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FACULTY OF ENGINEERING & TECHNOLOGY

Electrical Machine-1

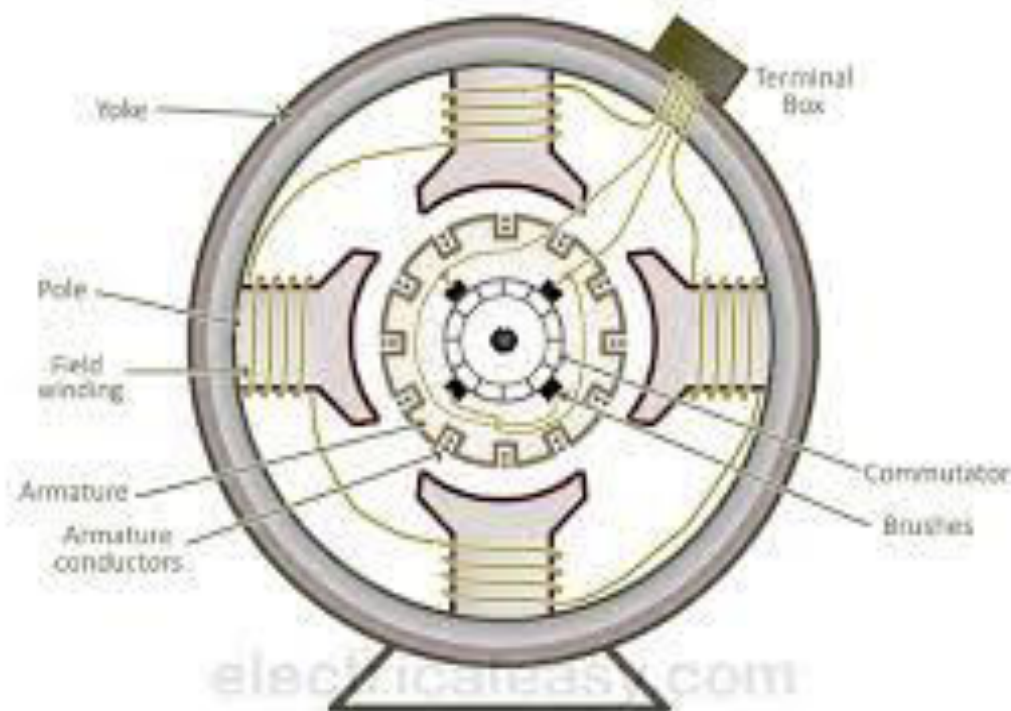
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# DC MACHINE

## DC Machine construction

parts required for the construction of DC machine, namely.

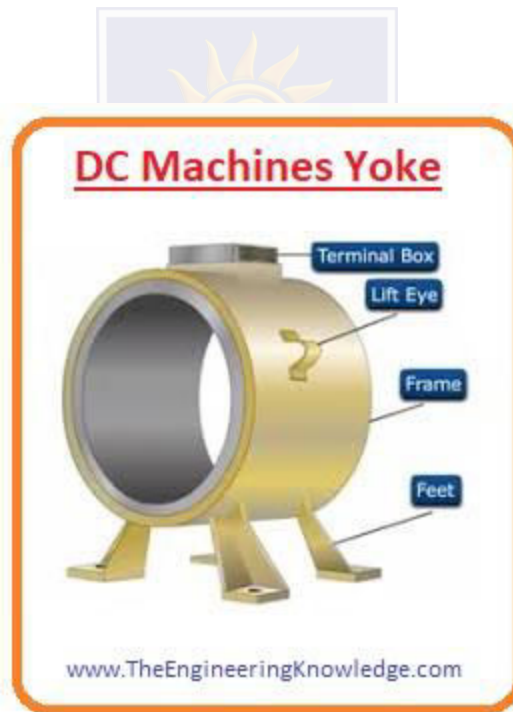
- Stator – The static part that houses the field windings and receives the supply and,
- Rotor – The rotating part that brings about the mechanical rotations
- Other than that there are several subsidiary parts namely the
- Yoke of DC motor
- Poles of DC motor
- Field winding of DC motor
- Armature winding of DC motor
- Commutator of DC motor
- Brushes of DC motor



Construction of a DC machine

## Yoke

The outer frame of a dc machine is called as yoke. It is made up of cast iron or steel. It not only provides mechanical strength to the whole assembly but also carries the magnetic flux produced by the field winding. The magnetic frame or the yoke of DC motor made up of cast iron or steel and forms an integral part of the stator or the static part of the motor.



# DC MACHINE

## Poles of DC Machine

Poles are joined to the yoke with the help of bolts or welding. They carry field winding and pole shoes are fastened to them.

Pole shoes serve two purposes;

- (i) they support field coils.
- (ii) spread out the flux in air gap uniformly.

## Field Winding of DC Machine

They are usually made of copper. Field coils are former wound and placed on each pole and are connected in series. They are wound in such a way that, when energized, they form alternate North and South poles.

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