ETEL

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**Continuous torque**
up to 22’300 Nm

**Peak torque**
up to 42’900 Nm

**Speed**
up to 5’200 rpm

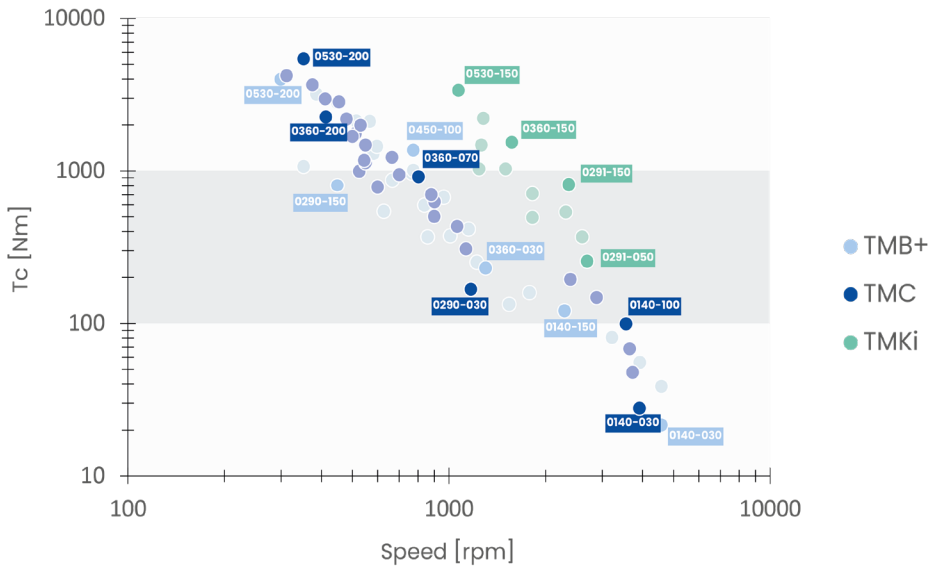
# TMB+/TMC/TMKi/TMM/TML

## Torque Motors

*For machine tool applications*

**ETEL leads the industry with its extensive range of over 160 standard torque motors, catering to a wide array of needs. Featuring ETEL’s unique very low cogging design, these motors offer exceptional torque density and unmatched thermal efficiency, making them ideal for precision machines sensitive to thermal drift.**

The three main advantages of direct drive technology include reduced cost of ownership, easy integration, and superior dynamic performance. By directly coupling the payload to the motor, the need for mechanical transmission elements is eliminated, reducing mechanical wear and ensuring excellent reliability and a long lifespan while minimizing maintenance requirements. Additionally, the availability of a wide range of sizes, from 140 mm to 1’290 mm in outer diameter, along with a hollow shaft design, allows for seamless integration of cables, cooling pipes, and other devices. Furthermore, improved dynamics through direct drive technology enhance the control loop bandwidth and eliminate limitations on dynamic performance. ETEL motors provide high torque across a broad speed range, reaching up to 5’200 rpm, making them an optimal choice for demanding applications.



# TMB+

This motor represents a significant advancement in torque motor technology, boasting up to a 20% increase in torque density and a remarkable 30% reduction in power losses compared to its predecessors, all within the same compact footprint. With its extended speed range, TMB+ not only enhances machine performance but also facilitates the integration of new processes into existing machines without requiring design modifications.

This advancement democratizes direct drive technology, expanding its applicability while ensuring top-notch quality, reliability, and reduced cost of ownership.

More info

**Tc:** 22'300 Nm
**Tp:** 42'900 Nm
**nm:** 4'590 rpm


# TMC

While retaining the robustness, repeatability, and reliability of its predecessors, TMC offers an additional option beyond traditional torque motors like TMB+ and high torque/high-speed motors such as TMKi. The TMC series stands out with a significantly wider speed range for continuous torque compared to traditional torque motors.

Developed through a cost-effective design approach, TMC excels in price-to-performance ratio, providing a 30% to 120% torque increase in the same stator footprint as TMB+, or enabling an ultra-compact solution by downgrading the motor. TMC is the ideal choice to elevate machine performance to the next level.

More info

**Tc:** 5'430 Nm
**Tp:** 10'100 Nm
**nm:** 3'920 rpm

# TMKi

TMKi family is a continuous improvement of the well-known TMK motors, which stand out with their advanced electromagnetic design, enabling them to achieve speed levels previously thought unattainable for torque motors. With a maximum speed range up to 8 times higher than conventional torque motors of similar size, TMKi motors offer both increased continuous and peak torque, setting a new standard for high-speed high-torque applications. This groundbreaking design not only expands the boundaries of "high speed" in the torque motor realm but also enhances motor robustness, thanks to fully encapsulated magnets and water cooling channels.

More info

**Tc:** 11'600 Nm
**Tp:** 20'600 Nm
**nm:** 5'200 rpm

# TML/TMM

As a lighter and more economical alternative to the renowned TMB motor, the TML torque motor range caters to applications where continuous torque demands are less stringent. Ideal for scenarios where water cooling is unnecessary, TML motors deliver exceptional peak torque and dynamic performance.

Designed with specific fixing lugs, TML motors ensure easy assembly into machine structures, providing flexibility and convenience in integration.

More info

**Tc:** 1'170 Nm
**Tp:** 4'990 Nm
**nm:** 4'400 rpm