

Tashida

Motors for any application

General Purposes IEC Motors **GRAPHENE Series**



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General Purposes IEC Motors

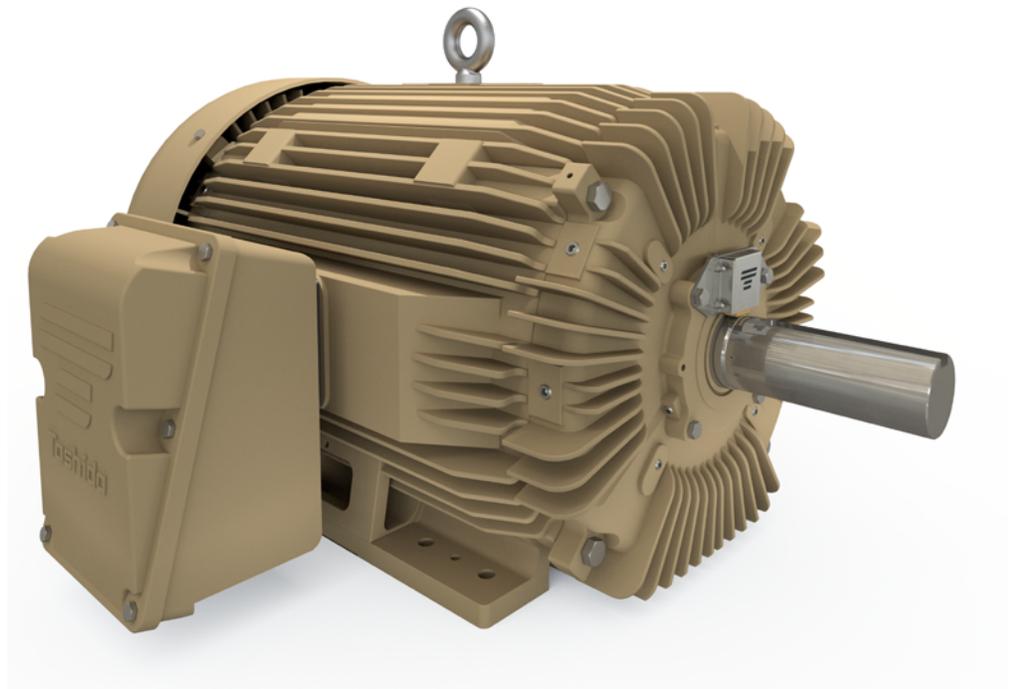
Motors for any application

Extended Reliability

Performance and protection for any application

Tashida Graphene series are tough, high-quality products designed for durability in the most demanding environments and applications where reliability and highest operating efficiency is desired, they are built with heavy-duty cast iron enclosure.

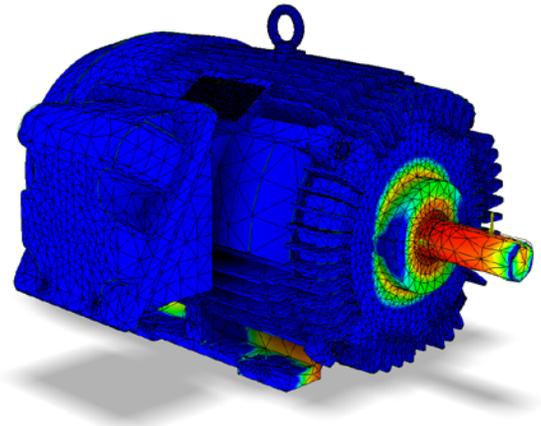
Robust, durable motor construction protects rotating and electrical components to provide extended operating life in industrial applications exposed to dusty, dirty, wet, outdoor, and possibly high vibration environments.



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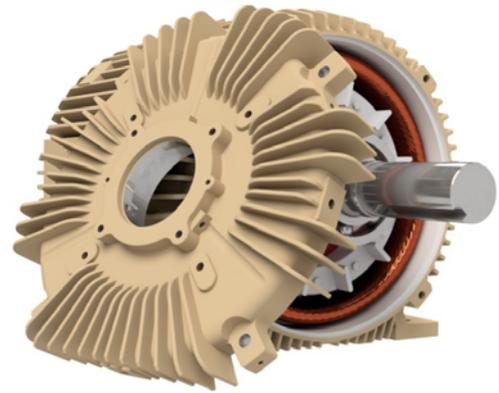
GRAPHENE Series

Tashida Graphene motors have a cast iron frame and bearing housings that offer ruggedness, reliability, performance, and efficiency. The design provides high structural strength using Finite Element Analysis (FEA) to strategically place material within each component to resist the effects of stress and vibration. Materials for resistance to corrosion are amply used throughout for long life in a wide variety of industrial applications.



Mechanical design

When you look at the sturdy design of these motors, you know immediately they are more than standard IEC motors. Tashida Graphene motors have a robust cast iron design to increase stability and eliminate common mechanical failures. The durable construction includes increased ribbing in the end bells, maximum surface area at connection points, and deep bearing pockets.

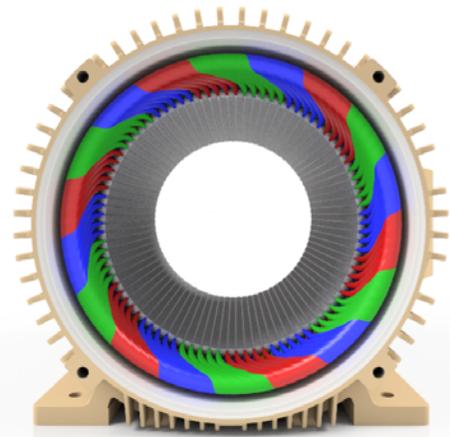


Optimized electrical design

Tashida Graphene motors are designed to provide superior performance and energy efficiency. Their advanced electromagnetic design meets and often exceeds the efficiency class IE3 per standard IEC 60034-30-1.

When a motor is run on a VFD, its windings need to withstand sharp voltage spikes coming from the VFD. Tashida designs its IEC motor series to comply with the IEC 60034-25, this technical specification is a guide for the design and performance of cage induction motors specifically designed for converter supply.

IEC motors do not typically have a Service Factor (SF = 1.0), Tashida IEC motors are designed with a 1.15 service factor, motors can be operated at 15 percent above nameplate power rating.

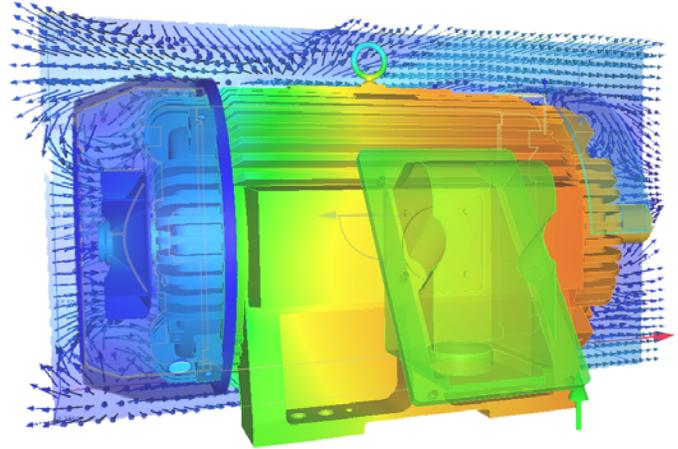


Design to Extended Service Life

Cooling system

Tashida's advanced cooling system is designed in such a way as to minimize air flow dispersion and improve heat dissipation resulting in less hot spots on the frame and longer bearing lubrication intervals. This advanced cooling system includes:

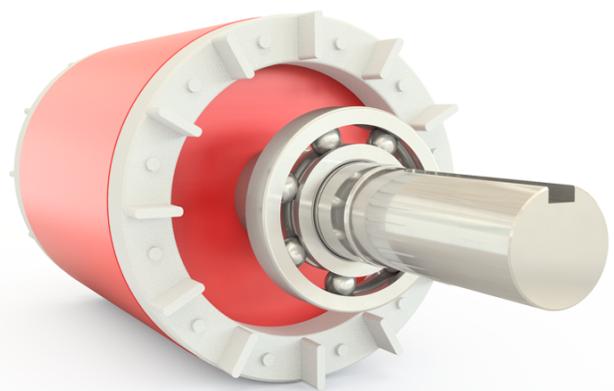
- An engineered finned all cast iron frame that provides optimum heat dissipation. The heavy frame (mass) helps to dissipate the heat.
- High flow volume cooling fan and special contour fan cover work together to provide superior air flow over frame and bearing housings.
- Motors with frame size 80 to 355 are supplied with IC 411 cooling systems, incorporating a bidirectional fan.



Bearing system

Studies have shown that the motor bearing system is one of the most important elements to ensure long service life. Tashida Graphene motors feature:

- Oversized 300 series bearings on both the drive end and non-drive. Oversized bearings allow Tashida's motors to last up to ten times longer than motors built with smaller bearings.
- Bearings on motors frame size 80 to 180 are sealed (lubricated for life). Larger frame sizes feature provisions for lubrication.
- Bearing housings and frame mating surfaces are precision machined for precise tolerances.
- Dynamically balanced with a half-key and fit vibration class A in accordance with standard IEC 60034-14.

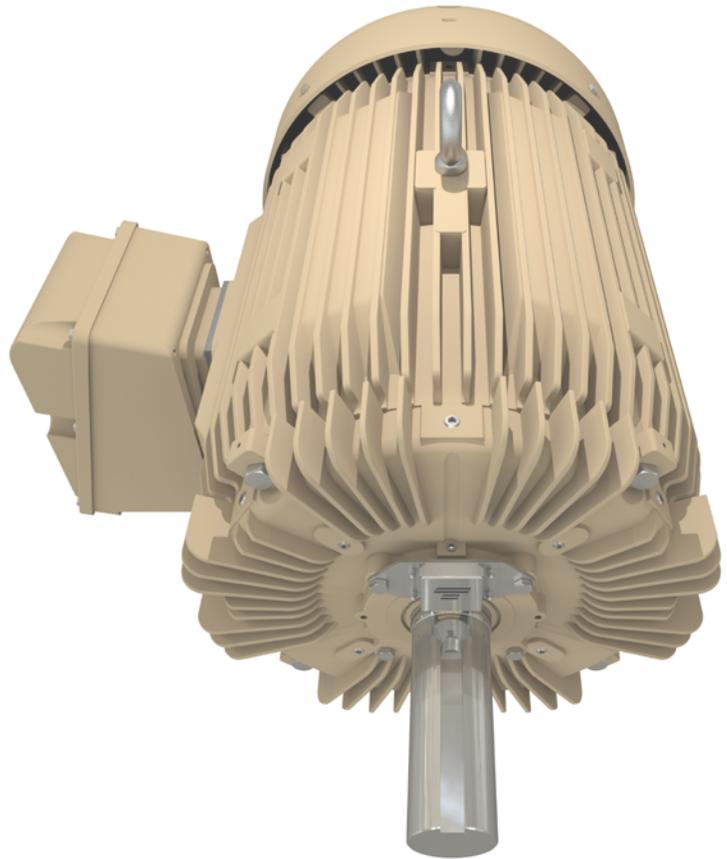


Data, Facts, and Details

A new generation of motors

Reducing your cost of operation in severe environments, Tashida Graphene motors have been developed to provide the rugged performance and long service life you have come to depend on plus exceptional operating efficiencies to further reduce your company's cost of ownership.

- UL Recognized Component System
- 6 / 9 / 12 Leads for Wye-Delta Starting
- Silicon Lead Gasket Between T-Box and Frame
- Oversized 300 Series Bearings
- L10 Bearing Life
- ABMA C3 Bearings Clearance
- Polyurea Grease (Mobil Polyrex EM)
- ASTM Grade 25 Grey Iron Frame and Brackets
- C-5 Rated Electrical Steel
- PTC Thermistors for Thermal Protection
- Designed and Manufactured According to IEC 60034



Motor Features

General Features

Enclosure	TEFC (Totally Enclosed Fan Cooled)
Cooling System	IC411
Power Range	0.37 - 375kW
Voltage (60Hz)	230/380V/460V - 460V
Speed (60Hz)	3600, 1800, 1200 Rpm
Frame Sizes	80 - 355

Electrical Features

Insulation Class	Class F (155°C)
Inverter Duty	Yes, Per IEC 60034-25, Section 18
Temperature Rise	Class B (80°C) @ 1.0 SF
Service Factor	1.15
Efficiency	IE2, IE3
IEC Torque Design	Design N
Duty Type	S1

Mechanical Features

Bearings Type	Anti-friction
Sealed Bearings	80 to 180 Frame
Regreasable Bearings	200 to 355 Frame
Degree Of Protection	IP55
Fan Material	Non-Sparking & Non-Corrosive
Fan Cover Material	Steel
Terminal Box Material	Aluminum
Terminal Box Rotation	90° Degree Increments
Terminal Box Position	Left Hand Side (LHS), Viewed From DE
Nameplate Material	Stainless Steel (304)

Boosting the industry of the future

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