## **PRODUCT INFORMATION PACKET**

Model No: SCA1P13A3121GAAD01 Catalog No: SCA1P13A3121GAAD01 TerraMAX® Cast Iron Motor, 1.50 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 90L Frame, TEFC



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Product Information Packet: Model No: SCA1P13A3121GAAD01, Catalog No:SCA1P13A3121GAAD01 TerraMAX® Cast Iron Motor, 1.50 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 90L Frame, TEFC

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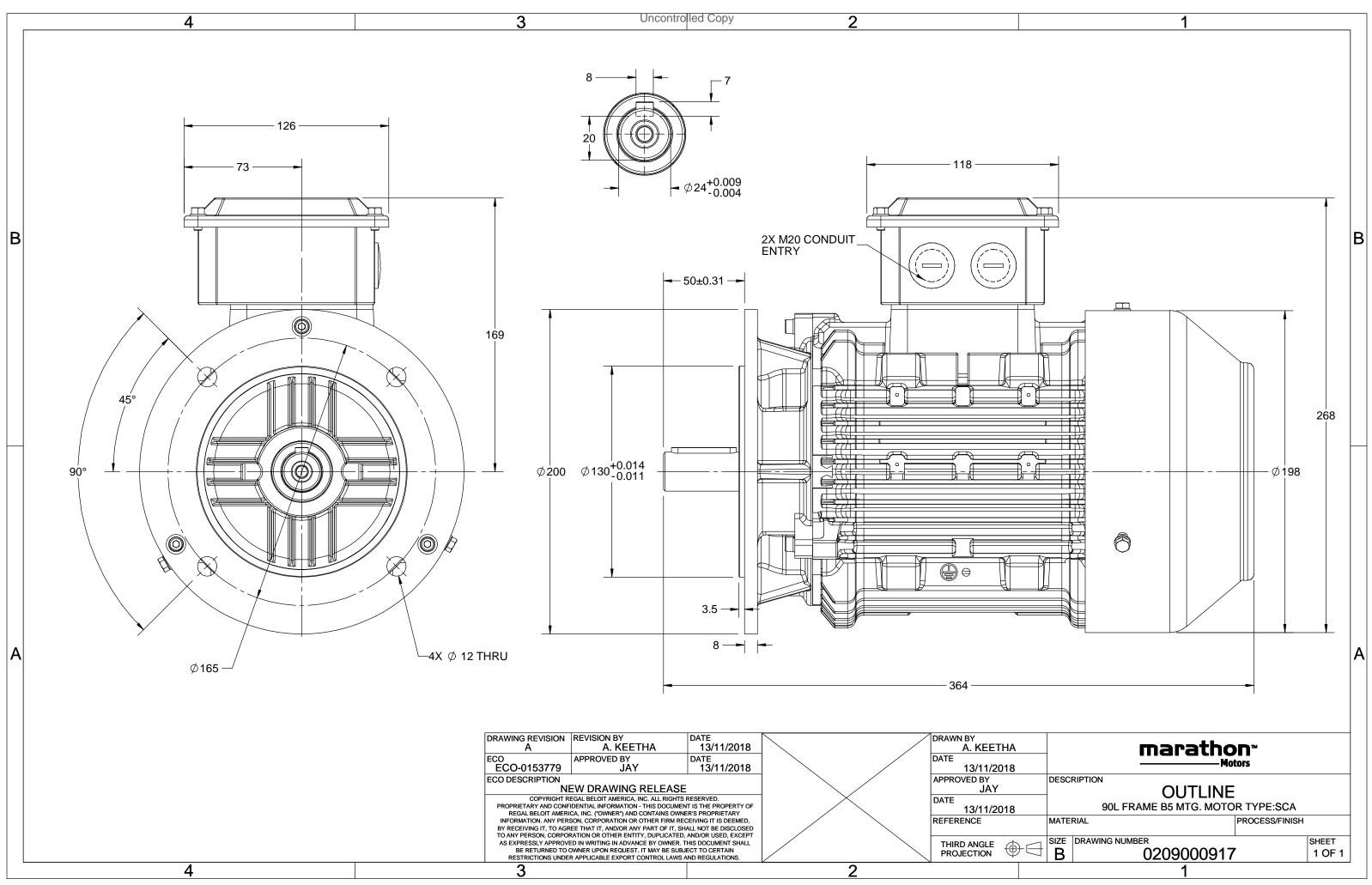
### Nameplate Specifications

Output HP	1.50 Hp	Output KW	1.1 kW
Frequency	50 Hz	Voltage	415 V
Current	2.9 A	Speed	925 rpm
Service Factor	1	Phase	3
Efficiency	78.1 %	Power Factor	0.69
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 50 °C
Thermal Protection	No Protection	Ambient Temperature	50 °C
Thermal Protection Drive End Bearing Size	No Protection 6205	Ambient Temperature Opp Drive End Bearing Size	50 °C 6205

### **Technical Specifications**

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	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	364 mm	Frame Length	185 mm
Shaft Diameter	24 mm	Shaft Extension	50 mm
Assembly/Box Mounting	ТОР		
Connection Drawing	8442000085	Outline Drawing	0209000917

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### Model No. SCA1P13A3121GAAD01

									-									
U	$\Delta / Y$	f	Р	Р	I	n	Т	IE	9	% EFF a	t load	t	PF	at lo	ad	$I_A/I_N$	$T_A/T_N$	$T_{\rm K}/T_{\rm N}$
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
415	Y	50	1.1	1.5	2.8	925	11.74	IE2	-	78.1	78.1	74.1	0.69	0.58	0.42	4.0	2.8	2.7

Duty\$1Gross weight - approx.31kVoltage variation *± 10%Motor inertia0.0048kgmFrequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mm/DesignNNoise level ( 1meter distance from motor)55dB(AService factor1.0No. of starts hot/cold/Equally spread2/3/4100Insulation classFStarting methodDOL100Ambient temperature-20 to +50°CType of couplingDirect						
Frame MaterialCast IronCooling methodIC 411Frame MaterialCast IronCooling methodIC 411Frame Size90LMotor weight - approx.30kDutyS1Gross weight - approx.31kVoltage variation *± 10%Motor inertia0.0048kgmFrequency variation *± 10%Load inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mm/DesignNNoise level ( 1meter distance from motor)55dB(AService factor1.0Noi of starts hot/cold/Equally spread2/3/4Imm/Insulation classFStarting methodDOLImmAmbient temperature-20 to +50°CType of couplingDirectImmHazardous area classificationNAStandard rotationBi-directionalImmAditidue above sea level1000meterDirection of rotationBi-directionalImmAditude above sea level1000meterAccessory - 1ImmImmAditidue above sea levelNAAccessory - 1ImmImmAsig groupNAAccessory - 2-ImmAbotr typeAnti-friction ballAccessory - 3-ImmDE / NDE bearing6205-2Z / 6205-2ZImmMaximum cable size/conduit sizeIR x 3C x 10mm²/2 x M20 x 1.5	Motor type	SCA		Degree of protection	IP 55	
Home internationPolicMotor weight - approx.30kDutyS1Gross weight - approx.31kVoltage variation *± 10%Motor weight - approx.31kFrequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mm/DesignNNoise level ( 1meter distance from motor)55dB(AService factor1.0No. of starts hot/cold/Equally spread2/3/4dB(AInsulation classFStarting methodDOLdB(AAmbient temperature-20 to +50°CType of couplingDirectdB(AAltitude above sea level1000meterDirectionaldBHazardous area classificationNAStandard rotationClockwise form DEdB(AGas groupNAAccessoriesAccessoriesdClockwise form DEdClockwise form DETemperature classNAAccessory - 1dClockwise form DEdClockwise form DEdClockwise form DEBearing typeAnti-friction ballAccessory - 3-dClockwise form DEdClockwiseDE / NDE bearing6205-2Z / 6205-2ZTerminal box positionTOPdClockwisedClockwiseLubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5dClockwise	Enclosure	TEFC		Mounting type	IM B5	
Normal DutyS1Gross weight - approx.31kVoltage variation *± 10%Gross weight - approx.31kFrequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mm/DesignNNoise level (1meter distance from motor)55dB(AService factor1.0No. of starts hot/cold/Equally spread2/3/4dB(AInsulation classFStarting methodDOLdB(AAmbient temperature-20 to +50°CType of couplingDirectdB(AAntient temperature is (by resistance)70 [Class B]KLR withstand time (hot/cold)20/40dB(AAltitude above sea level1000meterDirectdCockwise form DEdCockwise f	Frame Material	Cast Iron		Cooling method	IC 411	
Voltage variation *± 10%KFrequency variation *± 10%Motor inertia0.0048kgmFrequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mm/DesignNNo. of starts hot/cold/Equally spread2/3/468/20Insulation classFStarting methodDOL68/20Ambient temperature-20 to +50°CType of couplingDirect68/20Attitude above sea level1000meterDirection of rotationBi-directional68/20Altitude above sea level1000meterDirection of rotationBi-directional68/20Zone classificationNAPaint shadeRAL 501468/2068/20AccessoriesNAAccessories7011Rotor typeAluminum Die castAccessory - 1Accessory - 2-Bearing typeAnti-friction ballAccessory - 3-1DE / NDE bearing6205-22 / 6205-22Terminal box positionTOP1Lubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.51	Frame size	90L		Motor weight - approx.	30	kg
Frequency variation *± 5%Load inertiaCustomer to ProvideCombined variation *10%Vibration level1.6mm/DesignNNoise level ( 1meter distance from motor)55dB(AService factor1.0No. of starts hot/cold/Equally spread2/3/4dB(AInsulation classFStarting methodDOLdB(AAmbient temperature-20 to +50°CType of couplingDirectdTemperature rise (by resistance)70 [ Class B ]KLR withstand time (hot/cold)20/40dAltitude above sea level1000meterDirection of rotationBi-directionaldHazardous area classificationNAStandard rotationClockwise form DEdGas groupNAAccessoriesAccessory - 1Accessory - 2-Rotor typeAluminum Die castAccessory - 3Bearing typeAnti-friction ballAccessory - 3DE / NDE bearing6205-2Z / 6205-2ZCentrial box positionTOPMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5	Duty	S1		Gross weight - approx.	31	kg
Combined variation *10%Vibration level1.6mm/DesignNNoise level (1meter distance from motor)55dB(AService factor1.0No. of starts hot/cold/Equally spread2/3/4dB(AInsulation classFStarting methodDOLdB(AAmbient temperature-20 to +50°CType of couplingDirectdB(AAttitude above sea level1000meterDirection of rotationBi-directionaldB(AHazardous area classificationNAStandard rotationClockwise form DEdB(AGas groupNAAccessoriesdAccessory - 1dCcessory - 1Rotor typeAnti-friction ballAccessory - 3-dCcessory - 3-DE / NDE bearing6205-2Z / 6205-2ZTerminal box positionTOPterminal box positionTOPLubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5terminal box position	Voltage variation *	± 10%		Motor inertia	0.0048	kgm <sup>2</sup>
DesignNNoise level (1 meter distance from motor)55dB(AService factor1.0No. of starts hot/cold/Equally spread2/3/41000Insulation classFStarting methodDOL1000Ambient temperature-20 to +50°CType of couplingDirect1000Temperature rise (by resistance)70 [ Class B ]KLR withstand time (hot/cold)20/401000Hazardous area classificationNAStandard rotationBi-directional10001000Zone classificationNAStandard rotationClockwise form DE100010001000Rotor typeAluminum Die castAccessory - 1Accessory - 11000100010001000Bearing typeAnti-friction ballAccessory - 3-1000 <td>Frequency variation *</td> <td>± 5%</td> <td></td> <td>Load inertia</td> <td>Customer to Provide</td> <td></td>	Frequency variation *	± 5%		Load inertia	Customer to Provide	
Service factor1.0No. of starts hot/cold/Equally spread2/3/4Insulation classFStarting methodDOLAmbient temperature-20 to +50°CType of couplingDirectTemperature rise (by resistance)70 [ Class B ]KLR withstand time (hot/cold)20/40Altitude above sea level1000meterDirection of rotationBi-directionalHazardous area classificationNAStandard rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesClockwise form DETemperature classNAAccessory - 1Rotor 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	Combined variation *	10%		Vibration level	1.6	mm/s
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Ambient temperature-20 to +50°CType of couplingDirectTemperature rise (by resistance)70 [ Class B ]KLR withstand time (hot/cold)20/40Altitude above sea level1000meterDirection of rotationBi-directionalHazardous area classificationNAStandard rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesClockwise form DETemperature classNAAccessory - 1Rotor typeAluminum Die castAccessory - 3-DE / NDE bearing6205-22 / 6205-22Terminal box positionTOPLubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5	Service factor	1.0		No. of starts hot/cold/Equally spread	2/3/4	
Temperature rise (by resistance)70 [ Class B ]KLR withstand time (hot/cold)20/40Altitude above sea level1000meterDirection of rotationBi-directionalHazardous area classificationNADirection of rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesClockwise form DETemperature classNAAccessory - 1Rotor 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	Insulation class	F		Starting method	DOL	
Altitude above sea level1000meterDirection of rotationBi-directionalHazardous area classificationNAStandard rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesClockwise form DETemperature classNAAccessory - 1Rotor typeAluminum Die castAccessory - 2-Bearing typeAnti-friction ballAccessory - 3-DE / NDE bearing6205-22 / 6205-22Terminal box positionTOPLubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5	Ambient temperature	-20 to +50	°C	Type of coupling	Direct	
Hatede doct set referNAStandard rotationClockwise form DEHazardous area classificationNAStandard rotationClockwise form DEZone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesTemperature classNAAccessory - 1Rotor 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	Temperature rise (by resistance)	70 [ Class B ]	к	LR withstand time (hot/cold)	20/40	S
Zone classificationNAPaint shadeRAL 5014Gas groupNAAccessoriesTemperature classNAAccessory - 1Rotor typeAluminum Die castAccessory - 2Bearing typeAnti-friction ballAccessory - 3DE / NDE bearing6205-2Z / 6205-2ZTerminal box positionLubrication methodGreased for lifeMaximum cable size/conduit size	Altitude above sea level	1000	meter	Direction of rotation	<b>Bi-directional</b>	
NAAccessoriesGas groupNAAccessoriesTemperature classNAAccessory - 1Rotor typeAluminum Die castAccessory - 2Bearing typeAnti-friction ballAccessory - 3DE / NDE bearing6205-2Z / 6205-2ZTerminal box positionTOPLubrication methodGreased for lifeMaximum cable size/conduit size1R x 3C x 10mm²/2 x M20 x 1.5	Hazardous area classification	NA		Standard rotation	Clockwise form DE	
Temperature classNAAccessory - 1Rotor 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 classification	NA		Paint shade	RAL 5014	
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	Gas group	NA		Accessories		
Bearing type Anti-friction ball Accessory - 2   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	Temperature class	NA		Accessory - 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	Aluminum Die cast		Accessory - 2	-	
Lubrication method Greased for life Maximum cable size/conduit size 1R x 3C x 10mm²/2 x M20 x 1.5	Bearing type	Anti-friction ball		Accessory - 3	-	
	DE / NDE bearing	6205-2Z / 6205-2Z		Terminal box position	TOP	
Type of grease NA Auxiliary terminal box NA	Lubrication method	Greased for life		Maximum cable size/conduit size	1R x 3C x 10mm²/2 x M20 x 1.5	
	Type of grease	NA		Auxiliary terminal box	NA	

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

T<sub>K</sub>/T<sub>N</sub> - 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 combine variation are as per IEC60034-1

Technical da	ta are subject t	o change. There may be discrepa	ncies between calculated a	and name plate values	5.	
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

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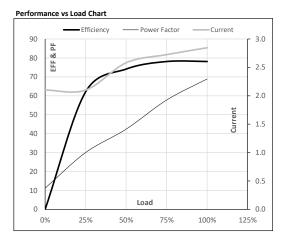


### Model No. SCA1P13A3121GAAD01

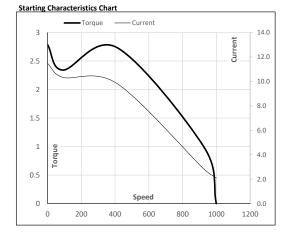
Enclosure	U	$\Delta / Y$	f	Р	Р	I	n	т	т	IE	Amb	Duty	Elevation	Inertia	Weight
	(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m <sup>2</sup> ]	[kg]
TEFC	415	Y	50	1.1	1.5	2.8	925	1.20	11.74	IE2	50	S1	1000	0.0048	30

Motor	Load	Data

	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
А	2.1	2.1	2.6	2.7	2.8	
Nm	0.0	2.7	5.5	8.5	11.7	
r/min	1000	982	965	947	925	
%	0.0	62.1	74.1	78.1	78.1	
%	11.2	30.0	42.4	57.8	68.9	
	Nm r/min %	A 2.1 Nm 0.0 r/min 1000 % 0.0	A     2.1     2.1       Nm     0.0     2.7       r/min     1000     982       %     0.0     62.1	A     2.1     2.1     2.6       Nm     0.0     2.7     5.5       r/min     1000     982     965       %     0.0     62.1     74.1	A     2.1     2.6     2.7       Nm     0.0     2.7     5.5     8.5       r/min     1000     982     965     947       %     0.0     62.1     74.1     78.1	A     2.1     2.1     2.6     2.7     2.8       Nm     0.0     2.7     5.5     8.5     11.7       r/min     1000     982     965     947     925       %     0.0     62.1     74.1     78.1     78.1



Forque Data						
	LR	P-Up	BD	Rated	NL	
r/min	0	91	411	925	1000	
А	11.5	10.3	9.8	2.8	2.1	
pu	2.8	2.3	2.7	1	0	
	r/min A	LR r/min 0 A 11.5	LR P-Up r/min 0 91 A 11.5 10.3	LR P-Up BD r/min 0 91 411 A 11.5 10.3 9.8	LR P-Up BD Rated r/min 0 91 411 925 A 11.5 10.3 9.8 2.8	LR     P-Up     BD     Rated     NL       r/min     0     91     411     925     1000       A     11.5     10.3     9.8     2.8     2.1



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

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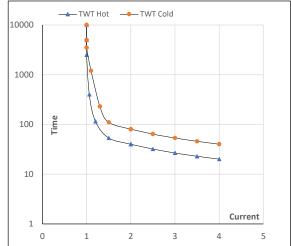
#### Model No. SCA1P13A3121GAAD01

Enclosure	U	Δ/Υ	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	415	Y	50	1.1	1.5	2.8	925	1.20	11.74	IE2	50	S1	1000	0.0048	30

#### Motor Speed Torque Data

Load		FL	$I_1$	I <sub>2</sub>	I <sub>3</sub>	$I_4$	I <sub>5</sub>	LR
TWT Hot	s	10000	53	40	32	27	23	20
TWT Cold	S	10000	110	80	64	53	46	40
Current	pu	1	1.5	2	2.5	3	3.5	4

#### Thermal Characteristics Chart



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

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### **EC Declaration of Conformity**

The undersigned representing the manufacturer:

Regal Beloit America 100 East Randolph St. Wausau, WI 54401 and the authorized representative established within the Community:

Marathon Electric UK 6F Thistleton Road Ind. Estate Market Overton Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : SCA1P13A3121GAAD01

(Model No. may contain prefix and/or suffix characters)

Catalog No : SCA1P13A3121GAAD01

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010) EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:

Michael A Logsdon

Michael A. Logsdon Vice President, Technology

Created on 09/01/2022

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Authorized Representative in the Community:

Julian Clark Marketing Engineer