## TOSHIBA Leading Innovation >>>



Power	0.37 to 315 kw
Speed (50 Hz)	3000, 1500, or 1000 RPM
Voltage (50 Hz)	≤ 4 kw = 230 V/400 V > 4 kw = 400 V/690 V
Enclosure	Totally Enclosed Fan Cooled (IC411)
Frame Size	80M through 355M
Ingress Protection	IP55
Construction	Aluminum Fin Type (80-180 Frame) Cast Iron (80-355 Frame)
Insulation	Class F with 80°C Rise @ 1.0 SF by Resistance
Vibration	Grade A Vibration and Balanced with Half Key per ISO 8821
Environment	Suitable for Indoor or Outdoor Use in Severe Duty Applications



## Tosh-ECO™ IEC

#### Tosh-ECO<sup>™</sup> IEC is the latest line of Toshiba low voltage motors designed for efficiency and reliability.

The Tosh-ECO IEC motor product line is designed to meet or exceed the requirements of IEC measurement standard 60034 while maintaining the high reliability and quality expected from Toshiba. Ideal for severe duty applications, these motors feature multiple new design enhancements that result in one of the lowest cost-of-ownership products in the industry.

Toshiba also provides solutions and Global Supply Chain Management Systems (GSCMS) to meet the evolving needs of global customers. Tosh-ECO IEC motors are available in a range of global IEC standards such as IEC 60034, 60072, 60204-1, 60038, & 60721 (where applicable).

- IE3 Efficiency Levels per IEC 60034-30
- Meets or Exceeds Global Standard Specifications such as IEC60034, 60072, 60204-1, 60038, & 60721 (Where Applicable)
- Multi-Mount on Selected Cast Iron Frames
- · Removable Base for 80 through 180 for Aluminum Frames & 160-250 Cast Iron Frames
- Available Interchangeable Flange Options (B5/B35 and B14/34)
- Suitable for Use on Adjustable Speed Drives
- Plugged Drain Holes in Frame and Brackets
- Normally Stocked for Selected Ratings (Check Catalog for More Details)





# >>> Tosh-ECO IEC

# **BUILT FOR SEVERE DUTY APPLICATIONS**



#### Nameplate

- 304 SS Stainless Steel
- Etched Lettering
- Single-Frequency 50 Hz
- Additional 415 V/3/50 Hz



#### Construction

- Aluminum Fin 80-180 Frame and Cast Iron Frames for 80-355
  Shaft V Ring Protection System
- Dual-Mount on Select Cast Iron Frames
- IP55 Ingress Protection
- Lead Separation Protection
- Fabricated Steel Fan Covers

#### **Conduit Box**

- Aluminum Box for 80-180 Aluminum Frame
- Cast Iron Box for 80-355 Cast Iron Frame
- Top Mount with 90° Rotational Option
- Conduit Entries: One Plastic Gland and One Plug (Metric Threaded)
- Terminal Block
- Gasketed Conduit Box
- Grounding Provisions: One Inside Main Terminal Box and One Ground Provision on Frame
- Connection Diagram Inside Conduit Box Cover



#### Bearing System

- Oversized Bearings for Extended Bearing Life
- Regreasable 180-355 Frame
- Low Temperature Rise for Extended Life
- L-10 Life of 100,000 Hours for Direct-Coupled Applications
- L-10 Life of 25,000 Hours for Belted Applications
- C3 Fit on Both Ends



### Insulation System

- Class B Rise by Resistance @ 1.0 SF
- Thermally Protected; 3 PTC Thermistors for ≥160 Frame (One per Phase with Color Coded Leads)
- Large Thermal Margins for Extended Life & Reliability
- Phase Paper & Coil Bracing on Both Ends
- 6 or 12 Leads Delta Δ/Wye Y Connection
- Bi-Directional (CCW Viewed from NDE)



#### Testing

100% No-load commercial Test on All Motors











### www.toshiba.com/tic



