



samson

THE STRONGEST NAME IN ROPE

LINE SELECTION GUIDE

2023



CHOOSING THE BEST LINE FOR THE JOB



So many different ropes – need a little help choosing?

Samson offers a large variety of ropes specifically designed for use as running rigging. Each is engineered to perform superbly under a particular set of circumstances. The choice may seem intimidating. Armed with a little knowledge and an accurate assessment of your sailing needs, the choice becomes clear.

Accurately assess your working load

Formulas for sheet loads are available in the back of this brochure, but consider the following:

Halyard loads are best determined by your rigger. For sheets, halyards, or control lines, anticipated loads are considered working loads. The standard working load for any Samson rope is 20% of the rated break strength.

For example, the total load for an end-of-boom mainsheet going through a four-purchase sheave system may be calculated at 900 lbs. Factoring in a 20% working load, the rope's break strength needs to be five times the working load, or 4,500 lbs. for this application.

Synthetic fibers: What are the differences?

Nylon was the first synthetic fiber widely used in ropes. Reasonably strong (much stronger than the natural fibers it replaced), nylon is still used in dock and anchor lines where its excellent elasticity allows it to absorb shock loads.

The introduction of polyester fiber allowed rope manufacturers to build ropes that were as strong as nylon, but with much less stretch and wet-strength loss. Because it has excellent grip, it works well on winches. Polyester ropes, particularly polyester double braids, became the standard against which all ropes were measured. Polyester is still regarded as an excellent fiber for many marine applications and is widely used for covers on high-performance, or high-modulus double braids.

High-modulus fibers: Which one, for what, and why?

There are several modern high-modulus fibers, each with a unique set of characteristics. The challenge of the rope designer is to match these characteristics with the unique performance requirements of the application for which they are designing.

High-modulus polyethylene (HMPE) fiber has a particularly well balanced set of characteristics that allow it to be used in a variety of applications. Extremely lightweight with ultra-high strength, very low stretch, and excellent abrasion, cut, and UV resistance, it is well-suited for use in halyards, control lines, and sheets.

Other high-modulus fibers include aramid fibers that blend very high strength, low stretch, and abrasion resistance with extreme heat resistance; liquid crystal polymer (LCP) fibers; and PBO fibers, which offer the highest strength of all the high-modulus fibers; however, it must be protected from UV light. These are all exceptionally low-creep fibers.

In some cases, Samson blends fibers to take advantage of the relative properties of each of the components. See our product descriptions for more information.

Class I and Class II ropes: What are they?

Samson ropes are classified into two main categories based on fiber type. Ropes manufactured using the traditional fibers of nylon, polyester, and olefin are categorized as Class I. Those ropes, made in whole or in part with any of the high-modulus fibers, are categorized as Class II.

Double braids and single braids: What's the difference?

Samson invented the double braid in the late 1950s, when nylon was still the king of synthetic fibers. This construction incorporates a braided core within a braided cover, each carrying an equal percentage of the total load. This type of construction is common to lines that use the more traditional synthetic fibers like polyester, olefin, and nylon. In addition to carrying up to one-half of the load, the cover serves to protect the core from abrasion or ultraviolet degradation, to provide grip on winches or in clutches and stoppers, and to provide protection from friction-generated heat.

For applications that require higher strength and lighter weight than traditional Class I fibers provide, you will look to a core-dependant double braid. In this construction, the core is made from Class II fibers and serves as the strength member while the cover is typically made of Class I fibers.

Single braids are ropes designed without a separate core. Samson manufactures a wide variety of single braids. For sailing applications, the most common single braid is a 12-strand line. Where necessary or desired, covers can be added to single braids to protect them from exposure to heat, abrasion, or cutting while in use.

Alternately, a sailor may opt to strip the cover from a double braid in order to save additional weight aloft for halyard applications. The cover remains intact in areas on the rope where the rope is cleated or winched.

Splicing techniques: Why is knowing the class of my line important?

Splicing techniques are different between Class I and Class II ropes and reflect the differences in strengths and grip between the two groups. It is absolutely critical to use the correct splice for the class of rope being used. The product specifications include rope construction, class and recommended splicing technique.

LINE SELECTION GUIDE

Racing or cruising, Samson makes a line for every application

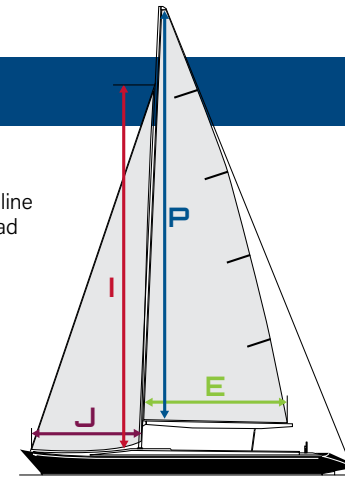
Sheets, halyards, and control lines all require different characteristics in strength and stretch. In these charts, you'll find a Samson line engineered for your size boat, the type of sailing you do, and its function in your rig. For sheets, use your sail plan and the sheet load formula provided to determine the appropriate size/strength for your boat and the wind conditions you expect to encounter.

To calculate typical loads on sheets for genoas, jibs, end of boom mainsheets, spinnaker guys and sheets, the following formula can be used (not applicable to multi-hull vessels):

$$(\text{windspeed})^2 \times .004 \times (\text{sail area in square feet}) = \text{sheet load at clew in pounds}$$

To calculate sail area based on your sail plan, use the following formulas:

$$100\% \text{ fore triangle} = 1/2J \times I \quad \text{mainsail} = 1/2E \times P$$



- I** Hoist of genoa, deck to sheeves
- P** Hoist of mainsail top of boom to sheeves
- E** Foot of main from back of mast to end of boom
- J** Stem fitting to front of mast

BREAK STRENGTH vs. ELASTIC STIFFNESS

When selecting a sailing line, the most commonly cited specification—break strength—is often NOT the most critical. For nearly all applications on a recreational sailboat, the strength of modern lines far exceeds both the load that it will experience and the strength of the hardware connected to it. Other characteristics, such as size, hand, weight, coefficient of friction, and flexibility are more important criteria for selection. Of these—elastic stiffness, or stretchiness of the line—is most critical.

Elastic stiffness is the resistance of a line to stretch under load. This is determined by the size, material, and construction of the line; and this is what sailors care about, because it impacts the way the rope handles. Before we can define the elastic stiffness of a rope, we must define one more thing: strain. Strain is the percentage change in length of an object when under the load. The higher the elastic stiffness, the less a line will elongate under load. In other words, the higher the elastic stiffness, the lower the strain.

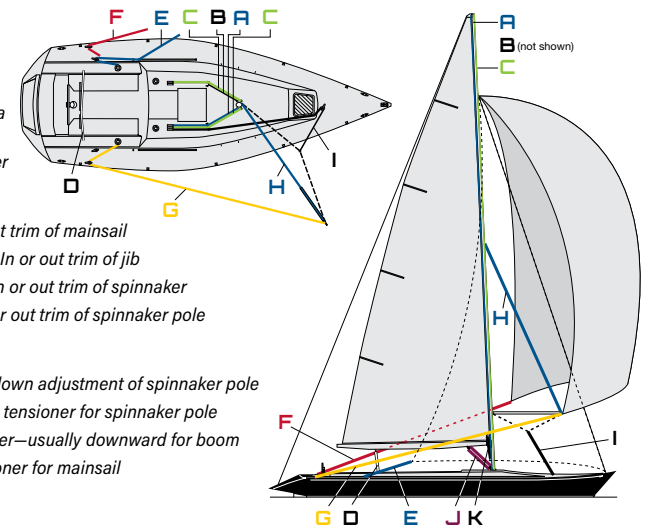
What does this mean, and how do we select the optimum stiffness of a line? Lines that control sail camber, such as halyards, outhauls, cunninghams, or jib sheets, benefit most from high stiffness. If, when beating to windward in a fresh breeze with your sail in the ideal trim, you are hit by a puff, the pressure on the sail would increase and thus the load on all the lines controlling that sail shape would increase—causing them to elongate. This elongation increases the depth of the sail camber, increasing both lift and drag on a sail.

There are cases where choosing a line with some stretch (lower elastic stiffness) is beneficial. A boom vang that is able to stretch when a puff hits allows the mainsail to twist and dump power from the head of the sail, thus preventing the boat from being overpowered. Similarly, using a lower stiffness line for a boom preventer is advisable, since it lowers the shock load on hardware and deck fittings.

Samson running and rigging lines allow sailors to select the appropriate lines for the desired elastic stiffness, based on your use and equipment.

HALYARDS

- A** Main Halyard Usage: Hoist or lower mainsail
- B** Jib/Genoa Halyard Usage: Hoist or lower jib/genoa
- C** Spinnaker Halyard Usage: Hoist or lower spinnaker



SHEETS

- D** Mainsheets Usage: In or out trim of mainsail
- E** Jib/Genoa Sheets Usage: In or out trim of jib
- F** Spinnaker Sheet Usage: In or out trim of spinnaker
- G** Spinnaker Guy Usage: In or out trim of spinnaker pole

CONTROL LINES

- H** Topping Lift Usage: Up or down adjustment of spinnaker pole
- I** Fore Guy Usage: Downward tensioner for spinnaker pole
- J** Boom Vang Usage: Tensioner—usually downward for boom
- K** Cunningham Usage: Tensioner for mainsail

ELASTIC STIFFNESS Approximate average in kN (kilonewtons)

	DIAMETER	2.5 mm 7/64"	3 mm 1/8"	5 mm 3/16"	6 mm 1/4"	8 mm 5/16"	9 mm 3/8"	10 mm 13/32"	11 mm 7/16"	12 mm 1/2"	14 mm 9/16"
SINGLE BRAIDS	AmSteel® Blue	330	490	980	1,500	2,500	3,400		4,300	5,900	7,600
	AmSteel®				1,200	1,900	2,700		3,300	4,600	5,900
	Lightning Rope®	240	310	720	1,100	1,900	2,600		3,000	4,400	5,600
	Tech-12™		290	590	880	1,500	2,000				
	Validator-12™	180	240	480	840	1,400	1,800		2,400	3,400	4,200
	Control-DPX™				540	720	1,200		1,400	1,900	
DOUBLE BRAIDS	GPX™				1,000	1,600		2,500		3,300	4,800
	WarpSpeed® II				850	1,200	1,700		2,400	2,900	4,400
	MLX3™				570	970		1,500		1,900	2,500
	Ultra-Lite™			150	300	550	700				
	XLS3™			80	110	190		280		390	530
	Trophy Braid™			40	80	110	150		230	290	

BREAKING STRENGTHS Approximate average in pounds

	DIAMETER	2.5 mm 7/64"	3 mm 1/8"	5 mm 3/16"	6 mm 1/4"	8 mm 5/16"	9 mm 3/8"	10 mm 13/32"	11 mm 7/16"	12 mm 1/2"	14 mm 9/16"
SINGLE BRAIDS	AmSteel® Blue	1,600	2,500	5,400	8,600	13,700	19,600		23,900	34,000	40,500
	AmSteel®				7,400	10,500	15,500		18,000	27,500	34,000
	Lightning Rope®	1,400	2,100	5,400	7,900	13,500	18,500		20,600	32,000	41,600
	Tech-12™		2,800	5,600	8,200	13,000	18,000				
	Validator-12™	2,000	2,700	5,500	9,400	14,000	19,500		23,500	35,000	43,000
	Control-DPX™					3,700	5,600	9,300		11,000	14,000
DOUBLE BRAIDS	GPX™				5,300	7,600		13,600		20,300	29,200
	WarpSpeed® II				5,100	6,200	9,800		14,000	21,000	26,500
	MLX3™				3,400	4,500		7,700		12,000	17,200
	Ultra-Lite™			1,200	2,200	2,900	4,400				
	XLS3™			1,700	2,400	4,100		6,300		8,700	11,700
	Trophy Braid™			800	1,400	2,000	3,000		4,000	6,000	

JIB/GENOA SHEETS			
SIZE	CRUISER	CRUISER/RACER	HIGH-TECH RACER
15'	6mm Control-DPX, Trophy	6mm Control-DPX, XLS3	6mm Control-DPX, GPX, WarpSpeed II
20'	6mm Control-DPX, Trophy	6mm Control-DPX, XLS3	6mm Control-DPX, GPX, WarpSpeed II
25'	8mm Control-DPX, Trophy, XLS3	8mm Control-DPX, MLX3, XLS3	6mm GPX, WarpSpeed II 8mm Control-DPX
30'	9mm Control-DPX, Trophy 10mm XLS3	9mm Control-DPX 10mm MLX3, XLS3	6mm GPX, WarpSpeed II 8mm Control-DPX
35'	10mm XLS3 11mm Control-DPX, Trophy	11mm Control-DPX, MLX3, XLS3	8mm GPX, WarpSpeed II 11mm Control-DPX
40'	12mm Control-DPX, Trophy, XLS3	12mm Control-DPX, MLX3, XLS3	9mm WarpSpeed II 10mm GPX 12mm Control-DPX
45'	12mm Control-DPX, XLS3	12mm Control-DPX, MLX3	9mm WarpSpeed II 10mm GPX 12mm Control-DPX
50'	12mm Control-DPX, XLS3	12mm Control-DPX, MLX3	9mm WarpSpeed II 10mm GPX 12mm Control-DPX

CONTROL LINES <i>For Topping Lifts, Fore Guys, Boom Vangs & Cunninghams</i>			
SIZE	CRUISER	CRUISER/RACER	HIGH-TECH RACER
15'	6mm XLS3	5mm AmSteel® 6mm XLS3	5mm AmSteel®Blue, Lightning Rope, Tech-12 6mm GPX, WarpSpeed II
20'	6mm Control-DPX, Trophy, XLS3	6mm AmSteel®, Control-DPX, MLX3, XLS3	5mm AmSteel®Blue, Lightning Rope, Tech-12 6mm Control-DPX, GPX, WarpSpeed II
25'	6mm Control-DPX, Trophy, XLS3	6mm AmSteel®, Control-DPX, MLX3, XLS3	5mm AmSteel®Blue, Lightning Rope, Tech-12 6mm Control-DPX, GPX, WarpSpeed II
30'	8mm Control-DPX, Trophy, XLS3	8mm AmSteel®, Control-DPX, MLX3, XLS3	6mm AmSteel®Blue, GPX, WarpSpeed II 8mm Control-DPX
35'	8mm Control-DPX, Trophy, XLS3	8mm AmSteel®, Control-DPX, MLX3, XLS3	5mm AmSteel®Blue, Lightning Rope, Tech-12 6mm GPX, WarpSpeed II 8mm Control-DPX
40'	9mm Control-DPX, Trophy 10mm XLS3	9mm AmSteel®, Control-DPX, 10mm MLX3, XLS3	6mm AmSteel®Blue, Lightning Rope, Tech-12 8mm GPX, WarpSpeed II 9mm Control-DPX
45'	10mm XLS3 11mm Control-DPX, Trophy	9mm AmSteel® 10mm MLX3, XLS3 11mm Control-DPX	6mm AmSteel®Blue, Lightning Rope, Tech-12 8mm GPX, WarpSpeed II 11mm Control-DPX
50'	12mm Control-DPX, Trophy, XLS3	10mm MLX3, XLS3 11mm AmSteel® 12mm Control-DPX	8mm AmSteel®Blue, Lightning Rope, Tech-12 9mm WarpSpeed II 10mm GPX 12mm Control-DPX

SPINNAKER SHEETS			
SIZE	CRUISER	CRUISER/RACER	HIGH-TECH RACER
15'	6mm Control-DPX, Trophy, XLS3	6mm Control-DPX, MLX3, Ultra-Lite	6mm Control-DPX, Ultra-Lite, GPX, WarpSpeed II
20'	6mm Control-DPX, Trophy, XLS3	6mm Control-DPX, MLX3, Ultra-Lite	6mm Control-DPX, Ultra-Lite, GPX, WarpSpeed II
25'	8mm Control-DPX, Trophy, XLS3	8mm Control-DPX, MLX3, Ultra-Lite	6mm GPX, WarpSpeed II 8mm Control-DPX, Ultra-Lite
30'	9mm Control-DPX, Trophy 10mm XLS3	9mm Control-DPX, Ultra-Lite 10mm MLX3	8mm GPX, WarpSpeed II 9mm Control-DPX, Ultra-Lite
35'	10mm XLS3 11mm Control-DPX, Trophy	9mm Ultra-Lite 10mm MLX3 11mm Control-DPX	8mm GPX, WarpSpeed II 9mm Ultra-Lite 11mm Control-DPX
40'	11mm Control-DPX 12mm Trophy, XLS3	11mm Control-DPX 12mm MLX3, XLS3	9mm WarpSpeed II 10mm GPX, MLX3 11mm Control-DPX
45'	12mm Control-DPX, XLS3	12mm Control-DPX, MLX3, XLS3	9mm WarpSpeed II 10mm GPX, MLX3 12mm Control-DPX
50'	12mm Control-DPX	12mm Control-DPX, MLX3, XLS3	10mm GPX 11mm WarpSpeed II 12mm Control-DPX, MLX3

HALYARDS <i>For Main, Jib/Genoa, & Spinnaker Halyards</i>			
SIZE	CRUISER	CRUISER/RACER	HIGH-TECH RACER
15'	6mm XLS3	6mm XLS3	3mm Tech-12 6mm MLX3, WarpSpeed II
20'	6mm XLS3	6mm MLX3, XLS3, WarpSpeed II	5mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 6mm WarpSpeed II, GPX, AmSteel®
25'	8mm XLS3	6mm WarpSpeed II 8mm MLX3, XLS3	5mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 6mm WarpSpeed II, GPX, AmSteel®
30'	10mm XLS3	8mm WarpSpeed II 10mm MLX3, XLS3	6mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 8mm WarpSpeed II, GPX, AmSteel®
35'	10mm XLS3	9mm WarpSpeed II 10mm MLX3, XLS3	6mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 8mm WarpSpeed II, GPX
40'	12mm XLS3	9mm WarpSpeed II 12mm MLX3, XLS3	6mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 8mm WarpSpeed II, GPX, AmSteel®
45'	12mm XLS3	11mm WarpSpeed II 12mm MLX3	6mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 8mm GPX, AmSteel® 9mm WarpSpeed II
50'	10mm MLX3	11mm WarpSpeed II 12mm MLX3	8mm AmSteel®Blue, Tech-12, Lightning Rope, Validator-12 9mm AmSteel® 10mm GPX 11mm WarpSpeed II

NOTE: The high-tech racer may wish to break down the halyards more specifically and in the same diameters as follows:
Main: Validator-12; GPX Spinnaker: WarpSpeed II

MAINSHEETS <i>End of Boom Sheeting</i>			
SIZE	CRUISER	CRUISER/RACER	HIGH-TECH RACER
15'	6mm Control-DPX, Trophy, XLS3	6mm Control-DPX, MLX3, XLS3, Ultra-Lite	6mm Control-DPX, GPX, WarpSpeed II
20'	8mm Control-DPX, Trophy, XLS3	8mm Control-DPX, MLX3, XLS3, Ultra-Lite	6mm GPX, WarpSpeed II 8mm Control-DPX
25'	8mm Control-DPX, Trophy, XLS3	8mm Control-DPX, MLX3, XLS3, Ultra-Lite	6mm GPX, WarpSpeed II 8mm Control-DPX
30'	8mm Control-DPX 9mm Trophy 10mm XLS3	8mm Control-DPX 10mm MLX3, XLS3	8mm Control-DPX, GPX, WarpSpeed II
35'	8mm Control-DPX 10 mm XLS3 11mm Trophy	8mm Control-DPX 10mm MLX3, XLS3	8mm Control-DPX 9mm WarpSpeed II 10mm GPX
40'	11mm Control-DPX 12mm Trophy, XLS3	11mm Control-DPX 12mm MLX3, XLS3	8mm Control-DPX 9mm WarpSpeed II 10mm GPX
45'	11mm Control-DPX 12mm Trophy, XLS3	11mm Control-DPX 12mm MLX3	10mm GPX 11mm Control-DPX, WarpSpeed II
50'	12mm Control-DPX 16mm Trophy	12mm Control-DPX, MLX3	10mm GPX 11mm WarpSpeed II 12mm Control-DPX

SPINNAKER GUYS			
SIZE	CRUISER	CRUISER/RACER	HIGH-TECH RACER
15'	N/A	6mm Control-DPX, XLS3	6mm Control-DPX, GPX, WarpSpeed II
20'	N/A	6mm Control-DPX, XLS3	6mm Control-DPX, GPX, WarpSpeed II
25'	N/A	8mm Control-DPX, MLX3, XLS3	8mm Control-DPX 6mm GPX, WarpSpeed II
30'	8mm Control-DPX 9mm XLS3	9mm Control-DPX 10mm MLX3	8mm GPX, WarpSpeed II 9mm Control-DPX
35'	10mm XLS3 11mm Control-DPX	10mm MLX3 11mm Control-DPX	8mm GPX, WarpSpeed II 11mm Control-DPX
40'	11mm Control-DPX 12mm XLS3	11mm Control-DPX 12mm MLX3	9mm WarpSpeed II 10mm GPX 11mm Control-DPX
45'	12mm Control-DPX	11mm WarpSpeed II 12mm Control-DPX	10mm GPX 11mm WarpSpeed II 12mm Control-DPX
50'	12mm Control-DPX	11mm WarpSpeed II 12mm Control-DPX	11mm GPX, WarpSpeed II 12mm Control-DPX

AmSteel®-Blue Product Code: 872

This 12-strand single braid is made from 100% HMPE fiber which provides the maximum strength-to-weight ratio. It is lightweight, floats, and has high abrasion and cut resistance. Cover where winch or rope clutches are used.



FEATURES:

- > Size-for-size, the same strength as wire rope
- > Extremely low stretch
- > Lightweight
- > Floats
- > Superior wear and flex fatigue
- > Torque-free construction
- > Easily spliced
- > UV stabilized

CONSTRUCTION:
12-strand single braid

FIBER: HMPE

COLORS:

Blue, some sizes also available by special order in black, gray, green, orange, red, or yellow

SPLICE/CLASS:
12-Strand Class II

AmSteel® Product Code: 870

An economical alternative to AmSteel²Blue, AmSteel[®] is a non-rotational rope that yields high strength and low stretch. It is flexible, easily spliced, and resists flex-fatigue and abrasion.



FEATURES:

- > High strength
- > Extremely low stretch
- > Floats
- > Easy to splice
- > Extremely lightweight
- > Wire rope replacement

CONSTRUCTION:
12-strand single braid

FIBER:
HMPE

COLORS:

Gray, red, blue, green, orange, and yellow

SPLICE/CLASS:
12-Strand Class II

Lightning Rope™ Product Code: 379

This 12-strand construction blends liquid crystal polymer (LCP) and HMPE fibers into a reliable, lightweight line with very low stretch and resistance to creep elongation.



FEATURES:

- > High strength-to-weight ratio
- > Extremely low stretch

CONSTRUCTION:
12-strand single braid

FIBER:
LCP-HMPE blend

COLORS:
Black, blue, green, or red

SPLICE/CLASS:
12-Strand Class II

GPX™ Product Code: 437

Samson's highest-performing line, GPX's core is a custom blend of Dyneema® SK99 and DM20, providing the highest possible elastic stiffness and virtually no creep. The specially-blended cover provides superior grip, excellent durability, and heat resistance.



SUNSET

FEATURES:

- > Highest strength and stiffness
- > Minimal creep and lowest stretch
- > Lightweight
- > Blended, strippable cover for improved traction

CONSTRUCTION:
Core-dependent double braid

FIBER (Core/Cover):
HMPE / Aramid-Polyester blend

COLORS:

Carbon with midnight, ocean, daybreak or dawn tracers and matching cores

SPLICE/CLASS:
Double Braid Class II

WarpSpeed® II Product Code: 440

The strength member in this double braid is 100% HMPE with a flexible 24-strand polyester cover. Strip the cover to save weight.



FEATURES:

- > High strength
- > Extremely low stretch
- > Lightweight
- > Excellent abrasion resistance

CONSTRUCTION:
Core-dependent double braid

FIBER (Core/Cover):
HMPE / Polyester

COLORS:

Variegated beige with black, blue, green, or red and matching cores

SPLICE/CLASS:
Double Braid Class II

MLX3™ Product Code: 436

MLX3 is a lightweight, core-dependent line with excellent strength and moderate stretch. The core is coated to match the cover, making the line strippable for greater weight savings.



MIDNIGHT

FEATURES:

- > High strength
- > Lightweight
- > Moderate stretch
- > Coated core matches cover

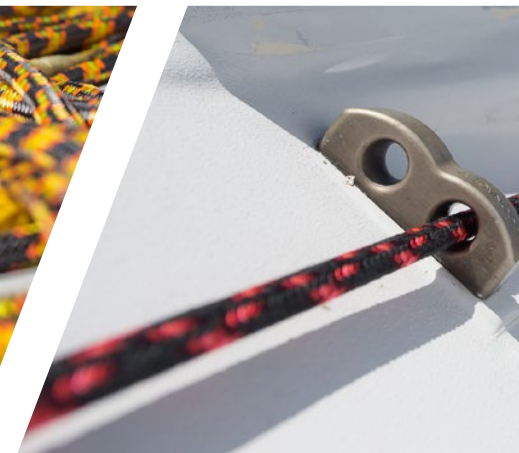
CONSTRUCTION:
Core-dependent double braid

FIBER (Core/Cover):
HMPE blend / Polyester

COLORS:

Slate with midnight, ocean, daybreak or dawn tracers and matching cores

SPLICE/CLASS:
Double Braid Class II



Tech-12™ Product Code: 890

This Samthane-coated 12-strand is made with 100% aramid fiber and offers excellent heat resistance, in addition to a high resistance to flex fatigue.



FEATURES:

- > Easy to splice
- > Samthane coated
- > Works well around sheaves and winches
- > Excellent heat resistance
- > Non-rotational
- > Negligible creep
- > Wire rope replacement

CONSTRUCTION:
12-strand single braid

FIBER: Aramid

COLORS:
Black, blue, green, or red

SPLICE/CLASS:
12-Strand Class II

Validator-12™ Product Code: 446

Validator-12 is a 12-strand construction made of 100% LCP. This easy-to-splice, no-creep line is extremely strong and lightweight.



FEATURES:

- > High strength-to-weight ratio
- > Extremely low stretch
- > Negligible creep
- > Samthane coated
- > Non-rotational
- > Heat resistant
- > Excellent durability
- > Abrasion resistant
- > Wire rope replacement

CONSTRUCTION:
12-strand single braid

FIBER: LCP

COLORS:
Black, blue, green, or red

SPLICE/CLASS:
12-Strand Class II

Control-DPX™ Product Code: 888

Control-DPX™ combines HMPE fiber and Samson's patented DPX™ fiber technology into a strong, lightweight line that is winch- and cleat-friendly while being incredibly easy on the hands. It performs well where winches are required without an added cover, while retaining the great "feel" you want in a mainsheet or guy. Control-DPX™ is not recommended for use with self-tailing winches.



FEATURES:

- > High strength
- > Low stretch
- > Solid grip on winch drums
- > Runs through blocks without kinking
- > Easy to handle
- > Lightweight
- > Easy to splice

CONSTRUCTION:
12-strand single braid

FIBER:
HMPE-Polyester blend

COLORS:
White with black, blue, green, red, or white tracers

SPLICE/CLASS:
12-Strand Class II

Ultra-Lite™ Product Code: 441

Great for light-wind sheets. This lightweight, floating double braid has a 24-strand MFP cover and a blended core of MFP and HMPE.



FEATURES:

- > Floats
- > High strength
- > Low stretch

CONSTRUCTION:
Core-dependent double braid

FIBER (Core/Cover):
HMPE blend / Polypropylene

COLORS:
Black, blue, green, or red — all with yellow tracers

SPLICE/CLASS:
Double Braid Class II

XLS3™ Product Code: 435

XLS3 is an update to a classic line — now stronger and more responsive with an updated look. Cruising sailors looking for optimal performance will appreciate the low-stretch polyester construction, smooth rendering, and long life of XLS3.



OCEAN

FEATURES:

- > Excellent abrasion resistance
- > Easy to splice
- > Great value using learnings from our elite-level rope

CONSTRUCTION:
Double braid

FIBER (Core/Cover):
Polyester / Polyester

COLORS:
White with midnight, ocean, daybreak or dawn tracers and solid navy, khaki, and white

SPLICE/CLASS:
Double Braid Class I

Trophy Braid™ Product Code: 453

Trophy Braid line has a soft, fuzzy cover that is easy on the hands. This double braid construction has a spun polyester cover and a polyester core.



FEATURES:

- > Easy to hold, wet or dry
- > Holds well in all types of cleats
- > Has a solid grip on winch drums

CONSTRUCTION:
Double braid

FIBER (Core/Cover):
Polyester / Spun Polyester

COLORS:
Black, blue, green, red, or white — all with a green and red ID

SPLICE/CLASS:
Double Braid Class I



» DOCK LINES

Choices—because not all boats are the same

Samson manufactures a complete line of double-braided dock lines to suit your vessel, no matter how large or small. All Samson *HarborMaster™* dock lines are constructed of 100% nylon. Nylon's elastic elongation helps smooth out the surge effects of wakes, waves, wind or heavy seas. *HarborMaster* dock lines are pre-spliced with a secure eye in one end and available in a wide range of diameters and lengths.



BLACK



NAVY BLUE



GOLD/WHITE



WHITE WITH TRACERS

CHECK YOUR LOCAL DEALER FOR COLOR AND SIZE AVAILABILITY.

DOCK LINE SELECTION GUIDE

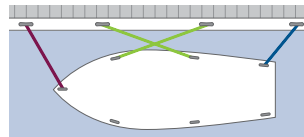
Strengths are approximate averages of new rope.

Boat Size	DOCK LINE LENGTH FEET	3/8" (9 mm) 4,900 lb	1/2" (12 mm) 8,200 lb	5/8" (16 mm) 13,500 lb	3/4"*** (18 mm) 22,200 lb
15-25 ft	10'	✓	✓		
26-30 ft	15'	✓	✓		
31-35 ft	20'	✓	✓	✓	
36-40 ft	25'	✓	✓	✓	
41-50 ft	30'		✓	✓	
51-60 ft	35'		✓	✓	
61-75 ft	40'			✓	✓
61-75 ft	45'				✓
61-75 ft	50'			✓	✓

*For storm conditions upgrade one size and double chafe protection.

**3/4" dock lines are available in black and navy blue only.

CUSTOM DOCK LINES



Formulas for calculating custom dock lines:

Bow Lines = 1-1/2 x Beam

Spring Lines = 3/4 x Length Over All

Stern Lines = 1-1/2 to 2 x Beam

» ANCHOR LINES

Choices—because not all boats are the same

Available in double braid (*HarborMaster*) or 3-strand twisted constructions (*Pro-Set-3*), Samson anchor lines provide excellent strength, energy absorption, and long service life.

DOUBLE BRAIDS



HarborMaster™

3-STRAND



Pro-Set™



Samson anchor lines are shipped with a prespliced high-strength, reinforced captive thimble. Smaller diameters are shipped in convenient, reusable plastic tote boxes. Longer lengths on spools are available. Contact your local Samson dealer for more information.

ANCHOR LINE SELECTION GUIDE

Strengths are approximate averages of new rope.

Boat Size	HarborMaster™	Pro-Set™
15-25 ft	3/8 in. 4,900 lb	3/8 in. 3,600 lb
26-30 ft	3/8 in. 4,900 lb	1/2 in. 6,300 lb
31-35 ft	3/8 in. 4,900 lb	1/2 in. 6,300 lb
36-40 ft	1/2 in. 8,200 lb	5/8 in. 10,000 lb
41-50 ft	1/2 in. 8,200 lb	5/8 in. 10,000 lb
51-60 ft	5/8 in. 13,500 lb	
61-75 ft	3/4 in. 22,200 lb	

ANCHOR LINE LENGTHS

Diameter INCHES	HarborMaster™ FEET	Pro-Set™ FEET
3/8 in.	100', 150', 200', 250', 300'	100', 150', 200'
1/2 in.	150', 200', 250', 300'	100', 150', 200', 300'
5/8 in.	200', 250', 300'	150', 200', 250', 300'

Dock & Anchor Lines

Whether power or sail, the most frequently used lines aboard are the dock and anchor lines

It's a fact of boating life that, for most of us, our boats spend more time moored than underway. Protect your investment and give yourself a little peace of mind by ensuring that you've got the best dock and anchor lines available.

Is there really a difference?

Yes. All Samson lines are built with 100% premium nylon that provides excellent stretch and flexibility. Nylon's elastic elongation properties help smooth out the surge effects of wakes, waves, wind, or heavy seas, making nylon the perfect fiber for dock and anchor lines. All of Samson's colored dock lines are produced with solution-dyed nylon to prevent bleed or fade.

Consistent quality from the company that moors more vessels than any other

Our recreational marine products are subjected to the same rigorous testing and quality control under which we produce mooring lines and hawsers for some of the world's largest vessels. They are also professionally prespliced, with thimbles included on all anchor lines.

» SPLICING

Samson Splice Training Kit

Comes complete with a fid, pusher, instructions for a double braid eye splice, and two lengths of double braided ropes.

Product Code: 999-0010



Samson Splicing Kit

Comes with a pusher, and 5 aluminum tubular fids (size range 1/4" through 1/2" diameter).

Product Code: 999-0070



Selma Fids™

Made from highly polished stainless steel, Selma Fids are patented worldwide. Available in sets only, the Selma Fid may be used to splice hollow braided lines from 1/8" to 9/16", or double braid and 3-strand rope up to 1-1/8".

Product Code: 903



Visit SamsonRope.com for detailed splice instructions, available in video and PDF formats



Lash-It!™ Product Code: 811

Lash-It! has been called "the sailor's duct tape" because of its multiple uses on any sailboat. A single braid made from HMPE fiber with Samthane urethane coating, Lash-It! offers a high strength-to-weight ratio: it is stronger than steel, so light it floats, and does not absorb water. Lash-It! comes in 180' easily dispensed from a plastic tube.

SPECIFICATIONS Available in 180 ft. tubes and 600 ft. spools.

Size Diameter INCHES	Size Diameter MILLIMETER	Strength Average POUNDS	Weight Per 100 ft. POUNDS
1/16 in.	1.75 mm	500 lb	0.12 lb
3/32 in.	2.20 mm	650 lb	0.16 lb



MFP Floatline™ Product Code: 461

Double braid with a multifilament polypropylene cover and floating core. MFP Floatline is yellow with red ID.

SPECIFICATIONS Available in 600 ft. spools

Size Diameter INCHES	Size Diameter MILLIMETER	Strength Average POUNDS	Weight Per 100 ft. POUNDS
1/4 in.	6 mm	1,700 lb	1.4 lb
3/8 in.	9 mm	3,200 lb	2.7 lb
1/2 in.	12 mm	5,200 lb	4.5 lb
5/8 in.	16 mm	7,400 lb	8.0 lb



Quik-Splice™ Product Code: 335

Quik-Splice is a fast-splicing single braid constructed with high-strength Ultra Blue copolymer olefin fiber. It floats and has high wet and dry abrasion resistance. The Ultra Blue fiber has excellent dielectric properties and provides superior resistance to sunlight degradation.

SPECIFICATIONS Available in 500 ft. spools

Size Diameter INCHES	Size Diameter MILLIMETER	Strength Average POUNDS	Weight Per 100 ft. POUNDS
1/4 in.	6 mm	1,400 lb	1.1 lb
5/16 in.	8 mm	2,500 lb	1.7 lb
3/8 in.	9 mm	3,500 lb	2.7 lb
7/16 in.	11 mm	4,600 lb	3.5 lb
1/2 in.	12 mm	6,700 lb	4.9 lb
9/16 in.	14 mm	7,500 lb	6.0 lb
5/8 in.	16 mm	10,900 lb	8.0 lb



Accessory Cord™ Product Code: 480

With a polyester cover and nylon core, Samson's Accessory Cord has excellent flexibility, knotting, and strength characteristics for a smooth running, torque-free cord.

SPECIFICATIONS Available in 500 ft. spools

Size Diameter INCHES	Size Diameter MILLIMETER	Strength Average POUNDS	Weight Per 100 ft. POUNDS
5/64 in.	2 mm	230 lb	0.20 lb
1/8 in.	3 mm	600 lb	0.50 lb
5/32 in.	4 mm	1,000 lb	0.80 lb
3/16 in.	5 mm	1,200 lb	1.4 lb
1/4 in.	6 mm	2,200 lb	1.8 lb
9/32 in.	7 mm	2,800 lb	2.3 lb
5/16 in.	8 mm	3,500 lb	3.0 lb
3/8 in.	9 mm	4,300 lb	3.8 lb

TECH TIP: STRIPPING COVERS



Stripping covers from core-dependent double braids

Many high-performance sailors like to strip the covers from core-dependent double braids to save weight, but it is important to leave the cover intact wherever the line needs to be cleated, worked on a winch, or through a rope clutch or stopper. Complete instructions for stripping covers are available on our website at SamsonRope.com

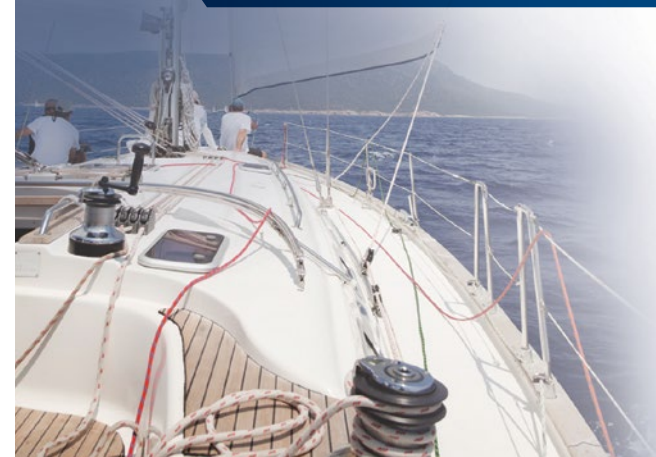
TECH TIP: HALYARDS

Upgrade Your Halyards

Have you ever had a difficult time furling your jib when the breeze picked up? Many times, this is due to an old halyard that is stretching. This causes your jib to sag at the luff, and keeps the furler from spinning freely.

Upgrade your halyards to any of Samson's low-stretch, lightweight, high-strength options, and watch your jib furl easier under all conditions.

Use a blended-core halyard on a jib furler so you do not stretch the sail beyond its design.



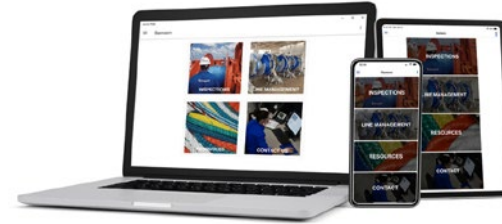
WHY SAMSON?

People and technology make the difference

Chances are you have seen Samson synthetic lines at work all around you. For more than 140 years, Samson has led the way in developing high-performance cordage products to meet the most demanding applications in the world. The running rigging you select for your boat carries the legacy of our experience in industries as diverse as commercial marine, safety and rescue, arborist, utilities, even the space program. So where's the advantage for you? When you buy Samson, you are getting a lot more than a rope. Our all-inclusive package of technology, products, manufacturing excellence, and experience provide our customers peace of mind.

So whether you're looking for new sheets to trim your composite genoa or replacing the halyards on a traditional schooner, look for Samson. It assures you of performance you can depend on, anytime, anywhere.

- > **TECHNOLOGY** Staffed with dedicated scientists and application engineers, Samson's R&D department is dedicated to problem solving, and leads the industry in the development of lighter, stronger, more durable ropes. Equally important to product innovation is our ability to stand confidently behind our products with accurate, reliable product specifications based on rigorous testing and measuring.
- > **PRODUCTS** Samson products are considered state of the art by sailors around the world. Samson has pioneered the use of new synthetic fibers, unique constructions, and coatings to improve the service life of ropes, reduce weight, reduce snagging, enhance abrasion resistance, and make splicing easier.
- > **MANUFACTURING** Samson's standards of manufacturing guarantee a quality product every time. Our manufacturing plants, in Lafayette, Louisiana and Ferndale, Washington are both ISO certified and utilize LEAN manufacturing principles.
- > **EXPERIENCE** When you sail with Samson, your boat carries the legacy of our 140+ years' experience providing rope to diverse industries. Known for excellence and quality, we have the experience, integrity, and reliability you can get only from The Strongest Name in Rope.



Samson App

Available for Android, iOS, and Windows, the Samson app brings you the latest in rope maintenance, innovation, and technology. Now it's easier than ever to track the condition of your rope while you are in the field.

The new and improved Samson App allows users to:

- > take the guesswork out of what to inspect.
- > pinpoint and document the exact positioning and severity of damaged ropes.
- > easily align rope condition to Samson retirement guidelines.
- > reduce time with automated reporting.
- > make informed decisions based on inspection results.

Find it on the app store!

TRADEMARK NOTICES:

AmSteel®, AmSteel-Blue®, and WarpSpeed® are registered trademarks of Samson Rope Technologies, Inc.

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