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MOWER

Rotary mower



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At least one **vertical spindle**. A blade is attached to the bottom of the spindle shaft. Whole assembly covered with a body to contain the grass and for safety. The spindle and blade are rotated rapidly so that the sharpened leading edge of the blade cuts the grass as it passes over it.



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ROTARY MOWER



Rotary mowers, also called drum mowers, have a rapidly rotating bar, or disks mounted on a bar, with sharpened edges that cut the crop. When these mowers are tractor-mounted they are easily capable of mowing grass at up to 20 miles per hour (32 km/h) in good conditions.

Flail Mower

Flail mower consists of a long horizontal tube or 'rotor'.

Rows of individual cutting blades or 'flails' are attached along the rotor in such a way that they can swing freely.

The rotor is mounted within a stationary housing (the mower body) and is spun at high speed so that centrifugal force holds the flails outwards.

As the mower moves across the ground, the fast-moving flails cut the grass.



Roller mower



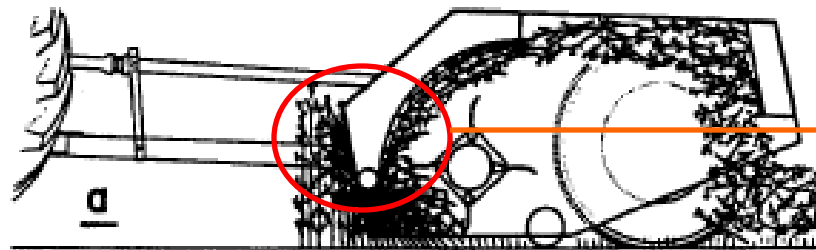
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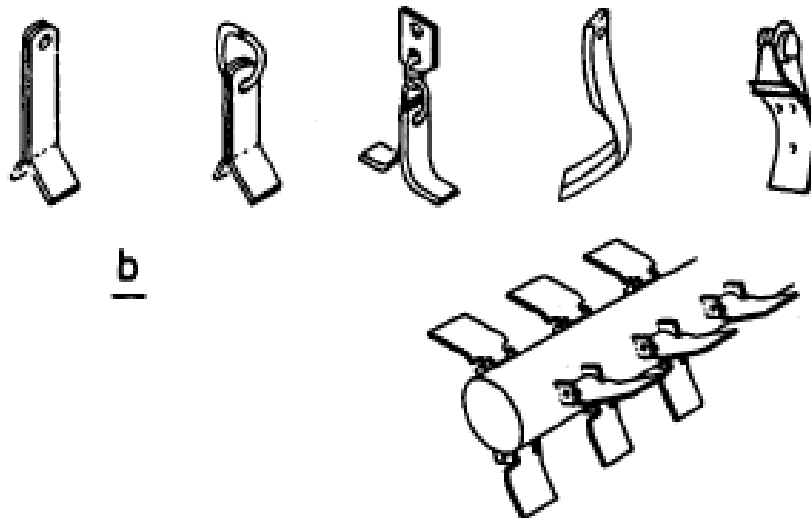


Advantage

Very safe, as any debris is trapped within the cutting chamber by the rollers. They minimize “scalping” (where the blades contact the ground) because the rollers follow the ground contours and support the mower across its full width. The rollers can produce an attractive striped finish.



**BENT
SHROUD**



**PERMITS BASAL
CUTTING**

**PREVENT
RE-CUTTING BY
CLEARANCE ABOVE
THE FLAIL**

**BENDING OF
STALKS REDUCE
CUTTING VELOCITY**

**Low velocity also
reduce re-cutting**

Figure 11.21 – A flail mower, showing (a) side view and (b) flail detail (reprinted from Persson, 1987).

**Knife velocity 43 m/s or less
found suitable**



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Mower blades

Blades are attached to a blade carrier in such a way that allows them to swing freely. When the blade carrier spins the blades are thrown outwards by centrifugal force. The blades are thinner than one piece blades, so continue to cut reasonably well even after the cutting edge is well worn. They are also relatively cheap and easy to replace.



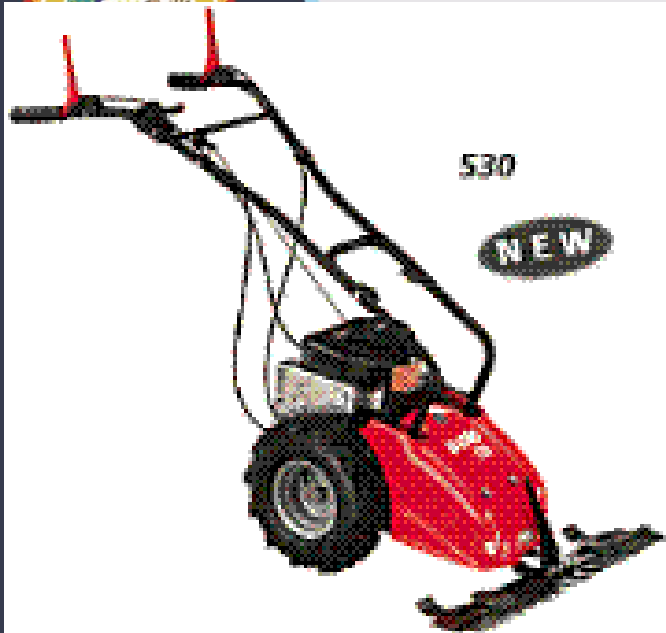


Lawn Mower



A lawn mower is a machine that uses revolving blades to cut a lawn at an even length. Lawn mowers employing a blade that rotates about a vertical axis are known as **rotary mowers**, while those employing a blade assembly that rotates about a horizontal axis are known as **cylinder** or **reel** mowers.

Cutterbar mower



Briggs and Stratton 3.5 hp engine

71 cm cutting width

Anti vibration system

Single speed self drive



Honda 4.5 hp engine

91 cm cutting width

Anti vibration system

Single speed self drive



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Outer Shoe

Inner Shoe