

# PRODUCT INFORMATION PACKET



Model No: LM13817

Catalog No: LM13817

General Purpose Motor, 150 & 150 HP, 3 Ph, 60 & 50 Hz, 460 & 415 V, 1800 & 1500 RPM, 444T Frame, DP



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### Nameplate Specifications

|                        |                  |                            |               |
|------------------------|------------------|----------------------------|---------------|
| Phase                  | 3                | Output HP                  | 150 & 150 Hp  |
| Output KW              | 112.0 & 112.0 kW | Voltage                    | 460 & 415 V   |
| Speed                  | 1788 & 1487 rpm  | Service Factor             | 1.25 & 1.15   |
| Frame                  | 444T             | Enclosure                  | Drip Proof    |
| Thermal Protection     | No Protection    | Efficiency                 | 95.8 & 95.8 % |
| Ambient Temperature    | 40 °C            | Frequency                  | 60 & 50 Hz    |
| Current                | 170 & 191 A      | Power Factor               | 86            |
| Duty                   | Continuous       | Insulation Class           | F             |
| Design Code            | BC               | KVA Code                   | G             |
| Drive End Bearing Size | 318              | Opp Drive End Bearing Size | 315           |
| UL                     | Recognized       | CSA                        | Y             |
| CE                     | Y                | IP Code                    | 22            |
| Number of Speeds       | 1                |                            |               |

### Technical Specifications

|                       |                             |                       |                     |
|-----------------------|-----------------------------|-----------------------|---------------------|
| Electrical Type       | Squirrel Cage Induction Run | Starting Method       | Wye Start Delta Run |
| Poles                 | 4                           | Rotation              | Reversible          |
| Resistance Main       | .026 Ohms                   | Mounting              | Rigid Base          |
| Motor Orientation     | Horizontal                  | Drive End Bearing     | Ball                |
| Opp Drive End Bearing | Ball                        | Frame Material        | Rolled Steel        |
| Shaft Type            | T                           | Overall Length        | 37.43 in            |
| Frame Length          | 21.27 in                    | Shaft Diameter        | 3.375 in            |
| Shaft Extension       | 8.5 in                      | Assembly/Box Mounting | F1 ONLY             |
| Connection Drawing    | A-EE7340-LN                 | Outline Drawing       | XK2D1SS1-2127       |

4

3

2

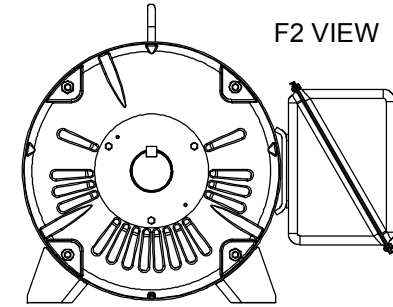
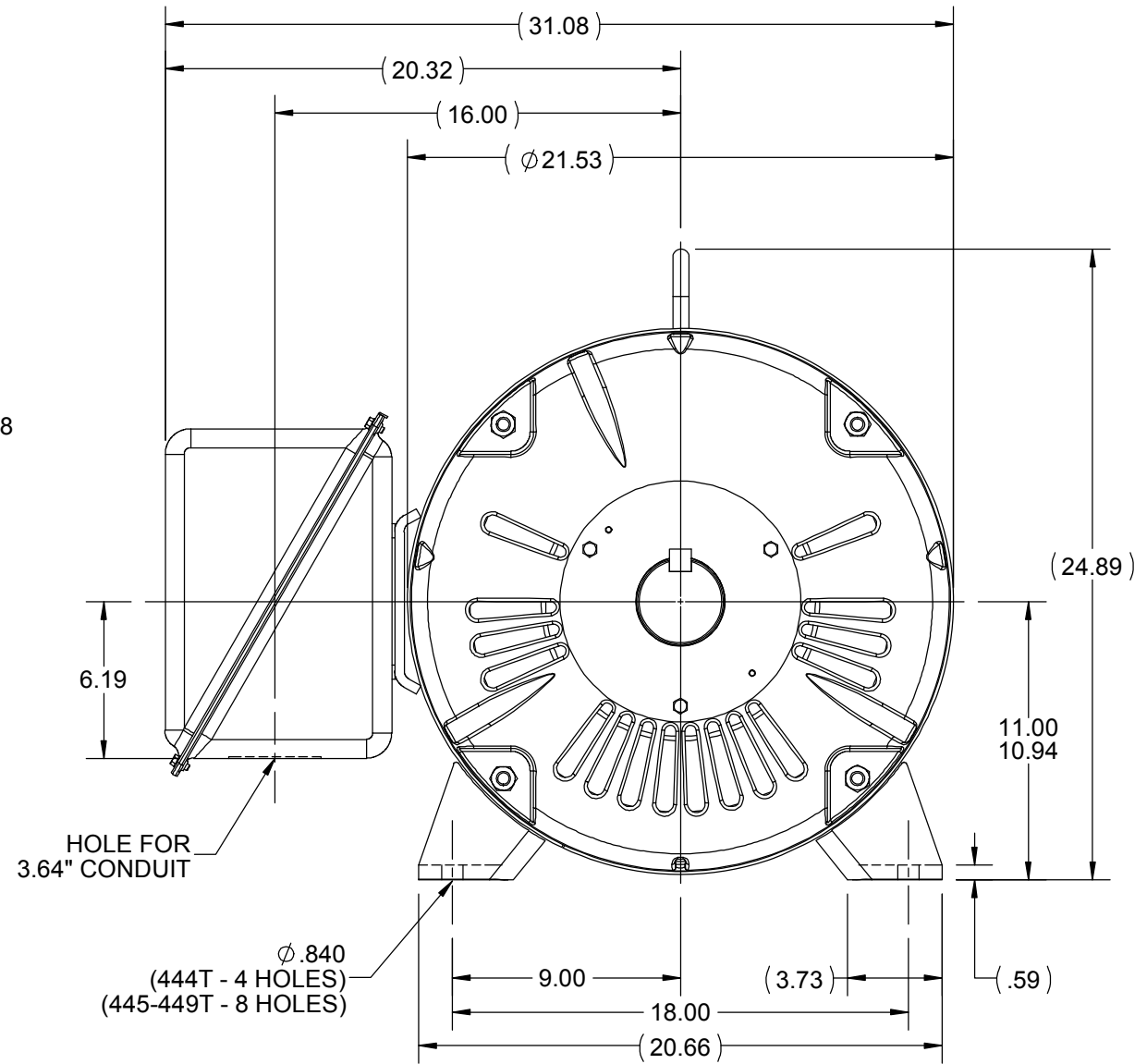
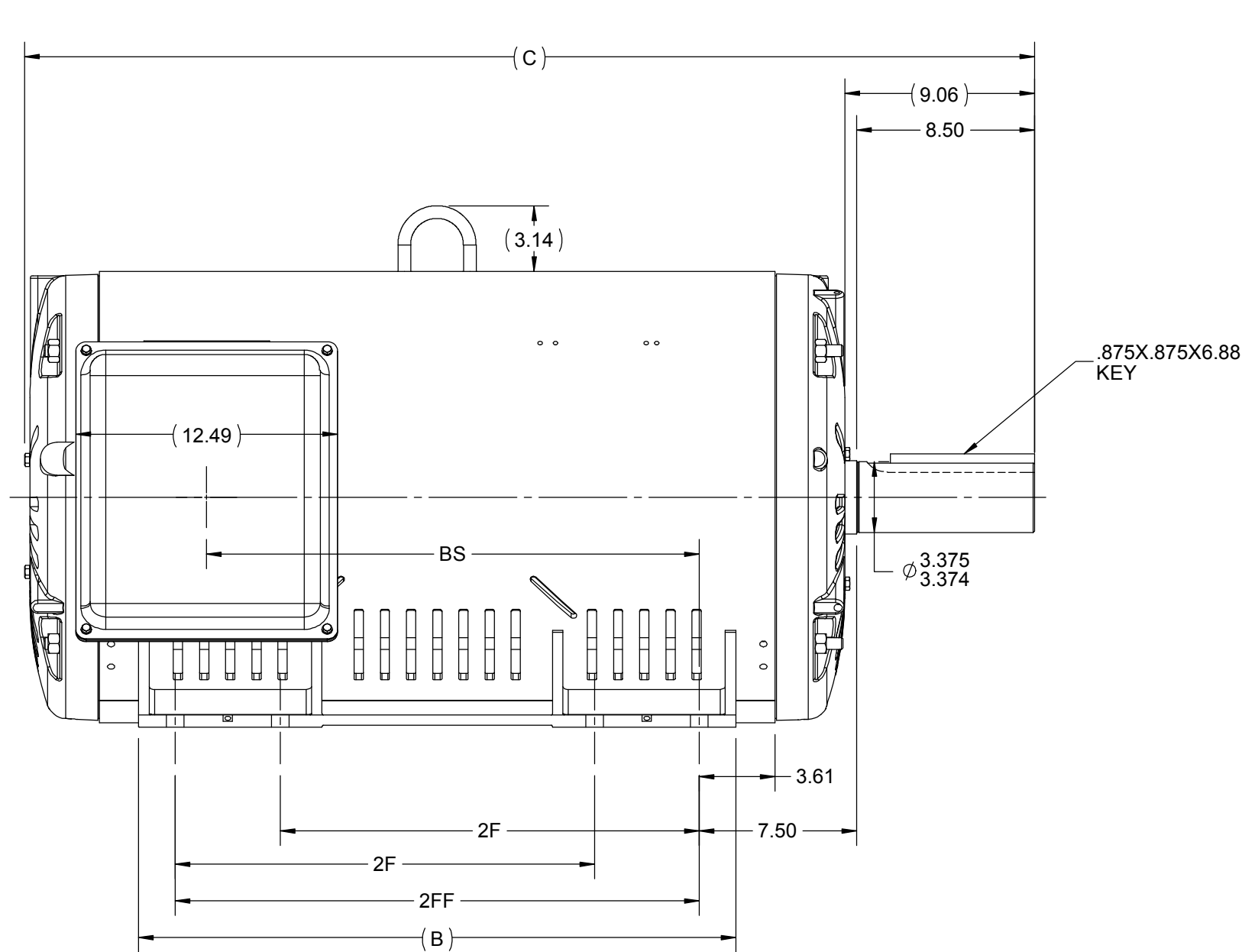
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B

B

A

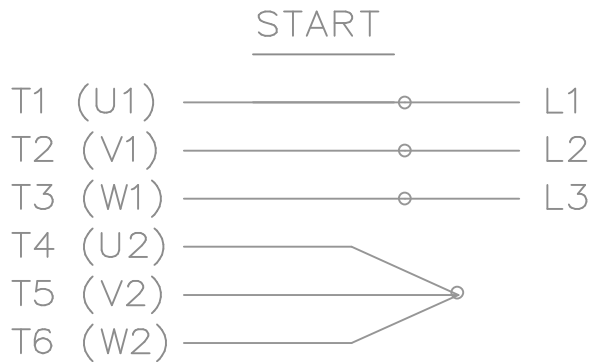
A



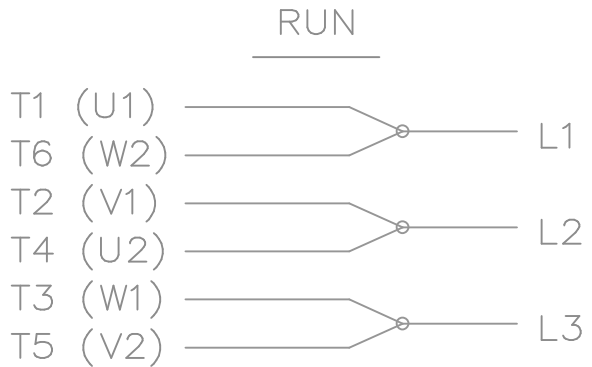
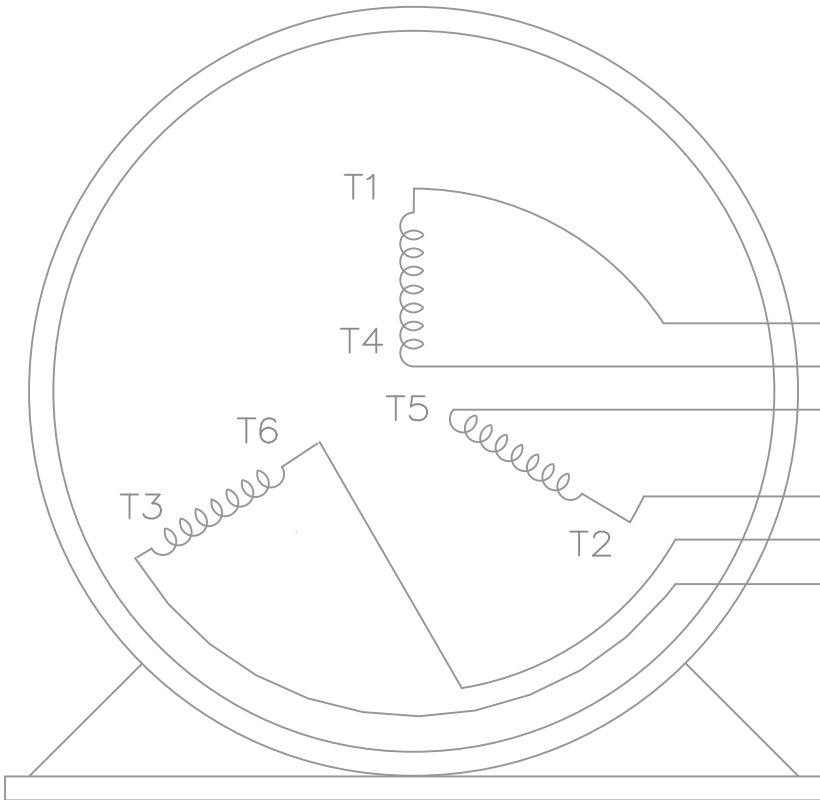
NOTES:  
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.  
2. NAMEPLATES TO BE READ FROM CONDUIT BOX  
SIDE OF MOTOR.

| DASH | FRAME | B     | C     | 2F    | 2FF   | BS    |
|------|-------|-------|-------|-------|-------|-------|
| 2127 | 444T  | 18.00 | 37.73 | 14.50 | - - - | 13.02 |
| 2327 | 445T  | 20.00 | 39.73 | 14.50 | 16.50 | 15.02 |
| 2677 | 447T  | 23.50 | 43.23 | 16.50 | 20.00 | 18.52 |
| 3177 | 449T  | 23.50 | 48.23 | 20.00 | 25.00 | 23.52 |

|   |                    |                               |  |  |  |  |                    |   |  |                 |  |
|---|--------------------|-------------------------------|--|--|--|--|--------------------|---|--|-----------------|--|
| DRAWING REVISION<br>F   | REVISION BY<br>ZR  | REV DATE/© DATE<br>08-09-2019 | TOLERANCES (EXCEPT AS NOTED):<br>DEC. INCH mm ANGLE<br>.X ±0.1 [±3] ±7° 30"<br>.XX ±0.03 [±0.8]<br>.XXX ±0.005 [±0.13]<br>.XXXX ±0.0005 [±0.013]<br>REMOVE BURRS & BREAK SHARP<br>EDGES: .003/.015 [.08/.38] X 45°<br>CORNER FILLETS: R.02 [.5]<br>MACHINED SURFACES: 200 $\sqrt{\text{mm}}$ 5.1 $\sqrt{\text{mm}}$<br>mm DIMENSIONS IN [BRACKETS]<br>ARE FOR REFERENCE ONLY |  |  |  | DRAWN BY<br>TJB    | Regal Beloit America, Inc.                  |  |                 |  |
| ECO<br>ECO-0171544  | APPROVED BY<br>JHA | DATE<br>08-09-2019            |  |  |  |  | DATE<br>08-09-2001 |   |  |                 |  |
| ECO DESCRIPTION<br>UPDATED TO CURRENT STANDARDS<br>COPYRIGHT (PER REVISION DATE) REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS. |                    |                               | THIRD ANGLE PROJECTION   |  |  |  | REFERENCE          | MATERIAL                                    |  | PROCESS/FINISH  |  |
|   |                    |                               |  |  |  |  | DATE<br>08-09-2001 | DESCRIPTION<br>OUTLINE<br>440T FR. - OPD UE |  |                 |  |
|   |                    |                               |  |  |  |  | SIZE<br>B          | DRAWING NUMBER<br>XK2D1SS1                  |  | SHEET<br>1 OF 1 |  |



THREE PHASE — Y START  
 Δ RUN MOTOR




T1 (U1)  
 T4 (U2)  
 T5 (V2)  
 T2 (V1)  
 T6 (W2)  
 T3 (W1)

T6CK  
 T6BM  
 T4CC  
 T2DL  
 T4C

NOTE:  
 IEC LEAD MARKINGS ARE NOTED  
 IN PARENTHESES

VIEW OF TERMINAL END

|  |                                       |                |               |                                |                    |   |                      |                          |              |
|--|---------------------------------------|----------------|---------------|--------------------------------|--------------------|---|----------------------|--------------------------|--------------|
|  |                                       |                |               | TOLERANCES<br>UNLESS SPECIFIED |                    |  | DRAWN BLR 10-04-1999 |                          |              |
|  |                                       |                |               | DEC.                           | INCHES             |   | CHK DRS 10-04-1999   |                          |              |
|  |                                       |                |               | .X                             | ±.1                |   | APPD TB 10-04-1999   |                          |              |
| 3  | REVISED TO MATCH M.E. ORIGINAL        | TAT 07-25-2005 | ML            | .XX                            | ±.02               | TITLE CONNECTION DIAGRAM<br>3ø – WYE START DELTA RUN                                  |                      |                          | SCALE 1=1    |
| 2  | REVISED DRAWING MISTAKE CN 29200-2980 | ERH 05-15-2003 | ML            | .XXX                           | ±.005              |   |                      |                          | REF          |
| 1  | NEW DRAWING                           | BLR 10-09-1999 |               | .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           |                                | CAD FILE ee7340_In |   | SIZE<br>A            | DRAWING NO.<br>EE7340-LN | PAGE OF<br>3 |
|  |                                       |                | DIST WA-LB-SB |                                |                    |   |                      |                          |              |



# CERTIFICATION DATA SHEET

2100 WASHINGTON ST.  
GRAFTON, WI  
PH. 262-277-8810

CONN. DIAGRAM: A-EE7340-LN

OUTLINE: XK2D1SS1-2127

CATALOG : LM13817

WINDING #: L4444012 1

MOUNTING: F1 ONLY

## TYPICAL MOTOR PERFORMANCE DATA

| HP      | kW      | SYNC. RPM | F.L. RPM  | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|---------|---------|-----------|-----------|-------|-----------|----------|--------|
| 150&150 | 112&112 | 1800      | 1788&1487 | 444T  | DP        | G        | BC     |

| PH | Hz    | VOLTS   | AMPS    | START TYPE          | DUTY       | INSL | S.F.      | AMB°C |
|----|-------|---------|---------|---------------------|------------|------|-----------|-------|
| 3  | 60/50 | 460&415 | 170&191 | WYE START DELTA RUN | CONTINUOUS | F1   | 1.25/1.15 | 40    |

|                |           |               |      |               |      |          |                 |
|----------------|-----------|---------------|------|---------------|------|----------|-----------------|
| FULL LOAD EFF: | 95.8&95.8 | 3/4 LOAD EFF: | 95.8 | 1/2 LOAD EFF: | 95.4 | GTD. EFF | ELEC. TYPE      |
| FULL LOAD PF:  | 86&85     | 3/4 LOAD PF:  | 83.5 | 1/2 LOAD PF:  | 77   | 95       | SQ CAGE IND RUN |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE     | B.D. TORQUE      | F.L. RISE°C |
|-------------|-------------------|-----------------|------------------|-------------|
| 441 LB-FT   | 1085              | 885 LB-FT 201 % | 1025 LB-FT 232 % | 45          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS / HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|------------|-----------|-----------------|---------------|-------------------|
| - dBA                  | - dBA       | 0 LB-FT^2  | - LB-FT^2 | - SEC.          | -             | - LBS.            |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT          |
|-----------------|------------------|------------|-------------|-------------|--------------------|------------|---------|----------------|
| STANDARD        | STANDARD         | RIGID      | HORIZONTAL  | FALSE       | NONE               | FALSE      | NONE    | GRAY - LINCOLN |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | ODE  |            |            |            |             |                         |                |
| BALL     | BALL | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | ROLLED STEEL   |
| 318      | 315  |            |            |            |             |                         |                |

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

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|---------------------------|
| INVERTER TORQUE: NONE     |
| INV. HP SPEED RANGE: NONE |
| ENCODER: NONE             |
| NONE NONE                 |
| NONE NONE PPR             |
| BRAKE: NONE NONE          |
| NONE P/N NONE             |
| NONE NONE                 |
| NONE FT-LB NONE V NONE Hz |

## Data Sheet

Date: 1/31/2018

LM13817



Data @ 460 V

## Motor Load Data

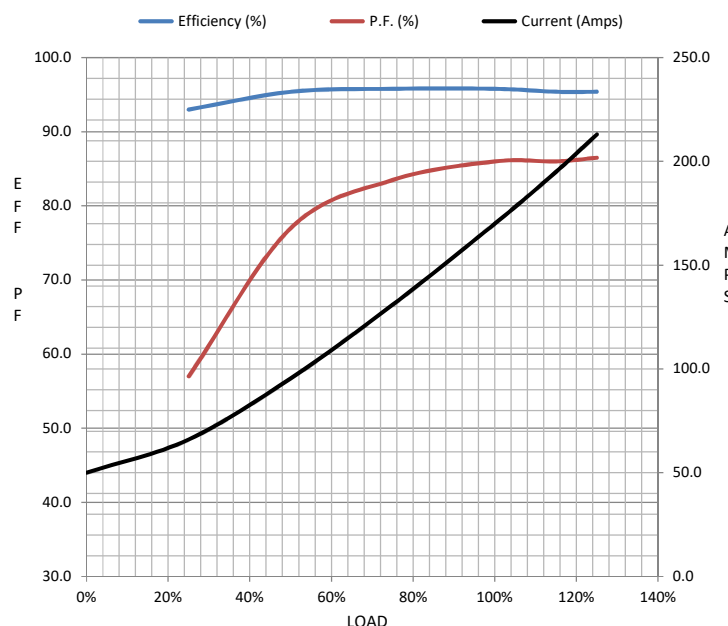
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR    |  |
|----------------|------|------|------|------|------|-------|------|-------|--|
| Current (Amps) | 50.0 | 66.0 | 95.5 | 131  | 170  | 195   | 213  | 1,085 |  |
| Torque (ft-lb) | 0.00 | 110  | 220  | 330  | 441  | 507   | 552  | 885   |  |
| RPM            | 1800 | 1797 | 1795 | 1790 | 1788 | 1,786 | 1784 | 0     |  |
| Efficiency (%) |      | 93.0 | 95.4 | 95.8 | 95.8 | 95.4  | 95.4 |       |  |
| P.F. (%)       | 4.0  | 57.0 | 77.0 | 83.5 | 86.0 | 86.0  | 86.5 | 30.5  |  |

## Motor Speed Data

|                | LR    | Pull-Up | BD    | Rated | Idle |
|----------------|-------|---------|-------|-------|------|
| Speed (RPM)    | 0     | 900     | 1730  | 1788  | 1800 |
| Current (Amps) | 1,085 | 1,035   | 750   | 170   | 50.0 |
| Torque (ft-lb) | 885   | 800     | 1,025 | 441   | 0.00 |

## Information Block

|                            |               |        |        |        |
|----------------------------|---------------|--------|--------|--------|
| HP                         | 150.0         |        |        |        |
| Sync. RPM                  | 1800          |        |        |        |
| Frame                      | 444           |        |        |        |
| Enclosure                  | DP            |        |        |        |
| Construction               | TDR           |        |        |        |
| Voltage                    | 460#415 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            | 0.00 Lb-Ft²   |        |        |        |
| Ref Wdg                    | L4444012 NONE |        |        |        |
| Sound Pressure @ 1M        | 999 dBA       |        |        |        |
| VFD Rating                 | NONE          |        |        |        |
| Outline Dwg                | XK2D1SS1-2127 |        |        |        |
| Conn. Diag                 | A-EE7340-LN   |        |        |        |
| Additional Specifications: |               |        |        |        |
| 0                          |               |        |        |        |
| 0                          |               |        |        |        |
| EQUIV CKT (OHMS / PHASE)   |               |        |        |        |
| R1                         | R2            | X1     | X2     | Xm     |
| 0.0190                     | 0.0110        | 0.1740 | 0.2060 | 5.2160 |



## Speed - Torque Curve

