

## MOTORS **Product Offering**



# SMART, STRONG DESIGNS WITH PROVEN PERFORMANCE

**Toshiba International Corporation (TIC)** is proud to be a single-source provider of electric motors, adjustable speed drives, motor control systems, and industrial automation. Known for our quality, performance, and reliability, Toshiba solutions are a preferred choice in demanding applications. With the knowledge and experience to optimize operations and develop a preventive maintenance plan, Toshiba can help reduce maintenance costs and increase uptime. Our in-house capabilities include:

- Research & Development
- Engineering
- Manufacturing
- Technical Sales
- Product & Application Support
- Customer Service
- Project Management
- Field Services & Preventive Maintenance
- Product & Field Service Training

#### CUSTOMIZABLE SOLUTIONS FOR MOTOR APPLICATIONS

Toshiba is a leading manufacturer of low voltage motors from ½ to 800 HP and 230 to 575 V and medium voltage motors from 100 to 50,000 HP and 2,300 to 13,800 V. Known for their quality, performance, and reliability, Toshiba motors are a preferred choice in the most demanding applications. With decades of experience, our US-based support team is a knowledgeable partner in providing customer-centric solutions. The large installed base across diverse industries demonstrates customers' confidence in Toshiba motors and service.



#### **INDUSTRIES SERVED**

- Agribusiness
  - Cement & Aggregate
    - Chemical
      - Data Centers
        - Food, Beverage & Pharmaceutical
        - HVAC
          - Metal Working & Processing
            - Mining & Minerals
              - Oil & Gas
                - Power Generation
                  Pulp & Paper
                  - Water & Wastewater

#### **LOW VOLTAGE MOTORS**











|                           | EQP Global® SD   | EQP Global <sup>®</sup> SD C-Face  | EQP Global®<br>Top Mount  | EQP Global <sup>®</sup> 840   | EQP Global <sup>®</sup> 841   |
|---------------------------|--|--|---|---|---|
| Efficiency                | NEMA Premium <sup>®</sup> Efficiency   | NEMA Premium® Efficiency   | NEMA Premium® Efficiency  | NEMA Premium® Efficiency  | NEMA Premium® Efficiency  |
| Enclosure                 | TEFC   | TEFC   | TEFC  | TEFC  | TEFC  |
| Horsepower                | 0.5 to 800 HP  | 0.5 to 75 HP   | 1 to 200 HP   | 0.75 to 500 HP  | 0.75 to 400 HP  |
| Speed                     | (60 Hz): 3600, 1800, 1200<br>or 900 RPM<br>(50 Hz): 3000, 1500, 1000<br>or 750 RPM   | (60 Hz): 3600, 1800 or 1200 RPM<br>(50 Hz): 3000, 1500 or 1000 RPM   | (60 Hz): 3600, 1800 or 1200 RPM<br>(50 Hz): 3000, 1500 or 1000 RPM  | (60 Hz): 3600, 1800, 1200<br>or 900 RPM<br>(50 Hz): 3000, 1500, 1000<br>or 750 RPM  | (60 Hz): 3600, 1800, 1200<br>or 900 RPM   |
| Voltage                   | (60 Hz): 230/460, 460 or 575 V<br>(50 Hz): 190/380 or 380 V,<br>56 - S447T   | (60 Hz): 230/460 or 575 V<br>(50 Hz): 190/380 V  | (60 Hz): 230/460 or 575 V (50<br>Hz): 190/380 V   | (60 Hz): 460 or 575 V<br>(50 Hz): 380 V, 143T - S447T   | (60 Hz): 460 or 575 V   |
| Frame Size                | 56 - 5811US  | 56C - 365TC  | 143T - S447T  | 143T - 5810UZ   | 143T - B449T  |
| Protection                | IP55 (Up to S447) &<br>IP54 (S/B449 & Above)   | IP55   | IP55  | IP55 (Up to 280 Frame) &<br>IP56 (320 Frame & Above)  | IP56  |
| Frame<br>Construction     | Cast Iron  | Cast Iron  | Cast Iron   | Cast Iron   | Cast Iron   |
| Insulation                | Class F Inverter Duty,<br>Exceeds NEMA MG1 Part 31   | Class F Inverter Duty,<br>Exceeds NEMA MG1 Part 31   | Class F Inverter Duty,<br>Exceeds NEMA MG1 Part 31  | Class F Inverter Duty, Exceeds<br>NEMA MG1 Part 31  | Class F Inverter Duty, Exceeds<br>NEMA MG1 Part 31  |
| Vibration<br>(Unfiltered) | 0.10 Inches/Second or Less   | 0.10 Inches/Second or Less   | 0.10 Inches/Second or Less  | 0.08 Inches/Second or Less  | 0.08 Inches/Second or Less  |
| Features                  | <ul> <li>Suitable for Severe Duty<br/>Applications</li> <li>Dual Frequency 50/60<br/>Hz Design</li> <li>C-Flange Footed &amp; Footless<br/>Available</li> <li>Shaft V-Ring Protection<br/>System</li> <li>Double Drilled Feet for Multi-<br/>Mount Capabilities</li> <li>Suitable for Horizontal &amp;<br/>Vertical Mounting</li> <li>4142 High Strength Shaft<br/>Steel on S444 Frames &amp; Above</li> </ul> | <ul> <li>Suitable for Severe Duty<br/>Applications</li> <li>Dual Frequency 50/60 Hz<br/>Design</li> <li>Footed &amp; Footless Available</li> <li>Shaft V-Ring Protection<br/>System</li> <li>Double Drilled Feet for Multi-<br/>Mount Capabilities</li> <li>Suitable for Horizontal &amp;<br/>Vertical Mounting</li> </ul> | <ul> <li>Dual Frequency 50/60 Hz<br/>Design</li> <li>Shaft V-Ring Protection<br/>System</li> <li>Double Drilled Feet for Multi-<br/>Mount Capabilities</li> <li>Suitable for Horizontal &amp;<br/>Vertical Mounting</li> <li>4142 High Strength Shaft<br/>Steel on S444 Frames &amp; Above</li> </ul> | <ul> <li>Mill &amp; Chemical Duty</li> <li>Dual Frequency 50/ 60 Hz<br/>Design</li> <li>C-Flange Footed &amp; Footless<br/>Available</li> <li>Double Drilled Feet for Multi-<br/>Mount Capabilities</li> <li>Suitable for Horizontal &amp;<br/>Vertical Mounting</li> <li>Umbrella Seal plus<br/>Forsheda® Seal System on<br/>DE &amp; ODE (324T-365T)</li> <li>4142 High Strength Shaft<br/>Steel on S444 Frames &amp; Above</li> <li>Labyrinth Seal on S444<br/>Frames &amp; Above</li> </ul> | <ul> <li>IEEE® 841<br/>Petrochemical Duty</li> <li>C-Face Footed &amp; C-Face<br/>Footless Designs Available</li> <li>Double Drilled Feet for Multi-<br/>Mount Capabilities</li> <li>Suitable for Horizontal &amp;<br/>Vertical Mounting</li> <li>Labyrinth Seal on All Frames<br/>(DE &amp; ODE)</li> <li>4142 High Strength Shaft<br/>Steel on S444 Frames &amp; Above</li> </ul> |
| Area<br>Classification    | Class I Division 2 Groups<br>A, B, C, D  | Class I Division 2 Groups<br>A, B, C, D  | Class I Division 2 Groups<br>A, B, C, D   | Class I Division 2 Groups<br>A, B, C, D   | Class I Division 2 Groups<br>A, B, C, D   |

Motors Product Offering

### LOW VOLTAGE MOTORS









|                        | EQP Global®<br>Explosion Proof   | EQP Global® IEC  | EQP Global®<br>Closed-Coupled Pump  | EQP Global®<br>Critical Cooling  |
|------------------------|--|--|---|--|
| Efficiency             | NEMA Premium <sup>®</sup> Efficiency   | IE3  | NEMA Premium <sup>®</sup> Efficiency  | NEMA Premium <sup>®</sup> Efficiency   |
| Enclosure              | TEXP   | TEFC   | TEFC  | TEAO   |
| Horsepower             | 1 to 350 HP  | 0.75 to 45 kW  | 1 to 75 HP  | 1 to 20 HP   |
| Speed                  | (60 Hz): 3600, 1800, 1200 or 900 RPM   | (60 Hz): 3600, 1800 or 1200 RPM<br>(50 Hz): 3000, 1500 or 1000 RPM   | (60 Hz): 3600, 1800 or 1200 RPM<br>(50 Hz): 3000, 1500 or 1000 RPM  | (60 Hz): 3600 or 1800 RPM  |
| Voltage                | (60 Hz): 230/460, 460 or 575 V   | (60 Hz): 460 V<br>(50 Hz): 230/400, 240/415, 220/380,<br>400, 415 or 380 V   | (60 Hz): 230/460 or 575 V<br>(50 Hz): 190/380 V   | (60 Hz): 230/460 or 575 V  |
| Frame Size             | 143T - N449T   | 80M - 225S   | 143JM/JP - 326JM & 365JP  | 143T - 256T  |
| Protection             | IP56   | IP55   | IP55  | IP55   |
| Frame Construction     | Cast Iron  | Aluminum Fin Type (90 - 160)<br>Cast Iron (80, 180 - 225)  | Cast Iron   | Cast Iron  |
| Insulation             | Class F Inverter Duty, Exceeds<br>NEMA MG1 Part 31   | Class F, Exceeds IEC 60034-25<br>(Inverter Duty)   | Class F Inverter Duty, Exceeds NEMA<br>MG1 Part 31  | Class F Inverter Duty, Exceeds NEMA<br>MG1 Part 31   |
| Vibration (Unfiltered) | 0.08 Inches/Second or Less   | Max. Vibration Magnitude in Velocity (RMS) is 2.8 mm/sec.  | 0.10 Inches/Second or Less  | 0.10 Inches/Second or Less   |
| Features               | <ul> <li>T3C Temperature Code 160°C</li> <li>C-Flange Footed &amp; Footless<br/>Available</li> <li>Double Drilled Feet for Multi-Mount<br/>Capabilities</li> <li>Non-Sparking Brass V-Ring Shaft<br/>Slinger</li> <li>Normally-Closed Thermostats</li> <li>Ball Bearing Available on All Frames</li> </ul> | <ul> <li>Dual Frequency 50/60 Hz Design</li> <li>IE3 Efficiency Levels per IEC<br/>60034-30-1</li> <li>Meets or Exceeds Global<br/>Standard Specifications<br/>including IEC60034, 60072,<br/>60204 &amp; 60038</li> <li>Shaft V Ring Protection System</li> <li>Dual-Mount 225 IEC Frames<br/>(225M &amp; 225S)</li> <li>Lead Separation Protection</li> <li>Terminal Block (6 Post)</li> <li>Sealed Bearings on 80-180 Frames;<br/>Regreasable Bearings on 200 - 225<br/>Frames</li> </ul> | <ul> <li>Dual Frequency 50/60 Hz Design</li> <li>Horizontal &amp; Vertical with C-Flange<br/>Option</li> <li>Shaft V-Ring Protection System</li> <li>Double Drilled Feet for Multi-Mount<br/>Capabilities</li> <li>Permanently Identified Leads with<br/>Single Ring Compression Type Lead<br/>Lugs on 284 Frames &amp; Larger</li> </ul> | <ul> <li>Critical Cooling Applications</li> <li>Total Enclosed Air-Over</li> <li>Extended Horsepower Capability</li> <li>Insulated Bearings on DE &amp; ODE</li> <li>Sealed Maintenance-free Bearings</li> <li>NEMA Design B</li> <li>1.15 SF @ 60 Hz</li> <li>Double Drilled Feet for Multi-Mount<br/>Capabilities</li> </ul> |
| Area Classification    | Class I Division 1 Group D and Class II<br>Division 1 Groups E, F & G, T3C 160°C   | Non-Hazardous  | Class I Division 2 Groups A, B, C, D  | Non-Hazardous  |
| Notes                  |  | B5, B34 Flanges Available  |   |  |

#### **LOW VOLTAGE MOTORS**







|                        | EQP Global <sup>®</sup> Cooling Tower  | EQP Global® Quarry Duty   | EQP Global® Brake   |
|------------------------|--|---|---|
| Efficiency             | NEMA Premium® Efficiency   | High & NEMA Premium® Efficiency   | NEMA Premium <sup>®</sup> Efficiency  |
| Enclosure              | TEFC, TEAO   | TEFC  | TEFC  |
| Horsepower             | 0.75 to 75 HP  | 5 to 750 HP   | 0.75 to 30 HP   |
| Speed                  | (60 Hz): 1800 or 1200 RPM<br>(50 Hz): 1500 or 1000 RPM   | 1800, 1200 or 900 RPM   | (60 Hz): 1800 or 1200 RPM<br>(50 Hz): 1500 or 1000 RPM  |
| Voltage                | (60 Hz): 230/460 or 575 V<br>(50 Hz): 190/380 V  | (60 Hz): 460 or 575 V   | (60 Hz): 230/460 or 575 V<br>(50 Hz): 190/380 V   |
| Frame Size             | 143T - 365T  | 184T - B587LL   | 143T - 286T   |
| Protection             | IP56   | IP55 (Up to S/B449) & IP54 (S/B587)   | IP55  |
| Frame Construction     | Cast Iron  | Cast Iron   | Cast Iron   |
| Insulation             | Class F Inverter Duty, Exceeds NEMA MG1 Part 31  | Class F Inverter Duty, Exceeds NEMA MG1 Part 31   | Class F Inverter Duty, Exceeds NEMA MG1 Part 31   |
| Vibration (Unfiltered) | 0.08 Inches/Second or Less   | 0.10 Inches/Second or Less  | 0.10 Inches/Second or Less  |
| Features               | <ul> <li>Dual-Frequency 50/60 Hz Design</li> <li>Double Drilled Feet for Multi-Mount Capabilities</li> <li>Epoxy Finished Paint</li> <li>Suitable for Horizontal &amp; Vertical Mounting</li> <li>Umbrella Seal plus Forsheda<sup>®</sup> Seal System on DE &amp; ODE</li> </ul> | <ul> <li>High Torque Design</li> <li>1.25 SF on 184T - 365T Frames &amp; 1.15 SF on 404T - 5810 Frames</li> <li>Stamped Steel Fan Cover</li> <li>Shaft V-Ring Protection System</li> <li>4142 High Strength Shaft Steel (505 Frames &amp; Larger)</li> <li>Polyurea Base Grease</li> <li>Grade-8 Hardware</li> <li>Bearing Lock Nuts for Vertical Mounting on 505 Frames &amp; Larger</li> <li>Double Drilled Feet for Multi-Mount Capabilities on Most Frames</li> </ul> | <ul> <li>Holding Duty</li> <li>Dual Frequency 50/60 Hz Design</li> <li>Shaft V-Ring Protection System</li> <li>Double Drilled Feet for Multi-Mount Capabilities</li> <li>Brake Ratings 15 lb. ft. &amp; Below Suitable for<br/>Vertical Mounting</li> </ul> |
| Area Classification    | Class I Division 2 Groups A, B, C, D   | Non-Hazardous   | Non-Hazardous   |



Motors Product Offering

#### **MEDIUM VOLTAGE MOTORS**







| Open Drip-Proof  | Weather-Protected I  | Weather-Protected II   |
|--|--|--|
| High Efficiency  | High Efficiency  | High Efficiency  |
| ODP  | WPI  | WPII   |
| 200 to 900 HP  | 250 to 2,000 HP; 700 to 7,500 HP CT  | 250 to 7,500 HP  |
| (60 Hz): 3600, 1800, 1200 or 900 RPM   | (60 Hz): 3600, 1800, 1200 or 900 RPM   | (60 Hz): 3600, 1800, 1200 or 900 RPM   |
| (60 Hz): 2300/4160 or 4000 V   | (60 Hz): 2300/4000, 4000, 6000, or 6600 V  | (60 Hz): 2300/4000, 4000, 6000, or 6600 V  |
| 505US through 5810US   | 588USS through 5811/12USS; N3512 - N5620   | 588USS through 450-1600  |
| IP22   | IP23   | IP24   |
| Cast Iron  | Cast Iron  | Cast Iron  |
| Class F with Class B Rise at 1.0 SF  | Class F with Class B Rise at 1.0 SF  | Class F with Class B Rise at 1.0 SF  |
| <ul> <li>Oversized Cast Iron or Fabricated Steel NEMA<br/>Type I Terminal Box</li> <li>IP22 Enclosure</li> <li>Grounding Provision in Conduit Box</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31<br/>Sect. 31</li> </ul> | <ul> <li>100 ohm Platinum Winding RTDs Wired to a<br/>Dedicated Auxiliary Box - 2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA<br/>Type I Terminal Box</li> <li>NEMA Type II Terminal Box Available - Standard for 6800 Frames</li> <li>120 V Single Phase Space Heaters Wired to<br/>Dedicated Auxiliary Box</li> <li>Insulated NDE Bearing</li> <li>Insulated NDE and DE Sleeve Bearings Available<br/>Some Ratings</li> <li>Provisions for Bearing Thermal Protection<br/>(RTDs or Thermocouples)</li> <li>Provisions for Housing Vibration Sensors</li> <li>IP23 Enclosure</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision in Conduit Box</li> <li>Non-Sparking Epoxy Coated Aluminum Fan<br/>Available</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31<br/>Sect. IV</li> </ul> | <ul> <li>100 ohm Platinum Winding RTDs Wired to a<br/>Dedicated Auxiliary Box - 2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA<br/>Type I Terminal Box</li> <li>NEMA Type II Terminal Box Available - Standard for 6800 Frames</li> <li>120 V Single Phase Space Heaters Wired to<br/>Dedicated Auxiliary Box</li> <li>Insulated NDE Bearing</li> <li>Insulated NDE and DE Sleeve Bearings Available<br/>Some Ratings</li> <li>Provisions for Bearing Thermal Protection<br/>(RTDs or Thermocouples)</li> <li>Provisions for Housing Vibration Sensors</li> <li>IP24 &amp; IP24W Protected Enclosures</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision in Conduit Box</li> <li>Non-Sparking Epoxy Coated Aluminum Fan<br/>Available</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31<br/>Sect. IV</li> </ul>  |
| Recommended for Indoor Use   | Suitable for Class I Division 2 Groups A, B, C, D  | Suitable for Class I Division 2 Groups A, B, C, D  |
|  | Open Drip-Proof         High Efficiency         ODP         200 to 900 HP         (60 Hz): 3600, 1800, 1200 or 900 RPM         (60 Hz): 300/4160 or 4000 V         505US through 5810US         IP22         Cast Iron         Class F with Class B Rise at 1.0 SF         Oversized Cast Iron or Fabricated Steel NEMA Type I Terminal Box         IP22 Enclosure         Grounding Provision in Conduit Box         Gasketed Auxiliary Boxes         Lead Separator Gasketed Main Terminal Box         Designed to Meet NEMA MG1-2018 Part 31 Sect. 31         Recommended for Indoor Use  | Open Drip-ProofWeather-Protected IHigh EfficiencyHigh EfficiencyODPWPI200 to 900 HP250 to 2,000 HP; 700 to 7,500 HP CT(60 Hz): 3600, 1800, 1200 or 900 RPM(60 Hz): 3600, 1800, 1200 or 900 RPM(60 Hz): 2300/4160 or 4000 V(60 Hz): 3600, 1800, 1200 or 900 RPM(60 Hz): 2300/4160 or 4000 V568USS through 5811/12USS; N3512 - N5620IP22IP23Cast IronCast IronClass F with Class B Rise at 1.0 SFClass F with Class B Rise at 1.0 SFOversized Cast Iron or Fabricated Steel NEMA<br>Type I Terminal Box• 100 ohm Platinum Winding RTDs Wired to a<br>Dedicated Auxiliary Box - 2/Phase<br>• Oversized Cast Iron or Fabricated Steel NEMA<br>Type I Terminal Box• P22 Enclosure<br>• Grawding Provision in Conduit Box<br>• Gasketed Muiliary Boxs<br>• Lead Separator Gasketed Main Terminal Box<br>• Designed to Meet NEMA MG1-2018 Part 31<br>Sect. 31• NeMA MG1-2018 Part 31<br>• Crasketed Auxiliary Boxs<br>• Lead Separator Gasketed Main Terminal Box<br>• Non-Sparking Epoxy Coated Aluminum Fan<br>Available<br>• Grawding Provision on Conduit Box<br>• Grawding Provision on Motor Frame<br>• Grounding Provision on Conduit Box<br>• Designed to Meet NEMA MG1-2018 Part 31<br>Sect. 31• Suitable for Class I Division 2 Groups A, B, C, D |

#### **MEDIUM VOLTAGE MOTORS**







|                     | Totally Enclosed TEFC   | Totally Enclosed TEFC 841   | High Torque 587 Frame   |
|---------------------|---|---|---|
| Efficiency          | High & NEMA Premium® Efficiency   | NEMA Premium <sup>®</sup> Efficiency  | High & NEMA Premium® Efficiency   |
| Enclosure           | TEFC  | TEFC  | TEFC  |
| Horsepower          | 100 to 2,500 HP   | 100 to 400 HP   | 200 to 750 HP   |
| Speed               | (60 Hz): 3600, 1800, 1200, 900 or 720 RPM   | (60 Hz): 3600, 1800, 1200 or 900 RPM  | (60 Hz): 1800, 1200 or 900 RPM  |
| Voltage             | (60 Hz): 2300/4000, 4000, 6000, or 6600 V   | (60 Hz): 2300/4000 V  | (60 Hz): 2300/4000 or 4000 V  |
| Frame Size          | S447TS/449TS through N8810  | S/B 447/9   | S/B 586/7   |
| Protection          | IP54  | IP56  | IP55  |
| Frame Construction  | Cast Iron   | Cast Iron   | Cast Iron   |
| Insulation          | Class F with Class B Rise at 1.0 SF   | Class F   | Class F   |
| Features            | <ul> <li>100 ohm Platinum Winding RTDs Wired to a<br/>Dedicated Auxiliary Box - 2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA<br/>Type I Terminal Box</li> <li>NEMA Type II Terminal Box Available - Standard for 6800 Frames</li> <li>120 V Single Phase Space Heaters Wired to<br/>Dedicated Auxiliary Box (Optional on S/B449)</li> <li>Insulated NDE Bearing (Optional on S/B449)</li> <li>Insulated NDE Bearing (Optional on S/B449)</li> <li>Insulated NDE Bearing Housings</li> <li>Provisions for Bearing Thermal Protection<br/>(RTDs or Thermocouples)</li> <li>Provisions for Housing Vibration Sensors</li> <li>IP55 Enclosure</li> <li>IP55 Enclosure Available</li> <li>Cast Iron or Fabricated Steel Fan Covers</li> <li>Fabricated Steel Only for 6800 Frames</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision in Conduit Box</li> <li>Non-Sparking Epoxy Coated Aluminum Fan<br/>Available</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Corrosion Resistant Breather Drains at Lowest<br/>Location of Motor and Terminal Box</li> </ul> | <ul> <li>100 ohm Platinum Winding RTDs Wired to a<br/>Dedicated Auxiliary Box - 2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA<br/>Type I Terminal Box</li> <li>120 V Single Phase Space Heaters Wired to<br/>Dedicated Auxiliary Box</li> <li>Provisions for Bearing Thermal Protection<br/>(RTDs or Thermocouples)</li> <li>Provisions for Housing Vibration Sensors</li> <li>IP56 Enclosure</li> <li>IEEE® 841 Nameplated</li> <li>Labyrinth Seals on DE and NDE</li> <li>Tropicalization Treatment on Windings</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision Foot Flatness</li> <li>Non-Sparking Epoxy Coated Aluminum Fan</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Corrosion Resistant Breather Drains at Lowest<br/>Location of Motor and Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31 Sect. IV</li> </ul> | <ul> <li>High-Torque Design</li> <li>Provisions for Bearing Thermal Protection<br/>(RTDs or Thermocouples)</li> <li>100 ohm Platinum Winding RTDs Wired to a<br/>Dedicated Auxiliary Box - 2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA<br/>Type I Terminal Box</li> <li>120 V Single Phase Space Heaters Wired to<br/>Dedicated Auxiliary Box</li> <li>Insulated NDE Bearing</li> <li>Provisions for Housing Vibration Sensors</li> <li>IP55 Enclosure</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision in Conduit Box</li> <li>Non-Sparking Fan</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Corrosion Resistant Breather Drains at Lowest<br/>Location of Motor and Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31 Sect. IV</li> </ul> |
| Area Classification | Suitable for Class I Division 2 Groups A, B, C, D   | Class I Division 2 Groups A, B, C, D<br>Suitable for Class II Division 2 Groups F, G  | Suitable for Class I Division 2 Groups A, B, C, D   |

#### **MEDIUM VOLTAGE MOTORS**





|                     | Totally Enclosed Air-to-Air Cooled   | Totally Enclosed Water-Air-Cooled  |
|---------------------|--|--|
| Efficiency          | High Efficiency  | High Efficiency  |
| Enclosure           | TEAAC  | TEWAC  |
| Horsepower          | 450 to 3,000 HP  | 400 to 5,500 HP  |
| Speed (60 Hz)       | 3600, 1800, 1200 or 900 RPM  | 3600, 1800, 1200 or 900 RPM  |
| Voltage (60 Hz)     | 4000 V, Option for 2300 or 6000 V  | 2300/4000, 4000, or 6000 V   |
| Frame Size          | 5810/11/12US through 450-1600  | 5011/12USS through 6812/13USS  |
| Protection          | IP54   | IP54   |
| Frame Construction  | Cast Iron  | Cast Iron  |
| Insulation          | Class F with Class B Rise at 1.0 SF  | Class F with Class B Rise at 1.0 SF  |
| Features            | <ul> <li>100 ohm Platinum Winding RTDs Wired to a Dedicated Auxiliary Box<br/>- 2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA Type I Terminal Box<br/>NEMA Type II Terminal Box Available</li> <li>Standard for 6800 Frames</li> <li>120 V Single Phase Space Heaters Wired to Dedicated Auxiliary Box</li> <li>Insulated NDE Bearing</li> <li>Insulated NDE and DE Sleeve Bearings Available Some Ratings</li> <li>Provisions for Bearing Thermal Protection (RTDs or Thermocouples)</li> <li>Provisions for Housing Vibration Sensors</li> <li>IF55 Enclosure Available</li> <li>Provisions for Housing Vibration Sensors</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision in Conduit Box</li> <li>Non-Sparking Epoxy Coated Aluminum Fan Available</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Corrosion Resistant Breather Drains at Lowest Location of Motor and<br/>Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31 Sect. IV</li> </ul> | <ul> <li>100 ohm Platinum Winding RTDs Wired to a Dedicated Auxiliary Box<br/>-2/Phase</li> <li>Oversized Cast Iron or Fabricated Steel NEMA Type I Terminal Box</li> <li>NEMA Type II Terminal Box Available</li> <li>Standard for 6800 Frames</li> <li>120 V Single Phase Space Heaters Wired to Dedicated Auxiliary Box</li> <li>Insulated NDE Bearing</li> <li>Insulated NDE and DE Sleeve Bearings Available Some Ratings</li> <li>Provisions for Bearing Thermal Protection (RTDs or Thermocouples)</li> <li>Provisions for Housing Vibration Sensors</li> <li>IP55 Enclosure Available</li> <li>Provisions for Housing Vibration Sensors</li> <li>Grounding Provision on Motor Frame</li> <li>Grounding Provision in Conduit Box</li> <li>Non-Sparking Epoxy Coated Aluminum Fan Available</li> <li>Gasketed Auxiliary Boxes</li> <li>Lead Separator Gasketed Main Terminal Box</li> <li>Corrosion Resistant Breather Drains at Lowest Location of Motor and Terminal Box</li> <li>Designed to Meet NEMA MG1-2018 Part 31 Sect. IV</li> </ul> |
| Area Classification | Suitable for Indoor or Outdoor Use   | Suitable for Indoor or Outdoor Use   |

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