

Mooring solutions

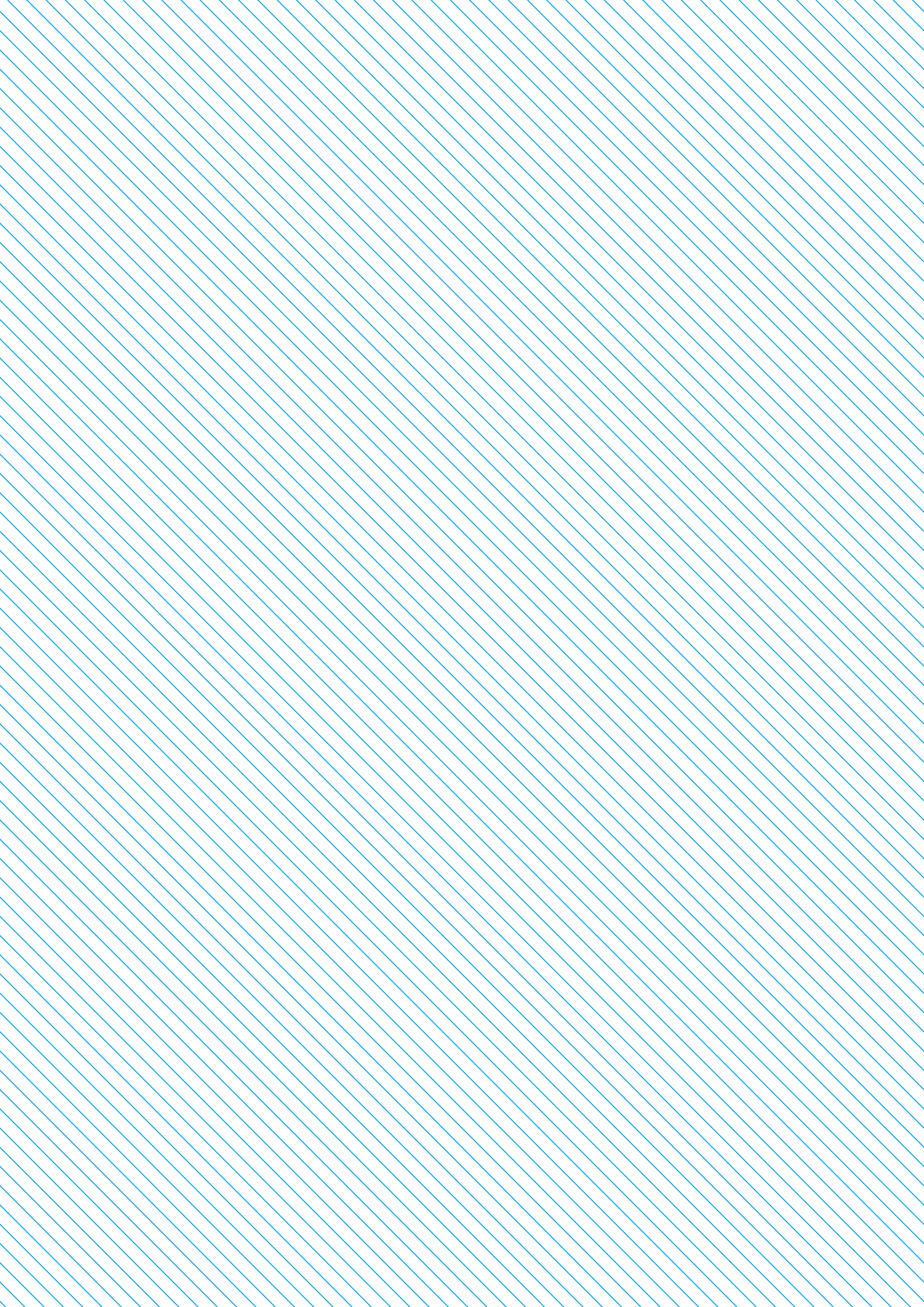
Marine industries



Catalogue

More than Ropes.

Gleistein



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Gleistein – traditionally in the lead

We create perfect connections

Gleistein is dedicated to the development, manufacture, and distribution of high-quality ropes. Founded in 1824, we are the oldest family-owned industrial enterprise in the Hanseatic city of Bremen, so tradition plays an important role for us: especially the tradition of always looking ahead! Sustainable development and forward-thinking decisions are fundamental conditions for future viability.

For a connection to last, however, you not only need the right rope, but you also need to use it properly. For this reason, Gleistein provides comprehensive service to complement its entire range of products. A good connection will not only withstand heavy stresses and strains, but it will also last for a very long time. It's no coincidence that this insight is just as relevant to business relationships as it is to our ropes.



We guide you to the perfect solution

Because we care

For mooring lines, the work begins when the vessel comes to rest: they provide support and cushion shocks, but must also be strong and flexible simultaneously. Premium solutions from Gleistein also offer outstanding longevity as well as clear benefits in handling due to their low weight.

Finding a functionally and economically superior connection solution starts with your requirements.

It is not only the quality and variety of our products that distinguish us from other suppliers on the market. As a family business, personal contact with our customers is particularly important to us. Our skilled consultants are always available to you, listen carefully and guide you to the right solution. The Gleistein team accompanies you from the initial idea to application and far beyond.

CruiseTail



For a future worth living

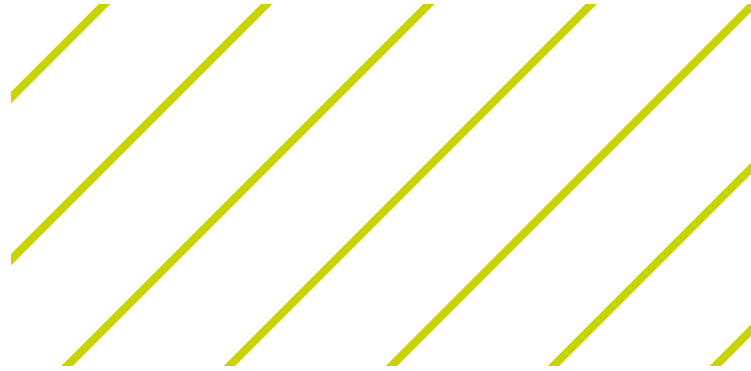
Gleistein is and will remain the oldest industrial family business in Bremen – not least because sustainability has been a fundamental principle for us since the very beginning.

We do not wait for pressure from the market or politics to consistently implement the highest standards when it comes to resource-conscious and ethically responsible production and application of our products. It is not new to us that sustainable development is a necessary condition for economic success.

As early as 2015, we were awarded the title of „CO₂-20 Climate Protection Company“ by the state of Bremen. We received the award as the first company ever – thanks to the conversion to energy-efficient LED lighting, the use of green electricity and the purchase of a modern combined heat and power plant. Today, our holistic sustainability management pursues goals in all areas of sustainability (economic, ecological, and social). One example is the annual calculation of our corporate carbon footprint and a detailed look at the CO₂ balance of our products. These and other measures help us to define goals and document progress.

“The future depends on what you do today”

Mahatma Gandhi



Sustainable Development Goals

An official framework for our sustainability efforts is provided by the 17 Sustainable Development Goals, which were defined by the United Nations in 2015. Our holistic sustainability strategy at Gleistein encompasses a large number of these SDGs. However, we have decided to place special focus on four selected goals in the coming years: Alongside regional and global support for environmental/climate protection, health management for our employees, as well as responsible consumption and production, they also include the promotion of sustainable innovation in our industry.



Gleistein's commitments

We go one step further...



Bio-based ropes

...without compromising performance.*



Carbon neutral production and ropes

...because we avoid, reduce and compensate.



Active support for the environment

...through ongoing commitment to initiatives.



*Gleistein is the first rope manufacturer who completely switched his products made with Dyneema® to the new bio-based Dyneema® fibres.



Gleistein by your side

Discover our service

No matter how unusual and complex your requirements – with Gleistein as your partner you will find the perfect solution. We listen carefully, think our way into your project and develop customised connection solutions for every application. Finding a functionally and economically superior mooring solution starts with your requirements.

Our skilled consultants listen to your needs and guide you to the right concept.

But we don't leave it at that: To ensure maximum operational reliability and the longest possible service life, Gleistein offers a range of services that will avoid application errors, unnecessary additional work and expense – and will also preserve you of sleepless nights.

Installation



On-site training



Inspection & maintenance



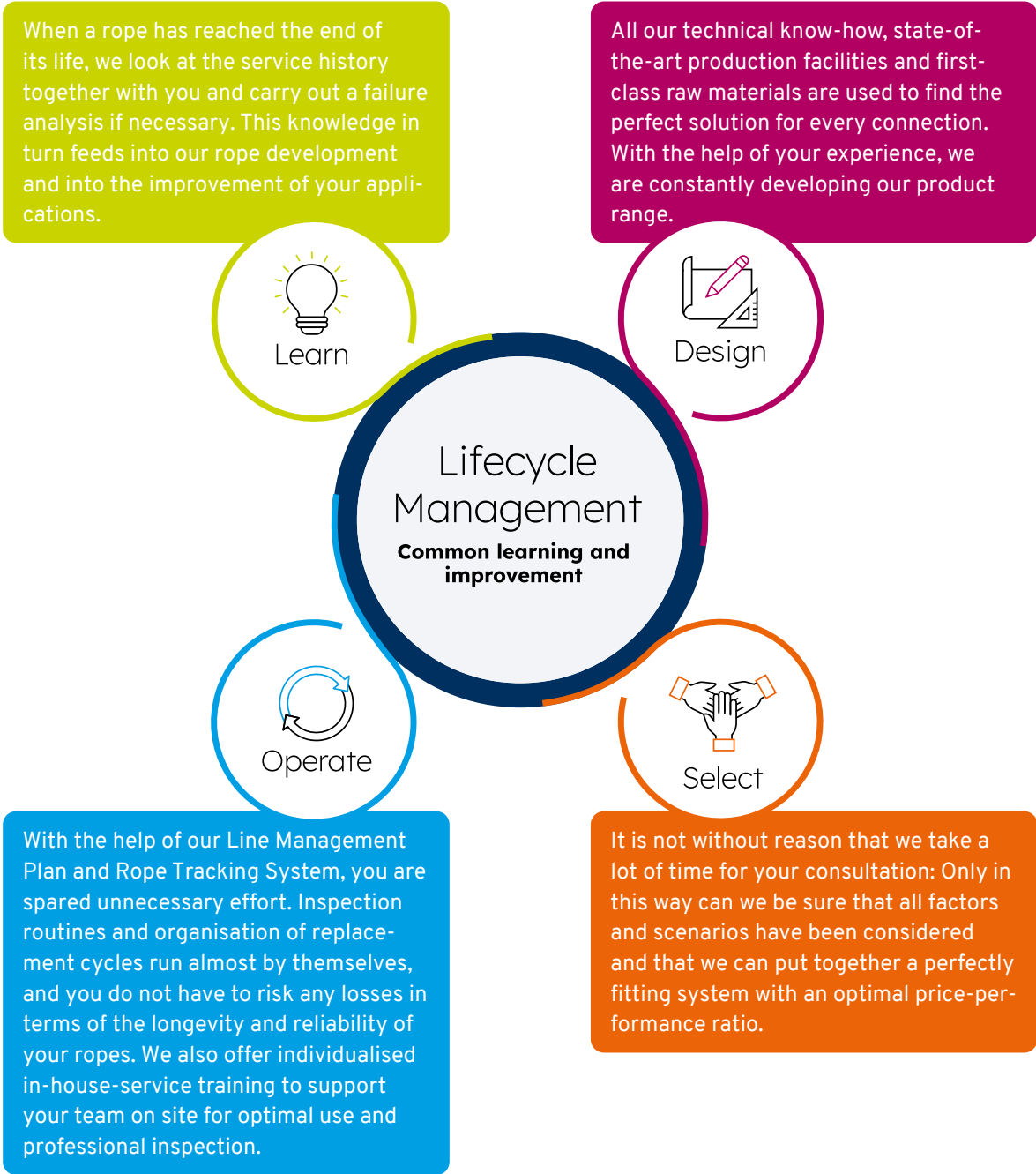
In-house training



Lifecycle management

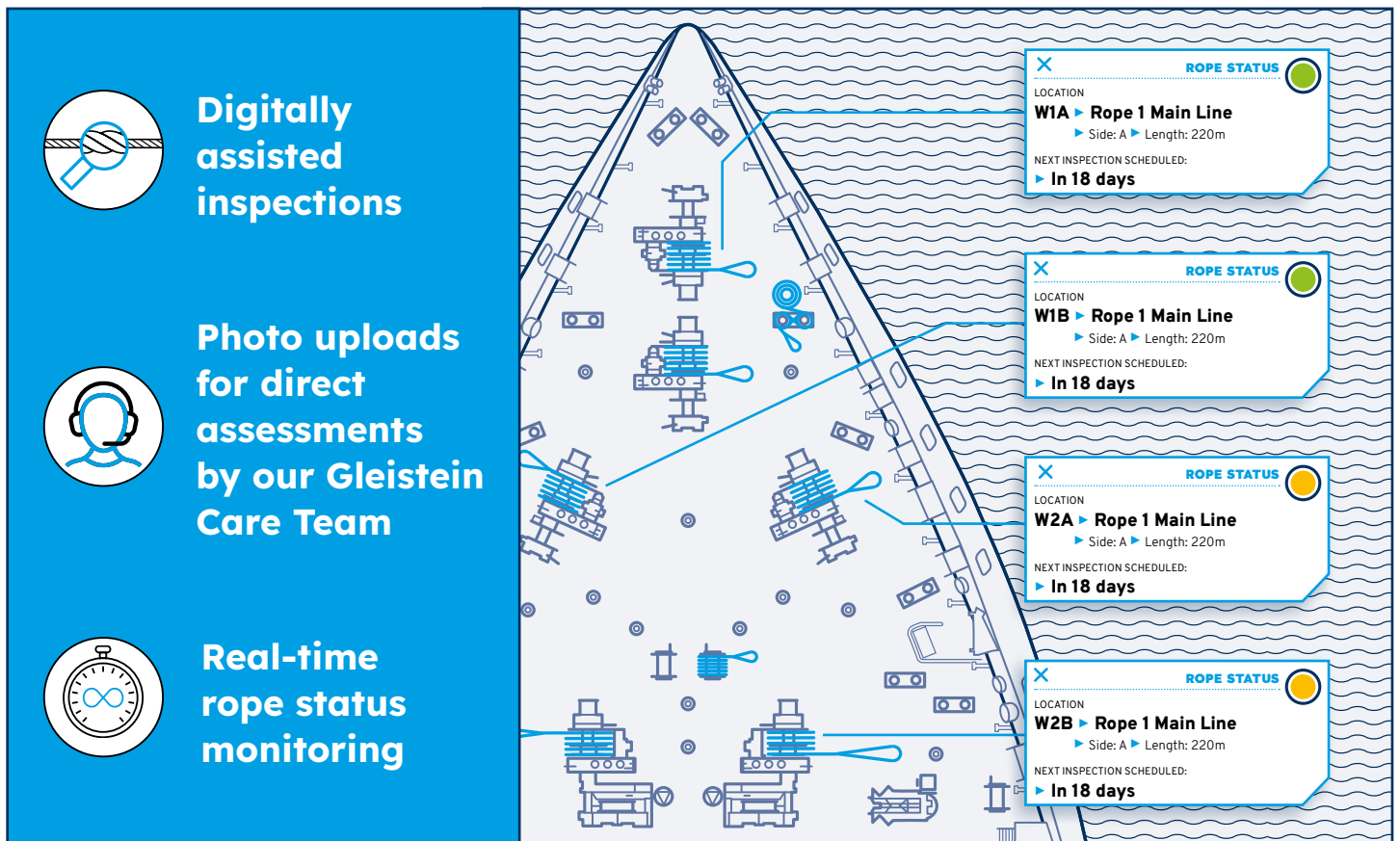
With Gleistein as your partner, you can simply sit back and relax

We take responsibility for the entire lifecycle of our products. In this way, we guarantee optimum use and maximum service life of our perfect connection solutions. To make this possible, it takes more than just selecting the right product.



Gleistein Tracking System

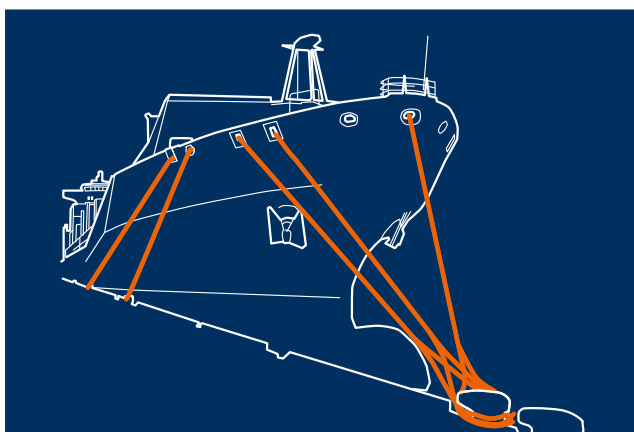
Transparent digital lifecycle management of every mooring component on board.



For your operational safety

- ▶ **Cloud-based online access** to all rope certificates and manufacturer's declarations.
- ▶ **Smart visualization** for the inspection process.
- ▶ **Permanently updated** damage reference information.
- ▶ **NFC chip** technology integrated.
- ▶ **Interface** to internal systems possible.
- ▶ GTS assists you in the **implementation and installation** of your mooring system and ensures seamless monitoring.
- ▶ System adapted to **your individual needs** from our experts.
- ▶ **Cloud-based** tracking service.

„Those who bear great responsibility for safety matters must have a handle on the big set of daily tasks – the simpler, the better.“



You know these problems

- ▶ Reduced safety due to unclear status of the mooring system
- ▶ Lack of inspection procedures
- ▶ Deficits in data quality and integrity

The Solution

- ▶ **Integrated database** providing a permanent overview of the safety status of the ropes.
- ▶ **Improved data quality and data integrity with** the historic lifetime data of all components of your mooring system.
- ▶ **Helpful reference** and **safety status information** such as **reference photos** for a better inspection process and a more informed assessment of the current wear condition.
- ▶ **Forward budget planning** possible due to fixed replacement/inspection cycles.
- ▶ **Cost savings** through optimised usage times of your mooring system.

Contact us


- ▶ We advise you about the right package of our **Gleistein Tracking System**
- ▶ Tel.: +49 421 690 49-21
marine@gleistein.com





AIDA prima

FLX Mooring System

Direct course to the profit zone!

- 

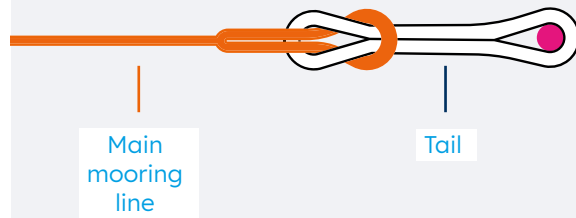
Light, compact and durable:
The high-quality bio-based main mooring line with Dyneema®. It weighs just a fraction of the weight of a conventional mooring line, but lasts many times longer.
- 

Someone has to do the work:
The highly efficient tail. It absorbs the shocks and wears like a conventional mooring line, but only constitutes the last few metres of the ensemble and can be exchanged in a flash.
- 

Profitability:
Acquisition costs are amortized after only a few years. But the substantial savings in weight and space as well as the easier handling can be enjoyed right from the start!

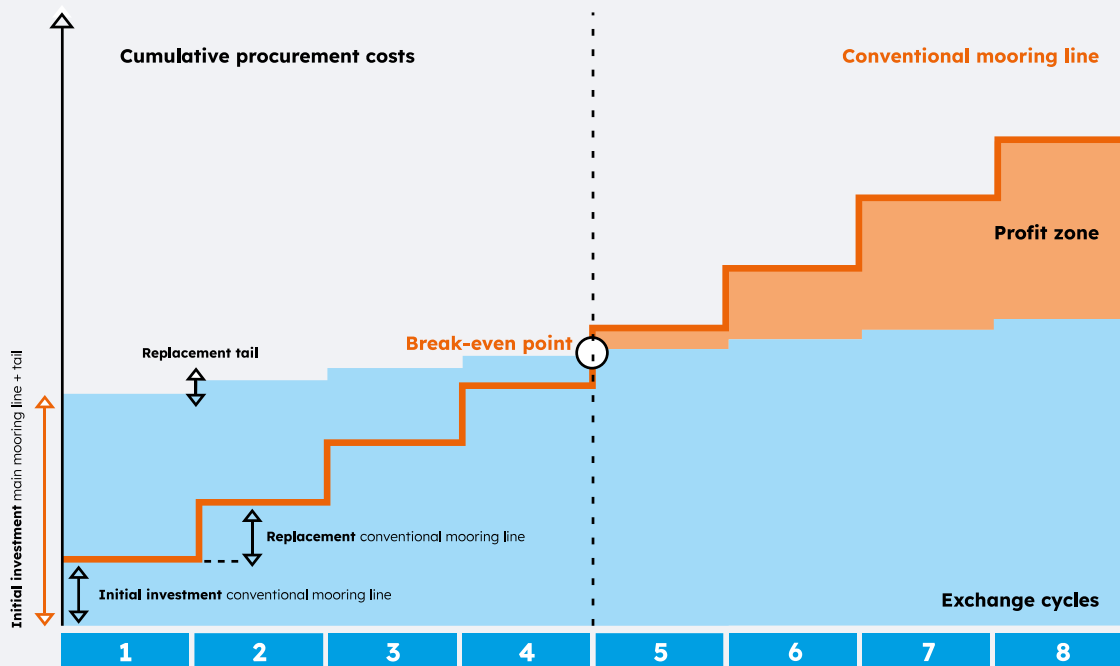
Premium mooring system with cost-efficiency

Extremely durable, lightweight main mooring line combined with high elongation tail as an inexpensive sacrificial element.



A main mooring line and a tail are always combined together.

Profitability of FLX Mooring System



FlexTwin



A perfect fit! Outstanding FLX mooring line optimised for direct mooring line replacement on conventionally designed winches and fairleads without compromising system functionality and integrity.



FLX performance for all vessels

Strength and diameter can be defined independently



Extremely durable

With Dyneema® in the core and an extremely robust cover



Economical

Clear cost benefits by using raw materials precisely tailored to your needs

TECHNICAL DATA

DIAMETER

Depending on your requirements

CONSTRUCTION

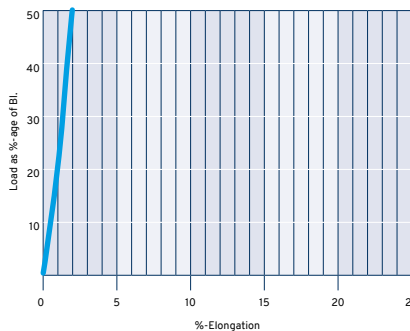
Twin: core dependent



LOAD ELONGATION

at 10% of the breaking load: 0.6%

Load-elongation curve



X-Twin Plus-Cover



Exceptional performance, attractively priced: the entry point to the X-Twin class. Buoyant mooring line with extreme strength.



High strength
Strength-optimised core made of Dyneema® SK78



Quality cover
Affordable, lightweight cover made of a high-quality Plus fibre mix



Perfect handling
Light and flexible for first-class handling under all conditions

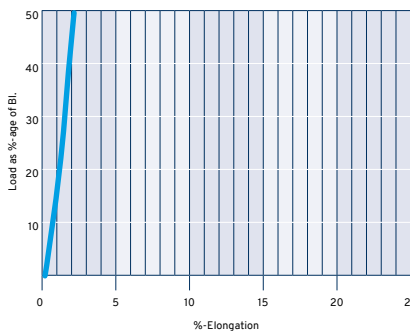
TECHNICAL DATA

DIAMETER
18 mm – 84 mm

CONSTRUCTION
Twin: core dependent

LOAD ELONGATION
at 10% of the breaking load: 0.6%

Load-elongation curve



Ø	Weight	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
18	12.8	170.0	17.3	189.0	19.3
20	19.5	232.0	23.7	258.0	26.3
22	25.1	303.0	30.9	337.0	34.4
24	31.0	370.0	37.7	411.0	41.9
28	39.9	468.0	47.7	520.0	53.0
32	46.6	543.0	55.4	603.0	61.5
34	55.0	620.0	63.2	689.0	70.3
36	63.3	748.0	76.3	831.0	84.7
38	69.8	815.0	83.1	906.0	92.4
40	79.5	925.0	94.3	1,028.0	104.8
42	89.7	1,044.0	106.5	1,160.0	118.3
44	97.8	1,155.0	117.8	1,283.0	130.8
48	112.4	1,260.0	128.5	1,400.0	142.8
50	119.5	1,370.0	139.7	1,522.0	155.2
52	131.5	1,510.0	154.0	1,678.0	171.1
54	141.0	1,650.0	168.3	1,833.0	186.9
56	158.5	1,790.0	182.5	1,989.0	202.8
62	168.0	1,930.0	196.8	2,144.0	218.6
64	187.6	2,070.0	211.1	2,300.0	234.5
68	197.2	2,200.0	224.3	2,444.0	249.2
70	206.7	2,330.0	237.6	2,589.0	264.0
72	237.7	2,600.0	265.1	2,889.0	294.6
74	247.3	2,730.0	278.4	3,033.0	309.3
76	269.7	2,860.0	291.6	3,178.0	324.1
78	288.8	3,120.0	318.1	3,467.0	353.5
80	298.4	3,240.0	330.4	3,600.0	367.1
82	339.6	3,510.0	357.9	3,900.0	397.7
84	349.1	3,640.0	371.2	4,044.0	412.4



TexteelTwin® Plus-Cover

Always on top: The economic entry to the TexteelTwin® class with excellent performance characteristics, yet buoyant and robust.



Maximum performance

Strength-optimized, low stretch core from pure Texteel® fibres



Reliability

Thoroughly tried-and-tested buoyant design with a strong protective cover made of Plus yarn for long service life



Cost-effectiveness


Texteel® = HMPE power in certified Gleistein quality to provide outstanding value for money

TECHNICAL DATA

DIAMETER

18 mm – 76 mm

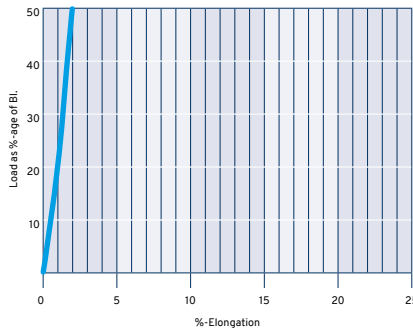
CONSTRUCTION

Twin: core dependent 

LOAD ELONGATION

at 10% of the breaking load: 0.6%

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
18	12.8	125.0	12.7	139.0	14.2
20	19.5	210.0	21.4	233.0	23.8
22	25.1	270.0	27.5	300.0	30.6
24	31.0	335.0	34.2	372.0	37.9
28	39.9	420.0	42.8	467.0	47.6
32	46.6	490.0	50.0	544.0	55.5
34	55.0	560.0	57.1	622.0	63.4
36	63.3	670.0	68.3	744.0	75.9
38	69.8	735.0	74.9	817.0	83.3
40	79.5	830.0	84.6	922.0	94.0
42	89.7	940.0	95.9	1,044.0	106.5
44	97.8	1,040.0	106.0	1,156.0	117.9
48	112.4	1,135.0	115.7	1,261.0	128.6
50	119.5	1,230.0	125.4	1,367.0	139.4
52	131.5	1,360.0	138.7	1,511.0	154.1
54	141.0	1,485.0	151.4	1,650.0	168.3
56	158.5	1,610.0	164.2	1,789.0	182.4
62	168.0	1,740.0	177.4	1,933.0	197.1
64	187.6	1,860.0	189.7	2,067.0	210.8
68	197.2	1,980.0	201.9	2,200.0	224.3
70	206.7	2,100.0	214.1	2,333.0	237.9
72	237.7	2,340.0	238.6	2,600.0	265.1
74	247.3	2,455.0	250.3	2,728.0	278.2
76	269.7	2,575.0	262.6	2,861.0	291.7



DynaOne® ISO

Power with each and every fibre: buoyant, textile wire rope replacement delivers long service life and best all-round characteristics – even without a cover.



Strength equal to wire ropes

Round braid made with 100% Dyneema® SK78



Perfectly engineered

Compact construction type for long service life



Excellent handling
Extremely light and flexible, easy to splice

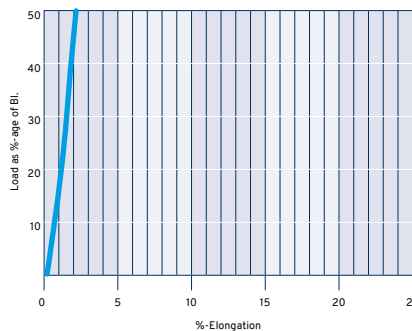
TECHNICAL DATA

DIAMETER
18 mm – 60 mm

CONSTRUCTION
One 

LOAD ELONGATION
at 10% of the breaking load: 0.6%

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
18	18.4	290	29.6	322	32.8
20	22.9	350	35.7	389	39.7
22	26.7	410	41.8	456	46.5
24	31.7	490	50.0	544	55.5
26	37.2	570	58.1	633	64.5
28	43.0	650	66.3	722	73.6
30	48.7	710	72.4	789	80.5
32	55.6	790	80.6	878	89.5
34	62.1	870	88.7	967	98.6
36	68.7	950	96.9	1,056	107.7
38	76.4	1,050.0	107.1	1,167	119.0
40	85.9	1,140.0	116.2	1,267	129.2
44	103.1	1,360.0	138.7	1,511	154.1
46	112.7	1,430.0	145.8	1,589	162.0
48	119.3	1,580.0	161.1	1,756	179.1
52	140.6	1,860.0	189.7	2,067	210.8
56	162.3	2,150.0	219.2	2,389	243.6
60	185.9	2,460.0	250.8	2,733	278.7



TexteelOne®



Less is more: Full Texteel® power in a buoyant high-performance rope boasting the equivalent strength of a steel rope at an extremely affordable price.



Maximum performance

Single-variety 12-plait with the strength and elongation characteristics of a steel rope at just one seventh the weight



Reliability

Fully developed MegaOne construction type and Geothane coating for long service life and high flexibility



Cost-effectiveness

Texteel® = HMPE power in certified Glestein quality to provide outstanding value for money

TECHNICAL DATA

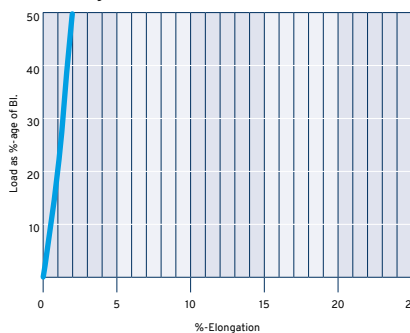
DIAMETER
18 mm – 60 mm

CONSTRUCTION
One



LOAD ELONGATION
at 10% of the breaking load: 0.6%

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
18	18.4	261.0	26.6	290.0	29.6
20	22.9	315.0	32.1	350.0	35.7
22	26.7	369.0	37.6	410.0	41.8
24	31.7	441.0	45.0	490.0	50.0
26	37.2	513.0	52.3	570.0	58.1
28	43.0	585.0	59.7	650.0	66.3
30	48.7	639.0	65.2	710.0	72.4
32	55.8	711.0	72.5	790.0	80.6
34	62.1	783.0	79.8	870.0	88.7
36	68.7	855.0	87.2	950.0	96.9
38	76.4	945.0	96.4	1,050.0	107.1
40	85.9	1,026.0	104.6	1,140.0	116.2
44	103.1	1,224.0	124.8	1,360.0	138.7
46	109.8	1,287.0	131.2	1,430.0	145.8
48	119.3	1,422.0	145.0	1,580.0	161.1
52	140.6	1,674.0	170.7	1,860.0	189.7
56	162.3	1,935.0	197.3	2,150.0	219.2
60	185.9	2,214.0	225.8	2,460.0	250.8



Cruise Tail

Tails



Up on top: high-quality, durable tail with handling edge.



Buoyant
Firm and durable tail made from Gleistein Plus-Yarns. Load-bearing core as endlessly spliced loop



Durable
Loop entirely overbraided with braided and GeoThane coated additional protection at contact points



Uncomplicated
Safe and easy handling through the firmly overbraided stretch zone

TECHNICAL DATA

DIAMETER

82 mm – 202 mm

CONSTRUCTION

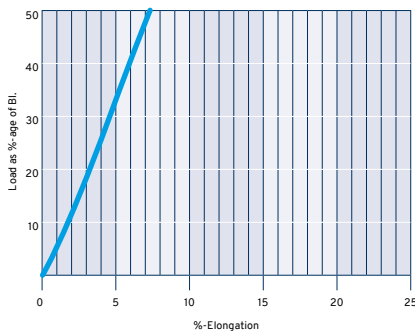
Twin: core dependent



LOAD ELONGATION

at 10% of the breaking load: 1.8 %

Load-elongation curve



Ø	Weight	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
mm	kg/11 m				
82	53.0	374.4	38.2	416.0	42.4
90	60.9	456.0	46.5	507.0	51.7
98	78.0	558.4	56.9	620.0	63.2
106	92.3	656.1	66.9	729.0	74.3
114	106.6	760.0	77.5	844.0	86.1
122	124.3	888.0	90.5	987.0	100.6
130	140.2	1,001.7	102.1	1,113.0	113.5
138	159.3	1,136.0	115.8	1,262.0	128.7
146	176.2	1,262.4	128.7	1,403.0	143.1
154	200.0	1,431.9	146.0	1,591.0	162.2
170	243.9	1,760.0	179.5	1,956.0	199.5
186	295.7	2,128.0	217.0	2,364.0	241.1
202	351.6	2,520.0	257.0	2,800.0	285.5



GeoSquare® Plus single



Splice me nice: Uncomplicated single-leg mooring tail with spliced eyes each end.



Universal

Flexible mooring tail with high strength and balanced elongation



Buoyant

The balanced mix of high tenacity polyester with polyolefin creates a balanced floating tail



Economical

The excellent price-performance ratio of the base rope ensures maximum customer value

TECHNICAL DATA

DIAMETER

16 mm – 96 mm

CONSTRUCTION

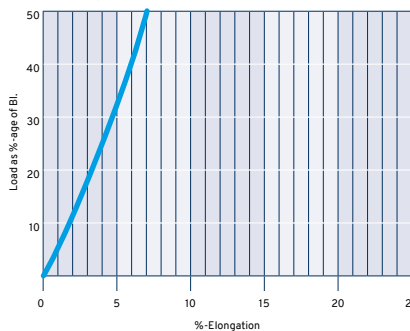
Square



LOAD ELONGATION

at 10% of the breaking load: 1.9 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
16	12.4	42.5	4.3	47.2	4.8
18	15.7	53.4	5.4	59.3	6.0
20	19.4	65.5	6.7	72.8	7.4
22	23.5	78.7	8.0	87.4	8.9
24	27.5	107.0	10.9	119.0	12.1
26	32.8	120.0	12.2	133.0	13.6
28	35.5	138.0	14.1	153.0	15.6
30	42.5	164.0	16.7	182.0	18.6
32	48.5	186.0	19.0	207.0	21.1
36	61.5	235.0	24.0	261.0	26.6
40	76.0	287.0	29.3	319.0	32.5
44	93.0	350.0	35.7	389.0	39.7
48	110.0	414.0	42.2	460.0	46.9
52	128.0	479.0	48.8	532.0	54.1
56	150.0	558.0	56.9	620.0	63.2
60	170.0	629.0	64.1	699.0	71.3
64	194.0	714.0	72.8	793.0	80.9
68	215.0	789.0	80.5	877.0	89.4
72	245.0	899.0	91.7	999.0	101.9
80	300.0	1,100.0	112.2	1,222.0	124.6
88	365.0	1,332.0	135.8	1,480.0	150.9
96	435.0	1,577.0	160.8	1,752.0	178.7



GeoSquare® Plus loop



Well rounded: buoyant, affordable tail endlessly spliced as a grommet.



Simply light
Buoyant tail made of lightweight Plus yarns



Simply robust
Balanced, robust construction with high break load and long service life



Simply affordable
The use of an endlessly spliced grommet ensures best weight-to-capacity-ratio

TECHNICAL DATA

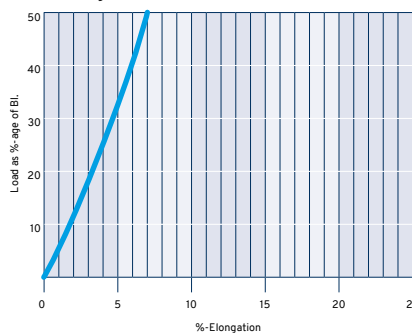
DIAMETER
16 mm – 96 mm

CONSTRUCTION
Square



LOAD ELONGATION
at 10% of the breaking load: 1.9 %

Load-elongation curve



Ø	Weight	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
16	3.1	68.0	6.9	76.0	7.7
18	3.9	85.4	8.7	95.0	9.7
20	4.9	104.8	10.7	116.0	11.8
22	5.9	125.9	12.8	140.0	14.3
24	6.9	171.2	17.5	190.0	19.4
26	8.2	192.0	19.6	213.0	21.7
28	8.9	220.8	22.5	245.0	25.0
30	10.6	262.4	26.8	292.0	29.8
32	12.1	297.6	30.3	331.0	33.8
36	15.4	376.0	38.3	418.0	42.6
40	19.0	459.2	46.8	510.0	52.0
44	23.3	560.0	57.1	622.0	63.4
48	27.5	662.4	67.5	736.0	75.0
52	32.0	766.4	78.1	852.0	86.9
56	37.5	892.8	91.0	992.0	101.2
60	42.5	1,006.4	102.6	1,118.0	114.0
64	48.5	1,142.4	116.5	1,269.0	129.4
68	53.8	1,262.4	128.7	1,403.0	143.1
72	61.3	1,438.4	146.7	1,598.0	162.9
80	75.0	1,760.0	179.5	1,956.0	199.5
88	91.3	2,131.2	217.3	2,368.0	241.5
96	108.8	2,523.2	257.3	2,804.0	285.9



GeoSquare® TailMaster single



Happy end: easy to splice square braid with weight-reducing polyolefin monofilaments that are carefully wrapped with polyester.



Balanced

High strength, best shock absorption, moderate weight



Durable

Rugged rope construction, best UV and abrasion resistance



Best handling

Very flexible, knobby surface, easy to splice

TECHNICAL DATA

DIAMETER

24 mm – 96 mm

CONSTRUCTION

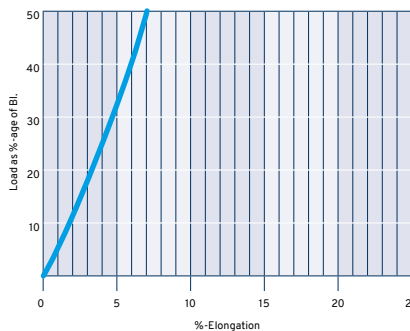
Square



LOAD ELONGATION

at 10% of the breaking load: 1.9 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
24	38.0	120.0	12.2	133.0	13.6
28	50.0	158.0	16.1	176.0	17.9
32	66.0	195.0	19.9	217.0	22.1
36	82.0	260.0	26.5	289.0	29.5
40	104.0	369.0	37.6	410.0	41.8
44	124.0	440.0	44.9	489.0	49.9
48	148.0	525.0	53.5	583.0	59.4
52	175.0	615.0	62.7	683.0	69.6
56	203.0	710.0	72.4	789.0	80.5
60	230.0	807.0	82.3	897.0	91.5
64	262.0	908.0	92.6	1,009.0	102.9
68	299.0	1,030.0	105.0	1,144.0	116.7
72	331.0	1,140.0	116.2	1,267.0	129.2
76	369.0	1,270.0	129.5	1,411.0	143.9
80	411.0	1,397.0	142.5	1,552.0	158.3
84	460.0	1,545.0	157.5	1,717.0	175.1
88	502.0	1,690.0	172.3	1,878.0	191.5
92	550.0	1,850.0	188.6	2,056.0	209.7
96	593.0	1,984.0	202.3	2,204.0	224.7



GeoSquare® TailMaster loop



Ready, steady, go! Extremely robust tail with weight advantage made of polyolefin yarns wrapped in polyester.



Ready to use
Spliced as a loop and equipped with protective elements for immediate use



Durable
Yarns wrapped in polyester for best abrasion and UV protection



Lightweight
Good strength-to-weight ratio for best handling

TECHNICAL DATA

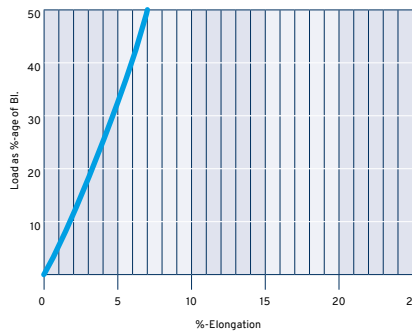
DIAMETER
24 mm – 96 mm

CONSTRUCTION
Square



LOAD ELONGATION
at 10% of the breaking load: 1.9 %

Load-elongation curve



Ø	Weight kg/11 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
24	9.5	192.0	19.6	213.0	21.7
28	12.5	252.8	25.8	281.0	28.7
32	16.5	312.0	31.8	347.0	35.4
36	20.5	416.0	42.4	462.0	47.1
40	26.0	590.4	60.2	656.0	66.9
44	30.8	636.8	64.9	708.0	72.2
48	37.0	840.0	85.7	933.0	95.1
52	43.8	984.0	100.3	1,093.0	111.5
56	50.8	1,136.0	115.8	1,262.0	128.7
60	57.5	1,291.2	131.7	1,435.0	146.3
64	65.5	1,452.8	148.1	1,614.0	164.6
68	74.8	1,648.0	168.0	1,831.0	186.7
72	82.8	1,824.0	186.0	2,027.0	206.7
76	92.3	2,032.0	207.2	2,258.0	230.2
80	98.5	2,236.8	228.1	2,485.0	253.4
84	115.0	2,472.0	252.1	2,747.0	280.1
88	125.5	2,704.0	275.7	3,004.0	306.3
92	137.5	2,960.0	301.8	3,289.0	335.4
96	148.3	3,174.4	323.7	3,527.0	359.6



GeoLink Lashing



Soft shackle in signal yellow colour. Child's play to fasten, holds securely and is easy to open again each time.



Safe handling
Injury-free one-person handling



Highest precision
Suitable as sacrificial element due to minimal series variation



Marked pressure points
Enhanced safety due to exact positioning

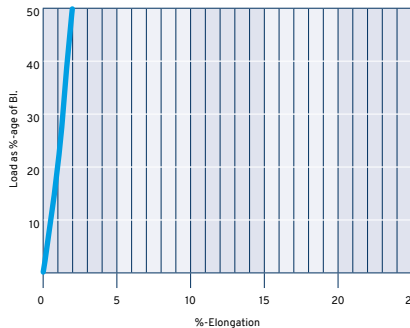
TECHNICAL DATA

DIAMETER
12 mm - 38 mm

CONSTRUCTION
One

LOAD ELONGATION
at 10% of the breaking load: 0.6%

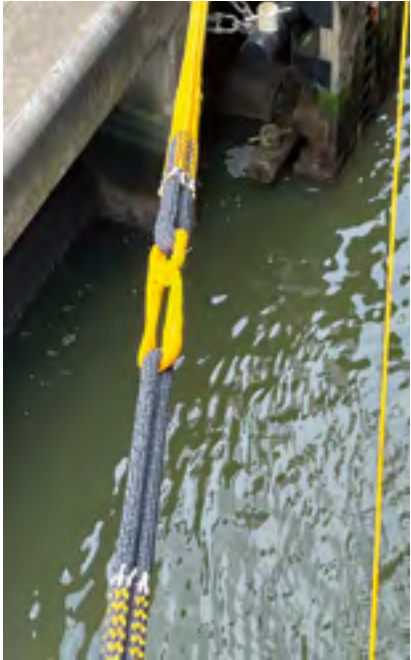
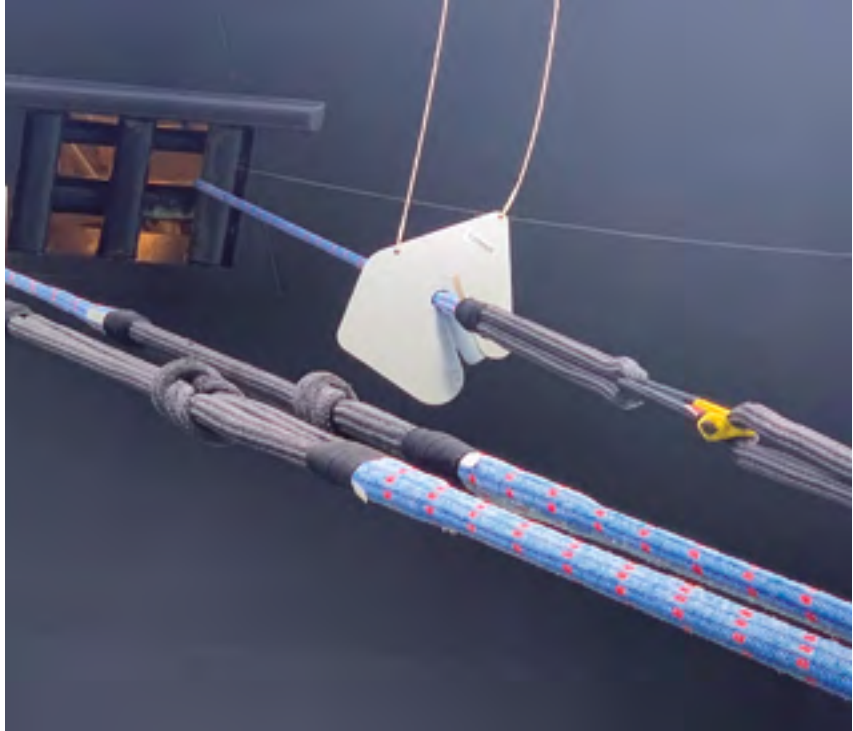
Load-elongation curve



R2

Ø	Spliced break load (LDBF)		Linear break load	
	kN	tnf	kN	tnf
18	546.8	55.8	608.0	62.0
20	694.1	70.8	771.0	78.6
22	810.0	82.6	900.0	91.8
24	983.1	100.3	1,093.0	111.5
26	1,073.3	109.4	1,193.0	121.7
28	1,299.4	132.5	1,444.0	147.2
30	1,426.5	145.5	1,585.0	161.6
32	1,471.5	150.0	1,635.0	166.7
36	1,867.5	190.4	2,075.0	211.6
38	2,075.6	211.6	2,306.0	235.1





R3

Ø	Spliced break load (LDBF)		Linear break load	
	kN	tnf	kN	tnf
18	820.1	83.6	911.0	92.9
20	1,041.2	106.2	1,157.0	118.0
22	1,215.0	123.9	1,350.0	137.7
24	1,474.9	150.4	1,639.0	167.1
26	1,609.9	164.2	1,789.0	182.4
28	1,949.1	198.7	2,166.0	220.9
30	2,139.8	218.2	2,378.0	242.5
32	2,207.3	225.1	2,453.0	250.1

R4

Ø	Spliced break load (LDBF)		Linear break load	
	kN	tnf	kN	tnf
18	1,230.2	125.4	1,367.0	139.4
20	1,561.8	159.3	1,735.0	176.9
22	1,822.5	185.8	2,025.0	206.5
24	2,212.3	225.6	2,458.0	250.6
26	2,414.8	246.2	2,683.0	273.6
28	2,923.6	298.1	3,248.0	331.2
30	3,209.6	327.3	3,566.0	363.6
32	3,310.9	337.6	3,679.0	375.1



FINNECOI
HELSINKI

ZERO EMISSION IN PORT

Photo: Finnlines



Conventional mooring lines

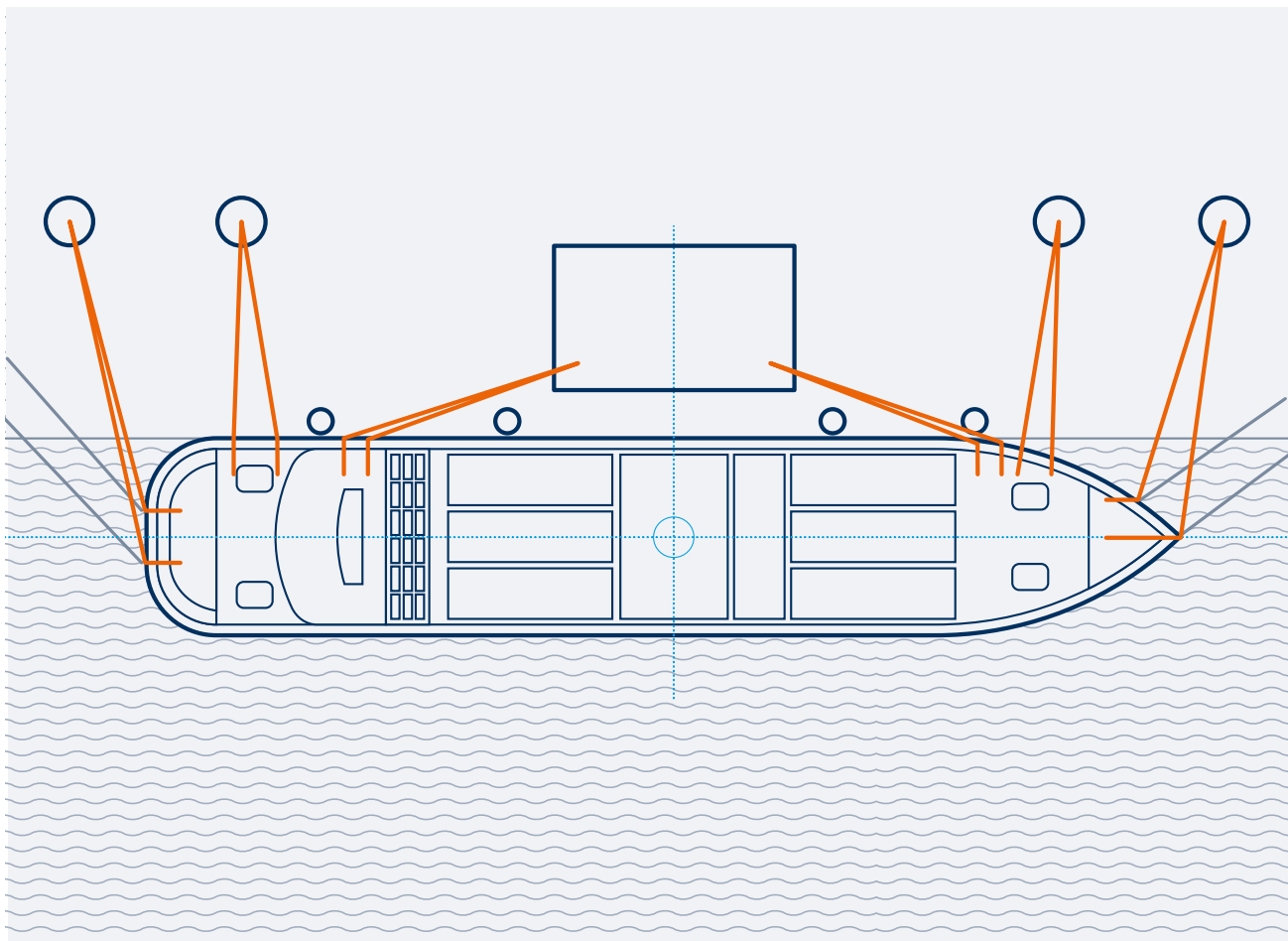
More for your mooring

Conventional mooring lines are made of high-strength fibres with balanced stretching properties. In combination with our meticulously optimised designs, they offer the best conditions for safe mooring, first-class shock absorption and long service life. Especially for small and medium-sized vessels, they prove their advantages for combined systems.

The key argument for conventional mooring lines is usually their attractive price.

Gleistein has clearly positioned itself in the highly competitive international market: We also focus on outstanding quality in this segment, which is particularly noticeable in the significantly longer service life of our solutions compared to price-optimised offers from competitors. This makes them the more economical alternative after only a short time.

Our range extends from classic, particularly easy-to-splice square braids to a selection of high-quality round braids and the dimensionally stable WinchMaster for tough winch applications.



WinchMaster

Everything you could winch for!
Economical winch line with exemplary properties.



Extremely dimensionally stable

Load bearing, compacted XS core with a rigid overbraid from Plus-Fibres



Extremely light

Fully buoyant by the balanced use of abrasion resistant polyester fibre in the firm cover braid



Extremely safe

Robust cover for long-term protection in use under toughest conditions

TECHNICAL DATA

DIAMETER

36 mm – 96 mm

CONSTRUCTION

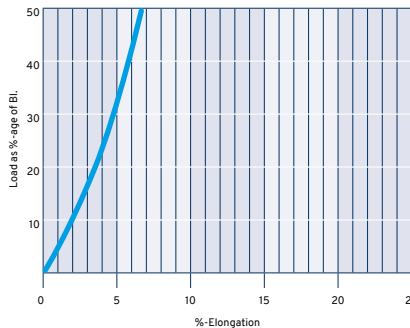
Twin: core dependent



LOAD ELONGATION

at 10% of the breaking load: 2.8 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
36	74.5	230.0	23.5	256.0	26.1
40	87.0	280.0	28.6	311.0	31.7
44	100.0	375.0	38.2	417.0	42.5
48	129.0	460.0	46.9	511.0	52.1
52	140.0	520.0	53.0	578.0	58.9
56	169.0	600.0	61.2	667.0	68.0
60	192.0	690.0	70.4	767.0	78.2
64	215.0	800.0	81.6	889.0	90.7
68	230.0	900.0	91.8	1,000.0	102.0
72	295.5	1,040.0	106.0	1,156.0	117.9
84	413.0	1,270.0	129.5	1,411.0	143.9
96	488.0	1,500.0	153.0	1,667.0	170.0



GeoSquare® Polyamide



Best cushioning, best spliceability. Square-braided mooring line with outstanding shock absorption characteristics.



Highest comfort
Premium polyamide mooring line with highest stretch



Strong and light
Very high strength at low weight



Handling
Easy to splice, grippy surface, neutral torsion

TECHNICAL DATA

DIAMETER
20 mm – 96 mm

CONSTRUCTION

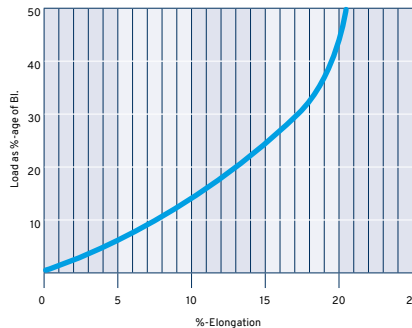
Square



LOAD ELONGATION

at 10% of the breaking load: 7.2 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
20	24.7	84.0	8.6	93.3	9.5
22	29.9	105.0	10.7	117.0	11.9
24	35.5	124.0	12.6	138.0	14.1
26	41.7	145.0	14.8	161.0	16.4
28	48.4	168.0	17.1	187.0	19.1
30	55.5	190.0	19.4	211.0	21.5
32	63.2	215.0	21.9	239.0	24.4
40	98.7	330.0	33.7	367.0	37.4
44	119.0	400.0	40.8	444.0	45.3
48	142.0	475.0	48.4	528.0	53.8
52	167.0	555.0	56.6	617.0	62.9
56	193.0	638.0	65.1	709.0	72.3
60	222.0	730.0	74.4	811.0	82.7
64	253.0	830.0	84.6	922.0	94.0
68	286.0	937.0	95.5	1,041.0	106.2
72	320.0	1,035.0	105.5	1,150.0	117.3
80	395.0	1,276.0	130.1	1,418.0	144.6
88	478.0	1,540.0	157.0	1,711.0	174.5
96	569.0	1,830.0	186.6	2,033.0	207.3



Also available in 12-strand construction



GeoSquare® Polyester

Ultimately has the advantage: durable mooring line with high strength, outstanding shock absorption properties and excellent spliceability.



Durability

Abrasion-resistant, non-hardening polyester square braid



Comfort

High stretch for very good shock absorption



Handling

Easy to splice, grippy surface, neutral torsion, permanently flexible

TECHNICAL DATA

DIAMETER
20 mm – 96 mm

CONSTRUCTION

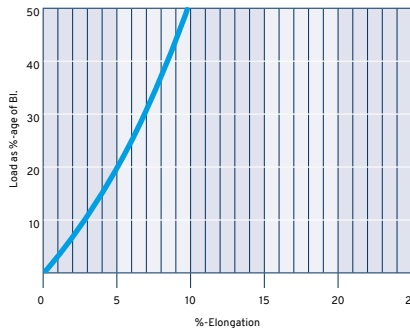
Square



LOAD ELONGATION

at 10% of the breaking load: 2.5 %

Load-elongation curve



Also available in 12-strand construction

Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
20	30.3	80.0	8.2	88.9	9.1
22	36.7	97.0	9.9	107.8	11.0
24	43.7	110.0	11.2	122.0	12.4
26	51.2	122.0	12.4	136.0	13.9
28	59.4	140.0	14.3	156.0	15.9
30	68.2	159.0	16.2	177.0	18.0
32	77.8	180.0	18.4	200.0	20.4
36	98.2	226.0	23.0	251.0	25.6
40	121.0	275.0	28.0	306.0	31.2
44	147.0	350.0	35.7	389.0	39.7
48	175.0	430.0	43.8	478.0	48.7
52	205.0	518.0	52.8	576.0	58.7
56	238.0	602.0	61.4	669.0	68.2
60	273.0	685.0	69.8	761.0	77.6
64	311.0	778.0	79.3	864.0	88.1
68	351.0	878.0	89.5	976.0	99.5
72	393.0	975.0	99.4	1,083.0	110.4
80	485.0	1,193.0	121.7	1,326.0	135.2
88	587.0	1,432.0	146.0	1,591.0	162.2
96	699.0	1,691.0	172.4	1,879.0	191.6



GeoSquare® GeoProp



Affordable, lightweight universal line: buoyant square braid made of polypropylene multifilament with excellent spliceability.



Lightweight
Is buoyant even in fresh water



Economical
Affordable all-round line, easy to splice



Handling
Grippy surface, neutral torsion, permanently flexible

TECHNICAL DATA

DIAMETER
12 mm – 96 mm

CONSTRUCTION

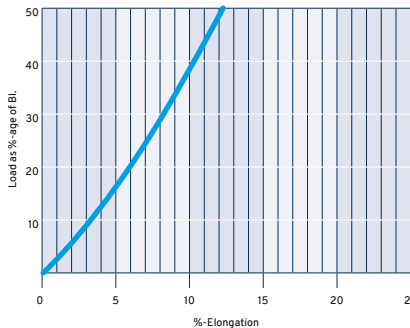
Square



LOAD ELONGATION

at 10% of the breaking load: 3.2 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
12	6.5	20.0	2.0	22.2	2.3
14	9.0	24.0	2.4	26.7	2.7
16	11.6	34.0	3.5	37.8	3.9
18	14.6	44.0	4.5	48.9	5.0
20	18.1	53.0	5.4	58.9	6.0
22	21.7	55.0	5.6	61.1	6.2
24	26.0	67.0	6.8	74.4	7.6
26	30.6	104.0	10.6	116.0	11.8
28	35.4	119.0	12.1	132.0	13.5
30	40.7	136.0	13.9	151.0	15.4
32	43.3	154.0	15.7	181.0	18.5
36	58.6	191.0	19.5	212.0	21.6
40	72.3	233.0	23.8	259.0	26.4
44	87.5	278.0	28.3	309.0	31.5
48	104.0	327.0	33.3	363.0	37.0
52	122.0	379.0	38.6	421.0	42.9
56	142.0	436.0	44.5	482.0	49.1
60	163.0	495.0	50.5	550.0	56.1
64	185.0	558.0	56.9	620.0	63.2
68	208.0	622.0	63.4	691.0	70.5
72	234.0	692.0	70.6	769.0	78.4
80	289.0	850.0	86.7	944.0	96.3
88	350.0	1,010.0	103.0	1,122.0	114.4
96	417.0	1,190.0	121.3	1,322.0	134.8



Also available in 12-strand construction



GeoSquare® TailMaster



Happy end: easy to splice square braid with weight-reducing polyolefin monofilaments that are carefully enveloped in polyester.



Balanced

High strength, best shock absorption, moderate weight



Durable

Rugged rope construction, best UV and abrasion resistance



Best handling

Very flexible, knobby surface, easy to splice

TECHNICAL DATA

DIAMETER

24 mm – 96 mm

CONSTRUCTION

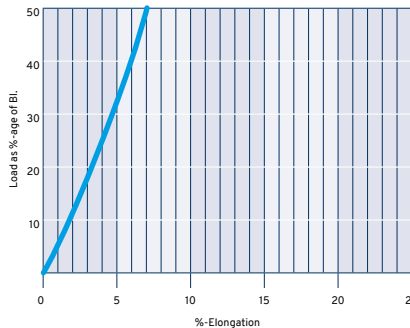
Square



LOAD ELONGATION

at 10% of the breaking load: 1.9 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
24	38.0	120.0	12.2	133.0	13.6
28	50.0	158.0	16.1	176.0	17.9
32	66.0	195.0	19.9	217.0	22.1
36	82.0	260.0	26.5	289.0	29.5
40	104.0	369.0	37.6	410.0	41.8
44	123.0	398.0	40.6	442.0	45.1
48	148.0	525.0	53.5	583.0	59.4
52	175.0	615.0	62.7	683.0	69.6
56	203.0	710.0	72.4	789.0	80.5
60	230.0	807.0	82.3	897.0	91.5
64	262.0	908.0	92.6	1,009.0	102.9
68	299.0	1,030.0	105.0	1,144.0	116.7
72	331.0	1,140.0	116.2	1,267.0	129.2
76	369.0	1,270.0	129.5	1,411.0	143.9
80	411.0	1,397.0	142.5	1,552.0	158.3
84	460.0	1,545.0	157.5	1,717.0	175.1
88	502.0	1,690.0	172.3	1,878.0	191.5
92	550.0	1,850.0	188.6	2,056.0	209.7
96	593.0	1,984.0	202.3	2,204.0	224.7



Also available in 12-strand construction



GeoSquare® Plus



Splice me nice: buoyant, robust auxiliary line made of Gleistein Plus yarns with best spliceability.



Universal
Flexible multi-purpose line with high strength and moderate elongation



Buoyant
Balanced use of polyester and polyolefin ensures good floatability



Economical
Easy to splice square braid at an attractive price

TECHNICAL DATA

DIAMETER
20 mm – 96 mm

CONSTRUCTION

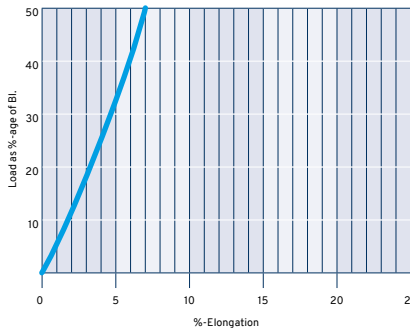
Square



LOAD ELONGATION

at 10% of the breaking load: 1.9 %

Load-elongation curve



Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
20	19.4	65.5	6.7	72.8	7.4
22	23.5	78.7	8.0	87.4	8.9
24	27.5	107.0	10.9	119.0	12.1
26	32.8	120.0	12.2	133.0	13.6
28	35.5	138.0	14.1	153.0	15.6
30	42.5	164.0	16.7	182.0	18.6
32	48.5	186.0	19.0	207.0	21.1
36	61.5	235.0	24.0	261.0	26.6
40	76.0	287.0	29.3	319.0	32.5
44	93.0	350.0	35.7	389.0	39.7
48	110.0	414.0	42.2	460.0	46.9
52	128.0	479.0	48.8	532.0	54.2
56	150.0	558.0	56.9	620.0	63.2
60	170.0	629.0	64.1	699.0	71.3
64	194.0	714.0	72.8	793.0	80.9
68	215.0	789.0	80.5	877.0	89.4
72	245.0	899.0	91.7	999.0	101.9
80	300.0	1,100.0	112.2	1,222.0	124.6
88	365.0	1,332.0	135.8	1,480.0	150.9
96	435.0	1,577.0	160.8	1,752.0	178.7



Also available in 12-strand construction



PowerPlait



**Lightweight and great value:
inexpensive, easy to splice mooring line for inland waterway use.**



Always on top
Buoyant even in fresh water



Distinctive
Striped design for torsion detection and best identifiability



Affordable
Easy to splice square braid at an attractive price

TECHNICAL DATA

DIAMETER
16 mm – 96 mm

CONSTRUCTION

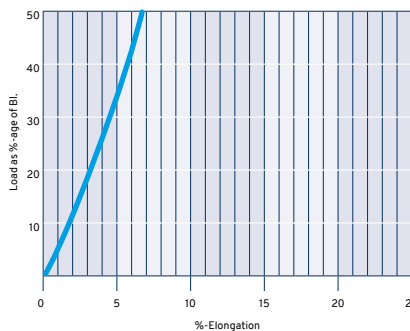
Square



LOAD ELONGATION

at 10% of the breaking load: 1.8 %

Load-elongation curve



Also available in 12-strand construction

Ø	Weight kg/100 m	Spliced break load (LDBF)		Linear break load	
		kN	tnf	kN	tnf
20	18.1	65.5	6.7	72.8	7.4
22	21.9	78.7	8.0	87.4	8.9
24	26.1	93.6	9.5	104.0	10.6
26	30.6	109.0	11.1	121.0	12.3
28	35.5	125.0	12.7	139.0	14.2
30	40.8	142.0	14.5	158.0	16.1
32	46.4	161.0	16.4	179.0	18.3
36	58.7	202.0	20.6	224.0	22.8
40	72.5	247.0	25.2	274.0	27.9
44	87.7	294.0	30.0	327.0	33.3
48	104.0	347.0	35.4	386.0	39.4
52	122.0	403.0	41.1	448.0	45.7
56	142.0	463.0	47.2	514.0	52.4
60	163.0	525.0	53.5	583.0	59.4
64	186.0	591.0	60.3	657.0	67.0
68	210.0	663.0	67.6	737.0	75.2
72	235.0	738.0	75.3	820.0	83.6
80	290.0	896.0	91.4	996.0	101.6
88	351.0	1,070.0	109.1	1,189.0	121.2
96	417.0	1,260.0	128.5	1,400.0	142.8





5

VB19 ForePC

Wear zone management

Solutions by Gleistein GeoProtect

Gleistein offers several solutions to shield mooring line systems against damage by applying protective elements such as impregnations and sleeves. This ensures the load-bearing fibre rope benefits from effective long-term protection against increased wear in the contact area at attachment points and deflections. Additionally, a full product line for the protection against chafing, abrasion and dirt penetration is provided.



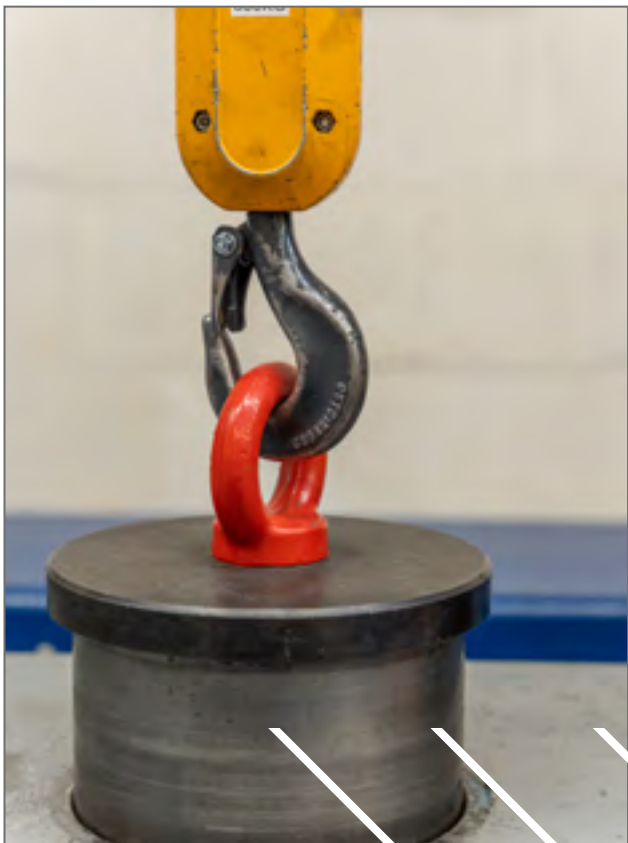
The Gleistein testing laboratory

Tearing it up: With a force of up to 300 tons!

Rope strengths are growing continuously and Gleistein's renowned testing lab keeps pace with three high-performance tensile testing machines ranging from 20 kN to 3,000 kN.

Besides classically assessing break loads and carrying out OCIMF tests, individual programmes can be conducted that include precise shock and continuous load simulations, testing in liquids and other situations closely replicating real-life conditions.

External customers now also have the opportunity to enjoy the extensive possibilities the Gleistein testing lab provides.



The Gleistein Mooring Rope Manual

More than Ropes

Get the scoop on all aspects regarding selecting, handling, maintaining, and storing mooring ropes and the associated set-ups for prolonged safe use and service life – in full OCIMF MEG4 compliance.



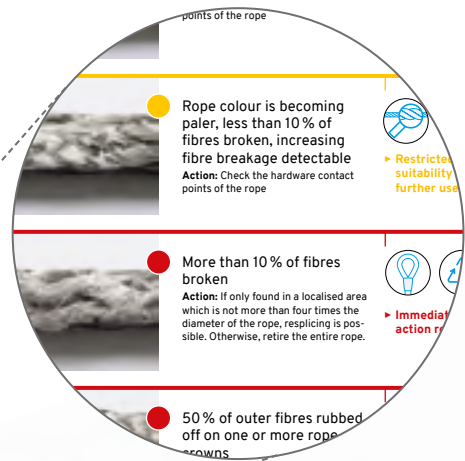
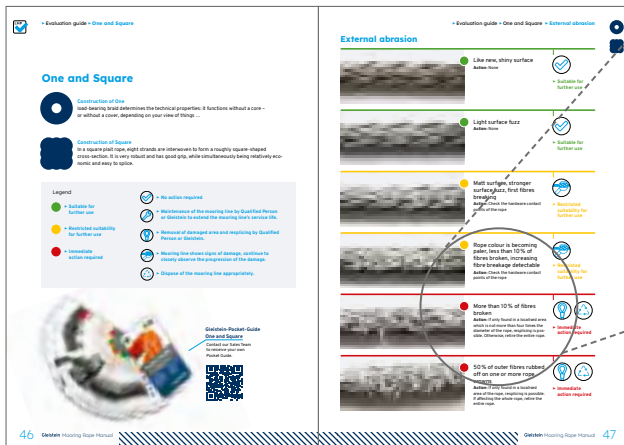
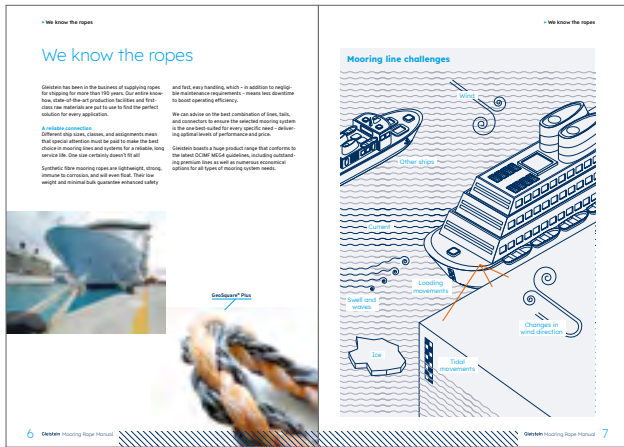
Guidelines for selecting the optimal mooring line system for your individual needs

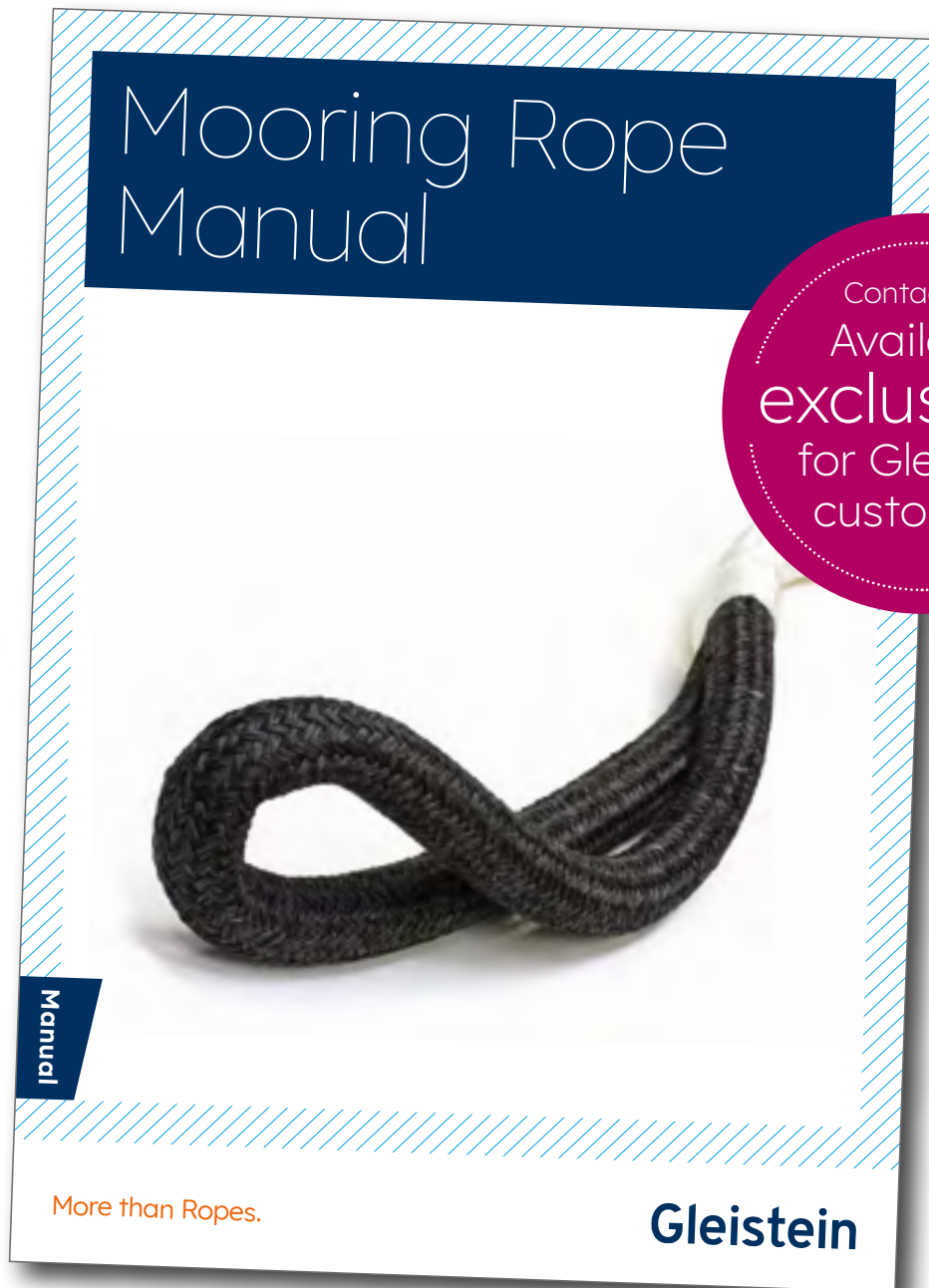


Offers a thorough overview of the major factors affecting mooring rope service life and tips for effective wear zone management



Provides a practical, detailed evaluation guide for assessing the condition of ropes and determining courses of necessary action





Contact us:
Available
exclusively
for Gleistein
customers



Safety instructions for the maintenance, repair and use of chemical fibre ropes

Care, maintenance and safety instructions for man-made fibre ropes

- The break load values were measured on samples of new products and under laboratory conditions. The use of the rope and weathering cause a drop of break load.
- Weight is measured according to EN 919:1995. A change in the weather conditions (e.g. moisture/drought) may cause weight differences.
- No responsibility is taken for the correctness of this information.
- Neither Gleistein nor its suppliers will under any circumstance be liable for any damage arising out of the improper use of the product. Any use of the product violating the following prescriptions at any time will be considered improper and inappropriate.

A. Some essential “Dos” and “Don’ts”

- Ensure before use that the ropes are in good condition.
- All suggested rope sizes are designed such that the load presents not more than 1/5 of the rope’s break load. Bear in mind that shock loads can result in a severe loss of break load.
- The radii of rope bends should fit the specific characteristics of the raw material used in the rope.
- Bends and hitches in ropes significantly reduce their strength.
- Do not drag ropes over sharp edges.
- Avoid scoring of the rope at guiding elements. All metal parts should be smooth and chafing points protected by leather, plastic or canvas parceling, or by worming with small sized ropes.
- Avoid exposure to all forms of heat. Avoid unnecessary exposure to the degrading influence of strong sunlight.
- Avoid contamination by chemicals or fumes. If contamination is suspected, wash man-made fibre ropes in cold running water e.g. by hosing.
- Avoid build-up of excessive turns in ropes. If this condition has occurred, loops will form, and, if loaded, strand distortion and loss of strength will result. Work excessive twists over the end of the rope before straining.
- Ropes should always be correctly coiled, reeled and stowed. Ropes running on winches should be pulled off tangentially to avoid kinks or bends.

- If the rope is delivered on a reel, mount the reel on trestles and unreel with the rope coming from underneath the reel.
- If you are not sure about the condition of a rope please contact the manufacturer or professional experts.

B. Damage to the ropes

1. Damage due to external wear

- In extreme cases, the strands become very worn that their outer faces are flattened and the outer yarns severed. If the predominant part of the yarns are damaged the rope should no longer be used.
- If one strand of a twisted rope is completely broken, the rope has to be exchanged.
- Assessment of the degree of wear is by observation of the number of severed yarns and the thickness relationship of the un-severed yarns at the abraded and un-abraded sections.
- A tensile test of one section of the rope will remove any doubts about the rope’s condition.

2. Damage due to local abrasion

- This may be caused by the passage of the rope over sharp edges whilst under tension, and such damage can result in serious strength losses, particularly if, for example, a deep score is produced in the rope.

3. Internal Wear

- Internal wear can be detected by the tell tale signs of a loosening of strands and the presence of powdered fibre.
- It is most often caused when grit becomes trapped in a rope which is repeatedly flexed in wet conditions.

4. Overloading

- An overloaded rope may be difficult to detect, and a tensile test is invaluable. Check measurements by markers on the rope may reveal local excessive stretch due to overloading, and some hardening of the rope may be observed with a reduction in diameter and considerable reduced extension under load.

5. Contact with chemicals or intense sunlight

- This may be revealed by staining or by ease of plucking or rubbing off filaments or fibres from the yarns.
- If this is the case the rope must be replaced.





6. Attack by heat

- In extreme cases, local fused sections indicate heat through friction and a considerable loss of strength can be expected.
- This may be revealed by glazing of the rope surface.
- If, after careful visual examination, doubts still exist, discard the rope or consult the rope manufacturer.

C. Routine Inspection

- Rope strengths may decrease every year by up to 30% through exposure, depending upon the raw material and the colour.
- Regular inspection of ropes is a worthwhile exercise, as the life can be extended considerably by proper repair and protection at obvious chafing points
- It must be emphasized that regardless of the cause that has weakened the rope, the effect will be more serious on smaller sizes than on larger sizes of rope.
- Examination of about 300 mm of rope at a time is recommended, the rope being turned to reveal all sides before continuing. At the same intervals, the strand should be opened as in splicing, but only sufficiently to allow examination of the inside bearing surfaces.

D. Maintenance after inspection

- Cut out local damaged sections if warranted, using short butt splice. Do not wait for a damaged section of the rope to part under strain, as the recoil effect can disturb the lay of the rope over a considerable length. Any rope which has broken through overload should be discarded.
- If thimbles are loose in the eyes, due to rope stretch, re-adjust the splice. Never allow a thimble to become so loose that it can rock. Have all splices properly served or taped, and thimbles sitting firmly. Do not allow any tuck to become undone: every tuck is necessary for the optimum splice efficiency in all constructions of rope.
- Never dry any fibre rope by use of heat. If possible, store ropes in a cool, dry, well ventilated store or locker, preferably on pallets or festooned.

E. Safety tips

- Never stand in rope loops.
- Ropes under strain are always a risk to their environment and to people standing close to them. Therefore ensure that nobody stands close to a rope under strain. Overloaded man-made fibre lines can part abruptly with little warning. The subsequent energy release and lash back can cause serious injury. Fittings are always dangerous; they can be torn away by heavily loaded ropes and increase the risk of accident.
- In preference always use stoppers on the double.
- Ropes are made to be used, not abused. Abuse of ropes leads to a shorter rope life and possible danger to the user.

Remember to take good and regular care of your ropes ... Your life may depend upon them!



NFC inside

Keeps you in the know

Your job has just become clearer and easier. Thanks to the integration of the latest NFC (Near Field Communication) technology in the rope, all relevant information is now at your fingertips. A simple contactless scan is all that is needed to have the information displayed on any Android or iOS smartphone.

Your crew now enjoys instant access to the precise rope specifications wherever you are in the world, ensuring maximum safety and protection in all situations, including routine servicing or necessary replacements.

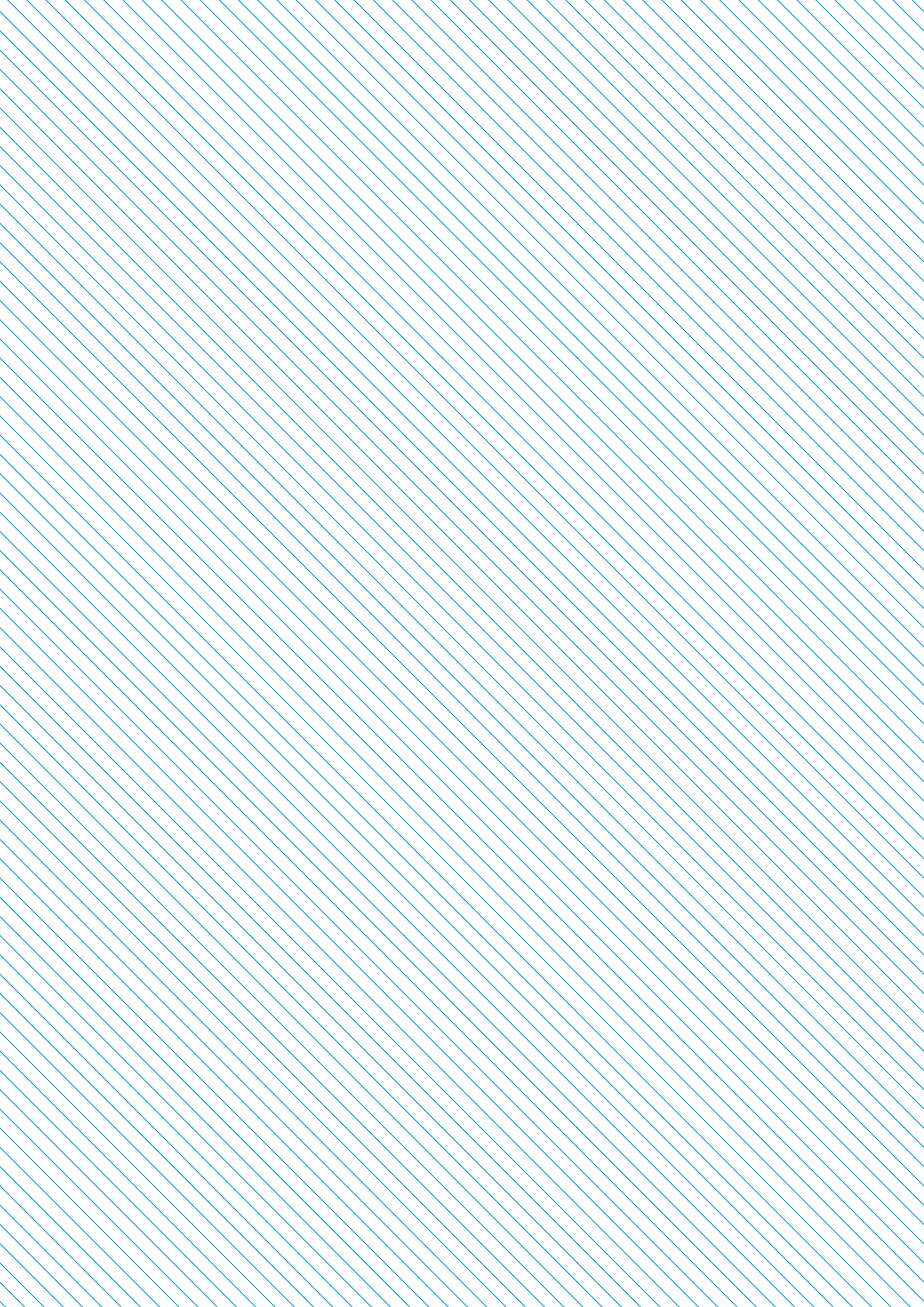
The NFC tag delivers information on:

- ▶ Rope information like type, length, diameter, (spliced) break load, Gleistein article number, production date and lot number
- ▶ Recommended service intervals
- ▶ Relevant certifications
- ▶ Gleistein's contact details
- ▶ Link to installation advice (on some models)

A distinctive whipping

designates the area of the rope where the NFC tag is conveniently and securely integrated.







FLX Mooring System

Custom design for
Carnival Cruise Lines

Gleistein GmbH

Heidlerchenstraße 7
28777 Bremen
Germany
+49 (0)421 69049-0
hello@gleistein.com

Office Spain

C. Sánchez Barcaiztegui 3,
Primera planta
11005 Cádiz
Spain
+49 (0)421 69049-0
hola@gleistein.com

Office Netherlands

Stoomloggerweg 8,
unit 2.2 3133KT Vlaardingen
Netherlands
+31 (0)630 485736
hey@gleistein.com

Gleistein Slovakia s.r.o.

Súvoz 1
91101 Trenčín
Slovakia
+421 (32) 7417910
ahoj@gleistein.com

From solutions for commercial marine applications and superyachts to towing line and mooring systems, Gleistein offers a broad range of catalogues for your specific needs. They are available for download on the Gleistein website:

<https://gleistein.com/downloads>



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