



UNITS: INCHES

| FRAME SIZE | MOTOR DIMENSIONS |             |      |       |                 |       |       |       |          |       | CONDUIT BOX |         |          |      |      |     |                |      |
|------------|------------------|-------------|------|-------|-----------------|-------|-------|-------|----------|-------|-------------|---------|----------|------|------|-----|----------------|------|
|            | A                | B           | C    | D     | G               | J     | K     | M     | O        | P     | T           | MA(MPT) | AB       | AC   | AE   | AF  | XL             | XN   |
| 5810USS    | 28.0             | 42.2        | 72.5 | 14.50 | 1.6             | 6.3   | 9.3   | 27.6  | 30.5     | 31.6  | 5.1         | 4.00    | 31.1     | 23.8 | 14.5 | 9.3 | 23.4           | 14.2 |
| 5810US     | 28.0             | 42.2        | 72.3 | 14.50 | 1.6             | 6.3   | 9.3   | 27.6  | 30.5     | 31.6  | 5.1         | 4.00    | 31.1     | 23.8 | 14.5 | 9.3 | 23.4           | 14.2 |
| 5810UZ     | 28.0             | 42.2        | 77.6 | 14.50 | 1.6             | 6.3   | 9.3   | 27.6  | 30.5     | 31.6  | 5.1         | 4.00    | 31.1     | 23.8 | 14.5 | 9.3 | 23.4           | 14.2 |
| FRAME SIZE | MOUNTING         |             |      |       | SHAFT EXTENSION |       |       |       | KEY SEAT |       |             |         | BEARINGS |      |      |     | MAXIMUM WEIGHT |      |
|            | E                | ZF          | H    | BA    | N-W             | V     | U     | R     | S        | ES    | LS          | OS      |          |      |      |     |                |      |
| 5810USS    | 11.50            | 36.00/32.00 | 1.2  | 10.00 | 6.75            | 6.50  | 2.375 | 2.021 | 0.625    | 5.00  | 6313C3      | NU313C3 | 7800     | lbs. |      |     |                |      |
| 5810US     | 11.50            | 36.00/32.00 | 1.2  | 10.00 | 6.25            | 6.19  | 3.625 | 3.134 | 0.875    | 5.00  | 6320C3      | 6320C3  | 7800     | lbs. |      |     |                |      |
| 5810UZ     | 11.50            | 36.00/32.00 | 1.2  | 10.00 | 11.62           | 11.38 | 5.250 | 4.550 | 1.250    | 10.00 | NU328C3     | 6320C3  | 7800     | lbs. |      |     |                |      |

CUSTOMER: \_\_\_\_\_ MOTOR MODEL NO.: \_\_\_\_\_ TAG NO's: \_\_\_\_\_

P.O. NO.: \_\_\_\_\_ HP: \_\_\_\_\_ VOLTAGE: \_\_\_\_\_ RPM(SYN.): \_\_\_\_\_ HZ: \_\_\_\_\_  
 FRAME SIZE: \_\_\_\_\_ PRODUCT TYPE: IEF3 EFP III, EFACT, & HIGH EFFICIENCY  
 COMMENTS: \_\_\_\_\_

PER: \_\_\_\_\_ DATE: \_\_\_\_\_

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- NOTES:
1. DIMENSION V REPRESENTS LENGTH OF STRAIGHT PART OF SHAFT
  2. MAIN CONDUIT BOX MAY BE ROTATED IN 90° INCREMENTS
  3. KEY DIMENSIONS EQUAL S x S x 10.00 FOR US AND S x S x 5.00 FOR US (MOTOR SUPPLIED WITH KEY)
  4. MOTOR WEIGHT SHOWN IS MAXIMUM HORSEPOWER IN FRAME
  5. THIS DIMENSION EQUALS 2F FOR 5809US/UZ MOUNTING
  6. STANDARD PRODUCT USE BI-DIRECTIONAL FAN, OPPOSITE ROTATION AVAILABLE ONLY BY CONNECTION CHANGE

STANDARD (NO AUX. BOXES)  
 RTD AUX. BOX  
 SPACE HEATER AUX. BOX  
 BEARING RTD's

**TOSHIBA**  
 TOSHIBA INTERNATIONAL CORPORATION  
 TOTALLY-ENCLOSED FAN-COOLED  
 HORIZONTAL FOOT-MOUNTED  
 3 PHASE INDUCTION MOTOR  
 F1 ASSEMBLY

**XT SERIES**  
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**TYPICAL MOTOR PERFORMANCE DATA**

Model: F4506FLG3OMH

| HP        | kW  | Pole       | FL RPM | Frame  | Voltage        | Hz          | Phase    | FL Amps      |
|-----------|-----|------------|--------|--------|----------------|-------------|----------|--------------|
| 450       | 336 | 6          | 1190   | 5810US | 575            | 60          | 3        | 426          |
| Enclosure | IP  | Ins. Class | S.F.   | Duty   | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC      | 54  | F          | 1.15   | CONT   | 95.4           | -           |          | 40 C         |

| Load         | HP     | kW    | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|--------|-------|---------|----------------|------------------|
| Full Load    | 450.00 | 335.6 | 425     | 95.6           | 82.8             |
| ¾ Load       | 337.50 | 251.7 | 328     | 95.3           | 80.9             |
| ½ Load       | 225.00 | 167.8 | 239     | 94.3           | 74.7             |
| ¼ Load       | 112.50 | 83.9  | 148     | 91.1           | 62.4             |
| No Load      |        |       | 136.0   |                | 3.5              |
| Locked Rotor |        |       | 2575    |                | 24.7             |

| Torque               |                         |                    |                       | Rotor wk <sup>2</sup><br>Inertia<br>(lb-ft <sup>2</sup> ) |
|----------------------|-------------------------|--------------------|-----------------------|---|
| Full Load<br>(lb-ft) | Locked Rotor<br>(% FLT) | Pull Up<br>(% FLT) | Break Down<br>(% FLT) |   |
| 1986                 | 160                     | 120                | 210                   | 386.77  |

| Safe Stall Time(s) |     | Sound Pressure<br>dB(A) @ 1M | Bearings* |        | Approx. Motor Weight<br>(lbs) |
|--------------------|-----|------------------------------|-----------|--------|-------------------------------|
| Cold               | Hot |                              | DE        | NDE    |                               |
| 27                 | 9   | -                            | 6320C3    | 6320C3 |                               |

\*Bearings are the only recommended spare part(s).

**Motor Options:**  
Product Family:EQP Global SD  
Mounting:Footed,Shaft:US Shaft

|             |  |
|-------------|--|
| Customer    |  |
| Customer PO |  |
| Sales Order |  |
| Project #   |  |

Tag:

All characteristics are average expected values.

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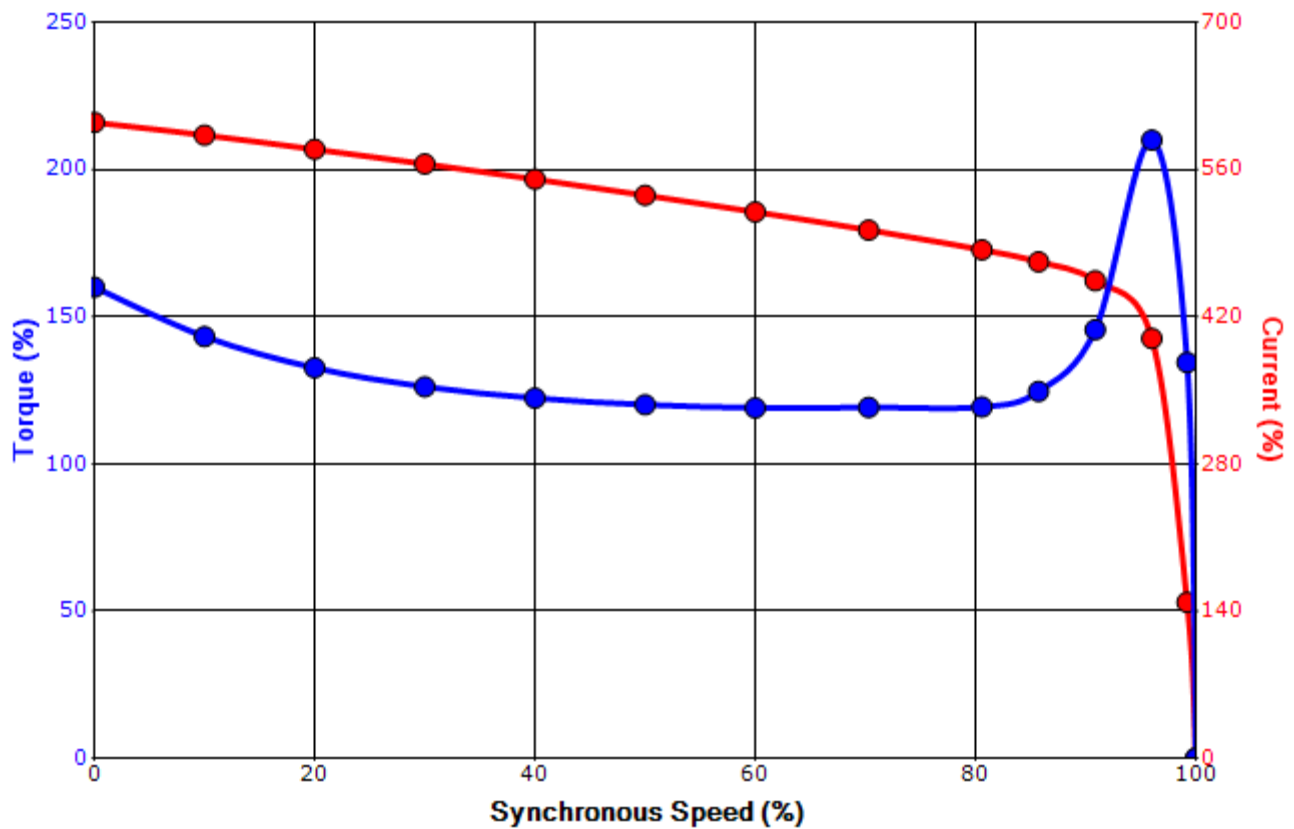
|             |           |                  |             |             |               |
|-------------|-----------|------------------|-------------|-------------|---------------|
| Engineering | zxie      | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 0 |
| Engr. Date  | 6/18/2021 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

**SPEED TORQUE/CURRENT CURVE**

Model: F4506FLG30MH

|                   |   |                   |                  |             |                |             |          |                |
|-------------------|---|-------------------|------------------|-------------|----------------|-------------|----------|----------------|
| HP                | kW  | Pole              | FL RPM           | Frame       | Voltage        | Hz          | Phase    | FL Amps        |
| 450               | 336   | 6                 | 1190             | 5810US      | 575            | 60          | 3        | 426            |
| Enclosure         | IP  | Ins. Class        | S.F.             | Duty        | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C)   |
| TEFC              | 54  | F                 | 1.15             | CONT        | 95.4           | -           |          | 40 C           |
| Locked Rotor Amps | Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> ) | Torque            |                  |             |                |             |          | Break Down (%) |
|                   |   | Full Load (lb-ft) | Locked Rotor (%) | Pull Up (%) |                |             |          |                |
| 2575              | 386.77  | 1986              | 160              | 120         |                |             | 210      |                |

**Design Values**



|             |  |  |     |
|-------------|--|--|-----|
| Customer    |  | wk <sup>2</sup> Load Inertia (lb-ft <sup>2</sup> ) | -   |
| Customer PO |  | Load Type  | -   |
| Sales Order |  | Voltage (%)  | 100 |
| Project #   |  | Accel. Time  | -   |

Tag:

All characteristics are average expected values.

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|             |           |                  |             |             |               |
|-------------|-----------|------------------|-------------|-------------|---------------|
| Engineering | zxie      | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1121 / 0 |
| Engr. Date  | 6/18/2021 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

### Motor Connection Diagram 3 Leads - Delta Connection



Switch L1 and L2 to reverse rotation

Each lead may consist of more than one cable.  
If multiple cables represent a single lead, each one  
of them will be labeled with the appropriate lead number.