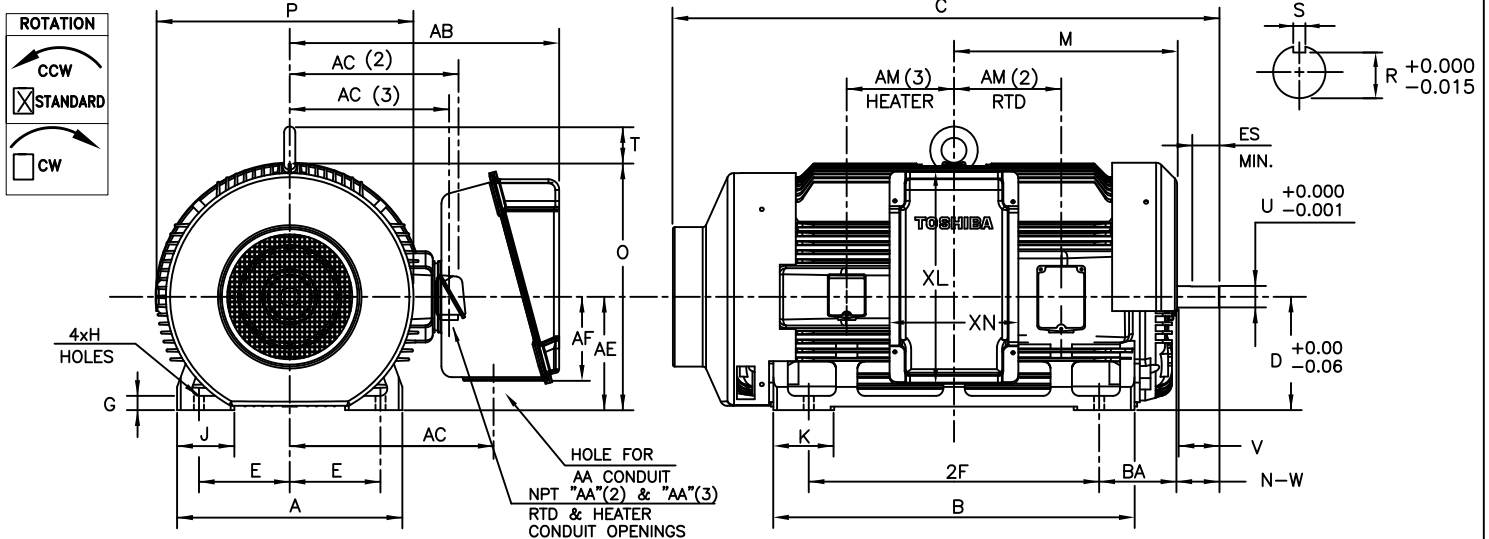


**TOSHIBA/HOUSTON**

**TOTALLY-ENCLOSED FAN-COOLED  
HORIZONTAL FOOT-MOUNTED (O.D.E ROLLER BRG)**

**Fr. 5010USS  
2-POLE  
350-500Hp**



| FRAME SIZE | MOUNTING |      |      |      | CONDUIT BOX |      |      |      |     |      |      |
|------------|----------|------|------|------|-------------|------|------|------|-----|------|------|
|            | E        | 2F   | H    | BA   | AA[NPT]     | AB   | AC   | AE   | AF  | XL   | XN   |
| 5010USS    | 10.00    | 32.0 | 1.12 | 8.50 | 4.00        | 29.7 | 22.5 | 12.5 | 9.3 | 23.4 | 14.2 |

| FRAME SIZE | MOTOR DIMENSIONS |      |      |       |     |     |     |      |      |      |     |
|------------|------------------|------|------|-------|-----|-----|-----|------|------|------|-----|
|            | A                | B    | C    | D     | G   | J   | K   | M    | O    | P    | T   |
| 5010USS    | 24.8             | 39.8 | 60.2 | 12.50 | 1.6 | 6.3 | 6.7 | 24.6 | 27.2 | 28.4 | 4.3 |

| FRAME SIZE | SHAFT EXTENSION |      |       | KEY SEAT |       |      | BEARINGS |         | MAXIMUM WEIGHT |
|------------|-----------------|------|-------|----------|-------|------|----------|---------|----------------|
|            | N-W             | V    | U     | R        | S     | ES   | LS       | OS      |                |
| 5010USS    | 4.75            | 4.50 | 2.375 | 2.021    | 0.625 | 3.03 | 6313C3   | NU313C3 | 4637 lbs.      |

| FRAME SIZE | RTD AUX. BOX |       |      |       |       | HEATER AUX. BOX |       |      |       |       |
|------------|--------------|-------|------|-------|-------|-----------------|-------|------|-------|-------|
|            | AA(2)        | AC(2) | AE   | AF(2) | AM(2) | AA(3)           | AC(3) | AE   | AF(3) | AM(3) |
| 5010USS    | 1.5          | 15.58 | 12.5 | 5.1   | 11.8  | 0.75            | 11.3  | 12.5 | 2.56  | 11.81 |

### MOTOR WITH

- ☐ AUX. RTD BOX  
☐ AUX. HEATER BOX  
☐ BOTH AUX. BOXES

ALL DATA SUBJECT TO CHANGE WITHOUT NOTICE.  
FOR CONSTRUCTION USE ONLY CERTIFIED DATA.

**CERTIFIED DATA**

### NOTES:

1. DIMENSION V REPRESENTS LENGTH OF STRAIGHT PART OF SHAFT.
2. CONDUIT BOX MAY BE ROTATED IN 90° INCREMENTS AND MAY BE MOUNTED ON OPPOSITE SIDE ON SPECIAL ORDER.
3. KEY DIMENSIONS EQUAL S x S x 3.00 (MOTOR SUPPLIED WITH KEY)
4. MOTOR WEIGHT SHOWN IS MAXIMUM HORSEPOWER IN FRAME.
5. STANDARD UNITS USE UNI-DIRECTIONAL FAN. OPPOSITE ROTATION AVAILABLE ONLY BY FAN AND CONNECTION CHANGE.

CUSTOMER: \_\_\_\_\_ P.O. NO.: \_\_\_\_\_ TAG NO.: \_\_\_\_\_

MOTOR MODEL NO.: \_\_\_\_\_ TOSHIBA FILE NO.: \_\_\_\_\_

HP: \_\_\_\_\_ RPM (SYN.): \_\_\_\_\_ VOLTAGE: \_\_\_\_\_ Hz: \_\_\_\_\_

FRAME SIZE: \_\_\_\_\_ LOG NO.: \_\_\_\_\_ LOG REV. LEVEL: \_\_\_\_\_

REMARKS: \_\_\_\_\_

PER: \_\_\_\_\_ ISSUE DATE: \_\_\_\_\_ SUPERSEDES: \_\_\_\_\_

## TYPICAL MOTOR PERFORMANCE DATA

Model: B4003FLG8BMH

| HP        | kW  | Pole       | FL RPM | Frame   | Voltage        | Hz          | Phase    | FL Amps      |
|-----------|-----|------------|--------|---------|----------------|-------------|----------|--------------|
| 400       | 298 | 2          | 3580   | 5010USS | 460            | 60          | 3        | 438          |
| Enclosure | IP  | Ins. Class | S.F.   | Duty    | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC      | 54  | F          | 1.15   | CONT    | 95.8           | B           | G        | 40 C         |

| Load         | HP     | kW    | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|--------|-------|---------|----------------|------------------|
| Full Load    | 400    | 298.3 | 438.0   | 96.0           | 89.1             |
| ¾ Load       | 300.00 | 223.7 | 329.4   | 95.9           | 87.7             |
| ½ Load       | 200.00 | 149.1 | 230.0   | 95.2           | 84.0             |
| ¼ Load       | 100.00 | 74.6  | 139.2   | 88.3           | 76.2             |
| No Load      |        |       | 87.0    |                |                  |
| Locked Rotor |        |       | 2900.00 |                |                  |

| Torque            |                      |                 |                    | Rotor wk² Inertia (lb-ft²) |
|-------------------|----------------------|-----------------|--------------------|----------------------------|
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) |                            |
| 587               | 200                  | 130             | 210                | 129.14                     |

| Safe Stall Time(s) |     | Sound Pressure dB(A) @ 1M | Bearings* |         | Approx. Motor Weight (lbs) |
|--------------------|-----|---------------------------|-----------|---------|----------------------------|
| Cold               | Hot |                           | DE        | NDE     |                            |
| 14.1               | 3   | -                         | 6313C3    | NU313C3 |                            |

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

### Motor Options:

Product Family:EQPIII

Mounting:Footed,Shaft:USS Shaft

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

Tag:

All characteristics are average expected values.

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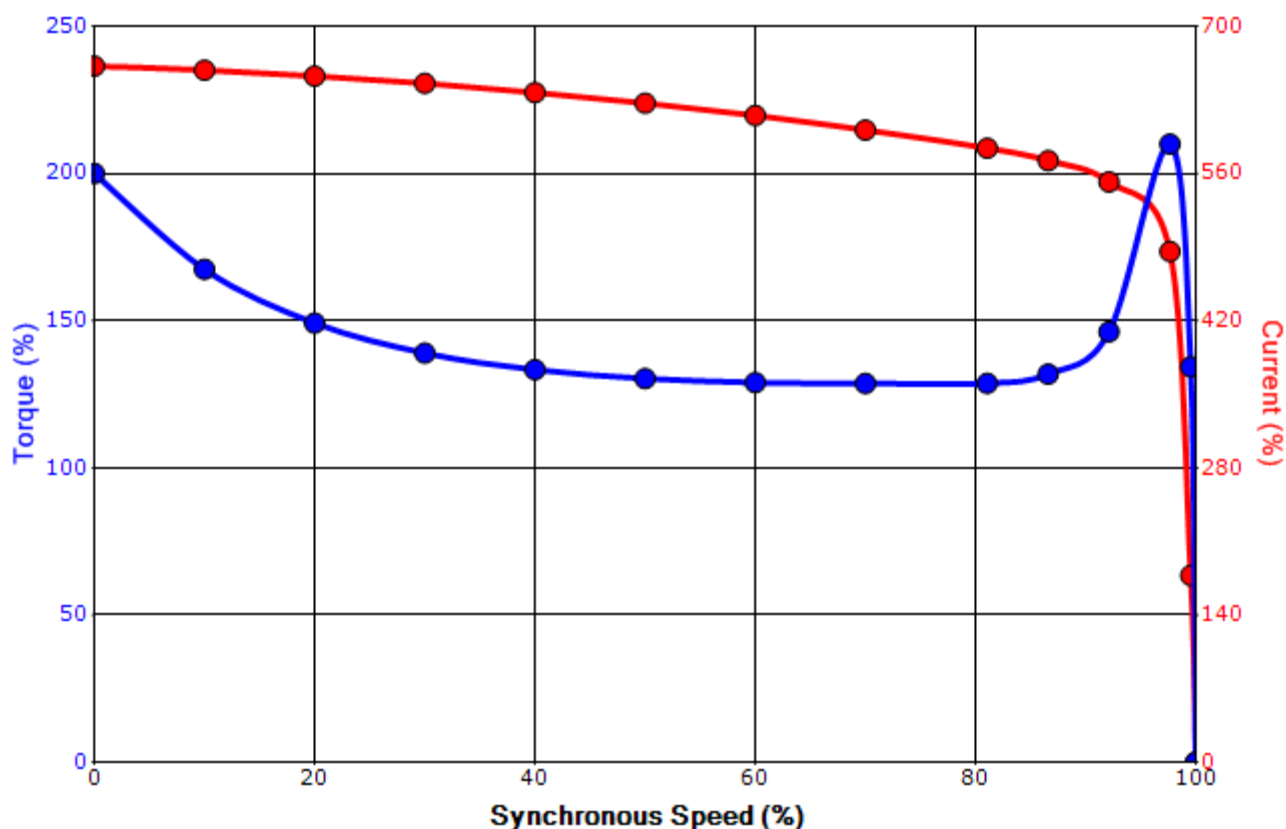
|             |           |                  |             |             |               |
|-------------|-----------|------------------|-------------|-------------|---------------|
| Engineering | amills    | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 0 |
| Engr. Date  | 2/14/2012 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

## SPEED TORQUE/CURRENT CURVE

Model: B4003FLG8BMH

| HP                | kW                                                  | Pole              | FL RPM           | Frame       | Voltage        | Hz             | Phase    | FL Amps      |
|-------------------|-----------------------------------------------------|-------------------|------------------|-------------|----------------|----------------|----------|--------------|
| 400               | 298                                                 | 2                 | 3580             | 5010USS     | 460            | 60             | 3        | 438          |
| Enclosure         | IP                                                  | Ins. Class        | S.F.             | Duty        | NEMA Nom. Eff. | NEMA Design    | kVA Code | Ambient (°C) |
| TEFC              | 54                                                  | F                 | 1.15             | CONT        | 95.8           | B              | G        | 40 C         |
| Locked Rotor Amps | Rotor wk <sup>2</sup> Inertia (lb-ft <sup>2</sup> ) | Torque            |                  |             |                |                |          |              |
|                   |                                                     | Full Load (lb-ft) | Locked Rotor (%) | Pull Up (%) |                | Break Down (%) |          |              |
| 2900.00           | 129.14                                              | 587               | 200              | 130         |                | 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 | amills    | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1121 / 0 |
| Engr. Date  | 2/14/2012 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

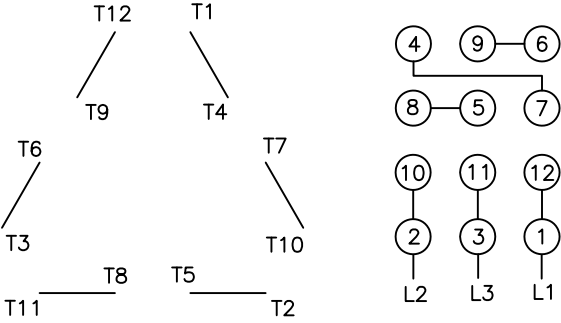
**Motor Connection Diagrams**  
12 Leads

Across-the-Line Starting / Running Connections

Low Voltage Delta



High Voltage Delta



Switch L1 and L2 to reverse rotation

Suitable for Wye-Delta Starting and Limited Part-Winding-Starting.  
Please Contact Toshiba International for specific connections.