

September 5, 2022

Press Release

What Types of Electric Motors are there?

Electric motors are made for a variety of purposes and are available in a range of sizes and capabilities. Electric motors come in two main varieties: AC motors (alternating current) and DC motors (direct current). These are used in the majority of electric motor applications and customised to suit the particular market and product specifications. This can mean that the electric motor can be brushed, brushless, synchronous or even uses permanent magnets.

Alternating current is used by AC motors to transform electrical energy into mechanical energy. They can maintain a constant pace and performance since they just require a small amount of power to start off and allow for controlled acceleration. These characteristics make AC motors ideal for stable-use applications like conveyor systems and air conditioners. These uses don't necessitate a frequent shift in speed, hence there is less likelihood of motor wear and tear. This, along with the absence of brushes in AC motors, makes them an extremely durable type of electric motor.

Types of AC motors

Synchronous and induction motors are the two main categories of AC motors. The rotor rotates at the same frequency as the supply current in synchronous AC motors. Due to the consistent speed regardless of load, it is perfect for high precision positioning equipment like robotic solutions.

The most prevalent kind of AC motors are induction motors, which are used in everything from lifting equipment to home appliances. Because they use electromagnetic induction to create a current in the rotor using the magnetic field in the stator winding, they are also referred to as asynchronous motors.

Types of DC motors

Direct current is used by all DC motors, which offer good speed control and a high starting torque. This makes them perfect for electric motor applications that need to move greater loads under a range of situations such as wiper systems for the rail, maritime, and haulage industries.

There are many various types of DC motors available to suit these applications, which include everything from electric shavers to cars. Maxon specialises in custom BLDC and PMDC motors.

BLDC motors

DC motors are available as brushed electric motors or as brushless (BLDC motors).

A brushed motor may need additional maintenance because of the brushes wearing out, however, they are widely employed in applications that call for a less expensive solution and are well-liked in industrial settings.

A brushless electric motor is typically more efficient due to speed not lost to brushes and it is typically more efficient and quieter when in operation. BLDC motors need to be wired to an electronic speed control to enable current to flow to the electromagnets. As a result, they are typically more expensive to buy.

PMDC motors

Another prominent type of DC motor in the healthcare and leisure sectors is the permanent magnet DC motor (PMDC motor). These electric motors differ from other types primarily in that the magnetic field is produced in the stator utilising fixed magnets rather than the stator windings.

Since PMDC motors are often smaller than other types of DC motors, they are easier to ship throughout the world and more economical. This means that they can be found in a wide variety of everyday items, such as electric toothbrushes and kid's toys.

Numerous applications across the world rely on electric motors in one way or another. There will be a solution to give you the best results whether you select an AC or DC motor. Your customers' products will constantly be in motion thanks to the creative and robust electric motors that maxon designs and manufactures.

Contact us to learn more about maxon electric motors.

maxon motor Australia tel. +61 2 9457 7477.

Length of this update: 610 words

The press release is available on the internet at: www.maxongroup.net.au



maxon motor Australia Pty Ltd
Unit 1, 12-14 Beaumont Road
Mt Kuring-Gai NSW 2080

Tel: +61 2 9457 7477
sales.au@maxongroup.com
www.maxongroup.net.au
Twitter @maxongroupAus

The Swiss specialist for quality drives

maxon is a developer and manufacturer of brushed and brushless DC motors, as well as gearheads, encoders, controllers, and entire mechatronic systems. maxon drives are used wherever the requirements are particularly high: in NASA's Mars rovers, in surgical power tools, in humanoid robots and in precision industrial applications, for example. To maintain its leadership in this demanding market, the company invests a considerable share of its annual revenue in research and development. Worldwide, maxon has more than 3000 employees at nine production sites and is represented by sales companies in more than 30 countries.