

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 284TSTFPA14007

Catalog No: Y1612

Fire Pump Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 3600 & 3000 RPM, 284TS Frame,  
TEFC



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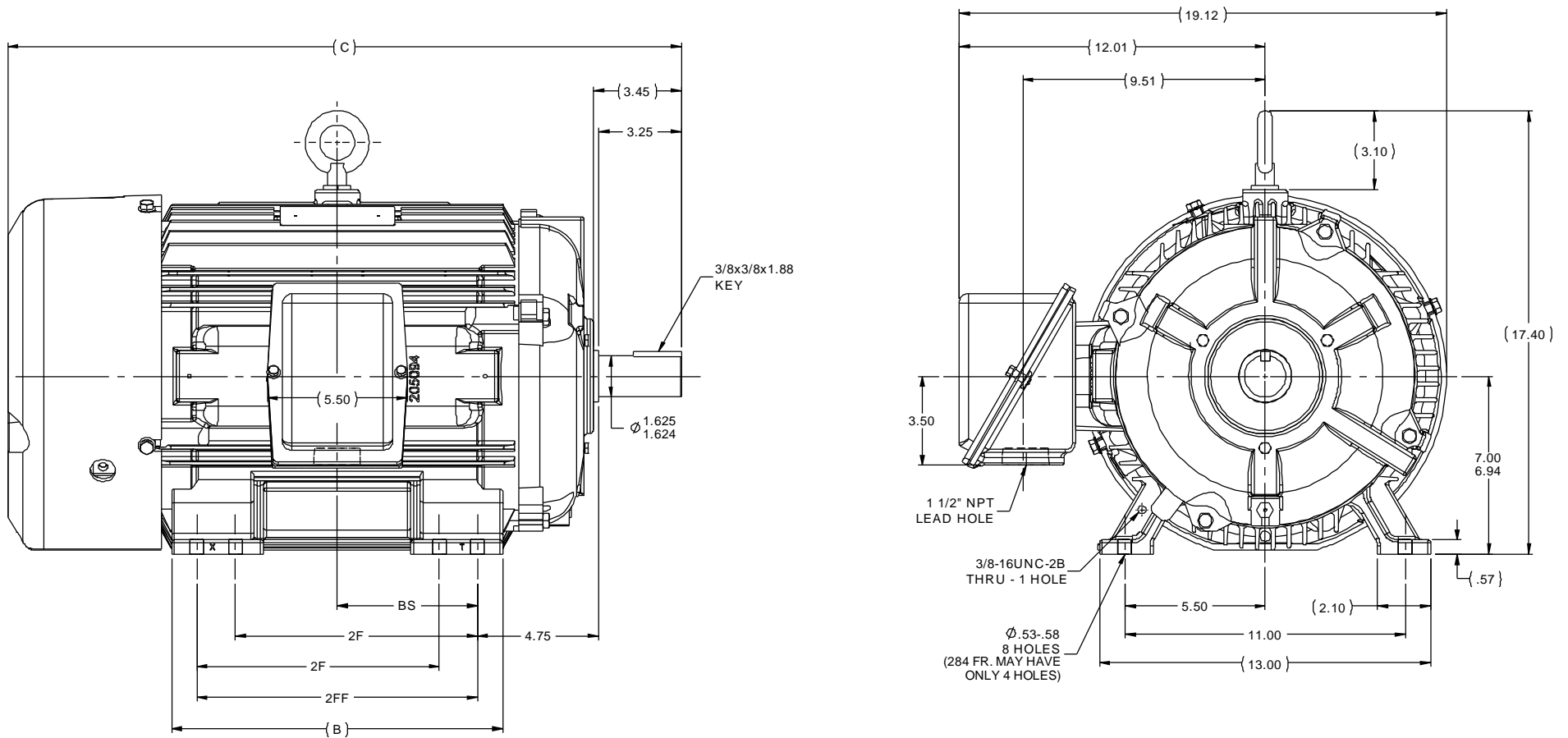
**RegalRexnord**

### 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>3520 &amp; 2918 rpm</b>   | Service Factor             | <b>1.15 &amp; 1.15</b>             |
| Frame                  | <b>284TS</b>                 | Enclosure                  | <b>Totally Enclosed Fan Cooled</b> |
| Thermal Protection     | <b>No Protection</b>         | Efficiency                 | <b>91 &amp; 90.2 %</b>             |
| Ambient Temperature    | <b>40 °C</b>                 | Frequency                  | <b>60 &amp; 50 Hz</b>              |
| Current                | <b>59/29.5 &amp; 58/29 A</b> | Power Factor               | <b>87</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>Listed</b>                | CSA                        | <b>Y</b>                           |
| CE                     | <b>Y</b>                     | IP Code                    | <b>43</b>                          |
| Number of Speeds       | <b>1</b>                     |                            |                                    |

### Technical Specifications

|                       |                                    |                       |   |
|-----------------------|------------------------------------|-----------------------|---|
| Electrical Type       | <b>Squirrel Cage Induction Run</b> | Starting Method       | <b>Part Wdg Start Low Volt Only &amp; Wye Start Delta Run</b> |
| Poles                 | <b>2</b>                           | Rotation              | <b>Reversible</b>   |
| Resistance Main       | <b>.345 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>TS</b>                          | Overall Length        | <b>24.93 in</b>   |
| Frame Length          | <b>12.76 in</b>                    | Shaft Diameter        | <b>1.625 in</b>   |
| Shaft Extension       | <b>3.45 in</b>                     | Assembly/Box Mounting | <b>F1/F2 CAPABLE</b>  |
| Outline Drawing       | <b>B-SS311235-1275</b>             | Connection Drawing    | <b>A-EE7308AA</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. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

|             |              |          |          |           |            |           |
|-------------|--------------|----------|----------|-----------|------------|-----------|
| 1275        | 284TS        | 24.93    | 11.50    | 9.50      | ---        | 4.75      |
| 1425        | 284/286TS    | 26.43    | 13.00    | 9.50      | 11.00      | 5.50      |
| <b>DASH</b> | <b>FRAME</b> | <b>C</b> | <b>B</b> | <b>2F</b> | <b>2FF</b> | <b>BS</b> |

|                        |  |                             |                 |                   |                              |                      |
|------------------------|--|-----------------------------|-----------------|-------------------|------------------------------|----------------------|
|                        |  | TOLERANCES UNLESS SPECIFIED |                 | marathon electric |                              | DRAWN CAV 09-26-2001 |
|                        |  | DEC INCHES                  |                 |                   |                              | CHK ML 09-26-2001    |
| 3                      | UPDATED FRAME TO NEW DESIGN AND TO SHOW 8 FOOT HOLES | ISAAC 10-2539 + MU112292    | MSG 02-27-2013  | DR XX ±.03        | TITLE OUTLINE - TEFC - TFPA  | APPR BW 09-26-2001   |
| 2                      | REVISED C'BOX LEAD HOLE FROM 1 1/4 TO 1 1/2          | MU39106                     | CAV 09-28-2001  | ML XXX ±.005      | 280TS FR. - STD. - 11.00 LAM | SCALE 1:4            |
| 1                      | NEW DRAWING  | MU39106                     | CAV 09-26-2001  | ML XXXX ±.0005    | MAT'L                        | REF                  |
| NO                     | REVISION   | BY & DATE                   | CHK LANG ±7'30" | FINISH            |                              | FMF MU39106          |
| THIRD ANGLE PROJECTION |  | RFP                         |                 | PREV              | SIZE B                       | DRAWING NO SS311235  |
|                        |  | NETWORK FILE NAME SS311235  |                 |                   |                              | PAGE OF              |
|                        |  |                             |                 |                   |                              | REV 3                |



### LOW VOLTAGE



### HIGH VOLTAGE



### VIEW OF TERMINAL END

|   |                              |                           |
|---|------------------------------|---------------------------|
| DRAWING REVISION<br><b>K</b>  | REVISION BY<br><b>AJW</b>    | DATE<br><b>07-17-2015</b> |
| ECO<br><b>ECO-0081632</b>   | APPROVED BY<br><b>T. VUE</b> | DATE<br><b>07-17-2015</b> |
| ECO DESCRIPTION<br><b>REV'D IEC MARKINGS PER IEC 60034-8</b>  |                              |                           |
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|                           |  |                                   |
|---------------------------|--|-----------------------------------|
| DRAWN BY<br><b>LZ</b>     | <b>Regal Beloit America, Inc.</b>  |                                   |
| DATE<br><b>01-12-1994</b> |  |                                   |
| APPROVED BY<br><b>GK</b>  | <b>DESCRIPTION</b><br><b>CONN DIAGRAM-EXTERNAL</b><br><b>3Ø-2/1 DELTA-12 LEADS</b> |                                   |
| DATE<br><b>01-14-1994</b> |  |                                   |
| REFERENCE                 | MATERIAL   | PROCESS/FINISH                    |
| THIRD ANGLE PROJECTION    | SIZE<br><b>A</b>   | DRAWING NUMBER<br><b>EE7308AA</b> |
|                           |  | SHEET<br><b>1 OF 1</b>            |



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

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CUSTOMER: \_\_\_\_\_ CUSTOMER P.O. #: \_\_\_\_\_  
 ORDER #: \_\_\_\_\_ REFERENCE MODEL #: 284TSTFPA14007  
 CONN. DIAGRAM: A-EE7308AA CAT #: Y1612  
 OUTLINE: B-SS311235-1275 CUSTOMER PART #: \_\_\_\_\_  
 WINDING: K2562197 NONE 2 MOUNTING: F1/F2 CAPABLE  
 SPEED: \_\_\_\_\_

**TYPICAL MOTOR PERFORMANCE DATA**

| HP | KW   | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|----|------|----------|--------|-------|-----------|------|----------|--------|
| 25 | 18.7 | 3600     | 3520   | 284TS | TEFC      | TFP  | G        | B      |

| PH | HZ    | VOLTS           | AMPS          | START TYPE         | DUTY | INSL | S.F. | AMB | ELEV. |
|----|-------|-----------------|---------------|--------------------|------|------|------|-----|-------|
| 3  | 60/50 | 230/460#190/380 | 59/29.5&58/29 | WS(LV ONLY) & YDRU | CONT | F    | 1.15 | 40  | 3300  |

| F.L. EFF | 91.0 | 3/4 LD EFF | 91.0 | 1/2 LD EFF | 90.2 | GTD EFF | ELECT. TYPE     |
|----------|------|------------|------|------------|------|---------|-----------------|
| F.L. PF  | 87.0 | 3/4 LD PF  | 85.0 | 1/2 LD PF  | 78.0 | 89.5    | SQ CAGE IND RUN |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE     | B.D. TORQUE     | F.L. RISE (°C) |
|-------------|-----------------|-----------------|-----------------|----------------|
| 37.5 LB-FT  | 178             | 67.0 LB-FT 179% | 98.0 LB-FT 261% | 70             |

| @ 3 FT. | POWER  | ROTOR WK²   | MAX. LOAD WK² | SAFE STALL TIME | STARTS/HOUR | MOTOR WGT |
|---------|--------|-------------|---------------|-----------------|-------------|-----------|
| 75 dBA  | 84 dBA | 1.45 LB-FT² | 23 LB-FT²     | 20 SEC.         | 2           | 475 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        | NO          | NONE               | NO         | NONE    | RED (ENAMEL) |

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

| 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 |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 0.239        | 0.217        | 0.901        | 0.844        | 29.013       | 0.150              | ODE   |

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

|                               |                   |
|-------------------------------|-------------------|
| PREPARED BY: FAREEDA DUDEKULA | BRAKE: NONE       |
| DATE: 9/17/2018               | NONE NONE         |
|                               | FT-LB: NA         |
|                               | VOLTAGE: NONE HZ: |
|                               | UL: NONE          |

FORM: 3531 REV\_4 2/27/06

Data Sheet

284TSTFPA14007

Date: 12/10/2018  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: FAREEDA DUDEKULA



Submittal

Data @ 460 V

Motor Load Data

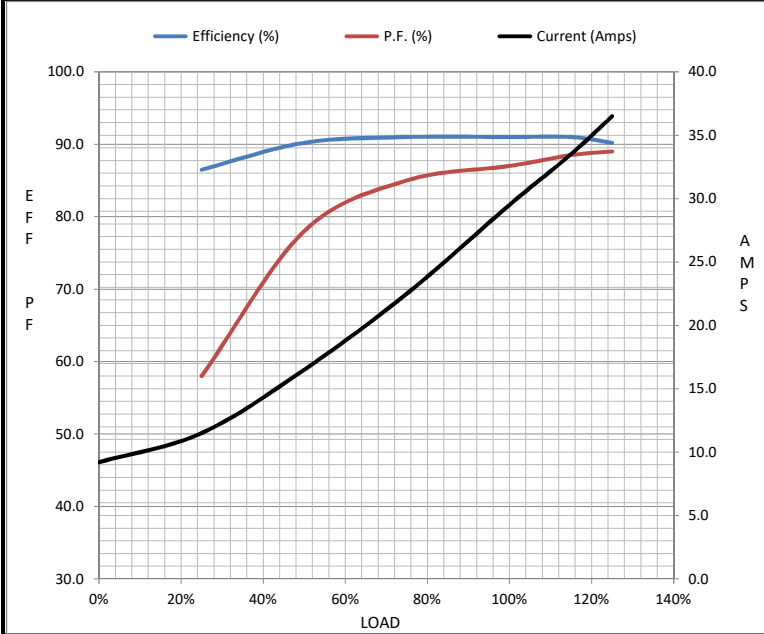
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115% | 125% | LR   |
|----------------|------|------|------|------|------|------|------|------|
| Current (Amps) | 9.2  | 11.5 | 16.5 | 22.5 | 29.5 | 33.5 | 36.5 | 178  |
| Torque (ft-lb) | 0.00 | 9.2  | 18.5 | 28.0 | 37.5 | 43.0 | 47.0 | 67.0 |
| RPM            | 3600 | 3580 | 3560 | 3540 | 3520 | 3505 | 3495 | 0    |
| Efficiency (%) |      | 86.5 | 90.2 | 91.0 | 91.0 | 91.0 | 90.2 |      |
| P.F. (%)       | 8.5  | 58.0 | 78.0 | 85.0 | 87.0 | 88.5 | 89.0 | 37.0 |

Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 1800    | 3150 | 3520  | 3600 |
| Current (Amps) | 178  | 165     | 110  | 29.5  | 9.2  |
| Torque (ft-lb) | 67.0 | 60.0    | 98.0 | 37.5  | 0.00 |

Information Block

|                             |                         |        |        |         |
|-----------------------------|-------------------------|--------|--------|---------|
| HP                          | 25.0                    |        |        |         |
| Sync. RPM                   | 3600                    |        |        |         |
| Frame                       | 284                     |        |        |         |
| Enclosure                   | TEFC                    |        |        |         |
| Construction                | TFS                     |        |        |         |
| Voltage                     | 230/460#190/380 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 wk <sup>2</sup> | 1.45 Lb-Ft <sup>2</sup> |        |        |         |
| Ref Wdg                     | K2562197 NONE           |        |        |         |
| Sound Pressure @ 1M         | 75 dBA                  |        |        |         |
| VFD Rating                  | NONE                    |        |        |         |
| Outline Dwg                 | B-SS311235-1275         |        |        |         |
| Conn. Diag                  | A-EE7308AA              |        |        |         |
| Additional Specifications:  |                         |        |        |         |
| 0                           |                         |        |        |         |
| 0                           |                         |        |        |         |
| EQUIV CKT (OHMS / PHASE)    |                         |        |        |         |
| R1                          | R2                      | X1     | X2     | Xm      |
| 0.2390                      | 0.2170                  | 0.9010 | 0.8440 | 29.0130 |



Speed - Torque Curve

