

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 254TTDCA6076

Catalog No: GT0017

Globetrotter® General Purpose Motor, 7.50 & 5 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V,  
1200 & 1000 RPM, 254T Frame, DP



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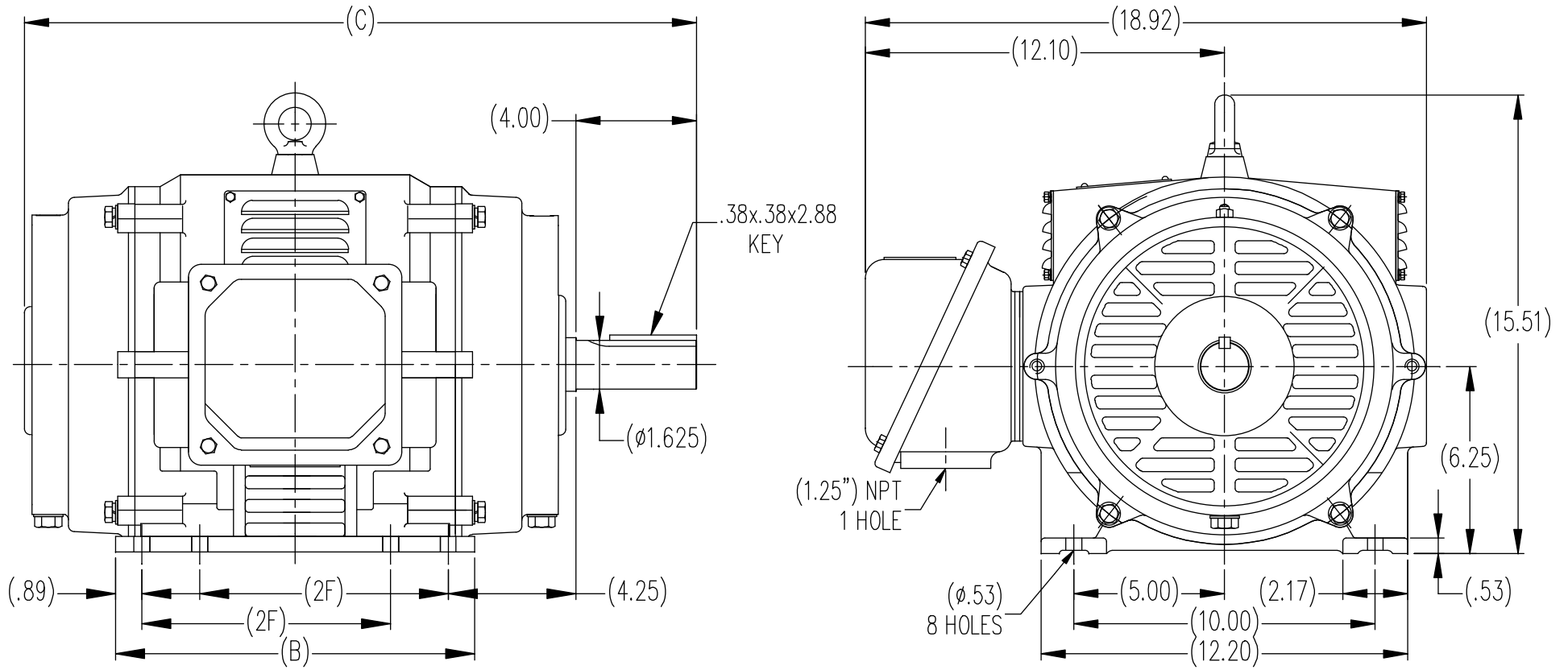
**RegalRexnord**

### Nameplate Specifications

|                        |                  |                            |                     |
|------------------------|------------------|----------------------------|---------------------|
| Phase                  | 3                | Output HP                  | 7.50 & 5 Hp         |
| Output KW              | 5.6 & 3.7 kW     | Voltage                    | 230/460 & 190/380 V |
| Speed                  | 1182 & 985 rpm   | Service Factor             | 1.15 & 1.15         |
| Frame                  | 254T             | Enclosure                  | Drip Proof          |
| Thermal Protection     | No Protection    | Efficiency                 | 90.2 & 88.5 %       |
| Ambient Temperature    | 40 °C            | Frequency                  | 60 & 50 Hz          |
| Current                | 21/10.5 & 18/9 A | Power Factor               | 73.5                |
| Duty                   | Continuous       | Insulation Class           | F                   |
| Design Code            | B                | KVA Code                   | G                   |
| Drive End Bearing Size | 6309             | Opp Drive End Bearing Size | 6208                |
| UL                     | Recognized       | CSA                        | Y                   |
| CE                     | Y                | IP Code                    | 22                  |
| Number of Speeds       | 1                |                            |                     |

### Technical Specifications

|                       |                              |                   |                  |
|-----------------------|------------------------------|-------------------|------------------|
| Electrical Type       | Squirrel Cage Inverter Rated | Starting Method   | Line Or Inverter |
| Poles                 | 6                            | Rotation          | Reversible       |
| Resistance Main       | 1.62 Ohms                    | Mounting          | Rigid Base       |
| Motor Orientation     | Horizontal                   | Drive End Bearing | Ball             |
| Opp Drive End Bearing | Ball                         | Frame Material    | Cast Iron        |
| Shaft Type            | T                            | Overall Length    | 22.64 in         |
| Shaft Diameter        | 1.625 in                     | Shaft Extension   | 4 in             |
| Assembly/Box Mounting | F1/F2 CAPABLE                |                   |                  |
| Connection Drawing    | A-EE7308K                    | Outline Drawing   | SS620237-254T    |



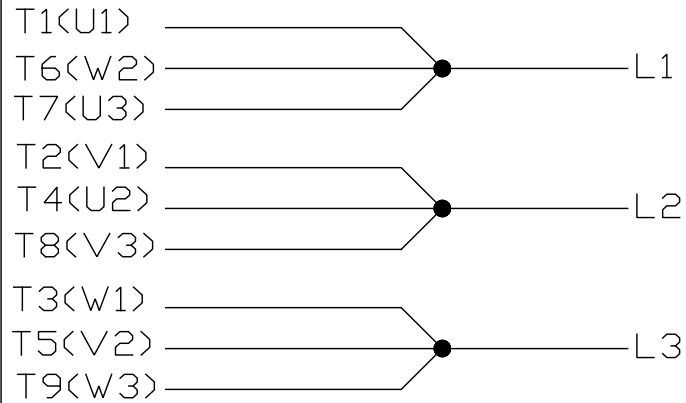
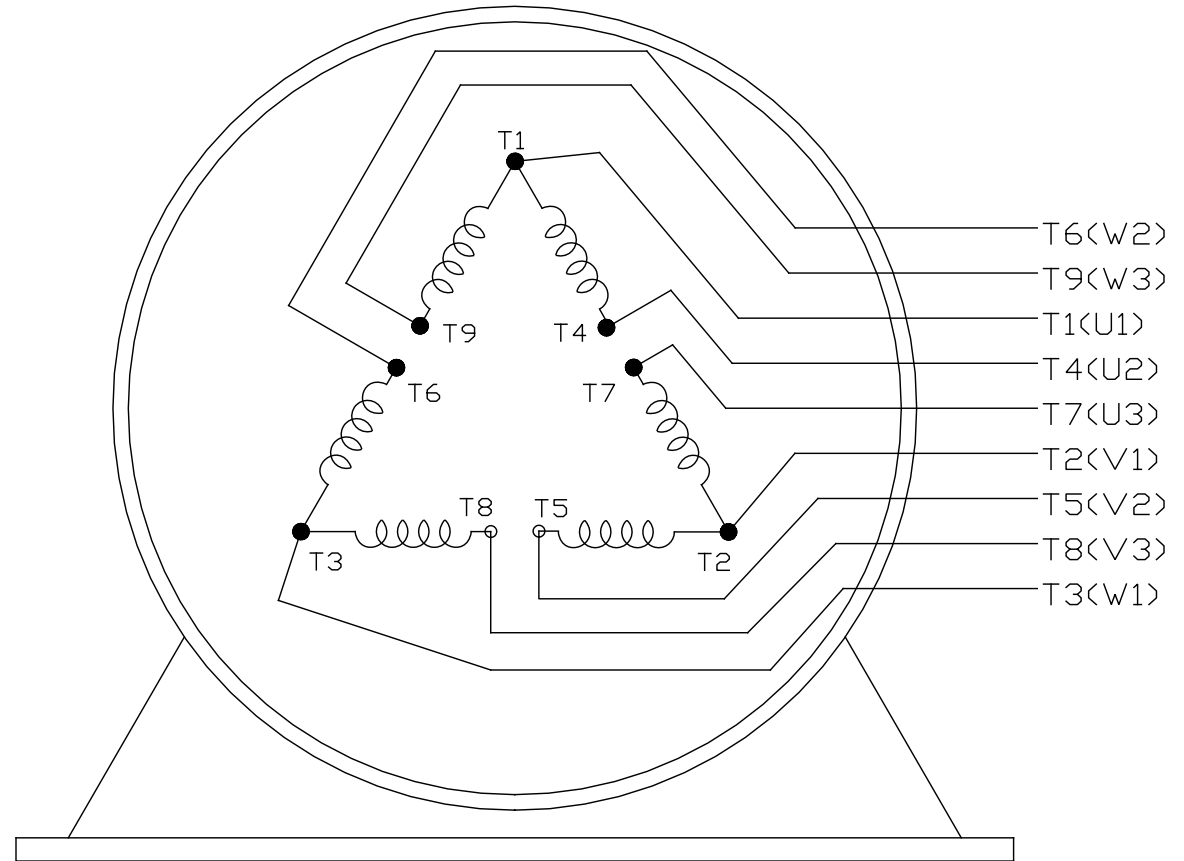
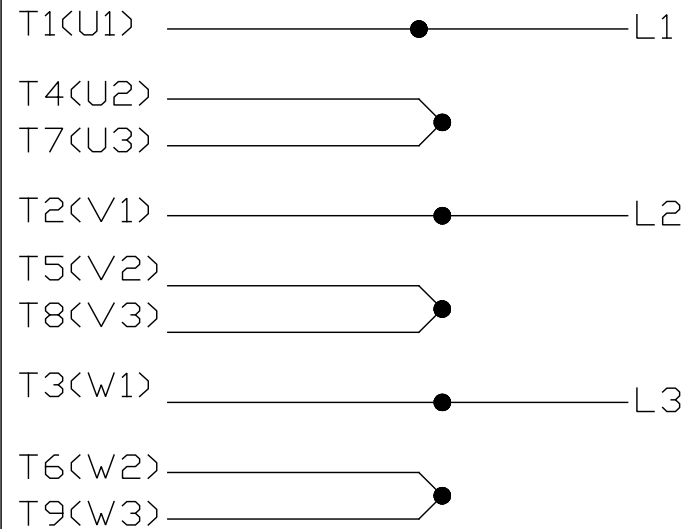
DIMENSIONS IN TABLE ARE CONSIDERED (REFERENCE)

(MAY NOT BE DRAWN TO SCALE)

|       |       |       |       |
|-------|-------|-------|-------|
| 254T  | 22.64 | 12.00 | 8.25  |
| 256T  | 24.22 | 13.59 | 10.00 |
| FRAME | C     | B     | 2F    |

|                                                                                                                                                                                                                                        |          |  |  |           |     |                                            |          |                                                       |                    |                      |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--|--|-----------|-----|--------------------------------------------|----------|-------------------------------------------------------|--------------------|----------------------|------|
|                                                                                                                                                                                                                                        |          |  |  |           |     | <div>TOLERANCES<br/>UNLESS SPECIFIED</div> |          | <div><div>REGAL</div>REGAL - BELOIT CORPORATION</div> |                    | DRAWN MSG 12-25-2009 |      |
|                                                                                                                                                                                                                                        |          |  |  |           |     | DEC.                                       | INCHES   |                                                       | CHK TJW 12-16-2009 |                      |      |
|                                                                                                                                                                                                                                        |          |  |  |           |     | .X                                         | ±.1      |                                                       | APPD SB 12-16-2009 |                      |      |
|                                                                                                                                                                                                                                        |          |  |  |           |     | .XX                                        | ±.03     | TITLE                                                 | OUTLINE            | SCALE 1=1            |      |
|                                                                                                                                                                                                                                        |          |  |  |           |     | .XXX                                       | ±.005    | 254/256T FR. — ODP — CAST IRON                        |                    | REF                  |      |
|                                                                                                                                                                                                                                        |          |  |  |           |     | .XXXX                                      | ±.0005   | MAT'L                                                 | FMF HUADA          |                      |      |
| NO.                                                                                                                                                                                                                                    | REVISION |  |  | BY & DATE | CHK | ANG                                        | ±1/2     | FINISH                                                |                    | PREV                 |      |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT<br>IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED<br>THIS IS AN ELECTRONICALLY GENERATED DOCUMENT — DO NOT SCALE THIS PRINT |          |  |  |           |     |                                            |          |                                                       |                    |                      |      |
|                                                                                                                                                                                                                                        |          |  |  |           |     | RFP                                        | CAD FILE | SS620237                                              | SIZE B             | DRAWING NO. SS620237 | REV. |
|                                                                                                                                                                                                                                        |          |  |  |           |     | DIST                                       |          |                                                       |                    |                      |      |

EE7308K

LOW VOLTAGEHIGH VOLTAGE

VIEW OF TERMINAL END

|                                                                                                                                                                                                                                  |                                            |                | TOLERANCES<br>UNLESS SPECIFIED |       |         |  <b>REGAL - BELOIT CORPORATION</b> | DRAWN PGK 06-04-1997 |             |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------|--------------------------------|-------|---------|-------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|------------|
| NO.                                                                                                                                                                                                                              | REVISION                                   | BY & DATE      | CHK                            | ANG   | ± 7'30" |                                                                                                                         | CHK                  | ML          | 06-05-1997 |
| E                                                                                                                                                                                                                                | CORRECTED IEC MARKINGS ECD-0111208         | WGJ 01-23-2017 | EMH                            | DEC.  | INCHES  | <b>TITLE</b><br>CONNECTION DIAGRAM<br>DELTA CON. - 3Ø - 9 LEADS                                                         | APPD                 | GK          | 06-15-1997 |
| D                                                                                                                                                                                                                                | RE-DRAWN WITH REGAL LOGO ECD-0110493       | WGJ 09-30-2016 | EMH                            | .X    | ± .1    |                                                                                                                         |                      |             |            |
| 8                                                                                                                                                                                                                                | ADDED IEC DESIGNATIONS MU95020             | TJW 4/30/2010  | MJS                            | .XX   | ± .02   |                                                                                                                         |                      |             |            |
| 7                                                                                                                                                                                                                                | REVISED HIGH VOLTAGE L2 WAS L3 CN52600-354 | MRB 09-21-1998 |                                | .XXX  | ± .005  |                                                                                                                         |                      |             |            |
| 6                                                                                                                                                                                                                                | REDRAWN ON CADD                            | PGK 06-05-1997 |                                | .XXXX | ± .0005 |                                                                                                                         |                      |             |            |
|                                                                                                                                                                                                                                  |                                            |                |                                |       |         | <b>MAT'L.</b>                                                                                                           |                      |             |            |
|                                                                                                                                                                                                                                  |                                            |                |                                |       |         | <b>FINISH</b>                                                                                                           |                      |             |            |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT |                                            |                |                                |       |         | CAD FILE EE7308K                                                                                                        | SIZE                 | DRAWING NO. | PAGE OF    |
|                                                                                                                                                                                                                                  |                                            |                |                                |       |         |                                                                                                                         | A                    | EE7308K     | REV.       |
|                                                                                                                                                                                                                                  |                                            |                |                                |       |         |                                                                                                                         |                      |             | E          |

## CERTIFICATION DATA SHEET

Model#: 254TTDCA6076 AD  
 CONN. DIAGRAM: A-EE7308K  
 OUTLINE: B-SS620237

WINDING#: CHT25460002 NONE 1  
 ASSEMBLY: F1/F2 CAPABLE

## TYPICAL MOTOR PERFORMANCE DATA

| HP      | KW        | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|---------|-----------|-----------|----------|-------|-----------|----------|--------|
| 7 1/2&5 | 5.60&3.70 | 1200      | 1182&985 | 254T  | DP        | G        | B      |

| PH | Hz    | VOLTS               | FL AMPS      | START TYPE          | DUTY           | INSL | S.F       | AMB°C | ELEVATION |
|----|-------|---------------------|--------------|---------------------|----------------|------|-----------|-------|-----------|
| 3  | 60/50 | 230/460#190/<br>380 | 21/10.5&18/9 | LINE OR<br>INVERTER | CONTINUOU<br>S | F7   | 1.15/1.15 | 40    | 3300      |

|                             |                    |                    |          |                   |              |
|-----------------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD EFF:<br>90.2&88.5 | 3/4 LOAD EFF: 89.5 | 1/2 LOAD EFF: 87.5 | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
| FULL LOAD PF:<br>73.5&69.5  | 3/4 LOAD PF: 66.5  | 1/2 LOAD PF: 53.5  | 89.5     | SQ CAGE INV RATED | 12.4 / 6.2   |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE  | B.D. TORQUE  | F.L. RISE°C |
|-------------|-------------------|--------------|--------------|-------------|
| 33.4 LB-FT  | 108 / 54          | 51 LB-FT 150 | 86 LB-FT 257 | 40          |

| SOUND PRESSURE<br>@ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2   | SAFE STALL TIME | STARTS<br>/HOUR | APPROX. MOTOR<br>WGT |
|---------------------------|-------------|-------------|-------------|-----------------|-----------------|----------------------|
| 62 dBA                    | 72 dBA      | 2.2 LB-FT^2 | 150 LB-FT^2 | 15 SEC.         | 2               | 225 LBS.             |

## \*\*\* SUPPLEMENTAL INFORMATION \*\*\*

| DE BRACKET<br>TYPE | ODE BRACKET<br>TYPE | MOUNT<br>TYPE | ORIENTATION | SEVERE<br>DUTY | HAZARDOUS<br>LOCATION | DRIP<br>COVER | SCREENS | PAINT            |
|--------------------|---------------------|---------------|-------------|----------------|-----------------------|---------------|---------|------------------|
| STANDARD           | STANDARD            | RIGID         | HORIZONTAL  | FALSE          | NONE                  | FALSE         | NONE    | BLUE<br>(ENAMEL) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT<br>MATERIAL          | FRAME<br>MATERIAL |
|----------|------|------------|------------|------------|-------------|----------------------------|-------------------|
| DE       | OPE  |            |            |            |             |                            |                   |
| BALL     | BALL | POLYREX EM | T          | NONE       | NONE        | 1045 HOT<br>ROLLED (C-204) | CAST IRON         |
| 6309     | 6208 |            |            |            |             |                            |                   |

| THERMO-PROTECTORS |            |          |          | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS       | PROTECTORS | WDG RTDs | BRG RTDs |             |         |                  |
| NONE              | NOT        | NONE     | NONE     | NONE        | FALSE   | NONE VOLTS       |

If Inverter equals NONE, contact factory for further information

|                                 |                                                                             |
|---------------------------------|-----------------------------------------------------------------------------|
| *<br>N<br>O<br>T<br>E<br>S<br>* | INVERTER TORQUE: VARIABLE 10:1                                              |
|                                 | INV. HP SPEED RANGE: NONE                                                   |
|                                 | ENCODER: NONE<br>NONE NONE<br>NONE NONE PPR                                 |
|                                 | BRAKE: NONE NONE<br>NONE P/N NONE<br>NONE NONE<br>NONE FT-LB NONE V NONE Hz |

DATE: 06/23/2017 02:43:05 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

## Data Sheet

Date: 6/20/2017

Customer: \_\_\_\_\_

Attention: \_\_\_\_\_

Submitted by: FAREEDA DUDEKULA



254TTDCA6076

Submittal

Data @ 460 V

## Motor Load Data

| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 6.2  | 6.5  | 7.5  | 8.8  | 10.5 | 12.0  | 13.0 | 54.0 |  |
| Torque (ft-lb) | 0.00 | 8.2  | 16.5 | 24.9 | 33.4 | 38.5  | 42.0 | 51.0 |  |
| RPM            | 1200 | 1195 | 1190 | 1185 | 1182 | 1,178 | 1175 | 0    |  |
| Efficiency (%) |      | 81.5 | 87.5 | 89.5 | 90.2 |       | 89.5 |      |  |
| P.F. (%)       | 6.0  | 33.0 | 53.5 | 66.5 | 73.5 | 76.5  | 77.5 | 37.0 |  |

## Motor Speed Data

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | LR                      | Pull-Up | BD   | Rated  | Idle | Information Block |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------|------|--------|------|-------------------|----------------|----------|----------------|-----|----|----|-----|-----|----|----|-----|-----|----|----|-----|------|----|----|------|------|----|----|------|-----------|----|--|--|--|
| Speed (RPM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                       | 600     | 1100 | 1182   | 1200 | HP                | 7.5            |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Current (Amps)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 54.0                    | 48.5    | 34.0 | 10.5   | 6.2  | Sync. RPM         | 1200           |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Torque (ft-lb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 51.0                    | 45.0    | 86.0 | 33.4   | 0.00 | Frame             | 254            |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| <div><div>Efficiency (%)</div><div>P.F. (%)</div><div>Current (Amps)</div></div> <table><thead><tr><th>LOAD</th><th>Efficiency (%)</th><th>P.F. (%)</th><th>Current (Amps)</th></tr></thead><tbody><tr><td>25%</td><td>82</td><td>33</td><td>6.2</td></tr><tr><td>50%</td><td>88</td><td>55</td><td>7.5</td></tr><tr><td>75%</td><td>90</td><td>68</td><td>9.0</td></tr><tr><td>100%</td><td>91</td><td>75</td><td>10.5</td></tr><tr><td>125%</td><td>90</td><td>78</td><td>12.5</td></tr></tbody></table> |                         |         |      |        |      | LOAD              | Efficiency (%) | P.F. (%) | Current (Amps) | 25% | 82 | 33 | 6.2 | 50% | 88 | 55 | 7.5 | 75% | 90 | 68 | 9.0 | 100% | 91 | 75 | 10.5 | 125% | 90 | 78 | 12.5 | Enclosure | DP |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | LOAD              | Efficiency (%) | P.F. (%) | Current (Amps) |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | 25%               | 82             | 33       | 6.2            |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | 50%               | 88             | 55       | 7.5            |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | 75%               | 90             | 68       | 9.0            |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | 100%              | 91             | 75       | 10.5           |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | 125%              | 90             | 78       | 12.5           |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Construction      | TDC            |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Voltage           | 30/460#190/3ØV |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Frequency         | 60 Hz          |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Design            | B              |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | LR Code letter    | G              |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Service Factor    | 1.15           |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Temp Rise @ FL    | 40 ° C         |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Duty              | CONT           |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Ambient           | 40 ° C         |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |         |      |        |      | Elevation         | 1,000 feet     |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Rotor/Shaft wk <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.20 Lb-Ft <sup>2</sup> |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Ref Wdg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CHT25460002 NONE        |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Sound Pressure @ 1M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 62 dBA                  |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| VFD Rating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | VARIABLE 10:1           |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Outline Dwg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | B-SS620237              |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Conn. Diag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A-EE7308K               |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| Additional Specifications:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                         |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                         |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| EQUIV CKT (OHMS / PHASE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |         |      |        |      |                   |                |          |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| R1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                         | R2      |      | X1     |      | X2                |                | Xm       |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |
| 0.9450                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                         | 0.4540  |      | 2.2680 |      | 3.4850            |                | 43.4320  |                |     |    |    |     |     |    |    |     |     |    |    |     |      |    |    |      |      |    |    |      |           |    |  |  |  |

## Speed -Torque Curve

