

HOW TO PICK A HIGH QUALITY CLIMBING ROPE



By David Rattigan

Ask around the industry, and you'll hear it again and again: tree climbers are a breed unto themselves – a demanding breed.

"I'm not a climber myself, but many are my customers and I talk to them a lot at shows and climbing championships," says Randy Nulle, sales director for cordage manufacturer Samson. "What I've found is that they tend to be loyal to something that works for them. They'll stay with it as long as it's working properly, but they're continually looking for something better. They are not afraid to switch to newer technology with whoever comes out with it."

"They also talk to each other quite a bit," Nulle adds. "Climbers in general – especially at the very upper level – are very tight. They know each other, they talk to each other, they discuss the different tools that they use in tree climbing, and certainly one of the key tools is rope. They discuss what works and what doesn't, and they



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share their information. They're continually striving for better technology."

They should be. In addition to helping a

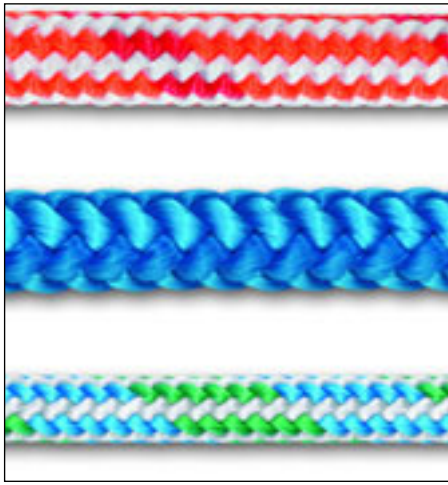
climber do his or her job more easily and efficiently, in many situations their life depends on the rope they are using.

For this article, the top manufacturers of rope were asked about their best selling climbing ropes and what makes them popular. Not surprisingly, all of them mentioned safety as a top priority. Here are some other things to love about, and look for in, climbing rope.

Color

The number one seller for the Scottsboro, Ala.-based Buccaneer Rope Co. is the red-white-and-blue Patriot, a 16-strand rope with a polyester cover and parallel straight nylon core. The rope comes in two sizes, half-inch and 5/8-inch. Tensile strength for the half-inch model is 7,000 pounds, and 10,000 for the 5/8-inch.

"What you'll find with climbing rope is that the colors have two purposes," explains salesman Tony Baugh. "One is practical, to be able to identify a particular rope – whether it is your current climbing



Samson ropes include, from top, Velocity Hot, True Blue and Velocity Cool. Velocity is a specialty rope for those seeking a lighter weight climbing line.

rope, or whether it is the rope of a particular climber. The other application is simply customer preference. Some people like green cars and some like purple cars. A white rope is just as good as a red, white

and blue rope, but some customers prefer the colored ones.”

To address quickly the practical need for colored ropes: different colored ropes may be used by different climbers, or for completely different jobs. Since it is important for climbers to know their ropes and history (and important that a rope used for high-stress purposes such as shock-loading never be used as a climbing rope), it is important to identify which rope is which. Having different color schemes allows the climber to do that. Sometimes, ropes may be marked using colored tape, which (unlike paint) will mark the rope but not degrade it.

Customer preference also plays a role in the purchase. As Vaugh says about the Patriot, people like “the fact that it’s colorful, and to be honest with you, I think folks like the name. We’re Americans and we’re patriots. I think that’s why our red, white and blue (rope) is more popular than our



Pelican Ropes Works’ climbing ropes include, from top, 4AR-1654 TigerLine KM, its most popular rope (by a slight margin); 4AR-160 KM, and; 4AR-162Y KM.

green and yellow.”

The Patriot is one of three ropes in the company’s Arbor Boss line, with the others being green-and-yellow (unofficially

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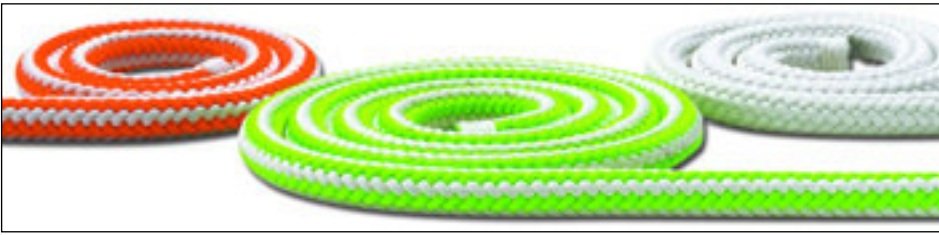
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New England Ropes' newer Ultra-Vee, center, is a version of its Braided Safety Blue (right) 16-strand climbing rope, with a safety-green cover yarn. At left is the Hi-Vee, also a version of the Safety Blue with a high visibility color yarn. Like the Safety Blue, the newer versions have the namesake blue core yarns.

referred to as “the Packer rope”), blue-and-yellow (called Blue Thunder), and solid white. All are 16-strand, with the same construction and same characteristics. The most economical rope is the white, with the other ropes slightly more expensive based on the cost of the dye used to produce each. Of the four models, the three most popular are the colored ropes.

While there might be subjective choices about colors, the truly important thing about each rope is that it's safe.

“We and everybody else in this industry manufactures rope to very strict specifications, so we're very comfortable that the people using it – assuming it's used correctly and appropriately – can do it safely,” Baugh says. “That's what we're all looking for – to be sure those guys come home at the end of the day in the same condition as they went.”

Durability

New England Ropes, Inc., based in Fall River, Mass., has two similarly-constructed top sellers, the 16-strand Braided Safety Blue and its orange-and-white counterpart, Hi Vee.

“Their popularity is probably due to the fact that they're extremely durable but still have a good feel and good ‘knotability,’ ” says Bill Shakespeare, marketing manager. “It's not a hard, firm rope; they're able to be soft yet still durable because of the difference in construction.”

Specifically, the tightly plied strands are made up of many components, and each strand is similar to a miniature piece of

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Pelican Rope Works' new Glow-in-the-Dark braided rope is a phosphorescent nylon product that emits a glow in the dark, making it an option for emergency work. When charged by any kind of light, the ropes will glow up to eight hours, diminishing as time passes. It can be produced in diameters of 3/16 of an inch to 1 inch in double braided, Kernmantle and 12-strand rope constructions, or flat braid webbing up to 3/4 of an inch wide.

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rope in itself. The result is that it is less likely to catch on things, or knot. The construction makes it resistant to abrasion, and it is therefore more durable.

The Hi Vee was the first climbing rope built with safety colors. While it's popular

for climbers to use colored ropes now, Shakespeare notes that New England Ropes has stuck with its basic safety color scheme.

Braided Safety Blue is a white rope with a blue core strand running up the middle. If the climber sees blue, that should act as a flashing warning to stop using the rope. "By the time you see the blue, that rope is way past worn out," Shakespeare cautions. "It's kind of like an emergency indicator that you've done severe damage to the rope."

In fact, many Braided Safety Blue ropes may be deemed worn out before the climber sees the blue core. But if the rope is nicked with a saw and a strand is cut, the blue that shows through the rope will be a reminder to the climber not to take chances. The blue core isn't supposed to replace regular inspections and other such safety practices.



Most climbers look for a rope that has good durability, but that also still has a good feel, flexibility and good "knotability."

Strength & performance

While the tensile strength of both ropes is well ahead of national standards – Braided Safety Blue is rated at 7,700 pounds, Hi Vee at 7,000 – there is more to think about when considering rope purchases than just that measure of quality.

"One of the easiest things for people to look at is tensile strength of a rope, and in a lot of ways that's kind of misleading," Shakespeare says, noting that all of the ropes sold by qualified manufacturers far surpass national safety standards. For example, the ANSI standard is 5,400 pounds, a tensile strength that has a big safety factor built in.

"Climbing ropes don't break," he says. "So instead of just looking at tensile strength, they should look at other performance characteristics, such as the hands (feel), the knotability, how well does it work with climbing hitches, and the durability."

New England Ropes also produces a 12-strand rope, the Safety Pro 12, which is constructed with some core strands that keep the rope round and firm. Its tensile strength is 6,600.

"One of the things people don't like about 12-strand ropes is their tendency to flatten out or go square," Shakespeare says. "Safety Pro 12 stays very round because of those core strands. It makes it unique."

Size

Arbor Gold, a 12-strand rope with a protective overlay finish that makes it more resistant to abrasion, is the prime seller for Plymkraft, Inc., based in Newport News, Va. Richard Sleight, vice president and chief operating officer, calls it an economical rope that gets the job done.

"It's a very flexible rope and, since it's a 12-strand braided rope, you don't have to worry about it kinking or anything like that," Sleight says. "It has the feel that an arborist would want, in that it's a firm 12-strand."

There are different colors and sizes in the Arbor Gold line, which are also made with both polyester and combination fibers. Tensile strengths can range from 5,500 to 7,500 for the 12-strand ropes. The standard Arbor Gold rope comes in white, and there is another top seller called Easy See Red, a high-visibility rope. A third model, the "All-American," comes in blue, with red and white tracers in it.

Unlike the experience of some manufacturers, Sleight says that the white Arbor Gold 12-strand is his top seller.

For the past year, the company also has been producing a 32-strand nylon-and-

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polyester rope. Called Fastline, its tensile strength is 9,200 pounds.

A 12-strand rope is less expensive than other types used by tree climbers, and is likely not the choice for those who use climbing devices, but it's a good, work-horse rope for tree climbing, according to Sleight.

"In the construction of rope, there is no magic," Sleight says. "Essentially, if you use good, quality raw materials and have knowledge of how to construct a rope, and good equipment, it's there for you."

The company also produces high-performance ropes for the military ("about 90 percent of our business," says Sleight) and safety ropes for the New York City Fire Department. As a market, arborists are similar in that they have a specialized need, and a demand for quality.

"We like the quality people demand in this business," says Sleight. "It's not a commodity type of business. We just take care of specialized needs."

Cost and availability

Pelican Rope Works of Santa Ana, Calif., is a relative newcomer to the industry, developing climbing lines for about five years. The company also produces high-tech ropes for fire departments and search-and-rescue operations.

"We were already set up making high-tech ropes with high liability – people's lives were going to be on the end of them," says Mike Gardosik, sales manager. "We realized that arborists and search-and-rescue had very similar products."

Pelican Rope Works produces a 16-strand climbing rope with a tightly-braided polyester cover over a straight nylon core, a half-inch in diameter.

"It's a firm rope; climbers like it because it doesn't collapse on them, so they can repel down," Gardosik says. The ropes are constructed in a way that prevents the cover from bunching, or "milking," when the climber repels.

Like other manufacturers, Pelican develops ropes with different color schemes, including its most popular rope (by a slight margin), the Tiger Line, which is neon orange with black tracers. There is also a red-and-yellow striped rope, an orange-and-white striped rope, and solid white.

"Most of the climbers like the bright col-

ors, so they can see them in the trees and don't cut them with a chain saw," Gardosik says. All are of the same design, with tensile strength of 8,000 pounds.

Gardosik has reviewed his competitors' ropes, and says that quality is high throughout the industry. For many manufacturers, their edge will come with pricing, service and good business practices.

"If somebody wants to order a rope, they need it. If you can get it to them quickly, you're going to have an edge over the other rope companies," he says.

Weight and adaptability

Based in Ferndale, Wash., Samson is a major manufacturer of ropes for commercial marine and offshore uses, as well as a

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dozen different dry-land industries. Tree care is one of them, and Randy Nulle notes that, "It's an important part of our business."

The company's top of the line, in both quality and sales, is ArborMaster, a 16-strand, half-inch polyester climbing line.

"It's got a really great feel to it," Nulle says. "It responds very well to hitches. You can use several different types of climbing hitches on it and really works well. It's flexible enough where you can footlock with it, and it responds to the various hardware devices people use in tree climbing."

The rope is available in three different colors, and the most popular is a blue-and-white striped ArborMaster rope called "Blue Streak." Nulle says that it's a nice, soft color that contrasts well with the trees, but why it's more popular than other colors, he doesn't know.

Three years ago, Samson began producing an upper-level, 11-millimeter climbing line called Velocity. It's built a solid niche as a specialty rope for those seeking a lighter weight climbing line.

"We take weight out by reducing the diameter, but it still meets all the minimum specifications," Nulle says.

Where Samson's ArborMaster ropes are made with 16-strand, core construction, its Velocity is a 24-strand, double-braid rope. Like ArborMaster, Velocity comes in two colors: hot (bright orange) and cool (blue-green).

"It's got a great following" because of its light weight, Nulle says. "When climbers are footlocking, they actually have to lift the rope with their feet. If you have 100 feet of rope hanging below you, it can get heavy."

While Velocity has developed its niche, the second-largest seller for Samson is the half-inch, 12-strand True-Blue, cousin of ArborPlex, the granddaddy of all climbing lines.

"The Samson ArborPlex is really known as the rope that changed arborists' climbing lines about 25 years ago," Nulle says. ArborPlex was the first braided arborist climbing line, and replaced the twisted three-strand construction ropes popular at that time.

It remains a strong seller, nearly matching the sales of True-Blue, a similarly

constructed rope. They're both made of polyester, a 12-strand rope woven together with no core. True-Blue is slightly larger in diameter.

"It's got a little softer, puffier feel," Nulle says. "The guys that have big hands really appreciate True-Blue. With a smaller diameter rope, if a guy has huge hands it can be tough gripping it."

As with all of the rope manufacturers, Nulle notes that safety is a priority for Samson. And, while climbers and instructors will stress that regular inspections of rope and other safety practices and techniques are important, it's also important to have a nice, strong rope.

"We would argue that tensile strength gives you a margin of error and a little cushion," says Nulle. "It's an indication of quality. The better-made lines tend to be a little stronger and last longer, too, typically."

Not surprisingly, Samson ropes have strong tensile strength ratings. ArborMaster has a tensile strength of 8,100, Velocity 6,000 and True-Blue 7,300.

In 2005, going for the lightweight market, Yale Cordage of Saco, Maine, came out with its Blaze 11 mm climbing line, which offers 5,600-pound tensile strength with an eye splice and is spliced like a standard double-braid rope. The Blaze weighs in at just 6 pounds per 100 feet. The Blaze 11 mm is made from high-visibility, extrusion-dyed polyester, resulting in permanent coloration that won't fade or run with use. The 24-carrier braided construction is easier to splice and feels great in the hand.

End of the rope

If, as Samson's Randy Nulle says, climbers are continually looking for better technology and are not afraid to switch to whoever comes out with it, you can certainly see why rope manufacturers have their work cut out for them in keeping ahead of the curve and cornering a piece of the market.

But it is heartening to see that, while seeking greater performance in the rope, neither the climbers nor the manufacturers move forward without maintaining safety as their top priority.

David Rattigan is a freelance writer living in Peabody, Massachusetts.

