

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCA5P52AE211GAA009

Catalog No: R328B

Cast Iron Motor, 7.50 & 5.50 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1800 & 1500 RPM,  
132S Frame, TEFC



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**RegalRexnord**

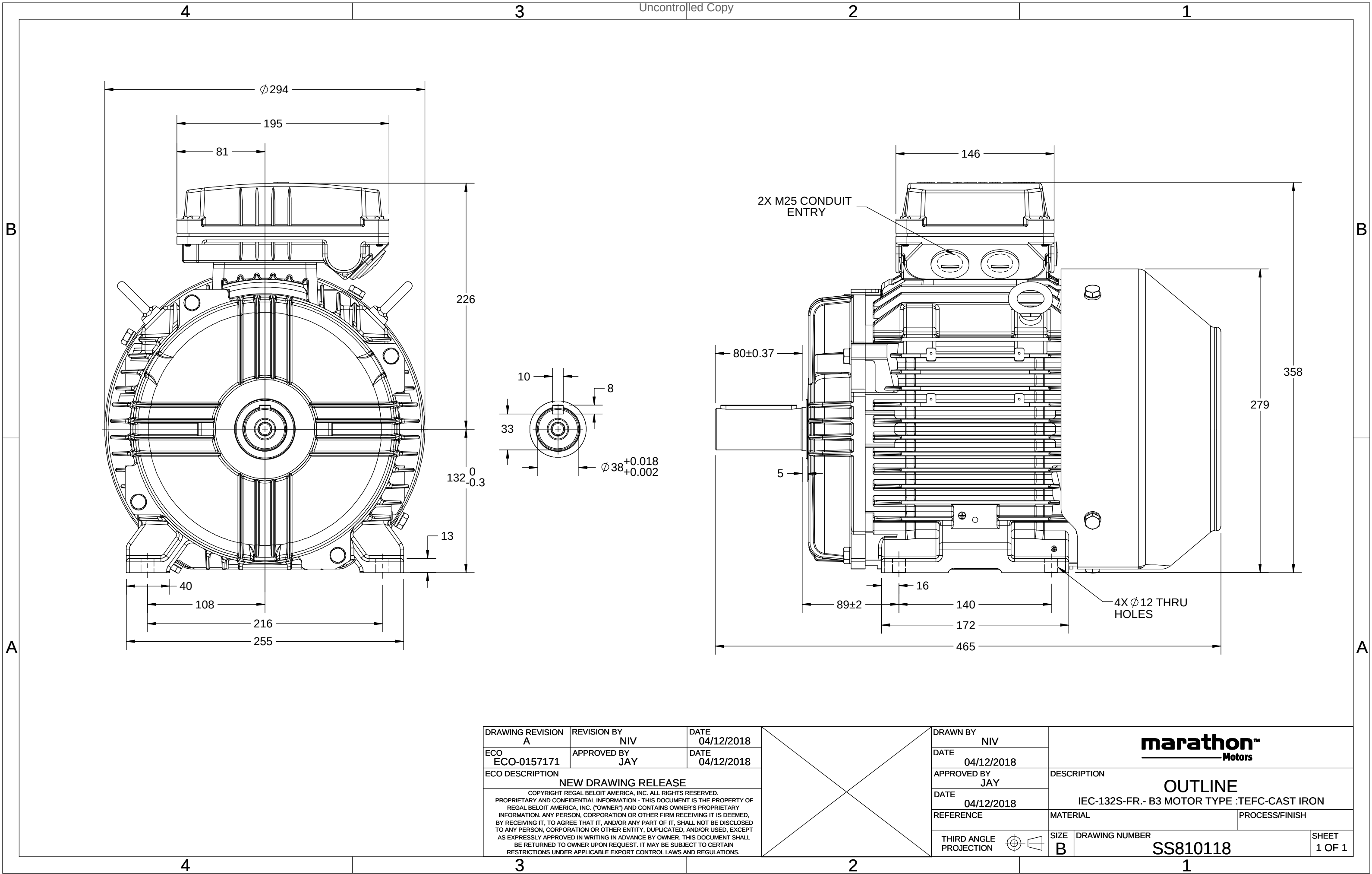
### Nameplate Specifications

|                        |                       |                            |                             |
|------------------------|-----------------------|----------------------------|-----------------------------|
| Phase                  | 3                     | Output HP                  | 7.50 & 5.50 Hp              |
| Output KW              | 5.5 & 4.0 kW          | Voltage                    | 230/460 & 200/400 V         |
| Speed                  | 1775 & 1480 rpm       | Service Factor             | 1.15 & 1.15                 |
| Frame                  | 132S                  | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No Protection         | Efficiency                 | 91.7 & 88.6 %               |
| Ambient Temperature    | 40 °C                 | Frequency                  | 60 & 50 Hz                  |
| Current                | 19.6/9.8 & 17.6/8.8 A | Power Factor               | 77                          |
| Duty                   | Continuous            | Insulation Class           | F                           |
| Design Code            | N (IEC)               | KVA Code                   | J                           |
| Drive End Bearing Size | 6308                  | Opp Drive End Bearing Size | 6208                        |
| UL                     | Recognized            | CSA                        | N                           |
| CE                     | Y                     | IP Code                    | 55                          |
| Number of Speeds       | 1                     | Efficiency Class           | IE3                         |

### Technical Specifications

|                       |                              |                       |                  |
|-----------------------|------------------------------|-----------------------|------------------|
| Electrical Type       | Squirrel Cage Inverter Rated | Starting Method       | Line Or Inverter |
| Poles                 | 4                            | Rotation              | Reversible       |
| Resistance Main       | 1.56 Ohms                    | Mounting              | B3               |
| Motor Orientation     | Horizontal                   | Drive End Bearing     | Ball             |
| Opp Drive End Bearing | Ball                         | Frame Material        | Cast Iron        |
| Shaft Type            | IEC                          | Overall Length        | 18.31 in         |
| Frame Length          | 7.95 in                      | Shaft Diameter        | 1.496 in         |
| Shaft Extension       | 3.15 in                      | Assembly/Box Mounting | F3               |
| Inverter Load         | CONSTANT 2:1/VARIABLE 10:1   |                       |                  |
| Outline Drawing       | SS810118                     | Connection Drawing    | 8442000715       |





|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|
| DRAWING REVISION<br>A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | REVISION BY<br>NIV | DATE<br>04/12/2018 |
| ECO<br>ECO-0157171                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | APPROVED BY<br>JAY | DATE<br>04/12/2018 |
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|                           |                                                                              |                                   |                 |
|---------------------------|------------------------------------------------------------------------------|-----------------------------------|-----------------|
| DRAWN BY<br>NIV           | <b>marathon™<br/>Motors</b>                                                  |                                   |                 |
| DATE<br>04/12/2018        |                                                                              |                                   |                 |
| APPROVED BY<br>JAY        | DESCRIPTION<br><b>OUTLINE</b><br>IEC-132S-FR.- B3 MOTOR TYPE :TEFC-CAST IRON |                                   |                 |
| DATE<br>04/12/2018        |                                                                              |                                   |                 |
| REFERENCE                 | MATERIAL                                                                     | PROCESS/FINISH                    |                 |
| THIRD ANGLE<br>PROJECTION | SIZE<br>B                                                                    | DRAWING NUMBER<br><b>SS810118</b> | SHEET<br>1 OF 1 |

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DRAWING REVISION  
**A**  
 ECO  
 ECO-0194685  
 ECO DESCRIPTION

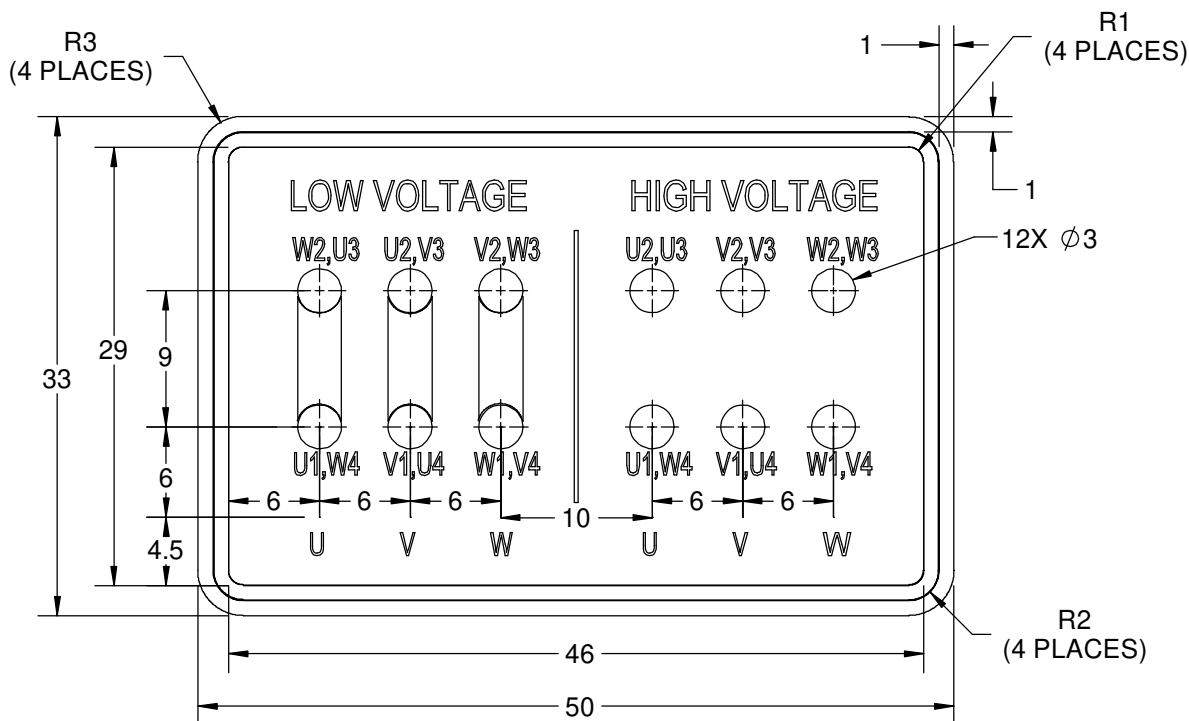
REVISION BY  
**S.MUDDA**  
 APPROVED BY  
**SUMANTA**

DATE  
 16/11/2020  
 DATE  
 16/11/2020

NEW DRAWING

GEOMETRIC TOLERANCE

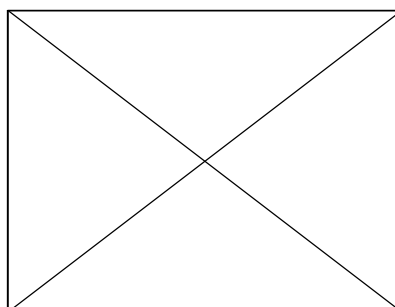
|            |         |      |
|------------|---------|------|
| LINEAR DIM | >0~6    | ±0.1 |
|            | >6~30   | ±0.2 |
|            | >30~120 | ±0.3 |



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
4. LEAD TERMINAL MARKINGS FONT SIZE : T1-T12 & U1-U4,V1-V4& W1-W4 OF ARIAL WITH 3mm SIZE
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

8WD.442.2017



DRAWN BY  
**S.MUDDA**  
 DATE  
 16/11/2020  
 APPROVED BY  
**SUMANTA**  
 DATE  
 16/11/2020  
 REFERENCE  
 THIRD ANGLE PROJECTION

**REGAL**™ Regal Beloit America, Inc.  
 DESCRIPTION  
**CONN DIAGRAM-NAMEPLATE**  
 MATERIAL  
 PROCESS/FINISH  
 SIZE  
**A**  
 DRAWING NUMBER  
**8442000715**  
 SHEET  
 1 OF 1



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

DATA VOLTS: 460

### CERTIFICATION DATA SHEET

CUSTOMER: \_\_\_\_\_  
ORDER #: \_\_\_\_\_  
CONN. DIAGRAM: 8442000677  
OUTLINE: SS810118  
WINDING: IE3L1324201 NONE 1  
SPEED: \_\_\_\_\_

CUSTOMER P.O. #: \_\_\_\_\_  
REFERENCE MODEL #: TCA5P52AE211GAA009  
CAT #: R328B  
CUSTOMER PART #: \_\_\_\_\_  
MOUNTING: F3

### TYPICAL MOTOR PERFORMANCE DATA

| HP  | KW  | SYNC RPM | FL RPM | FRAME | ENCLOSURE | TYPE        | KVA CODE | DESIGN |
|-----|-----|----------|--------|-------|-----------|-------------|----------|--------|
| 7.5 | 5.6 | 1800     | 1775   | 132S  | TEFC      | TCA 132SA04 | J        | N      |

| PH | HZ    | VOLTS           | AMPS              | START TYPE       | DUTY | INSL | S.F. | AMB (* C) | ELEV.(Ft.) |
|----|-------|-----------------|-------------------|------------------|------|------|------|-----------|------------|
| 3  | 60/50 | 230/460#200/400 | 19.6/9.8&17.6/8.8 | LINE OR INVERTER | CONT | F    | 1.15 | 40        | 3300       |

|          |      |            |      |            |      |         |                   |
|----------|------|------------|------|------------|------|---------|-------------------|
| F.L. EFF | 91.7 | 3/4 LD EFF | 91.7 | 1/2 LD EFF | 90.3 | GTD EFF | ELECT. TYPE       |
| F.L. PF  | 77.0 | 3/4 LD PF  | 69.0 | 1/2 LD PF  | 57.0 | 90.5    | SQ CAGE INV RATED |

| F.L. TORQUE |       | LR AMPS @ 460 V |  | L.R. TORQUE |            | B.D. TORQUE |            | F.L. RISE (° C) |  |  |
|-------------|-------|-----------------|--|-------------|------------|-------------|------------|-----------------|--|--|
| 22.2        | LB-FT | 73.4            |  | 54.2        | LB-FT 244% | 71.3        | LB-FT 321% | 75              |  |  |

|                        |        |       |                         |                           |                 |             |        |           |
|------------------------|--------|-------|-------------------------|---------------------------|-----------------|-------------|--------|-----------|
| SOUND PRESSURE @ 3 FT. | SOUND  | POWER | ROTOR WK <sup>2</sup>   | MAX. LOAD WK <sup>2</sup> | SAFE STALL TIME | STARTS/HOUR | APROX. | MOTOR WGT |
| 65 dBA                 | 74 dBA |       | 1.10 LB-FT <sup>2</sup> | 1.1 LB-FT <sup>2</sup>    | 10 SEC.         | 2           | 92     | KG.       |

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

|                 |                  |            |                   |             |                    |            |         |               |
|-----------------|------------------|------------|-------------------|-------------|--------------------|------------|---------|---------------|
| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | MOTOR ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT         |
| STANDARD        | STANDARD         | B3         | HORIZONTAL        | NO          | NONE               | NO         | NONE    | BLUE (ENAMEL) |

|           |            |              |            |             |                         |          |                |
|-----------|------------|--------------|------------|-------------|-------------------------|----------|----------------|
| BEARINGS  | GREASE     | SHAFT TYPE   | SPECIAL DE | SPECIAL ODE | SHAFT                   | MATERIAL | FRAME MATERIAL |
| DE ODE    |            |              |            |             |                         |          |                |
| BALL BALL | POLYREX EM | STANDARD IEC | NONE       | NONE        | 1045 HOT ROLLED (C-204) |          | CAST IRON      |
| 6308 6208 |            |              |            |             |                         |          |                |

|             |            |           |           |             |         |       |         |
|-------------|------------|-----------|-----------|-------------|---------|-------|---------|
| 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 |
| 0.908        | 0.454        | 2.004        | 2.572        | 49.242       | 0.150              | ODE   |

|                                 |  |                                                                          |
|---------------------------------|--|--------------------------------------------------------------------------|
| *<br>N<br>O<br>T<br>E<br>S<br>* |  | INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1<br>INV. HP SPEED RANGE: NONE |
|                                 |  | ENCODER: NONE<br>NONE<br>NONE PPR                                        |

|                                        |                                                                                             |           |
|----------------------------------------|---------------------------------------------------------------------------------------------|-----------|
| PREPARED BY: _____<br>DATE: 11/16/2020 | BRAKE: NONE<br>NONE<br>NONE<br>FT-LB: NA<br>VOLTAGE: NONE<br>UL: V - LI,ME-INS,CONST UL REC | HZ: _____ |
|----------------------------------------|---------------------------------------------------------------------------------------------|-----------|

FORM: 3531 REV\_4 2/27/06



## Data Sheet

TCA5P52AE211GAA009

Date: 5/28/2019

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

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

Submitted by: Fareeda Dudekula

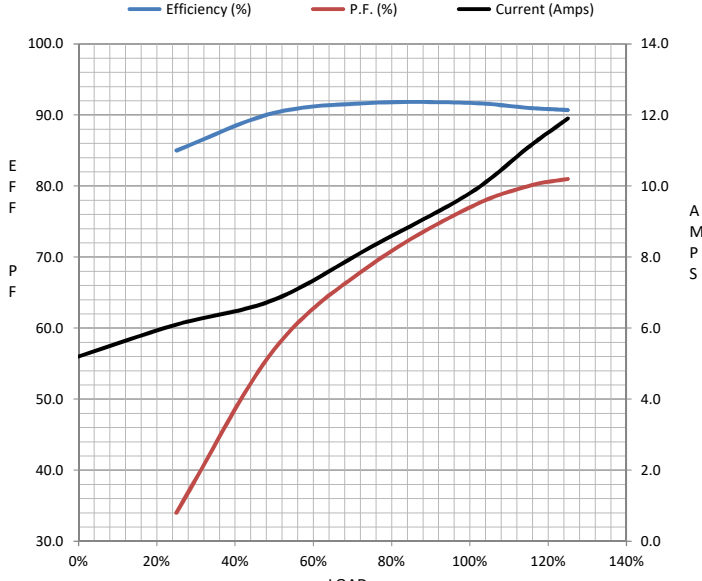
Submittal

Data @ 460 V

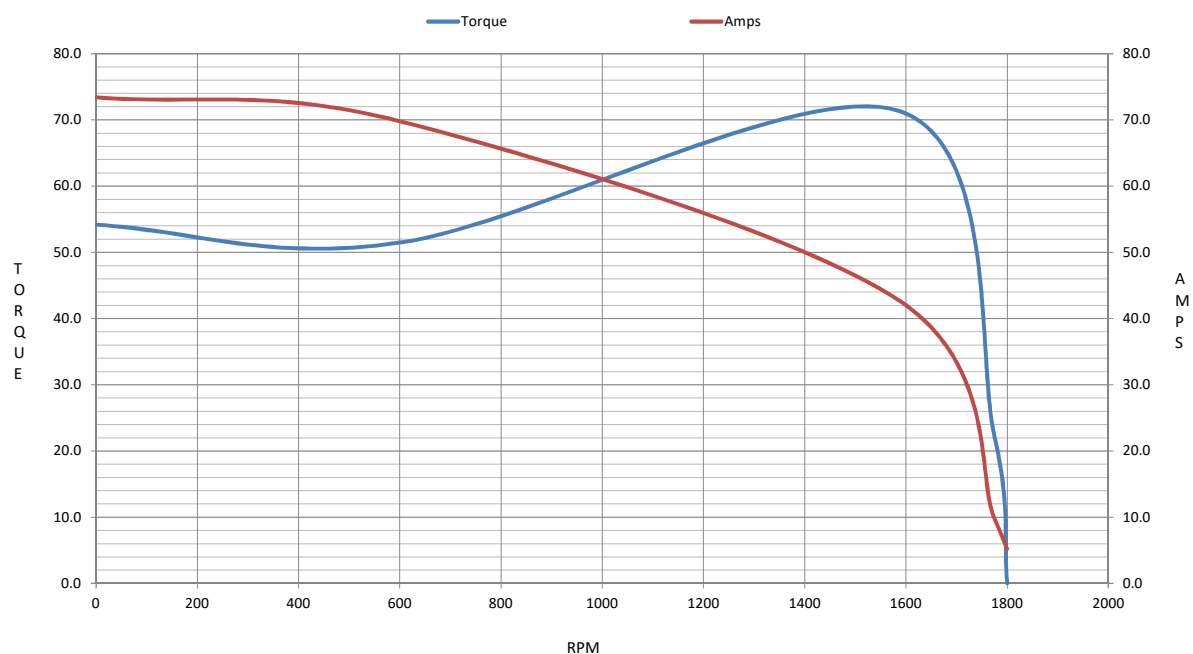
## Motor Load Data

| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 5.2  | 6.1  | 6.8  | 8.3  | 9.8  | 11.1  | 11.9 | 73.4 |  |
| Torque (ft-lb) | 0.00 | 5.5  | 11.0 | 16.6 | 22.2 | 25.6  | 27.9 | 54.2 |  |
| RPM            | 1800 | 1794 | 1788 | 1781 | 1775 | 1,770 | 1767 | 0    |  |
| Efficiency (%) |      | 85.0 | 90.3 | 91.7 | 91.7 | 91.0  | 90.7 |      |  |
| P.F. (%)       | 6.0  | 34.0 | 57.0 | 69.0 | 77.0 | 80.0  | 81.0 | 63.4 |  |

## Motor Speed Data

|                                                                                                                                                                     | LR   | Pull-Up                    | BD   | Rated  | Idle |                   |  |                   |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------|------|--------|------|-------------------|--|-------------------|--|--|
| Speed (RPM)                                                                                                                                                         | 0    | 600                        | 1587 | 1775   | 1800 |                   |  |                   |  |  |
| Current (Amps)                                                                                                                                                      | 73.4 | 69.8                       | 42.7 | 9.8    | 5.2  |                   |  |                   |  |  |
| Torque (ft-lb)                                                                                                                                                      | 54.2 | 51.5                       | 71.3 | 22.2   | 0.00 |                   |  |                   |  |  |
| <div><div>Efficiency (%)</div><div>P.F. (%)</div><div>Current (Amps)</div></div>  |      |                            |      |        |      | Information Block |  |                   |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | HP                |  | 7.5               |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Sync. RPM         |  | 1800              |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Frame             |  | 132               |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Enclosure         |  | TEFC              |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Construction      |  | TCA 132S04        |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Voltage           |  | 230/460#200/400 V |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Frequency         |  | 60 Hz             |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Design            |  | N                 |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | LR Code letter    |  | J                 |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Service Factor    |  | 1.15              |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Temp Rise @ FL    |  | 80 °C             |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Duty              |  | CONT              |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Ambient           |  | 40 °C             |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Elevation         |  | 3,300 feet        |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Rotor/Shaft wk²   |  | 1.10 Lb-Ft²       |  |  |
|                                                                                                                                                                     |      |                            |      |        |      | Ref Wdg           |  | IE3L1324201 NONE  |  |  |
| Sound Pressure @ 1M                                                                                                                                                 |      | 65 dBA                     |      |        |      |                   |  |                   |  |  |
| VFD Rating                                                                                                                                                          |      | CONSTANT 2:1/VARIABLE 10:1 |      |        |      |                   |  |                   |  |  |
| Outline Dwg                                                                                                                                                         |      | SS810118                   |      |        |      |                   |  |                   |  |  |
| Conn. Diag                                                                                                                                                          |      | 8442000677                 |      |        |      |                   |  |                   |  |  |
| Additional Specifications:                                                                                                                                          |      |                            |      |        |      |                   |  |                   |  |  |
| 0                                                                                                                                                                   |      |                            |      |        |      |                   |  |                   |  |  |
| 0                                                                                                                                                                   |      |                            |      |        |      |                   |  |                   |  |  |
| EQUIV CKT (OHMS / PHASE)                                                                                                                                            |      |                            |      |        |      |                   |  |                   |  |  |
| R1                                                                                                                                                                  |      | R2                         |      | X1     |      | X2                |  | Xm                |  |  |
| 0.9080                                                                                                                                                              |      | 0.4540                     |      | 2.0040 |      | 2.5720            |  | 49.2420           |  |  |

## 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 : TCA5P52AE211GAA009

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

Catalog No : R328B

Rework No : N/A

Directives :

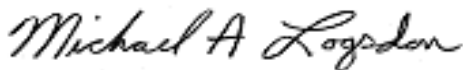
Low Voltage Directive 2014/35/EU

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**