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Press Release

Choosing an Electric Motor suited to your Application

At maxon, we recognise that each electric motor is carefully selected to offer efficient and dependable power to a wide range of possible applications, each with its unique set of needs. There are various elements to consider when selecting an electric motor for your application, including the intended industrial application and the type of motor that will be most suited to your needs. This is where custom electric motors prove useful, because they allow you to precisely specify the sort of electric motor that best meets your demands while also ensuring that it has the required starting torque and power.

Types of Electric motors

As a leading electric motor manufacturer, we can custom-build any motor to suit your specification and we offer four main types of electric motor, each of which has proven to be successful in a range of common applications.

AC Motors – This type of motor is durable and requires low power for start-up. AC motors are ideal for applications that require controlled acceleration and a constant speed. For example, air conditioning units will use these types of motor because they require constant control.

DC Motors – There are several types of DC motor but a standard brushed motor is most commonly used in industrial environments. Custom DC motors use brushes, which makes them slightly higher maintenance than other motor options but it means they offer a very high starting torque, which might be a consideration for the specific application. If you work with applications that need to get going straight away, then a DC motor will be the answer.

BLDC Motors – As the name suggests, a BLDC motor (Brushless DC motor) works in a similar way to a DC motor, but without the brushes. This makes it a low maintenance option and increases the lifespan on the motor. In addition, BLDC motors offer quiet operation, making them perfect for applications and industries that need reliable operation and low maintenance, such as in healthcare equipment. Therefore, you will often find these types of motors in patient hoists and ventilator pumps.

PMDC Motors – Our final type of motor is the permanent magnet DC motor. This type of motor can be built smaller than the other motors we manufacture, which means they are often used in the leisure industry and even in computers. Like our other custom DC motors, they have a high starting torque and work well in conjunction with our gearbox solutions

Consider Your Industry

The most important factor in choosing custom electric motors is the application. If you are building equipment to be used in a hospital environment, then you won't want an electric motor that may require lots of maintenance or is noisy. In this case, it's best to avoid PMDC motors and consider a BLDC motor or even an AC motor solution.

As leaders in custom electric motors and gearboxes, maxon designs and manufactures motors that are used globally in a wide range of industrial applications. As example of this is our Parvalux VIPER3, a DC motor used to power large windscreen wipers in the maritime, rail and road transport industries. A major benefit of this motor is its durability in extreme weather conditions, making it suitable for use on land and sea. If your application requires a robust solution, for instance, if it requires exposure to varying weather conditions or will be in constant use, it's important to choose an electric motor that has the durability to handle those demands.

Efficiency, Torque and Maintenance

The specific requirements of an electric motor are dictated by the application but also understanding the performance that is required is key. Considering its likely duty cycle and whether the speed needs to be constant or is likely to vary.

For example, if you have a conveyor system that needs to run constantly at a fixed speed, then an AC motor will likely be a good choice. However, if your conveyor is used in the food manufacturing industry then a BLDC motor is more appropriate, as you can vary the speed and direction more easily. As a electric motor manufacturer, maxon is happy to discuss your industry needs and help you decide how to fulfil your exact motor requirements.

We've been helping our customers choose the perfect custom electric motor solutions for more than 60 years. If you're unsure about which geared motor to choose, please give us a call to discuss your requirements.

maxon motor Australia tel. +61 2 9457 7477.

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



*DCX 22 S Ø22 mm,
Graphite Brushes,
ball bearings*

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.