# PRODUCT INFORMATION PACKET



Model No: SCA2803A4141GAA001 Catalog No: SCA2803A4141GAA001

TerraMAX® Cast Iron Motor, 375 HP, 3 Ph, 50 Hz, 380/660 V, 1000 RPM, 355L Frame, TEFC





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Product Information Packet: Model No: SCA2803A4141GAA001, Catalog No:SCA2803A4141GAA001 TerraMAX® Cast Iron Motor, 375 HP, 3 Ph, 50 Hz, 380/660 V, 1000 RPM, 355L Frame, TEFC



## Nameplate Specifications

| Output HP              | 375 Hp        | Output KW                  | 280.0 kW                    |
|------------------------|---------------|----------------------------|-----------------------------|
| Frequency              | 50 Hz         | Voltage                    | 380/660 V                   |
| Current                | 514.7 A       | Speed                      | 990 rpm                     |
| Service Factor         | 1             | Phase                      | 3                           |
| Efficiency             | 95 %          | Power Factor               | 0.87                        |
| 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           | IE2                         |
|                        |               |                            |                             |

## **Technical Specifications**

| Electrical Type       | Squirrel Cage | Starting Method       | Direct On Line |  |
|-----------------------|---------------|-----------------------|----------------|--|
| Poles                 | 6             | Rotation              | Bi-Directional |  |
| Mounting              | V1            | Motor Orientation     | Shaftdown      |  |
| Drive End Bearing     | C3            | Opp Drive End Bearing | СЗ             |  |
| Frame Material        | Cast Iron     | Shaft Type            | Keyed          |  |
| Overall Length        | 1680 mm       | Frame Length          | 1010 mm        |  |
| Shaft Diameter        | 95 mm         | Shaft Extension       | 170 mm         |  |
| Assembly/Box Mounting | Тор           |                       |                |  |
| Connection Drawing    | 8442000085    | Outline Drawing       | 0235501832     |  |
|                       |               |                       |                |  |

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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. SCA2803A4141GAA001

| U       | Δ/Υ  | f    | Р    | Р    | I     | n     | Т      | IE    | %     | 6 EFF a | it load | i     | PF   | at lo | oad   | I <sub>A</sub> /I <sub>N</sub> | $T_A/T_N$ | $T_K/T_N$ |
|---------|------|------|------|------|-------|-------|--------|-------|-------|---------|---------|-------|------|-------|-------|--------------------------------|-----------|-----------|
| (V)     | Conn | [Hz] | [kW] | [hp] | [A]   | [RPM] | [Nm]   | Class | 5/4FL | FL      | 3/4FL   | 1/2FL | FL   | 3/4FL | 1/2FL | [pu]                           | [pu]      | [pu]      |
| 380/660 | Δ    | 50   | 280  | 375  | 514.7 | 990   | 2696.5 | IE2   | -     | 95      | 95      | 95.6  | 0.87 | 0.84  | 0.77  | 6.1                            | 2.0       | 2.4       |
|         |      |      |      |      |       |       |        |       |       |         |         |       |      |       |       |                                |           |           |
|         |      |      |      |      |       |       |        |       |       |         |         |       |      |       |       |                                |           |           |
|         |      |      |      |      |       |       |        |       |       |         |         |       |      |       |       |                                |           |           |

| Motor type                      | SCA                         |       |
|---------------------------------|-----------------------------|-------|
| 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 resistance | e) 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 V1                                    |                  |
| Cooling method                          | IC 411                                   |                  |
| Motor weight - approx.                  | 1954                                     | kg               |
| Gross weight - approx.                  | 1999                                     | kg               |
| Motor inertia                           | 12.7166                                  | kgm <sup>2</sup> |
| Load inertia                            | Customer to Provide                      |                  |
| Vibration level                         | 2.8                                      | mm/s             |
| Noise level ( 1meter distance from moto | r) 70                                    | dB(A)            |
| No. of starts hot/cold/Equally spread   | 2/3/4                                    |                  |
| Starting method                         | DOL                                      |                  |
| Type of coupling                        | Direct                                   |                  |
| LR withstand time (hot/cold)            | 30/15                                    | S                |
| Direction of rotation                   | Bi-directional                           |                  |
| Standard rotation                       | Clockwise form DE                        |                  |
| Paint shade                             | RAL 5014                                 |                  |
| Accessories                             |  |                  |
| Accessory - 1                           | -  |                  |
| Accessory - 2                           | -  |                  |
| Accessory - 3                           | -  |                  |
| Terminal box position                   | TOP                                      |                  |
|   | x 3C x 300mm <sup>2</sup> /4 x M63 x 1.5 |                  |
| 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

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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 $<sup>\</sup>ensuremath{^{*}}$  Voltage, Frequency and combine variation are as per IEC60034-1

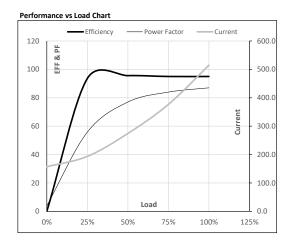




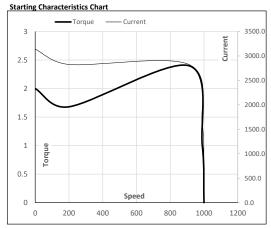
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| Enclosure | U       | Δ/Υ  | f    | Р    | Р    | I     | n     | T      | T       | IE    | Amb  | Duty | Elevation | Inertia              | Weight |
|-----------|---------|------|------|------|------|-------|-------|--------|---------|-------|------|------|-----------|----------------------|--------|
|           | (V)     | Conn | [Hz] | [kW] | [hp] | [A]   | [RPM] | [kgm]  | [Nm]    | Class | [°C] |      | [m]       | [kg-m <sup>2</sup> ] | [kg]   |
| TEFC      | 380/660 | Δ    | 50   | 280  | 375  | 514.7 | 990   | 274.97 | 2696.54 | IE2   | 40   | S1   | 1000      | 12.7166              | 1954   |
|           |         |      |      |      |      |       |       |        |         |       |      |      |           |                      |        |

| Motor Load Data | a     |       |       |        |        |        |       |
|-----------------|-------|-------|-------|--------|--------|--------|-------|
| Load Point      |       | NL    | 1/4FL | 1/2FL  | 3/4FL  | FL     | 5/4FL |
| Current         | Α     | 157.1 | 193.5 | 274.3  | 376.4  | 514.7  |       |
| Torque          | Nm    | 0.0   | 669.2 | 1341.5 | 2017.1 | 2696.5 |       |
| Speed           | r/min | 1000  | 998   | 995    | 993    | 990    |       |
| Efficiency      | %     | 0.0   | 93.6  | 95.6   | 95.0   | 95.0   |       |
| Power Factor    | %     | 3.9   | 55.8  | 77.0   | 84.0   | 87.0   |       |



| Motor Speed 1 | Torque Data |        |        |        |       |       |
|---------------|-------------|--------|--------|--------|-------|-------|
| Load Point    |             | LR     | P-Up   | BD     | Rated | NL    |
| Speed         | r/min       | 0      | 200    | 911    | 990   | 1000  |
| Current       | Α           | 3139.8 | 2825.8 | 1601.7 | 514.7 | 157.1 |
| Torque        | pu          | 2.0    | 1.7    | 2.4    | 1     | 0     |



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

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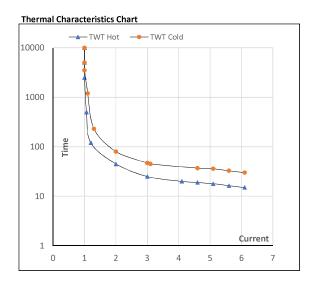




#### Model No. SCA2803A4141GAA001

| Enclosure | U      | Δ/Υ  | f    | Р    | Р    | ı     | n     | Т      | Т       | IE    | Amb  | Duty | Elevation | Inertia              | Weight |
|-----------|--------|------|------|------|------|-------|-------|--------|---------|-------|------|------|-----------|----------------------|--------|
|           | (V)    | Conn | [Hz] | [kW] | [hp] | [A]   | [rpm] | [kgm]  | [Nm]    | Class | [°C] |      | [m]       | [kg-m <sup>2</sup> ] | [kg]   |
| TEFC      | 380/66 | 0 Δ  | 50   | 280  | 375  | 514.7 | 990   | 274.97 | 2696.54 | IE2   | 40   | S1   | 1000      | 12.7166              | 1954   |

| Motor Speed Torque Data |    |       |       |       |                |       |                |     |
|-------------------------|----|-------|-------|-------|----------------|-------|----------------|-----|
| Load                    |    | FL    | $I_1$ | $I_2$ | l <sub>3</sub> | $I_4$ | I <sub>5</sub> | LR  |
| TWT Hot                 | S  | 10000 | 45    | 25    | 21             | 18    | 17             | 15  |
| TWT Cold                | s  | 10000 | 80    | 47    | 46             | 36    | 33             | 30  |
| Current                 | pu | 1     | 2     | 3     | 4              | 5     | 5.5            | 6.1 |



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

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