

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCAP751A3111GAAD01

Catalog No: SCAP751A3111GAAD01

TerraMAX® Cast Iron Motor, 1 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 80M Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

|                        |               |                            |                             |
|------------------------|---------------|----------------------------|-----------------------------|
| Output HP              | 1 Hp          | Output KW                  | 0.75 kW                     |
| Frequency              | 50 Hz         | Voltage                    | 415 V                       |
| Current                | 1.6 A         | Speed                      | 2824 rpm                    |
| Service Factor         | 1             | Phase                      | 3                           |
| Efficiency             | 77.4 %        | Power Factor               | 0.86                        |
| Duty                   | S1            | Insulation Class           | F                           |
| Frame                  | 80M           | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No Protection | Ambient Temperature        | 50 °C                       |
| Drive End Bearing Size | 6204          | Opp Drive End Bearing Size | 6204                        |
| UL                     | No            | CSA                        | No                          |
| CE                     | Yes           | IP Code                    | 55                          |
| Number of Speeds       | 1             | Efficiency Class           | IE2                         |

### Technical Specifications

|                       |               |                       |                |
|-----------------------|---------------|-----------------------|----------------|
| Electrical Type       | Squirrel Cage | Starting Method       | Direct On Line |
| Poles                 | 2             | Rotation              | Bi-Directional |
| Mounting              | B3            | Motor Orientation     | Horizontal     |
| Drive End Bearing     | 2z-C3         | Opp Drive End Bearing | 2z-C3          |
| Frame Material        | Cast Iron     | Shaft Type            | Keyed          |
| Overall Length        | 281 mm        | Frame Length          | 140 mm         |
| Shaft Diameter        | 19 mm         | Shaft Extension       | 40 mm          |
| Assembly/Box Mounting | TOP           |                       |                |
| Outline Drawing       | 0208000343    | Connection Drawing    | 8442000085     |

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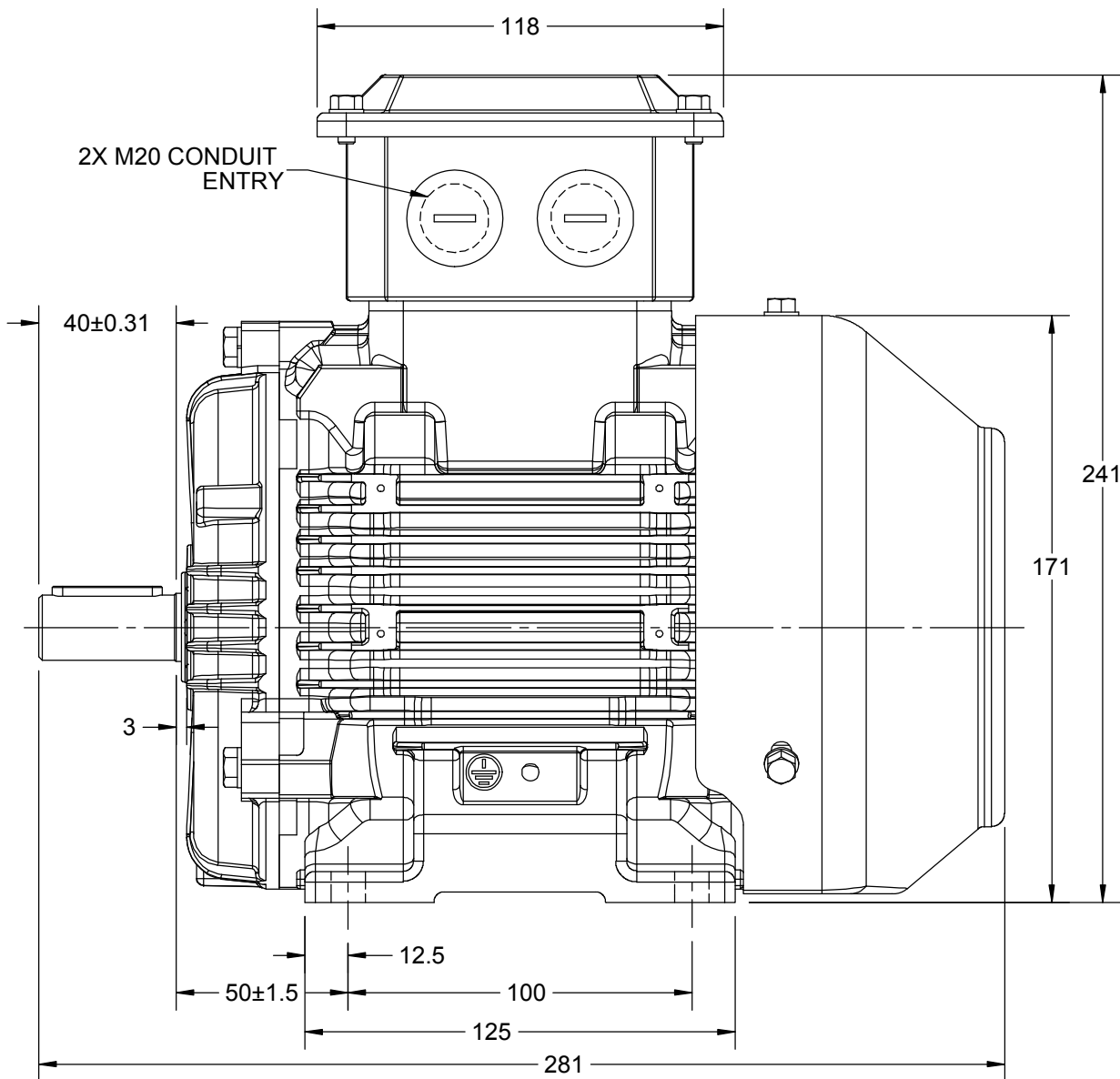
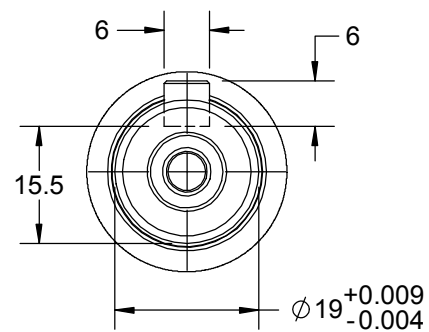
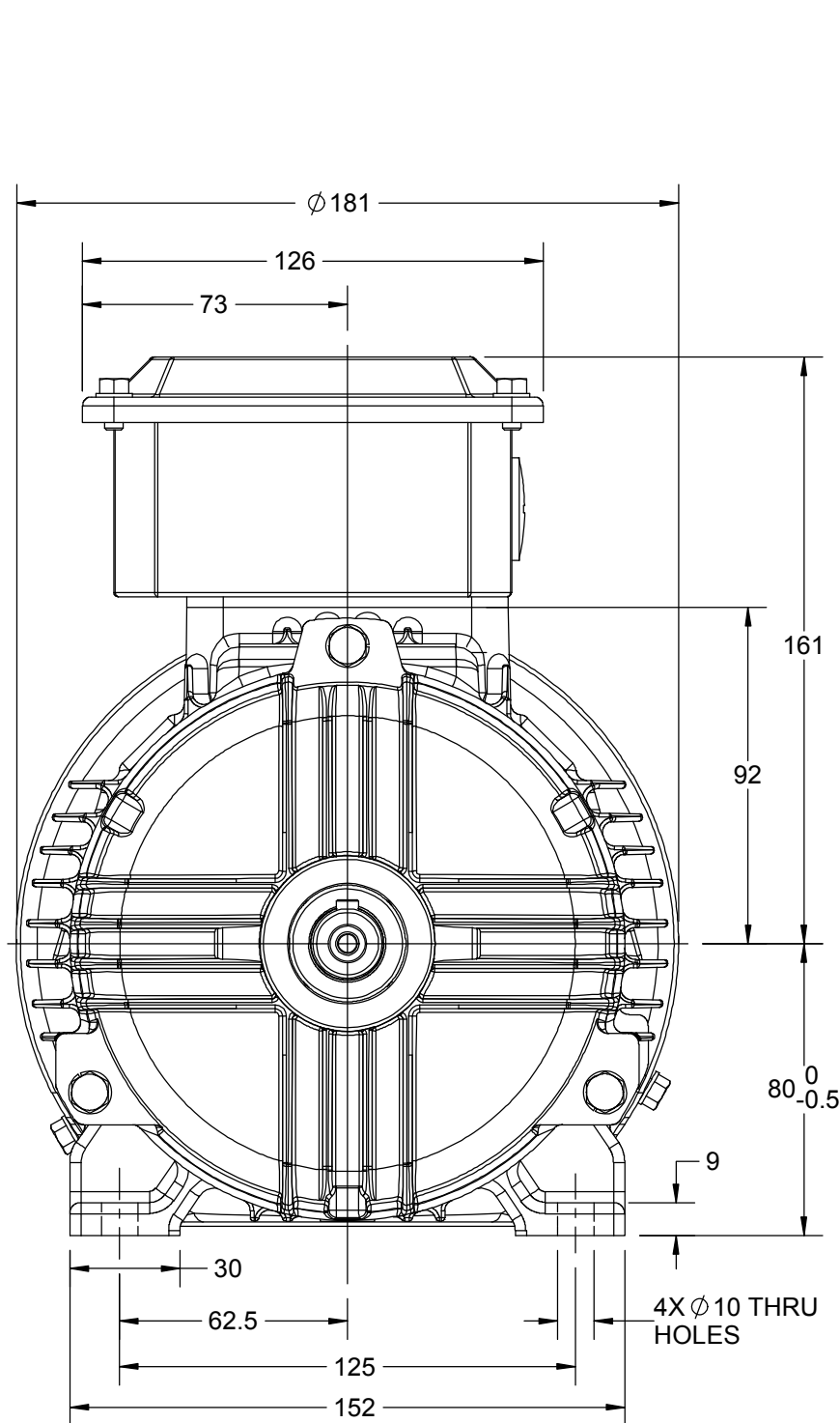
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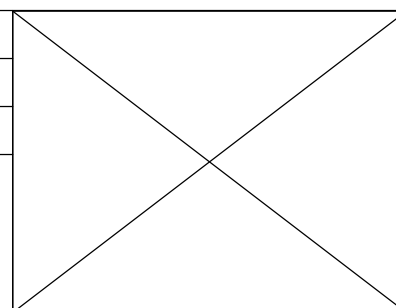
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|  |                   |                    |
|--|-------------------|--------------------|
| DRAWING REVISION<br>C  | REVISION BY<br>LK | DATE<br>23/05/2019 |
| ECO<br>ECO-0167983   | APPROVED BY<br>SR | DATE<br>23/05/2019 |
| ECO DESCRIPTION<br>MODEL UPDATED AS PER NEW 3D STRUCTURE   |                   |                    |
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|                           |  |                              |                 |
|---------------------------|--|------------------------------|-----------------|
| DRAWN BY<br>NIV           | <b>marathon™</b><br>Motors                                     |                              |                 |
| DATE<br>27/12/2017        |  |                              |                 |
| APPROVED BY<br>JAY        | DESCRIPTION<br><b>OUTLINE</b><br>80 FR- B3 MTG. MOTOR TYPE SCA |                              |                 |
| DATE<br>27/12/2017        |  |                              |                 |
| REFERENCE                 | MATERIAL   | PROCESS/FINISH               |                 |
| THIRD ANGLE<br>PROJECTION | SIZE<br>B  | DRAWING NUMBER<br>0208000343 | SHEET<br>1 OF 1 |

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|   |                           |                           |
|---|---------------------------|---------------------------|
| DRAWING REVISION<br><b>A</b>                  | REVISION BY<br><b>SN</b>  | DATE<br><b>13/01/2017</b> |
| ECO<br><b>ECO-0116390</b>                     | APPROVED BY<br><b>SBD</b> | DATE<br><b>13/01/2017</b> |
| ECO DESCRIPTION<br><b>NEW DRAWING RELEASE</b> |                           |                           |

| 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.

8WD.442.2017

|  |                           |  |  |                                     |                        |
|--|---------------------------|--|--|-------------------------------------|------------------------|
|  | DRAWN BY<br><b>SN</b>     |  | <b>Regal Beloit America, Inc.</b>            |                                     |                        |
|  | DATE<br><b>16/12/2016</b> |  |  |                                     |                        |
|  | APPROVED BY<br><b>SBD</b> |  | DESCRIPTION<br><b>CONN DIAGRAM-NAMEPLATE</b> |                                     |                        |
|  | DATE<br><b>16/12/2016</b> |  |  |                                     |                        |
|  | REFERENCE                 |  | MATERIAL                                     |                                     | PROCESS/FINISH         |
|  | THIRD ANGLE PROJECTION    |  | SIZE<br><b>A</b>                             | DRAWING NUMBER<br><b>8442000085</b> | SHEET<br><b>1 OF 1</b> |

**Model No.** SCAP751A3111GAAD01

| U<br>(V) | Δ / Y<br>Conn | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[RPM] | T<br>[Nm] | IE<br>Class | % EFF at __ load |    |       |       | PF at __ load |       |       | I <sub>A</sub> /I <sub>N</sub><br>[pu] | T <sub>A</sub> /T <sub>N</sub><br>[pu] | T <sub>K</sub> /T <sub>N</sub><br>[pu] |
|----------|---------------|-----------|-----------|-----------|----------|------------|-----------|-------------|------------------|----|-------|-------|---------------|-------|-------|--|--|--|
| 415      | Y             | 50        | 0.75      | 1.0       | 1.6      | 2824       | 2.37      | IE2         | 5/4FL            | FL | 3/4FL | 1/2FL | FL            | 3/4FL | 1/2FL | 5.5                                    | 2.4                                    | 2.8                                    |
|          |               |           |           |           |          |            |           |             |                  |    |       |       |               |       |       |  |  |  |

|                                  |                    |   |  |
|----------------------------------|--------------------|---|--|
| Motor type                       | SCA                | Degree of protection                      | IP 55                                      |
| Enclosure                        | TEFC               | Mounting type                             | IM B3                                      |
| Frame Material                   | Cast Iron          | Cooling method                            | IC 411                                     |
| Frame size                       | 80M                | Motor weight - approx.                    | 16.0 kg                                    |
| Duty                             | S1                 | Gross weight - approx.                    | 17.0 kg                                    |
| Voltage variation *              | ± 10%              | Motor inertia                             | 0.0008 kgm <sup>2</sup>                    |
| Frequency variation *            | ± 5%               | Load inertia                              | Customer to Provide                        |
| Combined variation *             | 10%                | Vibration level                           | 1.6 mm/s                                   |
| Design                           | N                  | Noise level ( 1meter distance from motor) | 76 dB(A)                                   |
| Service factor                   | 1.0                | No. of starts hot/cold/Equally spread     | 2/3/4                                      |
| Insulation class                 | F                  | Starting method                           | DOL  |
| Ambient temperature              | -20 to +50 °C      | Type of coupling                          | Direct                                     |
| Temperature rise (by resistance) | 70 [ Class B ] K   | LR withstand time (hot/cold)              | 6/10 s                                     |
| Altitude above sea level         | 1000 meter         | Direction of rotation                     | Bi-directional                             |
| Hazardous area classification    | NA                 | Standard rotation                         | Clockwise form DE                          |
| Zone classification              | NA                 | Paint shade                               | RAL 5014                                   |
| Gas group                        | NA                 | Accessories                               |  |
| Temperature class                | NA                 | Accessory - 1                             | -  |
| Rotor type                       | Aluminum Die cast  | Accessory - 2                             | -  |
| Bearing type                     | Anti-friction ball | Accessory - 3                             | -  |
| DE / NDE bearing                 | 6204-2Z / 6204-2Z  | Terminal box position                     | TOP  |
| Lubrication method               | Greased for life   | Maximum cable size/conduit size           | 1R x 3C x 10mm <sup>2</sup> /2 x M20 x 1.5 |
| Type of grease                   | NA                 | Auxiliary terminal box                    | NA   |

 $I_A/I_N$  - Locked Rotor Current / Rated Current

 $T_K/T_N$  - Breakdown Torque / Rated Torque

 $T_A/T_N$  - Locked Rotor Torque / Rated Torque

**NOTE**

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

\* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

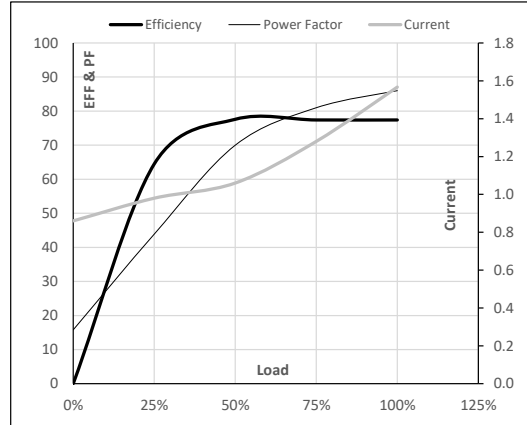
| Efficiency Standards | Europe | China | India           | Aus/Nz | Brazil | Global IEC |
|----------------------|--------|-------|-----------------|--------|--------|------------|
|                      | -      | -     | IS 12615 : 2018 | -      | -      | -          |

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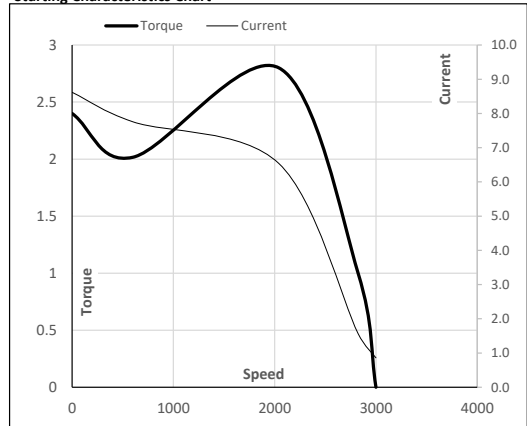
| Enclosure | U<br>(V) | $\Delta / Y$<br>Conn | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[RPM] | T<br>[kgm] | T<br>[Nm] | IE<br>Class | Amb<br>[°C] | Duty | Elevation<br>[m] | Inertia<br>[kg-m <sup>2</sup> ] | Weight<br>[kg] |
|-----------|----------|----------------------|-----------|-----------|-----------|----------|------------|------------|-----------|-------------|-------------|------|------------------|---------------------------------|----------------|
| TEFC      | 415      | Y                    | 50        | 0.75      | 1.0       | 1.6      | 2824       | 0.24       | 2.37      | IE2         | 50          | S1   | 1000             | 0.0008                          | 16             |

**Motor Load Data**

| Load Point   |       | NL   | 1/4FL | 1/2FL | 3/4FL | FL   | 5/4FL |
|--------------|-------|------|-------|-------|-------|------|-------|
| Current      | A     | 0.9  | 1.0   | 1.1   | 1.3   | 1.6  |       |
| Torque       | Nm    | 0.0  | 0.8   | 1.6   | 2.5   | 2.4  |       |
| Speed        | r/min | 3000 | 2969  | 2943  | 2914  | 2824 |       |
| Efficiency   | %     | 0.0  | 64.5  | 77.6  | 77.4  | 77.4 |       |
| Power Factor | %     | 15.8 | 43.9  | 70.0  | 81.0  | 86.0 |       |

**Performance vs Load Chart**

**Motor Speed Torque Data**

| Load Point |       | LR  | P-Up | BD   | Rated | NL   |
|------------|-------|-----|------|------|-------|------|
| Speed      | r/min | 0   | 600  | 2041 | 2824  | 3000 |
| Current    | A     | 8.6 | 7.8  | 6.5  | 1.6   | 0.9  |
| Torque     | pu    | 2.4 | 2.0  | 2.8  | 1     | 0    |

**Starting Characteristics Chart**

**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

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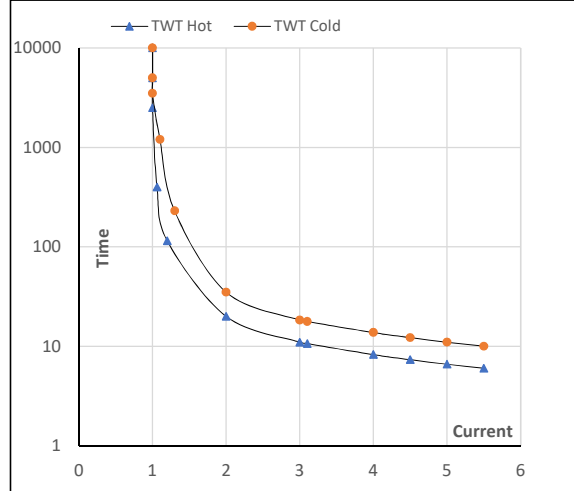
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| Enclosure | U<br>(V) | $\Delta$ / Y<br>Conn | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[rpm] | T<br>[kgm] | T<br>[Nm] | IE<br>Class | Amb<br>[°C] | Duty | Elevation<br>[m] | Inertia<br>[kg-m <sup>2</sup> ] | Weight<br>[kg] |
|-----------|----------|----------------------|-----------|-----------|-----------|----------|------------|------------|-----------|-------------|-------------|------|------------------|---------------------------------|----------------|
| TEFC      | 415      | Y                    | 50        | 0.75      | 1.0       | 1.6      | 2824       | 0.24       | 2.37      | IE2         | 50          | S1   | 1000             | 0.0008                          | 16.0           |

**Motor Speed Torque Data**

| Load     |    | FL    | I <sub>1</sub> | I <sub>2</sub> | I <sub>3</sub> | I <sub>4</sub> | I <sub>5</sub> | LR  |
|----------|----|-------|----------------|----------------|----------------|----------------|----------------|-----|
| TWT Hot  | s  | 10000 | 20             | 11             | 9              | 8              | 7              | 6   |
| TWT Cold | s  | 10000 | 35             | 18             | 14             | 12             | 11             | 10  |
| Current  | pu | 1     | 2              | 3              | 4              | 4.5            | 5              | 5.5 |
|          |    |       |                |                |                |                |                |     |

**Thermal Characteristics Chart**

**NOTE** Refer data sheet for applicable standard and tolerances on performance parameters

 Issued By  
Issued Date

## 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 : SCAP751A3111GAAD01

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

Catalog No : SCAP751A3111GAAD01

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**