

# PRODUCT INFORMATION PACKET



Model No: 811658.00  
Catalog No: 811658.00  
50 HP Severe Duty Motor, 3 phase, 1200 RPM, 460 V, 365T Frame, TEFC  
Severe Duty Motors



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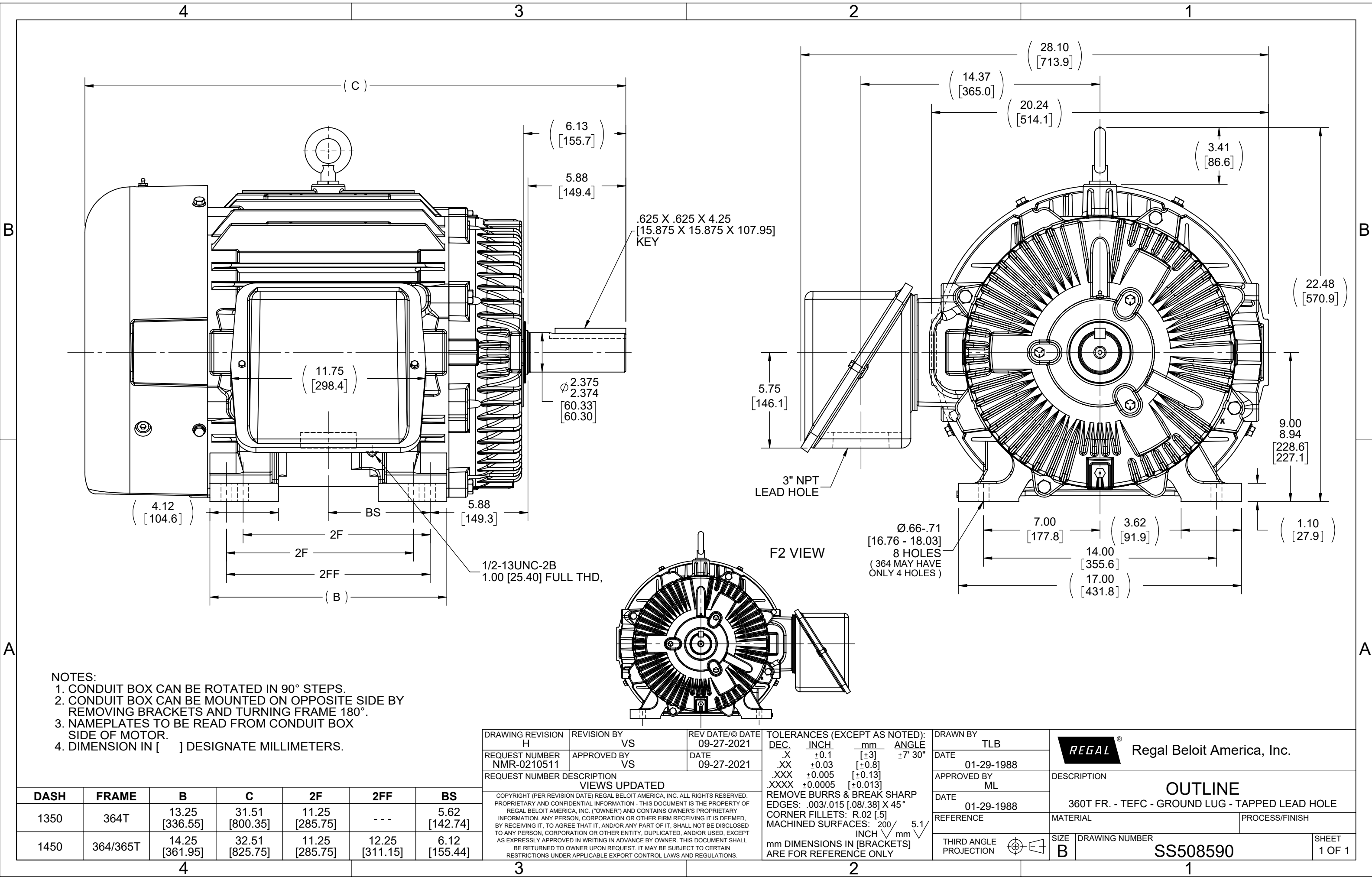
### Nameplate Specifications

|                        |            |                            |                             |
|------------------------|------------|----------------------------|-----------------------------|
| Output HP              | 50 Hp      | Output KW                  | 37.0 kW                     |
| Frequency              | 60 Hz      | Voltage                    | 460 V                       |
| Current                | 61.5 A     | Speed                      | 1182 rpm                    |
| Service Factor         | 1.15       | Phase                      | 3                           |
| Efficiency             | 94.5 %     | Power Factor               | 80.5                        |
| Duty                   | Continuous | Insulation Class           | F                           |
| Design Code            | B          | KVA Code                   | G                           |
| Frame                  | 365T       | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No         | Ambient Temperature        | 40 °C                       |
| Drive End Bearing Size | 6314       | Opp Drive End Bearing Size | 6312                        |
| UL                     | Recognized | CSA                        | Y                           |
| CE                     | Y          | IP Code                    | 56                          |
| Number of Speeds       | 1          |                            |                             |

### Technical Specifications

|                       |                              |                       |                  |
|-----------------------|------------------------------|-----------------------|------------------|
| Electrical Type       | Squirrel Cage Inverter Rated | Starting Method       | Line Or Inverter |
| Poles                 | 6                            | Rotation              | Reversible       |
| Resistance Main       | .12 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        | 31.51 in         |
| Frame Length          | 14.50 in                     | Shaft Diameter        | 2.375 in         |
| Shaft Extension       | 5.88 in                      | Assembly/Box Mounting | F1/F2 CAPABLE    |
| Outline Drawing       | B-SS508590-1450              | Connection Drawing    | A-EE7300U        |

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## IF MOTOR HAS 9 LEADS



## IF MOTOR HAS 6 LEADS



A-9806 DECAL IF CALLED FOR

## IF MOTOR HAS 12 LEADS



VIEW OF TERMINAL END

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                       |                                                                   |                                                                              |                 |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------|--|
| DRAWING REVISION<br>L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REVISION BY<br>AJW | DATE<br>05-04-2015 | TOLERANCES UNLESS<br>OTHERWISE SPECIFIED:<br><div><div>DEC.</div><div>INCH.</div><div>mm</div></div> <div>ANGLE</div> <div>±7' 30"</div> <div>.X</div> <div>±0.1</div> <div>[±2.5]</div> <div>.XX</div> <div>±0.02</div> <div>[±0.51]</div> <div>XXX</div> <div>±0.005</div> <div>[±0.127]</div> <div>.XXXX</div> <div>±0.0005</div> <div>[±0.0127]</div> <div>REMOVE BURRS &amp; BREAK SHARP</div> <div>EDGES: .003/.015 [0.076/.381] X 45°</div> <div>CORNER FILLETS: R.02 [0.51]</div> <div>MACHINED SURFACES: 200</div> <div>INCH</div> <div>5.1</div> <div>mm</div> <div>mm SHOWN IN [BRACKETS]</div> | DRAWN BY<br>DRS                                                                       | <div><div>REGAL™</div><div>Regal Beloit America, Inc.</div></div> | DESCRIPTION<br><div>CONN DIAGRAM-EXTERNAL</div> <div>3Ø SINDLE VOLTAGE</div> |                 |  |
| ECO<br>ECO-0077067                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | APPROVED BY<br>EWH | DATE<br>05-05-2015 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DATE<br>09-27-1996                                                                    |                                                                   |                                                                              |                 |  |
| ECO DESCRIPTION<br>UPDATED TO SOLIDWORKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | APPROVED BY<br>GK                                                                     |                                                                   |                                                                              |                 |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | REFERENCE                                                                             | MATERIAL                                                          |                                                                              |                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    | THIRD ANGLE<br>PROJECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | SIZE<br>A                                                         | DRAWING NUMBER<br>EE7300U                                                    | SHEET<br>1 OF 1 |  |



P.O. BOX 8003  
WAUSAU, WI 54401-8003  
PH. 715-675-3311

DATA VOLTS: 460

### CERTIFICATION DATA SHEET

CONN. DIAGRAM: A-EE7300U  
OUTLINE: B-SS508590-1450  
WINDING: T367601

CAT #: 811658.00

NONE 3

### TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|----|----|----------|--------|-------|-----------|------|----------|--------|
| 50 | 37 | 1200     | 1182   | 365T  | TEFC      | TFS  | G        | BC     |

| PH | HZ | VOLTS | AMPS | START TYPE       | DUTY | INSL | S.F. | AMB | ELEV. |
|----|----|-------|------|------------------|------|------|------|-----|-------|
| 3  | 60 | 460   | 61.5 | LINE OR INVERTER | CONT | F    | 1.15 | 40  | 3300  |

| F.L. EFF | 94.5 | 3/4 LD EFF | 94.5 | 1/2 LD EFF | 94.1 | GTD EFF |      | ELECT. TYPE       |  |
|----------|------|------------|------|------------|------|---------|------|-------------------|--|
| F.L. PF  | 80.5 | 3/4 LD PF  | 76.0 | 1/2 LD PF  | 66.0 |         | 93.6 | SQ CAGE INV RATED |  |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE    | B.D. TORQUE    | F.L. RISE (°C) |
|-------------|-----------------|----------------|----------------|----------------|
| 222 LB-FT   | 362             | 445 LB-FT 200% | 625 LB-FT 282% | 70             |

| PRESSURE @ 3 | POWER  | ROTOR WK²   | MAX. LOAD WK² | SAFE STALL TIME | STARTS/HOUR | MOTOR WGT |
|--------------|--------|-------------|---------------|-----------------|-------------|-----------|
| 58 dBA       | 67 dBA | 17.2 LB-FT² | 0 LB-FT²      | 25 SEC.         | 0           | 1025 LB.  |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | MOTOR ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT            |
|-----------------|------------------|------------|-------------------|-------------|--------------------|------------|---------|------------------|
| STANDARD        | STANDARD         | RIGID      | HORIZONTAL        | UM SEVERE   | DIVISION 2 T2B     | NO         | NONE    | N - LEESON WATTS |

| 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) | CAST IRON      |
| 6314     | 6312 |            |            |            |             |                         |                |

| THERMOSTATS | PROTECTORS | WDG RTD's | BRG RTD's | THERMISTORS | CONTROL | SPACE HEATERS |
|-------------|------------|-----------|-----------|-------------|---------|---------------|
| NONE        | NOT        | NONE      | NONE      | NONE        | FALSE   | NA            |

| R1 (ohms/ph) | R2 (ohms/ph) | X1 (ohms/ph) | X2 (ohms/ph) | Xm (ohms/ph) | VIBRATION (in/sec) | FLOAT |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 0.079        | 0.071        | 0.414        | 0.675        | 9.991        | 0.080              | ODE   |

|                                 |                                          |                                                                          |
|---------------------------------|------------------------------------------|--------------------------------------------------------------------------|
| *<br>N<br>O<br>T<br>E<br>S<br>* |                                          | <b>INVERTER TORQUE: CONSTANT 2:1</b><br><b>INV. HP SPEED RANGE: NONE</b> |
|                                 |                                          |                                                                          |
|                                 |                                          |                                                                          |
|                                 |                                          |                                                                          |
|                                 |                                          |                                                                          |
|                                 | <b>ENCODER: NONE</b><br>NONE<br>NONE     | NONE PPR                                                                 |
| DATE: 1/31/2018                 | <b>BRAKE: NONE</b><br>NONE               |                                                                          |
|                                 | <b>FT-LB: NA</b><br><b>VOLTAGE: NONE</b> |                                                                          |
|                                 | <b>UL: Y-(LEESON UL REC)</b>             |                                                                          |

## Data Sheet

Date: 1/31/2018

811658.00



Data @ 460 V

## Motor Load Data

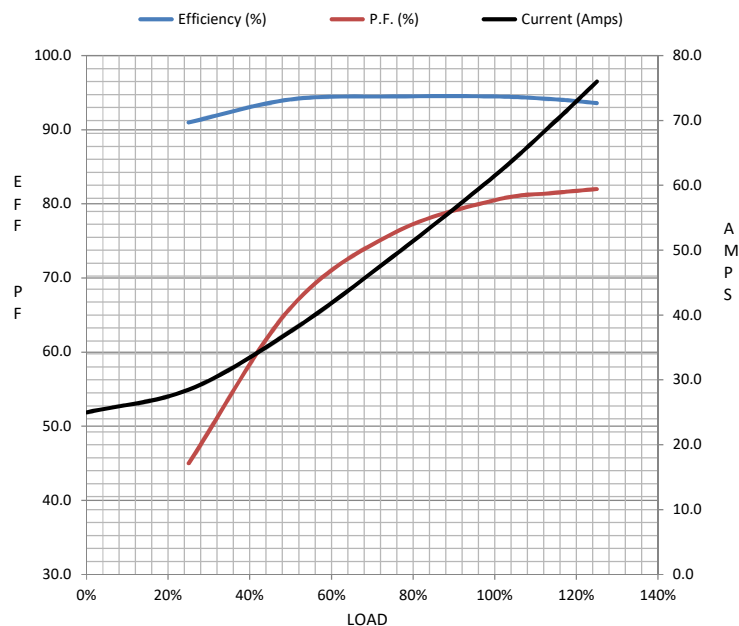
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 25.0 | 28.5 | 37.5 | 49.0 | 61.5 | 70.0  | 76.0 | 362  |  |
| Torque (ft-lb) | 0.00 | 55.0 | 110  | 166  | 222  | 256   | 280  | 445  |  |
| RPM            | 1200 | 1195 | 1192 | 1188 | 1182 | 1,178 | 1175 | 0    |  |
| Efficiency (%) |      | 91.0 | 94.1 | 94.5 | 94.5 | 94.1  | 93.6 |      |  |
| P.F. (%)       | 4.0  | 45.0 | 66.0 | 76.0 | 80.5 | 81.5  | 82.0 | 34.0 |  |

## Motor Speed Data

|                | LR  | Pull-Up | BD   | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM)    | 0   | 600     | 1125 | 1182  | 1200 |
| Current (Amps) | 362 | 325     | 225  | 61.5  | 25.0 |
| Torque (ft-lb) | 445 | 425     | 625  | 222   | 0.00 |

## Information Block

|                            |                 |        |        |        |
|----------------------------|-----------------|--------|--------|--------|
| HP                         | 50.0            |        |        |        |
| Sync. RPM                  | 1200            |        |        |        |
| Frame                      | 365             |        |        |        |
| Enclosure                  | TEFC            |        |        |        |
| Construction               | TFS             |        |        |        |
| Voltage                    | 460 V           |        |        |        |
| Frequency                  | 60 Hz           |        |        |        |
| Design                     | B               |        |        |        |
| LR Code letter             | G               |        |        |        |
| Service Factor             | 1.15            |        |        |        |
| Temp Rise @ FL             | 70 °C           |        |        |        |
| Duty                       | CONT            |        |        |        |
| Ambient                    | 40 °C           |        |        |        |
| Elevation                  | 1,000 feet      |        |        |        |
| Rotor/Shaft wk²            | 17.2 Lb-Ft²     |        |        |        |
| Ref Wdg                    | T367601 NONE    |        |        |        |
| Sound Pressure @ 1M        | 58 dBA          |        |        |        |
| VFD Rating                 | CONSTANT 2:1    |        |        |        |
| Outline Dwg                | B-SS508590-1450 |        |        |        |
| Conn. Diag                 | A-EE7300U       |        |        |        |
| Additional Specifications: |                 |        |        |        |
| 0                          |                 |        |        |        |
| 0                          |                 |        |        |        |
| EQUIV CKT (OHMS / PHASE)   |                 |        |        |        |
| R1                         | R2              | X1     | X2     | Xm     |
| 0.0790                     | 0.0710          | 0.4140 | 0.6750 | 9.9910 |



## Speed - Torque Curve

