## **PRODUCT INFORMATION PACKET**

Model No: SCA0453A4121GAA001 Catalog No: SCA0453A4121GAA001 TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 380/660 V, 1000 RPM, 280S Frame, TEFC



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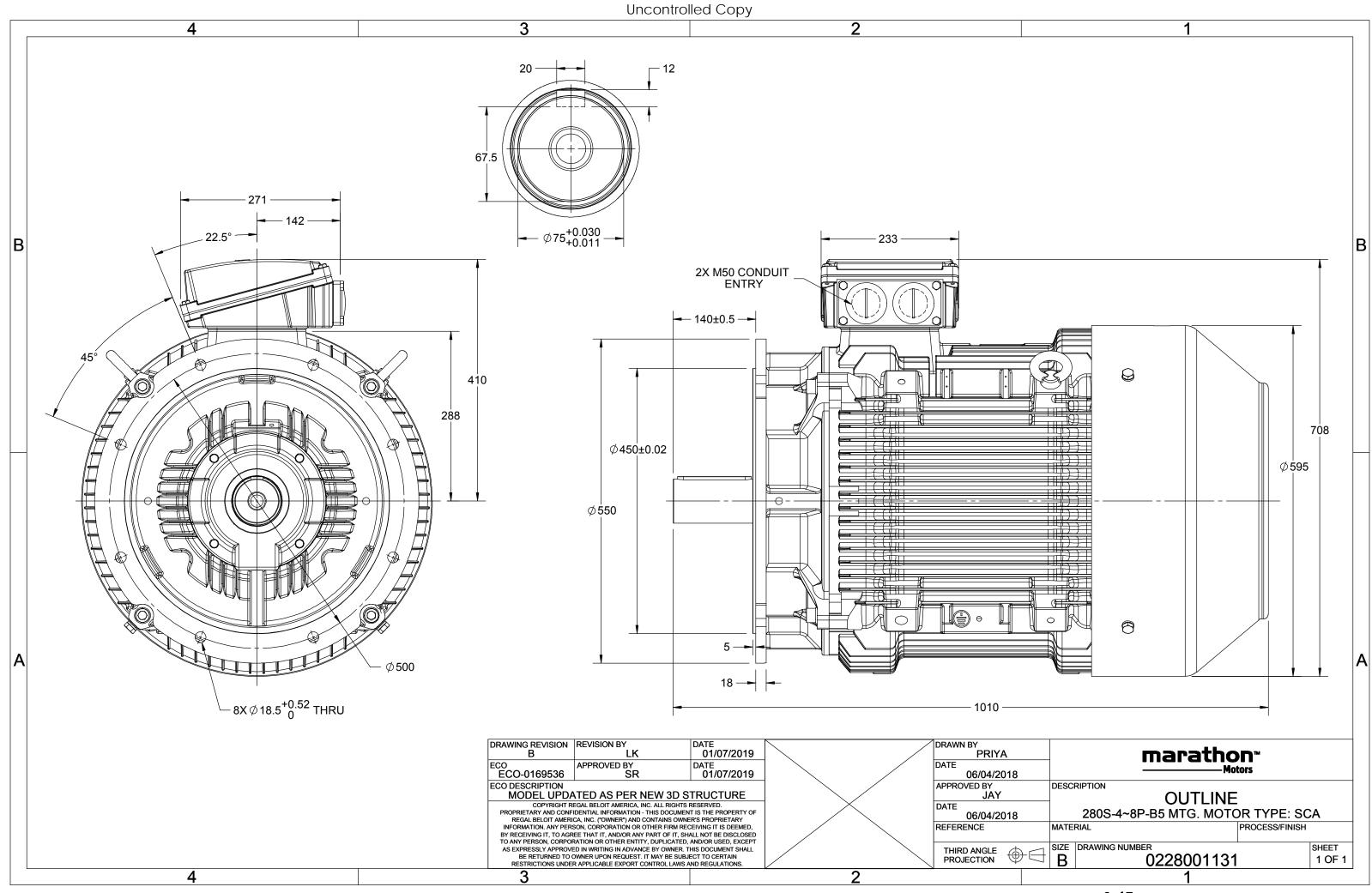
#### Nameplate Specifications

Output HP	60 Hp	Output KW	45.0 kW
Frequency	50 Hz	Voltage	380/660 V
Current	85.8 A	Speed	984 rpm
Service Factor	1	Phase	3
Efficiency	92.7 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	280S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6317	Opp Drive End Bearing Size	6317
Drive End Bearing Size	6317 No	Opp Drive End Bearing Size CSA	6317 No

### **Technical Specifications**

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	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	1009 mm	Frame Length	499 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Тор		
Outline Drawing	0228001131	Connection Drawing	8442000085

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U	$\Delta / Y$	f	Р	Р	I	n	Т	IE		% EFF a	t load	d	PF	at lo	bad	I <sub>A</sub> /I <sub>N</sub>	$T_A/T_N$	T <sub>K</sub> /T <sub>N</sub>
(∨)	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	45	60	85.8	984	434.20	IE2	-	92.7	92.7	93.6	0.86	0.83	0.74	5.7	2.0	2.4
Motor type					SCA				De	gree of	nrotecti	on				IP 55		
Enclosure					TEFC					Degree of protection Mounting type						IM B5		
Frame Mate	rial				Cast Irc					oling me						IC 411		
Frame size					2805					otor wei		nrov				kg		
Duty										oss weig	• •						kg	
Voltage vari	ation *				± 10%	6				otor iner						655 1.9403		kgm <sup>2</sup>
Frequency		*			± 5%					ad inerti					Custo	omer to Provid	e	
Combined v					10%					Vibration level						2.2		mm/s
Design					N					ise leve		er dista	nce fror	n motoi	r)	69		dB(A)
Service fact	or				1.0					No. of starts hot/cold/Equally spread						2/3/4		
Insulation c	lass				F				Sta	arting m	ethod	, 1	, ,					
Ambient ter	mperatu	re			-20 to +	40		°C		Type of coupling						Direct		
Temperatur	e rise (b	y resist	tance)		80 [ Class	s B ]		К	LR	withsta	nd time	(hot/co	old)			15/30		s
Altitude abo	ove sea l	evel			1000			meter	Dir	ection o	of rotation	on			В	i-directional		
Hazardous a	area clas	sificatio	on		NA				Sta	andard r	otation				Cloc	kwise form DE		
	Zone cla	assifica	tion		NA				Pai	int shad	e					RAL 5014		
	Gas gro	up			NA				Ac	cessorie	s							
	Temper	rature o	class		NA					Acc	cessory	- 1				-		
Rotor type				Alu	uminum D	Die cast				Acc	cessory	- 2				-		
Bearing typ	e			A	nti-frictio	n ball				Acc	cessory	- 3				-		
DE / NDE be	earing			63	17 C3 / 6	317 C3			Те	rminal b	ox posit	tion				TOP		
Lubrication	method				Regrease	able			Ma	aximum	cable si	ze/cond	luit size	1R	x 3C x 9	95mm²/2 x M5	0 x 1.5	
Type of grea	ase			CHEVRO	ON SRI-2 o	r Equival	ent		Au	xiliary te	erminal	box			Availa	able on Reque	st	

 $I_{\rm A}/I_{\rm N}$  - 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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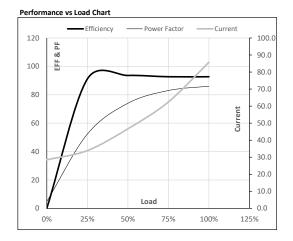
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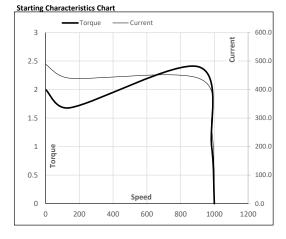
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Enclosure	U (V)	$\Delta / Y$ Conn	f [Hz]	P [kW]	P [hp]	ا [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380/660	Δ	50	45	60	85.8	984	44.28	434.20	IE2	40	S1	1000	1.9403	620

Motor Load Dat	ta						
Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	А	28.5	33.9	46.7	62.4	85.8	
Torque	Nm	0.0	107.2	215.3	324.2	434.2	
Speed	r/min	1000	996	993	989	984	
Efficiency	%	0.0	91.1	93.6	92.7	92.7	
Power Factor	%	4.8	52.3	74.0	83.0	86.0	



Motor Speed Torque Data												
Load Point		LR	P-Up	BD	Rated	NL						
Speed	r/min	0	143	905	984	1000						
Current	А	488.8	439.9	257.3	85.8	28.5						
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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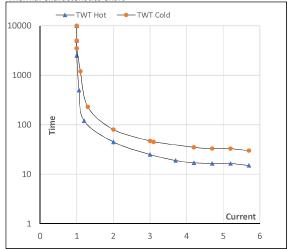
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	$U = \Delta / Y$	т	Р	Р	I	n	Т	Т	IE	Amb	Duty	Elevation	Inertia	Weight
(	(V) Conn	[Hz]	[kW]	[hp]	[A]	[rpm]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m <sup>2</sup> ]	[kg]
TEFC 38	80/660 Δ	50	45	60	85.8	984	44.28	434.20	IE2	40	S1	1000	1.9403	620

#### Motor Speed Torque Data

Load		FL	$I_1$	$I_2$	l <sub>3</sub>	$I_4$	ا5	LR
TWT Hot	s	10000	45	25	18	17	16	15
TWT Cold	s	10000	80	47	37	32	31	30
Current	pu	1	2	3	4	5	5.5	5.7

Thermal Characteristics Chart



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

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