

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: 284TTGCD6533

Catalog No: E547A

Hazardous Duty® Explosion Proof Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V,  
1800 & 1500 RPM, 284T Frame, EPFC



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RegalRexnord

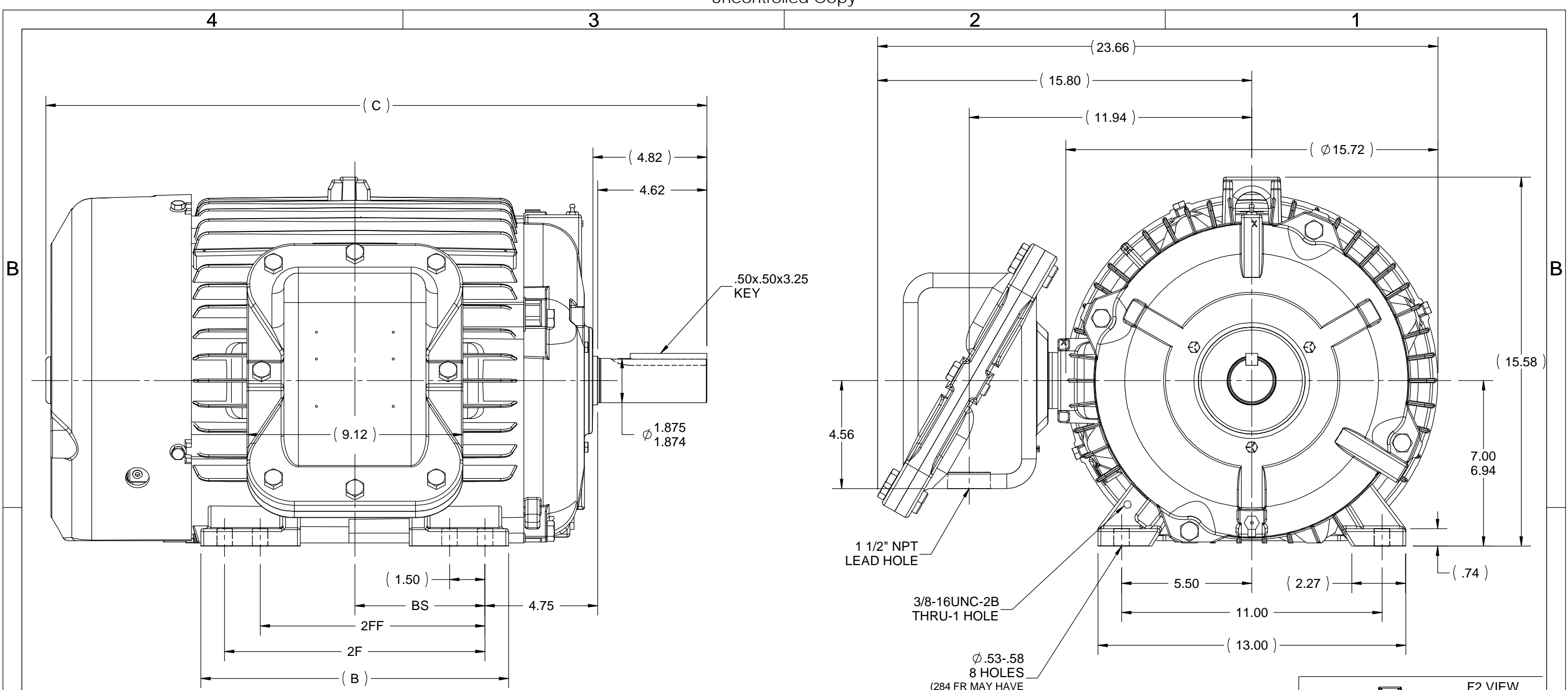
### Nameplate Specifications

|                        |                                    |                            |   |
|------------------------|------------------------------------|----------------------------|---|
| Phase                  | <b>3</b>                           | Output HP                  | <b>25 &amp; 20 Hp</b>                             |
| Output KW              | <b>18.7 &amp; 14.9 kW</b>          | Voltage                    | <b>230/460 &amp; 190/380 V</b>                    |
| Speed                  | <b>1772 &amp; 1475 rpm</b>         | Service Factor             | <b>1.00 &amp; 1.00</b>                            |
| Frame                  | <b>284T</b>                        | Enclosure                  | <b>Explosion Proof Fan cooled</b>                 |
| Thermal Protection     | <b>Thermostat</b>                  | Efficiency                 | <b>93.6 &amp; 92.7 %</b>                          |
| Ambient Temperature    | <b>50 °C</b>                       | Frequency                  | <b>60 &amp; 50 Hz</b>                             |
| Current                | <b>60/30 &amp; 58/29 A</b>         | Power Factor               | <b>83</b>   |
| Duty                   | <b>Continuous</b>                  | Insulation Class           | <b>F</b>  |
| Design Code            | <b>B</b>                           | KVA Code                   | <b>G</b>  |
| Drive End Bearing Size | <b>6311</b>                        | Opp Drive End Bearing Size | <b>6210</b>                                       |
| UL                     | <b>UL Listed And CSA Certified</b> | CSA                        | <b>Y</b>  |
| CE                     | <b>N</b>                           | IP Code                    | <b>54</b>   |
| Number of Speeds       | <b>1</b>                           | Hazardous Location         | <b>DIV 1 EXP PROOF CL I GR CD CL II GR FG T3C</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>.2988 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>                            | Shaft Diameter    | <b>1.875 in</b>         |
| Assembly/Box Mounting | <b>F1 ONLY</b>                      | Inverter Load     | <b>CONSTANT 10:1</b>    |
| Connection Drawing    | <b>A-EE7308T</b>                    | Outline Drawing   | <b>SS311106-1275</b>    |

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- NOTES:**
1. CONDUIT BOX CAN ONLY BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.
  2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°. THIS MODIFICATION CAN BE PERFORMED ONLY BY THE ORIGINAL EQUIPMENT MANUFACTURER OR BY A FACILITY THAT IS COVERED UNDER UNDERWRITERS LABORATORIES INC. CATEGORY PTKQ, TITLED "MOTORS AND GENERATORS, REBUILT FOR USE IN HAZARDOUS LOCATIONS".
  3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

| DASH | FRAME  | B     | C     | BS   | 2F    | 2FF  |
|------|--------|-------|-------|------|-------|------|
| 1275 | 284T   | 12.50 | 26.43 | 4.75 | 9.50  | ---  |
| 1425 | 284/6T | 13.00 | 27.93 | 5.50 | 11.00 | 9.50 |

|   |                    |                               |
|---|--------------------|-------------------------------|
| DRAWING REVISION<br>C   | REVISION BY<br>SD  | REV DATE/© DATE<br>11/19/2019 |
| ECO<br>ECO-0177183  | APPROVED BY<br>VMR | DATE<br>11/19/2019            |
| ECO DESCRIPTION<br>TITLE BOX UPDATED PER ECO  |                    |                               |
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**TOLERANCES (EXCEPT AS NOTED):**

| DEC.  | INCH    | mm       | ANGLE   |
|-------|---------|----------|---------|
| .X    | ±0.1    | [±3]     | ±7' 30" |
| .XX   | ±0.03   | [±0.8]   |         |
| .XXX  | ±0.005  | [±0.13]  |         |
| .XXXX | ±0.0005 | [±0.013] |         |

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45°  
 CORNER FILLETS: R.02 [.5]  
 MACHINED SURFACES: 200 INCH/mm 5.1  
 mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

DRAWN BY  
HLB

DATE  
10/10/2002

APPROVED BY  
DD

DATE  
10/10/2002

REFERENCE

THIRD ANGLE PROJECTION

**REGAL** Regal Beloit America, Inc.

DESCRIPTION  
**OUTLINE**  
280T FR. - BB - STD - 12.50 LAM

MATERIAL

PROCESS/FINISH

SIZE  
B

DRAWING NUMBER  
**SS311106**

SHEET  
1 OF 1

**HIGH VOLTAGE**



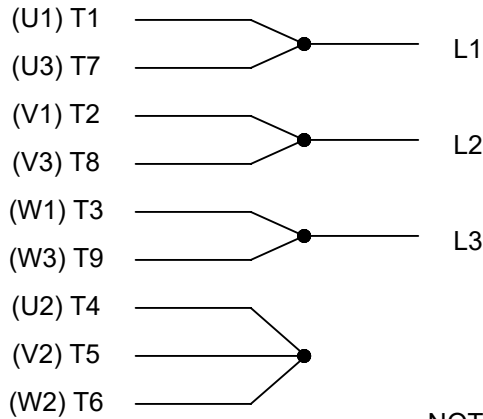
**THREE PHASE  
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS  
CONNECTED IN SERIES



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**



**VIEW OF TERMINAL END**

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

|   |                   |                    |                            |                    |   |
|---|-------------------|--------------------|----------------------------|--------------------|---|
| DRAWING REVISION<br>T   | REVISION BY<br>ZR | DATE<br>01-14-2019 |                            | DRAWN BY<br>SMC    | Regal Beloit America, Inc.  |
| ECO<br>ECO-0159915  | APPROVED BY<br>DR | DATE<br>01-15-2019 |                            | DATE<br>05-13-1992 |   |
| ECO DESCRIPTION<br><b>ADDED TERMINAL CONNECTION DIAGRAM</b>   |                   |                    |                            | APPROVED BY<br>TB  | DESCRIPTION<br><b>CONN DIAGRAM-INTERNAL</b><br>3 PHASE - DUAL VOLTAGE MOTOR |
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|   |                   |                    | REFERENCE<br>EE7308/EE7300 | SIZE<br>A          | DRAWING NUMBER<br>EE7308T   |
|   |                   |                    | THIRD ANGLE<br>PROJECTION  |                    |   |



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER: \_\_\_\_\_  
 ORDER #: \_\_\_\_\_  
 CONN. DIAGRAM: A-EE7308T  
 OUTLINE: B-SS311106-1275  
 WINDING: HA31804014 NONE 7  
 SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
 REFERENCE MODEL #: 284TTGCD6533  
 CAT #: E547A  
 CUSTOMER PART #: \_\_\_\_\_  
 MOUNTING: F1 ONLY  
 FAN: 504205B

**TYPICAL MOTOR PERFORMANCE DATA**

| HP | KW   | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|----|------|----------|--------|-------|-----------|------|----------|--------|
| 25 | 18.7 | 1800     | 1772   | 284T  | EPFC      | TFC  | G        | B      |

| PH | HZ    | VOLTS           | AMPS        | START TYPE      | DUTY | INSL | S.F. | AMB | ELEV. |
|----|-------|-----------------|-------------|-----------------|------|------|------|-----|-------|
| 3  | 60/50 | 230/460#190/380 | 60/30&58/29 | ACROSS THE LINE | CONT | F    | 1.00 | 50  | 3300  |

| F.L. EFF | 93.6 | 3/4 LD EFF | 93.6 | 1/2 LD EFF | 93.0 | GTD EFF | ELECT. TYPE     |
|----------|------|------------|------|------------|------|---------|-----------------|
| F.L. PF  | 83.0 | 3/4 LD PF  | 79.0 | 1/2 LD PF  | 69.0 | 93.0    | SQ CAGE IND RUN |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE    | B.D. TORQUE    | F.L. RISE (° C) |
|-------------|-----------------|----------------|----------------|-----------------|
| 74.0 LB-FT  | 182             | 150 LB-FT 203% | 230 LB-FT 311% | 60              |

| SOUND PRESSURE | SOUND  | ROTOR WK <sup>2</sup>  | MAX. LOAD WK <sup>2</sup> | SAFE STALL TIME | STARTS/HOUR | APROX.  | MOTOR WGT |
|----------------|--------|------------------------|---------------------------|-----------------|-------------|---------|-----------|
| 75 dBA         | 84 dBA | 4.8 LB-FT <sup>2</sup> | 175 LB-FT <sup>2</sup>    | 20 SEC.         | 2           | 561 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        | PREMIUM SEVERE DUTY | DIV 1 EXP PROOF CL I GR CD CL II GR FG T3C | NO         | NONE    | BLUE - RAL 5003 (EPOXY) |

| BEARINGS                         | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------------------------------|------------|------------|------------|-------------|-------------------------|----------------|
| DE ODE<br>BALL BALL<br>6311 6210 | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |

| THERMOSTATS  | PROTECTORS | WDG RTD's | BRG RTD's | THERMISTORS | CONTROL | SPACE HEATERS |
|--------------|------------|-----------|-----------|-------------|---------|---------------|
| TSTATS (N/C) | 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 |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 0.2          | 0.125        | 0.742        | 0.972        | 19.436       | 0.080              | ODE   |

|                                 |                           |          |
|---------------------------------|---------------------------|----------|
| *<br>N<br>O<br>T<br>E<br>S<br>* | INVERTER TORQUE: NONE     |          |
|                                 | INV. HP SPEED RANGE: NONE |          |
|                                 | ENCODER: NONE             |          |
|                                 | NONE                      | NONE PPR |
|                                 | NONE                      |          |

|                    |                     |
|--------------------|---------------------|
| PREPARED BY: _____ | BRAKE: NONE         |
| DATE: 1/23/2023    | NONE FT-LB: NA NONE |
|                    | VOLTAGE: NONE HZ:   |

FORM: 3531 REV\_4 2/27/06

UL: NO LETTER - ALL BRANDS-UL LISTED AND CSA CERTIFIED DIV. 1 XP MOTORS

Data Sheet

Date: 7/26/2022  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: \_\_\_\_\_



284TTGCD6533

Submittal

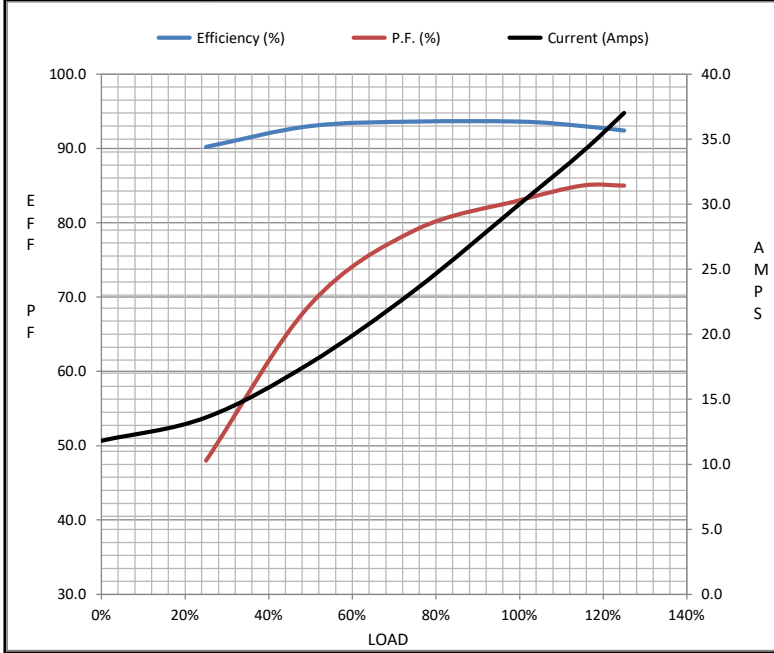
Data @ 460 V

Motor Load Data

| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 11.8 | 13.6 | 17.8 | 23.4 | 30.0 | 34.0  | 37.0 | 182  |
| Torque (ft-lb) | 0.00 | 18.3 | 36.7 | 55.2 | 74.0 | 85.2  | 93.0 | 150  |
| RPM            | 1800 | 1795 | 1788 | 1782 | 1772 | 1,768 | 1765 | 0    |
| Efficiency (%) |      | 90.2 | 93.0 | 93.6 | 93.6 | 93.0  | 92.4 |      |
| P.F. (%)       | 4.5  | 48.0 | 69.0 | 79.0 | 83.0 | 85.0  | 85.0 | 36.0 |

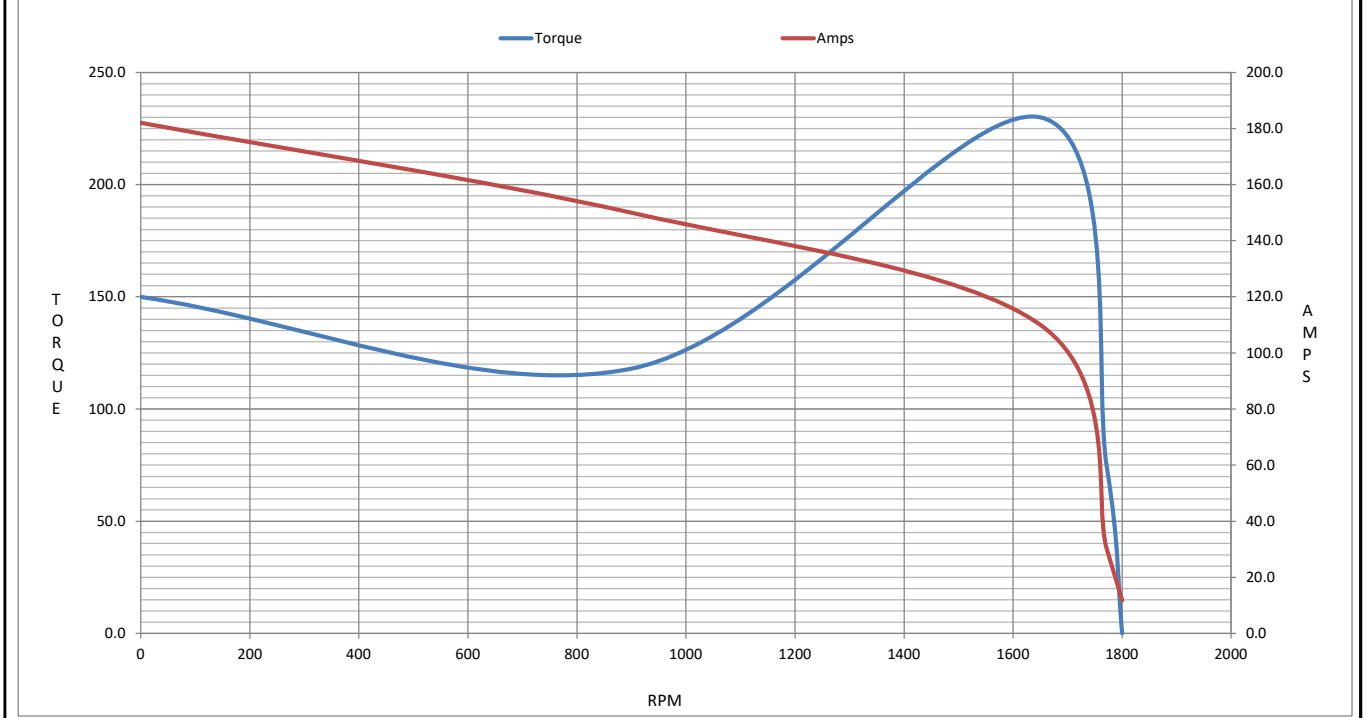
Motor Speed Data

|                | LR  | Pull-Up | BD   | Rated | Idle | Information Block |      |
|----------------|-----|---------|------|-------|------|-------------------|------|
| Speed (RPM)    | 0   | 900     | 1650 | 1772  | 1800 | HP                | 25.0 |
| Current (Amps) | 182 | 150     | 110  | 30.0  | 11.8 | Sync. RPM         | 1800 |
| Torque (ft-lb) | 150 | 118     | 230  | 74.0  | 0.00 | Frame             | 284  |



|                             |                        |        |        |         |
|-----------------------------|------------------------|--------|--------|---------|
| Enclosure                   | EPFC                   |        |        |         |
| Construction                | TFC                    |        |        |         |
| Voltage                     | 230/460#190/380 V      |        |        |         |
| Frequency                   | 60 Hz                  |        |        |         |
| Design                      | B                      |        |        |         |
| LR Code letter              | G                      |        |        |         |
| Service Factor              | 1.0                    |        |        |         |
| Temp Rise @ FL              | 60 °C                  |        |        |         |
| Duty                        | CONT                   |        |        |         |
| Ambient                     | 40 °C                  |        |        |         |
| Elevation                   | 3,300 feet             |        |        |         |
| Rotor/Shaft wk <sup>2</sup> | 4.8 Lb-Ft <sup>2</sup> |        |        |         |
| Ref Wdg                     | HA31804014 NONE        |        |        |         |
| Sound Pressure @ 1M         | 75 dBA                 |        |        |         |
| VFD Rating                  | NONE                   |        |        |         |
| Outline Dwg                 |                        |        |        |         |
| Conn. Diag                  | A-EE7308T              |        |        |         |
| Additional Specifications:  |                        |        |        |         |
| 0                           |                        |        |        |         |
| 0                           |                        |        |        |         |
| EQUIV CKT (OHMS / PHASE)    |                        |        |        |         |
| R1                          | R2                     | X1     | X2     | Xm      |
| 0.2000                      | 0.1250                 | 0.7420 | 0.9720 | 19.4360 |

Speed -Torque Curve



# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20220325- E12044  
**Report Reference** E12044-19991213  
**Issue Date** 2022-MARCH-25

**Issued to:** REGAL BELOIT AMERICA INC  
1946 W COOK RD  
FORT WAYNE IN 46818

Tradename: Marathon

**This certificate confirms that  
representative samples of**

MOTORS FOR USE IN HAZARDOUS LOCATIONS

Electric motors for use in hazardous locations; Class I, Groups C and D; Class II, Groups F and G; Inclusive of Model Number 284TTGCD6533 (may have prefix and/or suffix characters).

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** UL 674 - Electric Motors and Generators for Use in Division 1 Hazardous (Classified) Locations, CSA C22.2 No. 145, Electric Motors and Generators for Use in Hazardous (Classified) Locations

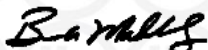
**Additional Information:** See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.



Bruce Mahrenholz, Director North American Certification Program

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