



NEW
ARRIVAL

AFM72V30K

Axial Flux Motor
for Heavy-Duty Applications



AFM72V30K – Axial Flux Motor

Most traction motors rely on radial flux designs, which limit torque density and packaging flexibility.

The AFM72V30K redefines this — delivering radial performance in a flat, sealed format ready for off-highway and industrial use.

Max torque. Zero cogging. Built for serious work.

The AFM72V30K is a 72 V axial flux PMSM developed by Guilera for real-world applications where compact size, high torque and long-term reliability are essential.

It delivers maximum torque from zero rpm, with a patented no-cogging design that eliminates magnetic detents.

The result: smooth torque delivery at all speeds, better control at low rpm, and no efficiency losses from ripple or vibration.

Technical highlights

- 8-pole axial flux PMSM with interior magnets and concentrated flux.
- No cogging: improved efficiency, quieter operation, better low-speed performance.
- Encoder-ready for FOC control.
- IP66 sealed aluminum housing, keyed shaft, Class F insulation.
- Precision-balanced for speeds up to 4500 rpm (@48 V).
- Designed to pair with Guilera’s FAC72V30K autotuning controller.

Benefits

Performance & Efficiency: high torque density, no cogging losses, smooth control.

Integration & Packaging: compact, lightweight, ready-to-integrate.

Reliability & Durability: IP66, Class F, off-highway duty.

Adaptability

The AFM72V30K has been engineered for flexibility.

Its axial layout and modular design allow Guilera to fine-tune torque behavior, motor dimensions, and enclosure geometry to fit each customer’s integration needs — ensuring the right balance between performance, efficiency and packaging.

Parameter	Value
Voltage	48 V, 72 V, 96 V
Power	14 HP, 22 HP, 30 HP
Speed	3500 rpm, 5500 rpm, 7500 rpm
Frequency	233 Hz, 367 Hz, 500 Hz
Insulation class	Class F
Number of poles	8
Weight	18 kg
Dimensions (L×W×H)	220 × 220 × 70 mm

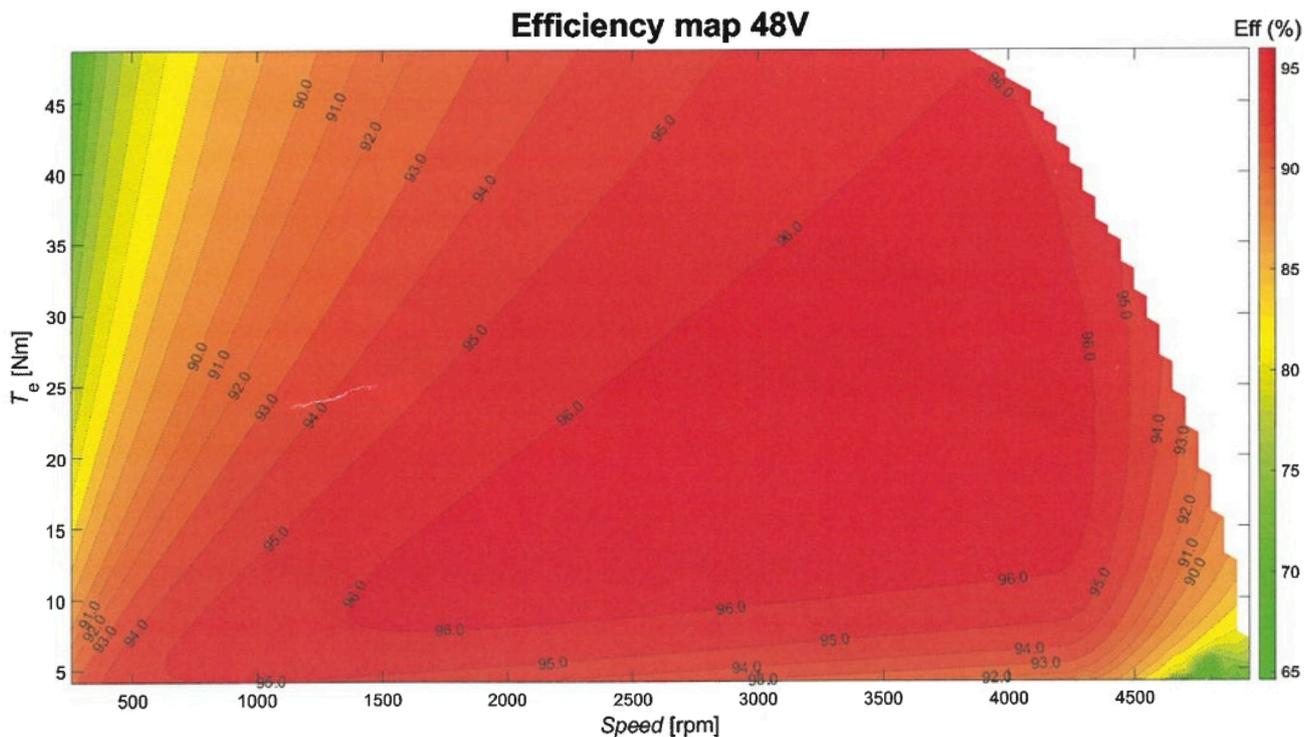
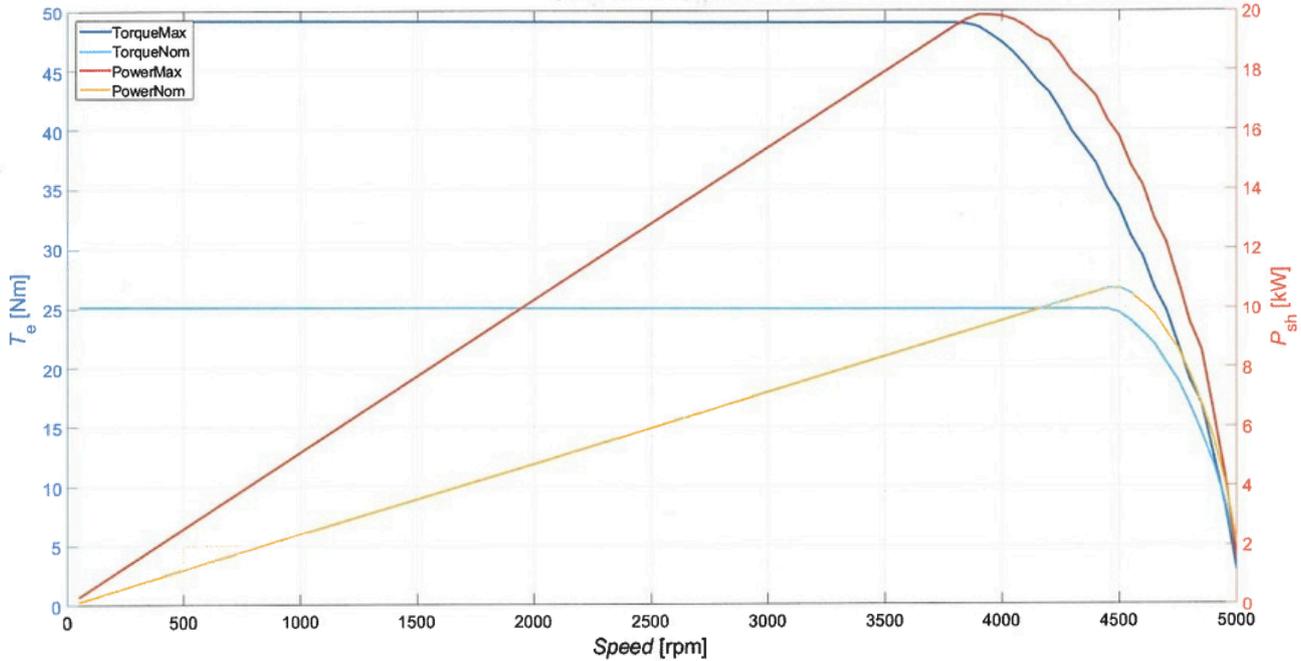


Performance that fits where others don't

The AFM72V30K is designed to deliver high torque from low speeds in a compact and sealed format. Its axial flux design means better power density and easier integration in space-constrained applications.

The patented rotor structure eliminates cogging, allowing smoother torque control at very low RPMs, even under heavy load. This improves energy efficiency and reduces mechanical stress on gearboxes and drivetrains.

Use it for traction, auxiliary systems or industrial drives—anywhere you need reliable torque, precise control and compact packaging.



Data shown corresponds to operation at 48 V, 320 A.

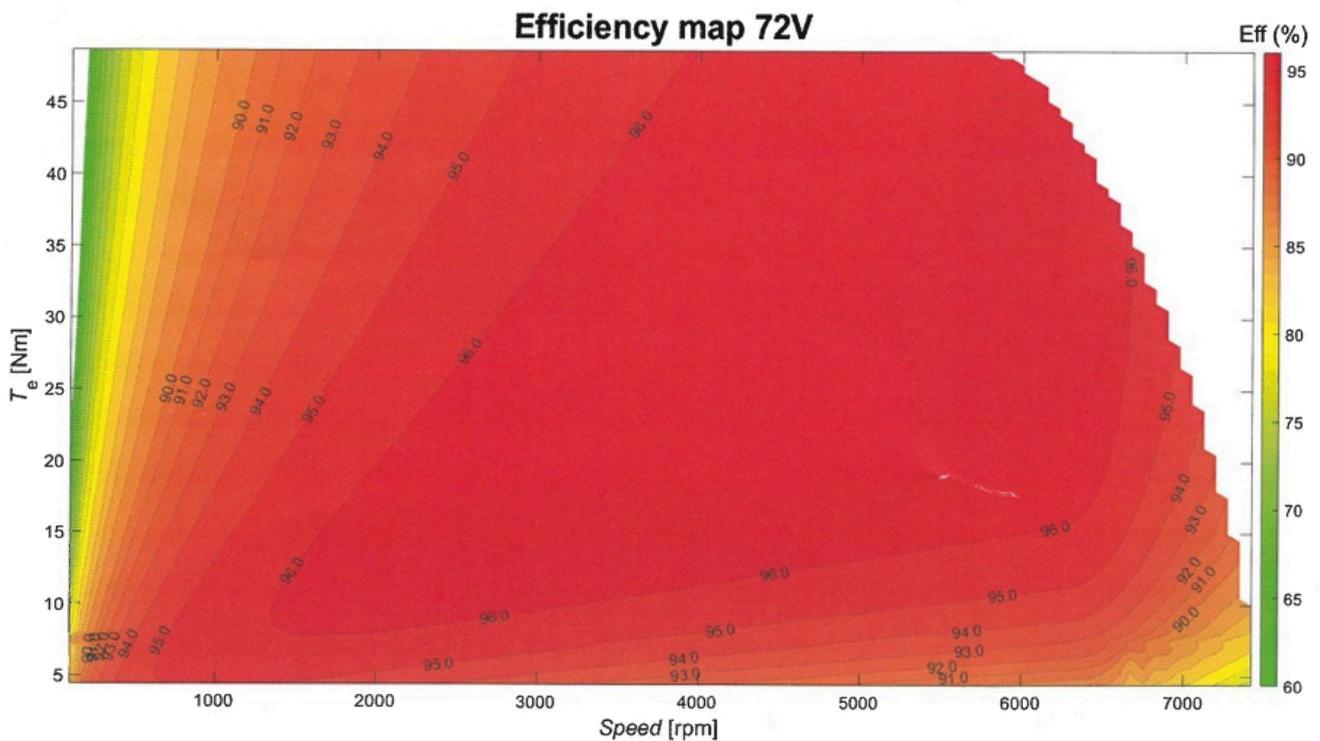
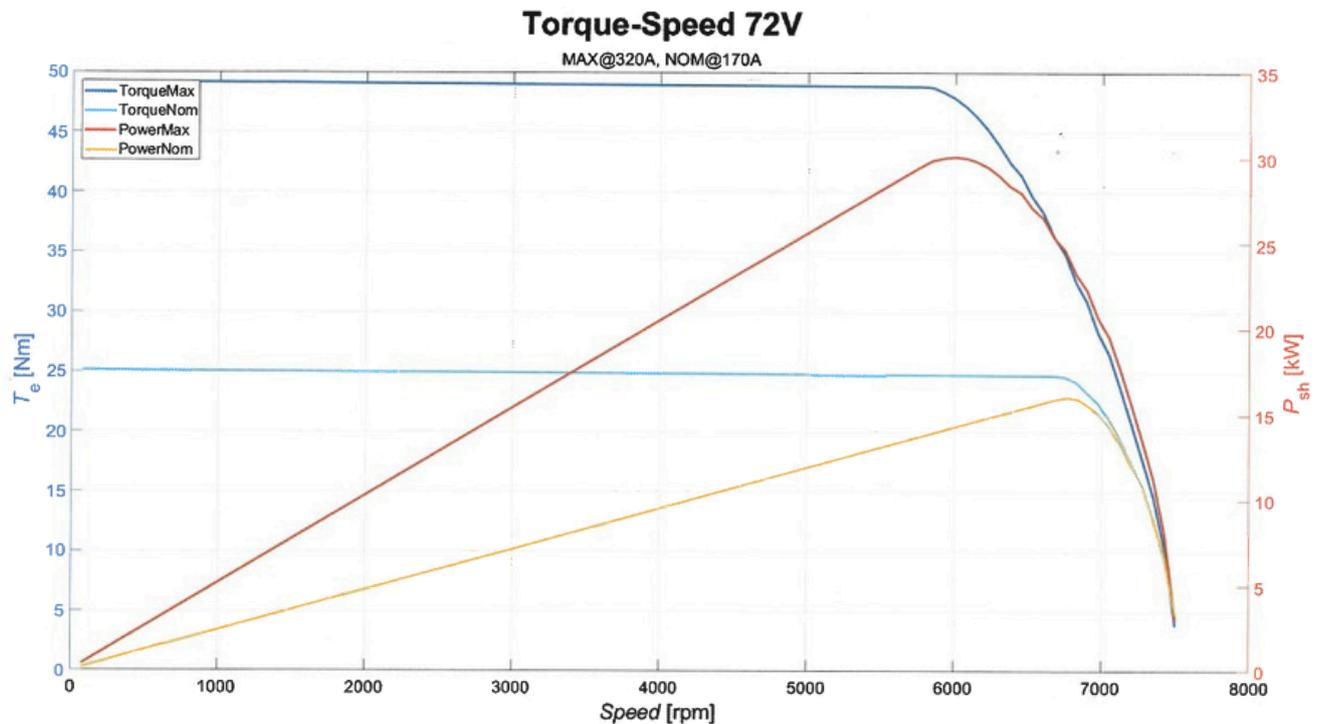


Torque profile under load – 72 V system

The AFM72V30K delivers consistent torque across the full speed range, with maximum torque available from zero rpm.

Its axial flux design and rotor topology ensure minimal torque ripple and stable output even under dynamic load conditions.

This makes it well suited for traction, hydraulic actuation and low-speed control systems in off-highway and industrial applications.



Data shown corresponds to operation at 72 V, 320 A.

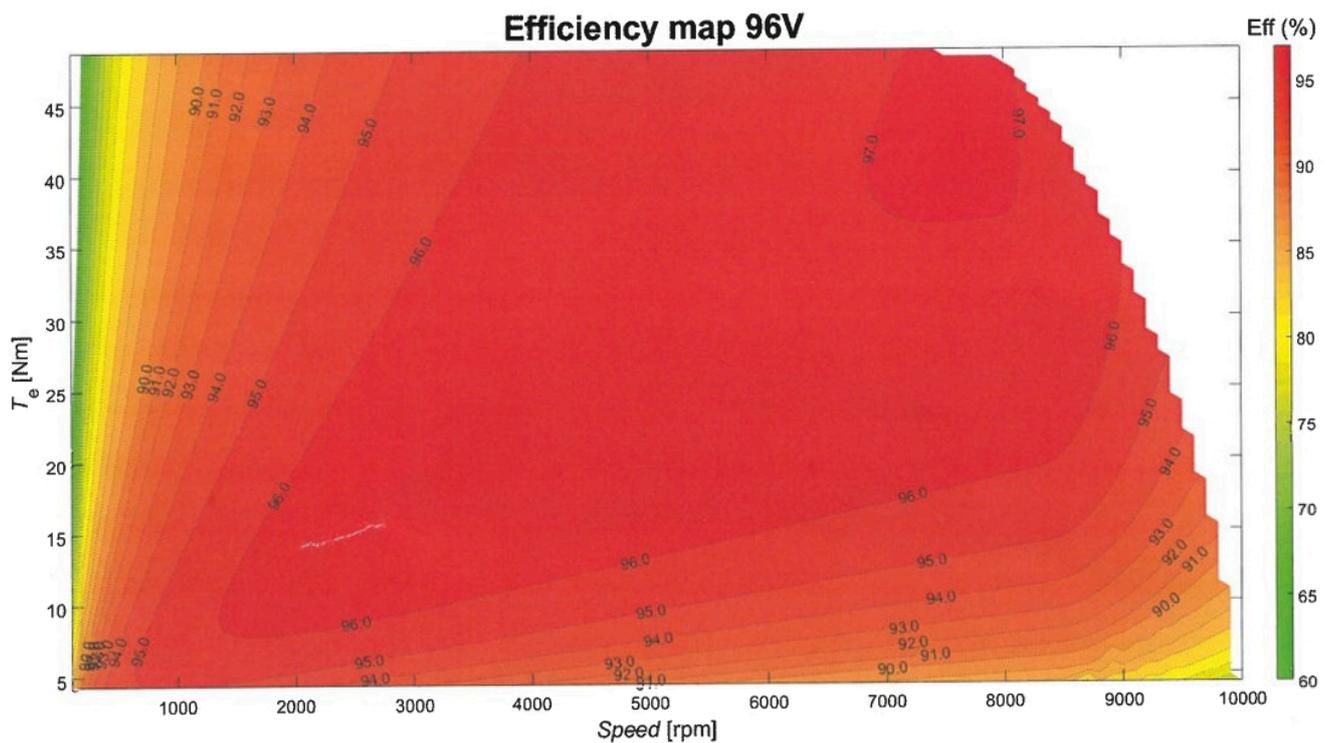
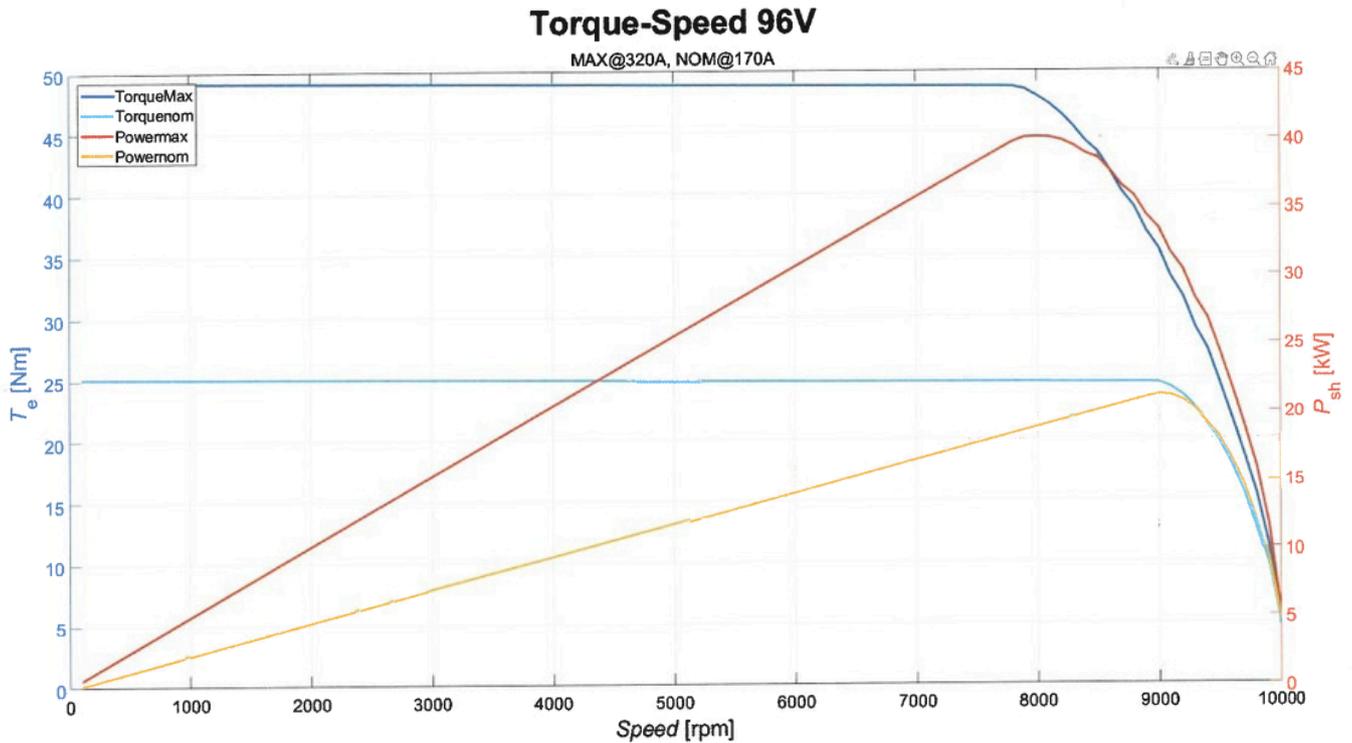


Torque profile under load – 96 V system

At higher voltages, the AFM72V30K operates with lower current for the same power output, reducing cable thickness, thermal losses and stress on connectors and switching devices.

This makes 96 V a practical and safe choice for mid-power systems (up to 22 kW), especially in off-highway and industrial platforms where space, cooling and reliability are critical.

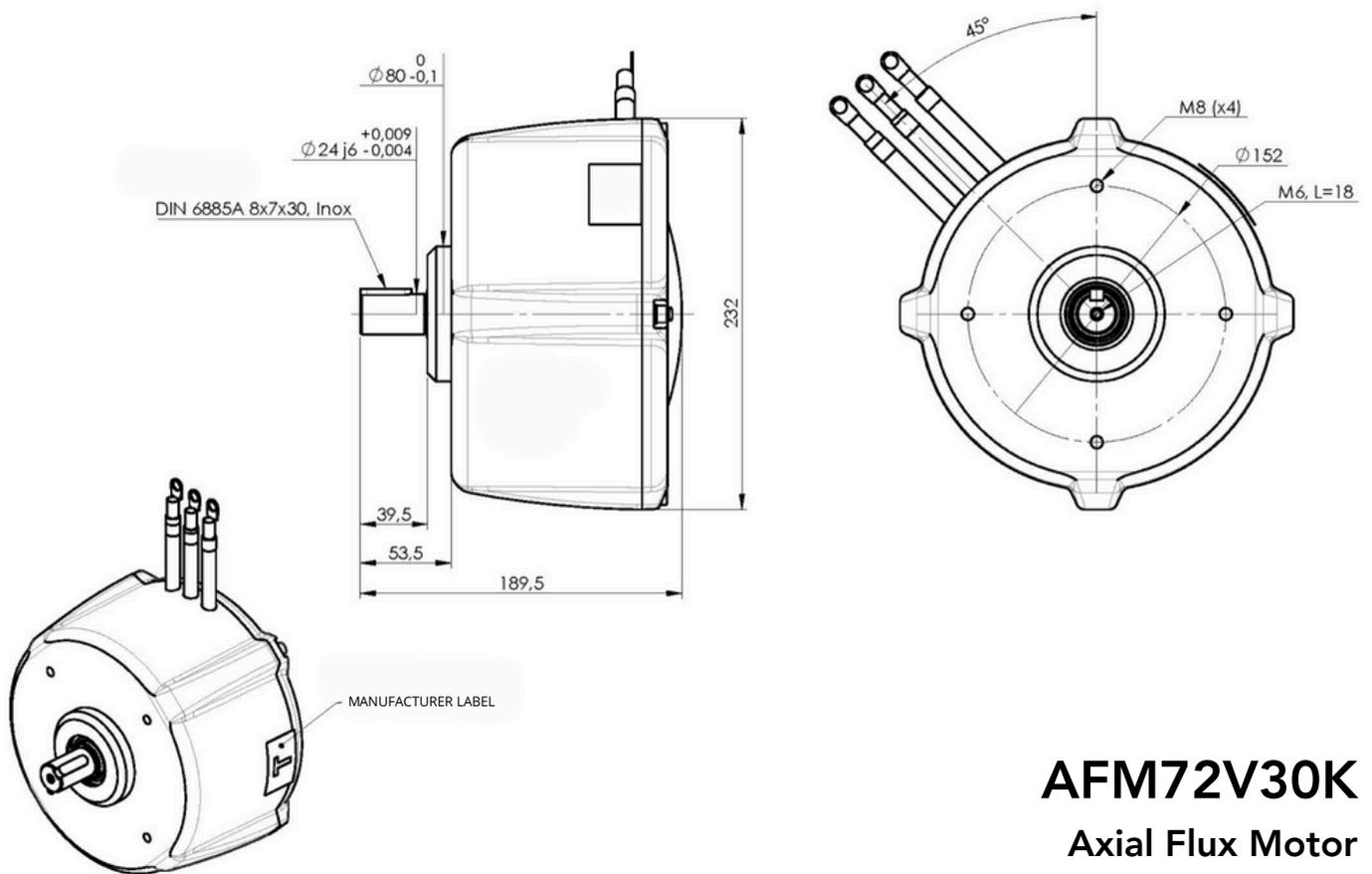
The motor maintains efficiency above 93% across a wide range of speeds and loads.



Data shown corresponds to operation at 96V, 320 A.



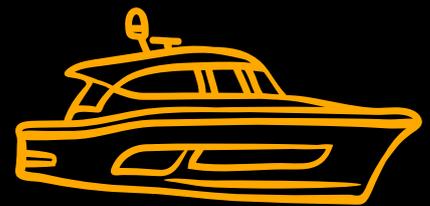
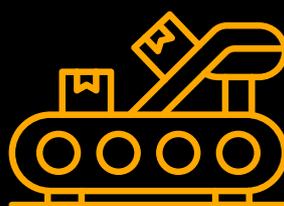
Dimensional drawing



AFM72V30K
Axial Flux Motor

Typical applications:

- Electric traction (UTVs, compact tractors, light construction)
- Off-highway auxiliaries
- Industrial drives
- Compact marine or agricultural systems.



Let's build your next platform together.

**Contact our engineering team to discuss your torque, space
or voltage requirements.**

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