

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 405TSTD4035

Catalog No: U1122

125 HP Fire Pump Motor, 3 phase, 1800 RPM, 575 V, 405TS Frame, ODP  
Fire Pump Motors



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**RegalRexnord**

**Nameplate Specifications**

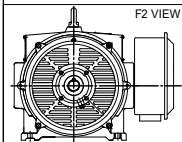
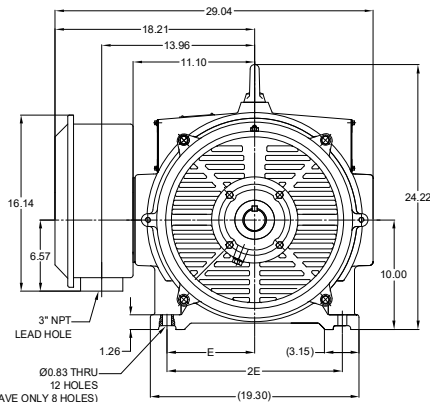
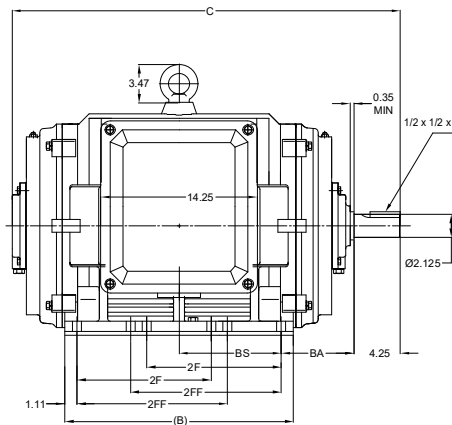
|                        |            |                            |            |
|------------------------|------------|----------------------------|------------|
| Output HP              | 125 Hp     | Output KW                  | 93.0 kW    |
| Frequency              | 60 Hz      | Voltage                    | 575 V      |
| Current                | 114.0 A    | Speed                      | 1785 rpm   |
| Service Factor         | 1.15       | Phase                      | 3          |
| Efficiency             | 94.5 %     | Power Factor               | 87         |
| Duty                   | Continuous | Insulation Class           | F          |
| Design Code            | B          | KVA Code                   | F          |
| Frame                  | 405TS      | Enclosure                  | Drip Proof |
| Thermal Protection     | No         | Ambient Temperature        | 50 °C      |
| Drive End Bearing Size | 6316       | Opp Drive End Bearing Size | 6315       |
| UL                     | Listed     | CSA                        | Y          |
| CE                     | Y          | IP Code                    | 23         |
| Number of Speeds       | 1          |                            |            |

**Technical Specifications**

|                       |                             |                       |                                      |
|-----------------------|-----------------------------|-----------------------|--------------------------------------|
| Electrical Type       | Squirrel Cage Induction Run | Starting Method       | Part Wdg Start & Wye Start Delta Run |
| Poles                 | 4                           | Rotation              | Reversible                           |
| Resistance Main       | .065 Ohms                   | Mounting              | Rigid Base                           |
| Motor Orientation     | Horizontal                  | Drive End Bearing     | Ball                                 |
| Opp Drive End Bearing | Ball                        | Frame Material        | Cast Iron                            |
| Shaft Type            | TS                          | Overall Length        | 35.44 in                             |
| Frame Length          | 21.25 in                    | Shaft Diameter        | 2.125 in                             |
| Shaft Extension       | 4.25 in                     | Assembly/Box Mounting | F1/F2 CAPABLE                        |
| Connection Drawing    | EE7300BH                    | Outline Drawing       | SS620752-405TS                       |

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| DASH NO. | B     | C     | E    | 2E    | 2F    | 2FF   | BA   | BS   | MOUNTING | FRAME     |
|----------|-------|-------|------|-------|-------|-------|------|------|----------|-----------|
| 100      | 19.29 | 33.86 | 8.00 | 16.00 | ---   | 12.25 | 6.62 | 8.54 | F1 OR F2 | 404TS     |
| 200      | 20.87 | 35.44 |      |       | 12.25 | 13.75 |      | 9.32 |          | 404/405TS |



|   |                      |                                |
|---|----------------------|--------------------------------|
| DRAWING REVISION<br>B   | REVISION BY<br>BISWA | REV DATE/ E DATE<br>10/03/2021 |
| ECO<br>CR-0001577   | APPROVED BY<br>GNK   | DATE<br>10/03/2021             |
| ECO DESCRIPTION<br>DRAWING UPDATED  |                      |                                |
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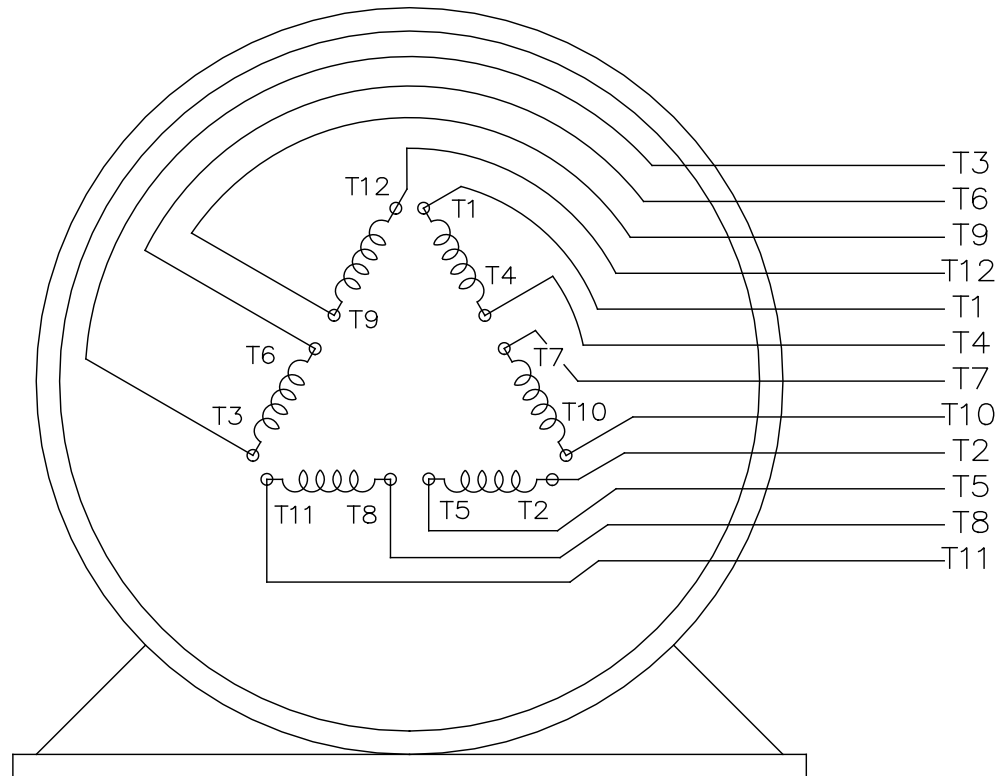
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MM DIMENSIONS IN [BRACKETS]  
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|                |                           |
|----------------|---------------------------|
| DRAWN BY<br>WY | DATE<br>07/21/2016        |
| APPROVED BY    | DATE                      |
| REFERENCE      | THIRD ANGLE<br>PROJECTION |

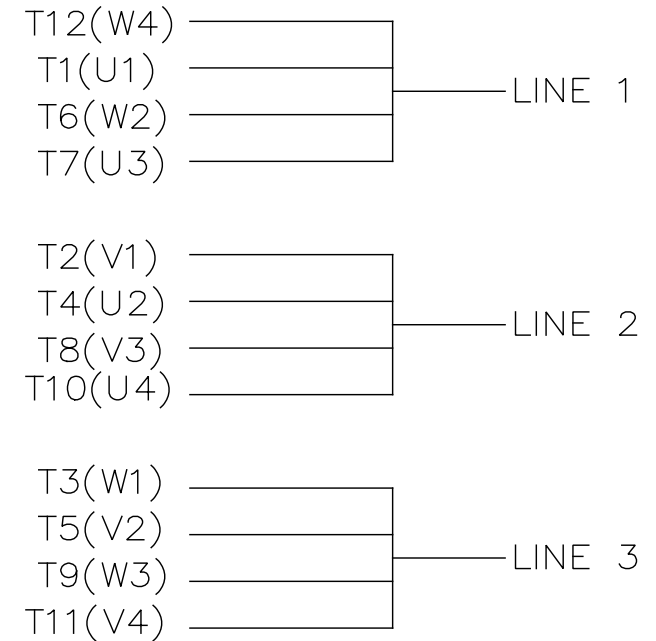
**Regal Beloit America, Inc.**


|                                 |                                   |
|---------------------------------|-----------------------------------|
| DESCRIPTION<br><b>OUTLINE</b>   | PROCESS/FINISH                    |
| 404/405TS FR-NEMA-ODP CAST IRON |                                   |
| SIZE<br>B                       | DRAWING NUMBER<br><b>SS620752</b> |

SHEET  
1 OF 1



VIEW OF TERMINAL END



|  |                              |             |                |                                |        |  |   |    |            |             |      |    |      |
|--|------------------------------|-------------|----------------|--------------------------------|--------|--|---|----|------------|-------------|------|----|------|
|  |                              |             |                | TOLERANCES<br>UNLESS SPECIFIED |        |  REGAL - BELOIT CORPORATION | DRAWN RJW 02-11-2005                                |    |            |             |      |    |      |
|  |                              |             |                | DEC.                           | INCHES |  | CHK   | ML | 02-11-2005 |             |      |    |      |
|  |                              |             |                | .X                             | ±.1    |  | APPD  | GK | 02-11-2005 |             |      |    |      |
|  |                              |             |                | .XX                            | ±.02   |  | SCALE   |    |            |             |      |    |      |
| D  | CHANGED TO REGAL TITLE BLOCK | ECO-0108299 | WGJ 08/22/2016 | EMH                            | .XXX   | ±.005  | TITLE CONNECTION DIAGRAM<br>12 LEAD- SINGLE VOLTAGE |    | REF        |             |      |    |      |
| 1  | ADDED IEC TERMINAL MARKINGS  | CN 41429    | JJB 05/24/2007 | ML                             | .XXXX  | ±.0005   | MAT'L.  |    | FMF        |             |      |    |      |
| NO.  | REVISION                     |             | BY & DATE      | CHK                            | ANG    | ±7'30"   | FINISH  |    | PREV       |             |      |    |      |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT<br>IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED<br>THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT |                              |             |                | RFP                            |        | 02-11-2005   | CAD FILE ee7300bh                                   |    | SIZE       | DRAWING NO. | PAGE | OF | REV. |
|  |                              |             |                | DIST                           |        | LB   |   |    | A          | EE7300BH    |      |    |      |



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 #: 405TSTD4035  
CONN. DIAGRAM: EE7300BH CAT #: U1122  
OUTLINE: SS620752 CUSTOMER PART #: \_\_\_\_\_  
WINDING: IE2L2504101 NONE 2 MOUNTING: F1/F2 CAPABLE  
SPEED: \_\_\_\_\_

### TYPICAL MOTOR PERFORMANCE DATA

| HP  | KW | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE | KVA CODE | DESIGN |
|-----|----|----------|--------|-------|-----------|------|----------|--------|
| 125 | 93 | 1800     | 1785   | 405TS | DP        | TDC  | F        | B      |

| PH | HZ | VOLTS | AMPS | START TYPE  | DUTY | INSL | S.F. | AMB | ELEV. |
|----|----|-------|------|-------------|------|------|------|-----|-------|
| 3  | 60 | 575   | 114  | PWS & YDRUN | CONT | F    | 1.15 | 50  | 3300  |

| F.L. EFF | 94.5 | 3/4 LD EFF | 94.5 | 1/2 LD EFF | 93.6 | GTD EFF | 80.0 | ELECT. TYPE | SQ CAGE IND RUN |
|----------|------|------------|------|------------|------|---------|------|-------------|-----------------|
| F.L. PF  | 87.0 | 3/4 LD PF  | 85.0 | 1/2 LD PF  | 80.0 |         | 0.0  |             |                 |

| F.L. TORQUE | LR AMPS @ 460 V | L.R. TORQUE    | B.D. TORQUE    | F.L. RISE (°C) |
|-------------|-----------------|----------------|----------------|----------------|
| 368 LB-FT   | 640             | 625 LB-FT 170% | 840 LB-FT 228% | 45             |

| @ 3 FT. | POWER  | ROTOR WK²   | MAX. LOAD WK² | SAFE STALL TIME | STARTS/HOUR | MOTOR WGT |
|---------|--------|-------------|---------------|-----------------|-------------|-----------|
| 80 dBA  | 89 dBA | 0.00 LB-FT² | 0 LB-FT²      | 20 SEC.         | 0           | 0 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    |            |            |            |             |                         |                |
| BALL BALL | POLYREX EM | TS         | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |
| 6316 6315 |            |            |            |             |                         |                |

| 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 |
|--------------|--------------|--------------|--------------|--------------|--------------------|-------|
| 0.06         | 0.028        | 0.231        | 0.44         | 10.417       | 0.150              | ODE   |

|  |  |   |
|--|--|---|
| *<br>N<br>O<br>T<br>E<br>S<br>*                  |  | INVERTER TORQUE: NONE<br>INV. HP SPEED RANGE: NONE  |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
| PREPARED BY: FAREEDA DUDEKULA<br>DATE: 8/31/2018 |  | ENCODER: NONE<br>NONE<br>NONE<br>NONE PPR<br><br>BRAKE: NONE<br>NONE<br>NONE<br>FT-LB: NA<br>VOLTAGE: NONE<br>HZ:<br>UL: NONE |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |

FORM: 3531 REV\_4 2/27/06

## Data Sheet

Date: 12/14/2018

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

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

Submitted by: FAREEDA DUDEKULA



405TSTD4035

Submittal

Data @ 575 V

## Motor Load Data

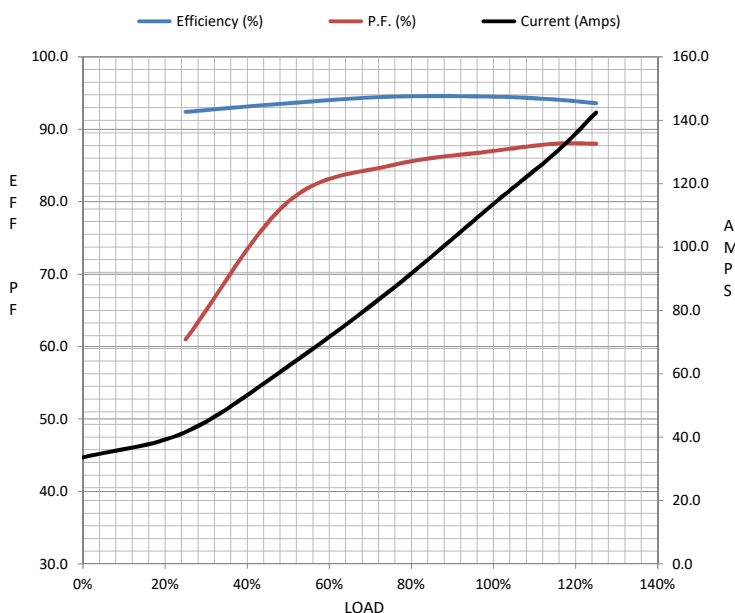
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115% | 125% | LR   |  |
|----------------|------|------|------|------|------|------|------|------|--|
| Current (Amps) | 33.6 | 41.6 | 62.4 | 86.4 | 114  | 130  | 142  | 640  |  |
| Torque (ft-lb) | 0.00 | 91.5 | 183  | 276  | 368  | 423  | 462  | 625  |  |
| RPM            | 1800 | 1795 | 1792 | 1788 | 1785 | 1782 | 1778 | 0    |  |
| Efficiency (%) |      | 92.4 | 93.6 | 94.5 | 94.5 | 94.1 | 93.6 |      |  |
| P.F. (%)       | 5.0  | 61.0 | 80.0 | 85.0 | 87.0 | 88.0 | 88.0 | 36.0 |  |

## Motor Speed Data

|                | LR  | Pull-Up | BD   | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM)    | 0   | 900     | 1725 | 1785  | 1800 |
| Current (Amps) | 640 | 600     | 380  | 114   | 33.6 |
| Torque (ft-lb) | 625 | 535     | 840  | 368   | 0.00 |

## Information Block

|                            |                  |        |        |         |
|----------------------------|------------------|--------|--------|---------|
| HP                         | 125.0            |        |        |         |
| Sync. RPM                  | 1800             |        |        |         |
| Frame                      | 405              |        |        |         |
| Enclosure                  | DP               |        |        |         |
| Construction               | TDC              |        |        |         |
| Voltage                    | 575 V            |        |        |         |
| Frequency                  | 60 Hz            |        |        |         |
| Design                     | B                |        |        |         |
| LR Code letter             | F                |        |        |         |
| Service Factor             | 1.15             |        |        |         |
| Temp Rise @ FL             | 45 ° C           |        |        |         |
| Duty                       | CONT             |        |        |         |
| Ambient                    | 40 ° C           |        |        |         |
| Elevation                  | 1,000 feet       |        |        |         |
| Rotor/Shaft wk²            | 0.00 Lb-Ft²      |        |        |         |
| Ref Wdg                    | IE2L2504101 NONE |        |        |         |
| Sound Pressure @ 1M        | 80 dBA           |        |        |         |
| VFD Rating                 | NONE             |        |        |         |
| Outline Dwg                | SS620752         |        |        |         |
| Conn. Diag                 | EE7300BH         |        |        |         |
| Additional Specifications: |                  |        |        |         |
| 0                          |                  |        |        |         |
| 0                          |                  |        |        |         |
| EQUIV CKT (OHMS / PHASE)   |                  |        |        |         |
| R1                         | R2               | X1     | X2     | Xm      |
| 0.0600                     | 0.0280           | 0.2310 | 0.4400 | 10.4170 |



## Speed -Torque Curve

