SHIPPING ROPES

TØNSBERG

EuroRope Marine

EUROROPE MARINE AS

EuroRope Marine is the continuation of ScanRope Marine.

EuroRope Marine is a well-known and highly trusted supplier of mooring ropes and accessories to the marine industry.

The company's main credentials remain the renowned product range Karat®, the experienced staff, and the high degree of service we provide.

The name change is the final stage in a transition that started in 2004 when the company became part of EUROROPE S.A., one of Europe's largest and most dynamic rope manufacturers.

EuroRope Marine's highly skilled staff based in Tønsberg, Norway, has a reputation for friendly service and a fundamental understanding of the shipping companies' needs. Karat Maxi Plus mooring ropes are therefore stocked at strategic ports throughout the world, including Rotterdam, Aberdeen, Houston, Singapore and Dubai. Furthermore, quality wire ropes and rope accessories are procured from approved manufacturers to ensure our customers a complete range of marine ropes and hardware.

FACTS

All Karat ® rope manufacturing takes place at a large and ultra-modern manufacturing plant in Thiva, Greece.
The factory was built in 2002 and has achieved its goal of high efficiency and unsurpassed quality. For our customers this means receiving reliable products at competitive prices delivered to the agreed destination at the agreed time.

QUALITY ASSURANCE

BUREAU VERITAS Certification

EUROPE S.A.
Eleonas, Thiva
GREECE

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 9001:2008

Scope of certification

PRODUCTION OF ROPES, MADE OUT OF NATURAL OR MANMADE SYNTHETIC FIBERS, STEEL WIRE ROPES AND COMBINATION ROPES.

Certification cycle start date: 27 January 2014

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 27 January 2017

Original certification date: 09 January 2011

Certificate No. 0913.1580/0 Version 1, Revision date: 17 October 2013

U.K.A.S. CERTIFICATION 008

Certification body address:
Bureau Veritas, 180 Borough High Street, London SE1 1LB, United Kingdom

Local office:
Nicolaou Pentadromou 113, 185 Piraeus 18 , 18545 Piraeus, Greece

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting this organization

To check this certificate validity please call: +30 210 4529400

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EuroRope Marine is certified according to NS-EN ISO 9001:2008

DNV

DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. X-0000

This is to certify that the Synthetic Fibre Ropes

with type designation(s)
KARAT® WINCHline, X strand rope

Manufactured by
Europe A.B.E.E.
PIRAEUS, Greece

is found to comply with
Det Norske Veritas' Type Approval Programme 1 Edit 1, 2012, Synthetic Fibre Ropes for Towing, Mooring and Anchoring of Ships and High Speed and Light Craft
ISO Standard 2307

Application:
Mooring and Towing of Ships and HSLCs and Anchoring of HSLCs.

Issued at Høvik on 2013-06-06
This Certificate is valid until 2018-06-05
DNV local station: Piraeus
Approved Engineer: Stella Nanouki

for Det Norske Veritas AS
Hans-Axel Straßny
Head of Section

Form No.: TE 107 a Issue: October 2008

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DNV Type Approval Certificate KARAT® WINCHline

DNV

DET NORSKE VERITAS

TYPE EXAMINATION CERTIFICATE

CERTIFICATE NO. X-0000

This is to certify that the Synthetic Fibre Ropes

with type designation(s)
Karat Maxi Plus™, X strand

Manufactured by
Europe A.B.E.E.
PIRAEUS, Greece

is found to comply with
Det Norske Veritas' Type Approval Programme 1 Edit 1, 2012, Synthetic Fibre Ropes for Towing, Mooring and Anchoring of Ships and High Speed and Light Craft
ISO Standard 2307

Application:
Mooring and Towing of Ships and HSLCs

This Certificate is valid until 2017-06-06
Issued at Høvik on 2013-06-06
DNV local station: Piraeus
Approved Engineer: Stella Nanouki

for Det Norske Veritas AS
Hans-Axel Straßny
Head of Section

Form No.: TE 107 a Issue: December 2012

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DNV Type Approval Certificate KARAT® MAXI Plus

IDENTIFICATION

EuroRope Marine has implemented ID marking on all KARAT® fibre rope products, both mooring ropes and tails.

Each mooring rope or tail has a stainless ID-tag with an individual four or five digit number. This number is also endorsed on the corresponding individual works certificate.

The ID-tag is located in the splice of the mooring rope or tail (one ID-tag per eye splice) and with the EuroRope Marine's ID-marking system, keeping record of rope performance and age will be an easy task.

The ID number on the stainless tag corresponds with the last four or five digits of the certificate number.

* Diameter, weight and MBL (as well as other mechanical and physical properties) are determined according to ISO 2307:2010. The MBL refers to the breaking strength of the fiberrope/wirerope itself, without splices or any other kind of termination that can be made with or without the use of accessories/fittings.

KARAT® MAXI PLUS

8-STRAND

KARAT® MAXI has become standard terminology in high quality mooring applications. Very high strength/weight ratio allows substantial size reductions and ease in handling, as well as providing excellent overall economy.
The new KARAT® MAXI PLUS ropes have the same properties but offer a higher MBL and much better abrasion resistance. The new KARAT® MAXI PLUS is DNV Type approved.

- **Highest strength of the conventional permanently floating mooring ropes**
- **High abrasion resistance**
- **No loss of strength when wet**
- **High energy absorption**
- **Very low snap-back effect**
- **Manufactured according to ISO and OCIMF**
- **EStalon™ is a polyester/polypropylene melt mixture**
- **Eurolefin™ in the outer yarn**

Dia. mm	Weight kg/100m	MBL* kN	MBL* Tonnes
32	52	221	22,5
36	66	278	28,3
40	80	344	35,1
44	97	411	41,9
48	115	483	49,2
52	136	560	57,1
56	157	644	65,6
60	181	731	74,5
64	206	827	84,3
68	232	927	94,5
72	260	1033	105,3
76	291	1138	116
80	321	1243	126,7
88	389	1384	141,1
96	463	1637	166,9
104	544	1833	187
112	630	2111	215
120	724	2418	246
128	823	2744	280
136	929	3102	316

FACTS

Melting point:	185˚C
Spec. Gravity:	0,99
Water absorption:	0%
Reduction of MBL when wet:	0%
Bending Ratio, Dynamic ISO 3730	9:1
Elongation, new rope:	18%
Elongation, broken-in ropes (15-20 operations)	11%
On request: larger diameter, different color, 12 strand	

KARAT® MAXI PLUS TAILS

8-STRAND

EuroRope Marine supplies a wide range of KARAT® MAXI PLUS mooring tails to suit different dimensions steel wire mooring ropes. We can offer both single leg TAILS and double leg endless RINGTAILS.

Mooring tails are typically supplied in lengths of 11 m with 2,0 m and 1,0 m covered eyes. Studies performed by OCIMF have indicated tail lengths of 22 m for exposed berths.

Because synthetic ropes are likely to deteriorate more rapidly than wire ropes, tails should be at least 25% stronger than the steel wire ropes to which they are attached (NOTE: +37% for Nylon). The mooring tails should be inspected frequently and replaced at regular intervals. (18 months as per OCIMF recommendations).

See below tables with MBL for typical dia steel wire mooring ropes construction 6x36WS+IWRC (steel core) tensile 1960 N/mm². The tables also provide strength calculations for selecting suitable dia KARAT® MAXI TAILS or RINGTAILS.

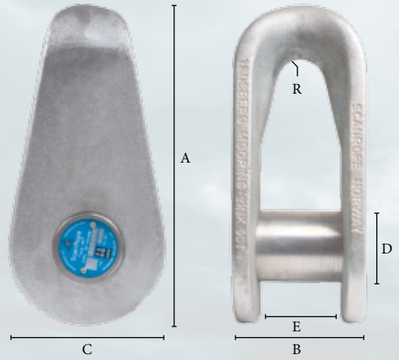
Steel wire rope 6x36WS+IWRC Dia. mm	MBL, T	Required MBL for tail, T	Maxi Plus Karat® Dia. mm	Maxi Plus Tails MBL, T	Maxi Plus Tails Weight kg	Maxi Plus Ringtails Karat® Dia. mm	Maxi Plus Ringtails MBL, T	Maxi Plus Ringtails Weight kg
32	72,9	91,1	68	94,5	40	56	105	41
34	82,4	103,0	72	105,3	46	56	105	48
36	92,3	115,4	76	116,0	52	60	119	48
38	103,0	128,8	88	141,1	72	64	135	55
40	114,0	142,5	96	166,9	87	68	151	63
42	126,0	157,5	96	166,9	87	72	168	71
44	138,0	172,5	104	187,0	104	76	186	81

Steel wire rope 6x36WS+IWRC Dia. mm	MBL, kN	Required MBL for tail, kN	Maxi Plus Karat® Dia. mm	Maxi Plus Tails MBL, kN	Maxi Plus Tails Weight kg	Maxi Plus Ringtails Karat® Dia. mm	Maxi Plus Ringtails MBL, kN	Maxi Plus Ringtails Weight kg
32	715	894	68	927	40	56	1037	41
34	807	1009	72	1033	46	56	1037	48
36	905	1131	76	1138	52	60	1178	48
38	1010	1263	88	1384	72	64	1332	55
40	1117	1396	96	1637	87	68	1493	63
42	1232	1540	96	1637	87	72	1664	71
44	1352	1690	104	1833	104	76	1833	81

TØNSBERG MOORINGLINK

Tønsberg Mooring Link - galvanised steel mooring link of compact design typically utilised as connection between wire rope and fibre tail. Available in three sizes 90 T, 120 T and 180 T. 300 T can be supplied on special request.

Link 90 T Tail 56-68 mm	Link 120 T Tail 72-80 mm	Link 180 T Tail 88-112 mm
A = 285 mm	A = 324 mm	A = 350 mm
B = 115 mm	B = 142 mm	B = 184 mm
C = 136 mm	C = 150 mm	C = 160 mm
D = 65 mm	D = 75 mm	D = 85 mm
E = 75 mm	E = 90 mm	E = 120 mm
R = 22 mm	R = 28 mm	R = 30 mm
Breaking load: 90 tonnes	*Breaking load:* 120 tonnes	*Breaking load:* 180 tonnes
Proof load: 45 tonnes	*Proof load:* 60 tonnes	*Proof load:* 90 tonnes
Weight: 11,2 kg	*Weight:* 16,9 kg	*Weight:* 25 kg



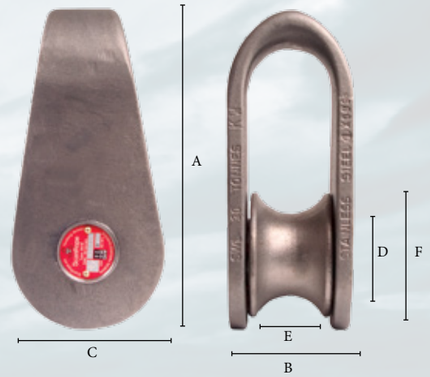
Each link is proof tested and certified by DNV. DNV Type Approval.

MANDAL FAIRLEADSHACKLE

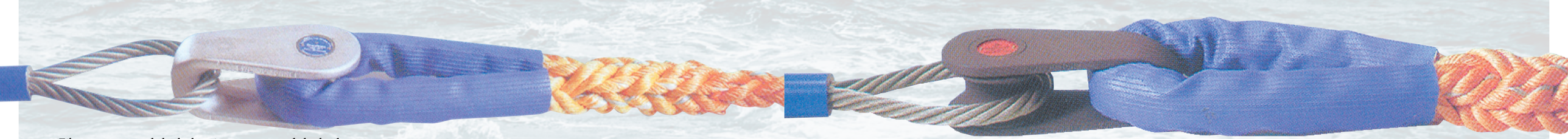
Mandal Fairlead Shackle - Stainless steel mooring shackle with sleek shape designed to pass through fairleads.

Available in two sizes 90 M and 120 M.

Shackle 90 M Tail 56-64 mm	Shackle 120 M Tail 68-80
A = 255 mm	A = 300 mm
B = 97 mm	B = 121 mm
C = 120 mm	C = 130 mm
D = 65 mm	D = 82 mm
E = 67 mm	E = 90 mm
F = 100 mm	F = 128 mm
R = 34 mm	R = 34 mm
Breaking load: 90 tonnes	*Breaking load:* 120 tonnes
Proof load: 45 tonnes	*Proof load:* 60 tonnes
Weight: 7,8 kg	*Weight:* 13,3 kg

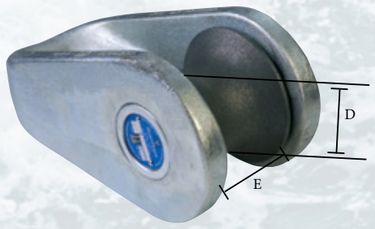


Each shackle is proof tested and certified by DNV. DNV Type Approval.

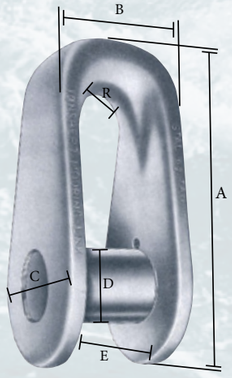


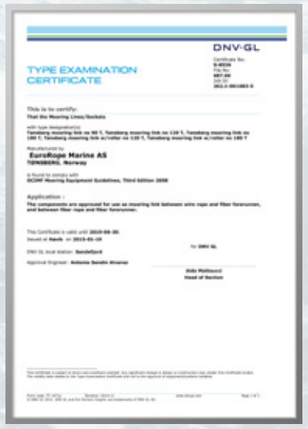
Fibre rope around the bolt, wire rope around the body.

Tønsberg Mooring Link with roller		
	120 T	180 T
Opening E	90 mm	120 mm
Roller dia.D	82 mm	97 mm
Weight	2,1 kg	4,5 kg

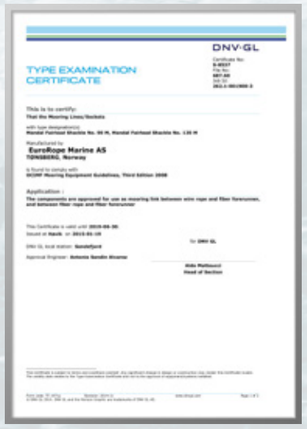


Tønsberg Mooring Link 300T
A = 447 mm
B = 216 mm
C = 190 mm
D = 110 mm
E = 146 mm
R = 36 mm
Breaking load: 300 tonnes
Safe working load: 100 tonnes
Weight: 52 kg
With Works certificate





DNV Type Approval Certificate
Tønsberg Mooring link



DNV Type Approval Certificate
Mandal Fairlead shackle

Key spanner

KARAT® WINCHLINE

6-STRAND

KARAT® WINCHline combines the unique characteristics of the high strength KARAT®-fibres with a 6-strand ”wire rope lay” construction. The outer layer of each strand comprises a special combination of Nylon monofilaments and Nylon multifilaments. KARAT® WINCHline is designed to be used on self tensioning winches and is DNV Type Approved.

- **High resistance to deformation**
- **No crushing or jamming on winch**
- **High abrasion resistance**
- **Excellent fatigue properties giving longer lifetime**
- **High strength gives better safety**
- **Maintenance free**

Dia. mm	Weight kg/100m	MBL* kN	MBL* Tonnes
40	104	324	33
44	121	412	42
48	144	491	50
52	169	530	54
56	197	657	67
60	225	706	72
64	257	804	82
68	290	922	94
72	325	1059	108
78	375	1157	118
80	401	1236	126

FACTS

Melting point	250˚C
Spec. Gravity	1,1
Water absorption	2%
Reduction of MBL when wet	1%
Bending Ratio, Dynamic ISO 3730	12:1
Elongation, new rope:	25%
Elongation, broken-in ropes (15-20 operations)	18%

BUOYANT WINCHLINE

6-STRAND

BUOYANT WINCHline™ is a unique fibre rope with a 6-strand ”wire rope lay” construction. The outer layer of each strand comprises a special combination of Nylon monofilaments and PP multifilaments. BUOYANT WINCHline™ is designed to be permanently floating and to be used on self tensioning winches.

- **Light weight - floats**
- **High resistance to deformation**
- **No crushing or jamming on winch**
- **High abrasion resistance**
- **Excellent fatigue properties giving longer lifetime**
- **High strength gives better safety**
- **Maintenance free**

Dia. mm	Weight kg/100m	MBL* kN	MBL* Tonnes
40	99	308	31,4
44	115	391	39,9
48	137	466	47,5
52	161	503	51,3
56	187	625	63,7
60	214	671	68,4
64	244	764	77,9
68	276	876	89,3
72	309	1007	102,6
80	381	1174	119,7

FACTS

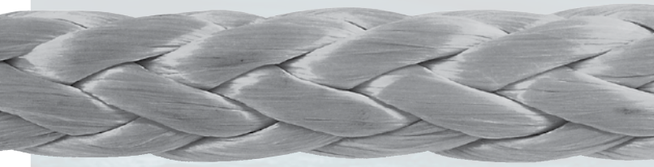
Melting point	250/165˚C
Spec. Gravity	0,99
Water absorption	2%
Reduction of MBL when wet	1%
Bending Ratio, Dynamic ISO 3730	12:1
Elongation, new rope	23%
Elongation, broken-in ropes (15-20 operations)	15%

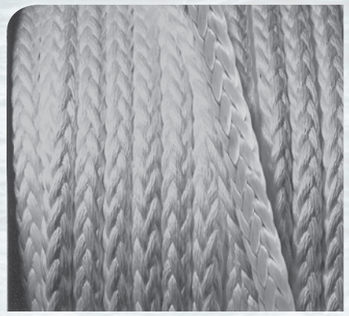
DYNAMAX™

12- STRAND

Twelve strand braided rope, made from DYNEEMA™ HMPE grade SK 75, has the highest strength to weight ratio in the current range of braided ropes.

- **Light weight – floats**
- **High strength – similar, size for size, to wire rope**
- **Torque balanced 12 strand braided construction**
- **Abrasion resistant polyurethane coating**





Dia. mm	Weight kg/100m	MBL* Tonnes
6	2,3	4
8	3,9	6
10	5,8	9
12	8,3	13
14	11,3	18
16	14,7	23
18	18,6	26
20	23,0	29
22	27,8	44
24	33,2	52
26	39,0	61
28	45,2	71
30	51,9	81
32	59,0	92
34	63,9	100
36	71,4	112
38	79,9	125
40	88,2	138
44	106,7	153
48	126,5	167

FACTS

Melting point	135˚C
Spec. Gravity	0,97
Water absorption	0%
Reduction of MBL when wet	0%
Bending Ratio, Dynamic ISO 3730	9:1
Elongation, new rope	5%
Elongation, broken-in ropes (15-20 operations)	3%
On request, larger diameter, different. color, 12 strand	

DYNAMAX™ PLUS

12- STRAND

Twelve strand braided rope, made from DYNEEMA™ HMPE grade SK 75, with a braided jacket of polyester. This gives a compact, round rope with a circular cross section and good spooling qualities.

Dynamax™ Plus with Polyester jacket is manufactured for applications where heavy abrasion is expected. Polyester has low friction against steel.

For special applications our Dynamax Plus can be manufactured with other type of jackets (dyneema, composite, etc.).

- **High abrasion resistance**
- **High strength/weight ratio**
- **Very low elongation**
- **Balanced construction**

Dia. mm	Weight kg/100m	MBL* Tonnes
8	6,0	5,5
10	9,0	8,2
12	13,0	11,9
14	18,0	16,4
16	23,0	21
18	29,6	27
20	36,0	32,9
22	44,0	40,1
24	36,4	47,5
26	61,0	55,7
28	71,0	64,8
30	81,0	73,9
32	87,0	79,4
34	92,0	84
36	105,0	95,8
38	105,3	106,8
40	117,9	119,6
42	129,6	131,4
44	144,9	147
48	174,6	159,1
52	204,3	175,4
56	239,4	188
60	255,6	205
64	293,4	221

FACTS

Melting point	265 / 135°C
Spec gravity	1,06
Water absortion	0%
Reduction of MBL when wet	0%
Bending ratio, Dynamic ISO 3730	9:1
Elongation, new rope	5%
Elongation, broken-in ropes (15-20 operations)	3%

STOCK POINTS

Please direct all enquiries for KARAT MAXI PLUS to the sales office in Tønsberg, Norway, from where worldwide stocks are handled.

EuroRope Marine AS
Stensarmen 9 I N-3112 Tønsberg, Norway.
P: +47 46 88 68 30
E: mailbox@euroropemarine.no

EuroRope Marine