

Ropes and plates and rock & roll...

Climbing is a broad church, ranging from bouldering and cragging to sport-ice cascades and winter alpinism. So the days of owning a single do-it-all rope are long gone. But there's a wide choice: thick or thin, long or longer, and a whole bunch of diverse belay devices go with. Mountain guide Bruce Goodlad brings order to chaos with a personal selection. . .

Ropes

All the ropes we use for climbing are 'dynamic', meaning their materials and construction allow them to stretch to absorb the impact of a falling climber. In fact climbing ropes are almost bungee-like in their stretchiness, lengthening by 20 per cent or so in a long fall. Static ropes, like those used in caving, on the other hand, don't stretch at all and if you shock loaded them in a climbing situation they could catastrophically fail!

There are three basic rope systems, with two in common use on most crags. Firstly, the single rope, which is perfect for sport climbing, where the fixed protection is usually in a straight line and the need to abseil reasonably infrequent. The second system uses double or half ropes, where each strand is clipped through different runners, often alternately, to reduce rope drag and give extra protection. This setup is particularly suited to trad climbing where protection placements rarely lie in a straight line and where using a single rope could cause them to lift out or result in prohibitive rope drag, or both! Double ropes also allow for long abseils and so are better in the mountains. The third system involves twin thin ropes used in parallel; *both* are clipped through *every* piece of protection. This system is especially useful for snow and ice climbing, saves weight and still allows for long abseils.

Choosing a rope

Length? A single sport rope should be at least 60m, but 70m and even 80m ropes are becoming popular as designs get thinner and lighter. A 50m double is adequate for most British trad use, but again 60m pairs could be useful. For thin twins, 60m is good as it gives you more scope for finding belays on snow and ice, ditto when abseiling.

Mammut

Mammut, in my opinion, have been leading the way in rope development for some time. They consistently produce the hardest wearing ropes, and as a result you often see Mountain Guides using them. Mammut produce a wide variety of ropes but we only have room to look at a couple.

The rope tag, which highlights the specifics of a rope, can be confusing. In simple terms my understanding of the information is as follows:

- **Number of UIAA rated falls** – indicates the number of falls the rope will take before it breaks, when tested with an 80kg weight for a single rope, and 50kg for a half rope, in a Factor 2 fall situation (no runners).
- **Weight per metre** – weight per metre!
- **Impact Force** – the force transmitted to the climber during a fall.
- **Elongation** – how much your rope will remain stretched after a first fall. Ropes have memories and will return to their original length if allowed to 'rest'.

If you are planning on taking some huge falls then look for a rope with a low impact force. If you want the rope to last longer then look for a higher number of UIAA rated falls, although this doesn't take into account abrasion and possible sheath damage.

'Dry treated' ropes – are they worth the extra? Oh yes! Ropes are significantly (scarily) weaker when wet and given that most of our readers live in the UK, it doesn't seem like much of a choice to me. If you are venturing out in winter, or climbing in the Alps, then definitely take a dry treated rope.

Top Tip: The outer dry treatment wears off with time, so look for a rope that treats the core as well as the sheath.

All prices in the following reviews are for dry treated ropes.



A Serenity 8.9mm single rope

52g/m, Falls 5, Impact force 9.5kN, 60m £130

If you want high tech then this is it the lightest UIAA rated rope on the market. The first to break the 9mm barrier, Mammut have achieved this diameter and weight by using a new Teflon coating that spreads the load along the length of the rope, making it perform better. It's OK, I don't understand it either, it just works! Perfect for that desperate on-sight, but not designed for working routes, the *Serenity* is also great in the mountains when paired with a twin rope or a length of Dyneema for abseiling. A word of caution though, it is thin and slippery so make sure you use an appropriate belay device (see below).

Revelation 9.2mm single rope

55g/m, Falls 5-6, Impact force 9.5kN, 60m £115

This was the first really skinny single rope that I used, and I found it brilliant to use for both guiding and my own personal climbing. The *Revelation* is a bit more robust than the *Serenity* and is perfect for the experienced user. Once again, make sure you use the right belay device with this rope.

Beal

Beal have been producing great ropes for years. Their ropes don't seem to wear as well as Mammut's, but they have a softer feel and are generally nicer to handle. There are loads of different versions to choose from, so here is a selection.

Tiger 10mm single rope

61g/m, Falls 7-8, Impact force 7.6kN, 60m £145

A new rope from Beal for this season, the *Tiger* is designed to be a hard working rope for those experimenting with thinner ropes. It's pretty light and feels great in use. The *Tiger* also comes in its own rope bag, which is really simple but effective, and I thought a great idea.

Cobra II 8.5mm half rope

48g/m, Falls 18-20, Impact force 4.9kN, 60m £91

The *Cobra* has become one of the industry standards for a great handling half rope, perfect in all situations. If you are only going to own one pair of ropes make it the *Cobra*.

Edelrid

If you look at the history of rope development, Edelrid have been at the forefront since the beginning, and were the pioneers of the kernmantle ropes that all climbing rope manufacturers use today. They also first introduced the concept of twin ropes, back in 1977. Their ropes feel great and perform well on the hill.

Livewire 9.4mm single rope

B 58g/m, Falls 7, Impact force 8.7kN 60m £135, 70m £160

New for this season, the *Livewire* 9.4mm feels great. It's soft and pliable right from the off, and seems to have lasted really well so far. The dry treatment is superb and it performed well both in the hills and on the crag.

Livewire 8mm half rope

C 44g/m, Falls 14, Impact force 6.7kN 50m £105, 60m £125

I used a pair of these on a 6 week climbing trip to the Sierra Nevada last summer and thought they were awesome, perfect for the long walk in and high alpine rock climbing. If you are climbing far from the road these are the ropes to take along.

Tendon Ropes

Tendon ropes are made in the Czech Republic and distributed in the UK by Allcord. My initial reaction to their ropes was that the technology felt a bit old, but in action they were great, performing well in all types of climbing situation. The ropes are smooth, great to handle and have been impregnated with Teflon to increase their life span.

Ambition 8.5mm half rope

46g/m, Falls 10-12, Impact force 5.5kN 50m £95

The *Ambition* is a nice feeling half rope. It felt a bit thinner than its 8.5mm, and is really light for a rope of this diameter.

Master 9.7mm single rope

61g/m, Falls 9-10, Impact force 7.6kN 60m £115

Another rope that felt light for its weight, the *Master* performs best on top end sport routes or anywhere that weight is an issue.

Infinity

Infinity come from the **Wild Country** stable, and have all the quality and performance that you would expect from a brand of their caliber. Infinity have a full range of ropes; the *Enduro* range are built to last and the *Sprint* are a bit lighter and designed for top end performance.

Sprint 8.4mm half rope

45g/m, Falls 6, Impact force 6.45kN 50m £90, 60m £100

This is a great half rope. Smooth, light and kink free, the *Sprint* 8.4mm performed in all situations. I did find with both the half ropes I tried from Infinity there was a degree of initial furring of the sheath, but this stopped after the first few weeks of use and didn't get any worse.

Sprint 10mm single rope

64g/m, Falls 8, Impact force 8.75kN 60m £135

Fairly heavy compared to some of the single ropes we have looked at, the *Sprint* 10mm has been a real workhorse for me over the past year. It has taken loads of abuse, both sport climbing and being dragged about on glaciers, and it still looks quite respectable and feels great to climb with.

Belay Devices

As we all know ropes are getting skinnier and skinnier, with obvious weight advantages, but we need to be able to control them when belaying, holding a fall or abseiling. This means that before you head for the crag you need to ensure your belay device is appropriate for the diameter of your rope.

As discussed before there are two possible rope systems, single and double, with belay devices to match. Single ropes can be used in double belay devices but not the other way round, so if you're only going to own one device then I would make it a double. Single rope devices are generally a more specialist piece of equipment designed with sport climbing in mind, where weight and bulk are less of an issue and performance is more important. We will have a look at both styles of device and at what's



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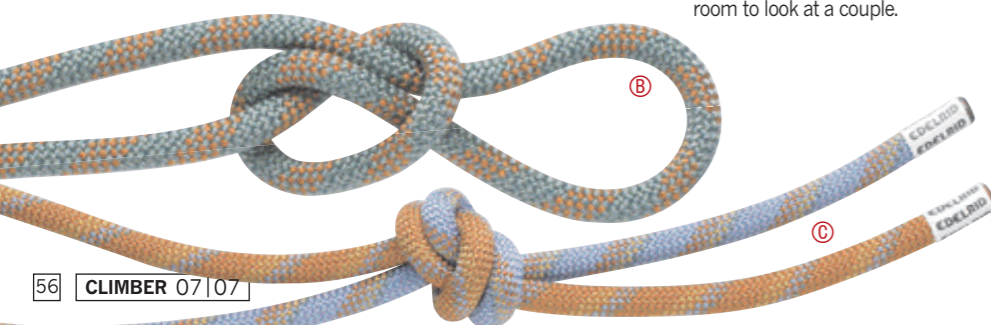
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Black Diamond ATC XP

7.7-11mm ropes, 87g, £16

Like the *ATC Guide* the *XP* utilises two V slots to generate friction with a variety of rope diameters. I found the original version very grabby when paying out the rope, but Black Diamond have since changed the configuration of the slots slightly making all the difference. If you are not bothered about the *Guide* function and want to save a few grams, the *XP* is brilliant.

Wild Country VC Pro

8-11mm ropes, 67g, £15

When it first came out this was my belay device of choice, and it still would be if it weren't for the guide function of the Black Diamond *ATC*. The *VC Pro* uses V grooves to generate a variable amount of friction, so coping with a variety of different rope diameters. At 67g it is also one of the lightest devices around. Brilliant! The original *Variable Controller* is still available and at £12 it is still a superb bit of equipment, but I would suggest spending the extra £3 and getting the more versatile unit.

Petzl Reverso

8-11mm ropes, 81g, £16

Petzl Reversino

7.5-8.2mm ropes, 53g, £15

The *Reverso* from Petzl, like the *ATC Guide*, can be used as a standard belay and abseil device but can also be used to bring up two seconds simultaneously. The smaller *Reversino* uses the same design but is scaled down to be used with smaller diameter ropes. In action they both work well, though I felt the *Reverso* was a bit slick with an 8mm rope. I also wasn't that keen on the solid metal retaining loop, where most other devices use wire. I found that it made the device feel bulky on my harness, but that's a personal preference. They both work well, just be a bit careful with the *Reverso* at the bottom end of its thickness range.

Metolius BRD

8-11mm ropes, 80g, £10

Metolius use a different design to other manufacturers with the *BRD* to generate extra friction with thin ropes. With a thin rope, when a load is applied, the karabiner is pulled up into the device so generating more friction. It works really well, giving loads of holding power on all



diameters of rope. When abseiling there is almost too much friction, but the 'horn' can be used to release the rope, or the device can be reversed. This is a great solution to the skinny rope issue.

DMM Bug

9-11mm ropes, 76g, £14

DMM Bugette

7.5-9mm ropes, 24g, £10

Two classic belay devices from DMM that have been around for a while, and are solid performers with the appropriate rope diameter. The Editor swears by the *Bugette*, as it's super light and doesn't twist the ropes even after prolonged abseiling.

DMM V-Twin

8-10.5mm ropes, 78g, £15

This is a new stainless steel device from DMM. The *V-Twin* utilises a couple of V grooves to give friction where it is needed, but is does not impede paying the rope out when the leader is going for it. At the time of going to press we had only just got hold of one, but initial impressions from the team were very favourable. They should be hitting the shops soon.

Single Rope devices

If you are doing much wall or sport climbing I find it's great to have a device that is specifically designed for a single rope. The main reason for me is that it is easier to hold a climber in position while they are working a route. Many people like them because they think they are foolproof devices, well, there are plenty of broken ankles and worse to testify that they are not! The same care and attention is required as would be used when operating any belay device.

Petzl Gri Gri

10-11mm ropes, 220g, £50

This is the original 'self-locking' device that has become the standard for sport climbing and perhaps one of the most misused. It can work really well but don't use it with anything less than a 10mm rope. Remember this is not a failsafe device, and the cam is prone to locking up when trying to pay the rope out quickly. The obvious and common work-round could result in you dropping your leader!

Edelrid Eddy

9-11mm ropes, 370g, £70

The *Eddy* uses a similar mechanism to the *Gri Gri*, but can be used with much thinner ropes, which is a distinct advantage when climbing some of the many longer sport routes that are now being put up.

The other advantage of the *Eddy* is that to lower the leader the control lever is held in a central position. If you pull too hard, as may happen with a panicked user, the device will lock. It's more expensive and heavier, but I think a better device.

available on the market.

I've started by looking at double rope devices. These are the most commonly used style of belay device, and consist of a piece of metal with two slots in it, designed to generate friction as the rope passes through. The amount of friction can be controlled by the user to hold a fall, or allow a controlled abseil descent. It is also worth considering the weight difference between yourself and your regular climbing partner. The bigger the difference, the more holding power you may need.

As an aside, no matter how much or little friction your plate generates, I would strongly recommend protecting your abseil using a French Prusik. It will hold you position while you sort out any twists in the rope or rig the next abseil, and will stop your descent if you are forced to let go of the rope – e.g. hit by a falling stone. [Read Libby Peter's in-depth guide to abseiling on page 30.]

Some manufacturers have introduced a number of design features to allow you to use their devices with a variety of different rope diameters. Another really useful feature is the ability to clip the device straight into the belay and bring up two seconds at once. This is a technique that guides have used for a long time. However it is not limited to guides, and is brilliant for making life simple when climbing as a three.

On to the devices, here is a selection that I have used on the crag.

Black Diamond ATC Guide

7.7-11mm ropes, 103g, £20

This is my current favourite belay device. It's one of those rare things that does everything I want it to do, enabling me to belay with one rope or two, thick or thin ropes. Holding a fall is no problem, abseiling is great, and I can bring up two seconds really easily. The device has two V slots that the ropes sit in, which increase friction the deeper the ropes slide into the slot, meaning thinner ropes slide deeper into the groove. The plate has a large hole at the back to clip into the belay for bringing up seconds, and has a small hole at the opposite end that aids releasing the plate under load, which can be a problem with this type of device.

Note: A friend of mine did have a rope slip with an iced-up rope, so – again – be careful with thin ropes and ice.