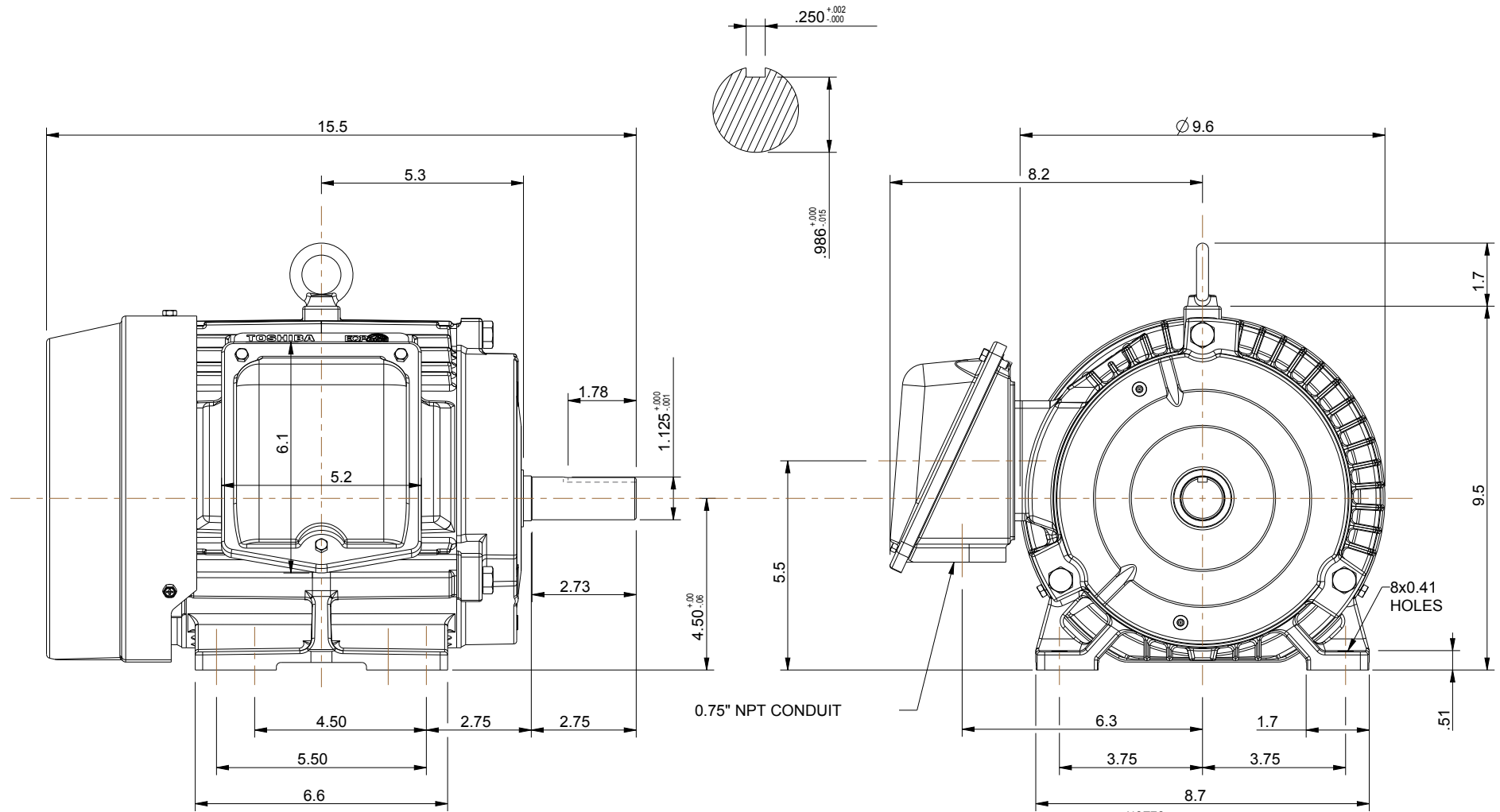




#### NOTES:

1. MAIN CONDUIT BOX MAY BE ROTATED IN 90° INCREMENTS
2. STANDARD PRODUCT USE BI-DIRECTIONAL FAN. OPPOSITE ROTATION AVAILABLE ONLY BY CONNECTION CHANGE.
3. KEY DIMENSIONS EQUAL (MOTOR SUPPLIED WITH KEY)

0.250" x 0.250" x 1.75"

UNITS: INCHES

TOSHIBA RESERVES THE RIGHT TO MAKE CHANGES OF TECHNICAL IMPROVEMENT WITHOUT NOTICE. DO NOT USE FOR CONSTRUCTION, INSTALLATION, OR APPLICATION PURPOSES UNLESS THE DRAWING IS CERTIFIED.

## 180T TEFC FRAME F1 ASSEMBLY

MDSL001-02

# TOSHIBA

TOSHIBA INTERNATIONAL CORPORATION

#### TOLERANCES

|       |       |
|-------|-------|
| .X    | .1    |
| .XX   | .03   |
| .XXX  | .005  |
| .XXXX | .0005 |

#### MAXIMUM MOTOR WEIGHT

97 lbs.  
44 kgs.

| NO | REVISION                              | DRAWN BY  | DATE     | CHECK |
|----|---------------------------------------|-----------|----------|-------|
| 2  | CHANGE "U" DIMENSION (OVERRIDE VALUE) | M. O'DOWD | 07/12/13 | JR    |
| 1  | ADDED KEY DIMENSIONS                  | S. CLANCY | 08/08/12 | JR    |
| 0  | FIRST ISSUE                           | N. MOMIN  | 09/02/10 | JR    |

**EQP** Global SD  
**XT SERIES**

DRAWN BY: N. MOMIN  
CHECK BY: J. RUSSELL  
APPROVED BY:

www.toshiba.com/ind

## TYPICAL MOTOR PERFORMANCE DATA

Model: 0052SDSR41A-P

| HP        | kW  | Pole       | FL RPM | Frame | Voltage        | Hz          | Phase    | FL Amps      |
|-----------|-----|------------|--------|-------|----------------|-------------|----------|--------------|
| 5         | 3.7 | 2          | 3500   | 184T  | 230/460        | 60          | 3        | 12/6         |
| Enclosure | IP  | Ins. Class | S.F.   | Duty  | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC      | 55  | F          | 1.15   | CONT  | 88.5           | B           | J        | 40 C         |

| Load         | HP   | kW  | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|------|-----|---------|----------------|------------------|
| Full Load    | 5    | 3.7 | 5.8     | 88.7           | 91.8             |
| ¾ Load       | 3.75 | 2.8 | 4.4     | 88.8           | 90.3             |
| ½ Load       | 2.50 | 1.9 | 3.1     | 87.5           | 85.7             |
| ¼ Load       | 1.25 | 0.9 | 2.2     | 81.4           | 65.1             |
| No Load      |      |     | 1.4     |                | 10.5             |
| Locked Rotor |      |     | 46.00   |                | 56.9             |

| Torque            |                      |                 |                    | Rotor wk² Inertia (lb-ft²) |
|-------------------|----------------------|-----------------|--------------------|----------------------------|
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) |                            |
| 7.5               | 215                  | 185             | 340                | 0.20                       |

| Safe Stall Time(s) |     | Sound Pressure dB(A) @ 1M | Bearings* |          | Approx. Motor Weight (lbs) |
|--------------------|-----|---------------------------|-----------|----------|----------------------------|
| Cold               | Hot |                           | DE        | NDE      |                            |
| 35                 | 15  | -                         | 6306ZZC3  | 6306ZZC3 |                            |

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

### Motor Options:

Product Family:EQP Global SD

Mounting:Footed,Shaft:T Shaft

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

Tag:

All characteristics are average expected values.

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|             |           |                  |             |             |               |
|-------------|-----------|------------------|-------------|-------------|---------------|
| Engineering | mcampbell | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 0 |
| Engr. Date  | 2/27/2012 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

## TYPICAL MOTOR PERFORMANCE DATA

Model: 0052SDSR41A-P

| HP        | kW  | Pole       | FL RPM | Frame | Voltage        | Hz          | Phase    | FL Amps      |
|-----------|-----|------------|--------|-------|----------------|-------------|----------|--------------|
| 5         | 3.7 | 2          | 2860   | 184T  | 190/380        | 50          | 3        | 16/8         |
| Enclosure | IP  | Ins. Class | S.F.   | Duty  | NEMA Nom. Eff. | NEMA Design | kVA Code | Ambient (°C) |
| TEFC      | 55  | F          | 1.0    | CONT  | 85.5           | B           | J        | 40 C         |

| Load         | HP   | kW  | Amperes | Efficiency (%) | Power Factor (%) |
|--------------|------|-----|---------|----------------|------------------|
| Full Load    | 5    | 3.7 | 7.4     | 90.6           | 89.0             |
| ¾ Load       | 3.75 | 2.8 | 5.4     | 91.4           | 87.5             |
| ½ Load       | 2.50 | 1.9 | 3.8     | 91.0           | 83.1             |
| ¼ Load       | 1.25 | 0.9 | 2.4     | 80.3           | 72.0             |
| No Load      |      |     | 1.4     |                | 8.7              |
| Locked Rotor |      |     | 55.00   |                | 68.8             |

| Torque            |                      |                 |                    | Rotor wk² Inertia (lb-ft²) |
|-------------------|----------------------|-----------------|--------------------|----------------------------|
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) |                            |
| 9.18              | 180                  | 155             | 220                | 0.20                       |

| Safe Stall Time(s) |     | Sound Pressure dB(A) @ 1M | Bearings* |          | Approx. Motor Weight (lbs) |
|--------------------|-----|---------------------------|-----------|----------|----------------------------|
| Cold               | Hot |                           | DE        | NDE      |                            |
| 17                 | 4   | -                         | 6306ZZC3  | 6306ZZC3 |                            |

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

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

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

Tag:

All characteristics are average expected values.

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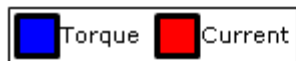
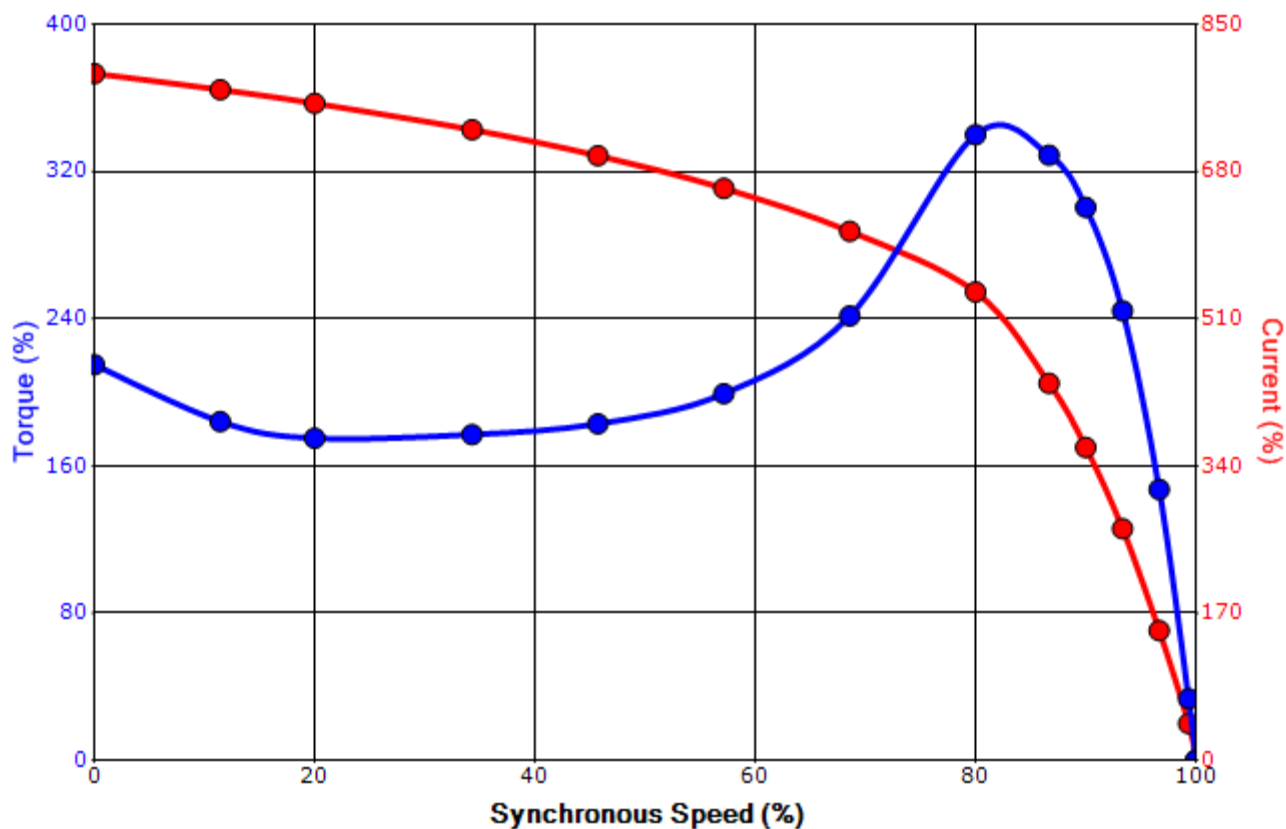
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|-------------|----------|------------------|-------------|-------------|---------------|
| Engineering | jhock    | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1119 / 0 |
| Engr. Date  | 4/8/2014 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

## SPEED TORQUE/CURRENT CURVE

Model: 0052SDSR41A-P

| HP                | kW                                                  | Pole              | FL RPM           | Frame       | Voltage        | Hz             | Phase    | FL Amps      |
|-------------------|-----------------------------------------------------|-------------------|------------------|-------------|----------------|----------------|----------|--------------|
| 5                 | 3.7                                                 | 2                 | 3500             | 184T        | 230/460        | 60             | 3        | 12/6         |
| Enclosure         | IP                                                  | Ins. Class        | S.F.             | Duty        | NEMA Nom. Eff. | NEMA Design    | kVA Code | Ambient (°C) |
| TEFC              | 55                                                  | F                 | 1.15             | CONT        | 88.5           | B              | J        | 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 (%) |          |              |
| 46.00             | 0.20                                                | 7.5               | 215              | 185         |                | 340            |          |              |

### 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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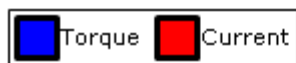
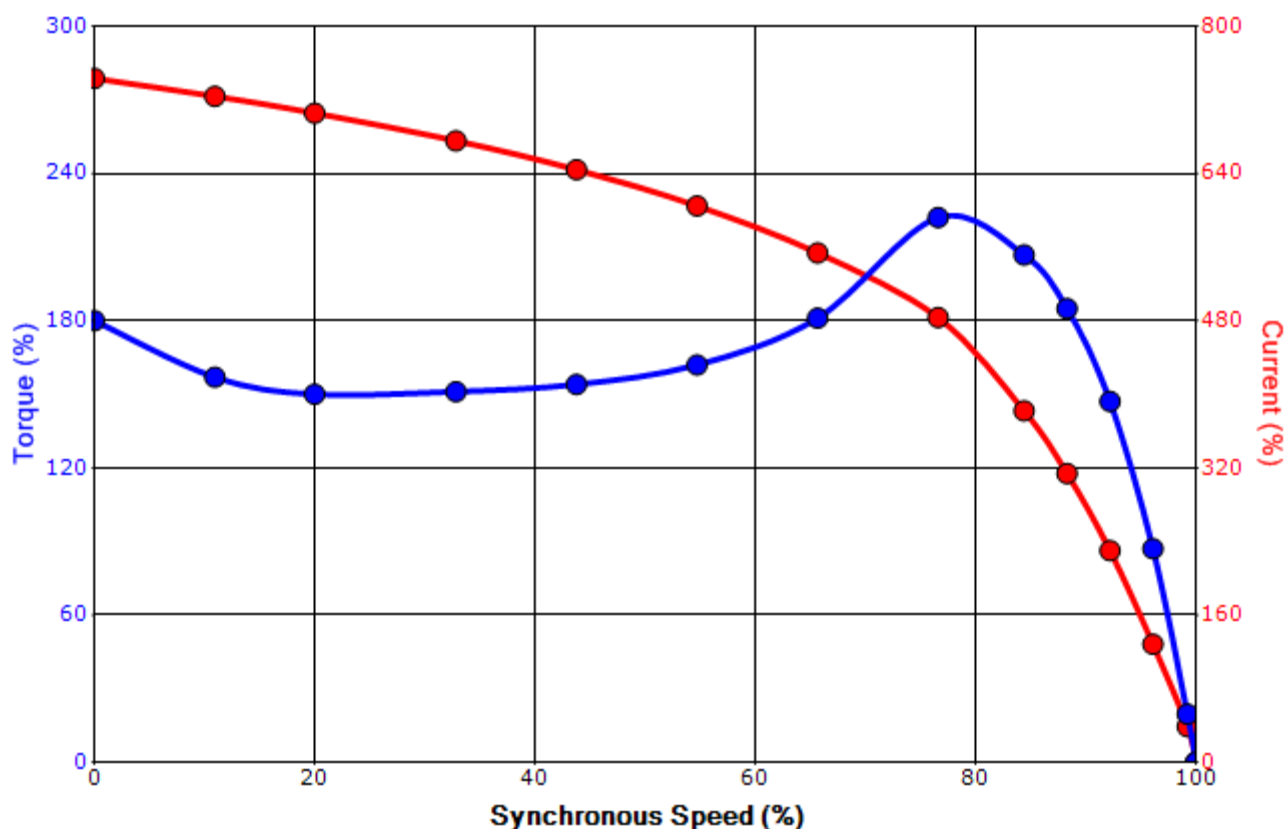
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|-------------|-----------|------------------|-------------|-------------|---------------|
| Engineering | mcampbell | Doc. Written By  | D. Suarez   | Doc.# / Rev | MPCF-1121 / 0 |
| Engr. Date  | 2/27/2012 | Doc. Approved By | M. Campbell | Doc. Issued | 6/8/2011      |

## SPEED TORQUE/CURRENT CURVE

Model: 0052SDSR41A-P

| HP                | kW                                                  | Pole              | FL RPM           | Frame       | Voltage        | Hz             | Phase    | FL Amps      |
|-------------------|-----------------------------------------------------|-------------------|------------------|-------------|----------------|----------------|----------|--------------|
| 5                 | 3.7                                                 | 2                 | 2860             | 184T        | 190/380        | 50             | 3        | 16/8         |
| Enclosure         | IP                                                  | Ins. Class        | S.F.             | Duty        | NEMA Nom. Eff. | NEMA Design    | kVA Code | Ambient (°C) |
| TEFC              | 55                                                  | F                 | 1.0              | CONT        | 85.5           | B              | J        | 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 (%) |          |              |
| 55.00             | 0.20                                                | 9.18              | 180              | 155         |                | 220            |          |              |

### 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.

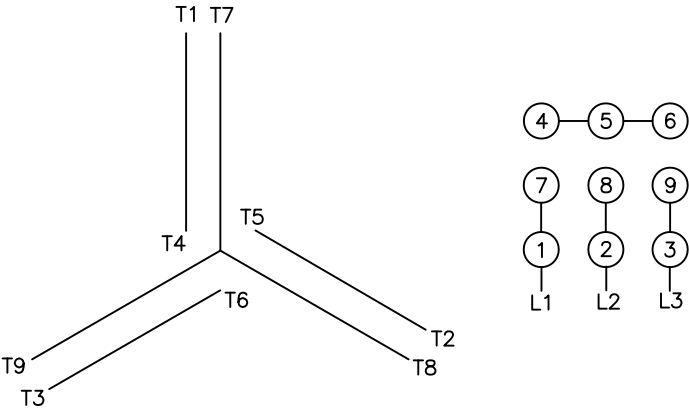
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|             |          |                  |             |             |               |
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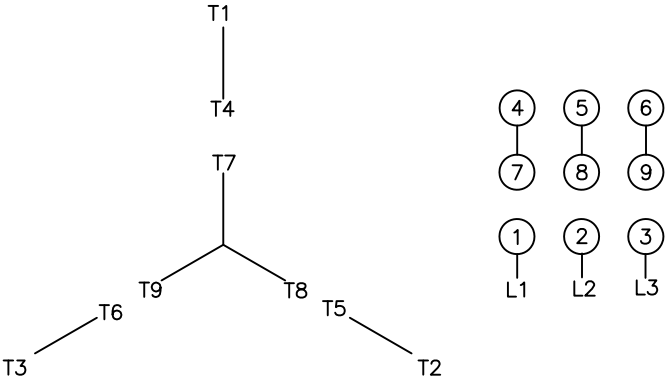
**Motor Connection Diagrams**  
9 Leads

Across-the-Line Starting / Running Connections

Low Voltage Wye



High Voltage Wye



Switch L1 and L2 to reverse rotation