

# PRODUCT INFORMATION PACKET

Model No: 449TSTDN16040  
Catalog No: U796  
450,1800,DP,449TS,3/60/460 PWS/YD  
Open Drip Proof (ODP)



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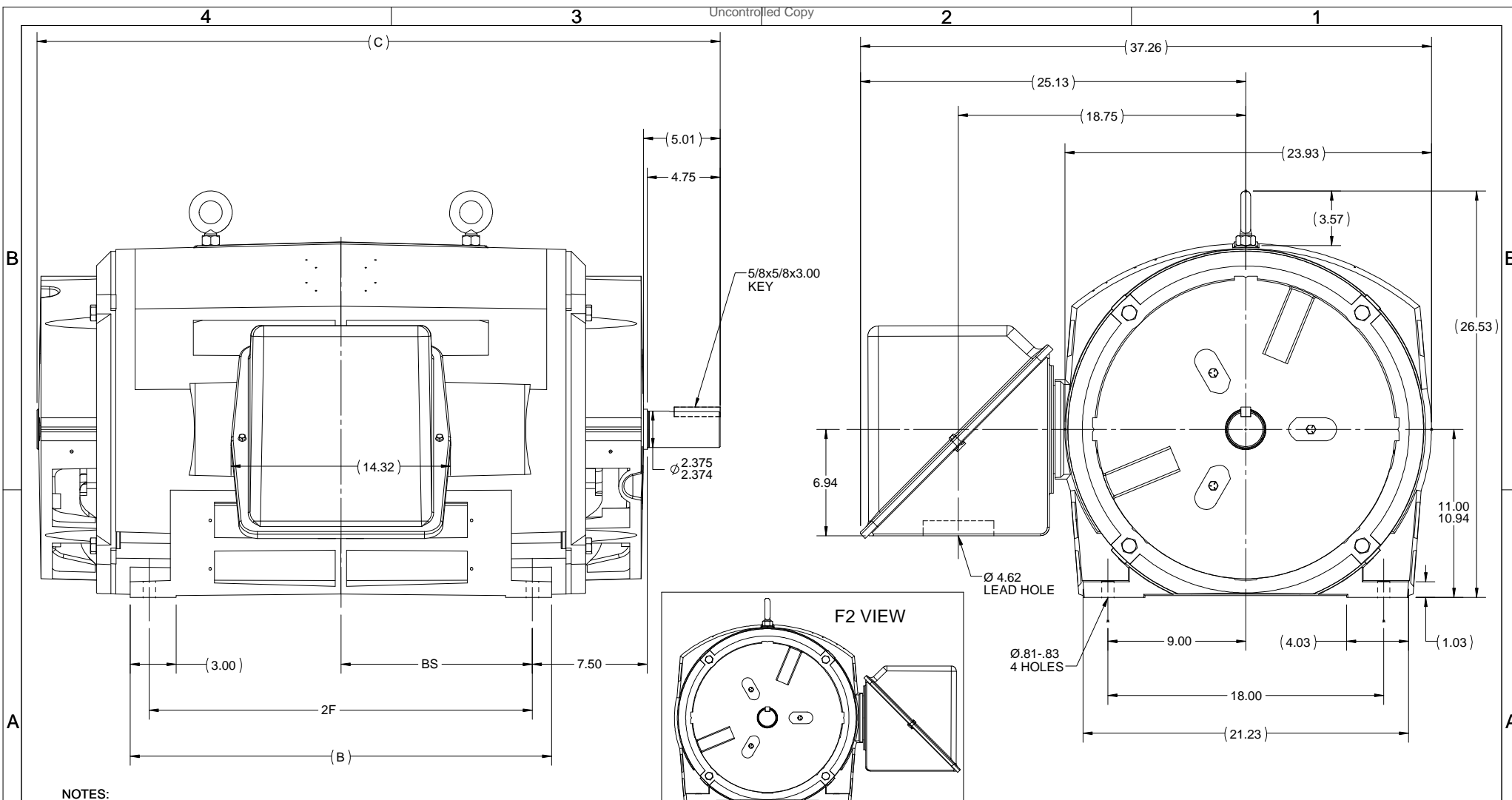
### Nameplate Specifications

|                            |                   |                        |                   |
|----------------------------|-------------------|------------------------|-------------------|
| Output HP                  | <b>450 Hp</b>     | Output KW              | <b>340.0 kW</b>   |
| Frequency                  | <b>60 Hz</b>      | Voltage                | <b>460 V</b>      |
| Current                    | <b>505.0 A</b>    | Speed                  | <b>1782 rpm</b>   |
| Service Factor             | <b>1</b>          | Phase                  | <b>3</b>          |
| Efficiency                 | <b>96.2 %</b>     | Duty                   | <b>Continuous</b> |
| Insulation Class           | <b>F</b>          | Design Code            | <b>B</b>          |
| KVA Code                   | <b>F</b>          | Frame                  | <b>449TS</b>      |
| Enclosure                  | <b>Drip Proof</b> | Overload Protector     | <b>No</b>         |
| Ambient Temperature        | <b>50 °C</b>      | Drive End Bearing Size | <b>6314</b>       |
| Opp Drive End Bearing Size | <b>6314</b>       | UL                     | <b>No</b>         |
| CSA                        | <b>Y</b>          | CE                     | <b>Y</b>          |
| IP Code                    | <b>12</b>         |                        |                   |

### Technical Specifications

|                       |                                    |                       |   |
|-----------------------|------------------------------------|-----------------------|---|
| Electrical Type       | <b>Squirrel Cage Induction Run</b> | Starting Method       | <b>Part Wdg Start &amp; Wye Start Delta Run</b> |
| Poles                 | <b>4</b>                           | Rotation              | <b>Reversible</b>                               |
| Mounting              | <b>Rigid base</b>                  | Motor Orientation     | <b>Horizontal</b>                               |
| Drive End Bearing     | <b>Ball</b>                        | Opp Drive End Bearing | <b>Ball</b>                                     |
| Frame Material        | <b>Cast Iron</b>                   | Shaft Type            | <b>TS</b>                                       |
| Overall Length        | <b>44.5 in</b>                     | Frame Length          | <b>29.38 in</b>                                 |
| Shaft Diameter        | <b>2.375 in</b>                    | Shaft Extension       | <b>5 in</b>                                     |
| Assembly/Box Mounting | <b>F1/F2 Capable</b>               |                       |   |
| Outline Drawing       | <b>B-SS514570-2938</b>             | Connection Diagram    | <b>A-EE7300BH</b>                               |

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

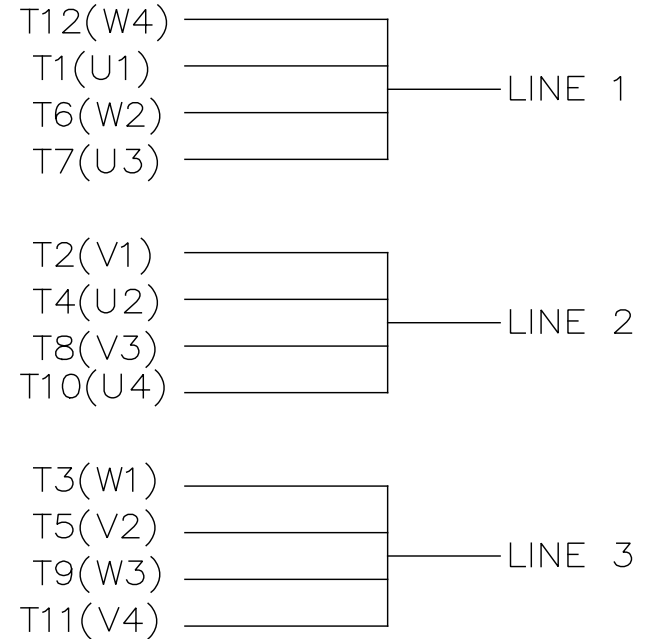
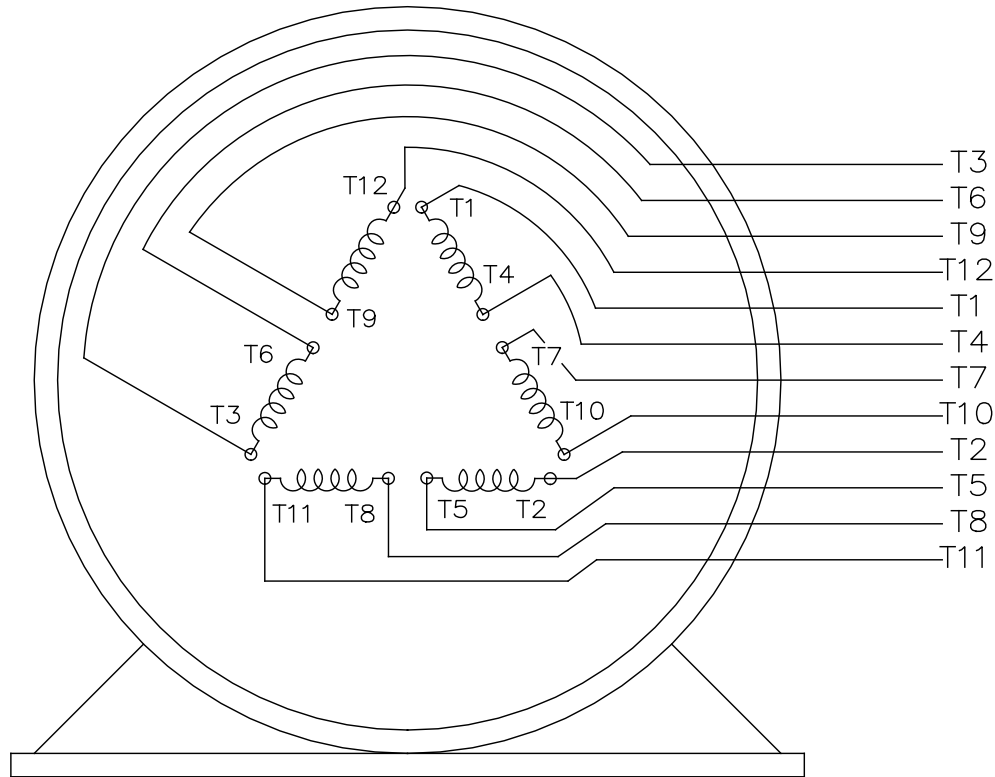
| DASH | FRAME | C     | B     | 2F    | BS    |
|------|-------|-------|-------|-------|-------|
| 2438 | 447TS | 39.58 | 22.50 | 20.00 | 10.00 |
| 2938 | 449TS | 44.58 | 27.50 | 25.00 | 12.50 |

|   |                    |                    |
|---|--------------------|--------------------|
| DRAWING REVISION<br>C   | REVISION BY<br>JP  | DATE<br>06-08-2018 |
| ECO<br>ECO-0146457  | APPROVED BY<br>DJK | DATE<br>06-08-2018 |
| ECO DESCRIPTION<br>MU129250/NMR-0154521   |                    |                    |
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|  |         |           |        |
|--|---------|-----------|--------|
| TOLERANCES UNLESS OTHERWISE SPECIFIED: |         |           |        |
| DEC.                                   | INCH    | mm        | ANGLE  |
| .X                                     | ±0.1    | [±2.5]    | ±7-30° |
| .XX                                    | ±0.03   | [±0.76]   |        |
| .XXX                                   | ±0.005  | [±0.127]  |        |
| .XXXX                                  | ±0.0005 | [±0.0127] |        |
| REMOVE BURRS & BREAK SHARP             |         |           |        |
| EDGES: .003/.015 [0.076/.381] X 45°    |         |           |        |
| CORNER FILLETS: R.02 [51]              |         |           |        |
| MACHINED SURFACES: 200                 |         |           |        |
|  |         | INCH      | 5.1    |
|  |         | mm        | mm     |
| mm SHOWN IN [BRACKETS]                 |         |           |        |

|                        |                    |
|------------------------|--------------------|
| DRAWN BY<br>KL         | DATE<br>06-19-1993 |
| APPROVED BY<br>JL      | DATE<br>06-20-1993 |
| REFERENCE              |                    |
| THIRD ANGLE PROJECTION |                    |

|  |                                   |
|--|-----------------------------------|
| Regal Beloit America, Inc.                               |                                   |
| DESCRIPTION<br><b>OUTLINE</b><br>447/449TS FR. - DR. PR. |                                   |
| MATERIAL   | PROCESS/FINISH                    |
| SIZE<br><b>B</b>   | DRAWING NUMBER<br><b>SS514570</b> |
|  | SHEET<br>1 OF 1                   |



VIEW OF TERMINAL END

|  |                              |             |                | TOLERANCES UNLESS SPECIFIED |              | REGAL REGAL - BELOIT CORPORATION | DRAWN RJW 02-11-2005 |        |                      |         |        |
|--|------------------------------|-------------|----------------|-----------------------------|--------------|----------------------------------|----------------------|--------|----------------------|---------|--------|
|  |                              |             |                | DEC.                        | INCHES       |                                  | CHK                  | ML     | 02-11-2005           |         |        |
|  |                              |             |                | .X                          | ±.1          |                                  | APPD                 | GK     | 02-11-2005           |         |        |
|  |                              |             |                | .XX                         | ±.02         | TITLE CONNECTION DIAGRAM         |                      | SCALE  |                      |         |        |
| D  | CHANGED TO REGAL TITLE BLOCK | ECO-0108299 | WGJ 08/22/2016 | EMH                         | .XXX ±.005   | 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 IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT |                              |             |                |                             |              | RFP 02-11-2005                   | CAD FILE ee7300bh    | SIZE A | DRAWING NO. EE7300BH | PAGE OF | REV. C |
|  |                              |             |                |                             |              | DIST LB                          |                      |        |                      |         |        |

**CERTIFICATION DATA SHEET**

**Model#:** 449TSTDN16040 AA      **WINDING#:** T4494183 NONE 1  
**CONN. DIAGRAM:** A-EE7300BH      **ASSEMBLY:** F1/F2 CAPABLE  
**OUTLINE:** B-SS514570-2938

**TYPICAL MOTOR PERFORMANCE DATA**

| HP      | KW      | SYNC. RPM | F.L. RPM  | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|---------|---------|-----------|-----------|-------|-----------|----------|--------|
| 450&350 | 340&260 | 1800      | 1782&1482 | 449TS | DP        | F        | B      |

| PH | Hz    | VOLTS   | FL AMPS | START TYPE  | DUTY       | INSL | S.F     | AMB°C | ELEVATION |
|----|-------|---------|---------|-------------|------------|------|---------|-------|-----------|
| 3  | 60/50 | 460#380 | 505&475 | PWS & YDRUN | CONTINUOUS | F1   | 1.0/1.0 | 50    | 3300      |

| FULL LOAD EFF:      | 3/4 LOAD EFF:   | 1/2 LOAD EFF:   | GTD. EFF | ELEC. TYPE      | NO LOAD AMPS |
|---------------------|-----------------|-----------------|----------|-----------------|--------------|
| 96.2&95.8           | 96.5            | 96.2            |          |                 |              |
| FULL LOAD PF: 86&86 | 3/4 LOAD PF: 84 | 1/2 LOAD PF: 77 | 95.8     | SQ CAGE IND RUN | 155          |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE    | B.D. TORQUE    | F.L. RISE°C |
|-------------|-------------------|----------------|----------------|-------------|
| 1324 LB-FT  | 2950              | 2500 LB-FT 188 | 3000 LB-FT 234 | 75          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2    | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|------------|--------------|-----------------|--------------|-------------------|
| 82 dBA                 | 92 dBA      | 92 LB-FT^2 | 1600 LB-FT^2 | 15 SEC.         | 1            | 2850 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    | BLUE (ENAMEL) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | OPE  |            |            |            |             |                         |                |
| BALL     | BALL | POLYREX EM | TS         | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |
| 6314     | 6314 |            |            |            |             |                         |                |

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

If Inverter equals NONE, contact factory for further information

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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 |

DATE: 06/21/2017 06:47:59 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

Data Sheet

4491STDN16040



Date: 6/20/2017  
 Customer:   
 Attention:   
 Submitted by: FAREEDA DUDEKULA

Submittal  
 Data @ 460 V

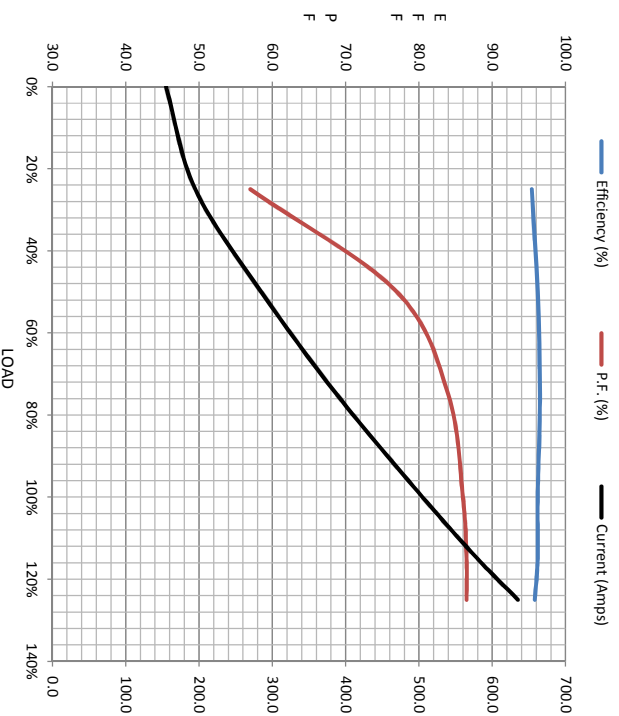
| Load           | Motor Load Data |      |      |      |       |       |       |       |
|----------------|-----------------|------|------|------|-------|-------|-------|-------|
|                | 0%              | 25%  | 50%  | 75%  | 100%  | 115%  | 125%  | LR    |
| Current (Amps) | 155             | 195  | 285  | 388  | 505   | 580   | 635   | 2,930 |
| Torque (ft-lb) | 0.00            | 329  | 659  | 992  | 1,324 | 1,526 | 1,661 | 2,500 |
| RPM            | 1800            | 1795 | 1792 | 1788 | 1782  | 1,778 | 1775  | 0     |
| Efficiency (%) |                 | 95.4 | 96.2 | 96.5 | 96.2  | 96.2  | 95.8  |       |
| P.F. (%)       | 3.0             | 57.0 | 77.0 | 84.0 | 86.0  | 86.5  | 86.5  | 32.0  |

Motor Speed Data

|                | LR    | Pull-Up | BD    | Rated | Idle |
|----------------|-------|---------|-------|-------|------|
| Speed (rpm)    | 0     | 900     | 1725  | 1782  | 1800 |
| Current (Amps) | 2,950 | 2,750   | 1,650 | 505   | 155  |
| Torque (ft-lb) | 2,500 | 2,000   | 3,000 | 1,324 | 0.00 |

Information Block

|                            |                 |        |        |        |
|----------------------------|-----------------|--------|--------|--------|
| HP                         | 450.0           |        |        |        |
| Sync. RPM                  | 1800            |        |        |        |
| Frame                      | 449             |        |        |        |
| Enclosure                  | DP              |        |        |        |
| Construction               | TDN             |        |        |        |
| Voltage                    | 460#380 V       |        |        |        |
| Frequency                  | 60 Hz           |        |        |        |
| Design                     | B               |        |        |        |
| LR Code letter             | F               |        |        |        |
| Service Factor             | 1.15            |        |        |        |
| Temp Rise @ FL             | 75 °C           |        |        |        |
| Duty                       | CONT            |        |        |        |
| Ambient                    | 40 °C           |        |        |        |
| Elevation                  | 1,000 feet      |        |        |        |
| Rotor/Shaft wkt            | 92.0 Lb-Fe      |        |        |        |
| Rel Wdg                    | T4494183 NONE   |        |        |        |
| Sound Pressure @ 1M        | 82 dBA          |        |        |        |
| VFD Rating                 | NONE            |        |        |        |
| Outline Dwg                | B-SS514570-2938 |        |        |        |
| Conn. Diag                 | A-EET300BH      |        |        |        |
| Additional Specifications: |                 |        |        |        |
| 0                          |                 |        |        |        |
| EQUIV CKT (OHMS / PHASE)   |                 |        |        |        |
| R1                         | R2              | X1     | X2     | Xm     |
| 0.0060                     | 0.0050          | 0.0490 | 0.0770 | 1.7290 |



Speed - Torque Curve

