

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 404TTDS16055

Catalog No: U903A

100 HP General Purpose Motor, 3 phase, 1800 RPM, 575 V, 404T Frame, ODP  
General Purpose Motors



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**RegalRexnord**

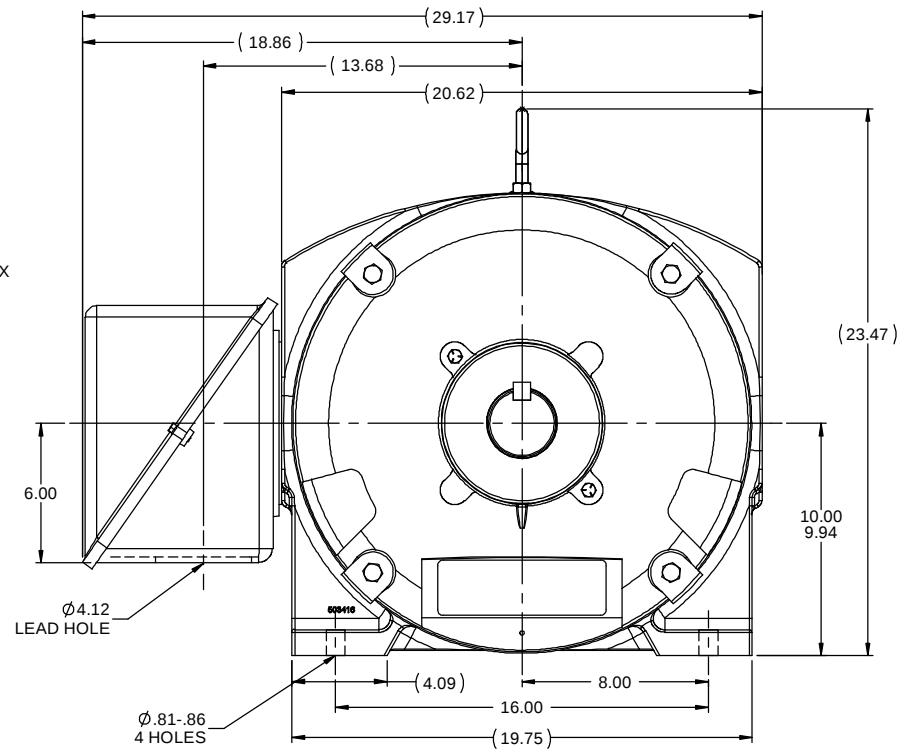
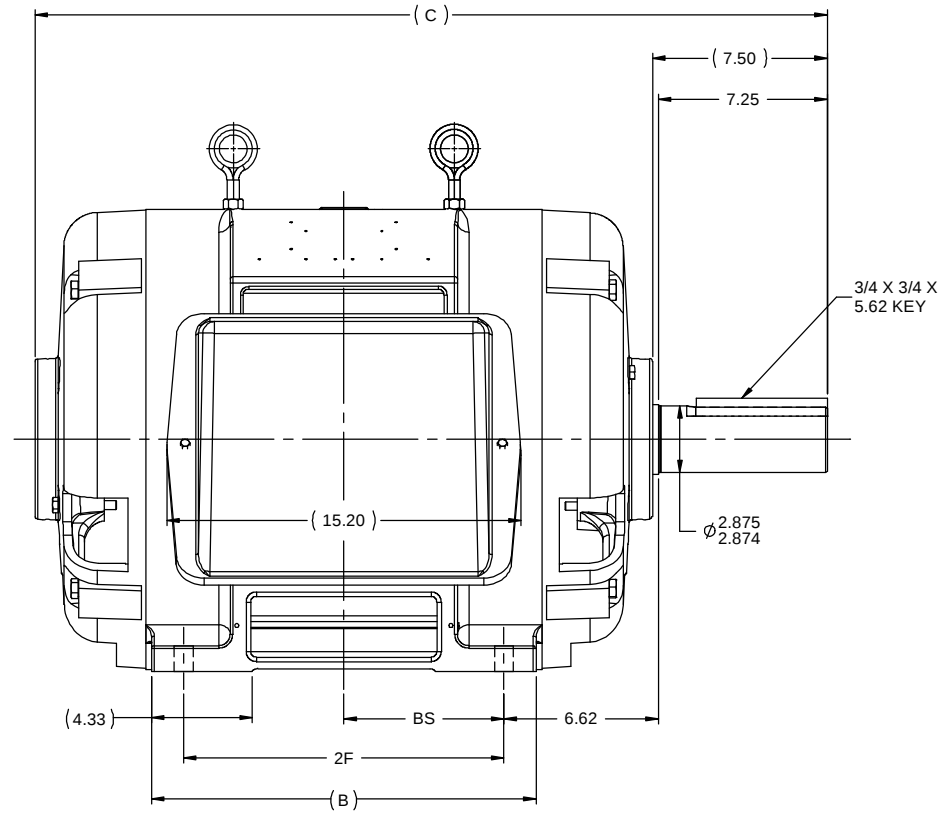
**Nameplate Specifications**

|                        |            |                            |            |
|------------------------|------------|----------------------------|------------|
| Output HP              | 100 Hp     | Output KW                  | 75.0 kW    |
| Frequency              | 60 Hz      | Voltage                    | 575 V      |
| Current                | 90.5 A     | Speed                      | 1785 rpm   |
| Service Factor         | 1.15       | Phase                      | 3          |
| Efficiency             | 95.4 %     | Power Factor               | 86         |
| Duty                   | Continuous | Insulation Class           | F          |
| Design Code            | B          | KVA Code                   | G          |
| Frame                  | 404T       | Enclosure                  | Drip Proof |
| Thermal Protection     | No         | Ambient Temperature        | 40 °C      |
| Drive End Bearing Size | 6316       | Opp Drive End Bearing Size | 6313       |
| UL                     | Recognized | CSA                        | Y          |
| CE                     | Y          | IP Code                    | 12         |
| Number of Speeds       | 1          |                            |            |

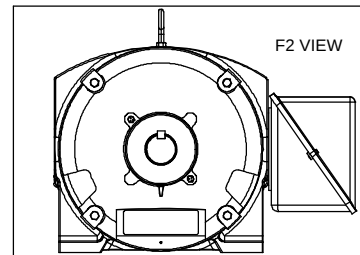
**Technical Specifications**

|                       |                              |                       |                                                  |
|-----------------------|------------------------------|-----------------------|--------------------------------------------------|
| Electrical Type       | Squirrel Cage Inverter Rated | Starting Method       | Part Wdg Start & Wye Start Delta Run Or Inverter |
| Poles                 | 4                            | Rotation              | Reversible                                       |
| Resistance Main       | .0545 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        | 32.51 in                                         |
| Frame Length          | 15.50 in                     | Shaft Diameter        | 2.875 in                                         |
| Shaft Extension       | 7.5 in                       | Assembly/Box Mounting | F1/F2 Capable                                    |
| Outline Drawing       | B-SS509599-1550              | Connection Drawing    | A-EE7300BH                                       |

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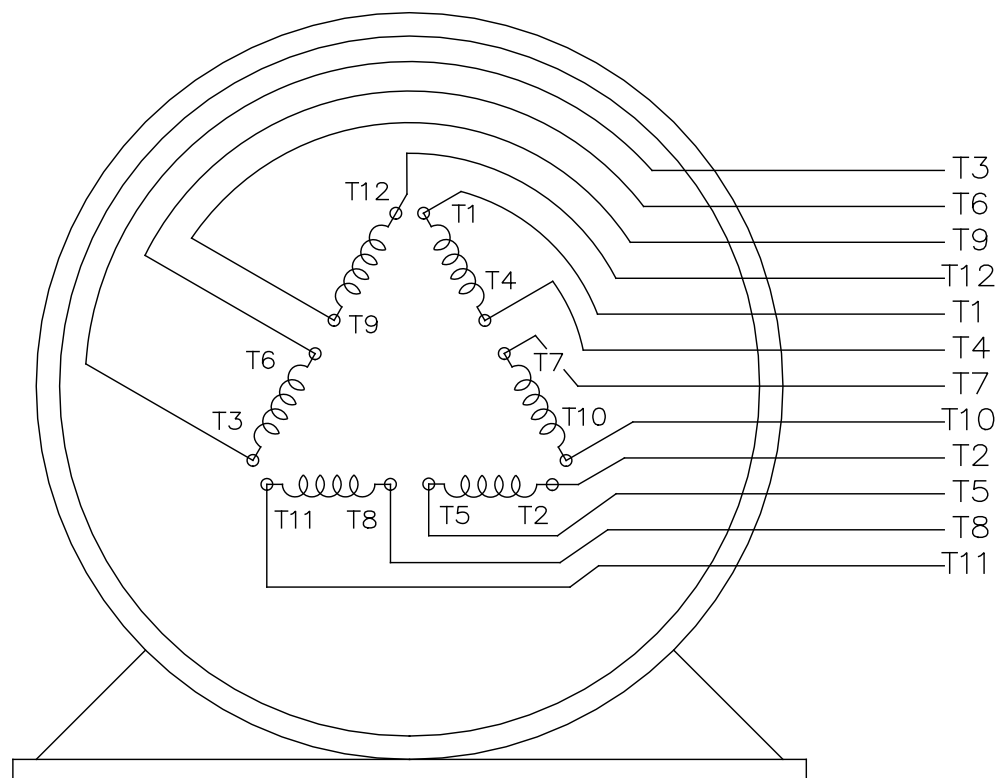


- NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90 ° STEPS.
  2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180 °
  3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

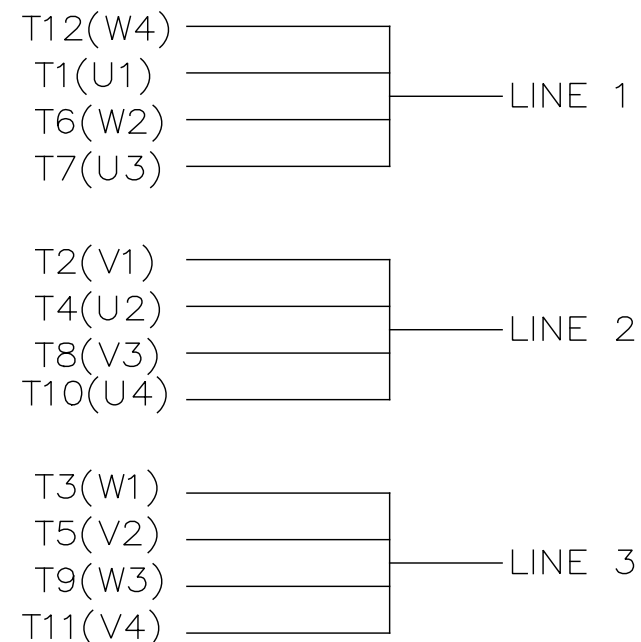


| DASH | FRAME | B     | C     | BS   | 2F    |
|------|-------|-------|-------|------|-------|
| 1550 | 404T  | 15.00 | 32.51 | 6.12 | 12.25 |
| 1700 | 405T  | 16.50 | 34.01 | 6.88 | 13.75 |

|                           |                                       | TOLERANCES<br>UNLESS SPECIFIED |      | marathon <sup>®</sup><br>electric |        | DRAWN TJB 2/24/1988 |              |
|---------------------------|---------------------------------------|--------------------------------|------|-----------------------------------|--------|---------------------|--------------|
| NO                        | REVISION                              | BY & DATE                      | CHK  | ANG                               | FINISH | PAGE                | OF           |
| 11                        | ADDED F2 VIEW                         | TJW 1/6/2010                   | CTO  | DEC                               | INCHES | CHK                 | JL 2/24/1988 |
| 10                        | REDRAWN IN AUTOCAD                    | TAT 6/29/2004                  | ML   | X                                 | ±.1    | APPR                | ML 2/24/1988 |
| 9                         | REPLACED ONE EYEBOLT WITH TWO CN28063 | BJW 2/10/2000                  | XX   |                                   | ±.03   | SCALE               | 3:16         |
| 8                         | UPDATED C'BOX GEOMETRY CN28063        | TRB 2/10/2000                  | XXX  |                                   | ±.005  | REF                 |              |
| 7                         | REDRAWN ON CADD                       | TLB 2/24/1988                  | XXXX |                                   | ±.0005 | FMF                 |              |
|                           |                                       |                                |      |                                   | ±7'30" |                     |              |
| THIRD ANGLE<br>PROJECTION |                                       | RFP                            |      | PREV                              |        | SIZE                | DRAWING NO   |
|                           |                                       | NETWORK FILE NAME              |      | SS509599                          |        | B                   | SS509599     |
|                           |                                       |                                |      |                                   |        |                     | REV          |
|                           |                                       |                                |      |                                   |        |                     | 11           |



VIEW OF TERMINAL END



|                                                                                                                                                                                                                                        |                              |             |                |                                |        |                                                                                                                  |                                                     |      |             |         |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------|----------------|--------------------------------|--------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------|-------------|---------|------|
|                                                                                                                                                                                                                                        |                              |             |                | TOLERANCES<br>UNLESS SPECIFIED |        |  REGAL - BELOIT CORPORATION | DRAWN RJW 02-11-2005                                |      |             |         |      |
|                                                                                                                                                                                                                                        |                              |             |                | DEC.                           | INCHES |                                                                                                                  | CHK                                                 | ML   | 02-11-2005  |         |      |
|                                                                                                                                                                                                                                        |                              |             |                | .X                             | ±.1    |                                                                                                                  | APPD                                                | GK   | 02-11-2005  |         |      |
|                                                                                                                                                                                                                                        |                              |             |                | .XX                            | ±.02   |                                                                                                                  | SCALE                                               |      |             |         |      |
| D                                                                                                                                                                                                                                      | CHANGED TO REGAL TITLE BLOCK | ECO-0108299 | WGJ 08/22/2016 | EMH                            | .XXX   | ±.005                                                                                                            | TITLE CONNECTION DIAGRAM<br>12 LEAD- SINGLE VOLTAGE |      |             | REF     |      |
| 1                                                                                                                                                                                                                                      | ADDED IEC TERMINAL MARKINGS  | CN 41429    | JJB 05/24/2007 | ML                             | .XXXX  | ±.0005                                                                                                           | MAT'L.                                              |      |             | FMF     |      |
| NO.                                                                                                                                                                                                                                    | REVISION                     |             | BY & DATE      | CHK                            | ANG    | ±7'30"                                                                                                           | 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 02-11-2005                 |        | CAD FILE ee7300bh                                                                                                |                                                     | SIZE | DRAWING NO. | PAGE OF | REV. |
|                                                                                                                                                                                                                                        |                              |             |                | DIST LB                        |        |                                                                                                                  |                                                     | A    | EE7300BH    |         | C    |

## CERTIFICATION DATA SHEET

Model#: 404TTDS16055 AN  
 CONN. DIAGRAM: A-EE7300BH  
 OUTLINE: B-SS509599-1550

WINDING#: T404450 NONE 2  
 ASSEMBLY: F1/F2 CAPABLE

## TYPICAL MOTOR PERFORMANCE DATA

| HP  | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-----|----|-----------|----------|-------|-----------|----------|--------|
| 100 | 75 | 1800      | 1785     | 404T  | DP        | G        | B      |

| PH | Hz | VOLTS | FL AMPS | START TYPE               | DUTY           | INSL | S.F  | AMB°C | ELEVATION |
|----|----|-------|---------|--------------------------|----------------|------|------|-------|-----------|
| 3  | 60 | 575   | 90.5    | PWS &<br>YDRUN OR<br>INV | CONTINUOU<br>S | F1   | 1.15 | 40    | 3300      |

|                     |                    |                   |          |                   |              |
|---------------------|--------------------|-------------------|----------|-------------------|--------------|
| FULL LOAD EFF: 95.4 | 3/4 LOAD EFF: 95.8 | 1/2 LOAD EFF: 95  | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
| FULL LOAD PF: 86    | 3/4 LOAD PF: 84    | 1/2 LOAD PF: 77.5 | 95       | SQ CAGE INV RATED | 27.6         |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE   | B.D. TORQUE   | F.L. RISE°C |
|-------------|-------------------|---------------|---------------|-------------|
| 294 LB-FT   | 580               | 435 LB-FT 148 | 750 LB-FT 255 | 45          |

| SOUND PRESSURE<br>@ 3 FT. | SOUND POWER | ROTOR WK^2   | MAX. WK^2   | SAFE STALL TIME | STARTS<br>/HOUR | APPROX. MOTOR<br>WGT |
|---------------------------|-------------|--------------|-------------|-----------------|-----------------|----------------------|
| 80 dBA                    | 90 dBA      | 24.5 LB-FT^2 | 550 LB-FT^2 | 20 SEC.         | 2               | 1100 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 |            |            |            |             |                            |                   |
| 6316     | 6313 | POLYREX EM | T          | NONE       | NONE        | 1045 HOT<br>ROLLED (C-204) | CAST IRON         |

| 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

INVERTER TORQUE: VARIABLE 10:1  
 INV. HP SPEED RANGE: NONE

ENCODER: NONE  
 NONE NONE  
 NONE NONE PPR

BRAKE: NONE NONE  
 NONE P/N NONE  
 NONE NONE  
 - FT-LB NONE V NONE Hz

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\*

DATE: 06/21/2017 07:56:36 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

## Data Sheet

Date: 6/29/2017

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

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

Submitted by: FAREEDA DUDEKULA



404TTDS16055

Submittal

Data @ 575 V

## Motor Load Data

| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 27.6 | 35.2 | 50.8 | 70.0 | 90.4 | 104   | 114  | 580  |  |
| Torque (ft-lb) | 0.00 | 73.0 | 147  | 220  | 294  | 338   | 369  | 435  |  |
| RPM            | 1800 | 1796 | 1792 | 1788 | 1785 | 1,780 | 1778 | 0    |  |
| Efficiency (%) |      | 92.4 | 95.0 | 95.8 | 95.4 | 95.4  | 95.4 |      |  |
| P.F. (%)       | 7.0  | 57.5 | 77.5 | 84.0 | 86.0 | 86.0  | 86.5 | 29.0 |  |

## Motor Speed Data

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LR              | Pull-Up | BD     | Rated   | Idle | Information Block |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|--------|---------|------|-------------------|----------------|----------|----------------|-----|------|------|------|-----|------|------|------|-----|------|------|------|------|------|------|-------|------|------|------|-------|-----------|----|--|--|--|
| Speed (RPM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0               | 900     | 1725   | 1785    | 1800 | HP                | 100.0          |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Current (Amps)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 580             | 520     | 340    | 90.4    | 27.6 | Sync. RPM         | 1800           |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Torque (ft-lb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 435             | 425     | 750    | 294     | 0.00 | Frame             | 404            |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| <div><div>— Efficiency (%) — P.F. (%) — Current (Amps)</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>92.5</td><td>57.5</td><td>45.0</td></tr><tr><td>50%</td><td>95.0</td><td>78.0</td><td>60.0</td></tr><tr><td>75%</td><td>96.0</td><td>85.0</td><td>80.0</td></tr><tr><td>100%</td><td>95.5</td><td>87.0</td><td>100.0</td></tr><tr><td>125%</td><td>95.5</td><td>87.0</td><td>120.0</td></tr></tbody></table></div> |                 |         |        |         |      | LOAD              | Efficiency (%) | P.F. (%) | Current (Amps) | 25% | 92.5 | 57.5 | 45.0 | 50% | 95.0 | 78.0 | 60.0 | 75% | 96.0 | 85.0 | 80.0 | 100% | 95.5 | 87.0 | 100.0 | 125% | 95.5 | 87.0 | 120.0 | Enclosure | DP |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | LOAD              | Efficiency (%) | P.F. (%) | Current (Amps) |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | 25%               | 92.5           | 57.5     | 45.0           |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | 50%               | 95.0           | 78.0     | 60.0           |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | 75%               | 96.0           | 85.0     | 80.0           |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | 100%              | 95.5           | 87.0     | 100.0          |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | 125%              | 95.5           | 87.0     | 120.0          |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Construction      | TDS            |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Voltage           | 575 V          |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Frequency         | 60 Hz          |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Design            | A              |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | LR Code letter    | G              |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Service Factor    | 1.15           |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Temp Rise @ FL    | 45 ° C         |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Duty              | CONT           |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Ambient           | 40 ° C         |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |         |        |         |      | Elevation         | 1,000 feet     |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Rotor/Shaft wk²                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 24.5 Lb-Ft²     |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Ref Wdg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T404450 NONE    |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Sound Pressure @ 1M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 80 dBA          |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| VFD Rating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | VARIABLE 10:1   |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Outline Dwg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B-SS509599-1550 |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Conn. Diag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A-EE7300BH      |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| Additional Specifications:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| EQUIV CKT (OHMS / PHASE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |         |        |         |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| R1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | R2              | X1      | X2     | Xm      |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |
| 0.0490                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.0330          | 0.4500  | 0.3960 | 11.8300 |      |                   |                |          |                |     |      |      |      |     |      |      |      |     |      |      |      |      |      |      |       |      |      |      |       |           |    |  |  |  |

## Speed -Torque Curve

