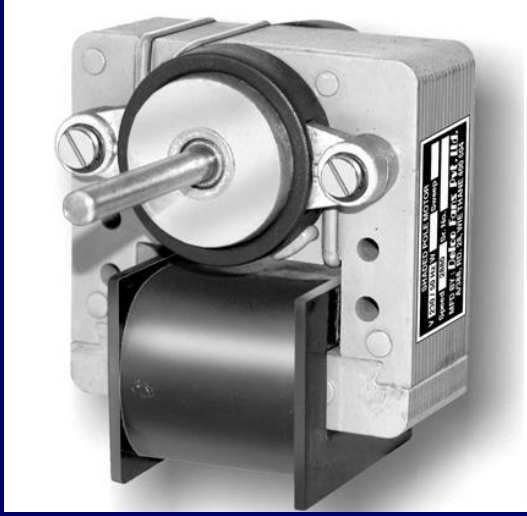
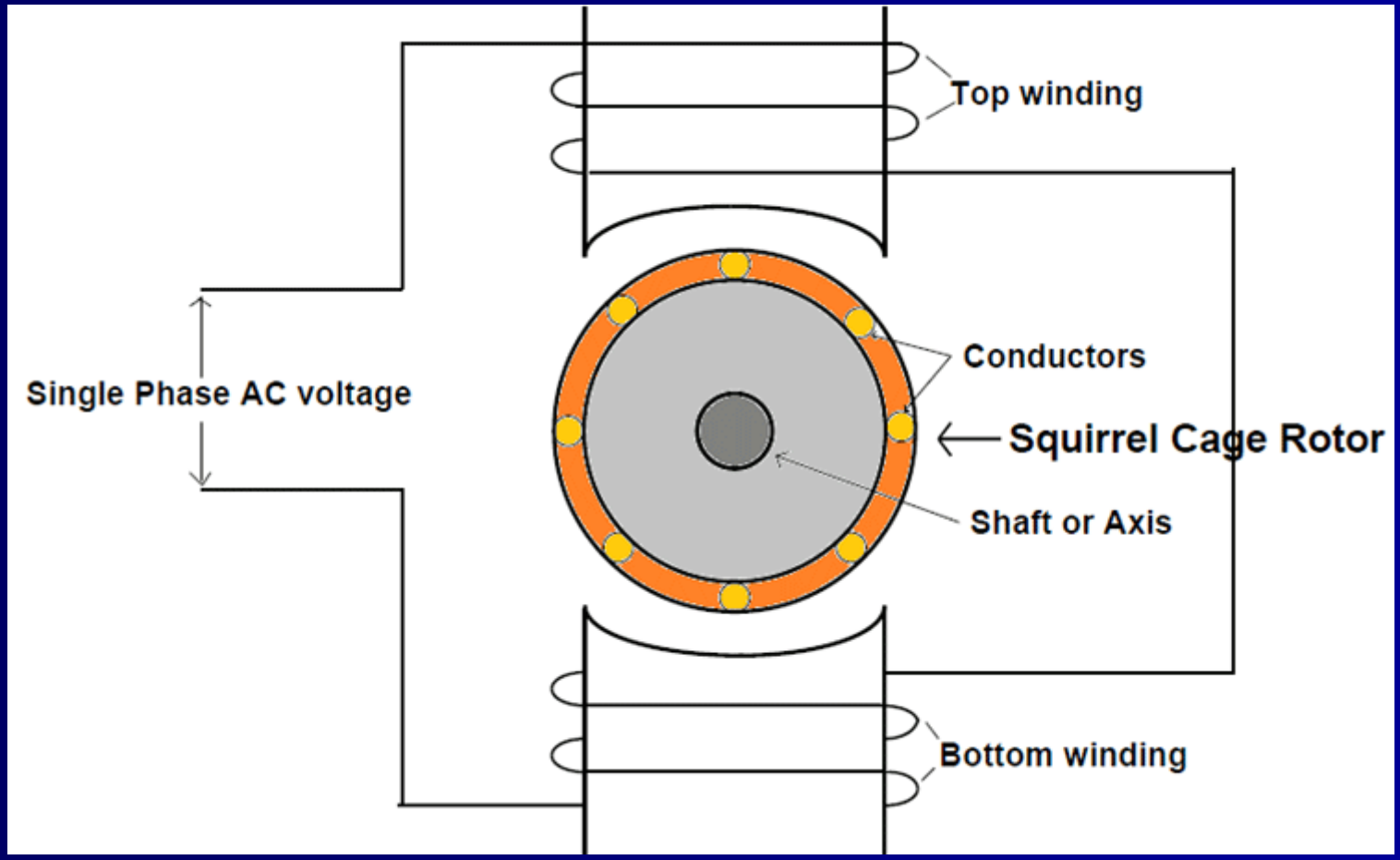
AC Single Phase Motors

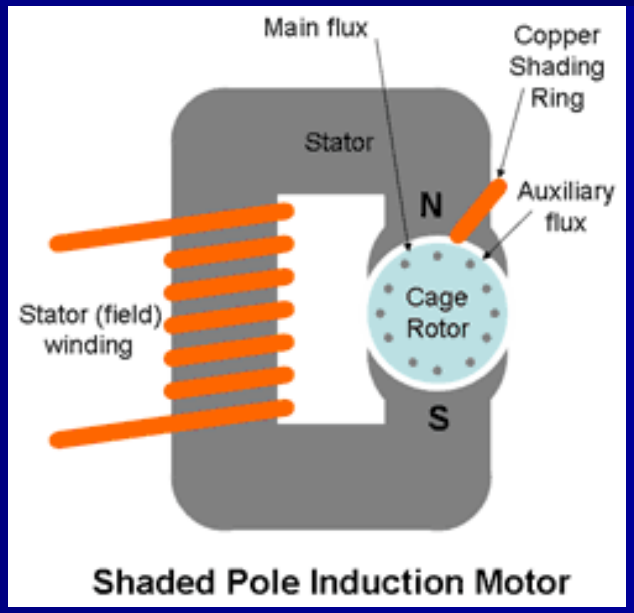


Motor Flux


Top winding
Single Phase AC voltage
Conductors
Squirrel Cage Rotor
Shaft or Axis
Bottom winding

D

Shaded Pole Motor

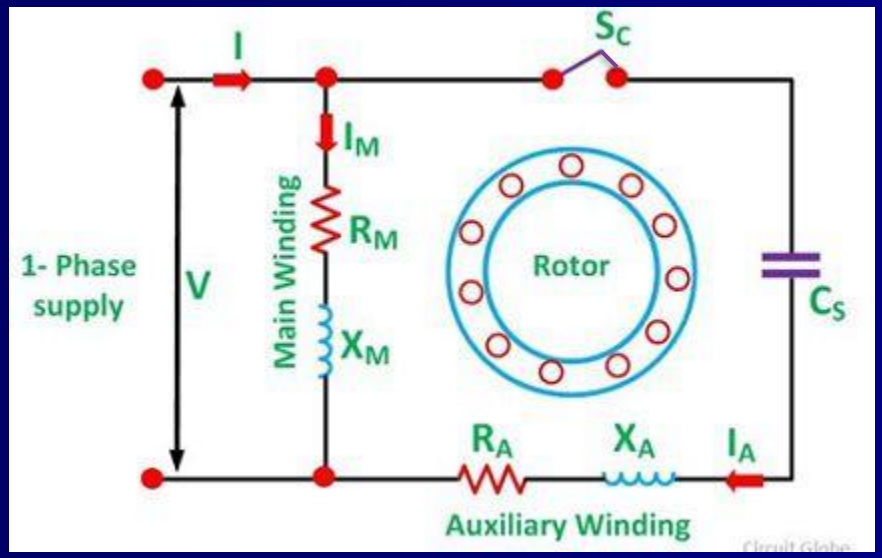


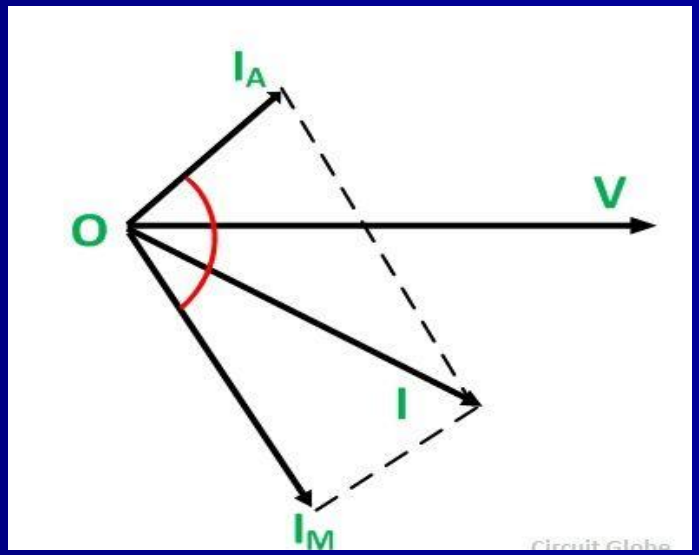
The **shaded-pole motor** is the original type of AC single-phase induction **motor**, dating back to at least as early as 1890. A **shaded-pole motor** is a small squirrel-cage **motor** in which the auxiliary winding is composed of a copper ring or bar surrounding a portion of each **pole**.

Capacitor Start Motor

A **Capacitor Start Motor** is a single phase Induction Motor that employs a capacitor in the auxiliary winding circuit to produce a greater phase difference between the current in the main and the auxiliary windings.

Capacitor Start Motor





The motor has a cage rotor and two windings on the stator. They are known as the main winding and the auxiliary or the starting winding. The two windings are displaced on the stator by 90 degrees. The capacitor (C_S) is connected in series with the starting winding by a centrifugal switch (S_C) which will disconnect the capacitor when the motor reaches full speed.

D

Series Universal Motor

This motor is essentially a DC series motor that due to its design of utilising a commutator to supply current to the armature or rotor, the AC supply will have the same effect on direction of rotation. When the AC stator field windings are alternating so is the rotor field hence Flemings left hand rule will apply.