

Rope Size & Selection

Line Suggestions & Recommendations



NEW ENGLAND ROPES

Since 1967, New England Ropes has built and maintained its reputation as the leading manufacturer of premium quality rope, proudly servicing more markets than any other rope company. Made in New England, its the most innovative product available, woven from the finest first-class fiber and designed and tested in a place with some of the worlds most notoriously harsh conditions. Not only do New England Ropes feel smoother, perform better, and last longer, they are guaranteed to be completely free of manufacturing defects. This level of quality and performance allows you to concentrate on what really matters: the unyielding thrill of the open sea. If New England rope can withstand everything from daunting mountain peaks to ruthless seas, you know you can trust it to perform in your world. Every time. Without exception. Performance Guaranteed.

ROPE FIBERS

NYLON: Use for applications where strength and shock absorption are important, such as dock and anchor lines.

POLYESTER: Use where strength, low stretch, and durability are key, like most running rigging applications.

HMPE & ARAMIDS (Dyneema® & Kevlar®): Very high performance fibers exhibiting very high strength and extremely low stretch for a higher price tag. Generally found on very serious racing sailboats and larger yachts for running rigging.

POLYPROPYLENE: Use where lightweight or very low cost is important such as light air spinnaker sheets or barrier rope for swimming.

FIBER TYPE	STRENGTH	STRETCH	UV RESISTANCE	COST
Nylon	High	High	Good	Moderate
Polyester	High	Low	Good	Moderate
HMPE	Very High	Very Low	Good	Very High
Aramids	Very High	Very Low	Fair	Very High
Polypropylene	Low	High	Poor	Very Low

ROPE CONSTRUCTION

DOUBLE BRAID: A braided core inside a braided cover produces an easy-to-handle rope that is strong and very durable.

PARALLEL CORE: A patented unidirectional fiber core with a braided cover produces a line with significantly less stretch and greater strength than the same size double braid line. Ideal for halyards, sheets, and guys where low stretch is required.

SINGLE BRAID: A flexible and supple construction that absorbs twist and does not kink. Perfect for mainsheets, furling lines, and large dock lines.

3 STRAND: A special stabilization process and a four-stage, balanced construction produce a durable, long-lasting, flexible, and easy-to-handle rope that won't harden with age. Ideal for anchor, dock, mooring, and tow lines, and for running rigging on traditional cruising boats.

TENSILE STRENGTH & WORKING LOADS

Tensile strength is the load at which a new rope, tested under laboratory conditions, can be expected to break. Rope strength is the approximate average for new rope tested under ASTM test method D-6268. To estimate the minimum tensile strength of a new rope, reduce the approximate average by 20%. Age, usage, and type of termination used (i.e., knots) will significantly lower tensile strengths.

The Cordage Institute specifies that the safe working load of a rope is determined by dividing the minimum tensile strength by the ropes safety factor. Safety factors range from 5 to 12 for non-critical uses. The working load is a guideline for rope in good condition used in non-critical applications. The load should be reduced where life, limb, or valuable property are involved or where exceptional shock, sustained loading, or severe vibration may be experienced.

WHAT SIZE LINE?

The size and type of line depends on a number of factors including length of boat. The following information is intended as a guide only. Docking in exposed water, strong winds, or tides may require larger or additional lines.

Heavy, well-ballasted cruising boats need heavier lines than lighter cruiser/racers of similar length. Also, increased wind due to greater freeboard and top hamper in exposed locations requires making lines heavier. Always make sure that cleats, as well as cleats ashore, are able to handle the diameter of the line. It is better to double up a 3/8" or 1/2" line than try to cleat a 5/8" or 3/4" line on too small a cleat.

LINE SIZE RECOMMENDATIONS

BOAT LENGTH	DOCK LINES	ANCHOR LINES	MOORING PENDANT
0'-20'	3/8"	3/8"	1/2"
20'-30'	1/2"	1/2"	5/8"
30'-35'	1/2"	1/2"	3/4"
35'-40'	1/2"	5/8"	7/8"
40'-45'	5/8"	3/4"	1"
45'-55'	5/8"	7/8"	1"
55'-65'	3/4"	1"	1-1/4"

HOW MUCH LINE?

Genoa sheets are generally 1.5 times the length of a boat. For non-overlapping jibs, one boat length is usually enough. Spinnaker sheets are usually twice the length of a boat. We recommend measuring all other running rigging.

REPLACE WIRE HALYARDS WITH ALL ROPE HALYARDS

Rope halyards are easier to handle and significantly lighter than wire halyards. Sta-Set X is an ideal replacement for wire halyards on cruising yachts and V-100 or T-900 for race boats and large cruising yachts.

WIRE HALYARD REPLACEMENT GUIDE

7 x 19 Wire	1/8"	5/32"	3/16"	7/32"	1/4"
Sta-Set X	5/16"	3/8"	7/16"	1/2"	9/16"
T-900	1/4"	1/4"	5/16"	3/8"	7/16"

CHOOSING THE CORRECT LINE

STEP #1 Choose application.

STEP #2 Choose type of sailing.

STEP #3 Select boat size.

STEP #4 Match color code for the best selection and diameter of line for given application.

To upgrade, modify "Type of Sailing." In most cases, choosing a better performing line will substantially lower the stretch and allow you to reduce diameter by 10–15%. The net result will be a lightweight, low-stretch line that will control sail shape more precisely.

- Sta-Set
- Sta-Set X
- ▶ Regatta Braid
- T-900
- ✱ Spyderline
- Flight Line
- ✱ VPC

APPLICATION	TYPE OF SAILING	BOAT SIZE (FEET)								
		0–15	15–20	20–25	25–30	30–35	35–40	40–45	45–50	
MAINSHEET	Cruising	▶ 5/16"	▶ 5/16"	▶ 3/8"	▶ 3/8"	▶ 7/16"	▶ 7/16"	● 1/2"	● 1/2"	
	Club Racing	● 5/16"	● 5/16"	● 3/8"	● 3/8"	✱ 3/8"	✱ 3/8"	✱ 7/16"	✱ 7/16"	
JIB SHEET	Cruising	● 1/4"	● 5/16"	● 5/16"	● 3/8"	● 3/8"	● 7/16"	● 7/16"	● 1/2"	
	Club Racing	● 1/4"	✱ 5/16"	✱ 5/16"	✱ 3/8"	✱ 3/8"	✱ 3/8"	✱ 7/16"	✱ 7/16"	
SPIN SHEET	Cruising	● 1/4"	● 1/4"	● 5/16"	● 5/16"	● 3/8"	■ 3/8"	■ 7/16"	■ 7/16"	
	Club Racing	○ 1/4"	○ 1/4"	○ 5/16"	○ 5/16"	○ 3/8"	○ 3/8"	○ 3/8"	■ 5/16"	
LIGHT AIR SPIN SHEETS	Cruising	✱ 3/16"	✱ 3/16"	○ 1/4"	○ 1/4"	○ 1/4"	○ 5/16"	○ 3/8"	○ 3/8"	
	Club Racing	✱ 3/16"	✱ 3/16"	○ 1/4"	○ 1/4"	○ 1/4"	○ 5/16"	○ 3/8"	○ 3/8"	
TRAVELLER	Cruising	○ 1/4"	○ 1/4"	○ 5/16"	○ 5/16"	○ 5/16"	○ 3/8"	○ 3/8"	○ 3/8"	
	Club Racing	● 1/4"	● 1/4"	● 5/16"	● 5/16"	● 5/16"	● 3/8"	● 3/8"	● 3/8"	
AFTER GUY	Cruising	N/A	N/A	N/A	N/A	■ 5/16"	■ 3/8"	■ 7/16"	■ 1/2"	
	Club Racing	N/A	N/A	N/A	N/A	□ 5/16"	□ 3/8"	□ 7/16"	□ 1/2"	
MAIN HALYARD	Cruising	■ 1/4"	■ 5/16"	■ 5/16"	■ 3/8"	■ 3/8"	■ 7/16"	■ 7/16"	■ 1/2"	
	Club Racing	□ 1/4"	□ 1/4"	□ 5/16"	□ 5/16"	□ 3/8"	□ 3/8"	□ 7/16"	□ 7/16"	
JIB HALYARD	Cruising	■ 1/4"	■ 5/16"	■ 5/16"	■ 3/8"	■ 3/8"	■ 7/16"	■ 7/16"	■ 1/2"	
	Club Racing	□ 1/4"	□ 1/4"	□ 1/4"	□ 5/16"	□ 5/16"	□ 3/8"	□ 3/8"	□ 7/16"	
SPIN HALYARD	Cruising	● 1/4"	● 1/4"	● 5/16"	● 5/16"	● 5/16"	● 3/8"	● 3/8"	● 7/16"	
	Club Racing	✱ 1/4"	✱ 1/4"	✱ 1/4"	✱ 1/4"	✱ 5/16"	✱ 5/16"	✱ 3/8"	✱ 7/16"	
SPINNAKER TOPPING LIFT	Cruising	● 3/16"	● 3/16"	● 1/4"	● 5/16"	● 5/16"	● 3/8"	● 3/8"	● 7/16"	
	Club Racing	■ 3/16"	■ 3/16"	■ 1/4"	■ 1/4"	■ 5/16"	□ 5/16"	□ 5/16"	□ 3/8"	
FORE GUY	Cruising	● 3/16"	● 3/16"	● 1/4"	● 3/8"	● 3/8"	● 3/8"	● 3/8"	● 7/16"	
	Club Racing	■ 3/16"	■ 3/16"	■ 1/4"	■ 1/4"	■ 5/16"	■ 3/8"	■ 3/8"	■ 7/16"	



Sailrite Enterprises, Inc.

2390 East 100 South, Columbia City, IN 46725

Phone (800) 348-2769 / (260) 244-4647

Fax (260) 818-2005

Email info@sailrite.com

Sailrite.com

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