

TOSHIBA

TOSHIBA INTERNATIONAL CORPORATION

LOW VOLTAGE MOTORS

EQP Global[®] IEC



**METRIC
IEC**

IE3 EFFICIENCY, VERSATILE DESIGN FOR GLOBAL MARKET DEMANDS

The EQP Global IEC motor series is designed to meet the international specifications as well as the requirements of the IEC 60034, while maintaining the high reliability and quality expected from Toshiba. This cutting-edge, dual voltage product line is designed in both aluminum and cast iron frames for indoor and outdoor use in severe duty applications.

EQP Global[®]
IEC

E133052 CC027B
CE   **IE3**



Inverter Duty Rated

Designed for use with an adjustable speed drive that can lead to energy savings when run at optimum application-based speed. Exceeds IEC 60034-25.

Dual-Frequency Rated

50/60 Hz design allows the motor to be a drop-in replacement anywhere in the world. Standard dual rating label plate mounted on motor.

Versatile Design Arrangements

Engineered for multiple mounting configurations with removable feet on frames 90-160. The motor is suitable for vertical and horizontal mounting with additional interchangeable flanges.

Severe Duty Applications

V-ring seal on the DE, severe duty paint system and IP55 enclosure allow for a wide variety of applications in industrial environments .

Insulation

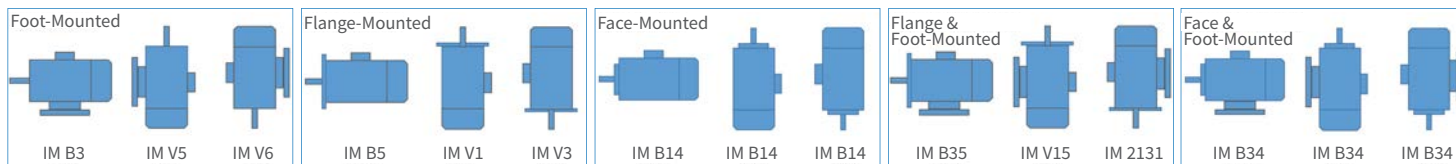
Class F rated insulated system with Class H varnish and magnet wire provide large thermal margins for extended life and reliability.

FRAME SELECTION

NEMA	56	145	-	182	184	213	215	254	256	284	286	324	326	364	365
IEC	80	90	100L	112S	112M	132S	132M	160M	160L	180M	180L	200M	200L	225S	225M

*Due to the differing standards, critical frame and mounting dimensions may vary between IEC and NEMA frames.

MOUNTING ARRANGEMENTS



VOLTAGE RANGE

50 Hz		
Frame Size	VΔ	VY
80-132	220/230/240 V	380/400/415 V
160-225	380/400/415 V	-

60 Hz		
Frame Size	VΔ	VY
80-132	-	460 V
160-225	460 V	-

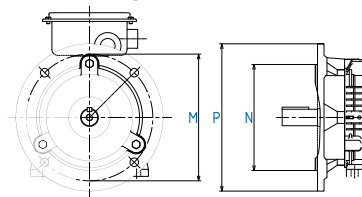
FLANGE AND FACE OPTIONS

B5/B35 FLANGES					
Frame Size	M	N	P	Standard	Reduced
80	165	130	200	FF 165	FF 130
90	185	130	200	FF 165	FF 130*
100	215	180	250	FF 215	FF 165
112	215	180	250	FF 215	FF 165*
132	265	230	300	FF 265	FF 215*
160	300	250	350	FF 300	FF 265*
180	300	250	350	FF 300	-
200	350	300	400	FF 350	-
225	400	350	450	FF 400	-

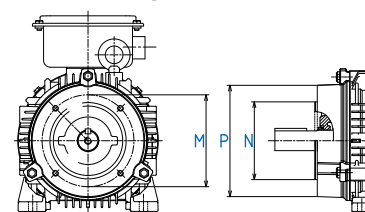
*Note: Frames 90, 112, 132, and 160 do not meet IEC C dimension and flanges are not interchangeable

B14/B34 FACE OPTIONS						
Frame Size	M	N	P	Standard	Reduced	Increased
80	100	80	120	FT 100	FT 85	FT 130
90	115	95	140	FT 115	FT 100	FT 130
100	130	110	160	FT 130	FT 115	FT 165
112	130	110	160	FT 130	-	FT 165
132	165	130	200	FT 165	-	-
160	215	180	250	FT 215	-	-

B5, B35 Flange



B14, B34 Flange



INDUSTRIES SERVED

- Oil & Gas
- Mining & Minerals
- Chemical
- Water & Wastewater

APPLICATIONS

- Pumps
- Fans
- Compressors
- Centrifuges
- Conveyors
- Mixers

AVAILABLE OPTIONS

- Interchangeable Flanges
- Cast Iron Fan Cover for Frames 180-225
- Regreasable Bearings on 180 Frame
- Space Heater
- Drip Cover
- Shaft Grounding Ring
- Insulated Bearings
- Thermal Protection Devices

3 THREE YEAR WARRANTY



GENERAL

Power	.75 to 45 kW
Speed (50 Hz) (60 Hz)*	3000, 1500, or 1000 RPM
	3600, 1800, or 1200 RPM
Voltage (50 Hz) (60 Hz)*	230/400, 240/415, 220/380, or 400, 415, 380 V
	460 V
Enclosure	Totally Enclosed Fan Cooled; Cast Iron Frame 80, 180-225, Aluminum Frame 90-160
Frame Size	80M through 225S
Ingress Protection	IP55
Global Standards	Meets or Exceeds IEC 60034, 60072, 60204, 60038
ASD Rated	60:1 Variable Torque; 10:1 Constant Torque
Vibration	Maximum Vibration Magnitude in Velocity (RMS) is 2.8 mm/sec.
Environment	Suitable for Indoor or Outdoor Use in Severe Duty Applications
Efficiency	IE3

CONSTRUCTION

Frame	Aluminum Fin Frame and Cast Iron Brackets for 90-160
	Cast Iron Fin Frames and Brackets for 80, 180-225
Shaft Seals	Shaft V Ring Protection System
Mounting	Dual-Mount 225 IEC Frame (225M & 225S)
Ingress Protection	IP55
Lead	Lead Separation Protection
Fan Cover	Fabricated Steel Fan Covers

BEARINGS

Type	Sealed Bearings 80-180; Regreasable Bearings 200-225
Life	L-10 Life of 100,000 Hours for Direct-Coupled Applications; L-10 Life of 40,000 Hours for Belted Applications

CONDUIT BOX

Material	Fabricated Steel or Aluminum Box for 80-160; Cast Iron Box for 180-225
Mounting	Top Mount with Rotable 90° Increments
Grounding	Grounding Provisions Per CE
Dual Conduit Entry	One Plastic Gland and One Plug (Metric Threaded)
Termination	Terminal Block (6 Post)
Gasket	Gasketed Conduit Box

INSULATION SYSTEM

Temperature Rise	Class B Rise (80°C) @ 1.0 SF
Thermal Protection	Winding PTC Thermistors for 160 Frame and Larger (One per Phase with Color Coded Leads, 155 °C)
Material	Low-loss Electrical Steel; Phase Paper & Coil Bracing on Both Ends; Inverter Grade, Spike Resistant Magnet Wire, Exceeds IEC 60034-25
Class	Class F Rated with Class H Varnish

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TOSHIBA MOTORS & DRIVES DIVISION
Adjustable Speed Drives • Motors • Motor Controls

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