



IOG

DATA SHEET

MOWING

Mowing is one of the most important maintenance operations. Mowing can dictate the appearance, health of the grass, and have a big effect on the game.. Mowing is basically pruning of the grass and as with pruning a shrub or tree, grass needs different degrees of mowing dependant on:

- the seasonal factors
- the purpose for which the turf is used.

Mowing influences grass density, sward characteristics, weed invasion and earthworm activity. The height of cut and frequency of cut will affect the balance of the grass species. The playing surface will be greatly affected by the removal or return of grass clippings.

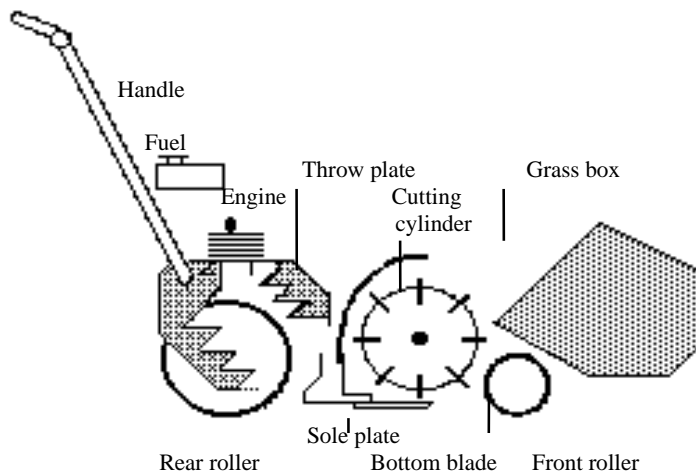
Mowing is achieved in two principle ways:

- Pedestrian controlled mowing machinery
- Ride-on, tractor mounted or trailed gang mowers

The use of pedestrian mowers and ride-on mowers usually allows for the collection of grass clippings via the grass boxes, tractor mounted or trailed machinery usually returns grass clippings to the pitch surface. There are four types of cutting action on mowing machines, cylinder, rotary, flail and reciprocating.

CYLINDER MOWERS

Cylinder mowers have a cutting action which is similar to a pair of scissors. It therefore provides a clean cut without tearing the grass. There are two working parts to the cutters, the cylinder and bottom blade.



The blades of the cylinder are made with a spiral twist to ensure a clean cut and less damage from any objects hit by the machine. The blades are connected by rivets or welding on a series of flanges to the centre shaft. A rapidly revolving cylinder with a large number of blades provides the best cut. The cylinder may be driven by chains, belts or gears.

Fig 1. Parts of a cylinder mower.

The bottom blade should be strong but not too thick to prevent a low height of cut. The bottom blade is attached to the sole plate as shown in fig. 1. Careful adjustment is required to ensure that the cutting blades wipe the bottom blade without being too tight to encourage wear on the cutting surfaces. Special bottom blades are available for the wicket mower to enable a very low height of cut to be achieved.

The remaining parts of the cylinder mower include the front and rear roller, the throw plate and the grass box. The rear roller may be cast in one section, or divided into two or three to assist with turning. Optional grooming devices may be attached to the mowing machine to 'lift' the grass before the cut is made.

RIDE ON MOWERS

Ride on mowers; mini gangs and gang mowers are used on larger areas of sports grounds, due to their speed and quality of finish. For an acceptable finish the mower must have slender cutters.

Hydraulically driven ride-on and gang mowers tend to provide a more uniform cut than gear driven or trailed sets, and also produce a better cut in wet conditions. Uniform machine setting is essential and careful measurement of height of cut is required. The cutting unit must be set on a level surface, most gangs have notches which adjust the rear roller and thereby the cutting height. Gang mowers with floating heads may require different settings compared to conventional single unit machines or those with fixed cutting heads.

To avoid risk of tyre depression marks the direction of mowing should be varied where possible for each cut, when using tractor drawn machines.

ROTARY MOWERS

These are generally not used to prepare whole pitches. However, the smaller pedestrian version may be used to cut out the areas for line marking. Though the technology has advanced to allow for grass collection there is at times a tendency to leave grass clippings. Also the finish of the cut is not as good as that with cylinder mowers.

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