



KITE LINES

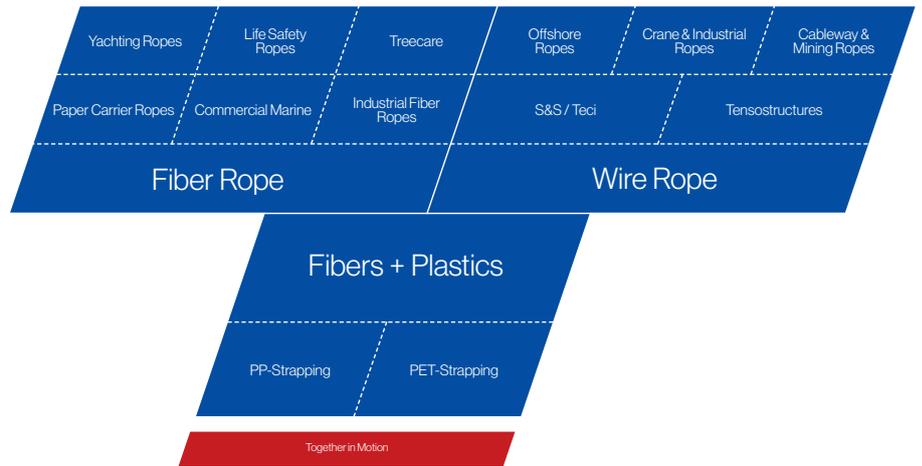
Flying Lines, Depower Lines, Leader Lines & Safety Lines, Bridle Lines

EXPERTISE FROM MORE THAN 225 YEARS OF EXPERIENCE

What started back in 1790 as a simple shop making hemp ropes has since evolved into a globally successful group of enterprises specializing in the development and production of fiber and steel wire ropes as well as strapping.

Great diversity

TEUFELBERGER's products and services are destined for a wide variety of applications ranging from cranes and marine applications to packaging and through to personal protection. The continuity and stability of a family enterprise makes us a reliable partner who, competently and effectively, supports you in mastering your day-to-day challenges..



Global presence ensures customer proximity

Manufacturing operations in various countries allow us to meet local quality and certification standards as well as customer requirements without difficulty. From our sites in Austria, the Czech Republic, the U.S., Italy, Sweden, and Thailand, and backed by a close-knit global network of distribution partners, we continue to satisfy the expectations of our customers.



Innovative solutions through synergies

TEUFELBERGER is a leading specialist for fiber and steel wire ropes as well as strapping. The spectrum of technologies in TEUFELBERGER's portfolio generates various synergies between the extrusion of thermoplastics, the braiding of high performance fibers, and the processing of wires into ropes and strapping.

Especially fiber and steel wire products have brought about valuable synergies with regard to both application and manufacturing technologies, which have benefited our customers tremendously. This makes TEUFELBERGER your ideal partner right from the project planning phase.

5% of TEUFELBERGER's employees are active in research and development and make sure that our customers have access to the latest innovative rope technologies. 10% of the entire investment volume is committed to development and quality assurance.

CONTENTS

About TEUFELBERGER	2
Information about product specification	4
Product categories	4
Product terms	5
Flying Lines	6
Racing - Flying Lines	6
Performance - Flying Lines	7
Depower Lines	8
Leader Lines & Safety Lines	9
Bridle Lines	10

WARNING

Using these products may be dangerous. Only use our products for the purposes they are intended for. Customers must ensure that the persons using these products are familiar with their correct use and the necessary safety precautions. Please bear in mind that any of these products may cause damage or harm when used improperly or subjected to excessive loads.

TEUFELBERGER® and 拖飞宝® are internationally registered trademarks of the TEUFELBERGER Group. Other internationally registered trademarks are: Dyneema® by DSM

INFORMATION ABOUT PRODUCT SPECIFICATION

For more than a decade, TEUFELBERGER has been a technological leader and successful producer in the field of Kite Lines. Our products are the ultimate benchmark in kiteboarding when it comes to quality, breaking load, lowest stretch, creep protection and shrinkage resistance. Many years of partnering with leading kite brands and manufacturers has resulted in a superior portfolio benefiting kites worldwide.

Product terms



T - monofilament TRACE TECHNOLOGY.

Product name	Ø	Breaking strength	Weight	Stretch	Construction	Trace Technology	qty/spool
	mm	daN	g/m	% (at 80 daN)			m
TARIFA FL-340T	1.40	340	1.60	1.00	8 braided	yes	800 - 2,000

T = monofilament TRACE TECHNOLOGY.

Many of TEUFELBERGER Flying Lines are produced with our TRACE TECHNOLOGY. This technology is a colored PE monofilament in the braid of the Flying Line. What is the advantage of this TEUFELBERGER technology and what makes it unique? The features achieved by the TRACE TECHNOLOGY can be compared to those of a toothbrush, whose bristles will rise again after sweeping the finger across them. This principle is leveraged in the TEUFELBERGER Kite Lines with TRACE TECHNOLOGY. The technology always causes the kite line to straighten itself again, which helps to avoid extreme radii and the consequential kinking of the line.

SY = single yarn coated line

MBL = minimum breaking load in daN

The value in daN (1 daN is about 1 kg) indicates the minimum breaking load at which the line would break. The specified breaking loads are values determined in testing in our laboratory. In practical use, these values may deviate depending on the type of use. The breaking loads were determined for free lengths of line and will be decreased by splices or knots.

Elongation

Our elongation is measured with 80 daN (= ca. 80 kg). It measures how much the line gets longer while we pull on it with our defined strength of 80 daN.

Weight = weight in grams per meter (g/m)

The specified values in grams relate to one meter of line. The length of the line can change during use. As a result, there may also be deviations from the specified weight.

Braiding

TEUFELBERGER offers high-end Kite Lines with 8 and 12 strands.

Spool length

This value is the line length per spool in meters. The line's length is measured taking EN ISO 2307 into account.

Colors

Kite line color:
TEUFELBERGER's standard color for the impregnation is transparent. Nevertheless all needed colors can be produced and will be adjusted on a customer's demand.

Standard PE-monofilament colors:
black, blue, red. Other colors on request.

Coating

By using different impregnation and coating techniques TEUFELBERGER is able to enhance the specific characteristics of a Kite Line. After braiding the line, the complete construction is dipped in a calibrated procedure. Again, a final fixing step will be carried out to ensure that applied substances remain attached to the line fibers as long as possible.

S.Y.I.S. – Single Yarn Impregnation System

Before braiding the line, all single yarns are being dipped and fixed. Added color pigments allow applying any desired color. Our single-yarn technology protects the line from contamination; abrasion resistance will improve as well as the life time of the Kite Line.

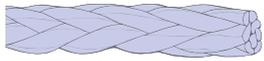
Product categories

- FL = Flying Line
- DPL = Depower Line
- BRL = Bridle Line
- OL = Leader Line
- MUL = Multi-usage Line

Flying line product categories:

GARDA

Racing Kite Lines made out of Dyneema® SK99 with an 8 braided construction



MAUI

Racing Kite Lines made out of Dyneema® SK99 with a 12 braided construction



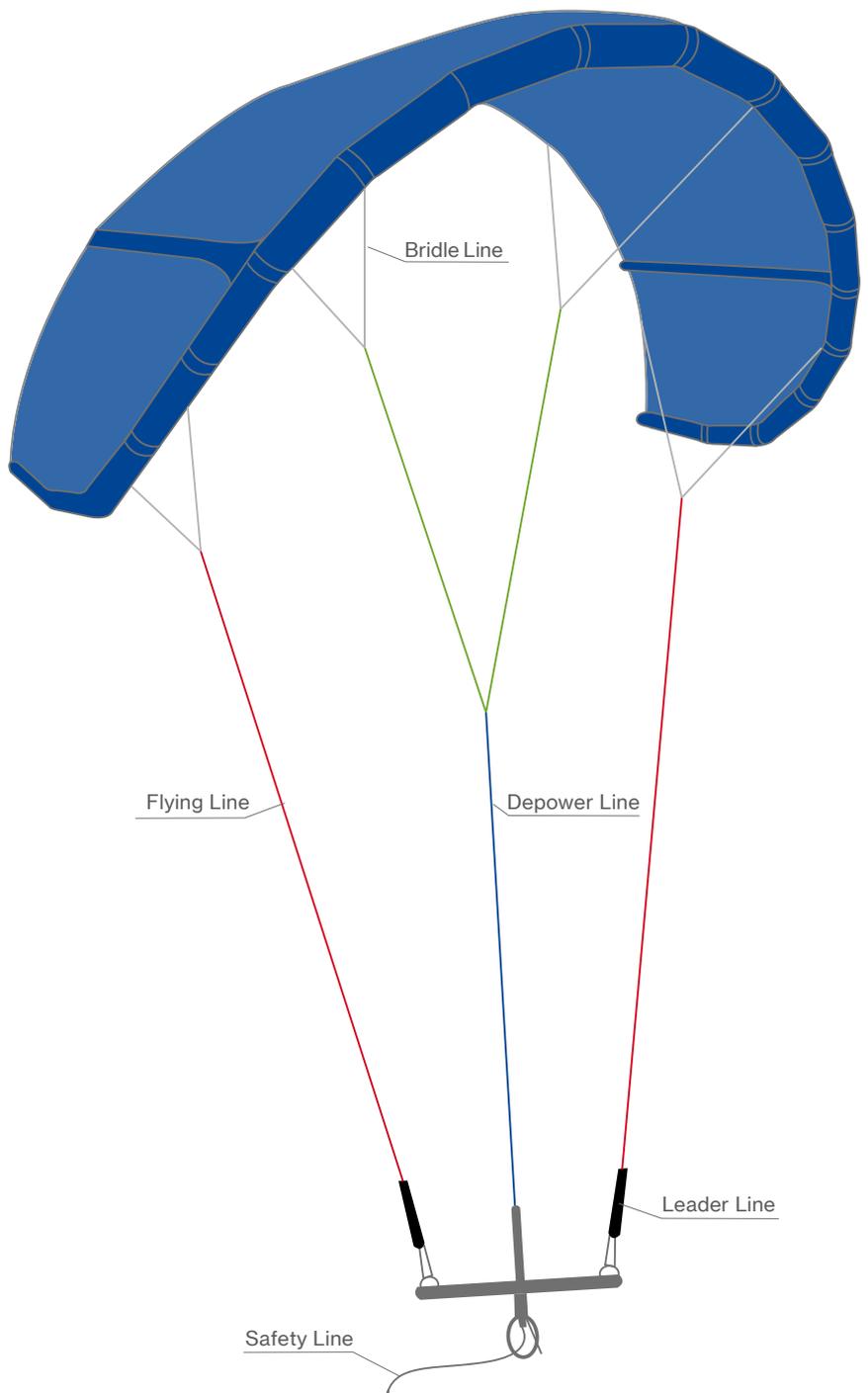
TARIFA

Performance Lines with an 8 braided construction



CAPETOWN

Performance Lines with a 12 braided construction



RACING - FLYING LINES

TEUFELBERGER Racing - Flying Lines are named after two of the best kite spots worldwide – MAUI in Hawaii and GARDA in Italy! All of our GARDA (8-braided construction) and MAUI (12-braided construction) Racing Lines are pre-stretched and made out of the high-end raw material Dyneema® SK99. GARDA and MAUI Kite Lines are the best choice for an exact kite control and an incomparable breaking strength to weight ratio. This characteristic leads to smallest diameters, lowest elongation and to the lightest Flying Lines available in the market.

GARDA FL-299



GARDA FL-389



MAUI FL-389



MAUI FL-639T



Characteristics



- Pre-stretched Dyneema® SK99 Kite Line
- Save up to 40% weight in comparison to standard performance Kite Lines
- Extremely attractive weight/performance ratio
- Lowest elongation and smallest diameter tolerances
- Lowest shrinking properties
- Highest creep resistance
- Increase of safety due to higher breaking-loads in comparable diameters
- Extremely high breaking load in comparison to regular performance Flying Lines
- Low weight and minimum wind resistance
- Kink free
- Easy to splice Flying Lines
- TEUFELBERGER heat pre-stretched Kite Lines
- TEUFELBERGER NEXT.GENERATION coating
- TEUFELBERGER TRACE.TECHNOLOGY
This technology always causes the Kite Line to straighten itself again, which helps to avoid extreme radii and the consequential kinking of the line.

Technical data

Product name	Ø	Breaking strength	Weight	Stretch	Construction	Trace Technology	qty/spool
	mm	daN	g/m	% (at 80 daN)			m
Garda FL-299	1.10	290	0.90	0.95	8 braided	no	800 - 2,000
Garda FL-389	1.30	380	1.30	0.90	8 braided	no	800 - 2,000
Maui FL-389	1.35	380	1.20	0.85	12 braided	no	800 - 2,000
Maui FL-639T	1.70	630	2.80	0.85	12 braided	yes	800 - 2,000

PERFORMANCE - FLYING LINES

In the last decade, kiteboarding has evolved at a breathtaking speed! TEUFELBERGER's Performance - Flying Lines are the answer to this fast and changing environment. To meet all demands, TEUFELBERGER offers two possible construction possibilities in the performance section: TARIFA Performance - Kite Lines have an eight braided construction (for instance our benchmark TARIFA FL-340T), while our CAPETOWN Performance - Flying Lines are made from a 12-strand Kite Line braiding.

TARIFA FL-265T



TARIFA FL-350T



CAPETOWN FL-410T



CAPETOWN FL-500



TARIFA FL-340T



CAPETOWN FL-400



CAPETOWN FL-450



CAPETOWN FL-610



Characteristics

- Pre-stretched Kite Lines
- High stretch resistance and smallest diameter tolerances
- Lowest shrinking properties
- High creep resistance with nearly no creep
- Minimum wind resistance
- Kink free
- Easy to splice flying lines
- Used for Flying and Bridle Lines
- TEUFELBERGER heat pre-stretched Kite Lines
- TEUFELBERGER NEXT.GENERATION coating
- TEUFELBERGER TRACE.TECHNOLOGY
This technology always causes the Kite Line to straighten itself again, which helps to avoid extreme radii and the consequential kinking of the line.

Technical data

Product name	Ø	Breaking strength	Weight	Stretch	Construction	Trace Technology	qty/spool
	mm	daN	g/m	% (at 80 daN)			m
TARIFA FL-265T	1.40	265	1.55	1.10	8 braided	yes	800 - 2,000
TARIFA FL-340T	1.40	340	1.60	1.00	8 braided	yes	800 - 2,000
TARIFA FL-350T	1.60	350	1.60	1.00	8 braided	yes	800 - 1,200
CAPETOWN FL-400	1.70	400	1.90	0.85	12 braided	no	800 - 2,000
CAPETOWN FL-410T	1.90	410	2.40	0.85	12 braided	yes	800 - 2,000
CAPETOWN FL-450	1.60	440	1.90	0.90	12 braided	no	800 - 2,000
CAPETOWN FL-500	1.80	500	2.10	0.80	12 braided	no	800 - 2,000
CAPETOWN FL-610	2.20	610	3.32	0.55	12 braided	no	800 - 2,000

DEPOWER LINES

High abrasion resistance is key and the most important property of kiteboarding Depower Lines. Together with our development partner, we have worked diligently to engineer high-performance lines that offer great durability combined with minimal wear. TEUFELBERGER DPL-Lines are coated with a special impregnation which markedly increases its life span and offers great abrasion resistance in comparison to competitor lines in the market.

DPL-1600SY



DPL-2200



Characteristics

- Pre-stretched Depower Lines
- Extremely high abrasion resistance
- Highest breaking strength
- Highest stretch resistance nearly no elongation
- Easy to splice Depower Lines
- Special life span expanding anti-abrasion coating
- Single yarn impregnation (DPL-1600SY)
- TEUFELBERGER heat pre-stretched Kite Lines

Technical data

Product name	Ø	Breaking strength	Weight	Stretch	Construction	Trace Technology	qty/spool
	mm	daN	g/m	% (at 80 daN)			m
DPL-1600SY	4.80	1,600	13.60	0.10	12 braided	no	500 - 1,200
DPL-2200	4.70	2,200	12.20	0.10	12 braided	no	500 - 1,200





LEADER LINES & SAFETY LINES

In this product category, TEUFELBERGER offers special constructed and designed Leader Lines and Multi-usage Lines.

OL-500



OL-965



LDL-400



LDL-500



LDL-800



LDL-1600



LDL-2300



LDL-3200



Characteristics

- Minimum stretch
- High breaking strength
- Easy to splice Leader Lines

Technical data

Product name	Ø	Breaking strength	Weight	Construction	Trace Technology	qty/spool
	mm	daN	g/m			m
OL-500	2.50	500	3.50	12 braided	no	500 - 1,200
OL-965	2.70	965	4.70	12 braided	no	500 - 1,200
LDL-400	2.00	400	2.00	12 braided	no	200 - 1,600
LDL-500	2.50	500	4.00	12 braided	no	200 - 800
LDL-800	3.00	800	5.00	12 braided	no	200 - 800
LDL-1600	4.00	1,600	8.00	12 braided	no	200 - 2,000
LDL-2300	5.00	2,300	11.00	12 braided	no	200 - 1,400
LDL-3200	6.00	3,200	17.00	12 braided	no	200 - 1,000

BRIDLE LINES

Bridle Lines with a cover / core construction as well as Bridle Line on a Flying Line basis are available.

BRL-130



BRL-250



BRL-300



BRL-500



Characteristics

- Extremely high abrasion resistance
- High stretch resistance
- Cover / core construction

Technical data

Product name	Ø	Breaking strength	Trace Technology	qty/spool
	mm	daN		m
BRL-130	1.70	130	no	250 - 750
BRL-250	2.10	250	no	250 - 750
BRL-300	2.50	300	no	250 - 750
BRL-500	3.00	500	no	200 - 800



TEUFELBERGER Fiber Rope GmbH

Vogelweiderstraße 50

4600 Wels, Austria

Phone: +43 (0) 7242 413-0

Fax: +43 (0) 7242 413-169

fiberrope@teufelberger.com

www.teufelberger.com