SIZES AND STRENGTHS

D2 RACING 75 (DYNEEMA®)

Diameter (mm)	8	10	12	14	16	18
Average Break Load (kg)	3950	5360	6690	9274	11592	14919
Weight (kg/100m)	3.90	5.92	9.29	11.66	14.69	18.52

D2 COMPETITION 75 (DYNEEMA®)

Diameter (mm)	8	10	12
Average Break Load (kg)	2025	3950	5360
Weight (kg/100m)	4.83	7.63	9.71

EXCEL FUSION 75 (DYNEEMA®)

Diameter (mm)	6	7	8	10
Average Break Load (kg)	590	1085	1450	2472
Weight (kg/100m)	1.7	2.2	3.0	4.4

MARLOWBRAID (POLYESTER)

Diameter (mm)	6	8	10	12	14	16	18	20
Average Break Load (kg)	901	1740	2850	4450	5460	7420	10190	11340
Weight (kg/100m)	3	4.5	7.3	10	14.5	19	23.5	28.5

MATTBRAID (POLYESTER)

Diameter (mm)	8	10	12	14	16	18	20
Average Break Load (kg)	1395	3000	3510	5450	6200	7900	10110
Weight (kg/100m)	4.4	7.4	10.3	14.6	18.6	24.4	29.8

DOUBLEBRAID (POLYESTER)

Diameter	6mm	8mm	10mm	12mm	14mm	16mm	18mm
Average Break Load (kg)	1230	1900	2300	3350	5100	6200	7500
Weight (kg / 100m)	2.90	5.20	8.20	11.60	15.30	21.60	26.00

EXCEL MARSTRON (POLYPROPYLENE)

Diameter (mm)	6	8
Average Break Load (kg)	700	850
Weight (kg/100m)	2.3	3.1

EXCEL CONTROL

Diameter (mm)	4	5
Average Break Load (kg)	562	877
Weight (kg/100m)	1.02	1.59

EXCEL D12 (DYNEEMA®)

Diameter (mm)	2.5	3	4	5	6
Average Break Load (kg)	569	995	2056	2395	3230
Weight (kg/100m)	0.37	0.53	0.98	1.28	1.77

EXCEL RACING (DYNEEMA®)

Diameter (mm)	1.5	2	3	4	5	6
Average Break Load (kg)	172	211	463	1152	1410	2025
Weight (kg/100m)	0.15	0.34	0.6	1	1.9	2.5

EXCEL PRO (POLYESTER)

Diameter (mm)	2	3	4	5	6	8
Average Break Load (kg)	97	199	377	687	906	1420
Weight (kg/100m)	0.28	0.65	0.9	2	3	4.5

8 PLAIT PRE-STRETCHED (POLYESTER)

Diameter (mm)	4	5	6	8
Average Break Load (kg)	428	617	891	1413
Weight (kg/100m)	1.3	2.1	2.9	5.5

3 STRAND PRE-STRETCHED (POLYESTER)

Diameter (mm)	3	4	5	6	8	10	12
Average Break Load (kg)	319	583	1034	1694	2178	2640	3344
Weight (kg/100m)	0.98	1.61	2.07	3.06	4.81	8.23	10.66

DOCKLINES

Diameter (mm)	12	14	16
Average Break Load (kg)	4150	6250	7600
Weight (kg/100m)	7.91	12.74	16.64

3 STRAND STANDARD (POLYESTER)

Diameter (mm)	4	6	8	10	12	14	16	18	20	24	28	32
Average Break Load (kg)	529	941	1465	2570	3170	3930	4766	6600	9230	11210	14640	18840
Weight (kg/100m)	1.21	2.73	4.8	7.85	10.9	14.9	19.4	24.6	30.3	46	62.8	82

MULTIPLAIT (NYLON)

Diameter (mm)	8	10	12	14	16	18	20	24	28	32
Average Break Load (kg)	1900	2770	3800	4670	6640	7270	9890	14370	18550	23930
Weight (kg/100m)	4.2	6.5	9.4	12.8	16.6	21	26	37.3	51	66.4

ROPE CARE

At **Marlow**, we know what our ropes will do. How well they can be expected to perform. How long they are likely to last and under what conditions. That's our business. The fact remains that the best ropes in the world deserve to be well looked after in order to preserve their reliability, durability and performance.

Coiling and Uncoiling Not always as simple as it sounds. Pulling wrongly from a coil or reel can cause kinks where one strand turns over into a tight little loop and stands out like a vein much reducing the strength of the rope. The answer is to coax out the kink before any damage is done.

Nipping A sharp bend is something to avoid. It means that only about half of the rope's fibres are taking the load - the remaining fibres being rendered ineffective by compression. This in turn puts undue strain on the remaining fibres.

Wear There's no problem in storing synthetic ropes in a wet state. The risk of deterioration is minimal. The real risk is if they remain in the same position for long periods of use. If signs of wear are there to see, the rope can be reversed one end to the other in order to spread the wear. Alternatively, use slightly longer ropes than needed in the first place and periodically move the bearing position a few inches. The furry look of a well used synthetic rope may indicate a slight strength loss however the hairy surface helps to protect the rope against further abrasion. If the rope shows excessive wear i.e. a plaited cover worn right through, the rope will need to be replaced.

Abrasion Something to watch for with every rope. Checking the blocks, cleats and fairleads for burrs and imperfections allowing the rope to pass freely minimise the risk, although many problems are often due to using the wrong sized rope for the fitting. Only a regular inspection will keep you out of trouble.

Information on recommended sheave diameters are available from our technical department.

Heat Damage Friction can cause strands to melt both externally and internally. But as the melting point of most rope fibre are between 130° - 260°C the risk of real damage under normal sailing conditions is slight. If you think a rope has been overloaded, open the strands to check for heat damage (fusing of strands).

Splicing A correctly spliced rope has between 90 - 95% of the strength of the unspliced rope. Regular inspection of the splice makes sense. For example, a plaited rope splice where new fibres sometimes appear at the neck. If this can be seen the splice is slipping.

End of Season Salt crystals will affect the life and efficiency of ropes so, at the end of each season, soak them in fresh warm water.

KEEL BOATS Sheets and Halyards Size Selector

Charts show usual sail area in square feet for a given boat length in metres. If your boat is rigged with larger sails, use the rope size indicated for the sail area.

Overall Yacht Length (m)	6-8	9	10	11	12	14	16	18
Approx. Sail Area sq.ft.								
MAIN	90	144	171	198	252	405	540	720
GENOA/JIB	100	180	270	360	450	630	765	900
SPINNAKER	405	495	585	765	990	1260	1620	1980
SHEET SIZE diameter (mm)								
MAIN	8	10	10	10	12	12	14	16
GENOA/JIB	8	10	10	12	12	14	16	18
SPINNAKER	8	8	8	10	10	12	14	16
SPINNAKER/GUY	8	8	10	10	12	14	16	18
Suggested SHEET ropes. MARLOWBRAID, Mattbraid, D2 Racing								
HALYARD SIZE diameter (mm)								
MAIN	10	10	12	12	14	14	18	20
GENOA/JIB	10	10	12	12	14	14	18	20
SPINNAKER	8	8	10	10	12	12	14	16
Suggested HALYARD ropes. Marlowbraid, D12 Racing Remember for D2 Racing, V2Racing Sheets or Halyards you can go down a size.								
MOORING ROPES diameter (mm)								
Displacement (approx) tonnes	2	4	5	6.5	8	11	12	20
POLYESTER	8-10	12	12	14	14	16	18	24
POLYPROPYLENE (Nelson)	10-12	14	16	18	20	20	24	28
Suggested MOORING ropes. 3-Strand Standard Polyester, Docklines.								
ANCHORS WARPS, PAINTER LINES								
NYLON	12	14	16	16	18	20	20	24
POLYESTER	14	16	18	18	20	24	24	24
NYLON (KEDGE)	8	8	10	10	10	12	12	12
Suggested ropes. Multiplait nylon.								
ANCHOR AND CHAINS								
BRUCE	5	7.5	10	10	15	20	20	30
DANFORTH & CQR	8	14	14	14	19	25	25	34
CHAIN	8	8	10	10	10	12	12	12
Bruce, Danforth and CQR anchor on kg. Other sizes are diameter in mm								

DINGHIES

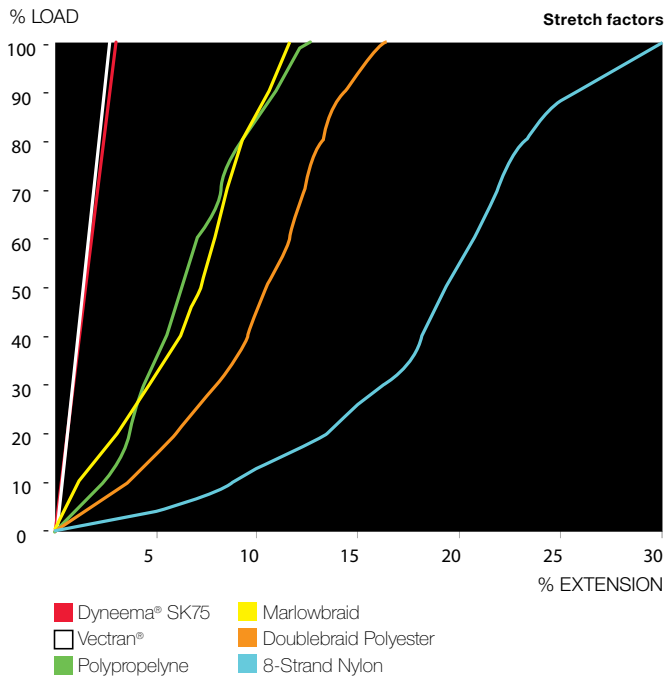
Sizes are diameter (mm)	HALYARDS Excel Racing Excel Pro Pre-Stretched	SHEETS 8-PlaitMatt Mattbraid 8-Plait Marston	Colour Code
MAIN	5 or 6	8 or 10	White
JIB	5 or 6	8 or 10	Blue
SPINNAKER	5 or 6	6	Red

CONTROL LINES 4mm or 5mm 8-Plait Pre-Stretched or Excel Pro. Where very low stretch is required use Excel D12 or Excel Racing.

Remember, when using Excel Racing for control lines and halyards you can go down a size, when using Excel D12 you can go down two sizes

Remember, this selection guide holds only part of Marlow's extensive range - ask your local **Marlow** dealer for information on our other products, or visit **www.marlowropes.com**

RIGGING GUIDE



The three-way stretch There are three terms for the ways in which halyards and sheets stretch under tension: (1) elastic stretch - in which recovery is total and immediate: (2) recoverable stretch - difficult to allow for, because recovery towards the original length after tension is gradual: (3) nonrecoverable stretch (creep) from which even the best rope never quite recovers its length due to changes in its geometry.

This graph shows figures for the total stretch of a selection of **Marlow** ropes after working six times to 50% of break. Note the low stretch of the plaited ropes and the extent to which stretch decreases after working.

THE ROPE SELECTION GUIDE 09

Marlow®

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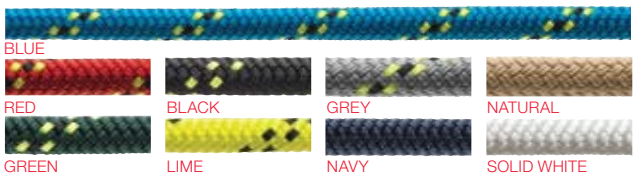
SHEETS

D2 RACING 75 12 Strand Dyneema ® SK75 core | 24 plait polyester cover

Halyards | Sheets | Guys | Control lines | Out/downhauls | Reefing lines | Runner-tails | Vang | Furlers

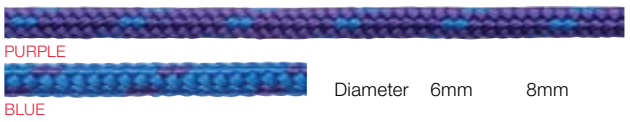


Diameter 8mm 10mm 12mm 14mm 16mm

Benefits
- Dyneema core is light weight - reduces onboard weight and makes the rope easier to handle.
- Dyneema core is high strength - upgrade polyester halyards by choosing a smaller diameter and achieve further weight savings and handling improvements.
- Pre-stretching the core results in very low stretch - far fewer rig adjustments when sailing.
- Polyester jacket provides superior performance in clutches and jammers and gives excellent abrasion resistance and greater longevity.
- Easily spliced and tapered for a safer rig and further weight saving.

EXCEL MARSTRON 16 plait polypropylene | polypropylene core

Sheets



Diameter 6mm 8mm

Benefits
- Very lightweight floating mainsheet reducing overall sailing weight.
- Cost effective option for light airs.
- 16 plait cover provides smooth profile but maintains grip for the user.

MARLOWBRAID 3 Strand polyester core | 16 plait polyester cover

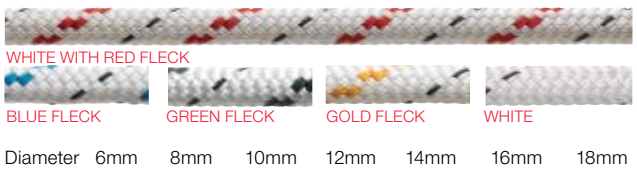
Halyards | Sheets | Guys | Control lines | Out/downhauls | Reefing lines | Runner-tails | Vang | Furlers

Diameter 6mm 8mm 10mm 12mm 14mm 16mm 18mm 20mm

Benefits
- Stronger than braid-on-braid ropes – gives increased safety factor.
- Twisted 3-strand core gives less stretch than braid-on-braid - fewer rig adjustments while sailing.
- Tough polyester jacket - provides excellent abrasion resistance and greater longevity.
- Relatively quick and easy to splice.
- An excellent all round rope for most on board applications.

DOUBLEBRAID 12 Strand braided polyester core | Braided polyester 24 plait cover

Sheets | Guys | Control lines | Out/downhauls | Runner-tails | Reefing lines | Vang | Furlers

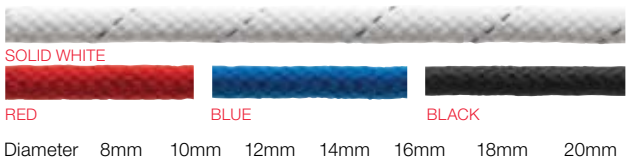


Diameter 6mm 8mm 10mm 12mm 14mm 16mm 18mm

Benefits
- Braid on Braid construction – easily spliced.
- Versatile rope can be used on most applications on cruising boats.
- Construction provides a soft and flexible rope – easy handling

MATTBRAID 3 Strand polyester core | 16 plait matt polyester cover

Sheets | Guys | Control lines | Out/downhauls

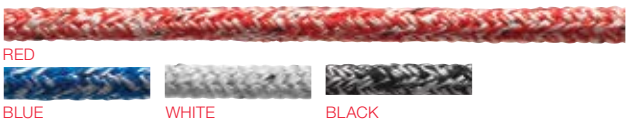


Diameter 8mm 10mm 12mm 14mm 16mm 18mm 20mm

Benefits
- Twisted 3-strand core gives less stretch than braid-on-braid - fewer rig adjustments while sailing.
- Soft matt cover providing comfort and grip for the sailor when handling the rope when wet or dry.
- Knots and splices easily.

EXCEL FUSION 75 Dyneema ® SK75 core | Blended Dyneema ® & polypropylene cover

Sheets



Diameter 6mm 7mm 8mm 10mm

Benefits
- Lightweight cover does not absorb water - helps reduce weight.
- Dyneema in the cover - excellent abrasion resistance.
- Pre-stretched Dyneema core – very low stretch, very light weight.
- Easily tapered – further reduces sheet weight in areas that aren't handled.
- Dyneema and polypropylene covering and pre stretched Dyneema ® core provide the strongest lightweight dingy mainsheet on the market.

HALYARDS AND CONTROL LINES

D2 RACING 75 12 Strand Dyneema ® SK75 core | 24 plait polyester cover

Halyards | Sheets | Guys | Control lines | Out/downhauls | Reefing lines | Runner-tails | Vang | Furlers

Diameter 8mm 10mm 12mm 14mm 16mm

Benefits
- Dyneema core is light weight - reduces onboard weight and makes the rope easier to handle.
- Dyneema core is high strength - upgrade polyester halyards by choosing a smaller diameter and achieve further weight savings and handling improvements.
- Pre-stretching the core results in very low stretch - far fewer rig adjustments when sailing.
- Polyester jacket provides superior performance in clutches and jammers and gives excellent abrasion resistance and greater longevity.
- Easily spliced and tapered for a safer rig and further weight saving.

NEW

EXCEL CONTROL Twisted polypropylene core | Polyester & Technora ® cover

Technora.

Control lines

Diameter 4mm 5mm

Benefits
- Specifically designed for use as a continuous control line
- Durable Technora & polyester cover for high strength and abrasion resistance
- Light weight polypropylene core
- Snakeskin cover allows polyester yarns to be tapered out when splicing
- End to end splice with no diameter increase.

EXCEL PRO Twisted polyester core | 16 plait polyester cover

Halyards | Sheets | Control lines | Kickers, | Out/downhauls | Backstays

Diameter 2mm 3mm 4mm 5mm 6mm 8mm

Benefits
- Distinctive colours, makes for easy line identification while racing.
- Twisted polyester core reduces stretch for an economic price.
- Durable 16 plait cover protects against wear, increasing the lines life.
- Rope holds in cleats well making it ideal for halyards and control lines.

2mm & 3mm available in mixed packs of handy Mini-Spools.

D2 COMPETITION 75 12 Strand Dyneema ® SK75 core | 16 plait polyester traction jacket and cover

Halyards | Sheets | Guys | Control lines | Out/downhauls | Reefing lines | Runner-tails | Vang

Diameter 8mm 10mm 12mm

Benefits
- Dyneema core is light weight - reduces onboard weight and makes the rope easier to handle.
- Dyneema core is stronger than standard polyester ropes – gives you an increased safety factor.
- Less stretch than polyester ropes - far fewer rig adjustments when sailing.
- Sacrificial internal traction jacket makes splicing much easier.
- Dyneema ropes can be tapered – saves more weight and makes handling even easier.
- A cost effective option to upgrade to Dyneema without worrying about changing deck gear.

EXCEL D12 12 Strand Dyneema ® SK75

Control lines | Trapeze lines | Kicker | Out/downhauls | Lashings | Backstays

Diameter 2.5mm 3mm 4mm 5mm 6mm

Benefits
- Lightweight – reduces weight, especially at the top of the rig when used as a halyard.
- Marlow ArmourCoat, increases the life of the rope by reducing UV and abrasion fatigue.
- Does not absorb water so floats and remains light weight when sailing.
- Quick and easy to splice, less time preparing the boat more time on the water.

8 PLAIT PRE-STRETCHED Twisted polyester core | 8 plait polyester cover | pre-stretched

Halyards | Control lines | Out/downhauls | Kicker | Backstays

7 AND 8MM ONLY AVAILABLE IN WHITE

Diameter 4mm 5mm 6mm 8mm

Benefits
- Marlow Pre-stretching process ensures minimal stretch for the user.
- Distinctive colours, makes for easy line identification while racing.
- Rope holds in cleats very well making it ideal for halyards and control lines.
- Multiple use line.

MARLOWBRAID 3 Strand polyester core | 16 plait polyester cover

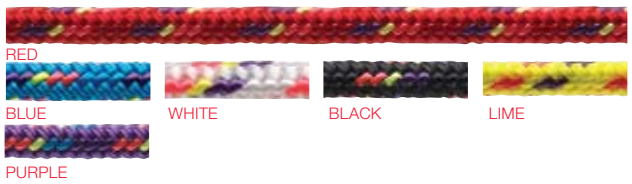
Halyards | Sheets | Guys | Control lines | Out/downhauls | Reefing lines | Runner-tails | Vang | Furlers

Diameter 6mm 8mm 10mm 12mm 14mm 16mm 18mm 20mm

Benefits
- Stronger than braid-on-braid ropes – gives increased safety factor.
- Twisted 3-strand core gives less stretch than braid-on-braid - fewer rig adjustments while sailing.
- Tough polyester jacket - provides excellent abrasion resistance and greater longevity.
- Relatively quick and easy to splice.
- An excellent all round rope for most on board applications.

EXCEL RACING Dyneema ® SK75 core | 16 plait polyester cover

Halyards | Sheets | Control lines | Kickers | Out/downhauls | Backstays | Ties/lashing



Diameter 1.5mm 2mm 3mm 4mm 5mm 6mm

Benefits
- Braided Dyneema core –easy to taper (4mm +).
- 16 plait cover – hardwearing, easy to grip in small diameters.
- Holds in cleats, makes it ideal for halyards and control lines.
- Distinctive colours, makes for easy line identification while racing.
- Marlow Pre-stretched, ensures line will have minimal stretch when used.
- Flexibility through tight radii of blocks.

3 STRAND PRE-STRETCHED 3 Strand polyester | pre-stretched

Halyards | Control lines | General purpose

Diameter 3mm 4mm 5mm 6mm 8mm 10mm 12mm

Benefits
- General purpose rope.
- Low stretch – good for traditional halyards.
- Very easily spliced.

MOORING LINES

DOCKLINE Braided nylon core | 16 plait polyester

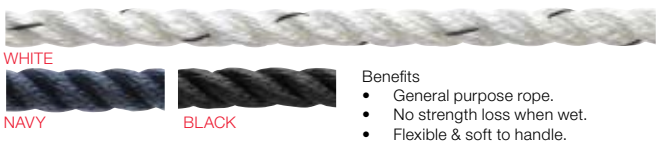
Mooring

Diameter 12mm 14mm 16mm 18mm 20mm

Benefits
- Shock absorbing.
- Abrasion resistant
- Stronger than 3 Strand polyester or nylon.
- Easily spliced.
- Comfortable to handle

3 STRAND POLYESTER 3 Strand polyester

Mooring | General purpose



Benefits
- General purpose rope.
- No strength loss when wet.
- Flexible & soft to handle.
- Very easily spliced.
- Good abrasion resistance

Diameter 4mm 6mm 8mm 10mm 12mm 14mm 16mm 18mm 20mm 24mm 28mm 32mm

MULTIPLAIT NYLON 8 Strand nylon

Anchoring | Mooring

Benefits
- Elasticity with flexibility
- Absorbs high shock loads
- Flexible & soft to handle
- Easily eye spliced and to chain – features special markers
- Stows neatly in chain locker

Diameter 8mm 10mm 12mm 14mm 16mm 18mm 20mm 24mm 28mm 32mm

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