# PRODUCT INFORMATION PACKET



Model No: TCA2204AF121GAC010 Catalog No: TCA2204AF121GAC010

TerraMAX® Cast Iron Motor, 295 HP, 3 Ph, 50 Hz, 380 V, 750 RPM, 355L Frame, TEFC



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# Nameplate Specifications

| Output HP              | 295 Hp        | Output KW                  | 220.0 kW                    |
|------------------------|---------------|----------------------------|-----------------------------|
| Frequency              | 50 Hz         | Voltage                    | 380 V                       |
| Current                | 420.7 A       | Speed                      | 742 rpm                     |
| Service Factor         | 1             | Phase                      | 3                           |
| Efficiency             | 94.6 %        | Power Factor               | 0.84                        |
| Duty                   | <b>S</b> 1    | Insulation Class           | F                           |
| Frame                  | 355L          | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No Protection | Ambient Temperature        | 40 °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           | IE3                         |
|                        |               |                            |                             |

## **Technical Specifications**

| Electrical Type       | Squirrel Cage | Starting Method       | Direct On Line |
|-----------------------|---------------|-----------------------|----------------|
| Poles                 | 8             | Rotation              | Bi-Directional |
| Mounting              | B5            | Motor Orientation     | Horizontal     |
| Drive End Bearing     | СЗ            | Opp Drive End Bearing | СЗ             |
| 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 | Тор           |                       |                |
| Outline Drawing       | 0235501831    | Connection Drawing    | 8442000085     |

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

### **NEW DRAWING RELEASE**

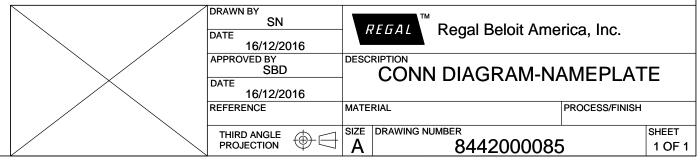
| GEOMENTRIC TOLERANCE |         |      |  |  |  |
|----------------------|---------|------|--|--|--|
|                      | >0~6    | ±0.1 |  |  |  |
| LINEAR DIM           | >6~30   | ±0.2 |  |  |  |
|                      | >30~120 | ±0.3 |  |  |  |



## NOTES:

- 1.
- 2.
- PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE 3. BY THE TABLE.

8WD.442.2017







#### Model No. TCA2204AF121GAC010

| U   | Δ/Υ  | f    | Р    | Р    | I      | n     | T      | IE    | 9     | % EFF a | t load | t     | PF   | at lo | oad   | I <sub>A</sub> /I <sub>N</sub> | T <sub>A</sub> /T <sub>N</sub> | $T_K/T_N$ |
|-----|------|------|------|------|--------|-------|--------|-------|-------|---------|--------|-------|------|-------|-------|--------------------------------|--------------------------------|-----------|
| (V) | Conn | [Hz] | [kW] | [hp] | [A]    | [RPM] | [Nm]   | Class | 5/4FL | FL      | 3/4FL  | 1/2FL | FL   | 3/4FL | 1/2FL | [pu]                           | [pu]                           | [pu]      |
| 380 | Δ    | 50   | 220  | 295  | 420.65 | 742   | 2879.3 | IE3   | -     | 94.6    | 94.6   | 95.2  | 0.84 | 0.81  | 0.73  | 6.1                            | 1.6                            | 2.4       |
|     |      |      |      |      |        |       |        |       |       |         |        |       |      |       |       |                                |                                |           |
|     |      |      |      |      |        |       |        |       |       |         |        |       |      |       |       |                                |                                |           |
|     |      |      |      |      |        |       |        |       |       |         |        |       |      |       |       |                                |                                |           |

| Motor type                    | TCA                         |       |
|-------------------------------|-----------------------------|-------|
| Enclosure                     | TEFC                        |       |
| Frame Material                | Cast Iron                   |       |
| Frame size                    | 355L                        |       |
| Duty                          | S1                          |       |
| Voltage variation *           | ± 10%                       |       |
| Frequency variation *         | ± 5%                        |       |
| Combined variation *          | 10%                         |       |
| Design                        | N                           |       |
| Service factor                | 1.0                         |       |
| Insulation class              | F                           |       |
| Ambient temperature           | -20 to +40                  | °C    |
| Temperature rise (by resistan | ce) 80 [ Class B ]          | K     |
| Altitude above sea level      | 1000                        | meter |
| Hazardous area classification | NA                          |       |
| Zone classification           | NA                          |       |
| Gas group                     | NA                          |       |
| Temperature class             | NA                          |       |
| Rotor type                    | Aluminum Die cast           |       |
| Bearing type                  | Anti-friction ball          |       |
| DE / NDE bearing              | 6322 C3 / 6322 C3           |       |
| Lubrication method            | Regreasable                 |       |
| Type of grease                | CHEVRON SRI-2 or Equivalent |       |
|                               |                             |       |

| Degree of protection                  | IP 55                                       |                  |
|---------------------------------------|---|------------------|
| Mounting type                         | IM B5                                       |                  |
| Cooling method                        | IC 411                                      |                  |
| Motor weight - approx.                | 2138  | kg               |
| Gross weight - approx.                | 2183  | kg               |
| Motor inertia                         | 14.7210                                     | kgm <sup>2</sup> |
| Load inertia                          | Customer to Provide                         |                  |
| Vibration level                       | 2.8   | mm/s             |
| Noise level ( 1meter distance from mo | tor) 65                                     | dB(A)            |
| No. of starts hot/cold/Equally spread | 2/3/4                                       |                  |
| Starting method                       | DOL   |                  |
| Type of coupling                      | Direct                                      |                  |
| LR withstand time (hot/cold)          | 15/30                                       | S                |
| Direction of rotation                 | Bi-directional                              |                  |
| Standard rotation                     | Clockwise form DE                           |                  |
| Paint shade                           | RAL 5014                                    |                  |
| Accessories                           |   |                  |
| Accessory - 1                         | PTC 150°C                                   |                  |
| Accessory - 2                         | -   |                  |
| Accessory - 3                         | -   |                  |
| Terminal box position                 | TOP   |                  |
| Maximum cable size/conduit size       | 1R x 3C x 300mm <sup>2</sup> /4 x M63 x 1.5 |                  |
| Auxiliary terminal box                | NA  |                  |
|                                       |   |                  |

 $I_A/I_N$  - 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

 $\ensuremath{^{*}}$  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 | Europe | China                 | India | Aus/Nz | Brazil | Global IEC    |
|------------|--------|-----------------------|-------|--------|--------|---------------|
| Standards  | -      | GB 18613-2012 Grade 2 | -     | -      | -      | IEC: 60034-30 |

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