



marine braid range

performance



DONAGHYS
PERFORMANCE FIRST



COVER PAGE:
 Emirates Team New Zealand
 TP52 racing in Europe.
 Photography by Ian Roman.

THIS PAGE:
 ABN AMRO One racing wins Volvo
 Round the World Ocean Race 2005-06.
 Ericsson 4 wins Volvo Round the
 World Ocean Race 2008-09.
 Photography by Rick Tomlinson.

reliability

ROUND THE WORLD OCEAN RACE ACHIEVEMENTS

- 1981-82
 Outward Bound, New Zealand, Digby Taylor
 Ceramco, New Zealand, Peter Blake
- 1985-86
 Lion New Zealand, Peer Place
 NZI Enterprise, New Zealand, Digby Taylor
- 1989-90
1st: Steinlager 2, New Zealand, Peter Blake
2nd: Fisher and Paykel, New Zealand, Grant Dalton
- 1993-94
1st Maxi: NZ Endeavour, Grant Dalton
2nd Maxi: Merit Cup, Switzerland, Pierre Fehlmann
 Whitbread 60 class:
1st: Yamaha, Japan, Ross Field
2nd: Intrum Justitia, Europe, Lawrie Smith
3rd: Galicia 93 Pesconova, Spain, Javier Gandara
 Winston, USA, Dennis Conner, Brad Butterworth
 Tokio, Japan, Chris Dickson
- 1997-98
2nd: Merit Cup, Monaco, Grant Dalton
3rd: Swedish Match, Sweden, Gunnar Krantz
 Innovation Kvaerner, Norway, Knut Frostad
 Toshiba, USA, Dennis Conner, Paul Standbridge
- 2001-02
3rd: Amer Sports One, New Zealand, Grant Dalton
 News Corp, New Zealand, Jez Fanstone
 Amer Sports Too USA/UK, Lisa McDonald
- 2005-06
1st: ABN AMRO One, Netherlands, Mike Sanderson
3rd: Brasil 1, Brazil, Torben Grael
 ABN AMRO Two, Netherlands, Sebastien Josse
- 2008-09
1st: Ericsson 4, Torben Grael

“Reliability is key to not losing;
 never in all our racing have
 Donaghys products let us down.”
 –GRANT DALTON, EMIRATES TEAM NEW ZEALAND

There's no substitute for expertise, experience, and achievement. Qualities not lost on skippers, riggers, boat builders and designers the world over when looking for the best in marine braids for their vessels.

From simple beginnings as a small ropeworks founded in 1876 by John Donaghy in Dunedin New Zealand, Donaghys now demand respect as the key developer and manufacturer of some of the most technically advanced marine braids available.

The acquisition of Southern Ocean Ropes in 2006, creating the brand Donaghys Southern Ocean, ensured their market would always benefit by having the best in research and development available to them. With a dogged commitment and focus to providing new levels of service in a very competitive environment, Donaghys production personnel understand what 'quality' is demanded of them and their products - reliability.



DONAGHYS
 PERFORMANCE FIRST



application

Carefully blended yarns within leading edge constructions, take rope performance to a new level making Donaghys the first choice for leading racing teams. Choosing Donaghys could make the difference between winning and losing, so don't take that risk.

construction

Donaghys high performance range, including Ocean12, offer the ultimate in performance running rigging. Core and cover combinations are carefully selected to work in unison producing the elite sailing solution for all racing and super yachts.

high performance

Donaghys extensive yacht braid range covers the family cruiser through to the serious racer. High tech durable products provide both performance and cost effective ropes along with a brand you can depend on whatever your situation.

cruising

Donaghys continue to support Olympic sailors with high performance braids for their International class boats. With the advancements in performance rope fibres and technology, Donaghys has expanded our range to include new braids for dinghy racers and sailors.

dinghy

To secure your most valued asset, you want a mooring system you can trust – Donaghys Docklines and Flexline.

Constructed to offer high strength and good elasticity, Donaghys mooring systems provide good looking rope that will not fade or discolour, and offer long service life with excellent abrasion characteristics.

mooring

Donaghys complete range of general braids round off a comprehensive product offering. From tying down to water ski braid to rope cutters, Donaghys have a product that will meet your requirements.

We are suppliers to one of the worlds' largest sailmakers. Our consistent quality and service make us their 'first choice' for braid and cord everytime.

general

construction



coatings

ARMORCOAT

Donaghys Armorcoat is specifically designed to work with high performance fibres enhancing their abrasion resistance, UV protection and to make splicing easier. The state of the art aqueous aliphatic coating utilises nanotechnology to bond to the individual fibres creating a protective barrier on the braid.

BINDACOAT

Donaghys Bindacoat is designed to act as an intermediary membrane linking high performance cores to their covers eliminating core cover slippage. This allows Donaghys to maximise the amount of material packed into a core greatly increasing the performance of the product. Bulky intermediate covers take up this valuable space reducing cost but also greatly reducing the performance.

WATERSHIELD

Donaghys Watershield can be used by itself or combined with either Armorcoat or Bindacoat to obtain a durable water resistant coating on most fibres.

fibre qualities

DESCRIPTION	FIBRE TYPE	SPECIFIC GRAVITY	SENSITIVE TO	RESISTANT TO	HEAT REACTION	STRENGTH AND ELONGATION
HT Polyester	Continuous Filament	1.38	Alkalis, phenolic compounds, sulphuric acid.	Most organic and mineral acids, organic solvents, bleaches and oxidising agents.	Softens 228°C Melts 255°C	Equivalent wet/dry strength ratio. Elongation 35% at break.
Polyamide (Nylon 6.6)	Continuous Filament	1.14	Strong acids and oxidising agents, soluble in formic, sulphuric acids and phenolic compounds.	Alkalis, alcohols, esters, hydrocarbons and most bleaches.	Softens 229°C. Melts 249°C – 260°C	Elongation Dry 40%. Wet 35%. 90-95% strength ratio wet/dry.
Aramid (Kevlar®)	Continuous Filament	1.44	Hydrochloric, hydrobromic and sulphuric acids, bleaching and sunlight. Highly sensitive to abrasion.	Mineral and organic acids, alkalis, organic solvents, mildew and fungi.	371°C decomposition	Equivalent wet/dry strength ratio. Elongation 4% at break.
Technora®	Spun Filament	1.39	Hydrochloric, hydrobromic and sulphuric acids, bleaching and sunlight.	Mineral and organic acids, alkalis, organic solvents, sea water and steam.	500°C+ decomposition	Equivalent wet/dry strength ratio. Elongation 4.5% at break.
UHMwPE Ultra High Molecular weight Polyethylene	Continuous Filament	0.97	Strong oxidising agents, chlorosulfonic and nitric acids at high temperatures.	Most acids and alkalis, cold alcohols, ethers, esters, ketones and bleaches.	Melts 152°C	Equivalent wet/dry strength ratio. Elongation 2-5% at break.
TLCP (Vectran® UM) Thermotropic liquid crystal fiber	Continuous Filament	1.37	Alkalis at high temperatures.	Acids, alkalis.	400°C decomposition	Elongation 2.4% @ BF 98% strength ratio wet/dry. 22 g/d.
PBO (Zylon®)	Continuous Filament	1.56	Strong acids, acids and alkalis at higher temperatures, sunlight.	Organic solvents, acids and alkalis at room temperature.	650°C decomposition	2.5% at break.

cores

Donaghys Performance cores are available with either Armorcoat if exposed or Bindacoat if one of the cover systems is selected.



PBO (ZYLON® CORE)
12 strand single braid PBO fibre.



CHALLENGE BRAID (VECTRAN® CORE)
12 strand single braid Vectran® fibre.



OCEAN12 SK90 (SK90 DYNEEMA®)
12 strand single braid Dyneema® SK90 fibre. The ultimate in performance and strength, 13% stronger than Ocean 12 HS.



OCEAN12 HS (SK78 DYNEEMA®)
12 strand single braid Dyneema® SK78 fibre Heat-Stretched for improved strength and lower elongation with reduced creep characteristics.



OCEAN12 (UHMwPE)
12 strand strand single braid UHMwPE fibre.



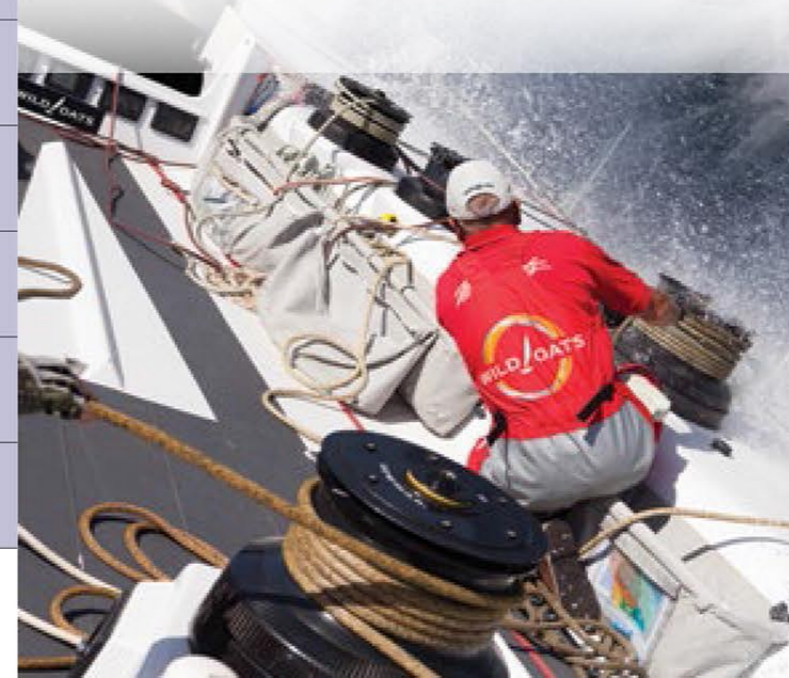
SUPERBRAID (UHMwPE)
16, 24 strand single braid UHMwPE fibre.



SUPERSPEED (UHMwPE)
8, 16 Plait single braid UHMwPE fibre with Bindacoat.



YACHTMASTER XS (HT POLYESTER FILAMENT)
8, 16 or 24 plait single braid HT polyester fibre.



Donaghys ropes aboard Wild Oats XI.
Photography by Andrea Francolini.

construction



covers

Donaghys High Performance cover systems work perfectly in combination with our core range to protect and enhance the life and performance of the braids. Careful blending of state of the art fibres with specific twist ratios provides the ultimate for any application.



SNAKESKIN

In the snakeskin configuration, visible lines of each fibre type provide greater heat dissipation and adds grip when needed.



MOTTLED

In the mottled configuration, the different fibre types are blended providing the ultimate in performance and protection from heat build up and abrasion while maintaining optimum control in extreme racing applications.



WEAR SLEEVES

Designed to offer additional protection against continuous abrasion, Wear Sleeves can be inserted over ropes or standing rigging to prevent damage.

Available in Vectran®, Technora® and UHMwPE to cover sizes from 8mm to 18mm.

Fibre Types

Dyneema® is a high modulus polyethylene fibre, with an exceptional strength to weight ratio. (Weight for weight 10 times stronger than steel).

Vectran® Multifilament spun yarn is manufactured from a high performance Liquid Crystal Polymer (LCP). Vectran® is very stable under constant static loads showing minimal creep and very low stretch. Vectran® also has good high temperature and abrasion resistance. This fibre is sensitive to UV light.

Zylon® PBO has extreme heat resistance (decomposes at 600°C) and is very stable under high loads. Only available in a distinctive gold colour, PBO is ideal for high load and temperature.

Technora® is one of the new generation para-aramid fibres developed and produced exclusively by Teijin Limited. Weight for weight, Technora is 8 times stronger than steel. Technora® shows little loss of strength even during repeated abrasion, flexing and stretching. Technora® decomposes over 500°C.

Kevlar® is the original aramid fibre with high heat resistance (decomposes over 400°C). Weight for weight it is 5 times stronger than steel. This fibre is sensitive to UV light. A range of alternative Aramid fibres are now available.

UHMwPE yarn is economical while offering exceptional strength with light weight and low stretch characteristics.



POLYESTER

Braided High Tenacity Polyester produces an abrasion resistance cover suitable for general purpose applications.



ARAMID/POLYESTER

An economic technical mix to assist heat dissipation in areas of friction. The HT Polyester component provides cost savings in medium heat applications. Noticeable enhancement to grip.



TECHNORA®/POLYESTER

Superior abrasion and heat resistance, Technora® offers a step up from Aramid fibres where general protection is required.



ARAMID/VECTRAN®

Excellent grip with smooth handling features. Both fibres have high melting points, low stretch and hard wearing properties. With near zero stretch there is minimal milking on the core.



TECHNORA®/VECTRAN®

As above, but with the added abrasion and heat resistance of Technora®.



PBO/TECHNORA®

This blend offers high performance in heat resistance while maintaining smooth and precise control around winches. Ideal for sheets and runners.



PBO/VECTRAN®

Silky grip and handling features in the harshest of applications. Super light weight fibres with rugged wear characteristics. Excellent winch, clutch and cleat performance. This jacket is designed for the ultimate in racing performance.



PBO

PBO cover offers unrivalled strength and precise control on winches even under extreme loads. Will not melt or glaze.



high performance



Ericsson 4 wins Volvo Round the World Ocean Race 2008-09.
Photography by Rick Tomlinson.

ocean12



RANGE

- 1mm - 24mm
- UHMWPE core coated with Donaghys Armorcoat
- Sold by the metre
- High performance abrasion/heat resistant jackets available on request

APPLICATION

- Strops • High load purchase systems
- Halyards • Runners • Checkstays
- Afterguys • Winch lines

FEATURES

- High strength to weight ratio
- High UV resistance
- Floats and does not absorb water
- Low stretch
- High internal and external abrasion resistance
- Melt Point 152°C
- Elongation 3.7%
- Donaghys standard grey Armorcoat enhances abrasion and cut resistance

ocean12HS



RANGE

- 2mm - 44mm
- Dyneema® SK78 core coated with Donaghys Armorcoat
- Sold by the metre
- High performance abrasion/heat resistant jackets available on request

APPLICATION

- Strops • High load purchase systems
- Halyards • Runners • Checkstays
- Afterguys • Winch lines
- Tow lines and cables
- Wire rope replacement
- Applications where minimum creep is desirable

FEATURES

- Heat Stretched to compact the fibres, increasing strength and performance
- Very high strength to weight ratio
- High UV resistance
- Floats and does not absorb water
- Very low stretch
- Very high internal and external abrasion resistance
- Melt Point 152°C
- Elongation 3%
- Donaghys standard grey Armorcoat enhances abrasion and cut resistance

ocean12SK90



RANGE

- 7mm - 44mm
- Dyneema® SK90 core coated with Donaghys Armorcoat
- Sold by the metre
- High performance abrasion/heat resistant jackets available on request

APPLICATION

- Strops • High load purchase systems
- Halyards • Runners • Checkstays
- Afterguys • Tow lines and cables
- Wire rope replacement
- Applications where minimum creep is desirable • Applications where extreme breakloads are required

FEATURES

- As per Ocean12 HS plus the following:
- Extreme strength to weight ratio
- 12-16% stronger than Ocean12 HS Ensures breakloads can be achieved with smaller diameters
- Increased direct control and less energy absorption enabling precise, efficient trim control
- Extremely low stretch

TECHNICAL – Average Breakload (tonnes)

	Diameter (mm)*																															
	1	1.5	1.75	2	2.5	3	3.5	4	5	6	7	8	9	10	11	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44
Ocean12	0.25	0.4	0.5	0.88	1.1	1.3	1.7	2	2.5	4.2		6.6		10.7		13	19	24	28	34	40	48										
Ocean12 HS				1.05		1.5	2.1	2.6	4.1	5.4	6.8	8.9	11.2	14	16.8	20.1	27	36	45	56	63	75	81	93	98	110	124	135	148	157	168	182
Ocean12 SK90											7.6		12.6		18.8	21.4	28	44	51	63	72	82	92	101	110	124	140	152	167	176	188	205

*Larger diameters available on request.

“While pushing E4 to the extreme to smash the elusive 600 mile barrier, and set a new 24 hour record there was one thing we didn't need to worry about and that was the Donaghys Southern Ocean ropes we chose because in times like these 2nd best will never do!” –BRAD JACKSON

DONAGHYS
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high performance

high performance

PBO ELITE



RANGE

- 6mm – 16mm
 - Made to custom length
 - Bulk rigger reels or cartons and larger diameters up to 40mm available on request
- High Performance cover options available on request*

APPLICATION

- Halyards
- Sheets
- Guys
- Control lines
- Runner tails

FEATURES

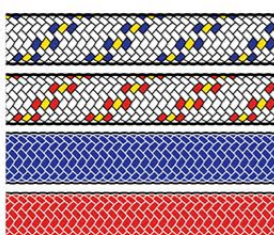
- High strength with very low stretch and zero creep
- 12 strand core with Donaghys Armorcoat
- Allows smooth and precise control around winches under extreme loads
- Direct exposure to sunlight should be avoided at all times

TECHNICAL

Average Breakload (kg). Refer breakload table (pg 34) for full specs

ø	2000	4000	6000	8000	10000	12000	14000	16000	18000	20000
6mm	2700									
8mm	4600									
10mm	7100									
12mm	10100									
14mm	12800									
16mm	17200									

CHALLENGE BRAID



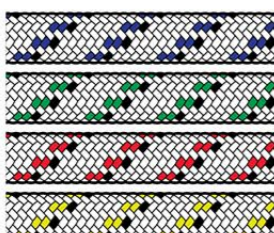
- 3mm – 12mm
 - 100m reels
 - Bulk rigger reels or cartons and larger diameters up to 40mm available on request
- High Performance cover options available on request*

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

- Vectran® fibre core with HT Polyester jacket
- Very high strength, negligible stretch and creep
- Similar load and extension performance to Aramid fibres with greater flex fatigue and UV resistance
- Cover can be removed on diameters 4mm and upwards for special applications
- Perfect for low stretch/creep applications such as Genoa Halyards

ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
3mm	550									
4mm	750									
5mm	1200									
6mm	1800									
8mm	3400									
10mm	6200									
12mm	9800									

SUPERBRAID



- 6mm – 12mm
 - 100m reels
 - Bulk rigger reels or cartons and larger diameters up to 40mm available on request
- Custom colour options and High Performance cover options available on request*

- Halyards
- Sheets
- Guys
- Control lines
- Out/downhauls
- Runner tails
- Vang
- Reefing and furling systems

- Lightweight UHMWPE core with HT Polyester cover provides high strength with minimal stretch
- Treated with Donaghys Bindacoat on core to prevent core/cover slippage
- Withstands shock loadings and accepts a tighter radius and knots better than Aramids
- Easy to splice

ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
6mm	1770									
8mm	4000									
10mm	6600									
12mm	9700									

Left: Emirates Team New Zealand TP52.
Photo courtesy of Emirates Team New Zealand.

Right: Donaghys ropes aboard Wild Oats maxi yacht, multiple winner of the Sydney to Hobart yacht race.
Photography by Andrea Francolini.

“ Maintaining constant performance is critical in long distance events. Therefore preparation is paramount. That’s why I choose Donaghys Southern Ocean ropes. ”

–TORBEN GRAEL, ISAF ROLEX WORLD SAILOR OF THE YEAR 2009



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high performance

high performance

CHAFE GUARD



RANGE

- 6mm – 8mm
- 10mm – 12mm
- 14mm – 16mm
- 18mm – 20mm
- 100m reels

APPLICATION

- Protection of sheets and other ropes in high abrasion applications

FEATURES

- UHMwPE fibre
- Single cover braid
- High UV resistance
- High abrasion resistance

TECHNICAL Average Breakload (kg).

ANTI-TORSION BRAID



- 9 – 14mm

- For furling systems

- Vectran®/HT Polyester core with Aramid cover
- Triple braid construction ensures the braid won't twist
- High tensile strength
- Negligible elongation

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
9mm	3000									
11mm	5800									
13mm	9000									

high performance

projects

ABN AMRO I, II (70' race Juan Kouyoumdjian)
ALFA ROMEO SHOCKWAVE (90' Maxi Reichel Pugh)
ARTFORMS (50' race Owen Clarke)
AUSTRALIAN SYDNEY 38 and 32 FLEETS
BOLS (93' race Wellbourne)
BRASIL I (Volvo 70' Farr)
EMIRATES TEAM NZ (IACC)
GENUINE RISK (90' race Dubois)
GRAND SOLEIL (42' race Boutin-Carkeek)
HUGO BOSS (60' race Juan Kouyoumdjian)

KOKOMO (145' race/cruising Dubois)
MARI-CHA IV (140' race Oliver, Elliot, Briand)
MAXIMUS (30m race Elliot)
MORNING GLORY (87' race Reichel Pugh)
MY SONG (80' race/cruising Reichel Pugh)
ORLANDA (56' race Farr)
PEGASUS (70' race Andrews)
PINDAR (60' race Owen Clarke)
RANGER (130' J Class Burgess, Stephens)
SPEEDBOAT (100' race Maxi yacht)
STEALTH (92' race Frers)
TP 52's RUSH, PINTA, WARPAT
WILD OATS (60' race Reichel Pugh)
WILD OATS XI (100' race, Reichel Pugh)
ZANA (30m Maxi Bakewell White)

superyacht projects

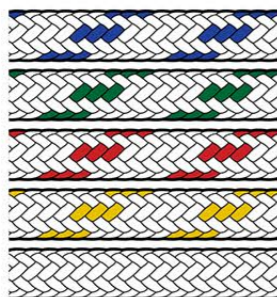
BRISTOLIAN 2 (120' Briand)
DESTINATION FOX HARBOUR (134' Dubois)
GEORGIA (48.5m Johnson, Dalrymple-Smith)
HELIOS (37.5m Dubois)
IMAGINE II
MARI-CHA III (145' race/cruising Briand)
MIDNIGHT (37.15m Dubois)
SALPERTON (53m Dubois)

SILVERTIP (33.8m Dubois)
TWIZZLE (57.5m Ketch Dubois)
VERTIGO (220' Ketch Briand)
WHIRLAWAY (43m Briand)
ZULU (39m Dubois)
ZEFIRA (49.7m Dubois and Fitzroy Yachts)
ZENJI (56m Perini Navi and Ron Holland)

Left: Donaghys Ropes onboard
Wally 130 Megayacht.
Photo courtesy of Velamania.

Right: Donaghys Ropes
onboard a superyacht.
Photo courtesy of Southern Spars.

YACHTMASTER XS



- 6mm – 16mm
- 100m reels
- Bulk rigger reels or cartons and larger diameters up to 40mm available on request
- Black fleck colour option available on request*

APPLICATION

- Sheets
- Guys
- Control lines
- Out/downhauls
- Runner tails
- Traveller
- Vang
- Reefing and furling systems on cruising and cruiser/racing yachts

FEATURES

- Double braid construction, manufactured from High Tenacity Polyester
- High jacket to core ratio assisting long life
- Excellent breakload and abrasion resistance
- Resistant to kinking, hockling and twisting
- Highly resistant to most chemicals and UV light
- Easy to splice

TECHNICAL Average Breakload (kg). Refer breakload table (pg 34) for full specs

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
6mm	800									
8mm	1700									
10mm	2500									
12mm	3250									
14mm	4200									
16mm	5600									

YACHTMASTER BRIGHTS



- 4mm – 12mm
- 100m reels
- Bulk rigger reels or cartons and larger diameters up to 40mm available on request
- Solid Green, Beige or Dark Grey colour options available on request*

- Sheets
- Guys
- Control lines
- Out/downhauls
- Runner tails
- Traveller
- Vang
- Reefing and furling systems on cruising and cruiser/racing yachts

- Identical construction and features as Yachtmaster XS
- Solid colours assist identification and aesthetic look on board
- Colour fast dye in yarn production phase

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
4mm	350									
6mm	800									
8mm	1700									
10mm	2500									
12mm	3250									

SUPERSPEED



- 2mm – 12mm
- 100m reels
- Available in Hotdog, Solid colour or Mottled
- Bulk rigger reels or cartons and larger diameters up to 40mm available on request
- Custom colour options including Dark Grey, Beige or Orange available on request*

- Halyards
- Sheets
- Guys
- Control lines
- Out/downhauls
- Runner tails
- Vang
- Reefing and furling systems

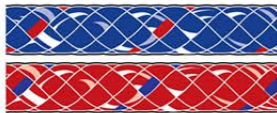
- Minimal stretch easy splice 12 plait UHMwPE core
- 2-5mm 8 plait cover provides improved holding in cleats
- Super hard wearing HT Polyester jacket in smooth plait construction from 6mm+
- Core treated with Donaghys Bindacoat to minimise slippage
- High strength with minimal stretch and weight

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
2mm	270									
3mm	420									
4mm	550									
5mm	1150									
6mm	1330									
8mm	3100									
10mm	5300									
12mm	8300									

Left: Looking down on Wally 130 Megayacht.
Photo courtesy of Velamania.

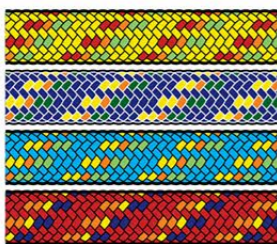
Below: Donaghys ropes aboard Wild Oats XI.
Photography by Andrea Francolini.





RANGE	APPLICATION	FEATURES	TECHNICAL																																	
<ul style="list-style-type: none">• 6mm and 8mm• 100m reels	<ul style="list-style-type: none">• Sheets• Tapered Sheets• Halyards	<ul style="list-style-type: none">• Lightweight with ultra-low stretch• UHMwPE braided core with coating• 8 plait UHMwPE/PP multifilament mottle cover• Good strength• Easy handling with high grip• Floats in water	<div><div>Average Breakload (kg). Refer breakload table (pg 34) for full specs</div><table><tr><th>ø</th><th>500</th><th>1000</th><th>1500</th><th>2000</th><th>2500</th><th>3000</th><th>3500</th><th>4000</th><th>4500</th><th>5000</th></tr><tr><td>6mm</td><td>1700</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8mm</td><td>3900</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></div>	ø	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	6mm	1700										8mm	3900									
ø	500	1000	1500	2000	2500	3000	3500	4000	4500	5000																										
6mm	1700																																			
8mm	3900																																			

SUPERLITE



- 2mm – 6mm
- 100m reels

- Halyards
- Sheets
- Control lines
- Out / Downhauls
- Kickers

- Lightweight with ultra-low stretch
- Twisted UHMwPE/Polyester fibre core
- Abrasion resistant HT Polyester cover

ø	50	100	150	200	250	300	350	400	450	500
2mm	140									
4mm	300									
6mm	500									



Left: Team Jolly, Jo Aleh, Olivia Powrie and coach Nathan Handley. Photo courtesy of Team Jolly.

Below: Peter Burling and Blair Tuke competing in 49er 2009 world championships in Garda. Photo courtesy of Peter Burling.



Jo Aleh and Olivia Powrie competing in the ISAF Sailing World Cup in Melbourne. Photography by Jeff Crow.

“ We needed reliable high quality ropes to ensure we could compete against the best in the world, and Donaghys products didn’t let us down.”

470 WORLD CHAMPION SILVER MEDALLISTS 2010, JO ALEH AND OLIVIA POWRIE CELEBRATING WITH THEIR COACH NATHAN HANDLEY

mooring

ANCHOR PACKS



- 6mm – 14mm
- Multiple lengths in each size
- 3 fibre options: Silver*, PP** and Nylon**

* Australia range only
** NZ range only

RANGE APPLICATION

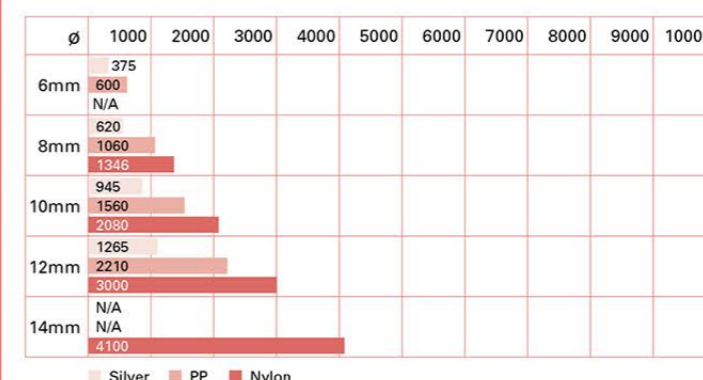
- Anchoring

FEATURES

- 3 strand construction
- Stainless steel thimble in one end for anchor attachment
- Pre-spliced with minimum of four tucks to ensure reliability
- PP and Silver packs are economical and float in water
- Nylon packs have good strength and elasticity and will sink in water
- Nylon packs also have great shock absorption properties

TECHNICAL

Average Breakload (kg). Refer breakload table (pg 34) for full specs



FLEXLINE



- 10mm – 24mm
- Various lengths available
- Reel and coil options

- Mooring
- Docking
- Fibre rope tails and towlines

- Hollow 12 strand construction in HT Polyester
- Equivalent wet/dry strength
- Exclusive appearance look on this classy dock line
- Easy to splice
- Highly abrasion resistant and UV stabilised
- Soft feel torque and kink resistant



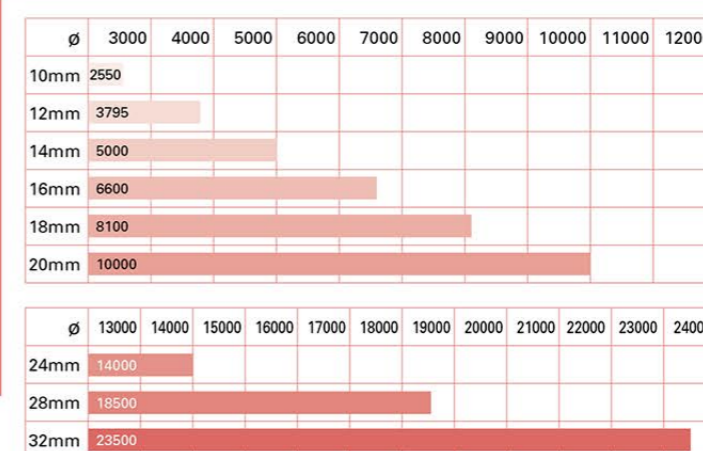
DOCKLINE



- 10mm – 20mm in 100m reels
- 24mm – 32mm in 50m reels
- Bulk rigger reels or cartons and larger diameters up to 40mm available on request

- Mooring
- Docking
- Anchoring

- Double braid with high strength shock absorbing Nylon core
- Hard wearing colour fast High Tenacity Polyester jacket
- Braid remains soft and supple in long term use
- Easy to handle, coil and splice
- Resistant to kinking, hockling and twisting
- High level of elongation provides for a comfortable ride at anchor or mooring



DOCKLINE PREPACKS



- 10mm in 4.6m and 7.5m lengths
- 12mm and 16mm in 4.6m, 7.5m and 10.7m lengths
- Includes spliced eye
- Packaged in a carton

APPLICATION

- Mooring
- Docking

FEATURES

- Convenient prepack lengths with spliced eye
- Double braid with high strength shock absorbing Nylon core
- Water resistant coating to prevent strength loss when wet
- High abrasion resistance
- Well balanced, torque free and won't un-lay under heavy loading
- Soft and easy to handle, cleat and coil

TECHNICAL

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
10mm	2550									
12mm	3795									
16mm	6600									

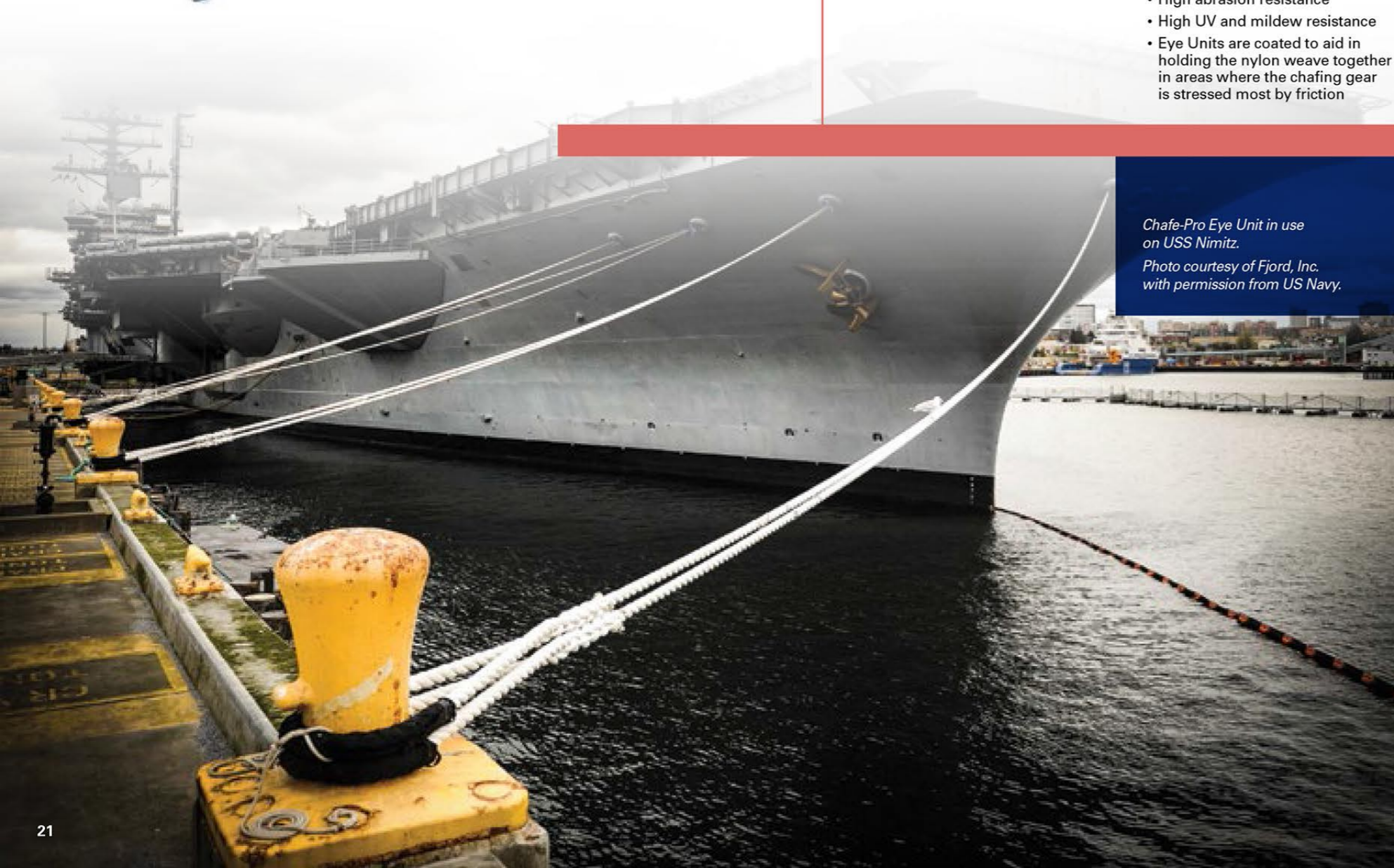
CHAFE-PRO®



- HB Eye Units available from 25mm – 127mm size
- Nylon Sleeves available from 17mm – 94mm
- Custom lengths
- Other specialist covers available on request

- Chafe-abrasion protection for mooring, anchor, towing and ship assist lines

- Easy application and removal
- Can be installed or removed from the eye without having to undo the splice
- No lacing or lashing of lines is required due to a special locking feature
- High abrasion resistance
- High UV and mildew resistance
- Eye Units are coated to aid in holding the nylon weave together in areas where the chafing gear is stressed most by friction



Chafe-Pro Eye Unit in use on USS Nimitz.
Photo courtesy of Fjord, Inc. with permission from US Navy.

general

DINGHY LIGHT



RANGE

- 6mm, 8mm and 10mm
- 100m reels

APPLICATION

- For use on most sailing dinghies
- General purpose line

FEATURES

- Single braid 8 plait construction of Polypropylene
- Economical light weight line
- Floats and does not absorb water
- Soft grip
- Easily tied and holds well in cleats
- Resistant to most chemicals

TECHNICAL Average Breakload (kg).

ø	250	500	750	1000	1250	1500	1750	2000	2250
6mm	420								
8mm	700								
10mm	1200								

WINCHLINE PREPACKS



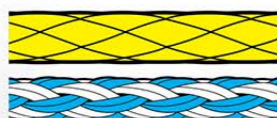
- 5mm in 5m and 6m lengths
- 7mm in 7m lengths
- 5mm size finished spliced with Stainless Steel 'S' Hook
- 7mm size finished spliced with Stainless Steel Snap Hook

- For use on marine trailer winches

- 15 x stronger than steel wire
- 8 x lighter than steel wire and easier to handle
- Floats and does not absorb water
- Soft to handle and does not kink
- No recoil in unlikely event of break
- Does not lose strength when overlapped or crushed on winch like steel wire

ø	500	1000	1500	2000	2500	3000	3500	4000	4500
5mm	1900								
7mm	3500								

SKI BRAID



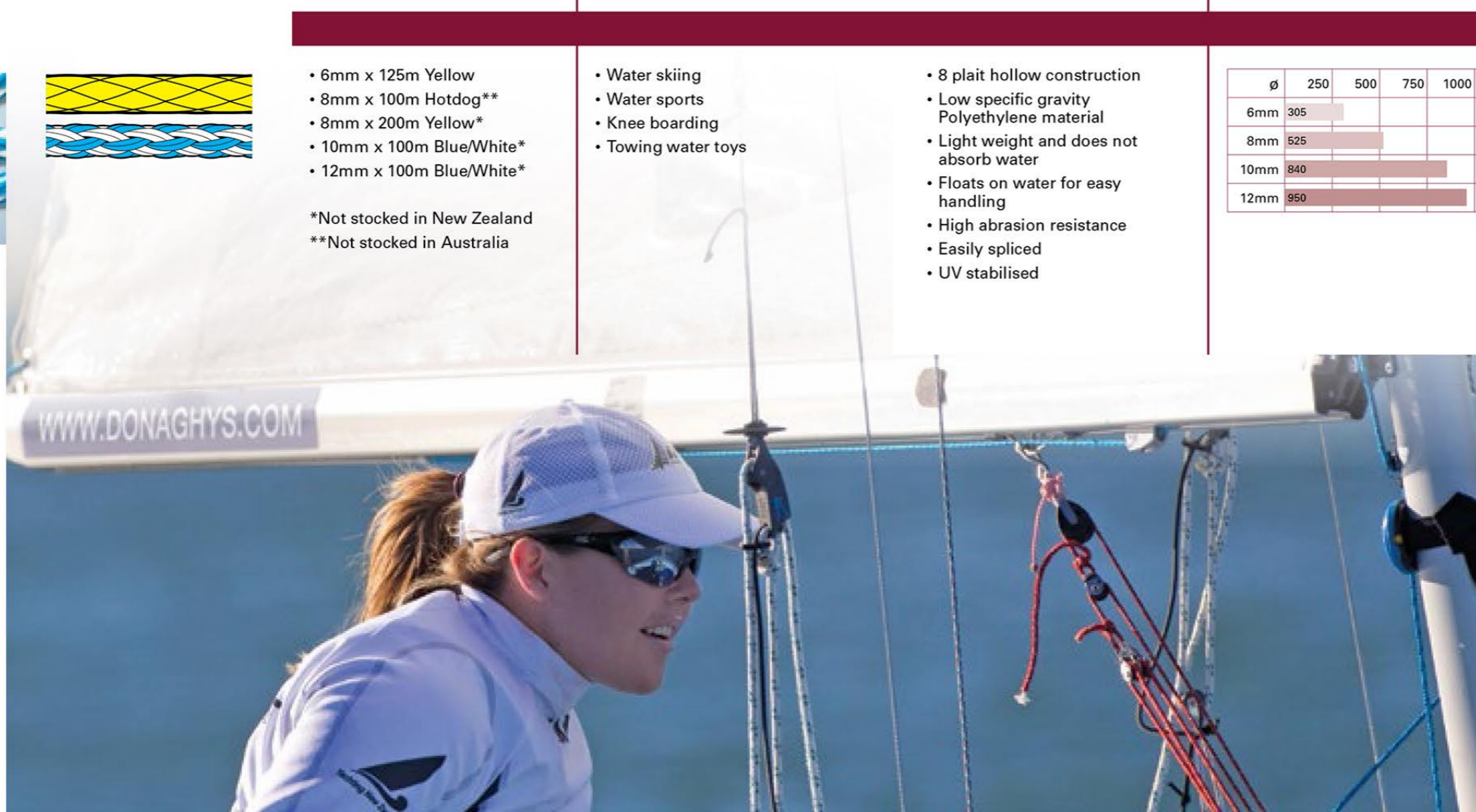
- 6mm x 125m Yellow
- 8mm x 100m Hotdog**
- 8mm x 200m Yellow*
- 10mm x 100m Blue/White*
- 12mm x 100m Blue/White*

*Not stocked in New Zealand
**Not stocked in Australia

- Water skiing
- Water sports
- Knee boarding
- Towing water toys

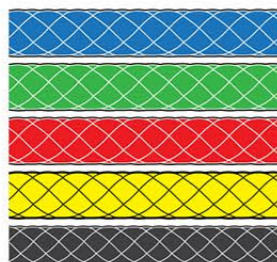
- 8 plait hollow construction
- Low specific gravity Polyethylene material
- Light weight and does not absorb water
- Floats on water for easy handling
- High abrasion resistance
- Easily spliced
- UV stabilised

ø	250	500	750	1000	1250	1500	1750	2000	2250
6mm	305								
8mm	525								
10mm	840								
12mm	950								



Olivia Powrie on board 470 racing yacht rigged with Donaghys braids.
Photography by Gareth Cooke.

VB BRIGHTS



- 2mm in 30m spools
- 3mm in 20m spools
- Sold in cartons of 10 spools (mixed colours)

APPLICATION

- Whipping
- Tying
- General purpose

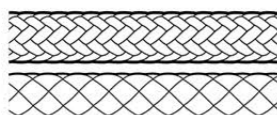
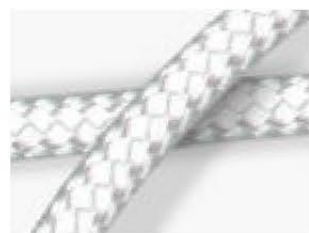
FEATURES

- Strong, bright coloured braids in pocket size spool
- Fade and abrasion resistant Polyester construction
- UV treated
- Low stretch

TECHNICAL Average Breakload (kg).

Ø	100	200	300	400	500	600	700	800	900
2mm	100								
3mm	145								

SYNTHETIC BRAIDS



- 1mm – 5mm white smooth braids in 100m and 300m reels
- 2mm – 3mm black textured braids in 500m reels*
- 3mm – 5mm (500m), 6mm (250m), 8mm (200m) and 12mm (80m) white textured braids*

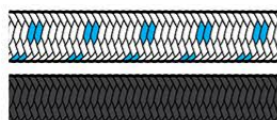
* Not stocked in NZ

- Flag halyard
- Mouse line
- Leech lines
- General purpose

- Hard wearing HT Polyester fibre supple plait construction
- Smooth (16 plait) and textured (8 plait) options
- Highly resistant to stretch, abrasion, UV degradation and discolouration
- Excellent knotting and untying properties

Ø	50	100	150	200	250	300	350	400	450
1mm	47								
1.5mm	65								
2mm	100								
2.5mm	124								
3mm	169								
3.5mm	250								
4mm	290								
5mm	450								

SHOCK CORD



- 3mm – 6mm in 100m reels
- 7mm – 10mm in 50m reels

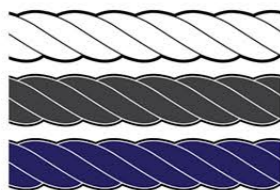
- General purpose

- Premium Marine Grade rubber core to ensure minimum 100% stretch characteristic
- HT Polyester cover with fine plait smooth jacket construction offering long life wear resistance to abrasion and UV degradation
- Not affected by water



general

POLYESTER ROPE



- 6mm – 24mm
- Various lengths from 100m – 250m
- Reel and coil options
- White, black and navy* colour options

*Black and navy not stocked in NZ

APPLICATION

- Mooring
- General
- Industrial

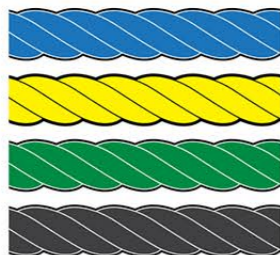
FEATURES

- 3 strand HT Polyester construction
- Soft feel and easy handling, coiling and knotting
- Low stretch and excellent abrasion resistance
- No strength loss when wet
- Stretches up to 46% before breaking
- Excellent shock absorption
- Sinks in water
- Blue internal marker

TECHNICAL Average Breakload (kg).

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000
6mm	600								
8mm	1020								
10mm	1600								
12mm	2300								
14mm	3200								
16mm	4100								
20mm	6300								

PP & SUPERFILM ROPES



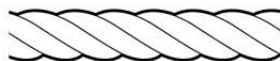
- Australia
- 4mm – 24mm
 - Various lengths from 125m – 600m
 - Reel and coil options
- NZ
- Yellow Superfilm Rope
 - 4mm and 6mm in 250m reels
 - 8mm – 12mm in 125m reels

- General
- Industrial

- 3 strand Polypropylene tape construction
- Strong and light with high abrasion resistance
- Excellent handling and splicing properties
- Floats on water
- UV treated with good weathering properties
- Resistant to oils, petrols, common solvents, bacteria and fungi

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000
4mm	214								
6mm	600								
8mm	1060								
10mm	1560								
12mm	2210								
14mm	3050								
16mm	3770								
20mm	5800								

SILVER ROPE



- 6mm – 40mm
 - Various lengths from 80m – 300m
 - Reel and coil options
- Not stocked in NZ

- General
- Industrial

- 3 strand Polyethylene construction
- Wear and abrasion resistant
- Excellent knotting and handling qualities
- Floats in water
- Not affected by water
- Resistant to fungi

Ø	1000	2000	3000	4000	5000	6000	7000	8000	9000
6mm	375								
8mm	620								
10mm	945								
12mm	1265								
14mm	1440								
16mm	2120								
20mm	3160								



accessories

HOT KNIFE CUTTERS



- Electronic cutters available in hand held or bench type models
- For use on synthetic ropes, twines and braids
- Cuts and seals low melting point synthetic fibres with ease
- Not suitable on Natural, Vectran®, Kevlar® or PBO Zylon® fibres

ROPE MEASURERS



- Measurer accommodates rope and cordage from 6mm to 20mm in diameter
- The toothed Measuring Wheel and Stainless Steel Pressure Shoe, assure uninterrupted NO SLIP contact with cordage
- Wall or bench mounted
- Digital counter adds or subtracts
- Resets to zero with one turn of knob
- Conforms to Weights and Measures specifications

SPLICING KITS



- Provides all the tools you need to create the perfect splice
- Contains 5 splicing fids to splice from 6mm to 24mm with wire fid pusher
- Comes with basic instructions to get you started

general



care & maintenance

WEAR

Modern synthetic ropes can be stowed in a wet state with little risk of deterioration. However, if they remain in use in the same position for extended periods they can become worn. If this is apparent by eye, the rope can be reversed i.e. Attach bottom end of rope to top position to ensure more even wear. Another solution is to buy longer ropes than required and periodically move the bearing position some centimetres. In applications of extreme heat or abrasion, high tech protective wear sleeves can be fitted.

ABRASION

All types of ropes are susceptible to abrasion – the way to minimise this is to ensure that all cleats, fairleads etc, allow the rope to pass freely. Problems may arise through incorrect size of rope to fittings. We find rope problems are often caused by ratchets and stoppers which are particularly harsh on the outer jacket of ropes. This is an area that requires regular inspection.

HEAT DAMAGE

Friction can cause strands to melt/fuse, either internally or externally. However, with melting points ranging from 130°C – 600°C dependent on fibre of use, the risk of damage can be minimised by correct product selection. A quick check to assess rope loading points by opening the strands to search for fusion is essential. External heat sources and corrosive materials are also to be avoided.



SPLICING

Splicing produces a fastening point which has a strength of up to 90% of the unspliced rope when completed correctly. Inspect regularly and in the case of a plaited rope splice, ensure that no new fibres appear at the neck of the splice. If the rope eye appears to be moving i.e. if clean rope appears, we recommend you seek professional advice of rigging specialists.

FITTINGS

Ensure that all moving parts of fittings or blocks are performing freely as seized blocks and swivels can damage ropes very quickly. For information on recommended sheave diameters, please consult your chandler.

















CARE

At the end of each season all ropes should be immersed in lukewarm clear water, with non halogenic mild detergent additive, if required, to remove traces of dirt or salt which can harm ropes. Drying is best achieved in a cool, shaded area with healthy air circulation.

*Dyneema® is a registered trade mark of Royal DSM N.V.
Vectran® is a registered trade mark of Kuraray America, Ltd.
Kevlar® is a registered trade mark of Du Point, USA.
Technora® is a registered trade mark of Teijin BV.
Zylon® also known as PBO is a registered trademark of Toyobo Co.*

APPLICATION CHART

Where more than one product is suitable for the purpose, Blue indicates the most suitable (primary) and Grey an alternative (secondary). In some instances a combination of both may be desirable.

 <div>product</div>		Main Halyard	Mainsheet Traveller	Mainsheet	Reefing Lines	Mainsail Outhaul	Cunningham	Genoa/Jib Halyard	Genoa/Jib Sheet	Genoa Car Control	Genoa/Jib Cunningham	Spinnaker Halyard	Spinnaker Sheet	After Guy/Brace	Spinnaker Pole Topping Lift	Spinnaker Pole Fore Guy	Spinnaker/Genoa Barberhailer	Running Backstay Purchase	Topmast Backstay Control	Lazy Jack Line	Anchor Warp	Dock Line	Dinghy Painter	Dinghy Sheet Lines	Dinghy Control Lines									
	Ocean12 SK90 with cover																																	
	Ocean12/O12 HS with cover																																	
	PBO with cover																																	
	Challenge Braid																																	
	Superbraid																																	
	Superspeed																																	
	Yachtmaster XS																																	
	Yachtmaster Brights																																	
	Super Swift ¹²																																	
	Superlite																																	
	Dinghy Light																																	
	Dockline	<i>NB: Sizes indicated are an approximate guide only. Variation on the type of yacht (cruiser, cruiser racer, high tech racer) and factors such as displacement, right moment, sail area and rig types will produce different load characteristics. As a general rule, the Ocean12 range, PBO, Challenge Braid and Superbraid can be the smaller of the diameters shown. Note: Ensure that the line is of sufficient diameter to avoid slippage on self tailing winches, cleats and jammers.</i>																																
	Flexline																																	
	Polyester Rope																																	
	PP Rope (buoyant when wet)																																	
Boat Size		Product Diameter (mm)																																
2 – 4m / 6.5 – 13 FT		4 – 5	4 – 8	6		4	3 – 4	4 – 5	6	3	3	4 – 5	4 – 5		4 – 5	4 – 5	3 – 4				6	6		4 – 6	2 – 5									
4 – 6m / 13 – 20 FT		5 – 6	5 – 8	6 – 8	6	5	4 – 5	6	6	3 – 4	4	4 – 6	6		5 – 6	5	4 – 5				8	8		4 – 8	2 – 6									
6 – 8m / 20 – 26 FT		6 – 8	6 – 8	8 – 10	8	6 – 8	5 – 6	6	7 – 8	4 – 5	5	6	6 – 8	7 – 8	6	6	5 – 6	6 – 8	5	4	10	10	10 – 12											
8 – 10m / 26 – 33 FT		8 – 10	8 – 10	10 – 12	10	8 – 10	6 – 8	8	8 – 10	6	6	8	6 – 8	8 – 10	8	6 – 8	6	8	6	6	12	12	10 – 12											
10 – 12m / 33 – 39 FT		10 – 12	10	10 – 12	10 – 12	10	8 – 10	10	10 – 12	6 – 8	8	8 – 10	8 – 10	10	8 – 10	8 – 10	6 – 8	8 – 10	6	6	14	14	10 – 12											
12 – 14m / 39 – 46 FT		12 – 14	10 – 12	12 – 14	12 – 14	12	10	12	12 – 14	8 – 10	8	10 – 12	8 – 12	10 – 12	10	10	8	10 – 12	8	6	14 – 16	14 – 16	10 – 12											
14 – 16m / 46 – 53 FT		12 – 14	12 – 14	14 – 16	14	12 – 14	10	12 – 14	14 – 16	8 – 10	10	12 – 14	10 – 12	12 – 14	10 – 12	12	8 – 10	12 – 14	8	6	16 – 20	16	10 – 12											

technical

STANDARDS FOR STRENGTH AND APPLICATIONS

NEW ROPE TENSILE STRENGTH

New Rope Tensile Strengths (breakload) as stated are based on the manufacturer’s standard test methods. Rope strength can be expected to decrease with use and age.

WORKING LOADS

Because of the broad range of rope use it is not possible to make a general recommendation for working load. For non-critical applications with appropriate terminations and/or splices, a normal workload of between 11% and 20% of published break load is acceptable for new rope.

For critical applications, which may involve dynamic loading or when there is a danger of injury should a rope fail, then a reduction from the normal workload is recommended. Higher workloads should only be selected after professional analysis of conditions including a thorough inspection of the rope before use.

Do not use a rope if it has been exposed to high dynamic loading, excessive use, sustained loading for extended periods, or elevated temperatures. Rope under tension stores energy. Should the rope or termination fitting fail, stored energy may be transferred into recoil. Avoid standing in line with any rope under tension. In all cases when people are at risk the rope

workload should be substantially reduced and the rope properly inspected before each use.

DYNAMIC LOADING

Normal working loads are not applicable when a rope is or has been subjected to significant dynamic loading. Dynamic loading is applied to the rope when a load is picked up, stopped or swung. The more rapidly or suddenly such actions occur the greater the dynamic loading will be.

In extreme cases the force on the rope may be many times the normal load involved. In such applications including towing lines, lifelines, safety lines, climbing ropes etc working loads do not apply.

Note: Dynamic effects are greater on low elongation rope made from products such as polyester or HMPE, and lesser on a high elongation rope such as nylon. Dynamic effects are also greater on shorter rope lengths than longer measures.

Although product specifications and performance data is deemed accurate and reliable at time of print, no responsibility for inaccuracies can be assumed by Donaghys Industries Ltd. Donaghys Industries Ltd reserves the right to change performance characteristics and specifications without prior notice. Not all products are available in all countries.

YACHT BRAID BREAK STRAINS AVERAGE BREAKLOAD (KGS)

Diameter (mm)	Ocean12 SK90	Ocean12 HS	Ocean12	PBO Elite	Challenge Braid	Super-braid	Super Swift ¹²	Super-speed	Yacht-master XS / Brights	Superlite	Dockline	Flexline	Diameter (mm)
2		1050	880		300			270		140			2
3		1500	1300		550			420					3
4		2600	2000		750	880		550	350	300			4
5		4100	2500		1200			1150	650				5
6		5400	4200	2700	1800	1770	1700	1330	800	500			6
7	7600	6800	6000		2400								7
8		8900	6600	4600	3400	4000	3900	3100	1700				8
9	12600	11200	9000										9
10		14000	10700	7100	6200	6600		5300	2500		2550	2500	10
11	18800	16800											11
12	21400	20100	13000	10100	9800	9700		8300	3250		3795	3500	12
14	28000	27400	18700	12800	12600	12500			4200		5000	4800	14
16	44000	35800	24200	17200	17000	17500			5600		6600	6400	16
18	51000	45400	28400	22000	22500	21200			7000		8100	7700	18
20	63000	56000	34000		23200	26000			9500		10000	8100	20
22	72000	62900	40000		26000	33000			11000		12100	11880	22
24	82000	74800	48000		32000	38800			13000		14000	13750	24
26	92000	81100			36000	43000					16000		26
28	101000	93000			40000	51300			17500		18500		28
30	110000	98000			44000	60200					20000		30
32	124000	110000			48000	69800			22000		23500		32
34	140000	124000											34
36	152000	135000									26000		36
38	167000	148000											38
40	176000	157000									35000		40
42	188000	168000											42
44	205000	182000											44



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