

Applications of DC Motor

The applications of different types of DC motors are listed below:

Shunt DC Motors

Owing to the fairly constant speed and medium starting torque of shunt DC motors, they are used in the following applications:

1. Centrifugal and reciprocating pumps
2. Lathe machines
3. Blowers and Fans
4. Drilling machines
5. Milling machines
6. Machine tools

Series DC Motors

Owing to the high starting torque and variable speed of series DC motors, they are used in the following applications:

- Conveyors
- Hoists, Elevators
- Cranes
- Electric Locomotives

Cumulative Compound DC motors

Owing to the high starting torque of cumulative compound DC motors, they are used in the following applications:

- Shears
- Heavy Planers
- Rolling mills
- Elevators
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Type of Motor	Characteristics	Applications
Shunt	Speed is fairly constant and medium starting torque.	<ol style="list-style-type: none"> 1. Blowers and fans 2. Centrifugal and reciprocating pumps 3. Lathe machines 4. Machine tools 5. Milling machines 6. Drilling machines
Series	High starting torque. No load condition is dangerous. Variable speed.	<ol style="list-style-type: none"> 1. Cranes 2. Hoists, Elevators 3. Trolleys 4. Conveyors 5. Electric locomotives
Cumulative compound	High starting torque. No load condition is allowed.	<ol style="list-style-type: none"> 1. Rolling mills 2. Punches 3. Shears 4. Heavy planers 5. Elevators
Differential compound	Speed increases as load increases.	Not suitable for any practical applications

Shunt DC Motor

Characteristics:

Speed is fairly constant and medium starting torque.

Applications:

1. Blowers and fans
2. Centrifugal and reciprocating pumps
3. Lathe machines
4. Machine tools
5. Milling machines
6. Drilling machines

Series DC Motor

Characteristics:

Series High starting torque.

No load condition is dangerous.

Variable speed.

Applications:

1. Cranes
2. Hoists, Elevators
3. Trolleys
4. Conveyors
5. Electric locomotives

Cumulative compound DC Motor

Characteristics:

High starting torque.

No load condition is allowed.

Applications:

1. Rolling mills
2. Punches
3. Shears
4. Heavy planers
5. Elevators

Differential compound DC Motor

Characteristics:

Speed increases as load increases.

