### **PRODUCT INFORMATION PACKET**

Model No: SCA2P21AG121GAA001 Catalog No: SCA2P21AG121GAA001 TerraMAX® Cast Iron Motor, 3 HP, 3 Ph, 50 Hz, 220/380 V, 3000 RPM, 90L Frame, TEFC



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Product Information Packet: Model No: SCA2P21AG121GAA001, Catalog No:SCA2P21AG121GAA001 TerraMAX® Cast Iron Motor, 3 HP, 3 Ph, 50 Hz, 220/380 V, 3000 RPM, 90L Frame, TEFC

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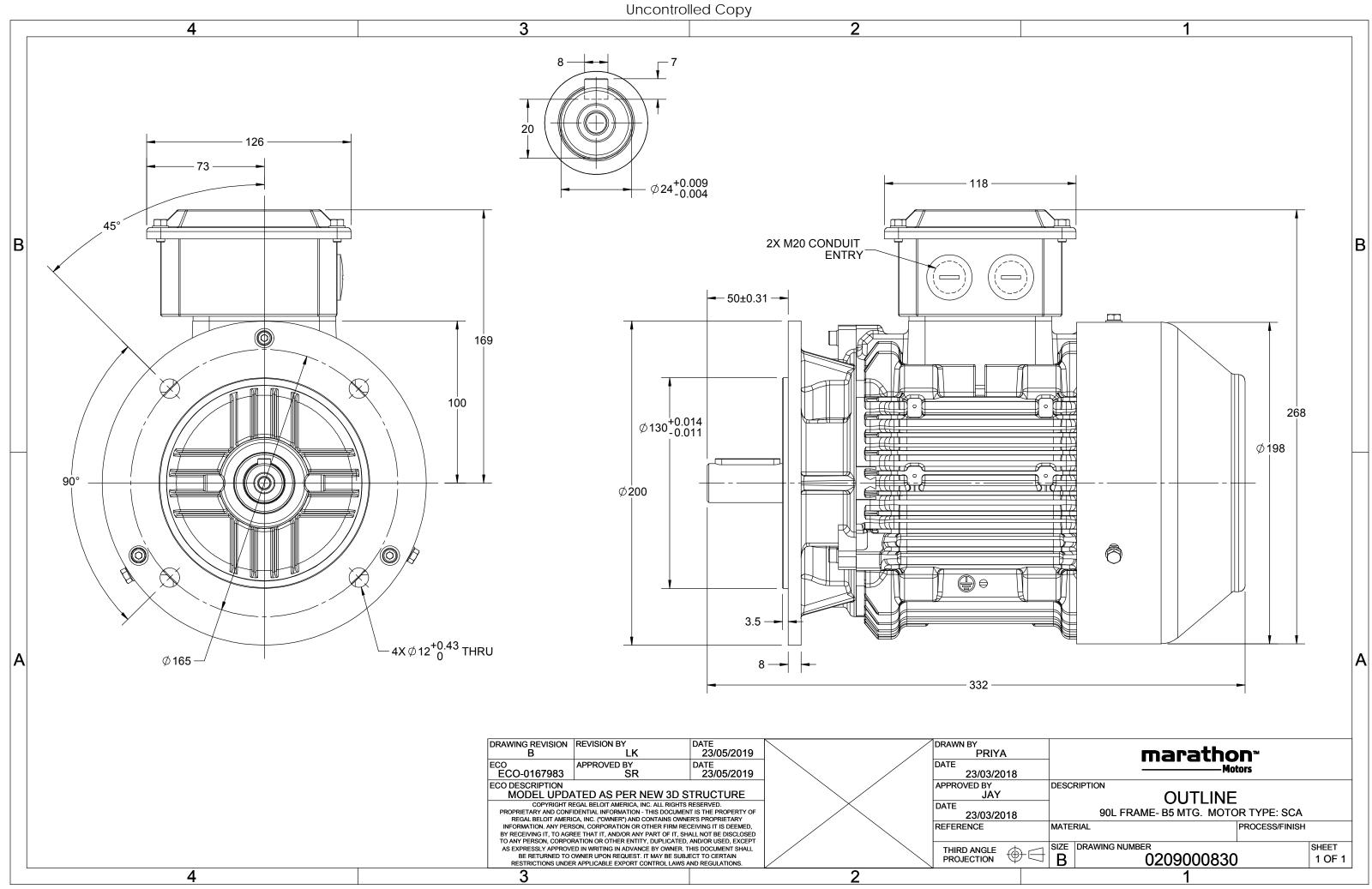
### Nameplate Specifications

Output HP	3 Нр	Output KW	2.2 kW
Frequency	50 Hz	Voltage	220/380 V
Current	4.6 A	Speed	2868 rpm
Service Factor	1	Phase	3
Efficiency	83.2 %	Power Factor	0.88
Duty	S1	Insulation Class	F
Frame	90L	Enclosure	Totally Enclosed Fan Cooled
Frame Thermal Protection	90L No Protection	Enclosure Ambient Temperature	Totally Enclosed Fan Cooled 40 °C
Thermal Protection	No Protection	Ambient Temperature	40 °C
Thermal Protection Drive End Bearing Size	No Protection 6205	Ambient Temperature Opp Drive End Bearing Size	40 °C 6205

### **Technical Specifications**

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	332 mm	Frame Length	153 mm
Shaft Diameter	24 mm	Shaft Extension	50 mm
Assembly/Box Mounting	Тор		
Connection Drawing	8442000085	Outline Drawing	0209000830

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3 of 7





# **TerraMAX**°

Model No. SCA2P21AG121GAA001

220/380       Y       50       2.2       3.0       4.6       2868       7.44       IE2       -       83.2       83       0.88       0.82       0.7       7.2       3.5       3.2         Motor type       SCA       Image: Construction of the second of t	U	$\Delta / Y$	f	Р	Р	I	n	Т	IE		% EFF a	t loa	d	PF	at lo	bad	I <sub>A</sub> /I <sub>N</sub>	$T_A/T_N$	$T_{\rm K}/T_{\rm N}$
Motor type       SCA       Degree of protection       IP 55         Enclosure       TEFC       Mounting type       IM 85         Frame Material       Cast Iron       Cooling method       IC 411         Frame size       90L       Motor weight - approx.       28.3       I         Voltage variation *       ± 10%       Motor inertia       Customer to Provide         Combined variation *       ± 0%       Vibration level       1.6       mm         Design       N       Noise level (1meter distance from motor)       65       d8[         Service factor       1.0       No. of starts hot/cold/Equally spread       2/3/4       2/3/4         Ambient temperature rise (by resistance)       80[ Class B ]       K       K withstand time (hot/cold)       6/10         Attidue above sea level       1000       meter       Direction of rotation       Bi-directional         Hazardous area classification       NA       Accessory - 1       -         Accessory - 2       -       Accessory - 2       -         Temperature class       NA       Accessory - 2       -         Gas group       NA       Accessory - 2       -         De / NDE bearing       6205-22       Ferminal box position       TOP     <	(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
And on typeTEFCMounting typeIM B5EnclosureTEFCMounting typeIM B5Frame MaterialCast IronCooling methodIC 411Frame size90LMotor weight - approx.27.3IDutyS1Gross weight - approx.28.3IVoltage variation *± 10%Motor inertia0.0023kgrFrequency variation *± 5%Lod inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mmDesignNNoise level (1meter distance from motor)65dB(Service factor1.0No. of starts hot/cold/Equally spread2/3/4dB(Insulation classFStarting methodDOLdC(10Ambient temperature-20 to +40°CType of couplingDirectdC(10Temperature rise (by resistance)80 [ Class B ]KLR withstand time (hot/cold)6/10dC(10Altitude above sea level1000meterDirection of rotationBi-directionaldC(10)dC(10)Altitude above sea level1000meterAccessory - 1-Accessory - 1-Accessory - 2-Accessory - 2Accessory - 2-Cool preting6205-2Z / 6205-2Z-Accessory - 3De / NDE bearing6205-2Z / 6205-2ZMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5-Lubrication methodGreased for lifeMaximum cable size	220/380	Y	50	2.2	3.0	4.6	2868	7.44	IE2	-	83.2	83.2	83	0.88	0.82	0.7	7.2	3.5	3.2
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Temperature classNAAccessory - 1-Rotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6205-2Z / 6205-2ZTerminal box positionTOPLubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5		Zone cl	assifica	tion		NA				Pai	int shad	e					RAL 5014		
Recessory     Processory     Processory       Rotor type     Aluminum Die cast     Accessory - 2       Bearing type     Anti-friction ball     Accessory - 3       DE / NDE bearing     6205-2Z / 6205-2Z     Terminal box position       Lubrication method     Greased for life     Maximum cable size/conduit size     1R x 3C x 10mm²/2 x M20 x 1.5		Gas gro	oup			NA				Aco	cessorie	S							
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 10mm²/2 x M20 x 1.5		Temper	rature o	class		NA					Ac	cessory	- 1				-		
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 10mm²/2 x M20 x 1.5	Rotor type				Alı	uminum I	Die cast				Ac	cessory	- 2				-		
Lubrication method     Greased for life     Maximum cable size/conduit size     1R x 3C x 10mm²/2 x M20 x 1.5	Bearing typ	be			A	nti-frictio	on ball				Ac	cessory	- 3				-		
	DE / NDE b	earing			62	05-2Z / (	5205-2Z			Тег	rminal b	ox posi	tion				TOP		
Type of grease NA Auxiliary terminal box Available on Request	Lubrication	method			G	Greased for	or life			Ma	aximum	cable si	ze/conc	luit size	1R	x 3C x 1	L0mm²/2 x N	120 x 1.5	
	Type of gre	ase				NA				Au	xiliary t	erminal	box			Availa	Available on Request		

 $I_{\rm A}/I_{\rm N}$  - Locked Rotor Current / Rated Current  $T_{\rm A}/T_{\rm N}$  - Locked Rotor Torque / Rated Torque

 $T_{\rm K}/T_{\rm N}$  - 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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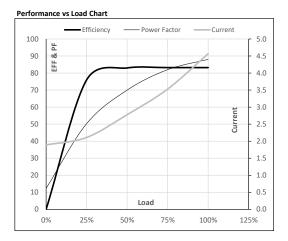
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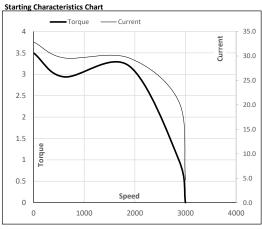
Model No. SCA2P21AG121GAA001

Enclosure	U	$\Delta / Y$	f	Р	Р	I	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	220/380	Y	50	2.2	3.0	4.6	2868	0.76	7.44	IE2	40	S1	1000	0.0023	27.3

Motor Load Dat	ta						
Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	А	1.9	2.1	2.8	3.5	4.6	
Torque	Nm	0.0	1.8	3.6	5.5	7.4	
Speed	r/min	3000	2968	2939	2905	2868	
Efficiency	%	0.0	76.0	83.0	83.2	83.2	
Power Factor	%	12.3	50.3	70.0	82.0	88.0	



Load Point		LR	P-Up	BD	Rated	NL	
Speed	r/min	0	600	1882	2868	3000	
Current	А	32.9	29.6	20.7	4.6	1.9	
Torque	pu	3.5	2.9	3.2	1	0	



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

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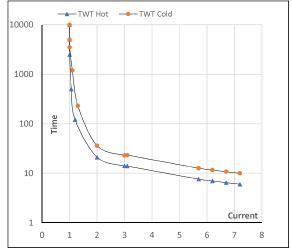
Model No. SCA2P21AG121GAA001

Elevation Inertia Weight	Elevation	Duty	Amb	IE	Т	Т	n	I	Р	Р	f	$\Delta / Y$	U	Enclosure
[m] [kg-m <sup>2</sup> ] [kg]	[m]		[°C]	Class	[Nm]	[kgm]	[rpm]	[A]	[hp]	[kW]	[Hz]	Conn	(∨)	
1000 0.0023 27.3	1000	S1	40	IE2	7.44	0.76	2868	4.6	3.0	2.2	50	) Y	220/380	TEFC
0.0023	1000	51	40	ILZ	7.44	0.70	2000	4.0	3.0	2.2	50	, ,	220,380	TEFC

#### Motor Speed Torque Data

Load		FL	$I_1$	$I_2$	I <sub>3</sub>	$I_4$	I <sub>5</sub>	LR
TWT Hot	s	10000	21	14	10	8	7	6
TWT Cold	s	10000	36	23	17	15	13	10
Current	pu	1	2	3	4	5	5.5	7.2

#### Thermal Characteristics Chart



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

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