

Petrol chainsaws are often used by loggers to bring down big trees or large branches. The larger models are powerful tools, suitable for large-scale operations. This saw is also the primary tool of arborists who work in remote or woodland locations where there is little/no access to electricity. Many woodland owners use them to work their woodlands and to produce firewood.

PROS

- Petrol chainsaws are powerful, thanks to their two-stroke engine. Blades can be as long as 90cm (36 in.) and more, which makes them great for large jobs. They're often much more powerful than electric chainsaws.
- They are easy to manoeuvre and you don't have to deal with wires and cords around your work site.
- This type of chainsaw is capable of handling almost every kind of job easily. There is a huge range of sizes in terms of bars and power. You can find chainsaws for personal, domestic, and professional use.

CONS

- Petrol chainsaws require upper body strength and a firm grip. New users should get trained in order to become accustomed to them.
- The fuelling process is a little cumbersome and time-consuming. You need to wait for the engine to cool down before refuelling. It is essential to add the right amount of two-stroke oil to the petrol.
- They are noisy, vibrate and can emit noxious fumes. The machine can get hot when used continuously.
- Petrol chainsaws require careful maintenance and must be stored carefully and drained if not used for a long period.

ELECTRIC CHAINSAWS

An electric chainsaw works on electric power, either from the mains or a generator. They are generally smaller in size and lighter than petrol models. Electric engines generate and supply power to the chainsaw blade through the crankshaft mechanism. The centrifugal clutch controls the movement of the blade and ensures that the chain is moving only when needed, even if the engine is on.

Most electric chainsaws are supplied with more than 30m of cable. They are ideal for small-scale and intricate cutting tasks and are often used by landscapers, homeowners and gardeners. These saws have enough power to deal with small branches, bushes, shrubs and plants; some of the larger models can also be used to cut sturdy trees.

PROS

- Electric chainsaws are easy to handle and use. They're not too heavy or cumbersome. The blades are no longer than about 38cm (14 in.), which makes them a great choice for new users.
- They start at the press of a button, unlike petrol models, which (mostly) have to be primed before the starter cord is pulled.
- These saws are easier to store and don't require specific storage or conditions.

CONS

- Electric chainsaws aren't as powerful as petrol saws, which means they are unsuitable in large-scale professional applications.
- The long, dangling cord is cumbersome and can also be a safety hazard. It limits your range of action and can even get in the way of your work.



BATTERY-POWERED CHAINSAWS

At the basic level, both battery-powered and petrol chainsaws provide the same functionality. They both have a motor, bar, chain and drive gear. The difference lies in their motor and the effect it has on everyday operation and usability. Both have sufficient torque and power to saw through the toughest wood.

PROS

- A battery chainsaw is quiet and starts with just the push of a button.
- It can last for several hours' work, depending on the battery pack.
- Battery-powered models are generally well-balanced and lightweight.
- Battery chainsaws are much quieter and emission-free.

CONS

- Battery life – a spare back-up battery is a must.
- Cost of batteries.

Batteries are available in a range of sizes from 4.0Ah to 31.1Ah, with operating time anything between 25 minutes and 18 hours. It is sensible to keep an extra charged battery handy.

Most leading brands, such as Stihl and Husqvarna, offer new generation lithium-ion batteries that can easily match the power of small (around 50cc) petrol-driven chainsaws without any of the drawbacks. Batteries are often much cheaper when you buy them with a tool and some batteries can be used across a range of tools from a particular manufacturer.

COST

The outright cost of buying a battery saw with two batteries will be more than a standard petrol chainsaw. But petrol engines are more complex than electric motors, so there is more to go wrong, and running costs with petrol and mixing oil are higher than electric charging costs. All saws require chain oil and replacement chains. Battery saws are cheaper to maintain and tend to have a longer life span.

THE VERDICT

Different arborists have different requirements and one tool isn't necessarily better than the other. Many owners buy a petrol chainsaw for work in the woods and use a smaller electric model for cross-cutting logs at home. All tools will require ongoing maintenance and all users should consider some sort of training for the purposes of safety.

USING A BATTERY CHAINSAW

Woodland owner Mike Pepler uses a Husqvarna 536Li XP battery chainsaw with a BLi300 lithium-ion battery.

He says, 'It takes just over an hour to charge this size battery from empty, using the 330W charger. It uses 1/2 to 3/4 of a battery to fill a 1m3 trailer with logs (depending on log length) – about an hour's work – though probably only 20 minutes of actual full power running, as the rest of the time is handling wood. Coppicing is lighter work than logging, and when working alone I've not managed to empty both batteries in a day (although I spend some of the time splitting and

stacking 2m lengths of wood). The battery itself is heavier than a tank of fuel, but the motor is much lighter than a petrol engine, so overall the machine is lighter than our 50cc petrol chainsaw. It is not quite as powerful and I'd estimate that it is equivalent to a 30-35cc saw.'

In a virtuous circle, Mike charges his Husky at home via his solar-powered system. Mike believes that the BLi300 battery (with a capacity of 9.4Ah at 36V) gets the same work done as a tank of fuel in his 50cc petrol chainsaw.

Watch his short video showing the saw being used to fell a tree.



Northern Arb Supplies

sell consumables: chain oil, bars, replacement chains, as well as safety gear and other items vital for woodland work.

CHAINSAW SUPPLIERS

Manufacturers' websites: click on the links below.

Black and Decker

Bosch

Dolmar

Echo

Husqvarna

Makita

McCulloch

Oregon

Ryobi

Stihl

Living Woods Issue 44

Summer 2017 has buying advice on page 20.