

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA1P51AG111GAA001

Catalog No: SCA1P51AG111GAA001

TerraMAX® Cast Iron Motor, 2 HP, 3 Ph, 50 Hz, 220/380 V, 3000 RPM, 90S Frame, TEFC



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**RegalRexnord**

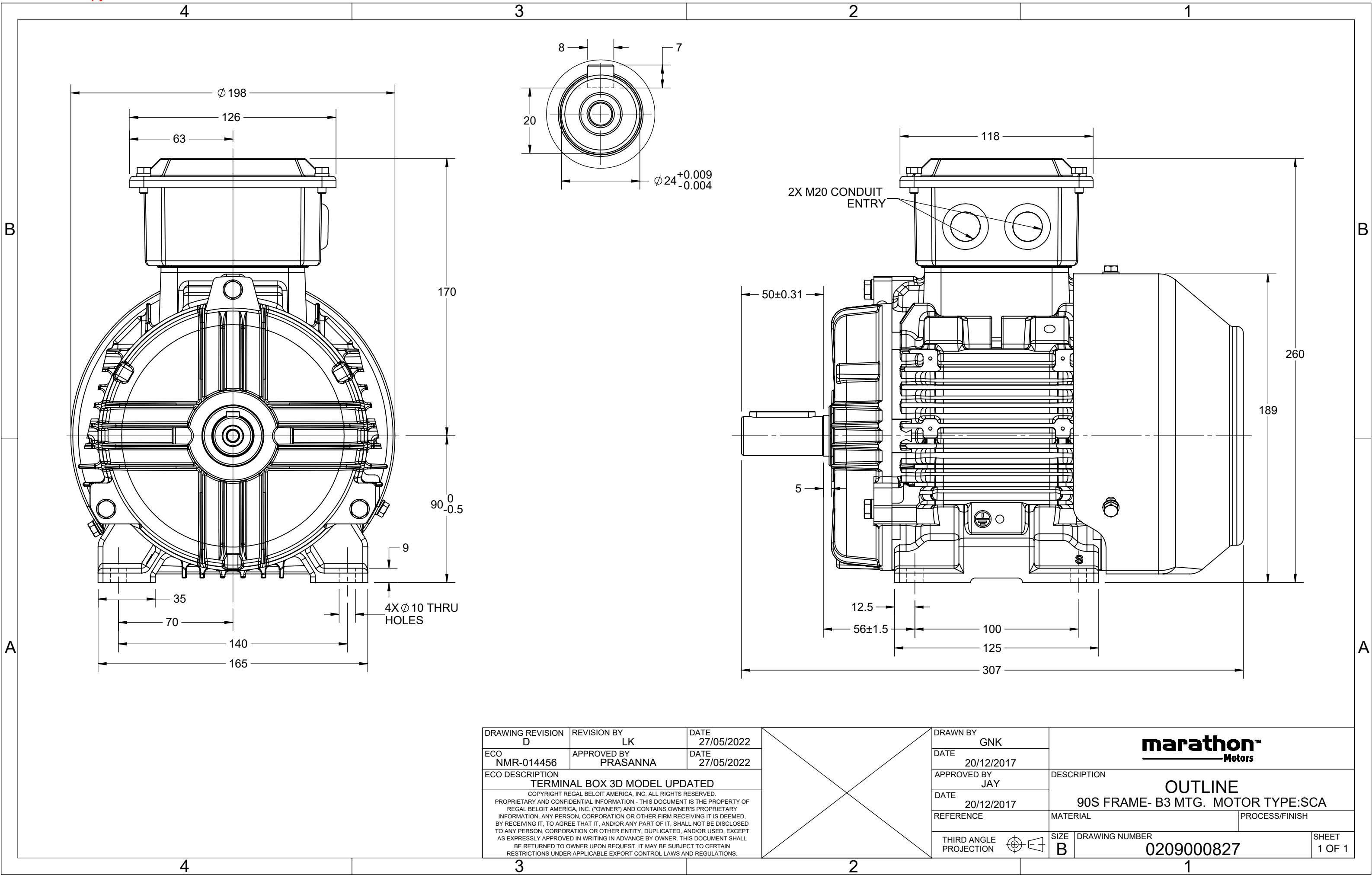
## Nameplate Specifications

Output HP	2 Hp	Output KW	1.5 kW
Frequency	50 Hz	Voltage	220/380 V
Current	3.3 A	Speed	2869 rpm
Service Factor	1	Phase	3
Efficiency	81.3 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	90S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6205	Opp Drive End Bearing Size	6205
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

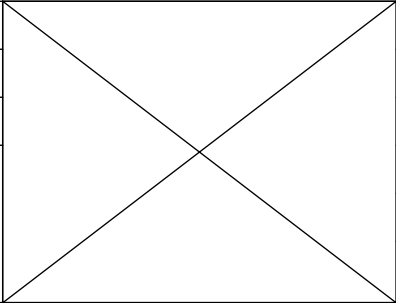
## Technical Specifications

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	307 mm	Frame Length	128 mm
Shaft Diameter	24 mm	Shaft Extension	50 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0209000827

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DRAWING REVISION D	REVISION BY LK	DATE 27/05/2022
ECO NMR-014456	APPROVED BY PRASANNA	DATE 27/05/2022
ECO DESCRIPTION TERMINAL BOX 3D MODEL UPDATED		
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DRAWN BY GNK	<b>marathon™</b> <b>Motors</b>		
DATE 20/12/2017			
APPROVED BY JAY	DESCRIPTION <b>OUTLINE</b> 90S FRAME- B3 MTG. MOTOR TYPE:SCA		
DATE 20/12/2017			
REFERENCE	MATERIAL		PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE <b>B</b>	DRAWING NUMBER <b>0209000827</b>	SHEET 1 OF 1

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DRAWING REVISION

A

REVISION BY

SN

DATE

13/01/2017

ECO  
ECO-0116390

APPROVED BY  
SBD

DATE

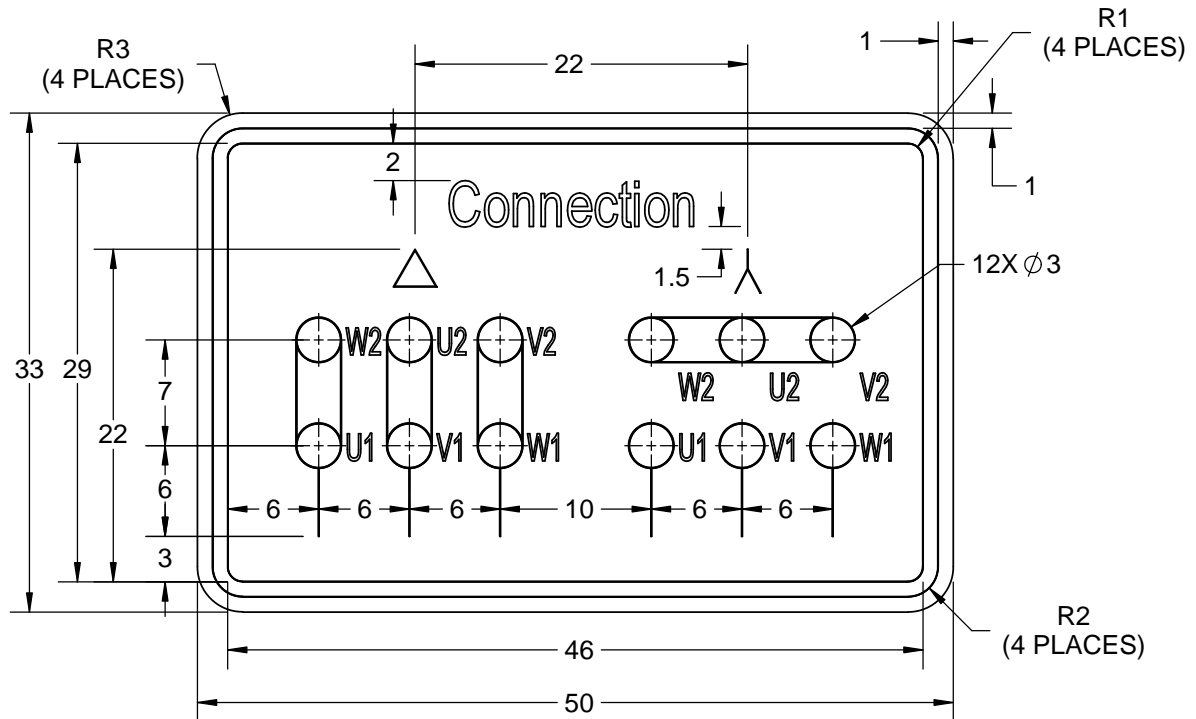
13/01/2017

ECO DESCRIPTION

NEW DRAWING RELEASE

GEOMETRIC TOLERANCE

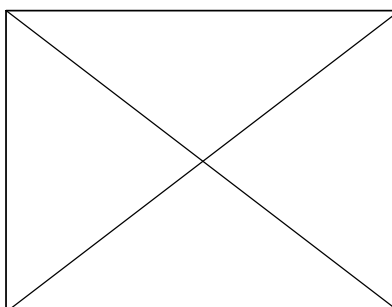
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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  
SN  
DATE  
16/12/2016  
APPROVED BY  
SBD  
DATE  
16/12/2016  
REFERENCE  
THIRD ANGLE  
PROJECTION

**REGAL**™ Regal Beloit America, Inc.  
DESCRIPTION  
**CONN DIAGRAM-NAMEPLATE**  
MATERIAL  
PROCESS/FINISH  
SIZE  
A  
DRAWING NUMBER  
8442000085  
SHEET  
1 OF 1

**Model No.** SCA1P51AG111GAA001

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
220/380	Y	50	1.5	2.0	3.3	2869	4.96	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.6	3.0	3.1

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	90S	Motor weight - approx.	22.6 kg
Duty	S1	Gross weight - approx.	23.6 kg
Voltage variation *	± 10%	Motor inertia	0.0018 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)	65 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [ 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	6205-2Z / 6205-2Z	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	Available on Request

I<sub>A</sub>/I<sub>N</sub> - Locked Rotor Current / Rated CurrentT<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated TorqueT<sub>A</sub>/T<sub>N</sub> - 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.

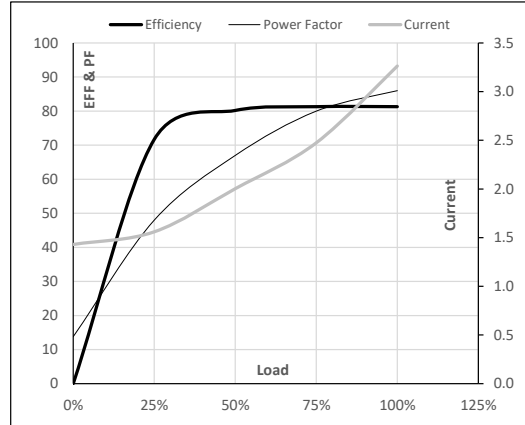
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

**Model No.** SCA1P51AG111GAA001

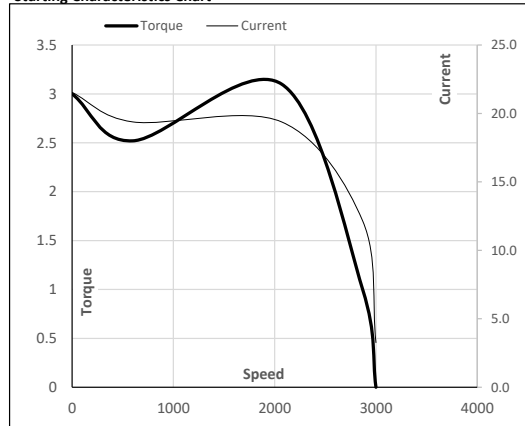
Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	220/380	Y	50	1.5	2.0	3.3	2869	0.51	4.96	IE2	40	S1	1000	0.0018	22.6

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.4	1.6	2.0	2.5	3.3	
Torque	Nm	0.0	1.2	2.4	3.7	5.0	
Speed	r/min	3000	2968	2939	2906	2869	
Efficiency	%	0.0	71.7	80.2	81.3	81.3	
Power Factor	%	13.8	48.0	67.0	80.0	86.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2069	2869	3000
Current	A	21.5	19.4	12.2	3.3	1.4
Torque	pu	3.0	2.5	3.1	1	0

**Starting Characteristics Chart**

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

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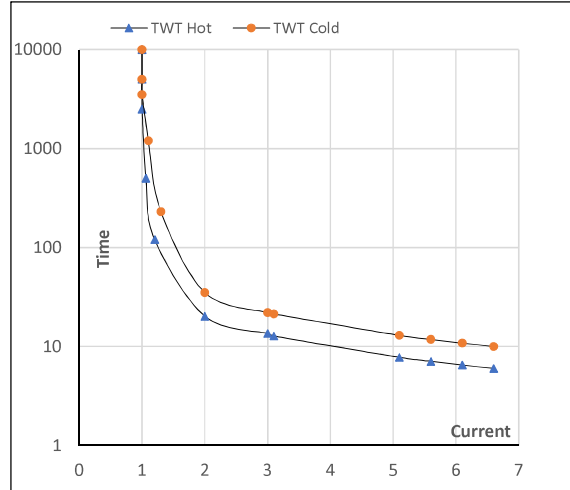
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**Model No.** SCA1P51AG111GAA001

Enclosure	U (V)	$\Delta$ / 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 <sup>2</sup> ]	Weight [kg]
TEFC	220/380	Y	50	1.5	2.0	3.3	2869	0.51	4.96	IE2	40	S1	1000	0.0018	22.6

**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	14	10	8	7	6
TWT Cold	s	10000	35	22	16	12	11	10
Current	pu	1	2	3	4	5	5.5	6.6

**Thermal Characteristics Chart**

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

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