

PRODUCT INFORMATION PACKET

Model No: 445THFN9087
Catalog No: W614
150 HP Severe Duty Motor, 3 phase, 1200 RPM, 460 V, 445T Frame, TEFC
Severe Duty Motors



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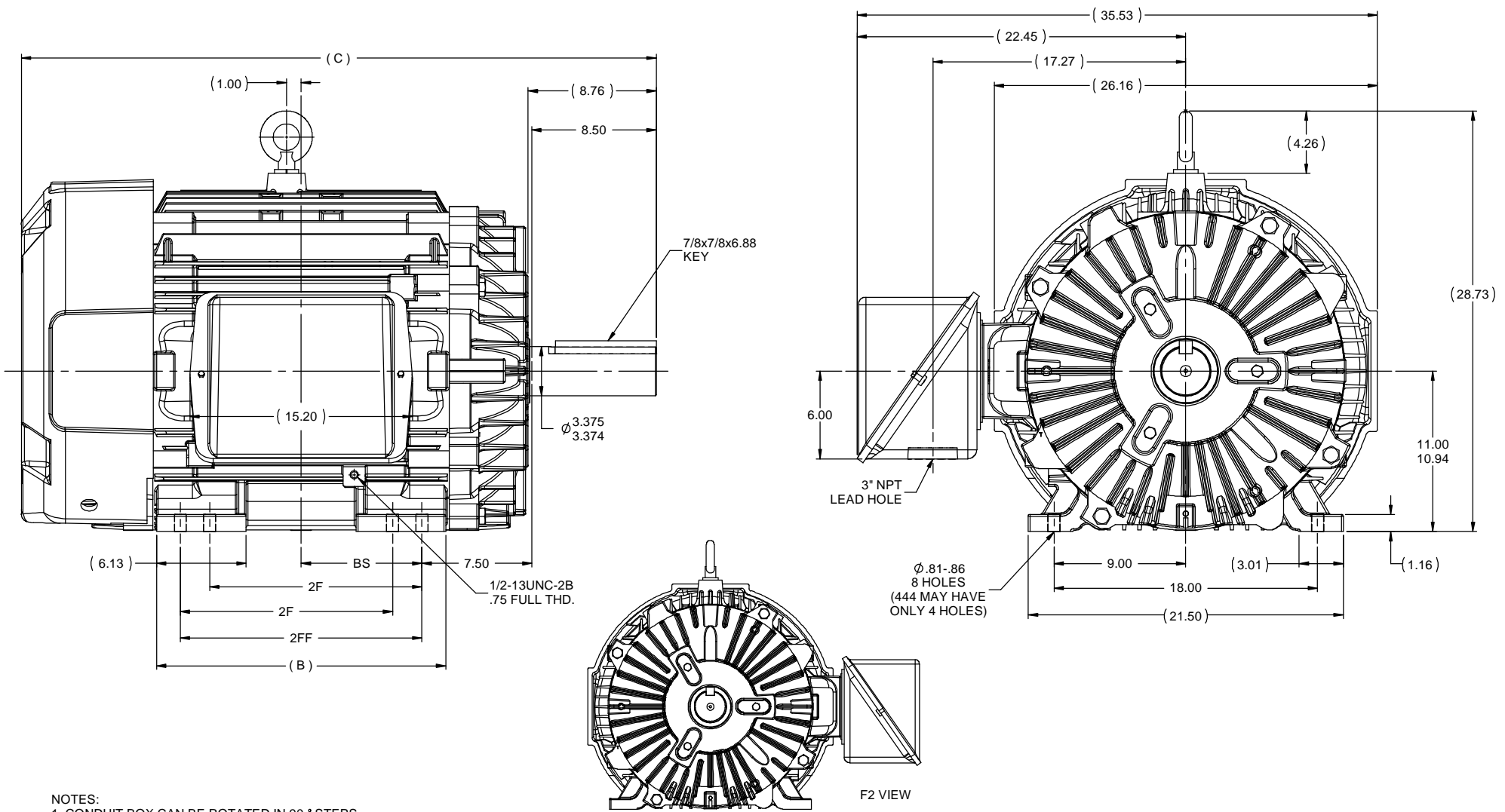


Nameplate Specifications

| | | | |
|------------------------|----------------|----------------------------|-----------------------------|
| Output HP | 150 Hp | Output KW | 112.0 kW |
| Frequency | 60 Hz | Voltage | 460 V |
| Current | 181.0 A | Speed | 1190 rpm |
| Service Factor | 1.15 | Phase | 3 |
| Efficiency | 95.8 % | Power Factor | 81 |
| Duty | Continuous | Insulation Class | H |
| Design Code | B | KVA Code | G |
| Frame | 445T | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No | Ambient Temperature | 40 °C |
| Drive End Bearing Size | NU318 | Opp Drive End Bearing Size | 6316 |
| UL | Recognized | CSA | Y |
| CE | Y | IP Code | 56 |
| Hazardous Location | DIVISION 2 T2B | Number of Speeds | 1 |

Technical Specifications

| | | | |
|-----------------------|------------------------------|-----------------------|------------------|
| Electrical Type | Squirrel Cage Inverter Rated | Starting Method | Line Or Inverter |
| Poles | 6 | Rotation | Reversible |
| Resistance Main | .022 Ohms | Mounting | Rigid Base |
| Motor Orientation | Horizontal | Drive End Bearing | Roller |
| Opp Drive End Bearing | Ball | Frame Material | Cast Iron |
| Shaft Type | T | Overall Length | 43.35 in |
| Frame Length | 20.25 in | Shaft Diameter | 3.375 in |
| Shaft Extension | 8.76 in | Assembly/Box Mounting | F1/F2 CAPABLE |
| Inverter Load | CONSTANT 2:1 | | |
| Outline Drawing | B-SS517026-2025 | Connection Drawing | A-EE7300U |



- 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. NAMPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

| | | | | | | |
|------------------------|---|----------------|-----|-----------------------------|---------------------------|---------------------|
| 8 | UPDATED MOUNTING HOLE NOTE | HV 08-07-2012 | EH | TOLERANCES UNLESS SPECIFIED | | DRAWN DRS 2/24/1999 |
| 8 | UPDATED FRAME TO CURRENT STD'S. ISAAC 09-5049 | JJB 01-17-2012 | DEC | INCHES | | CHK ML 2/25/1999 |
| 7 | ADDED F2 VIEW | MSG 04-21-2010 | MSG | x ±.1 | APPR JL 2/25/1999 | SCALE 5:32 |
| 6 | REVISED FRAME AND DASH TABLE ISAAC09-5049 | TJW 04-01-2010 | EH | xx ±.02 | TITLE OUTLINE | REF |
| 5 | UPDATED DRAWING | RJW 04-18-2007 | ML | xxx ±.005 | 444/445T FR. - TEFC - STD | FMF |
| 4 | CHG TO SHORT FAN GUARD DESIGN PER CN39335 | RWR 02-17-2007 | ML | xxxx ±.0005 | MATL | PAGE OF |
| NO | REVISION | BY & DATE | CHK | LANG ±7'30" | FINISH | REV |
| THIRD ANGLE PROJECTION | | | | RFP | PREV | SIZE DRAWING NO |
| | | | | NETWORK FILE NAME | SS517026 | REV |
| | | | | SIZE | B | DRAWING NO |
| | | | | SS517026 | | REV |
| | | | | | | 9 |

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 L | REVISION BY AJW | DATE 05-04-2015 | TOLERANCES UNLESS OTHERWISE SPECIFIED: | DRAWN BY DRS | Regal Beloit America, Inc. | | | | | | | | | | | | | | | | | | | |
| ECO ECO-0077067 | APPROVED BY EWH | DATE 05-05-2015 | <table style="font-size: small; border-collapse: collapse;"> <tr> <td><u>DEC.</u></td> <td><u>INCH</u></td> <td><u>mm</u></td> <td><u>ANGLE</u></td> </tr> <tr> <td>.X</td> <td>±0.1</td> <td>[±2.5]</td> <td>±7' 30"</td> </tr> <tr> <td>.XX</td> <td>±0.02</td> <td>[±0.51]</td> <td></td> </tr> <tr> <td>.XXX</td> <td>±0.005</td> <td>[±0.127]</td> <td></td> </tr> <tr> <td>.XXXX</td> <td>±0.0005</td> <td>[±0.0127]</td> <td></td> </tr> </table> | <u>DEC.</u> | | <u>INCH</u> | <u>mm</u> | <u>ANGLE</u> | .X | ±0.1 | [±2.5] | ±7' 30" | .XX | ±0.02 | [±0.51] | | .XXX | ±0.005 | [±0.127] | | .XXXX | ±0.0005 | [±0.0127] | |
| <u>DEC.</u> | <u>INCH</u> | <u>mm</u> | <u>ANGLE</u> | | | | | | | | | | | | | | | | | | | | | |
| .X | ±0.1 | [±2.5] | ±7' 30" | | | | | | | | | | | | | | | | | | | | | |
| .XX | ±0.02 | [±0.51] | | | | | | | | | | | | | | | | | | | | | | |
| .XXX | ±0.005 | [±0.127] | | | | | | | | | | | | | | | | | | | | | | |
| .XXXX | ±0.0005 | [±0.0127] | | | | | | | | | | | | | | | | | | | | | | |
| ECO DESCRIPTION UPDATED TO SOLIDWORKS | | | REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45° CORNER FILLETS: R.02 [.51] MACHINED SURFACES: 200 $\sqrt{\text{INCH}}$ 5.1 $\sqrt{\text{mm}}$ mm SHOWN IN [BRACKETS] | APPROVED BY GK | DESCRIPTION CONN DIAGRAM-EXTERNAL 3Ø SINDLE VOLTAGE | | | | | | | | | | | | | | | | | | | |
| COPYRIGHT 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. | | | | DATE 09-30-1996 | | MATERIAL | PROCESS/FINISH | | | | | | | | | | | | | | | | | |
| | | | | REFERENCE | SIZE A | DRAWING NUMBER EE7300U | SHEET 1 OF 1 | | | | | | | | | | | | | | | | | |

CERTIFICATION DATA SHEET

Model#: 445THFN9087 AC WINDING#: T445692 NONE 6
 CONN. DIAGRAM: A-EE7300U ASSEMBLY: F1/F2 CAPABLE
 OUTLINE: B-SS517026-2025

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-----|-----|-----------|----------|-------|-----------|----------|--------|
| 150 | 112 | 1200 | 1190 | 445T | TEFC | G | B |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|----|----|-------|---------|------------------|------------|------|------|-------|-----------|
| 3 | 60 | 460 | 181 | LINE OR INVERTER | CONTINUOUS | H1 | 1.15 | 40 | 3300 |

| | | | | | |
|---------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD EFF: 95.8 | 3/4 LOAD EFF: 95.8 | 1/2 LOAD EFF: 95.4 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
| FULL LOAD PF: 81 | 3/4 LOAD PF: 77 | 1/2 LOAD PF: 67.5 | 95.4 | SQ CAGE INV RATED | 72 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|----------------|----------------|-------------|
| 662 LB-FT | 1085 | 1075 LB-FT 162 | 1700 LB-FT 257 | 65 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS / HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|------------|--------------|-----------------|---------------|-------------------|
| 72 dBA | 82 dBA | 91 LB-FT^2 | 2350 LB-FT^2 | 25 SEC. | 2 | 2550 LBS. |

*** SUPPLEMENTAL INFORMATION ***

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|-----------------|------------------|------------|-------------|---------------------|--------------------|------------|---------|--------------|
| STANDARD | STANDARD | RIGID | HORIZONTAL | PREMIUM SEVERE DUTY | DIVISION 2 T2B | FALSE | NONE | BLUE (EPOXY) |

| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|----------|------|-----------------|------------|------------|-------------|-------------------------|----------------|
| DE | OPE | SHC-100/POLYREX | T | NONE | NONE | 1045 HOT ROLLED (C-204) | CAST IRON |
| ROLLER | BALL | | | | | | |
| NU318 | 6316 | | | | | | |

| 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

| | |
|---------------------------------|---|
| * N O T E S * | INVERTER TORQUE: CONSTANT 2:1 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 04:53:07 AM
 FORM 3531 REV.3 02/07/99
 ** Subject to change without notice.

Data Sheet

Date: 29-06-2017
Customer: _____
Attention: _____
Submitted by: FAREEDA DUDEKULA



445THFN9087

Submittal

Data @ **460 V**

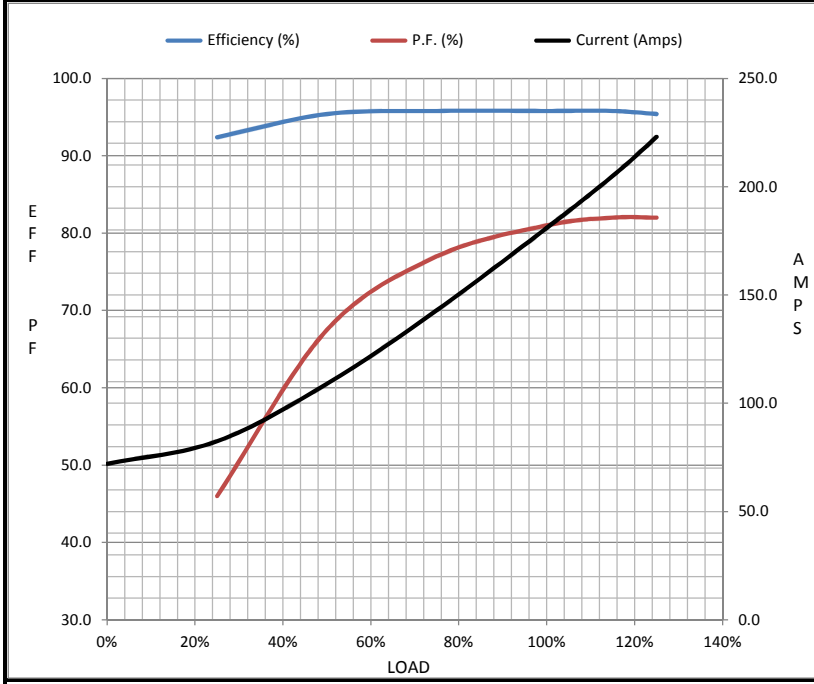
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|-------|
| Current (Amps) | 72.0 | 82.5 | 109 | 143 | 181 | 205 | 223 | 1,085 |
| Torque (ft-lb) | 0.00 | 165 | 330 | 495 | 662 | 760 | 825 | 1,075 |
| RPM | 1200 | 1198 | 1196 | 1194 | 1190 | 1,188 | 1186 | 0 |
| Efficiency (%) | | 92.4 | 95.4 | 95.8 | 95.8 | 95.8 | 95.4 | |
| P.F. (%) | 3.5 | 46.0 | 67.5 | 77.0 | 81.0 | 82.0 | 82.0 | 28.0 |

Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-------|---------|-------|-------|------|
| Speed (RPM) | 0 | 600 | 1150 | 1190 | 1200 |
| Current (Amps) | 1,085 | 975 | 650 | 181 | 72.0 |
| Torque (ft-lb) | 1,075 | 1,025 | 1,700 | 662 | 0.00 |

| Information Block | | | | |
|-----------------------------|-------------------------|--------|--------|--------|
| HP | 150.0 | | | |
| Sync. RPM | 1200 | | | |
| Frame | 445 | | | |
| Enclosure | TEFC | | | |
| Construction | TFN | | | |
| Voltage | 460 V | | | |
| Frequency | 60 Hz | | | |
| Design | B | | | |
| LR Code letter | G | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 65 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 91.0 Lb-Ft ² | | | |
| Ref Wdg | T445692 NONE | | | |
| Sound Pressure @ 1M | 72 dBA | | | |
| VFD Rating | CONSTANT 2:1 | | | |
| Outline Dwg | B-SS517026-2025 | | | |
| Conn. Diag | A-EE7300U | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 365THFS8036 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0130 | 0.0120 | 0.1610 | 0.1970 | 3.4590 |



Speed - Torque Curve

