

The logo for EMP (Electric Motor Power) is rendered in a bold, white, sans-serif font with a blue-to-white gradient. The letters are thick and modern, with the 'E' and 'P' having a slight shadow effect.

EMP

ELECTRIC MOTOR POWER

An abstract graphic on the left side of the page consists of a blue wireframe mesh that forms a shape resembling a gear or a stylized letter 'E'. The mesh is composed of numerous small triangles and lines, with some vertices highlighted by small, glowing blue dots. The overall effect is a sense of digital connectivity and motion.

Powering Momentum

CAPABILITY STATEMENT 2024

Australian DC Motor Design & Manufacturing Specialists

www.emppl.com.au

ABOUT US

Proudly Australian owned and operated since 1989, Electric Motor Power takes pride in taking the time to understand our customers' individual requirements and establishing long-term relationships as your DC electric motor specialist.

We are leaders in electric motor technology and innovation, creating sustainable futures and delivering exceptional service for all our clients. EMP continually develops innovative and sustainable electric motor solutions, that deliver on quality and performance.

Always at the Forefront of Innovation

To stay at the forefront of the latest innovations in DC motor and generator technology, Electric Motor Power continues to invest in the research and development of new products that align with our clients' needs.

EMP also believes in a cleaner environment and sustainable energy consumption, which is why we strive to achieve the best possible efficiency from our products, by using the highest quality raw materials available and utilising the latest technologies to produce them.

Efficiency is key to our products as it provides motors that offer better run times, require less maintenance and are more cost effective to operate.

We Proudly Boast



**CUSTOMISED
SOLUTIONS TO MEET
YOUR NEEDS**



**CONCEPT TO
PRODUCTION, WE
OFFER AN END-TO-END
SERVICE**



**AUSTRALIAN
DESIGN MEANS
HIGH QUALITY &
LONGEVITY**



**OVER 35 YEARS
OF EXPERIENCE &
KNOWLEDGE**



**DEDICATED AND
WHOLE-OF-LIFE
SERVICE AND
SUPPORT**

Expert Guidance and Support

Electric Motor Power has been operating for 35 years in the Australian motor market and are established as market leaders in motor development and R&D work.

Our highly qualified team of electronics engineers are dedicated to understanding the requirements of each project, and are available to assist with both the system set-up and configurations, to ensure the best possible motor is provided for our clients' projects.

All our design work is based on extensive knowledge of various motor types and the specific industries of which they apply, in conjunction with our comprehensive knowledge of the latest manufacturing techniques required to produce these motors. Allowing us to act as a complete 'concept to completion' partner for our clients.

OUR SPECIALTIES

Electric Motor Power is ISO accredited, specialising in the design, development and production of permanent magnet DC brushed and brushless electric motors providing our customers with the highest quality motion control solutions.

Brushless motors have many added benefits over brushed units and AC motors.

- They can be controlled at any speed
- Can be easily reversed
- Make less noise
- Provide a higher power to weight ratio
- Have a higher efficiency
- Require less maintenance (no brush or commutator erosion)

Many of our brushless motors achieve efficiencies between 90% - 92% making these motors much more energy efficient than brushed motors and AC motor alternatives.

All our engineering design and product development is done by our skilled Australian team of experts who oversee every single aspect of our production, ensuring all our electric motors are crafted with quality and precision.

While our expertise lies in partnering on specific projects with our clients, in addition to this, we carry a standard range of over 100 motors and accessories from 12V to 415V DC, 50W to 50kW and up to 15,000rpm, all manufactured to the relevant standards.

Customised Motor Service - Concept to Completion

Electric Motor Power specialises in providing customisable solutions, and unlike many other manufacturers, you can speak directly with a design expert, who can guide and assist you in developing a customised solution, specifically tailored to your project's requirements.

We work with you from concept to completion to customise new designs and projects, including the supply and set-up of suitable motor controllers for BLDC motors, gearboxes, brakes, joysticks, encoders, plus custom machined shaft, and flange options where required.

Electric Motor Power provides DC motor solutions that can be applied across a wide range of applications including:

- HVAC systems
- Automated doors, windows & guards for armoured vehicles
- Electric vehicle auxiliary motors
- Auxiliary submarine motors
- Small propulsion systems
- Drones
- Robotics
- Turntables and turrets
- Periscopes
- Winches & hoists
- Hose reels
- Pump systems
- AGVs & UAVs
- Lifting platforms
- & many more



APPLICATIONS

PRODUCT APPLICATIONS

Due to technological advances and the growth of sustainable, green energy solutions, the applications of our brushed and brushless DC motors can span across a vast range of industries and systems.

We specialise in creating custom brushed or brushless motor solutions for your application or project.

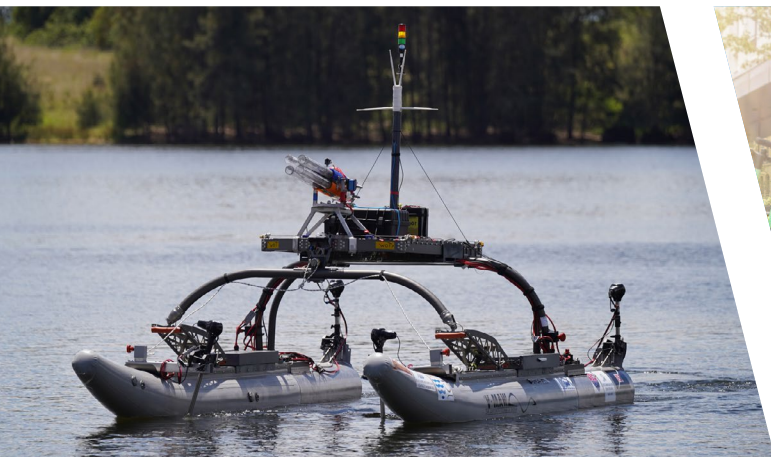
By understanding your unique needs, we can produce a high calibre of products and provide you with a highly efficient, sustainable, reliable, and long-lasting product that can compete on a global stage.

Our motors are used across a wide range of applications and industries including:

- Clean Energy
- Construction & Engineering
- Defence
- Manufacturing
- Mining
- Oil, Gas & Energy
- Rail
- Agricultural
- Robotics & Automation

Some of our motors' common applications include:

- Water pumps
- Electric vehicle auxiliary motors
- E-bikes and e-scooters
- Electric wheelchairs and personal mobility devices
- Small boat propulsion systems
- Winches and reels
- Lifting systems
- Cooling fans
- Low voltage HVAC systems
- Vacuum systems
- Automatic gates, doors & turnstiles
- Conveyors
- Water jet cutting machines
- Robotics (AGVs / UAVs, etc.)
- Hand tools
- Stirrers and polishers
- Augurs / Seeders
- Turrets
- Gimbal systems
- Periscopes
- Turntables



OTHER APPLICATIONS

Electric Vehicle Motors

When it comes to meeting your electric vehicle power needs, Electric Motor Power carries a huge range of permanent magnet motors to suit a wide range of electric vehicles and applications such as electric vehicle auxiliary motors, turrets, periscopes, and turrets.

AXIAL FLUX APPLICATIONS

Axial Flux motors are quickly gaining a foothold in a wide range of applications due to their compact design and high torque density.

These units ultimately allow for a more compact, quieter, efficient, and lightweight motor. Axial Flux motors within vehicles can be used in turrets and turntables and in-wheel solutions.

IPM MOTORS

Interior Permanent Magnet (IPM) motors are commonly utilised within traction applications.

These motors offer excellent torque capabilities at low speeds and can maintain a constant torque across a wide range of varying load points, they are ideally suited for applications requiring strong acceleration such as powering up embankments or steep inclines.

SPM MOTORS

Surface Permanent Magnet (SPM) motors are commonly used in many industrial applications and when it comes to electric vehicles this is no different. These motors can be found within HVAC systems, the automation of doors and shields, and associated vehicle componentry.

Automation Solutions

Electric Motor Power also extend our services to provide suitable controller selection and set-up with our motors, ensuring our clients have control over the systems which they are designing and automating.

We work closely with you, to understand your system requirements during the selection phase and pair our motor with the best controller and encoder for your application, which is ideal for all projects requiring absolute position control, remote control capabilities or dual motor synchronisation.

Marine Motors

Electric Motor Power carries a huge range of permanent magnet motors to suit a wide range of marine systems and applications for everything from smaller boats to larger recreational vessels, marine machinery and equipment which include:

PROPULSION APPLICATIONS

We manufacture a range of brushless motors wound to various power and speed requirements for propulsion systems. When paired with the appropriate propeller, this ensures that our motors meet your exact propulsion specifications.

From small underwater autonomous vehicles, sailing boats and larger passenger craft, we work closely with you to understand the weight of the vessel and its thrust requirements, then design according to your requirements.

AUXILIARY SYSTEMS

Aside from propulsion systems, you will find DC motors within many related systems on various watercraft such as HVAC systems, winches, periscopes and pump systems which have many varied performance specifications, and for which EMP can design and produce the motors accordingly.

Government & Defence

Electric Motor Power has 35 years of industry experience in designing and manufacturing DC electric motors to the highest quality and control standards. We deliver with direct access to our product designers, so the ultimate user in Defence or Government procurement has complete confidence in any new product development.

Sovereign Capabilities

Electric Motor Power understands the importance of sovereign capability obligations. From ensuring we can maximise local content requirements, avoid supply chain issues as well as managing and maintaining critical design information and intellectual property onshore.

Our DC motors are suited to a multitude of applications across a variety of industries, and unlike many other manufactures, Electric Motor Power has the capability and expertise to work closely with our customers to design a system or solution to suit their unique requirements.

CUSTOM SOLUTIONS

Electric Motor Power provides customised solutions for any project

The Electric Motor Power team have a vast array of experience across many industries and excels in understanding the challenges and creating solutions to meet any brief.

We offer a bespoke service for speciality requirements

Working with you from concept to completion on customising new designs and projects, including the supply and set-up of suitable motor controllers for BLDC motors, gearboxes, brakes, joysticks, encoders, custom machined shaft, and flange options where required.

In addition to carrying our standard range of over 100 motors and accessories in a range of frame options manufactured to IEC standards, we also offer custom motor solutions to meet any project requirement be it large or small.

We take the time to understand and solve any specific project challenges our clients face. Our team works with you to design and manufacture any motor to your project's required voltage, speed, optimal weight/size, power, reliability, efficiency, and supply chain requirements.

Our team of specialists can work with you from concept to completion on customising any new DC motor designs and projects.

Benefits of Custom Motor Solutions

Our expertise span multiple industries including marine, agricultural, construction, electrical, automotive, defence and robotics and our team are committed to meeting the challenges and providing custom motor solutions for any brief.

Here are some of the key benefits of choosing a custom motor solution for your project.

- Our custom motors can be wound to the desired voltage, power and speed required for your specific project
- We can customise any brushed or brushless DC motor to suit any voltage and speeds up to 15,000rpm
- We can supply a range of gearbox and mounting options including IEC and NEMA options as well as production, based on your drawings
- Electric Motor Power understands the peak versus nominal loads of the system, the duty cycle and ingress protection requirements that are needed for your project, to ensure optimal performance
- We produce highly efficient motors which deliver better run times, require less maintenance, and have lower operational costs.
- Our team of experts can help you address any specific challenges you may face, to create the right DC motor for your project across a wide range of industries and applications
- We work with you in a way that if, and when your product evolves and your product requirements change, we understand those required changes and can assist with any revised motor requirements to meet those evolving needs

MANUFACTURING

Electric Motor Power is ISO accredited and we specialise in the design, development and production of Permanent Magnet DC brushed and brushless electric motors, providing our customers with the highest quality motion control solutions.

All our engineering design and product development is done here on our shores by our skilled Australian team who oversee every single aspect of our production, ensuring all our electric motors are crafted with quality and precision.

Electric Motor Power fully owns and maintains manufacturing facilities across two countries; located in Melbourne, Australia and Ningbo, China. All our design work is carried out onshore and our customers' details are never shared between sites.

All our products are tested throughout the production process and then again at final QC check before dispatch, with production capabilities across our two wholly owned facilities.

When it comes to defence projects, all production requiring local defence capabilities is designed and manufactured locally, using as many Australian suppliers and materials as practicable to meet the project's specifications.



Volume & Capabilities

Our production capabilities across two factories means that we can assist with any quantities, from one-off end users through to high volume production for global businesses.

We can assist with discounts for high volume orders, as well as for batch orders based on weekly/monthly collection requirements for our customers.

Our Process

We would firstly arrange a technical meeting / telecon to discuss the exact requirements and application, and then proceed to a feasibility check and provide drawings for your approval based on the noted specifications and once approved, proceed to quoting stage and then producing the sample unit(s) for your review and testing.

Once the sample unit is incorporated successfully within your system, we would then proceed to volume production based on any feedback from this final testing.

This process will ensure you can have full confidence in the product and incorporating it within your system before proceeding to the stage of volume purchasing.

Design to Manufacture

EMP has 35 years of motor design and development capabilities and are also pleased to assist our customers get new projects from concept stage through to becoming a reality in the market.

We take great care in the production of our motors and make sure we work to meet specific requirements.

Quality Control Standards

For over three decades we have maintained a strong focus on technical quality and our ability to design and manufacture based on our customers' requirements has driven our growth to this day.

Electric Motor Power maintains strict control processes for all staff and production managers. The safety and reliability of our motors is of the utmost importance to us, with many motors operating uninterrupted in the field for over 20 years.



ELECTRIC MOTOR POWER

COMPANY DETAILS

Electric Motor Power

ABN: 96 065 126 605

Address: 10 Newcastle Road,
BAYSWATER VIC, 3153 Australia

Ph: +61 3 9720 6366

Fax: +61 3 9720 7080

Email: sales@emppl.com.au

Web: www.emppl.com.au

ICN Gateway Business ID: 14152

Employees: 30+

Local Manufacturer: Yes

Foreign Manufacturer: Yes

Exporter: Yes

CERTIFICATIONS

ISO 9001 Quality

+ ISO 45001 OH&S

Certified by SAI Global



MEMBERSHIPS

ADA-Vic (Australian Defence Alliance – Victoria)

AMGC (Advanced Manufacturing Growth Centre)

AMTIL (Australian Manufacturing Technology Institute Ltd)

AAUS (Australian Assoc for Uncrewed Systems)

VDSN (Victorian Defence & Space Network)

CONTACT

Hristos Matheou
Operations Manager

 +61 405 811 867

 hristosm@emppl.com.au