

Electric Machines

Electric Machine Structure

An electric machine typically consists of two major parts:

1. Rotor
2. Stator

The ***rotor*** is the moving (rotating) part, the ***stator*** is the stationary part.

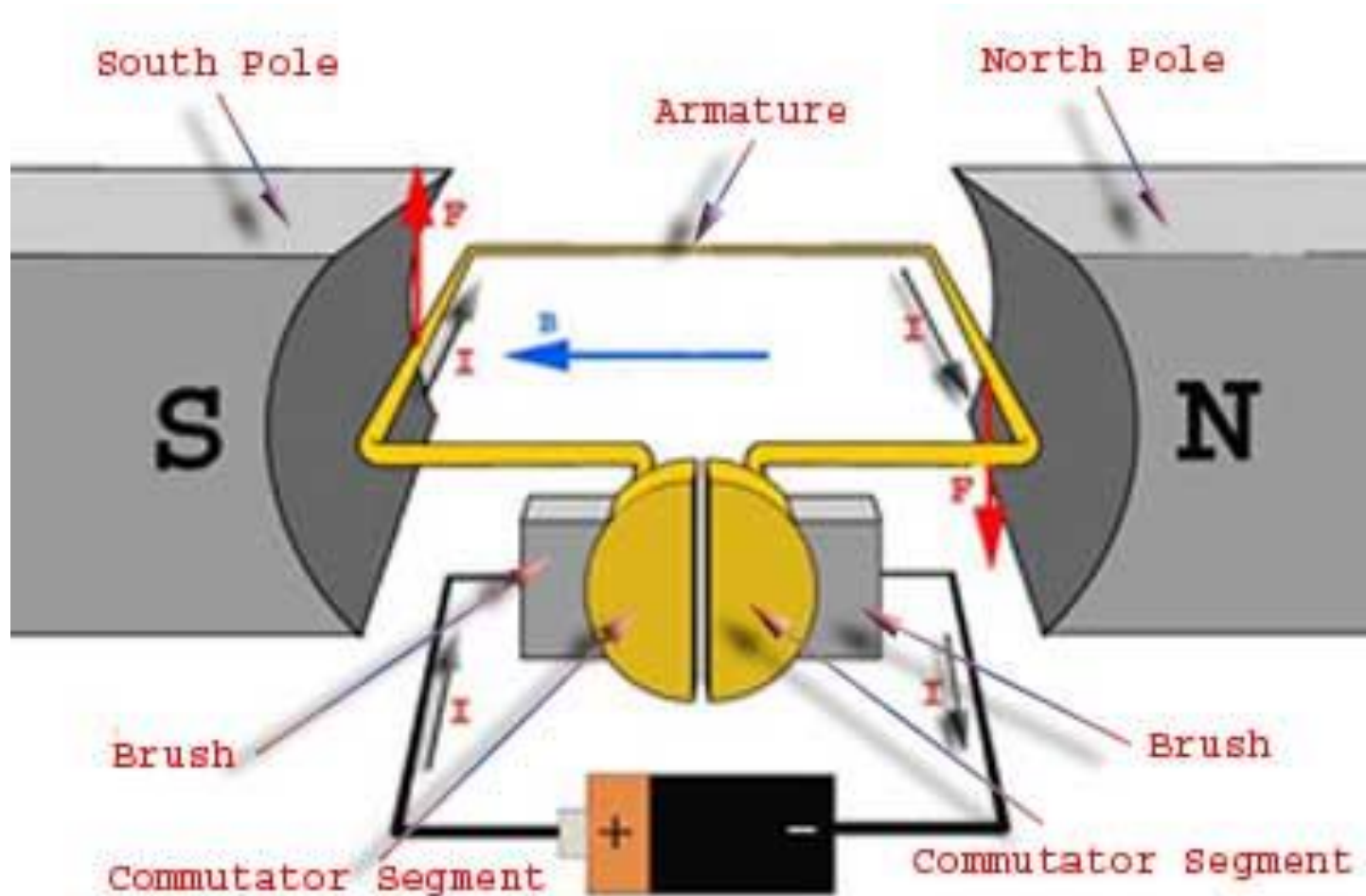
Electric Machine Types

- DC Motor
- Induction Motor
- Synchronous Generator

DC Motor

Input: DC electric power

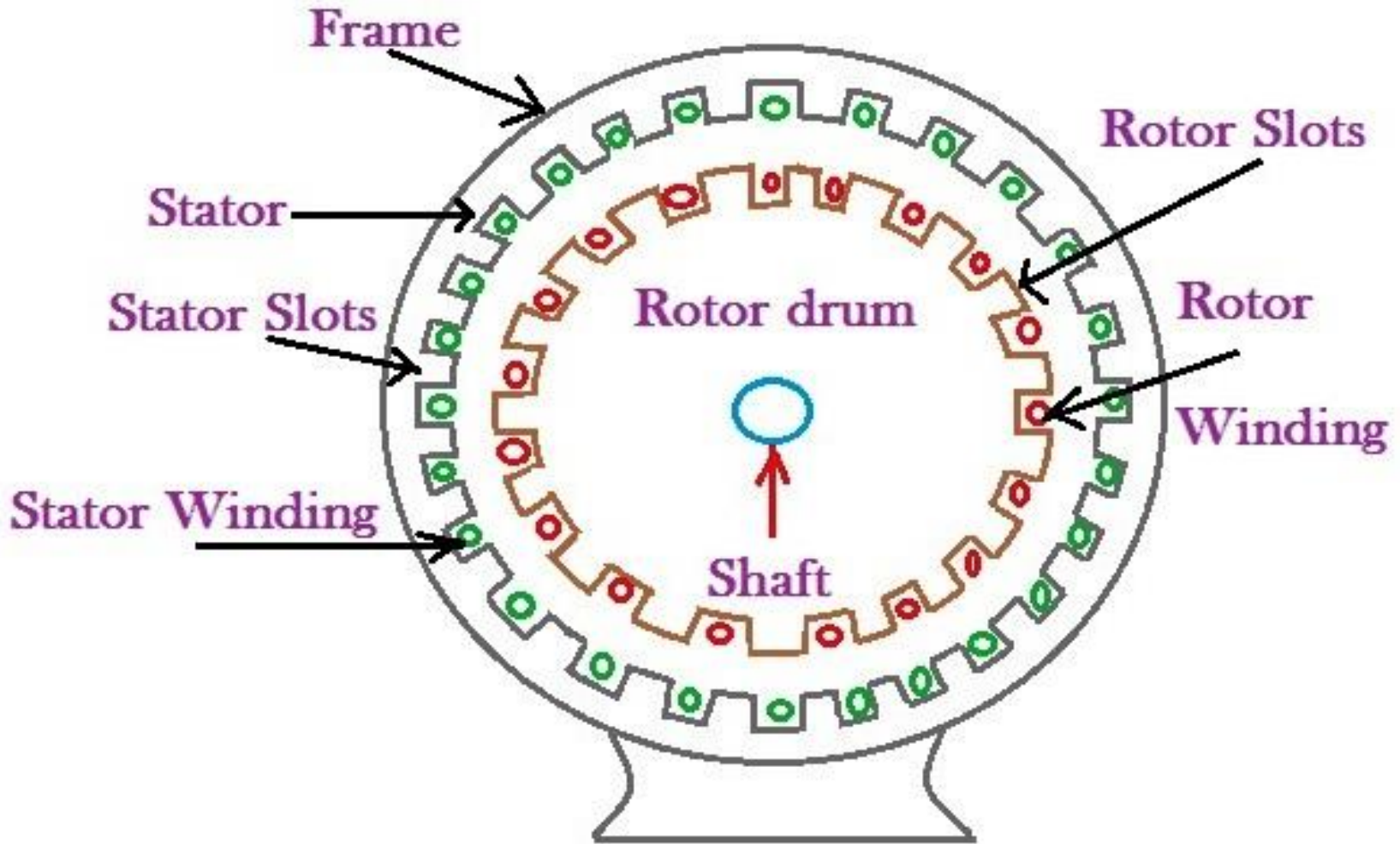
Output: Mechanical power



Induction Motor

Input: 3-phase AC electric power

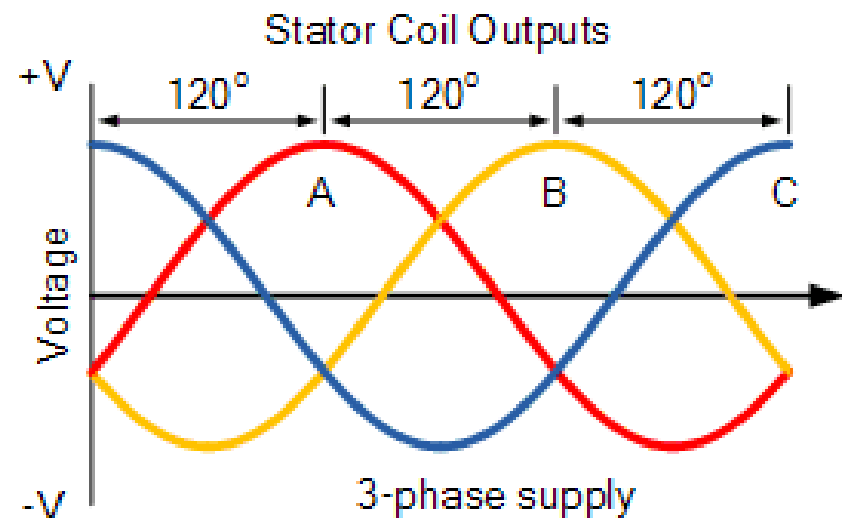
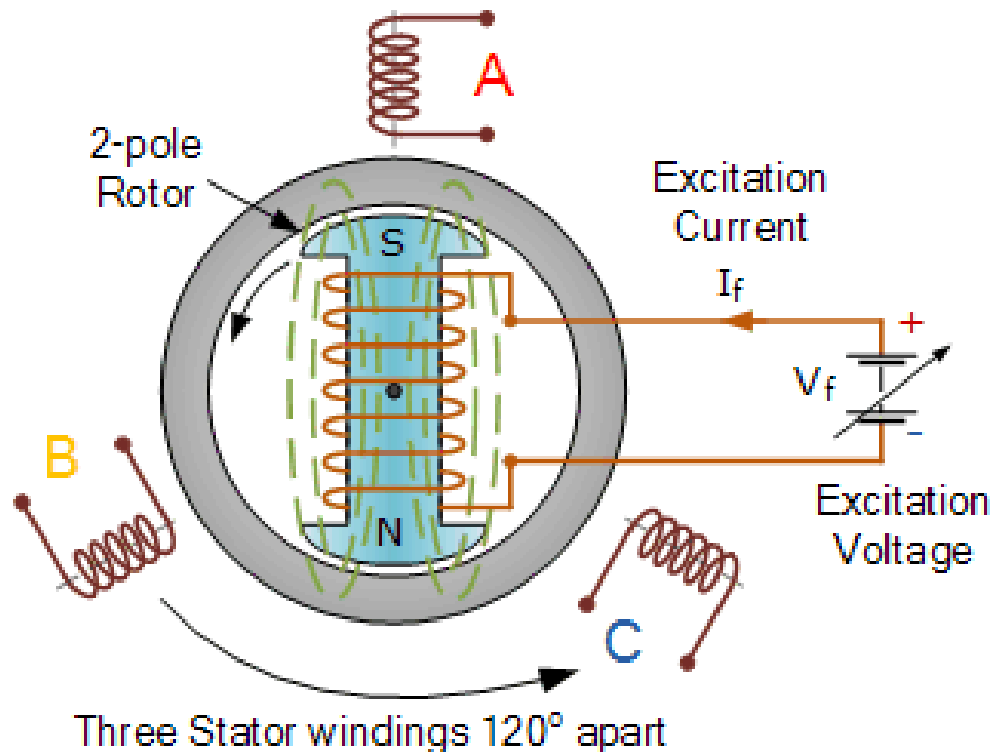
Output: Mechanical power



Synchronous Generator ($p = 2$)

Input: Mechanical power

Output: 3-phase AC electric power



Synchronous Generator ($p = 10$)

Input: Mechanical power

Output: 3-phase AC electric power

