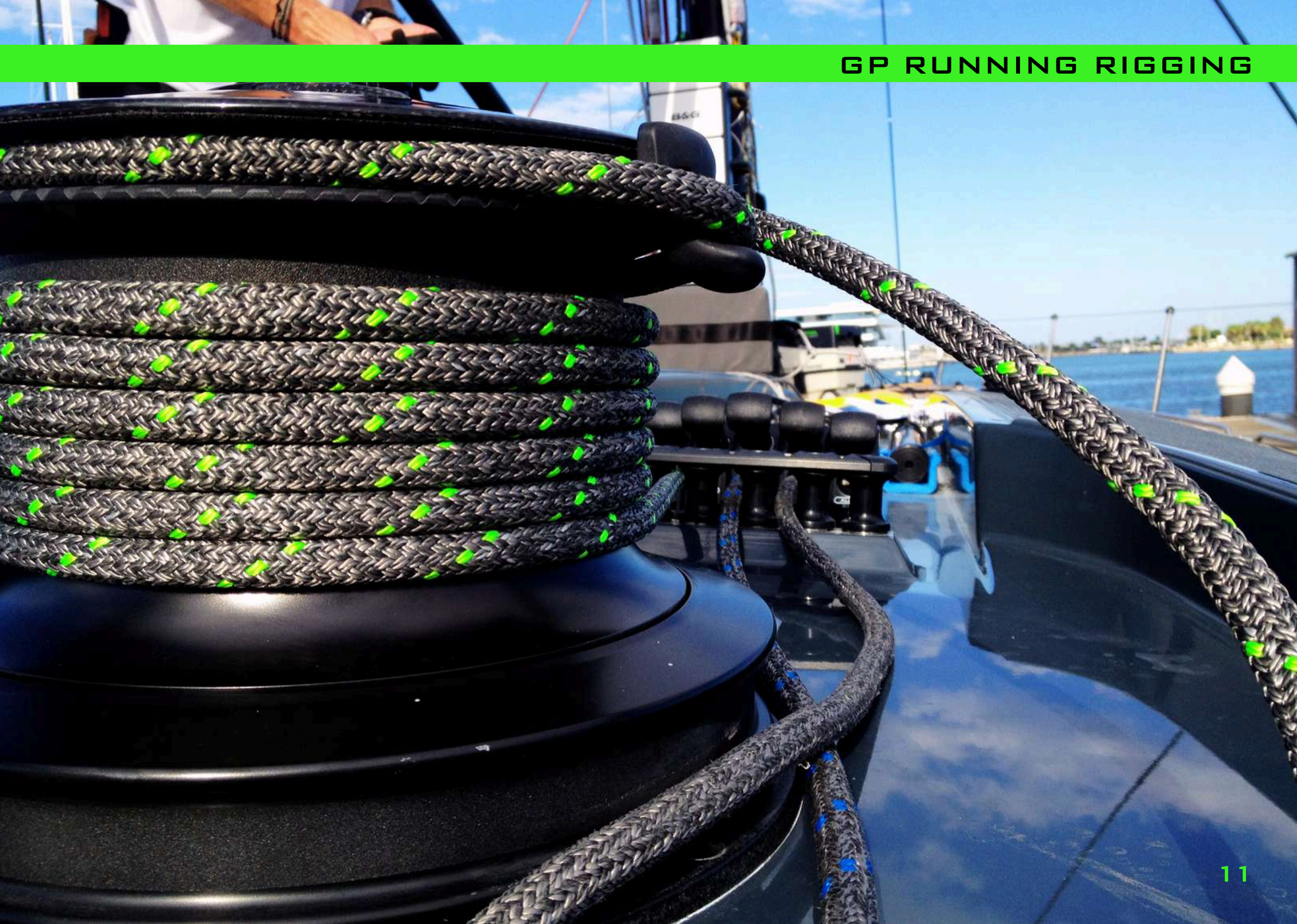
Polyurethane improves abrasion resistance and increases the fibre`s consistency and texture. Coatings are available in a wide range of colors.

EPOXY ELASTIC COATINGS

This very special Epoxy based resin has great elasticity, so it doesn't crack if the applied subject is bent. Furthermore it greatly improves the abrasion resistance of Dyneema and PBO covers. The coatings are specifically designed for high-friction areas, such as the tip of sheets, life lines, bobstays and deflectors.

LUBE COATING

Is a special finish for fibers, based on both wax and silicone emulsion used to help reduce the fiber-fiber friction or fiber-metal friction. This improves the abrasion resistance as well as the fatigue properties.
It also alows the application of other coatings on the finished rope, while still showing an improved abrasion performance.



A NEW WAY TO DESIGN THE RIGHT ROPES FOR YOU

Custom-made ropes are manufactured to match any specific request that may be determined by:

• BREAKING LOAD • COVER THICKNESS • FINAL DIAMETER

(i.e.) You can start from a core diameter that matches a desired load capacity and then choose the cover thickness that will give you the best result depending if you want to enhance the rope's durability, final diameter, etc.

COVER THICKNESS		
LIGHT HIGHER LOAD / DIAMETER RATIO	MEDIUM HIGH LOAD / MEDIUM DIAMETER Excellent load / durability compromise for medium friction uses such as halyards, sheets and main car traveller.	HEAVY HIGH LOAD / LARGER DIAMETER

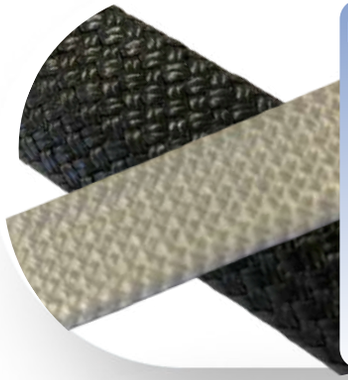
CORES		COVER					
		Light		Medium		Heavy	
ø		Cover	Rope Final ø	Cover	Rope Final ø	Cover	Rope Finalø
mm		mm	mm	mm	mm	mm	mm
4		LC07	5,4	MC07	6,6	HC07	7,0
4.5	HYPER	LC07	6,1	MC07	7,5	HC07	7,9
5		LC08	6,6	MC08	8,0	HC08	8,4
5.5	HYPER	LC09	7.1	MC09	8,7	HC09	9,1
6		LC09	8.0	MC09	9,3	HC09	9,6
6.5	HYPER	LC10	8.7	MC10	9,8	HC10	10,5
7		LC10	9.2	MC10	10	HC10	10,7
7.5	HYPER	LC11	9.7	MC11	10,3	HC11	11,5
8		LC11	10.2	MC11	10,8	HC11	11,7
8.5	HYPER	LC12	10.7	MC12	11,3	HC12	12,7
9		LC12	11.2	MC12	12,3	HC12	13,2
9.5	HYPER	LC14	11.9	MC14	12,7	HC14	14,3
10		LC15	12.4	MC15	14,4	HC15	14,8
10.5	HYPER	LC16	12.9	MC16	15,3	HC16	15.7
11		LC16	13.8	MC16	15,8	HC16	16,2
11.5	HYPER	LC18	14.3	MC18	16,5	HC18	17,1
12		LC18	14.8	MC18	17	HC18	17,6

DIFFERENT COVER SIZES FOR DIFFERENT TYPES OF SPLICES

TIGHT COVERS WON'T ALLOW A COVERED SPLICE, BUT ALLOWS A STRIPPED EYE SPLICE

PERFECT FIT COVERS ALLOWS COVERED SPLICES AND MAKES STRIPPED EYE PLICES EASIER

WIDER FIT COVERS ALLOWS TO WOTK ON COVERED EYE SPLICES WITH EASE



LIGHT COVER

HIGH AND MEDIUM / LOW WEAR FOR FRICTION

- JIB HALYARD HOIST LINE
- MAIN HALYARD HOIST LINE
- HOIST LINE
- STROPS
- CABLE
- LIFE LINE
- JACK LINE
- STEERING CABLE

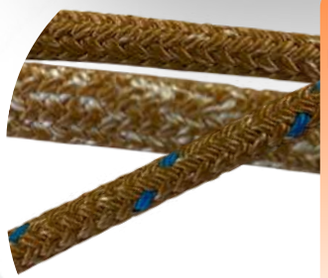
LIGHT COVER	CORE ø 4	5	6	7	8	9	10	11	12
LC07	P	T							
LC08	W	P	T						
LC09		W	P	T					
LC10			W	P	T				
LC11				W	P	T			
LC12					W	P	T		
LC15						W	P	T	
LC16							W	P	T
LC18								W	P
CODE	ROPE FIT CODE + COVER								

MEDIUM COVER

MEDIUM LOAD AND MEDIUM WEAR FOR FRICTION

- HALYARDS
- GENNAKER SHEETS
- MAIN TRAVELLER
- TACK LINES

LIGHT COVER	CORE ø 4	5	6	7	8	9	10	11	12
MC07	P	T							
MC08	W	P	T						
MC09		W	P	T					
MC10			W	P	T				
MC11				W	P	T			
MC12					W	P	T		
MC15						W	P	T	
MC16							W	P	T
MC18								W	P
CODE	ROPE FIT CODE + COVER								



HEAVY COVER

MEDIUM LOAD AND HIGH WEAR FOR FRICTION

- RUNNER TAIL
- GENOA SHEETS
- MAIN SHEETS
- FURLING LINE
- GENNAKER SHEETS

HEAVY COVER	CORE ø 4	5	6	7	8	9	10	11	12
HC07	P	P	T						
HC08		W	P	T					
HC09			W	P	T				
HC10				W	P	T			
HC11					W	P	T		
HC12						W	P	T	
HC15							W	P	T
HC16								W	P
HC18									W
CODE	ROPE FIT CODE + COVER								

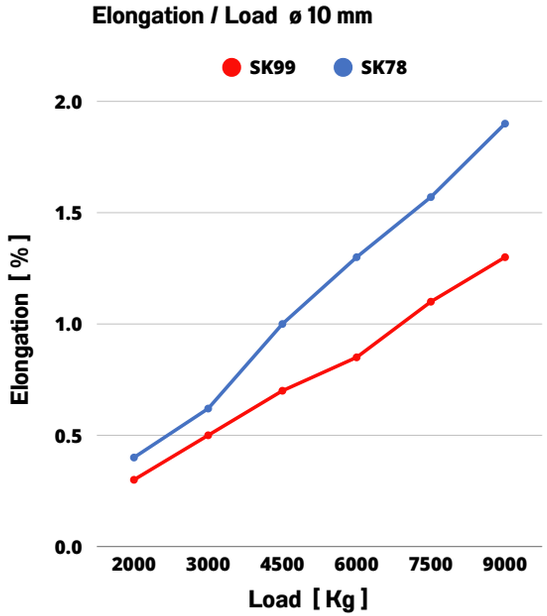
DYNEEMA CORES

HYPER 99

DYNEEMA® SK99**HYPER** HEAT PRESTRETCHED + PU COATING

FEA TURES			Ø	BREAKING LOAD	WEIGHT
MATERIAL	DYNEEMA® SK99		(mm)	(kg)	(g/m)
CONSTRUCTION	12 STRAND	**EXTRA LONG** PITCH STRAND	2,5	1.444	6,02
TREATMENTS	**HYPER** HEAT PRESTRETCH PROCESS	**BLACK** LONG-LASTING POLYERETHANE COATING	3,5	3.000	11,20
FEATURES	**HYPER** STRENGHT	**HYPER** ELONGATION RESISTANCE	4,5	4.365	18,05
APPLICATIONS	BEST STATIC FEATURE	SOFT STAYS, HALYARDS, GUYS, STROPS	5,5	6.320	22,86
			6,5	8.236	27,50
			7,5	10.027	38,80
			8,5	12.687	48,13
			9,5	14.964	58,80
			10,5	16.814	62,00
			11,5	18.573	77,00

BREAKING LOAD ★★★★★★
ELONGATION RESISTANCE ★★★★★★
CREEP RESISTANCE ★★★★★☆
FLEXIBILITY ★☆☆☆☆



SUPER PERFORMANCE 99

DYNEEMA® SK99 **SUPER** HEAT PRESTRETCHED + PU COATING

FEA TURES			Ø	BREAKING LOAD	WEIGHT
MATERIAL	DYNEEMA® SK99		(mm)	(kg)	(g/m)
CONSTRUCTION	12 STRAND	**LONG** PITCH STRAND	**3**	**1.472**	6,02
TREATMENTS	**SUPER** HEAT PRESTRETCH PROCESS	LONG-LASTING POLYERETHANE COATING	**3,5**	**2.243**	9,63
FEATURES	**SUPER** STRENGHT	**SUPER** ELONGATION RESISTANCE	**4**	**2.854**	11,20
APPLICATIONS	BEST STATIC FEATURE	HALYARDS, SHEETS, GUYS, STROPS	**5**	**4.365**	18,05
			6	**6.320**	22,86
			7	**8.236**	27,50
			8	**10.027**	38,80
			9	**12.687**	48,13
			10	**14.964**	58,80
			11	**16.814**	62,00
			12	**18.573**	77,00

BREAKING LOAD ★★★★★★
ELONGATION RESISTANCE ★★★★★★
CREEP RESISTANCE ★★★★★☆
FLEXIBILITY ★★☆☆☆

SUPER GP 78

DYNEEMA SK78 **SUPER** HEAT PRESTRETCHED

FEATURES			Ø	BREAKING LOAD	WEIGHT
MATERIAL	DYNEEMA SK78		(mm)	(kg)	(g/m)
CONSTRUCTION	12 STRAND	**EXTRA** PITCH STRAND	3	1.413	6,80
TREATMENTS	**SUPER** HEAT PRESTRETCH PROCESS	LONG-LASTING POLYURETHANE COATING	3,5	1.674	8,20
FEATURES	**HYPER** STRENGHT	GOOD ELONGATION RESISTANCE	4	2.294	10,10
APPLICATIONS		HALYARDS, SHEETS, CASCADES	5	3.147	15,30
			6	5.092	24,00
			7	6.524	31.10
			8	7.543	38,20
			9	9.684	51,10
			10	11.825	60,00
			11	13.354	77,00
			12	16.310	94,00

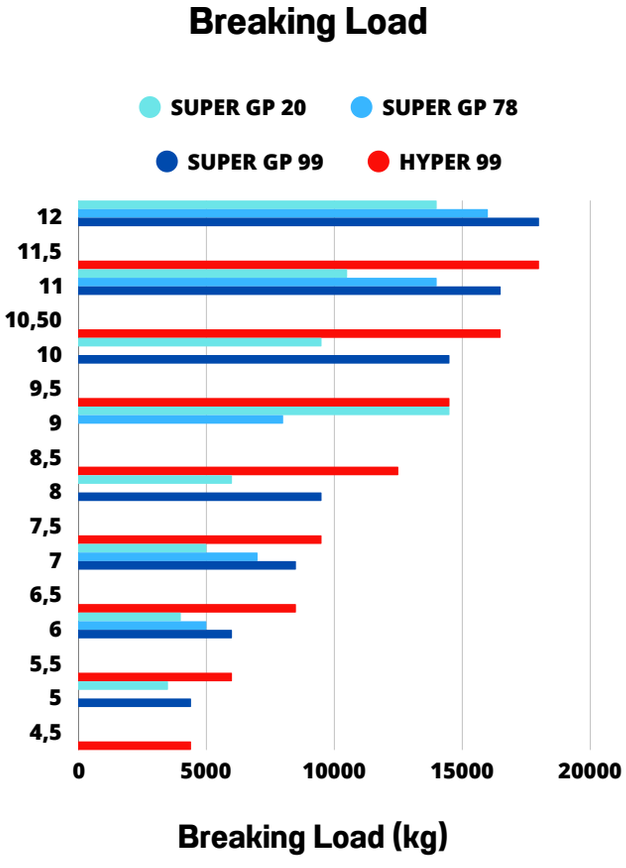
BREAKING LOAD	★★★☆☆
ELONGATION RESISTANCE	★★★☆☆
CREEP RESISTANCE	★★★☆☆
FLEXIBILITY	★★☆☆☆

SUPER GP 20

DYNEEMA® DM20 **SUPER** HEAT PRESTRETCHED

FEATURES			Ø	BREAKING LOAD	WEIGHT
MATERIAL	DYNEEMA® DM20		(mm)	(kg)	(g/m)
CONSTRUCTION	12 STRAND	**LONG** PITCH STRAND	4	1.916	9,28
TREATMENTS	**SUPER** HEAT PRESTRETCH PROCESS	**GREY** POLYURETHANE COATING	5	2.701	14,06
FEATURES	**NO CREEP,** GOOD RESISTANCE		6	3.231	19,76
APPLICATIONS	STATIC APPLICATIONS WITH LOW CREEP	STAYS, SMALL SHROUDS, STATIC CABLES	7	4.842	27,60
			8	6.765	35,86
			9	7.288	42,95
			10	9.021	50,00
			11	10.194	62,50
			12	13.904	75,80

BRAKING LOAD	★★☆☆☆
ELONGATION RESISTANCE	★★☆☆☆
CREEP RESISTANCE	★★★★★
FLEXIBILITY	★★☆☆☆



DYNEEMA® COVERS

One of the most versatile cover materials deserves a special mention.
Dyneema covers are used in a wide array of applications and for a diverse series of reasons, thanks to their light weight, superior abrasion resistance and good friction reduction.
The versatility of the covers can be increased even more! Throughout the years we have been experiencing with different variations on the braiding process to change the performance characteristics of the cover itself, according to what it's final purpose will be.

DYNEEMA PROTECTION COVERS

COLOUR	WHITE	BLACK	GREY
Ø	WEIGHT	WEIGHT	WEIGHT
(mm)	(g/m)	(g/m)	(g/m)
5	6,00	6,36	6,36
6	11,04	12,08	12,08
7	12,00	12,72	12,72
8	15,54	16,47	16,47
9	18,00	19,08	19,08
10	22,20	23,53	23,53
12	30,00	31,80	31,80
14	46,20	48,97	48,97
16	51,00	54,06	54,06
18	57,00	60,42	60,42
20	66,00	69,96	69,96
WE CAN SUPPLY DIAMETERS UP TO 52 mm			

SUPERCABLE 99

FEATURES		
MATERIAL	DYNEEMA SK78	
CONSTRUCTION	12 STRAND	**EXTRA** PITCH STRAND
TREATMENTS	**SUPER** HEAT PRESTRETCH PROCESS	LONG-LASTING POLYURETHANE COATING
FEATURES	**HYPER** STRENGHT	GOOD ELONGATION RESISTANCE
APPLICATIONS		HALYARDS, SHEETS, CASCADES

BREAKING LOAD	★★★☆☆
ELONGATION RESISTANCE	★★★☆☆
CREEP RESISTANCE	★★★☆☆
FLEXIBILITY	★★☆☆☆

DYNEEMA SK78 **SUPER** HEAT PRESTRETCHED

Ø	BREAKING LOAD	WEIGHT
(mm)	(kg)	(g/m)
3	1.413	6,80
3,5	1.674	8,20
4	2.294	10,10
5	3.147	15,30
6	5.092	24,00
7	6.524	31.10
8	7.543	38,20
9	9.684	51,10
10	11.825	60,00
11	13.354	77,00
12	16.310	94,00

SUPERLOOP 99

FEATURES		
MATERIAL	DYNEEMA® DM20	
CONSTRUCTION	12 STRAND	**LONG** PITCH STRAND
TREATMENTS	**SUPER** HEAT PRESTRETCH PROCESS	**GREY** POLYURETHANE COATING
FEATURES	**NO CREEP,** GOOD RESISTANCE	
APPLICATIONS	STATIC APPLICATIONS WITH LOW CREEP	STAYS, SMALL SHROUDS, STATIC CABLES

BRAKING LOAD	★★☆☆☆
ELONGATION RESISTANCE	★★☆☆☆
CREEP RESISTANCE	★★★★★
FLEXIBILITY	★★☆☆☆

DYNEEMA® DM20 **SUPER** HEAT PRESTRETCHED

Ø	BREAKING LOAD	WEIGHT
(mm)	(kg)	(g/m)
4	1.916	9,28
5	2.701	14,06
6	3.231	19,76
7	4.842	27,60
8	6.765	35,86
9	7.288	42,95
10	9.021	50,00
11	10.194	62,50
12	13.904	75,80

What is this new thing??

The SUPER LOOP is a modified version of the Super Cable. The core remains in braided DYNEEMA SK99, but the construction is sligthly different, giving this product the following upgrades:

- Increased stiffness compared to a Super Cable of the same diameter.
- Constant section throught the length (no diameter variation close to the splice areas)

MAIN SPLICES AND FINISHES

We are specialized in all kinds of handcraft finishes, with a wide selection of different splicing and custom jobs to choose from depending on the rope materials and final use.
Sometimes ropes require certain specific characteristics determined by external factors, such as deck hardware or boat designs and the solution is not always very evident.

This is when our creativity, attention to detail and expert craftsmanship come to play to deliver functional, but also aesthetically pleasing solutions.

DYNEEMA COVERED EYE

COVERED EYE SPLICE

STRIRPED EYE SPLICE

PRO STRIRPED EYE SPLICE

SUPERCABLE SPLICE

CONNECTION/TAPER

MACHINE TAPERING

DIAMETER INCREASE

SHORT-SHEET LOOP

HOIST MARKERS

PRO TAIL

WHIPPING

LOOPS & STROPS

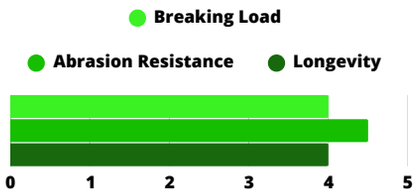
They are designed to replace steel shackles wherever it is possible and convenient to have a lighter, softer alternative. They are made from either unidirectional or braided DYNEEMA® SK99 and are usually covered with a 100% DYNEEMA® chafe guard to further protect them from chafing, UV rays and other external factors increasing their life.

These technically advanced loops and strops guarantee the best diameter / breaking load ratio and can be used in-line, double (basket) or with a dog bone.

All loops and strops are available in different sizes and MWL.
It is possible to have them coated in different colours in order to be easily recognized by the crew or, for example, match the colour of the connected rope.

Traditional covered loop

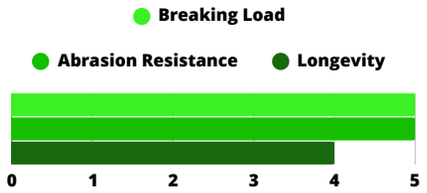
Strong, resistant, aesthetically clean and durable.



Construction: Dyneema® braided core and cover
Material: Dyneema®SK78, Dyneema®sk99

Unidirectional covered loop

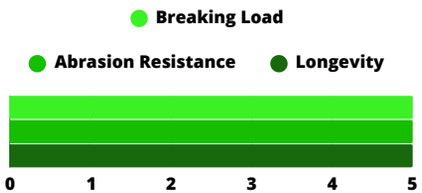
This reduced-diameter loop delivers maximum performance, is light strong and reduces elongation.



Construction: Dyneema® unidirectional core and Dyneema® braided cover
Material: Dyneema®sk99 UD

Offshore Loop with Dog-Bone

This loop combines the lightness and strength of Dyneema®, with the characteristics of classic steel shackles.



Construction: Dyneema® braided core and cover Dog Bone
Material: Dyneema®sk99, Dog Bone SS 17-4PH or aluminium alloy

HOW CAN USE MY LOOPS & STROPS

VERTICAL

MSF = 1,0

BASKET

MSF = 2,0

CHOKED/HITCH

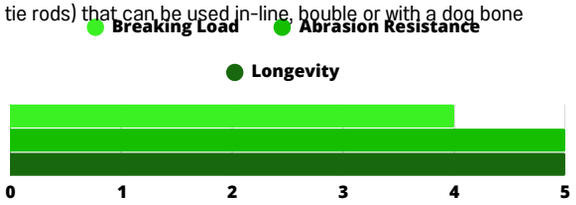
MSF = 0,8

BONED

MSF = 1,6

Traditional single strop

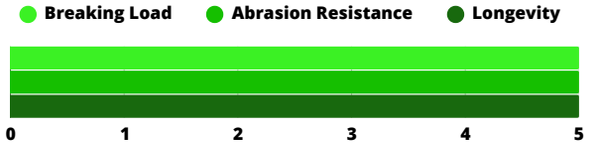
A strong & versatile fitting (for forestay strop, lock system, extension, tie rods) that can be used in-line, bouble or with a dog bone



Construction: Dyneema® braided core and cover
Material: Dyneema®SK78, Dyneema®sk99

Strop Loop with Dog-Bone

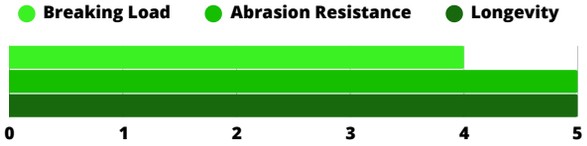
It is built as a single strop, but used as a boned loop. The fibers are better aligned and they can be mounted in different ways to adapt to the hardware.



Construction: Dyneema® braided core and cover + Dog Bone
Material: Dyneema®SK78, Dyneema®sk99

Mega loop & Mega strops

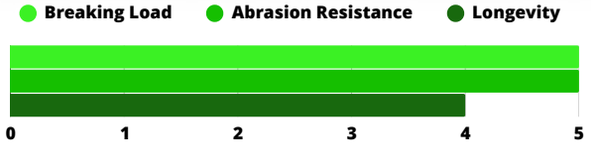
We have specifically designed and manufactured a diverse range of high-load strops and loops for the mega-yacht industry.



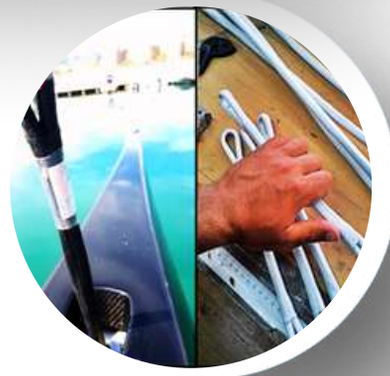
Construction: Dyneema® braided core and cover
Material: Dyneema®SK78, Dyneema®sk99

Unidirectional single strop

This reduced-diameter loop delivers maximum performance, is light, strong and reduces elongation.



Construction: Dyneema® braided unidirectional cover and Dyneema® braided cover
Material: Dyneema®SK78, Dyneema®sk99



HOW DO I CHOOSE THE RIGHT LOOPS/STROPS FOR ME?

There are many factors that may influence the choice of a loop/strop, along with all the different configuration possibilities, one may get a bit lost at first.
Here are some of the main aspects to keep in mind for a first approach:

1.Stripped or covered?
2. **Breaking Load**
3. **Hardware: The items to which the loop/strop is linked to impose specific constrains that must be accounted for. Usually these are declared by the manufacturer.**
4. **Easy to open/close or fixed?**

Please contact our technical department, where our expert staff will help you with the remaining details to find the best solution for you.

LOCK STROPS

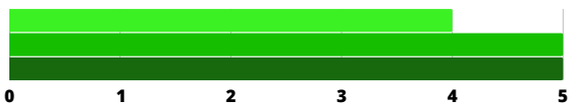
The Masthead Halyard Lock System has increasingly become an integral part of the rig. Our lock strops can either be spliced into various types of locks or bullets, or also delivered on their own as a plug-and-play solution.
The stop-rings are Torlon®-made and treated with Arnite in order to protect shafts and pulleys from damage.
They can be manufactured from either unidirectional or braided fibers.

COLORS
They can be color-coded with resin so crew can easily distinguish the different halyards during maneuvers.

All lock strops can be made to each client's specifications, in different sizes and MWL.

Traditional Lock strops

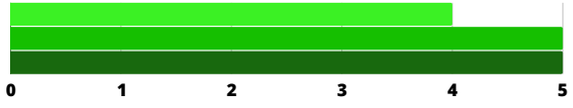
This is the most commonly used lock strop, offers a good balance between cost, strenght and longevity.



Construction: Dyneema® braided core and cover
Material: Dyneema®sk99

Traditional Lock strops (covered)

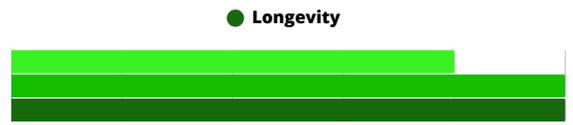
The Dyneema cover preserves the core, preserves chefing and increases its life.



Construction: Dyneema® braided core and cover
Material: Dyneema®sk99

Unidirectional Sling Lock Strops

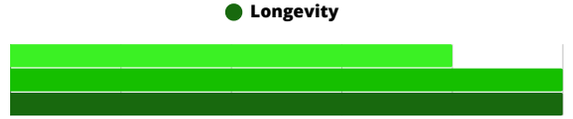
High-performance strops designed especially for the Grand Prix market, or wherever a diameter is a necessary. Tanks to unidirectional fibres they offer an unsurpassable performance-level due to their high breaking load and elongation resistance.



Construction: Dyneema® unidirectional core and cover
Material: Dyneema®sk99 UD

Mega yacht Lock strops

We have a range of lock strops which have been specifically developed for sudstantial loads and mega yacht industry. The strops are covered and fortified by means of a durable lashing.



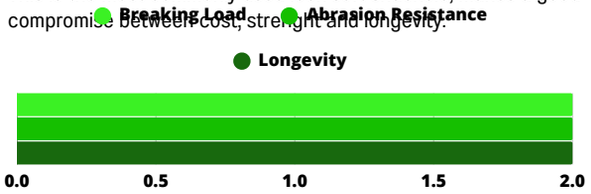
Construction: Dyneema® braided core and cover
Material: Dyneema®SK78, Dyneema®sk99

SOFT SHACKLES

Our Soft Shackles are made without the use of any metal at all, but built from DYNEEMA® SK99 instead. They can be used to substitute any opening metal hook or shackle, they are safe, strong and substantially lighter than their metal-made counterparts (approximately 6 times lighter).
Additional benefits of their decreased weight and 'soft-ness' are a reduced chance of injuring someone or damaging the boat. What's more...they don`t squeak.
*Code names help identify the equivalent size Tylaska. (i.e. SSC1L-08 = Equivalent WL as Tylaska T08)

Soft Shackle (No Cover)

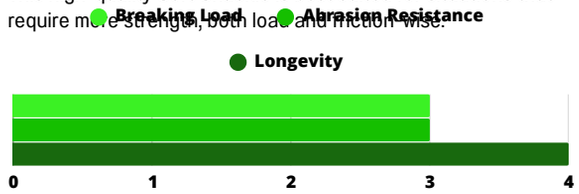
This is the most commonly used lock soft shackele, makes a good compromise between cost, strenght and longevity.



Construction: Dyneema® braided core
Material: Dyneema®sk99

Dyneema® Covered Soft Shackle - 1 Lap

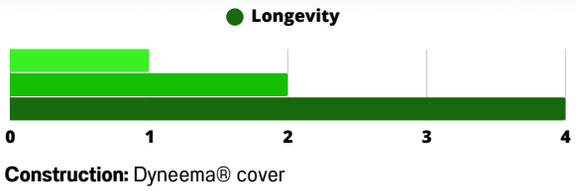
This high-quality Soft Shackle is best suited for situations that require more strength, both load and friction wise.



Construction: Dyneema® braided core and cover
Material: Dyneema®sk99

Super-light Soft Shackle (No Core)

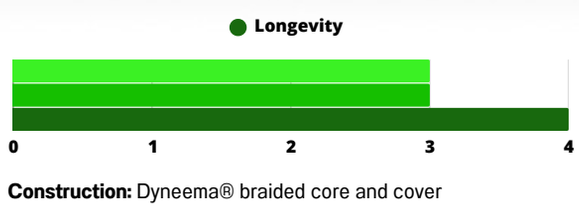
Best suited for low load areas where longevity is a must.



Construction: Dyneema® cover
Material: Dyneema® cover

Dyneema® Covered Soft Shackle - 2 Lap

This high-quality Soft Shackle is best suited for situations that require more strength, both load and friction wise.



Construction: Dyneema® braided core and cover
Material: Dyneema®sk99

SOFT SHACKLES SK99	MAX WL (ton)									
	0,5	1,0	1,5	2,0	2,5	3,0	4,0	4,5	5,0	6,0
No Cover Silgle Lap	SS-08	SS-12	SS-16	SS-20						
Covered Silgle Lap	SSC-05	SSC-08	SSC-12	SSC-16	SSC-18	SSC-20		SSC-24		
Covered Double Lap		SSC-05-2L	SSC-08-2L		SSC-12-2L		SSC-16-2L		SSC-18-2L	SSC-05-2L

ACCESSORIES - RINGS AND FERRULES

The classic and super versatile ferrule (a.k.a. frinction ring) is one of the most common accessories to have on board, with a thousand different applications. Use them as fairleads, rope deviations, purchases, lashings, cascades and so much more. It is well known that a rope's load resistance will greatly benefit when it works upon a surface with a correct radius, therefore we always recommend adding a ferrule whenever possible to improve the load distribution and preserve the fibers.

TITANIUM BOBBINS

Material: Grade 5 Titanium

Designed for more "static" applications, where the main focus is to benefit the alignments and dispositions of the fibers around the ferrule, to improve the equilibrium of the system and load distribution across the textile's section.

ITEM	Ø EXT	Ø INT	Ø ROPE MAX
[-]	[mm]	[mm]	[mm]
TB1	25	11	7
TB2	34	15	10
TB3	40	18	12
TB4	50	23	15
TB5	60	28	18
TB6	70	32	23
TB7	90	40	30

FERRULES / FRICTION RINGS

Material: Alluminium

These guys need no introduction. They come in a great variety of sizes for every different application and rope diameter, with a hard anodized finish to reduce friction of ropes running through.

ITEM	Ø EXT	Ø INT	Ø ROPE MAX
[-]	[mm]	[mm]	[mm]
F0	18	7	5
F1	25	10	7
F2	35	14	10
F2,5	42	18	12
F3	50	20	14
F4	65	28	20
F5	98	38	28

ACCESSORIES - DOG BONES

The highly adaptable dogbone serves as a 'connector' and can be used in conjunction with a soft loop/strop in order to replace almost any type of shackle. We offer dog bones in five different sizes and can supply classic yachts with titanium or bronze-made varieties. All dog bone are available in different sizes and MWL.

ITEM	Ø INT	LENGTH	BL
[-]	[mm]	[mm]	[kg]
DBT1	9	29	4.500
DBT2	10	35	6.200
DBT3	12	40	8.500
DBT4	14	45	11.200
DBT5	16	51	15.000
DBT6	19	60	21.000

TITANIUM DOG BONES

Material: Grade 5 Titanium

Besides the obvious advantages of the choice of materials, they improve safety of use thanks to the special design features. The sizes where studied to fit the ideal diameters and improve load resistance of the ropes.

ITEM	Ø INT	LENGTH	WEIGHT
[-]	[mm]	[mm]	[g]
DBOFFC0	9,5	44	28,5
DBOFFC1	10	51	45,0

OFFSHORE DOG BONE

Material: SS AISI 630 - 17-4 PH High Resistence

ITEM	Ø INT	LENGTH	BL	WEIGHT
[-]	[mm]	[mm]	[kg]	[g]
DB0	6,0	25,0	1.800	8,0
DB1	7,0	33,0	3.000	20,70
DB2	9,0	40,0	4.000	28,60
DB3	11,0	48,0	5.000	47,60
DB4	13,0	55,0	9.000	88,40

CLASSIC DOG BONE

Material: SS AISI 630- 17-4 PH High Resistence

ACCESSORIES - MAST PROTECTION FITTINGS

For those applications where a metal fitting at the end of a halyard, tack, or lock strop can damage a softer structure. Used to protect the mast surface or sheaves from impacts caused by a snap shackle or Tylaska, they are meant work as bumper between them and preserve much more important parts of the boat. These are the evolution of the classic colored stop-balls, meant to last longer and optimize luff length.

ITEM	Ø EXT	Ø INT
[-]	[mm]	[mm]
OMB01	44	14
OMB02	62	20

OMBRELLO

Material: Arnite

Improved ergonomy and resistance. They fit perfectly with metal bails of fittings such as Tylaska snap shackles.
They can move freely and avoid getting stuck under sails or pulpits

ITEM	Ø EXT	Ø INT
[-]	[mm]	[mm]
DISC01	44	16
DISC02	62	24

HALYARD STOP-DISC

Material: Arnite

The evolution of the classic stopball. Light and strong to help protect your mast, bowsprit, etc. from damage caused by metal fittings.

Martin Breaker & Customized Tylaska

DESCRIPTION

Regatta regulars will have seen it often times: a bowman balanced on the bowsprit while grappling for the tack line. However, with the help of the Martin Breaker, getting the shackle released is as simple as easeing the tack line until the TYLASKA® trips.
Our customized Tylaska enables the bowman to succesfully complete the manouvre without the need to be on the bowsprit.

CONSTRUCTION AND ADDITIONAL INFORMATION

Customized Carabiners (Designed by Soluzioni Tessili technicians) are available for TYLASKA® T12 - T16 - T20 - T30

MARTIN BREAKER

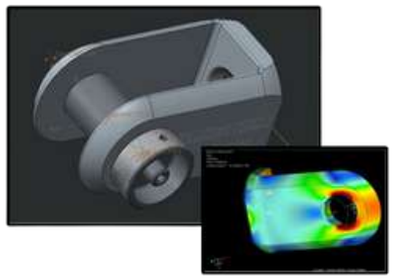
DESIGNED FOR TYLASKA® T12 - T16 - T20 - T30

This is the most commonly used carabiner in the regatta circuit. It is designed and customized to eliminate the need to be on the bow.
Construction: Stainless Steel HR components and customized Tylaska® . As the line is Dyneema® made, it`s suited for high load
Material: SS and Dyneema®SK99

MARTIN BREAKER + CUSTOM FITTING

FOR TYLASKA® T12 - T16 - T20 - T30

We are able to design and deliver bespoke fittings, such as a Tylaska® for the downfocker. The system is designed for the tack of the furling sail.
Construction: : Stainless Steel HR components and customized Tylaska® . The line is suitable for high load as it`s Dyneema® made.
Material: Steel 17-4PH (High load) and Dyneema®SK99



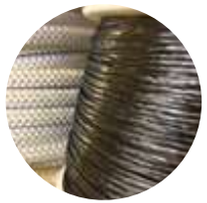
UNIDIRECTIONAL FIBRES

Unidirectional ropes offer an unsurpassable performance in terms of tensile force and elongation resistance when compared to braided ropes of the same diameter. We provide unidirectional fibres in both DYNEEMA® SK99 and DYNEEMA® DM20.

UD 99 - Unidirectional Dyneema® SK99 880 dtex

Dyneema® SK99 unidirectional fibers are substantially stronger and lighter when compared to SK78 (20% higher breaking load and an increased elongation resistance of 30%). Available also in Black.

Material: 880 dtex Dyneema® SK99



UD 99		
Costruction	Code-Pure	Code-Black
[dTex x yam]	[-]	
880x10	UD99W_88010	UD99B_88010
880x15	UD99W_88015	UD99B_88015
880x20	UD99W_88020	UD99B_88020
880x30	UD99W_88030	UD99B_88030
880x40	UD99W_88040	UD99B_88040

UD 20 - Unidirectional Dyneema® DM20 1760 dtex

Dyneema® DM20 A fibre engineered for ropes under constant load and for areas where permanent elongation may occur over extended periods of time, such as standing rigging, guys and stays.
Made by: 1760 dtex Dyneema® DM20

UD 20	
Costruction	Code
[dTex x yam]	[-]
1760x4	UD20_176004
1760x8	UD20_176008
1760x16	UD20_176016
1760x23	UD20_176023

FURLING LINES & BUNGEE

Soluzioni Tessili has also developed a range of products and solutions to improve the ease of use of furling lines.

•HIGH RESISTANCE COVERS from ultra-strong fibres (ARAMID, DYNEEMA® AND POLYESTER) help mantain a high breaking load without the need to increase the cover's diameter. The fibres' specific properties enable the rope to be easily spliced.

•CUSTOM COVER WITH DIRECTIONAL FLAGS: Customized markings show how the line is to be used.

•CARABINER WITH PULLEY: Combines the practicality of the carabiner with the pulley`s low friction properties.

DIGITAL RECOGNITION, THE NEXT STEP ON YACHT MAINTENANCE AND SERVICE

Now you can simplify the maintenance of your yacht's rigging by inserting a special CHIP in any of our textile-made loops, strops and cables.

The CHIP's NFC (Near-Field Communication) technology stores all of your product's most relevant information such as MWL, Safety Factor, or expected life-span. This way we can keep track of the products on your yacht, and let you know when a specific item might be in need of maintenance or replacement. The system also eliminates the need to store and search through a hefty manual, as all you need is your device or smartphone to access a loop, rope or strop's data in just a few seconds.

Near-Field Communication (NFC) enables two electronic devices (one of which is usually portable, such as a smartphone) to exchange data by bringing the devices within 4 cm (1.6 in) of each other.

USE AND MAINTENANCE GUIDELINES

The average values indicated in the tables and graphs in this catalogue are obtained from laboratory tests.
These tests were made under controlled conditions on new ropes, ropes which were suitably spliced at both ends.
Indicated values may be changed without notice.

•Use and exposure to atmospheric agents cause breaking load losses
•In order to safeguard the characteristics of the product and unexpected breakages the load applied to a rope in good condition must never exceed the values indicated in the table by 20% or more.
•The safety percentage must be higher when dynamic loads and/or tears come into play.
•An incorrectly constructed splice considerably reduces a product's resistance. The presence of knots can also cause a drop in resistance of up to 50%.
•When using the ropes the user must avoid contact with sharp or particularly abrasive surfaces.
•We recommend a visual check at regular intervals to verify the condition of the deck equipment and components that interact with the lines (winches, pulleys, bevel gear, etc.).
•Each line must be checked periodically, especially after intense or extreme use. Visual inspection alone cannot guarantee the quality of the product and, therefore, its breaking load.
•Do not use lines with obvious signs of aging
•To avoid injury always position yourself outside the range of the line when working with lines under load.
•Dyneema®- made products must not be used in environments with temperatures above 55°.
•Zylon® and Vectran®-made cores must be used with their protective cover to avoid direct exposure to sunlight.
•Zylon® has a high sensitivity to moisture, therefore it is strongly recommended not to store Zylon®-made ropes in damp environments.
•It is recommended to avoid ropes coming into contact with chemical agents. In case of contamination, contact Textile Rigging Solutions
•Ropes should be washed periodically with fresh water. Dirt, grease and salt residues reduce the life of the fibers and the product’s breaking load.
•Ropes must be disposed of as "municipal waste" - DO NOT DISPOSE OF ROPE- MATERIAL IN THE ENVIRONMENT
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LOOPS & STROPS
In order to comply with our standard, resting radiuses must be 1,25 times the strop diameter

All the products in this catalogue are intended exclusively for use in pleasure boating and sports, which includes work undertaken aloft. Any other usage are strictly prohibited.

SOLUZIONI TESSILI RIGGING is in no way responsible for any printing errors in this catalogue.

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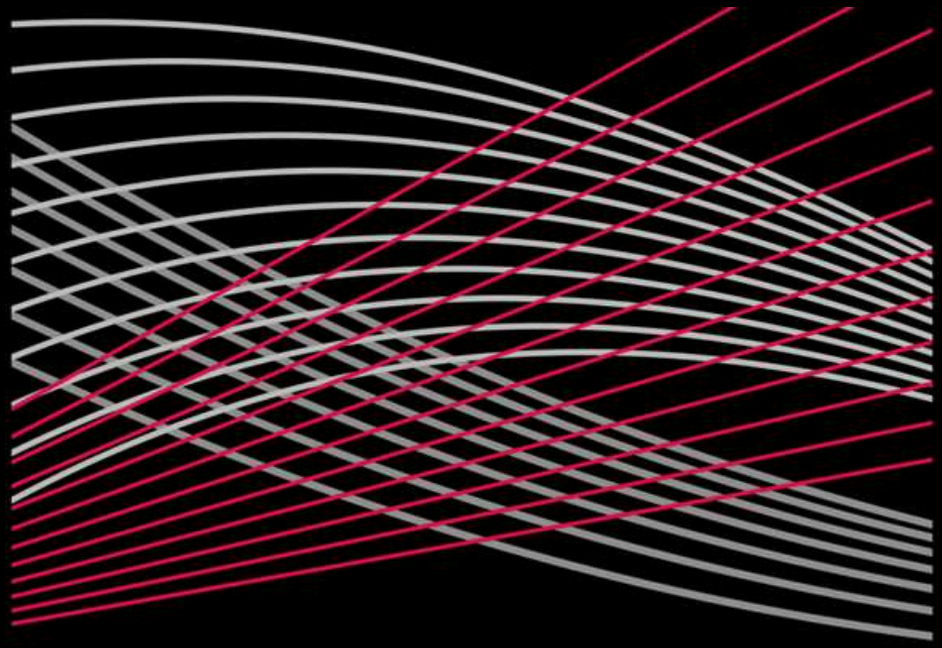

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RIGGING