

# TOSHIBA EQP Global™ SD

With Hybrid Ceramic Bearings (575 Volt)

Efficiency, Quality & Performance (EQP)



The TOSHIBA EQP Global SD premium efficient motor are suited for the FANWALL® applications. Motors are balanced to vibration levels at half the allowable NEMA limits. The totally enclosed air over (TEAO) design runs quiet, is very compact and is a superior enclosure for any application, including dirty or wet environments.

The insulation system in a motor is designed to handle the sum of three temperatures: an ambient design temperature 40°C / 104°F; the temperature rise in the motor under load; and a 10°C hot spot allowance. For example, a NEMA Class B rated motor can have a maximum motor temperature rise during operation of 80°C. This results in a total motor temperature rating of 130°C (40°C ambient temp. + 80°C motor temp. rise + 10°C hot spot temp.). A NEMA Class F rating allows for a motor temperature rise of 105°C yielding a total motor temperature rating of 155°C. A NEMA Class F ratings allows for a 125°C motor temperature rise for a total motor temperature rating of 180°C. Additionally, NEMA allows the motor temperature rating limit to increase by 10°C for motors rated with a 1.15 service factor. TOSHIBA EQP motors provided for FANWALL systems incorporate Class F rated wire and Class F rated varnish as part of the insulation system.

Testing: Through manufacturers testing the TOSHIBA EQP motors are suitable for continuous duty in ambient temperatures from -25°C to 40°C in 100% humidity. The increased airflow over the motor fins, produced by the Coplanar Silencer® design in FANWALL systems, helps to keep the motor windings cooler and well below a Class F 180°C [356°F] rating. This unique cooling design makes available a significantly greater number of motor horsepower increments that can be selected to more closely match brake horsepower requirements. These incremental horsepower motors carry a full factory warranty, maintain a 1.15 service factor, are constructed for 120 Hz continuous operation, and are readily available from Nortek Air Solutions LLC stock inventory.

Frame mounting dimensions are industry standard for readily available replacement. The motors utilize an insulation system which meets the requirements of NEMA MG1 Part 31.4.4.2 for VFD use, and is considered inverter ready. Cast iron motor construction is rigid, durable and quiet. The motors have double sealed hybrid ceramic ball bearings that exceed a L-10 life of 150,000 hours in direct coupled applications. These hybrid ceramic bearings prevent electrical arcing that damages traditional bearings.

The TOSHIBA motors are in accordance with the latest revisions of the applicable sections of the NEMA MG1, NEC, CSA, UL, IEEE and CE standards. The nominal efficiency is stamped on the nameplate of the motor. The nameplate and fasteners surpass a 720 hour salt spray (fog) test for corrosion resistance per ASTM B117/IEEE 841 A.4.

All efficiency testing and labeling are done in accordance with the NEMA MG1 standard. The motors are dynamically balanced to 0.10 inches per second peak velocity and vibration testing is per NEMA MG1 Part 7. All motors are painted with a corrosion-resistance, severe duty, alkyd resin primer paint with an acrylic enamel finish.



# TOSHIBA EQP Global™ SD

With Hybrid Ceramic Bearings (575 Volt)  
Efficiency, Quality & Performance (EQP) 1800 RPM MOTORS

| 1800 RPM Motors |          |                |                      |       |      |      |     |         |
|-----------------|----------|----------------|----------------------|-------|------|------|-----|---------|
|                 |          |                |                      |       |      | FLA  |     |         |
| HP              | Part #   | Toshiba Spec # | RPM @ 60Hz with slip | FRAME | EFF  | 575V | LBS | Max RPM |
| 1               | 200.0805 | 405001L1ZVS210 | 1760                 | 143T  | 85.5 | 1.3  | 53  | 3600    |
| 1.5             |          |                | 1740                 |       | 84.0 | 1.7  |     |         |
| 2               | 200.0806 | 405002L1ZVS210 | 1750                 | 145T  | 86.5 | 2.4  | 58  | 3600    |
| 2.5             |          |                | 1730                 |       | 84.5 | 2.8  |     | 2700    |
| 3               | 200.0807 | 405003L1ZVS210 | 1760                 | 182T  | 89.5 | 3.2  | 92  | 3600    |
| 3.5             |          |                | 1750                 |       | 89.5 | 3.5  |     | 3150    |
| 4               |          |                | 1740                 |       | 89.5 | 3.9  |     | 2700    |
| 4.5             |          |                | 1735                 |       | 87.5 | 4.5  |     | 2400    |
| 5               | 200.0808 | 405005L1ZVS210 | 1750                 | 184T  | 89.5 | 5.2  | 104 | 3600    |
| 5.5             |          |                | 1750                 |       | 88.5 | 5.6  |     | 3300    |
| 6               |          |                | 1740                 |       | 87.5 | 6.0  |     | 3000    |
| 6.5             |          |                | 1735                 |       | 87.5 | 6.6  |     | 2850    |
| 7               |          |                | 1730                 |       | 86.5 | 7.1  |     | 2700    |
| 7.5             | 200.0809 | 405Y75L1ZVS210 | 1760                 | 213T  | 91.7 | 7.8  | 175 | 3600    |
| 8               |          |                | 1760                 |       | 91.0 | 8.2  |     | 3450    |
| 8.5             |          |                | 1760                 |       | 91.0 | 8.6  |     | 3300    |
| 9               |          |                | 1760                 |       | 91.0 | 9.0  |     | 3000    |
| 9.5             |          |                | 1760                 |       | 91.0 | 9.5  |     | 2850    |
| 10              | 200.0810 | 405010L1ZVS210 | 1760                 | 215T  | 91.7 | 10.4 | 190 | 3600    |
| 10.5            |          |                | 1760                 |       | 91.0 | 10.6 |     | 3000    |
| 11              |          |                | 1760                 |       | 91.0 | 11.1 |     | 2850    |
| 11.5            |          |                | 1760                 |       | 91.0 | 11.6 |     | 2700    |
| 12              |          |                | 1760                 |       | 90.2 | 12.1 |     | 2250    |
| 15              | 200.0811 | 405015L1ZVS210 | 1770                 | 254T  | 92.4 | 15.2 | 289 | 3600    |
| 20              | 200.0812 | 405020L1ZVS210 | 1770                 | 256T  | 93.0 | 20.0 | 331 | 2550    |

# TOSHIBA EQP Global™ SD With Hybrid Ceramic Bearings (575 Volt)

Efficiency, Quality & Performance (EQP) 3600 RPM MOTORS

| 3600 RPM Motors |          |                |                      |       |      |      |     |         |
|-----------------|----------|----------------|----------------------|-------|------|------|-----|---------|
|                 |          |                |                      |       |      | FLA  |     |         |
| HP              | Part #   | Toshiba Spec # | RPM @ 60Hz with slip | FRAME | EFF  | 575V | LBS | Max RPM |
| 1               | 200.0813 | 205Y15L1ZVS210 | 3525                 | 143T  | 82.5 | 1.2  | 50  | 4800    |
| 1.5             |          |                | 3490                 |       | 84.0 | 1.6  |     |         |
| 2               | 200.0814 | 205002L1ZVS210 | 3490                 | 145T  | 85.5 | 2.1  | 53  | 4800    |
| 2.5             |          |                | 3455                 |       | 84.0 | 2.5  |     |         |
| 3               | 200.0815 | 205003L1ZVS210 | 3500                 | 182T  | 86.5 | 3.0  | 80  | 4800    |
| 3.5             |          |                | 3485                 |       | 85.5 | 3.4  |     |         |
| 4               |          |                | 3465                 |       | 84.0 | 3.9  |     |         |
| 4.5             |          |                | 3440                 |       | 82.5 | 4.4  |     |         |
| 5               | 200.0816 | 205005L1ZVS210 | 3500                 | 184T  | 88.5 | 4.6  | 95  | 4800    |
| 5.5             |          |                | 3475                 |       | 87.5 | 5.1  |     |         |
| 6               |          |                | 3465                 |       | 86.5 | 5.6  |     |         |
| 6.5             |          |                | 3455                 |       | 86.5 | 6.1  |     |         |
| 7               |          |                | 3440                 |       | 85.5 | 6.6  |     |         |
| 7.5             | 200.0817 | 205Y75L1ZVS210 | 3500                 | 213T  | 89.5 | 7.2  | 159 | 4800    |
| 8               |          |                | 3490                 |       | 89.5 | 7.5  |     |         |
| 8.5             |          |                | 3485                 |       | 89.5 | 8.0  |     |         |
| 9               |          |                | 3475                 |       | 88.5 | 8.5  |     |         |
| 9.5             |          |                | 3470                 |       | 88.5 | 9.0  |     |         |
| 10              | 200.0818 | 205010L1ZVS210 | 3510                 | 215T  | 90.2 | 9.4  | 177 | 4800    |
| 10.5            |          |                | 3505                 |       | 90.2 | 9.7  |     |         |
| 11              |          |                | 3500                 |       | 90.2 | 10.1 |     |         |
| 11.5            |          |                | 3495                 |       | 90.2 | 10.6 |     |         |
| 12              |          |                | 3490                 |       | 90.2 | 11.1 |     |         |
| 15              | 200.0819 | 205015L1ZVS210 | 3530                 | 254T  | 91.0 | 14.4 | 274 | 4800    |
| 20              | 200.0820 | 205020L1ZVS210 | 3520                 | 256T  | 91.0 | 19.2 | 292 | 4800    |

Specifications and illustrations subject to change  
without notice and without incurring obligation.



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