ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS INSTITUTION
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UNIT 5 HARVESTING MACHINERY

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No grain losses at the back end of the harvesting unit

No unthrashed grain

Proper threshing of grains without any injury

It should give clean grains

Machine should be capable of operations on crop even with higher moisture content

Machine should be capable of working on various crops

Ease of operation

More output with safety measures

Easy to maintain

Less to consumption of spares and fuels

Types of combine harvester

Pull type or tractor mounted/drawn

These are of two size smaller and bigger with the cutting width of 1.25-2.5m and 3-6m with the power requirement of about 10hp/m of cutting width.

Pull type or tractor drawn with auxillary engine

These are the machines ground speed is covered tractor and working power is covered by auxillary engine

Self propelled combine harvester

These are the latest model with the power of 60-150hp and cutting width of 1.5-2m (smaller) and 2-7m (bigger). The power requirement per meter cutting width is about 15hp/m. the suitable working speed in field is 2-6km/hr and in road is 4-20km/hr

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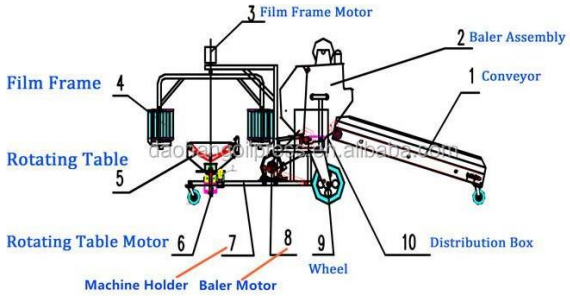
Baler:

A baler, most often called a hay baler is a piece of farm machinery used to compress a cut and rake crop (such as hay, cotton, flax straw, salt marsh hay, or silage) into compact bales that are easy to handle, transport, and store.

A baler is an agricultural machine designed to compress and bundle crops, such as hay, straw, or silage, into dense, uniform bales. Here's the working principle of a baler:

Main Components:

1. Feed System: Collects and feeds crop material into the baler.
2. Compression Chamber: Compresses the crop material.
3. Baling Chamber: Forms the compressed material into a bale.
4. Tying System: Secures the bale with twine or wire.
5. Ejection System: Expels the completed bale.



Baler

Working Principle:

1. Crop material is fed into the baler through the feed system.
2. The crop material is compressed by rollers or plunger in the compression chamber.
3. The compressed material is then transferred to the baling chamber.
4. In the baling chamber, the material is formed into a bale shape.

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5. The tying system secures the bale with twine or wire.
6. The completed bale is then ejected through the ejection system.