

TOSHIBA

Leading Innovation >>>



Efficiency & Reliability — The 6800 Frame is Toshiba's next-generation medium voltage motor series.

This product line offers some of the highest efficiency and torque in the industry while producing some of the lowest vibration in frames of this size – leading to a longer life and greater reliability.

Features include:

- Bearing RTD Provisions
- Air Filter Provisions
- Dowel Holes & Provisions for Vertical Jacking Screws for Easy Alignment
- API-541 4th Edition Capabilities
- Meets American Recovery & Reinvestment Act of 2009 (ARRA) Requirements

> ONE CALL. ONE SOLUTION.

Toshiba International Corporation is proud to be a single-source solution for our customers, offering a complete lineup of electric motors, adjustable speed drives, and motor starters for a variety of applications. Our products are completely designed, engineered, and manufactured at our one million square foot manufacturing facility located in Houston, Texas. This gives us the flexibility to customize our motors to perform beyond a wide variety of industrial and application requirements. We also have the capability to test our products together, as a complete system, before it goes out into the field—ensuring the highest level of quality, performance, and reliability.

Horsepower	800 to 4000 HP (Pole Speed Dependent)
Pole Speed (RPM)	2 (3600), 4 (1800), 6 (1200) or 8 (900)
Voltage (60 Hz)	2300, 4160, or 6600 V
Frame Size	6810/11/12 or 6812/13
Protection	WPI, WP11, TEAAC, or TEWAC
Service Factor	1.15
Construction	Cast Iron Frame & Fabricated Steel Top-Hat
Insulation	Class F, Meets NEMA MG1 Part 31 (Inverter Duty)
Environment	Indoor & Outdoor Use
Sound	<85 dBa



6800 FRAME

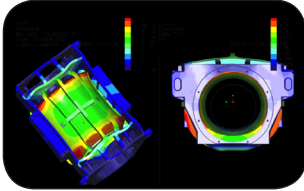
MEDIUM VOLTAGE MOTOR



6800 FRAME

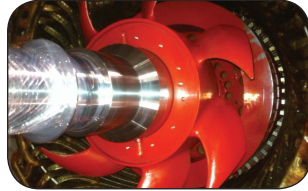


BUILT FOR SEVERE DUTY APPLICATIONS



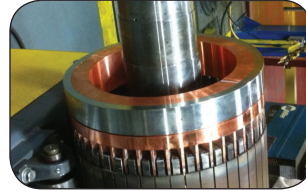
Frame Design

- Thermal Analysis Used to Determine Optimal Rigidity
- Designed to Reduce Vibration by Maintaining Stator-to-Frame Concentricity



Fan Design

- 3-D Fluid Analysis Used to Model Airflow & Optimize Fan Design
- Designed to Provide Maximum Airflow with Reduced Frictional Losses



Copper Bar

- API Style End Rings without Welded Joints
- End Rings/Brazing System Available per API 541
- Bar Swaging Complete Length of Stator Core



Motor-Drive Solution

- Insulation Meets NEMA MG1 Part 31
- Can Be Paired with UL-Listed Medium Voltage Drive
- Medium Voltage Drive Contains Motor-Friendly Multiphase Neutral Point Clamped Output

6800 Frame Specification

Pole	2	4	6	8
Maximum HP*	3750	4000	2500	1500
Frame	6810/6811/6812	6812/13	6812/13	6812/13
Service Factor	1.0/1.15	1.0	1.0/1.15	1.0/1.15
Nominal Efficiency	96.2%	96.6%	95.9%	95.4%
Power Factor	91.0%	90.6%	90.9%	84.3%
Winding Temperature Rise by Resistance Method (°C)	B Rise at 1.0	B Rise at 1.0	B Rise at 1.0	B Rise at 1.0
Sound	≤85 dBA	≤85 dBA	≤85 dBA	≤85 dBA
Vibration	Meets API 514 4th Edition Standard	<0.1 Inches/Second	<0.1 Inches/Second	<0.1 Inches/Second
Insulated Sleeve Bearings	Yes	Yes	Yes	Yes
Anti-Friction Ball Bearing	N/A	Yes	Yes	Yes
Locked Rotor Amps	≤650%	≤650%	Consult Factory	Consult Factory
Rotation	Uni	Uni	Uni	Bi
Voltage**	2300, 4160, or 6600 V	2300, 4160, or 6600 V	2300, 4160, or 6600 V	2300, 4160, or 6600 V
CSA	Yes	Yes	Yes	Yes
Area Classification	Class I, Division 2, Group A/B/C/D; T3 Temperature Code	Class I, Division 2, Group A/B/C/D; T3 Temperature Code	Class I, Division 2, Group A/B/C/D; T3 Temperature Code	Class I, Division 2, Group A/B/C/D; T3 Temperature Code
Rotor Construction	Copper with Phosphorous-Free Brazing	Copper with Phosphorous-Free Brazing	Copper with Phosphorous-Free Brazing	Copper with Phosphorous-Free Brazing
Shaft Material	Hot-Rolled 4142 (Forged Shaft Available)	Hot-Rolled 4142	Hot-Rolled 4142	Hot-Rolled 4142
Winding RTD	Two-Phase; 100 Ω Platinum	Two-Phase; 100 Ω Platinum	Two-Phase; 100 Ω Platinum	Two-Phase; 100 Ω Platinum
Space Heater	120/1/60	120/1/60	120/1/60	120/1/60
Main T-Box	Oversized Fabricated Steel	Oversized Fabricated Steel	Oversized Fabricated Steel	Oversized Fabricated Steel
Auxiliary Boxes	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Bearing RTD	Yes; Provisions	Yes; Provisions	Yes; Provisions	Yes; Provisions
Lamination Material	C5	C5	C5	C5
Fan Material	Aluminum Non-Sparking per API	Aluminum Non-Sparking per API	Aluminum Non-Sparking per API	Aluminum Non-Sparking per API
Vertical Jacking & Dowel Pins	Yes; Provisions	Yes; Provisions	Yes; Provisions	Yes; Provisions
Ambient Temperature	-20° to 40°C	-20° to 40°C	-20° to 40°C	-20° to 40°C

*WPII enclosures

**6600 V, three-phase, 60 Hz design is available at lower HP ratings

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www.toshiba.com/motors