

# PRODUCT INFORMATION PACKET

Model No: 445THFN9036

Catalog No: W612

Severe Duty Motor, 150 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 445T Frame, TEFC



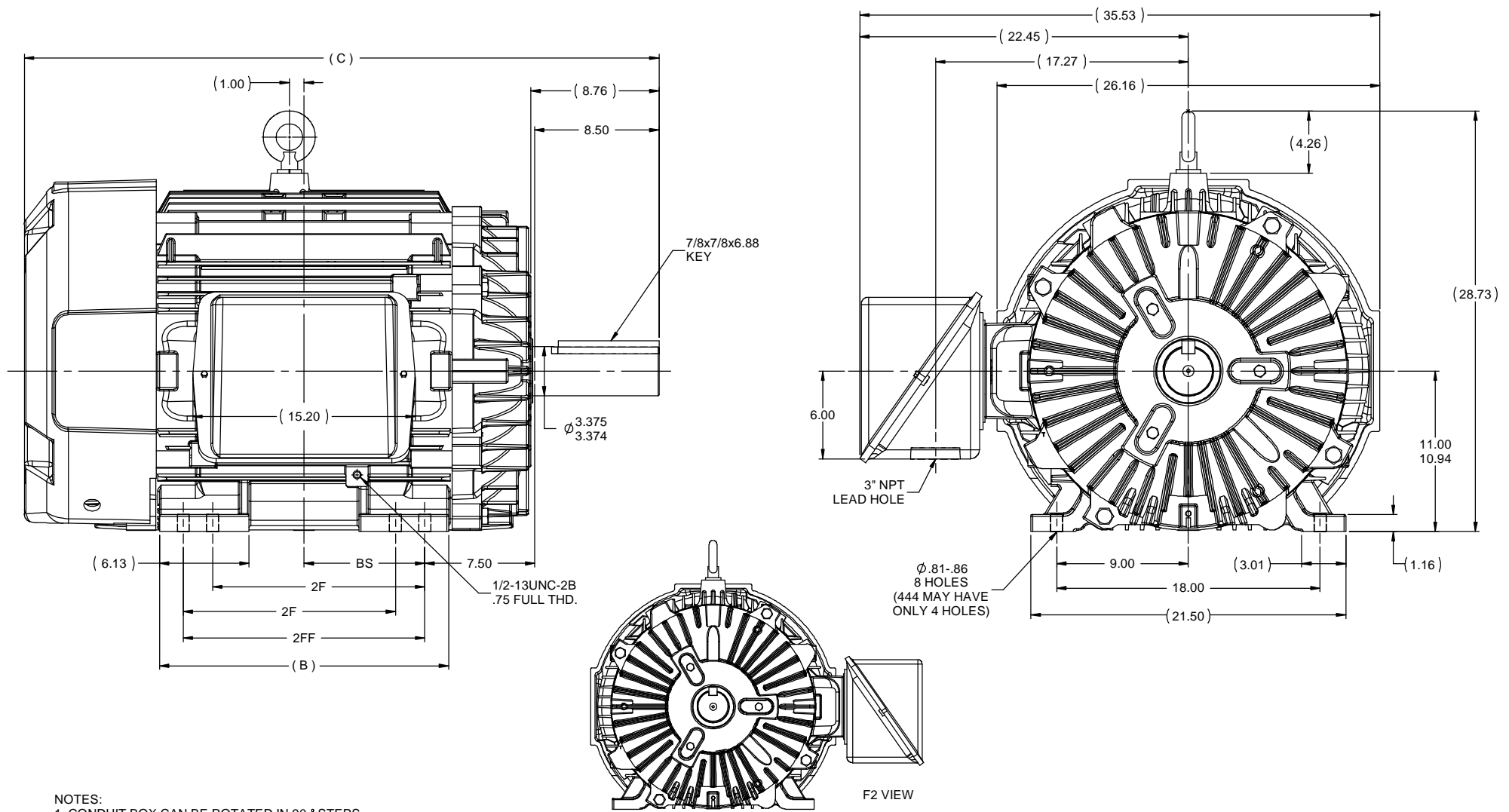
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### Nameplate Specifications

|                        |                      |                            |                                    |
|------------------------|----------------------|----------------------------|------------------------------------|
| Output HP              | <b>150 Hp</b>        | Output KW                  | <b>112.0 kW</b>                    |
| Frequency              | <b>60 Hz</b>         | Voltage                    | <b>460 V</b>                       |
| Current                | <b>172.0 A</b>       | Speed                      | <b>1785 rpm</b>                    |
| Service Factor         | <b>1.15</b>          | Phase                      | <b>3</b>                           |
| Efficiency             | <b>95.8 %</b>        | Power Factor               | <b>85</b>                          |
| Duty                   | <b>Continuous</b>    | Insulation Class           | <b>F</b>                           |
| Design Code            | <b>B</b>             | KVA Code                   | <b>G</b>                           |
| Frame                  | <b>445T</b>          | Enclosure                  | <b>Totally Enclosed Fan Cooled</b> |
| Thermal Protection     | <b>No Protection</b> | Ambient Temperature        | <b>40 °C</b>                       |
| Drive End Bearing Size | <b>6318</b>          | Opp Drive End Bearing Size | <b>6316</b>                        |
| UL                     | <b>Recognized</b>    | CSA                        | <b>Y</b>                           |
| CE                     | <b>Y</b>             | IP Code                    | <b>56</b>                          |
| Number of Speeds       | <b>1</b>             |                            |                                    |

### Technical Specifications

|                       |                                     |                       |                         |
|-----------------------|-------------------------------------|-----------------------|-------------------------|
| Electrical Type       | <b>Squirrel Cage Inverter Rated</b> | Starting Method       | <b>Line Or Inverter</b> |
| Poles                 | <b>4</b>                            | Rotation              | <b>Reversible</b>       |
| Resistance Main       | <b>.0275 Ohms</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>T</b>                            | Overall Length        | <b>43.35 in</b>         |
| Frame Length          | <b>20.25 in</b>                     | Shaft Diameter        | <b>3.375 in</b>         |
| Shaft Extension       | <b>8.76 in</b>                      | Assembly/Box Mounting | <b>F1/F2 Capable</b>    |
| Inverter Load         | <b>CONSTANT 10:1</b>                |                       |                         |
| Connection Drawing    | <b>A-EE7300U</b>                    | Outline Drawing       | <b>B-SS517026-2025</b>  |



- 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                    | B                         | SS517026            |

| DASH | FRAME    | B     | C     | BS   | 2F    | 2FF   |
|------|----------|-------|-------|------|-------|-------|
| 1825 | 444T     | 17.75 | 41.35 | 7.25 | 14.50 | ---   |
| 2025 | 444/445T | 19.75 | 43.35 | 8.25 | 14.50 | 16.50 |

**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><b>L</b>   | REVISION BY<br><b>AJW</b> | DATE<br><b>05-04-2015</b> | TOLERANCES UNLESS OTHERWISE SPECIFIED:   | DRAWN BY<br><b>DRS</b>    | <b>Regal Beloit America, Inc.</b>                                |                                  |                        |              |    |      |        |         |     |       |         |  |      |        |          |  |       |         |           |  |
| ECO<br><b>ECO-0077067</b>  | APPROVED BY<br><b>EWH</b> | DATE<br><b>05-05-2015</b> | <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<br><b>UPDATED TO SOLIDWORKS</b>  |                           |                           | REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45°<br>CORNER FILLETS: R.02 [.51]<br>MACHINED SURFACES: 200 $\sqrt{\text{INCH}}$ 5.1 $\sqrt{\text{mm}}$<br>mm SHOWN IN [BRACKETS]  | APPROVED BY<br><b>GK</b>  | DESCRIPTION<br><b>CONN DIAGRAM-EXTERNAL</b><br>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<br><b>09-30-1996</b> |  | MATERIAL                         | PROCESS/FINISH         |              |    |      |        |         |     |       |         |  |      |        |          |  |       |         |           |  |
|  |                           |                           |  | REFERENCE                 | SIZE<br><b>A</b>   | DRAWING NUMBER<br><b>EE7300U</b> | SHEET<br><b>1 OF 1</b> |              |    |      |        |         |     |       |         |  |      |        |          |  |       |         |           |  |

**CERTIFICATION DATA SHEET**

Model#: 445THFN9036 AG WINDING#: T4454127 NONE 1  
 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 | 1800               | 1785     | 445T               | TEFC       | G              | B      |                   |           |               |                   |
| PH                     | Hz  | VOLTS              | FL AMPS  | START TYPE         | DUTY       | INSL           | S.F    | AMB°C             | ELEVATION |               |                   |
| 3                      | 60  | 460                | 172      | LINE OR INVERTER   | CONTINUOUS | F1             | 1.15   | 40                | 3300      |               |                   |
| FULL LOAD EFF: 95.8    |     | 3/4 LOAD EFF: 96.2 |          | 1/2 LOAD EFF: 95.4 |            | GTD. EFF       |        | ELEC. TYPE        |           | NO LOAD AMPS  |                   |
| FULL LOAD PF: 85       |     | 3/4 LOAD PF: 82    |          | 1/2 LOAD PF: 74    |            | 95.4           |        | SQ CAGE INV RATED |           | 60            |                   |
| F.L. TORQUE            |     | LOCKED ROTOR AMPS  |          | L.R. TORQUE        |            | B.D. TORQUE    |        | F.L. RISE°C       |           |               |                   |
| 441 LB-FT              |     | 1085               |          | 800 LB-FT 181      |            | 1150 LB-FT 261 |        | 70                |           |               |                   |
| SOUND PRESSURE @ 3 FT. |     | SOUND POWER        |          | ROTOR WK^2         |            | MAX. WK^2      |        | SAFE STALL TIME   |           | STARTS / HOUR | APPROX. MOTOR WGT |
| 75 dBA                 |     | 85 dBA             |          | 47 LB-FT^2         |            | 1000 LB-FT^2   |        | 25 SEC.           |           | 2             | 2050 LBS.         |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY         | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAIN         |
|-----------------|------------------|------------|-------------|---------------------|--------------------|------------|---------|--------------|
| 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  |            |            |            |             |                         |                |
| BALL     | BALL | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |
| 6318     | 6316 |            |            |            |             |                         |                |

| 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

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N  
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\*

|                                |
|--------------------------------|
| INVERTER TORQUE: CONSTANT 10:1 |
| 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 04:48:22 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

Data Sheet

Date: 6/19/2017

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

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

Submitted by: FAREEDA DUDEKULA



445THFN9036

Submittal

Data @ 460 V

Motor Load Data

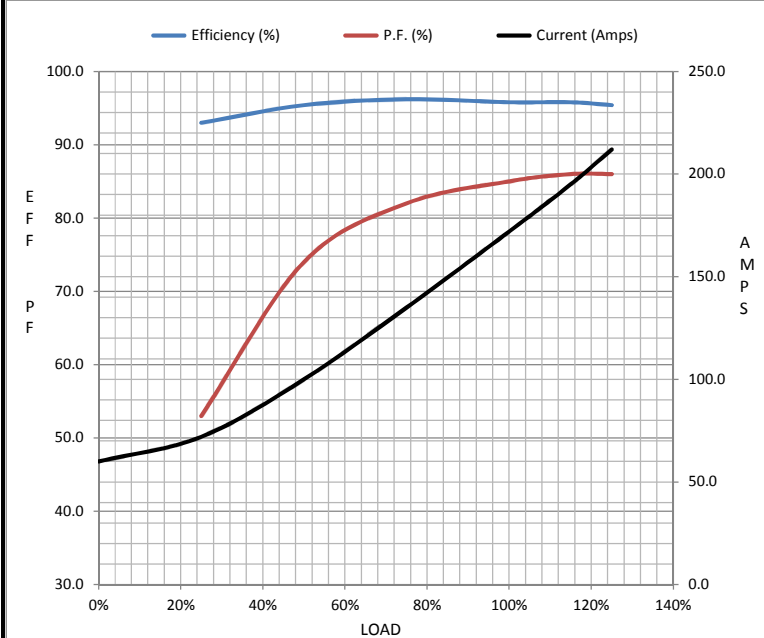
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR    |
|----------------|------|------|------|------|------|-------|------|-------|
| Current (Amps) | 60.0 | 72.0 | 100  | 135  | 172  | 195   | 212  | 1,085 |
| Torque (ft-lb) | 0.00 | 110  | 220  | 330  | 441  | 508   | 553  | 800   |
| RPM            | 1800 | 1796 | 1792 | 1790 | 1785 | 1,782 | 1780 | 0     |
| Efficiency (%) |      | 93.0 | 95.4 | 96.2 | 95.8 | 95.8  | 95.4 |       |
| P.F. (%)       | 4.5  | 53.0 | 74.0 | 82.0 | 85.0 | 86.0  | 86.0 | 28.0  |

Motor Speed Data

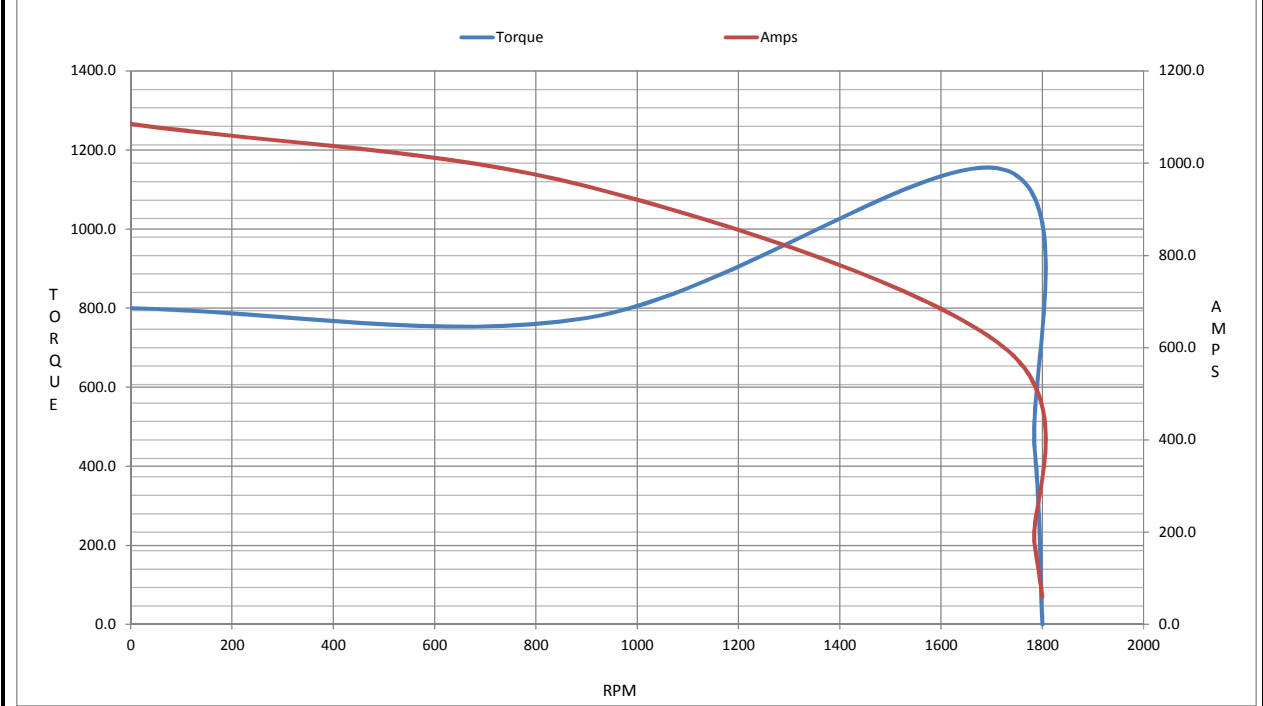
|                | LR    | Pull-Up | BD    | Rated | Idle |
|----------------|-------|---------|-------|-------|------|
| Speed (RPM)    | 0     | 900     | 1725  | 1785  | 1800 |
| Current (Amps) | 1,085 | 950     | 600   | 172   | 60.0 |
| Torque (ft-lb) | 800   | 775     | 1,150 | 441   | 0.00 |

Information Block

|                             |                         |        |        |        |
|-----------------------------|-------------------------|--------|--------|--------|
| HP                          | 150.0                   |        |        |        |
| Sync. RPM                   | 1800                    |        |        |        |
| Frame                       | 445                     |        |        |        |
| Enclosure                   | TEFC                    |        |        |        |
| Construction                | TFN                     |        |        |        |
| Voltage                     | 460 V                   |        |        |        |
| Frequency                   | 60 Hz                   |        |        |        |
| Design                      | A                       |        |        |        |
| LR Code letter              | G                       |        |        |        |
| Service Factor              | 1.15                    |        |        |        |
| Temp Rise @ FL              | 70 ° C                  |        |        |        |
| Duty                        | CONT                    |        |        |        |
| Ambient                     | 40 ° C                  |        |        |        |
| Elevation                   | 1,000 feet              |        |        |        |
| Rotor/Shaft wk <sup>2</sup> | 47.0 Lb-Ft <sup>2</sup> |        |        |        |
| Ref Wdg                     | T4454127 NONE           |        |        |        |
| Sound Pressure @ 1M         | 75 dBA                  |        |        |        |
| VFD Rating                  | CONSTANT 10:1           |        |        |        |
| Outline Dwg                 | B-SS517026-2025         |        |        |        |
| Conn. Diag                  | A-EE7300U               |        |        |        |
| Additional Specifications:  |                         |        |        |        |
| 0                           |                         |        |        |        |
| 0                           |                         |        |        |        |
| EQUIV CKT (OHMS / PHASE)    |                         |        |        |        |
| R1                          | R2                      | X1     | X2     | Xm     |
| 0.0210                      | 0.0120                  | 0.1680 | 0.1590 | 4.4090 |



Speed -Torque Curve



## EC Declaration of Conformity

The undersigned representing  
the manufacturer:

Regal Beloit America  
100 East Randolph St.  
Wausau, WI 54401

and the authorized representative  
established within the Community:

Marathon Electric UK  
6F Thistleton Road Ind. Estate  
Market Overton  
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : 445THFN9036

(Model No. may contain prefix and/or suffix characters)

Catalog No : W612

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon  
Vice President, Technology

Authorized Representative in the Community:



Julian Clark  
Marketing Engineer

Created on 09/01/2022

**CE 22**