# PRODUCT INFORMATION PACKET

Model No: SCA2803A3111GAAD01
Catalog No: SCA2803A3111GAAD01
TerraMAX® Cast Iron Motor, 375 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 355L Frame, TEFC

marathon® Motors

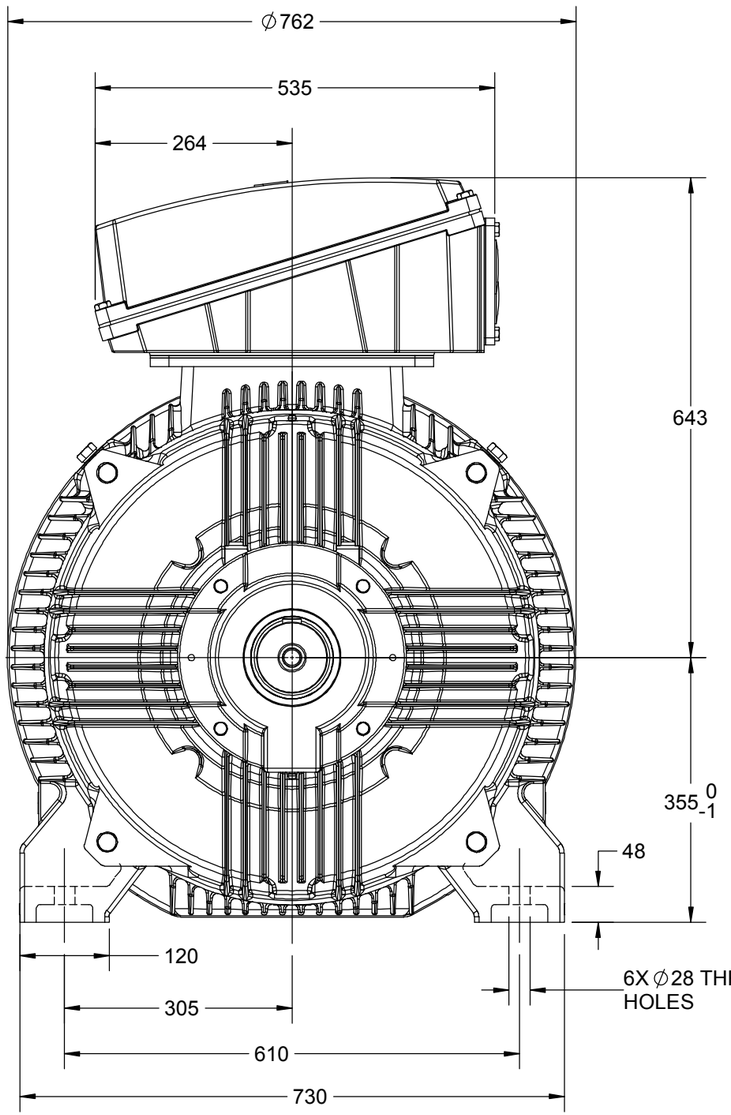
## Nameplate Specifications

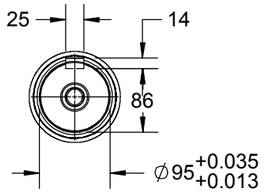
| | | | |
|---|---|---|---|
| Output HP | 375 Hp | Output KW | 280.0 kW |
| Frequency | 50 Hz | Voltage | 415 V |
| Current | 476.6 A | Speed | 990 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 95 % | Power Factor | 0.86 |
| Duty | S1 | Insulation Class | F |
| Frame | 355L | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | No Protection | Ambient Temperature | 50 °C |
| Drive End Bearing Size | 6322 | Opp Drive End Bearing Size | 6322 |
| UL | No | CSA | No |
| CE | Yes | IP Code | 55 |
| Number of Speeds | 1 | Efficiency Class | IE2 |

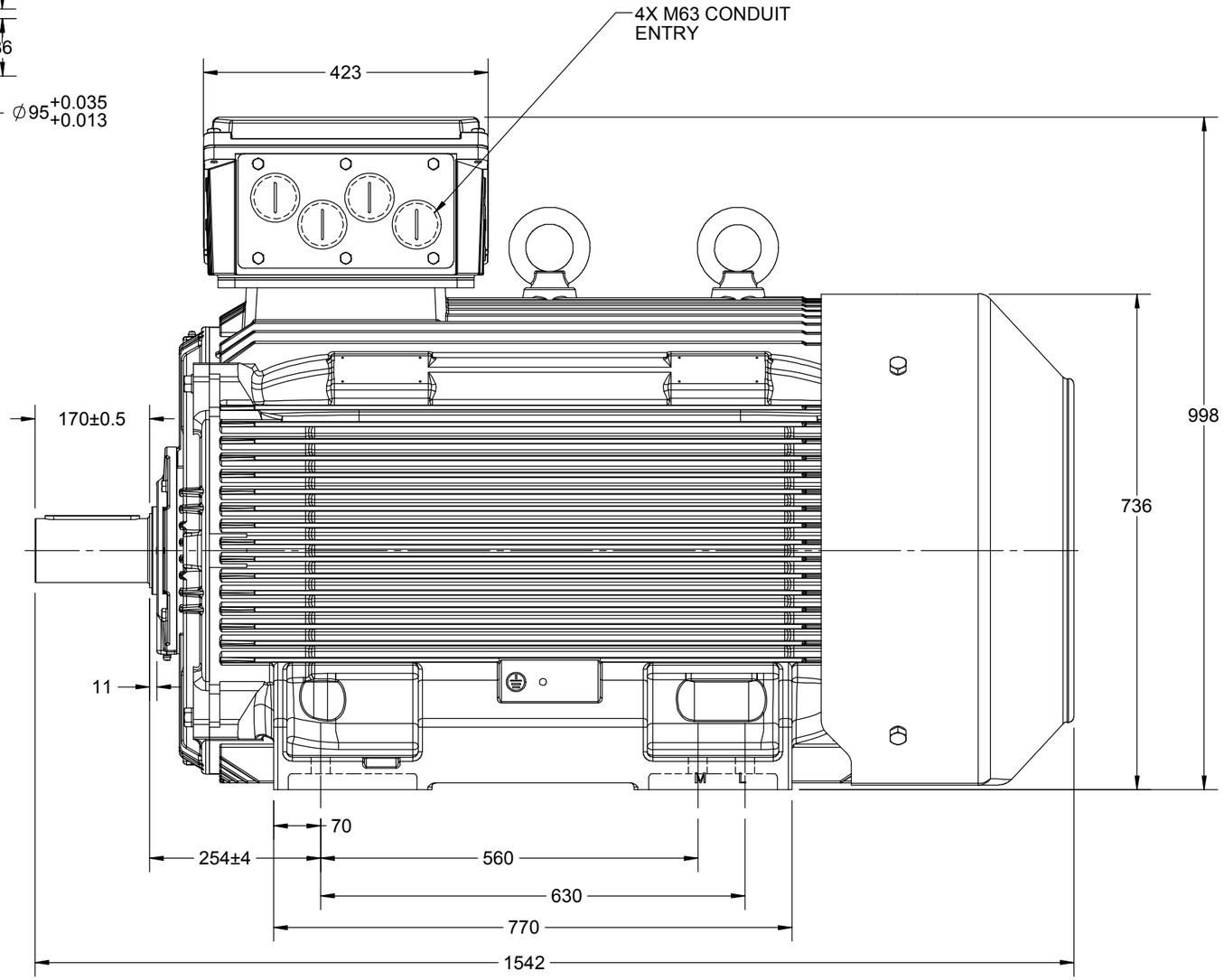
## Technical Specifications

| | | | |
|---|---|---|---|
| Electrical Type | Squirrel Cage | Starting Method | Direct On Line |
| Poles | 6 | Rotation | Bi-Directional |
| Mounting | B3 | Motor Orientation | Horizontal |
| Drive End Bearing | C3 | Opp Drive End Bearing | C3 |
| Frame Material | Cast Iron | Shaft Type | Keyed |
| Overall Length | 1542 mm | Frame Length | 1010 mm |
| Shaft Diameter | 95 mm | Shaft Extension | 170 mm |
| Assembly/Box Mounting | TOP | | |
| Outline Drawing | 0235501829 | Connection Drawing | 8442000085 |

# OUTLINE



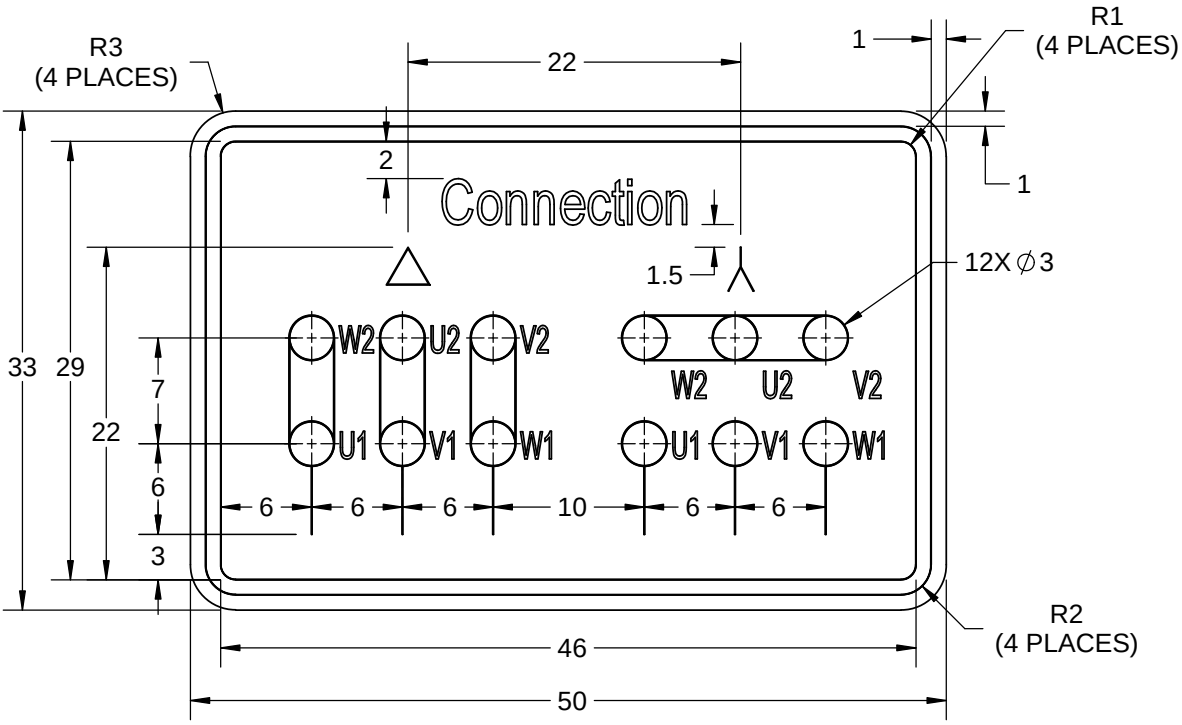




| | | | | | |
|---|---|---|---|---|---|
| DRAWING REVISION C | REVISION BY NIV | DATE 08/05/2019 | | DRAWN BY JOY | marathon™ Motors |
| ECO ECO-0165600 | APPROVED BY SR | DATE 08/05/2019 | | DATE 18/07/2014 | |
| ECO DESCRIPTION MODEL UPDATED | | | | APPROVED BY SBD | DESCRIPTION OUTLINE 355FR-B3 MTG. MOTOR TYPE: TCA/QCA |
| | | | | DATE 18/07/2014 | |
| | | | | REFERENCE | MATERIAL / PROCESS/FINISH |
| | | | | THIRD ANGLE PROJECTION | SIZE B / DRAWING NUMBER 0235501829 / SHEET 1 OF 1 |

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

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

marathon® Motors

TerraMAX®

**Model No.** SCA2803A3111GAAD01

| U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [RPM] | T [Nm] | IE Class | % EFF at __ load 5/4FL | FL | 3/4FL | 1/2FL | PF at __ load FL | 3/4FL | 1/2FL | $I_A/I_N$ [pu] | $T_A/T_N$ [pu] | $T_K/T_N$ [pu] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 415 | Δ | 50 | 280 | 375 | 476.6 | 990 | 2697.73 | IE2 | - | 95 | 95 | 95.8 | 0.86 | 0.84 | 0.76 | 5.3 | 1.9 | 2.3 |

| | | | | | |
|---|---|---|---|---|---|
| Motor type | SCA | | Degree of protection | IP 55 | |
| Enclosure | TEFC | | Mounting type | IM B3 | |
| Frame Material | Cast Iron | | Cooling method | IC 411 | |
| Frame size | 355L | | Motor weight - approx. | 1974 | kg |
| Duty | S1 | | Gross weight - approx. | 2019 | kg |
| Voltage variation * | ± 10% | | Motor inertia | 12.7166 | $kgm^2$ |
| Frequency variation * | ± 5% | | Load inertia | Customer to Provide | |
| Combined variation * | 10% | | Vibration level | 2.8 | mm/s |
| Design | N | | Noise level ( 1meter distance from motor) | 70 | 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) | 20/40 | 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 | 6322 C3 / 6322 C3 | | Terminal box position | TOP | |
| Lubrication method | Regreasable | | Maximum cable size/conduit size | 1R x 3C x 300mm²/4 x M63 x 1.5 | |
| Type of grease | Shell Gadus S5 V100 or Equivalent | | Auxiliary terminal box | Available on Request | |

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

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

$T_K/T_N$ - Breakdown 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 combined 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 | - | - | - |

REGAL®

marathon® Motors

TerraMAX®

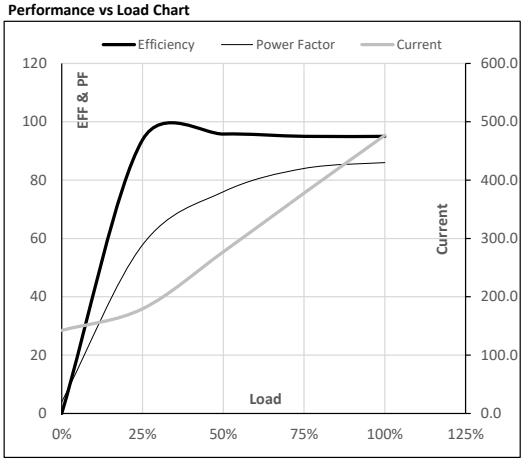
**Model No.** SCA2803A3111GAAD01

| Enclosure | U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [RPM] | T [kgm] | T [Nm] | IE Class | Amb [°C] | Duty | Elevation [m] | Inertia [kg-m$^2$] | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEFC | 415 | Δ | 50 | 280 | 375 | 476.8 | 990 | 275.09 | 2697.73 | IE2 | 50 | S1 | 1000 | 12.7166 | 1974 |

**Motor Load Data**

| Load Point | | NL | 1/4FL | 1/2FL | 3/4FL | FL | 5/4FL |
|---|---|---|---|---|---|---|---|
| Current | A | 142.4 | 179.4 | 277.0 | 377.7 | 476.8 | |
| Torque | Nm | 0.0 | 669.3 | 1341.7 | 2017.7 | 2697.7 | |
| Speed | r/min | 1000 | 998 | 995 | 993 | 990 | |
| Efficiency | % | 0.0 | 93.8 | 95.8 | 95.0 | 95.0 | |
| Power Factor | % | 4.0 | 57.8 | 76.0 | 84.0 | 86.0 | |

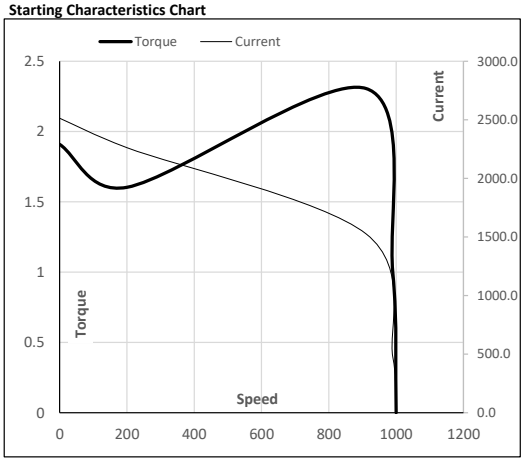
**Performance vs Load Chart**




**Motor Speed Torque Data**

| Load Point | | LR | P-Up | BD | Rated | NL |
|---|---|---|---|---|---|---|
| Speed | r/min | 0 | 200 | 911 | 990 | 1000 |
| Current | A | 2514.0 | 2262.6 | 1526.4 | 476.8 | 142.4 |
| Torque | pu | 1.9 | 1.6 | 2.3 | 1 | 0 |

**Starting Characteristics Chart**




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

Issued By
Issued Date

REGAL®

marathon® Motors

TerraMAX®

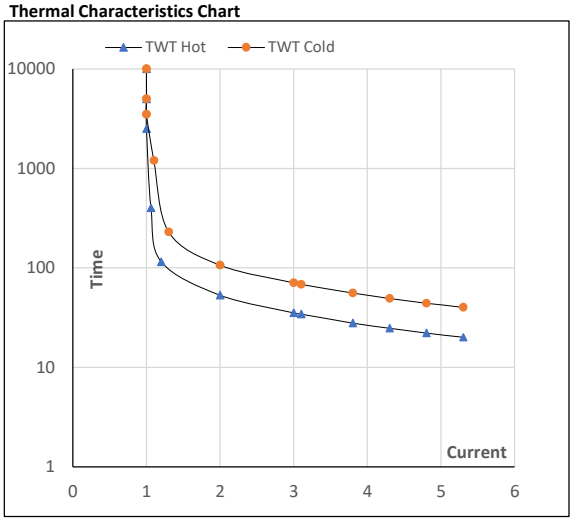
**Model No.** SCA2803A3111GAAD01

| Enclosure | U (V) | Δ / Y Conn | f [Hz] | P [kW] | P [hp] | I [A] | n [rpm] | T [kgm] | T [Nm] | IE Class | Amb [°C] | Duty | Elevation [m] | Inertia [kg-m$^2$] | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEFC | 415 | Δ | 50 | 280 | 375 | 476.8 | 990 | 275.09 | 2697.73 | IE2 | 50 | S1 | 1000 | 12.7166 | 1974 |

**Motor Speed Torque Data**

| Load | | FL | $I_1$ | $I_2$ | $I_3$ | $I_4$ | $I_5$ | LR |
|---|---|---|---|---|---|---|---|---|
| TWT Hot | s | 10000 | 53 | 35 | 27 | 24 | 21 | 20 |
| TWT Cold | s | 10000 | 106 | 71 | 54 | 48 | 43 | 40 |
| Current | pu | 1 | 2 | 3 | 4 | 4.5 | 5 | 5.4 |

**Thermal Characteristics Chart**




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

Issued By
Issued Date

REGAL