

# PRODUCT INFORMATION PACKET

Model No: 286THFPA8038  
Catalog No: Y512  
30,1800,TEBC,286TC,3/60/230/460  
2000:1 With Encoder Provision



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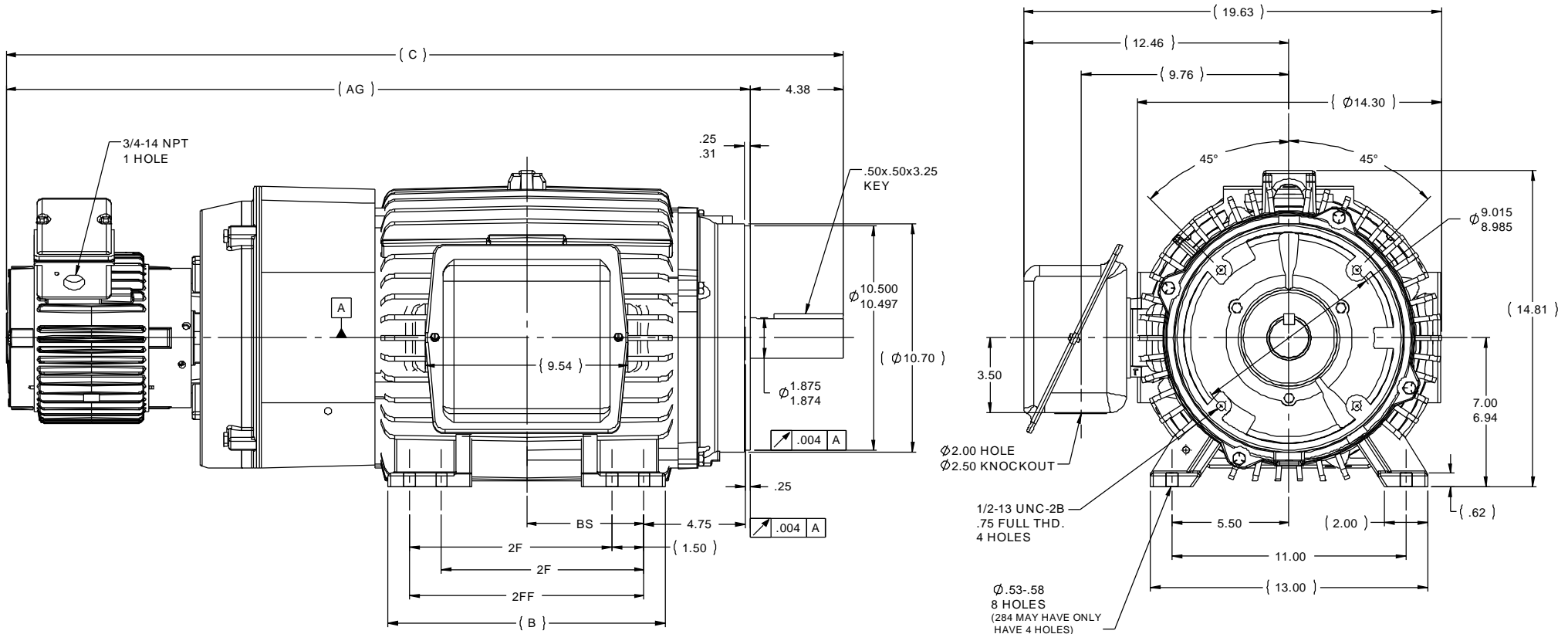
### Nameplate Specifications

|                            |                   |                        |                   |
|----------------------------|-------------------|------------------------|-------------------|
| Output HP                  | <b>30 Hp</b>      | Output KW              | <b>22.4 kW</b>    |
| Frequency                  | <b>60 Hz</b>      | Voltage                | <b>230/460 V</b>  |
| Current                    | <b>74/37 A</b>    | Speed                  | <b>1765 rpm</b>   |
| Service Factor             | <b>1</b>          | Phase                  | <b>3</b>          |
| Efficiency                 | <b>91 %</b>       | Duty                   | <b>CONTINUOUS</b> |
| Insulation Class           | <b>H</b>          | Design Code            | <b>INV</b>        |
| KVA Code                   | <b>F</b>          | Frame                  | <b>286TC</b>      |
| Enclosure                  | <b>TEBC-AXIAL</b> | Overload Protector     | <b>NOT</b>        |
| Ambient Temperature        | <b>40 °C</b>      | Drive End Bearing Size | <b>6311</b>       |
| Opp Drive End Bearing Size | <b>6210</b>       | UL                     | <b>Recognized</b> |
| CSA                        | <b>Y</b>          | CE                     | <b>Y</b>          |
| IP Code                    | <b>43</b>         |                        |                   |

### Technical Specifications

|                       |                         |                       |                      |
|-----------------------|-------------------------|-----------------------|----------------------|
| Electrical Type       | <b>SQ CAGE INV DUTY</b> | Starting Method       | <b>INVERTER ONLY</b> |
| Poles                 | <b>4</b>                | Rotation              | <b>REV</b>           |
| Mounting              | <b>RIGID</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>39.31 in</b>         | Frame Length          | <b>14.25 in</b>      |
| Shaft Diameter        | <b>1.88 in</b>          | Shaft Extension       | <b>4.37 in</b>       |
| Assembly/Box Mounting | <b>F1/F2 CAPABLE</b>    |                       |                      |
| Outline Drawing       | <b>B-SS311263-1425</b>  | Connection Diagram    | <b>A-EE7308T</b>     |

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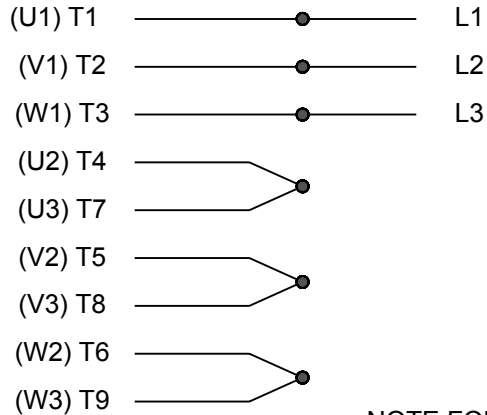


- NOTES:  
 1- C'BOX CAN BE ROTATED IN 90° STEPS.  
 2- C'BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°  
 3- NAMEPLATE TO BE READ FROM C'BOX SIDE OF MOTOR.

| DASH | FRAME | C     | AG    | B     | 2F   | 2FF   | BS   |
|------|-------|-------|-------|-------|------|-------|------|
| 1275 | 284TC | 37.81 | 33.43 | 11.50 | 9.50 |       | 4.75 |
| 1425 | 286TC | 39.31 | 34.93 | 13.00 | 9.50 | 11.00 | 5.50 |

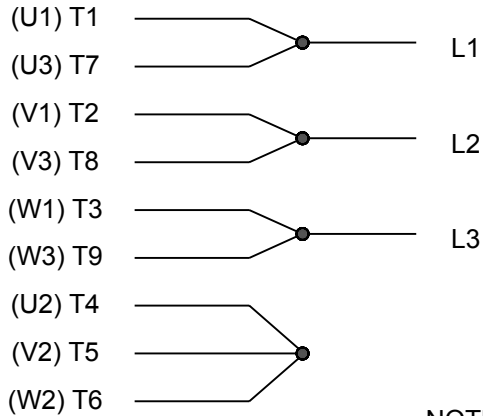
|  |   | TOLERANCES UNLESS SPECIFIED |        | MARATHON ELECTRIC |                             | DRAWN CAV 12-26-2001 |               |            |
|--|---|-----------------------------|--------|-------------------|-----------------------------|----------------------|---------------|------------|
|  |   | DEC                         | INCHES |                   |                             | CHK                  | ML 01-04-2002 |            |
| 3  | REVISED MOUNTING HOLE QUANTITY CN 40694 | DRS 10-25-2006              | ML .XX | ±.03              | TITLE OUTLINE - TFPA SERIES | APPR                 | DD 01-04-2002 |            |
| 2  | REDRAWN IN AUTOCAD                      | TAT 06-24-2005              | .XXX   | ±.005             | 280TC FR. - TEBC            | SCALE                | 1:4.5         |            |
| 1  | NEW DRAWING MU39842                     | CAV 01-02-2002              | .XXXX  | ±.0005            | MAT'L                       | REF                  |               |            |
| NO   | REVISION                                | BY & DATE                   | CHK    | ANG               | FINISH                      | FMF                  | 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                         | ANG    | ±7'30"            | CAD FILE                    | SS311263             | SIZE          | DRAWING NO |
|  |   | DIST                        | LB     |                   |                             | B                    | SS311263      | REV        |
|  |   |                             |        |                   |                             | 3                    |               |            |

## HIGH VOLTAGE



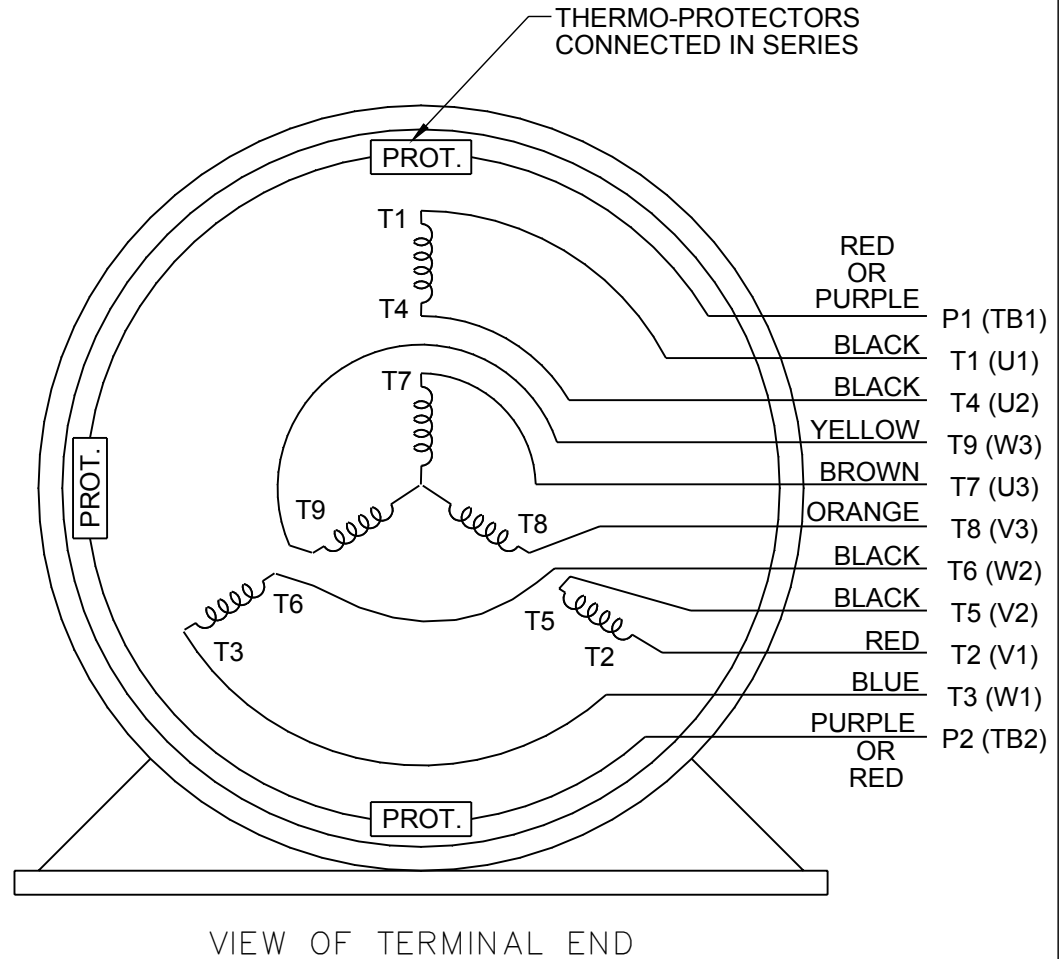
**NOTE FOR FACTORY USE ONLY:  
 TO SURGE TEST FOR COMMON CONNECT:  
 HIGH VOLT: CONNECT P1 TO T1  
 THEN P2 TO L1  
 LOW VOLT: CONNECT P1 TO T1 & T7,  
 THEN P2 TO L1**

## LOW VOLTAGE



**NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT**

## THREE PHASE DUAL VOLTAGE MOTOR



|   |                              |                           |                                   |                           |   |                        |
|---|------------------------------|---------------------------|-----------------------------------|---------------------------|---|------------------------|
| DRAWING REVISION<br><b>R</b>  | REVISION BY<br><b>AJW</b>    | DATE<br><b>07-17-2015</b> |                                   | DRAWN BY<br><b>SMC</b>    | <b>Regal Beloit America, Inc.</b>   |                        |
| ECO<br><b>ECO-0081632</b>   | APPROVED BY<br><b>T. VUE</b> | DATE<br><b>07-17-2015</b> |                                   | DATE<br><b>05-13-1992</b> |   |                        |
| ECO DESCRIPTION<br><b>REV'D IEC NOTATIONS PER IEC 60034-8</b>   |                              |                           |                                   | APPROVED BY<br><b>TB</b>  | DESCRIPTION<br><b>CONN DIAGRAM-INTERNAL</b><br>3 PHASE - DUAL VOLTAGE MOTOR |                        |
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|   |                              |                           | REFERENCE<br><b>EE7308/EE7300</b> | SIZE<br><b>A</b>          | DRAWING NUMBER<br><b>EE7308T</b>  | SHEET<br><b>1 OF 1</b> |
|   |                              |                           | THIRD ANGLE<br>PROJECTION         |                           |   |                        |



|            |        |         |  |
|------------|--------|---------|--|
| NONE       | NONE   |         |  |
| NONE FT-LB | NONE V | NONE Hz |  |

DATE: 06/27/2017 01:42:50 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

Data Sheet

Date: 16-06-2017  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: FAREEDA DUDEKULA



286THFA8038

Submittal

Data @ 460 V

Motor Load Data

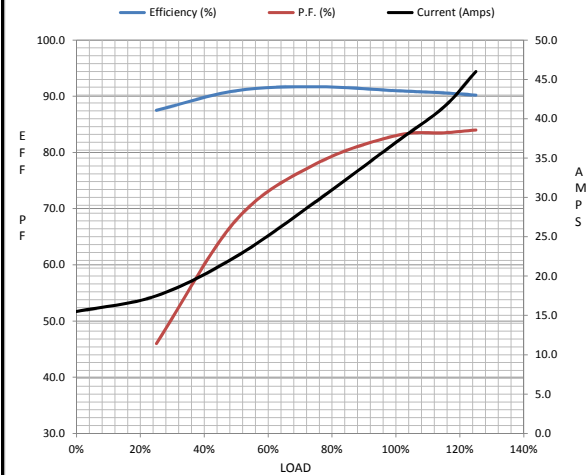
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 15.5 | 17.5 | 22.5 | 29.5 | 37.0 | 41.5  | 46.0 | 225  |
| Torque (ft-lb) | 0.00 | 22.0 | 44.0 | 66.5 | 89.3 | 101   | 112  | 185  |
| RPM            | 1800 | 1792 | 1782 | 1774 | 1765 | 1,760 | 1752 | 0    |
| Efficiency (%) |      | 87.5 | 91.0 | 91.7 | 91.0 | 90.6  | 90.2 |      |
| P.F. (%)       | 6.0  | 46.0 | 68.0 | 78.0 | 83.0 | 83.5  | 84.0 | 39.5 |

Motor Speed Data

|                | LR  | Pull-Up | BD   | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM)    | 0   | 900     | 1635 | 1765  | 1800 |
| Current (Amps) | 225 | 200     | 135  | 37.0  | 15.5 |
| Torque (ft-lb) | 185 | 170     | 240  | 89.3  | 0.00 |

Information Block

|                             |                        |        |        |         |
|-----------------------------|------------------------|--------|--------|---------|
| HP                          | 30.0                   |        |        |         |
| Sync. RPM                   | 1800                   |        |        |         |
| Frame                       | 286                    |        |        |         |
| Enclosure                   | TEBC                   |        |        |         |
| Construction                | TBP                    |        |        |         |
| Voltage                     | 230/460 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 wk <sup>2</sup> | 3.2 Lb-Ft <sup>2</sup> |        |        |         |
| Ref Wdg                     | K2564179 F             |        |        |         |
| Sound Pressure @ 1M         | 75 dBA                 |        |        |         |
| VFD Rating                  | CONSTANT 2000:1        |        |        |         |
| Outline Dwg                 | B-SS311263-1425        |        |        |         |
| Conn. Diag                  | A-EE7308T              |        |        |         |
| Additional Specifications:  |                        |        |        |         |
| 0                           |                        |        |        |         |
| 365THFS8036                 |                        |        |        |         |
| EQUIV CKT (OHMS / PHASE)    |                        |        |        |         |
| R1                          | R2                     | X1     | X2     | Xm      |
| 0.1930                      | 0.1520                 | 0.6790 | 0.9840 | 17.1230 |



Speed -Torque Curve

