KAYA ROPES

TENDER TOWING SYSTEM

2026 | ENG

Upgrade Your Lines

KAYA COMPANIES
www.kayacompanies.com

Kaya Companies;
A leader in its field today, Kaya Group began business in the 1980's as Kaya Construction. Kaya Group concentrates its knowledge and experience in four main areas of activity; the production of technical ropes, industrial work safety and work at height, health and safety at work training and consulting services. Since being fully aware of the dimension of social responsibility attached to the sector, the company obtains national and international certificates for all products that are developed and manufactured. By providing education and consultation services concerning the correct use of its products, the Kaya Group has gained the knowledge, experience and level of competence that have given the company the confidence and resources to be able to make new advances from a sound base. With its 40+ year experience, the Kaya Group is the largest organization in the sector. In 2010, with new products, services and investments, the company is firmly on the path towards becoming an important brand in the international market.

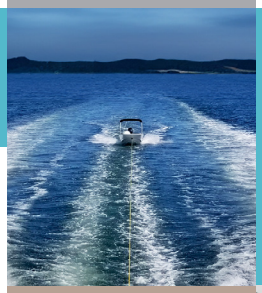
Our Vision;
To make Kaya the undisputed world's strongest, most prestigious and trusted brand in its sector.

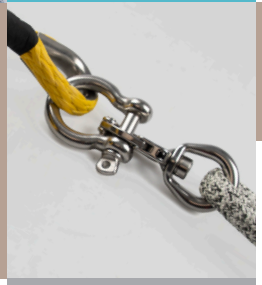
Mission Statement;
Our mission is to conduct research and development based on accurate analysis of needs in the sector and thereby develop new products; to employ modern machinery and a competent workforce in the manufacture of world-class, high quality goods; to provide training and consulting services to create knowledgeable workers and managers and help establish a culture of work safety in Turkey; and to provide complete solutions via our integrated services.

Company Philosophy;
Based on the value we place on human life, our goal is to design products that will safeguard human life on the job, to manufacture such products and to raise awareness about work safety by training workers and managers and providing consultation services in this regard.

KAYA SAFETY | KAYA ROPES | KAYA ARCHITECTURE | KAYA TRAINING | KAYA ADVENTURE | KAYA SCAFFOLDING
KAYA CONSTRUCTION | KAYA RESCUE | KAYA DEFENCE | KAYA SECURITY | KAYA SPORT | KAYA LIFTING | KAYA NATURAL

Index:





LUPA® VIPERA USA

APPLICATIONS

Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Superior Chafe Cover
High Breaking Load
Excellent Shock Absorption

Lupa® Vipera USA is built for durability and resilience in harsh marine conditions. It resists hardening, kinking, and wear while providing superior shock absorption for safe, smooth towing. With a tough chafe cover, high breaking load, and resistance to UV, chemicals, and abrasion, it delivers unmatched reliability on open waters.

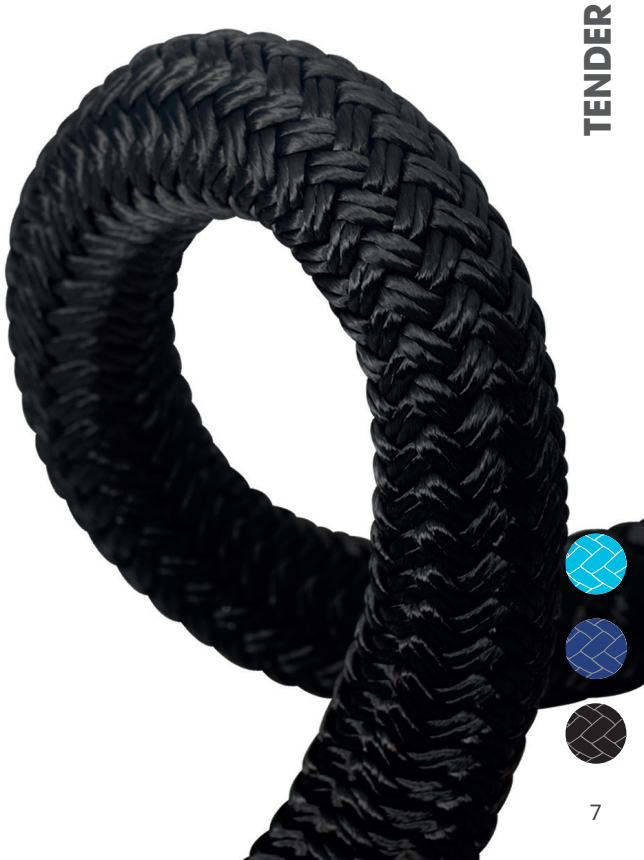
SPECIFICATIONS

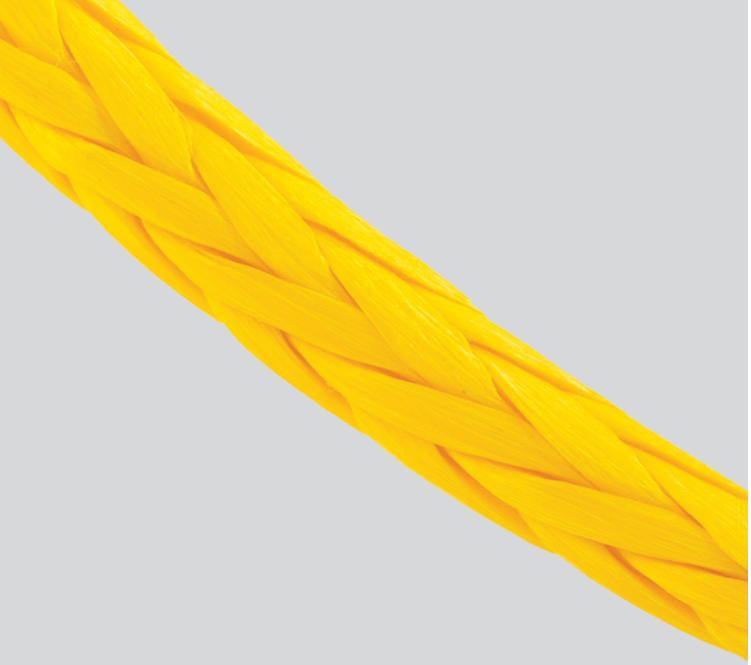
Material	:	100% HT Polyamide Fiber
Type	:	-
Specific Gravity	:	1,14 kg/dm³
Construction	:	Cover: 16-20-24-32 Plaited Core: 12-16 Plaited
UV Resistance	:	Very Good
Chemical Resistance	:	Good
Melting Point	:	218°C
Critical Temperature	:	130°C
Elongation at Break	:	Approx. %30
Fiber Water Absorption	:	Approx. %3-4
Wet Abrasion	:	Sufficent
Dry Abrasion	:	Good
Standard	:	EN ISO 10554
Length	:	100-200 m Wooden Spool or Coil

Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (kg/ 100m)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
18	22,50	9.586	8.640	3/4"	15,12	21.090	19.000
22	30,00	12.866	11.590	7/8"	20,16	28.305	25.000
24	40,00	16.902	15.230	1"	26,88	37.185	33.500
28	50,50	21.191	19.090	1-1/8"	33,94	46.620	42.000
30	59,25	25.580	23.050	1-1/4"	39,82	56.277	50.700
32	68,50	28.255	25.450	1-5/16"	46,03	62.160	56.000
36	89,00	36.580	32.950	1-1/2"	59,81	80.475	72.500
40	105,00	41.120	37.050	1-5/8"	70,56	90.465	81.500
42	117,00	44.400	40.000	1-11/16"	78,62	97.680	88.000

*Unspliced Break Load (All Tests are in Accordance with ISO 2307)





DYNE K® EXTREME

APPLICATIONS

Towing Line
Towing Pendant

BENEFITS / FEATURES

Superior Abrasion Resistance
Superior Breaking Load (SK99)
Buoyant
Durable
Extremely Low Stretch
Lightweight
Easy to Splice
Does not Kink

Dyne K® Extreme combines strength, abrasion resistance, and buoyancy. Its lightweight, low-stretch design ensures precision and reliability in the toughest marine conditions — performance without compromise.

SPECIFICATIONS

Material	:	Coated: Dyneema® SK 78/99 Fiber
Specific Gravity	:	0,97 kg/dm^3
Construction	:	12 Strand Braided
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	None
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	100-200 m Plastic/Wooden Spool or Coil

Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	B.Load (kgf) SK78	B.Load (kgf) SK99	DIA (inch)	Weight (lbs/ 100ft)	B.Load (lbs) SK78	B.Load (lbs) SK99
6	2,00	4.390	5.180	1/4"	1,34	9.658	11.396
8	3,75	7.570	8.930	5/16"	2,52	16.654	19.646
10	6,00	11.560	13.640	3/8"	4,03	25.432	30.008
12	8,50	16.450	19.410	1/2"	5,71	36.190	42.702
14	11,40	21.930	25.880	9/16"	7,66	48.246	56.936
16	14,80	27.960	32.990	5/8"	9,95	61.512	72.578
18	18,50	34.540	40.760	3/4"	12,43	75.988	89.672
20	22,70	41.670	49.170	13/16"	15,25	91.674	108.174
22	27,20	49.350	58.230	7/8"	18,28	108.570	128.106
24	32,20	57.020	67.280	1"	21,64	125.444	148.016
26	37,50	65.790	77.630	1-1/16"	25,20	144.738	170.786
28	43,30	75.120	88.640	1-1/8"	29,10	165.264	195.008
30	49,40	84.980	100.280	1-1/4"	33,20	186.956	220.616
32	55,90	94.850	111.920	1-5/16"	37,56	208.670	246.224
34	62,80	105.820	124.870	1 3/8"	42,20	232.804	274.714
36	70,10	117.330	138.450	1-1/2"	47,11	258.126	304.590
38	77,80	128.840	152.030	1-9/16"	52,28	283.448	334.466
40	85,90	140.910	166.270	1-5/8"	57,72	310.002	365.794

*Unspliced Break Load (All Tests are in Accordance with ISO 2307)

PU COATING | HEAT TREATMENT | Dyneema®

FORCE K® MAX EXTREME

APPLICATIONS

Towing Line
Towing Pendant

BENEFITS / FEATURES

Superior Abrasion Resistance
Superior Breaking Load
Buoyant
Durable
Extremely Low Stretch
Lightweight
Easy to Splice
Does not Kink

Force K® Max Extreme delivers outstanding performance at great value. With superior abrasion resistance, high breaking load, and buoyancy, it thrives in harsh conditions.
Lightweight and low-stretch, it ensures precision, handling, and lasting quality without compromise.

SPECIFICATIONS

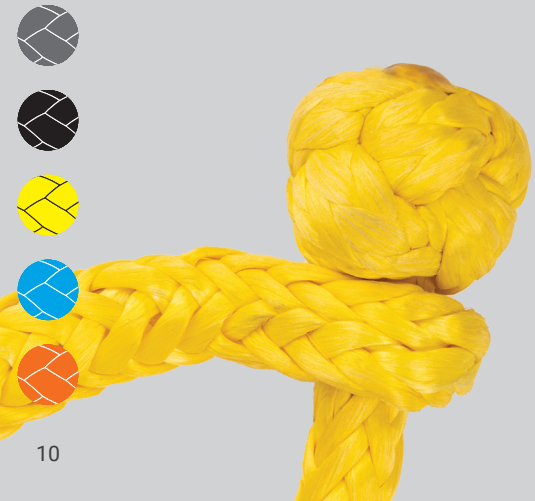
Material	:	Coated UHMWPE Fiber
Specific Gravity	:	0,97 kg/dm^3
Construction	:	12 Strand Braided
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Fiber Water Absorption	:	None
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	B.Load (kgf) SK78	B.Load (kgf) SK99	DIA (inch)	Weight (lbs/ 100ft)	B.Load (lbs) SK78	B.Load (lbs) SK99
6	2,00	4.390	5.180	1/4"	1,34	9.658	11.396
8	3,75	7.570	8.930	5/16"	2,52	16.654	19.646
10	6,00	11.560	13.640	3/8"	4,03	25.432	30.008
12	8,50	16.450	19.410	1/2"	5,71	36.190	42.702
14	11,40	21.930	25.880	9/16"	7,66	48.246	56.936
16	14,80	27.960	32.990	5/8"	9,95	61.512	72.578
18	18,50	34.540	40.760	3/4"	12,43	75.988	89.672
20	22,70	41.670	49.170	13/16"	15,25	91.674	108.174
22	27,20	49.350	58.230	7/8"	18,28	108.570	128.106
24	32,20	57.020	67.280	1"	21,64	125.444	148.016
26	37,50	65.790	77.630	1-1/16"	25,20	144.738	170.786
28	43,30	75.120	88.640	1-1/8"	29,10	165.264	195.008
30	49,40	84.980	100.280	1-1/4"	33,20	186.956	220.616
32	55,90	94.850	111.920	1-5/16"	37,56	208.670	246.224
34	62,80	105.820	124.870	1 3/8"	42,20	232.804	274.714
36	70,10	117.330	138.450	1-1/2"	47,11	258.126	304.590
38	77,80	128.840	152.030	1-9/16"	52,28	283.448	334.466
40	85,90	140.910	166.270	1-5/8"	57,72	310.002	365.794

*Unspliced Break Load (All Tests are in Accordance with ISO 2307)

PU COATING HEAT TREATMENT



DYNE K® SHACKLES

APPLICATIONS

Connection Line

BENEFITS / FEATURES

Can be Opened and Closed Quickly
Buoyant
Very Low Stretch
Self-Locking Under Load
Easy to Use
Extremely Durable

SPECIFICATIONS

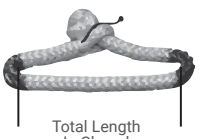
Material	:	Coated Dyneema® SK75/78 Fiber
Specific Gravity	:	0,97 kg/dm³
Construction	:	12 Strand Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	-
Length	:	-

Other Colours & Larger Diameters Upon Request

Shackle Dia (mm)	Rope Dia (mm)	Total Length In Closed Condition (cm)	Shackle-1 Weight (kg)	Shackle-1 Minimum B.load (kgf)	Shackle-2 Weight (kg)	Shackle-2 Minimum B.load (kgf)	Shackle-3 Weight (kg)	Shackle-3 Minimum B.load (kgf)
12	7	12,5	0,03	5.000	0,05	11.250	0,07	16.900
14	8	15,0	0,05	6.330	0,07	14.250	0,11	21.400
18	10	17,5	0,09	9.700	0,13	21.830	0,20	32.790
20	12	20,0	0,14	13.770	0,21	30.990	0,32	46.550
24	14	35,0	0,33	18.360	0,49	41.310	0,75	62.060
28	16	40,0	0,49	23.455	0,73	52.780	1,12	79.280
32	18	45,0	0,68	29.065	1,03	65.400	1,57	98.240
34	20	50,0	0,93	34.675	1,40	78.020	2,14	117.210
36	22	55,0	1,23	41.300	1,85	92.930	2,83	139.600
40	24	60,0	1,59	47.930	2,38	107.850	3,65	162.010
44	26	65,0	2,01	55.065	3,01	123.900	4,62	186.120
48	28	70,0	2,49	62.715	3,74	141.110	5,73	211.980
50	30	75,0	3,05	71.385	4,57	160.620	7,01	241.290
54	32	80,0	3,68	79.540	5,52	178.970	8,46	268.850
58	34	85,0	4,39	88.720	6,59	199.620	10,10	299.880
60	36	90,0	5,20	98.405	7,80	221.420	11,96	332.610
64	38	95,0	6,09	108.090	9,13	243.210	14,00	365.350
68	40	100,0	7,07	117.780	10,61	265.010	16,27	398.100
72	42	110,0	8,54	128.980	12,80	290.210	19,63	435.960

* Spliced Break Load (All tests are in Accordance with ISO 2307)

Shackle-1



Shackle-2

Shackle-3

PU COATING HEAT TREATMENT Dyneema®

FORCE K® SHACKLES

APPLICATIONS

Connection Line

BENEFITS / FEATURES

Can be Opened and Closed Quickly
Buoyant
Very Low Stretch
Self-Locking Under Load
Easy to Use
Extremely Durable

SPECIFICATIONS

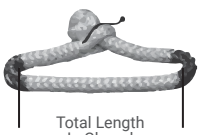
Material	:	Coated UHMWPE Fiber
Specific Gravity	:	0,97 kg/dm^3
Construction	:	12 Strand Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	-
Length	:	-

* Other Colours & Larger Diameters Upon Request

Shackle Dia (mm)	Rope Dia (mm)	Total Length In Closed Condition (cm)	Shackle-1 Weight (kg)	Shackle-1 Minimum B.load (kgf)	Shackle-2 Weight (kg)	Shackle-2 Minimum B.load (kgf)	Shackle-3 Weight (kg)	Shackle-3 Minimum B.load (kgf)
12	7	12,5	0,03	5.000	0,05	11.250	0,07	16.900
14	8	15,0	0,05	6.330	0,07	14.250	0,11	21.400
18	10	17,5	0,09	9.700	0,13	21.830	0,20	32.790
20	12	20,0	0,14	13.770	0,21	30.990	0,32	46.550
24	14	35,0	0,33	18.360	0,49	41.310	0,75	62.060
28	16	40,0	0,49	23.455	0,73	52.780	1,12	79.280
32	18	45,0	0,68	29.065	1,03	65.400	1,57	98.240
34	20	50,0	0,93	34.675	1,40	78.020	2,14	117.210
36	22	55,0	1,23	41.300	1,85	92.930	2,83	139.600
40	24	60,0	1,59	47.930	2,38	107.850	3,65	162.010
44	26	65,0	2,01	55.065	3,01	123.900	4,62	186.120
48	28	70,0	2,49	62.715	3,74	141.110	5,73	211.980
50	30	75,0	3,05	71.385	4,57	160.620	7,01	241.290
54	32	80,0	3,68	79.540	5,52	178.970	8,46	268.850
58	34	85,0	4,39	88.720	6,59	199.620	10,10	299.880
60	36	90,0	5,20	98.405	7,80	221.420	11,96	332.610
64	38	95,0	6,09	108.090	9,13	243.210	14,00	365.350
68	40	100,0	7,07	117.780	10,61	265.010	16,27	398.100
72	42	110,0	8,54	128.980	12,80	290.210	19,63	435.960

* Spliced Break Load (All tests are in Accordance with ISO 2307)

Shackle-1



Shackle-2

Shackle-3

PU COATING

HEAT TREATMENT

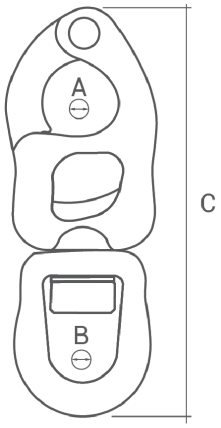
TYLASKA TRIGGER SNAP SHACKLES

Tylaska

MARINE & AEROSPACE

Tylaska's Trigger Snap Shackles are world renowned as the best sailing snap shackles that money can buy. Fabricated from high strength 17-4 PH stainless steel and polished to a mirror finish, the T-Shackle is both extremely strong and highly corrosion resistant. The T-Shackle was meticulously designed using advanced calculus to reliably release under low loads without compromising its resistance to accidental release when subject to heavy vibrations or shock loads.

Model	Part Number	Dimensions (mm)			Weight (kg)	WLL (kgf)	B.Load (kgf)
		A	B	C			
12L	TY1012-L	18	28,3	117	0,23	2.720	5.440
16L	TY1016-L	22,9	33,3	138	0,36	3.630	7.260
20L	TY1020-L	25,1	35,3	147	0,45	4.540	9.070
30S	TY1030-S	31,2	30,5	166	0, 76	6.800	13.610
40S	TY1040-S	44,5	45,5	241	2,34	9.070	18.140
50S	TY1050-S	49,5	50,8	294	3,20	11.340	22.680



EUROPEAN TYPE SS BOW SHACKLES

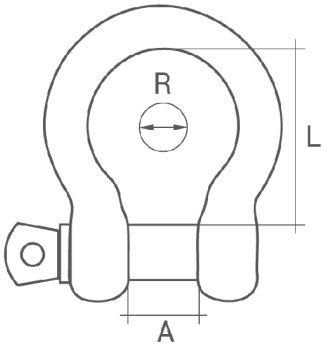
European type stainless steel bow shackle is easy to attachment and detachment due to a hole in the pin of the anchor shackle, it allows for the shackle to be wired shut. It is made from marine-grade stainless steel, will not harm humans, birds or mammals which might be adversely affected by zinc in the less-expensive galvanised fittings, we also have European Type Stainless Steel D Shackle for your option.

SPECIFICATIONS

Material : AISI 316 / AISI 304
Surface : High Polished Finish
Standard : EN 13889
Brand : Unbranded/Generic
Application : Lifting, Lashing, Towing

Larger Diameters Upon Request

Size		Dimensions (mm)			WLL (kgf)	B.Load (kgf)
(inch)	(mm)	A	L	R		
5/32"	4	8	16	14	98	590
3/16"	5	10	20	17	155	930
1/4"	6	12	24	21	225	1.345
5/16"	8	16	32	28	405	2.415
3/8"	10	20	40	35	635	3.800
7/16"	12	24	48	42	935	5.600
1/2"	13	26	52	45	1.095	6.580
9/16"	14	28	56	49	1.270	7.630
5/8"	16	32	64	56	1.660	9.960
3/4"	19	38	76	66	2.310	13.875
7/8"	22	44	88	77	3.140	18.835
1"	25	50	100	88	3.800	22.820



US TYPE ANCHOR SHACKLES

US-type screw pin anchor shackle and bow shackle are usually used interchangeably, the shackle body is made from high tensile carbon steel (C1045), and the screw pin is premium quality alloy steel, generally meet to US Fed.Spec.RR C 271 shackle & ASME B30 26 shackles.

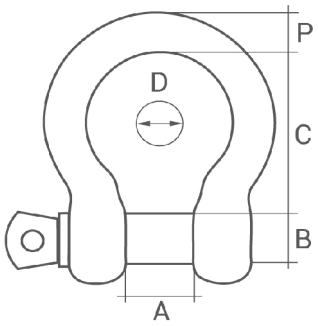
Proof load at 2 times the Working Load Limit (WLL). Minimum Breaking Strength(M.B.S) at 6 times (usually surface finish hot dipped galvanized) or 4 times (surface finish electric galvanized) the WLL

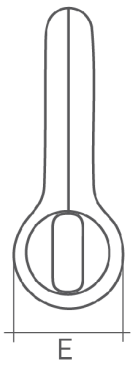
SPECIFICATIONS

Material : Body Carbon Steel C1045(#45)/Pin Alloy Steel
Surface : Electric Galvanized/Hot Dipped Galvanized
Standard : U.S. Federal Specification RR-C-271D / ASME B30.26
Brand : Unbranded / Generic
Application : Overhead Lifting, Lashing, Towing

Larger Diameters Upon Request

Nominal Size		Dimensions (mm)					Weight (kg)	WLL (kgf)	B.Load (kgf)
(inch)	(mm)	A	B	C	D	E			
3/16"	5	9,65	6,35	22,4	15,2	14,2	0,03	350	1.400
1/4"	6	11,9	7,85	28,7	19,8	15,5	0,05	500	2.000
5/16"	8	13,5	9,65	31,0	21,3	19,1	0,09	750	3.000
3/8"	10	16,8	11,2	36,6	26,2	23,1	0,14	1.000	4.000
7/16"	12	19,1	12,7	42,9	29,5	26,9	0,17	1.500	6.000
1/2"	13	20,6	12,7	47,8	33,3	30,2	0,33	2.000	8.000
5/8"	16	26,9	16,0	60,5	42,9	38,1	0,62	3.250	13.000
3/4"	19	31,8	19,1	71.4	51,0	46,0	1,07	4.750	19.000
7/8"	22	36,6	22.4	84,1	58,0	53,0	1,64	6.500	26.000
1"	25	42,9	25,4	95,3	68,5	60,5	2,38	8.500	34.000
1-1/8"	28	46,0	28,7	107,9	74,0	68,5	3,36	9.500	38.000
1-1/4"	31	51,5	31,8	119,1	92,5	76,0	4,31	12.000	48.000
1-3/8"	32	57,0	35,1	133,3	92,0	84,0	6,14	13.500	54.000
1-1/2"	38	60,5	38,1	146	98,5	92,0	7,80	17.000	68.000
1-3/4"	44	73,0	41,4	177,8	127,0	106,0	12,60	25.000	100.000
2"	50	82,5	51,0	196,8	146,0	122,0	20,40	35.000	140.000
2-1/2"	64	105,0	57,0	266,7	184,0	145,0	38,90	55.000	220.000





Y-TYPE

The Y-TYPE towing system is designed with a dual-line configuration that enhances towing efficiency by ensuring a balanced distribution of forces.

It provides stable towing for general operations in moderate conditions, where maneuverability is key, like crowded harbors and narrow paths. While it offers reliability and control, the system is most effective in environments where minimal external forces are at play.

The Y-TYPE is well-suited for recreational use and lighter professional applications where ease of handling and precise towing are priorities.

LENGTH OF THE TOWING SYSTEM (A+B+C):
2-3X OF MAIN BOAT LENGTH

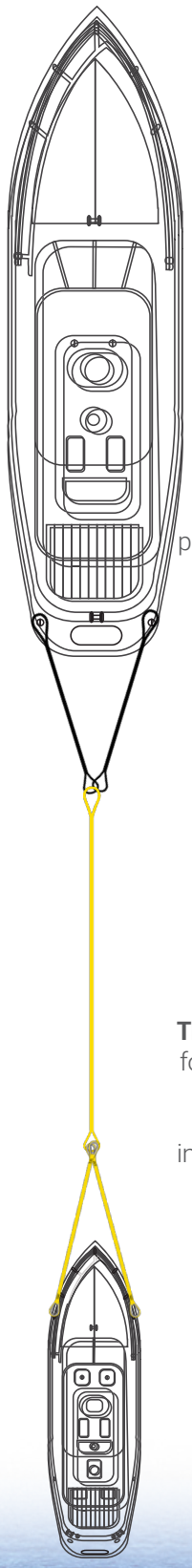
SHOCK LINES (A)
LUPA® VIPERA USA

LENGTH OF SHOCK LINES (A):
2X OF MAIN BOAT BEAM

TOWING LINE (B)
DYNE K® EXTREME
FORCE K® MAX EXTREME

TENDER TOWING PENDANTS (C)
DYNE K® EXTREME
FORCE K® MAX EXTREME

LENGTH OF PENDANTS (C):
3-5 METERS



YY-TYPE

The YY-TYPE towing system features a reinforced dual-line design that offers superior strength and enhanced stability.

It is specifically engineered to withstand higher loads and is optimized for demanding towing operations, particularly in rough or punpredictable sea conditions.

The system's construction significantly improves towing stability by reducing yaw and lateral movement, providing better control and safety during high-stress towing tasks.

The YY-TYPE is ideal for professional and heavy-duty marine applications, offering greater durability and performance under extreme conditions.

ONSHORE

TENDER WEIGHT (TONNE)	SF 3/1	A	B	C	D1	D2
	BREAKING LOAD (TONNE)	SHOCK LINES DIAMETER	TOWING LINE DIAMETER	PENDANTS DIAMETER	SNAP SHACKLE PART NO	SOFT SHACKLE DIAMETER
		LUPA® VIPERA USA	DYNE K® EXTREME / FORCE K® MAX EXTREME	DYNE K® EXTREME / FORCE K® MAX EXTREME	TYLASKA	DYNE K® SHACKLE I - FORCE K® SHACKLE I
2	6	18	10	10	T12	14
3	9	18	11	11	T12	14
4	12	18	12	12	T16	18
5	15	22	14	14	T20	20
6	18	24	16	16	T30	24
7	21	24	16	16	T30	24
8	24	28	18	18	T30	24
9	27	30	20	20	T40	28
10	30	30	20	20	T40	28
11	33	32	22	22	T50	32
12	36	32	22	22	T50	32

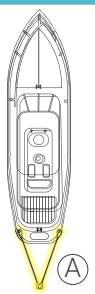
OFFSHORE

TENDER WEIGHT (TONNE)	SF 5/1	A	B	C	D1	D2
	BREAKING LOAD (TONNE)	SHOCK LINES DIAMETER	TOWING LINE DIAMETER	PENDANTS DIAMETER	SNAP SHACKLE PART NO	SOFT SHACKLE DIAMETER
		LUPA® VIPERA USA	DYNE K® EXTREME / FORCE K® MAX EXTREME	DYNE K® EXTREME / FORCE K® MAX EXTREME	TYLASKA	DYNE K® SHACKLE I - FORCE K® SHACKLE I
2	10	18	12	12	T16	18
3	15	22	14	14	T20	20
4	20	24	16	16	T30	24
5	25	28	18	18	T30	24
6	30	30	20	20	T40	28
7	35	30	20	20	T40	28
8	40	32	22	22	T40	28
9	45	36	24	24	T50	32
10	50	40	26	26	T50	32
11	55	42	28	28	T50	32
12	60	42	28	28	T50	32

SYSTEM TYPES

Y-TYPE TOWING SYSTEM ☐	YY-TYPE TOWING SYSTEM ☐

SHOCK LINES (A)

LUPA® VIPERA USA			
A-01		☐ L: Q:	
A-02		☐ L: Q:	
A-03		☐ L: Q:	
A-04		☐ L: Q:	
A-05		☐ L: Q:	
A-06		☐ L: Q:	
A-07		☐ L: Q:	

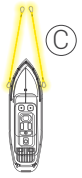
TOWING LINES (B)

	DYNE K® EXTREME	FORCE K® MAX EXTREME	
B-01		☐ L: Q:	  
B-02		☐ L: Q:	
B-03		☐ L: Q:	
B-04		☐ L: Q:	
B-05		☐ L: Q:	
B-06		☐ L: Q:	
B-07		☐ L: Q:	

SYSTEM TYPES

Y-TYPE TOWING SYSTEM ☐	YY-TYPE TOWING SYSTEM ☐

TENDER TOWING PENDANTS (C)

	DYNE K® EXTREME	FORCE K® MAX EXTREME	
C-01		☐ L: Q:	
C-02		☐ L: Q:	
C-03		☐ L: Q:	
C-04		☐ L: Q:	
C-05		☐ L: Q:	
C-06		☐ L: Q:	
C-07		☐ L: Q:	

ACCESSORIES (D)

D1	TYLASKA SNAP SHACKLE		☐ Q:
D2	DYNE K® SHACKLE		☐ Q:
D2	FORCE K® SHACKLE		☐ Q:
D3	EU SHACKLE		☐ Q:
D4	SS RING		☐ Q:

* Accessories are for optional use, depending on your preffered connection type between shock lines, towing line and tender towing pendants.

OUR MATERIALS

DYNEEMA® FIBER

Dyneema®, an UHMWPE fiber, was invented by DSM over 30 years ago and has been in production since 1990. The fiber is incredibly versatile with virtually limitless applications. The fiber is manufactured by means of a gel-spinning process that combines extreme strength with incredible softness. Dyneema® is a super-strong fiber based on UHMWPE. It offers maximum strength combined with minimum weight.

Dyneema® SK75 is a high-strength, low-stretch fiber with good durability. It has been considered as the industry reference for years.

Dyneema® SK78 proved its superior performance under extreme conditions. The high modulus fiber, SK78 has the same strength as SK75 but offers significantly improved creep characteristics than its predecessor.

Dyneema® SK99 is the latest addition to the SK range, offering a significant step up in performance. Compared to SK78, it delivers around 20% higher strength while keeping the same reliable elongation and creep characteristics. This makes SK99 the ideal choice for sailors who demand maximum strength, minimal stretch, and dependable safety at sea.

Dyneema® DM20 has ultra-high creep resistant and zero permanent elongation. Developed for offshore use, DM20 ropes outperform alternatives, exceeding standards for deep-water mooring and outlasting the installation's operational life. While slightly lower in tenacity than SK78, DM20's key advantage is its near-zero creep, making it ideal for static load applications like standing rigging

TECHNORA® FIBER

Technora® is a para-aramid fiber made from co-polymers and produced from poly-paraphenylene terephthalamide (PPTA). It was independently developed by Teijin and has been commercially available since 1987. This high performance fiber has a range of excellent properties, including high tensile strength, good fatigue resistance, long-term dimensional stability and good resistance to corrosion, heat, chemicals and saltwater.

VECTRAN® FIBER

Vectran® is a high-performance multifilament yarn spun from liquid crystal polymer (LCP) produced by Kururay in Japan. Vectran® is currently the only melt spun LCP fiber in the world that is commercially available. The unique combination of characteristics of Vectran® fibers make it superior to many other materials and enable it to perform under conditions in which other materials fail.

TWARON® FIBER

Twaron® is a para-aramid, high- performance yarn. Offering well-balanced performance in terms of mechanical properties, chemical resistance and thermal stability, Twaron® is recognized across a wide range of industries as an extremely valuable material with excellent durability. Their experience in aramid production, which extends back more than 30 years, not only guarantees a technically well-established product, it is also the basis for developments, often in close cooperation with our customers, to tailor Twaron® to the specific requirements of various applications.

POLYESTER

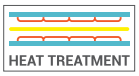
First commercial polyester fiber production: 1953, Dupont company. Polyester is a category of polymers which contain the ester functional group in their main chain. Polyester is the most durable of the common materials. It has good breaking load and a low elongation. It has good resistance against sunlight, external abrasion. Polyester does not lose strength rapidly due to cyclic loading. Polyester has a low co-efficient of friction. Polyester is used as a material for the cover (protection against UV radiation) in the hig-tech ropes and is most widely used fiber in yachting ropes as well as for anchoring lines.

POLYAMIDE

Commercial production of nylon fiber began in 1939 with the DuPont company. Nylon is a manufactured fiber in which the fiber-forming substance is a long-chain synthetic polyamide, where less than 85% of the amide linkages (-CO-NH-) are directly attached to two aliphatic groups. Polyamides lose strength when wet but have better abrasion resistance in wet conditions compared to dry ones. However, they can become stiff if kept wet for too long. The most important polyamides are PA 6 and PA 6.6. Polyamide is commonly used in mooring lines, sport climbing ropes, and safety and rescue ropes.

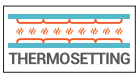
OUR TREATMENTS

This special polyurethane coating known as long lasting- most efficient kind of protective coating that is being applied to each of our high-tech lines to improve abrasion resistance on the ropes and avoids slippage between cover and core. This particular process offers excellent substrate protection to get better results, which also makes the splicing much easier.



This particular thermal process increases efficiency and strength of Dyneema® ropes, which also achieves significant improvements in the break load of the rope and almost eliminates the 'creep' that helps ropes to have better performance. This procedure contracts the yarns and increases the net fiber density of the rope as well. The ropes become stronger and more durable than standard production performance ropes through these processes.

Dyneema® fiber currently has a lowest stretch among all the other synthetic fibers. However, the constructional elongation will occur during twisting and braiding processes of basic rope manufacturing procedure. Pre-Stretch method is used to minimize this constructional elongation and improve rope strength. When the heat set and Pre-Stretch process applied on the rope together, the both constructional and structural elongation will be reduced yet further increase in strength is also obtained by making the polymer to linear array. We apply this method to all of our high-tech and mid-tech lines to have an excellent product that exceeds our customer's needs.



This Thermo Setting process not only extends the lifespan of the rope but also enhances its strength and flexibility, making it ideal for various applications. With its exceptional thermal performance and ability to withstand extreme conditions, Thermo Setting treated ropes offer extra durability and reliability as well as extra softness in hand, providing peace of mind to users in demanding environments.


Use Spike

AUGUST HERZOG
Maschinenfabrik Gmbh & Co.Kg
AM Alexanderhaus 160 26127
Oldenburg Germany
Phone: +49 (0)441 3008 0
Fax: +49 (0)441 3008 100
E-mail: info@herzog-online.com
www.herzog-online.com

GALAN TEXTILE MACHINERY S.L.
Francesc Oller, 91 E-08225
Terrassa (Barcelona) Spain
Phone: +34 93 733 65 50
Fax: +34 93 788 40 40
E-mail: galan@galan.es
www.galan.es

TWISTECHNOLOGY
Ctra. de Rubi, km 22. E-08228
Terrassa (Barcelona) Spain
Phone: +34 937 894 100
Fax: +34 937 894 355
E-mail: info@twistechnology.com
www.twistechnology.com

ROBCO ENGINEERING A/S
Kjeldgaardsvej 6
9300 Saeby Denmark
Phone: +45 98 46 40 00
Fax: +45 98 46 18 00
E-mail: info@robco-eng.com
www.robco-eng.com

SIMA GROUP
Via Chiesaccia, 2 40056
Crespellano (BO) Italy
Phone: +39 0516505511
Fax: +39 051739588
E-mail: simagroup@simagroup.it
www.simagroup.it

ZWICK GMBH & CO. KG
August-Nagel-Str. 11 D-89079
Ulm Germany
Phone: +49 (0)7305 10 0
Fax: +49 (0)7305 10 200
E-mail: info@zwick.de
www.zwick.de

AVIENT PROTECTIVE MATERIALS B.V.
Avient Center Court, Brightlands Chemelot
Campus, Urnonderbaan 22, 6167 RD Geleen
Geleen, Netherlands
Phone: +31 46 750 6590
www.avient.com

TEIJIN ARAMID B.V.
Velperweg 76 P.O. Box 5153
6802 ED Arnhem The Netherlands
Phone: +31 0 88 26 89 159
Fax: +31 0 88 26 89 179
E-mail: ropes_cables@teijinaramid.com
www.teijinaramid.com

NEXIS FIBERS AG
Gerliswilstrasse 17 6021
Emmenbrücke Switzerland
Phone: +41 (0)41 267 80 53
Fax: +41 (0)41 267 92 16
www.nexisfibers.com

I-COATS N.V.
I-Coats N.V. K. Mercierlei 29
2600 Berchem Belgium
Phone: +32 3 281 73 03
Fax: +32 3 281 73 04
E-mail: kvg@i-coats.be
www.i-coats.be

KAYA HALAT AŞ

Yönetim ve Üretim Merkezi
Management & Production Center

Gebze Organize Sanayi Bölgesi,
1000. Sokak No: 1015
Çayırova, Kocaeli, Turkey
kayagrubu.com.tr

Santral/Central
T: +90 262 677 19 19 pbx
F: +90 262 677 19 10

KAYA ROPES

Gebze Organize Sanayi Bölgesi,
1000. Sokak No: 1015
Çayırova, Kocaeli, Turkey
T: +90 262 677 19 03 pbx
F: +90 262 677 19 01
info@kayaropes.com
kayaropes.com

KAYA ROPES USA
Kaya USA LLC

6453 West Rogers Circle C7
Boca Raton, FL 33487, USA
T: +1 561-303-5763
info@kayausa.us
kayaropes.com/en-US/

/KayaRopes
/in/kayaropes
/KayaRopes
/KayaRopes