

Log splitter

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A **log splitter** is a piece of machinery or equipment used for splitting firewood from softwood or hardwood logs that have been pre-cut into sections (rounds), usually by chainsaw or on a saw bench. Many log splitters consist of a hydraulic or electrical rod and piston assembly and these are often rated by the tons of force they can generate. The higher the pressure rating, the greater the thickness or length of the rounds that can be split. The log splitter consists of all four major hydraulic components.

Most log splitter models for home use have a rating around 10 tons, but professional hydraulic models may exert 25 tons of force or more. There are also manual log splitters, which use mechanical leverage to force logs through a sharpened blade assembly and screw or 'corkscrew' types that are driven directly from an agricultural tractor's power take-off shaft where the splitter is mounted on the three point linkage.

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Power source

A simple log splitter may be powered by an electric motor driving a hydraulic pump or by gasoline or diesel engine with or without a tractor. The non-electric versions can be used remotely where the splitter can be moved to the location of the cut wood source. Split logs can then be loaded into trucks, trailers or bulk bags.

No matter what the power source, a log splitter either uses a hydraulic piston to drive the log through a stationary blade or a rotating cone shaped screw mandrel that pulls the log up over a wedge. Some models have attachments that prevent the split logs from falling to the ground allowing the operator to reposition the logs quickly for a second pass on the log splitter. Some cone or



A woman using a gas powered log splitter to split firewood.



A Croco log splitter attached to a Kobelco excavator in Jyväskylä, Finland.

screw splitters are mounted on steel platforms mounted on a 3-point linkage that allow the log to be repeatedly split into smaller pieces without putting the wood down and up again.

Uses

Although smaller firewood splitters are intended for home, there are now many commercial units available. Some commercial splitters are part of a 'firewood processor' that saw logs of timber into lengths, split them, and then carry the wood up an inclined conveyor onto a pile or into a bag, truck or trailer. Specialty producers such as those producing maple syrup use units that split 4 foot lengths. Machines that split and point wood for fence post also exist though they are few in number as it is generally safer and more convenient to saw the posts.

The rising cost of domestic heating gas oil has reawakened a desire for alternative fuel sources and burning wood is carbon neutral. Modern wood burning stoves are efficient and safe. Many consumers that would not have considered splitting their own logs a few years ago are now burning wood fuel for both ecological and economical reasons.

Safety

Although a good log splitter can save the operator hours of labor, it is not possible to make it completely safe. Only trained adults should operate a log splitter, since anything caught between the log and the splitting blade will receive at least 10 tons of pressure. Most hydraulic machines now have 'two handed operation' for safety which means that both of the operator's hands are needed to actuate the splitter thus keeping them out of the way of the moving blade.

The behavior of each log can not be predicted, so a safety zone should be established around the splitter to prevent injury from flying splinters of wood. Helpers can pick up the individual pieces of firewood, but should not stand near the log splitter while it is in operation.

External links

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Categories: Cutting machines | Firewood | Forestry equipment



Video of a vintage steam-powered log splitter in Germany



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