

# PRODUCT INFORMATION PACKET

Model No: SCA0032AG141GAA001

Catalog No: SCA0032AG141GAA001

TerraMAX® Cast Iron Motor, 4 HP, 3 Ph, 50 Hz, 220/380 V, 1500 RPM, 100L Frame, TEFC



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### Nameplate Specifications

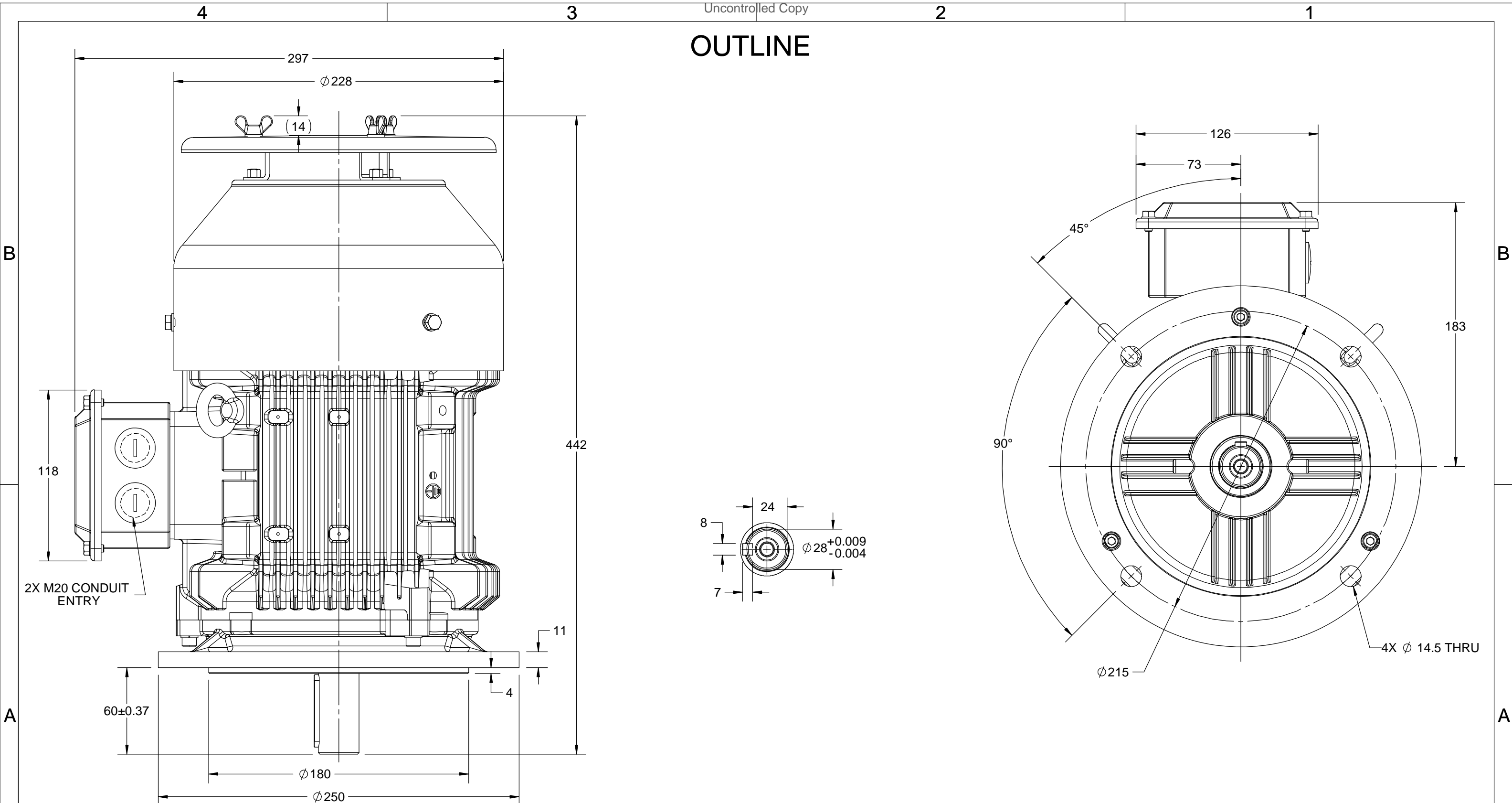
Output HP	<b>4 Hp</b>	Output KW	<b>3.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>220/380 V</b>
Current	<b>6.4 A</b>	Speed	<b>1434 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>85.5 %</b>	Power Factor	<b>0.84</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>100L</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6206</b>	Opp Drive End Bearing Size	<b>6206</b>
UL	<b>No</b>	CSA	<b>No</b>
CE	<b>Yes</b>	IP Code	<b>55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE2</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>4</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>V1</b>	Motor Orientation	<b>Shaftdown</b>
Drive End Bearing	<b>2z-C3</b>	Opp Drive End Bearing	<b>2z-C3</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>Keyed</b>
Overall Length	<b>442 mm</b>	Frame Length	<b>200 mm</b>
Shaft Diameter	<b>28 mm</b>	Shaft Extension	<b>60 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Connection Drawing	<b>8442000085</b>	Outline Drawing	<b>0210000483</b>

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# OUTLINE



DRAWING REVISION A	REVISION BY LK	DATE 26/06/2018
ECO ECO-0147803	APPROVED BY JAY	DATE 26/06/2018
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DRAWN BY LK	<b>marathon™</b> Motors	
DATE 26/06/2018		
APPROVED BY JAY	DESCRIPTION <b>OUTLINE</b> 100 FR.- V1 MTG. MOTOR TYPE: SCA	
DATE 26/06/2018	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE <b>B</b>	DRAWING NUMBER <b>0210000483</b>
THIRD ANGLE PROJECTION	SHEET 1 OF 1	

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DRAWING REVISION <b>A</b>	REVISION BY <b>SN</b>	DATE <b>13/01/2017</b>
ECO <b>ECO-0116390</b>	APPROVED BY <b>SBD</b>	DATE <b>13/01/2017</b>
ECO DESCRIPTION <b>NEW DRAWING RELEASE</b>		

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 <b>SN</b>	DATE <b>16/12/2016</b>		 <b>Regal Beloit America, Inc.</b>	
	APPROVED BY <b>SBD</b>			<b>DESCRIPTION</b> <b>CONN DIAGRAM-NAMEPLATE</b>
	DATE <b>16/12/2016</b>		<b>MATERIAL</b>  <b>PROCESS/FINISH</b>	
	REFERENCE			
	<b>THIRD ANGLE PROJECTION</b> 		<b>SHEET</b> <b>1 OF 1</b>	

**Model No.** SCA0032AG141GAA001

U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			$I_A/I_N$ [pu]	$T_A/T_N$ [pu]	$T_K/T_N$ [pu]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
220/380	Y	50	3	4.0	6.3	1434	19.86	IE2	-	85.5	85.5	85.3	0.84	0.77	0.64	6.4	2.8	3.0

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	100L	Motor weight - approx.	41 kg
Duty	S1	Gross weight - approx.	44 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.0074 kgm <sup>2</sup>
Frequency variation *	$\pm 5\%$	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level ( 1meter distance from motor)	58 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)	20/10 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	6206-2Z / 6206-2Z	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

 $I_A/I_N$  - Locked Rotor Current / Rated Current

 $T_K/T_N$  - Breakdown Torque / Rated Torque

 $T_A/T_N$  - 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

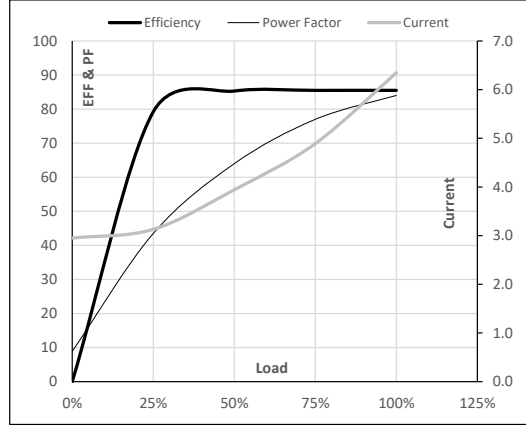
Model No. SCA0032AG141GAA001

Enclosure	U (V)	Δ / 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	3	4.0	6.3	1434	2.03	19.86	IE2	40	S1	1000	0.0074	41

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.0	3.1	3.9	4.9	6.3	
Torque	Nm	0.0	4.8	9.7	14.7	19.9	
Speed	r/min	1500	1485	1470	1453	1434	
Efficiency	%	0.0	79.2	85.3	85.5	85.5	
Power Factor	%	8.9	43.5	64.0	77.0	84.0	

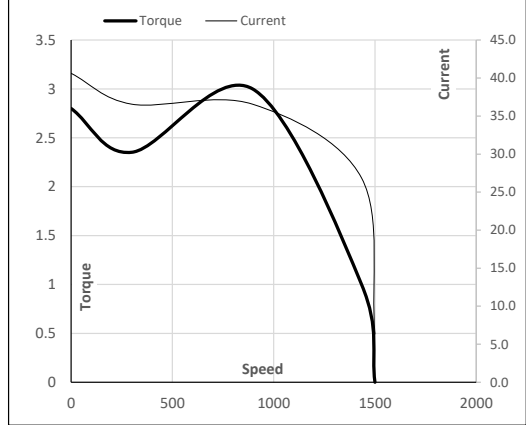
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	896	1434	1500
Current	A	40.6	36.6	26.9	6.3	3.0
Torque	pu	2.8	2.4	3.0	1	0

**Starting Characteristics Chart**



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

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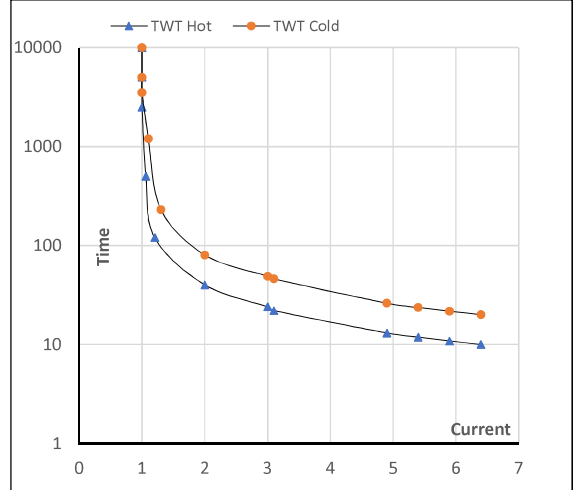
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Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m <sup>2</sup> ]	Weight [kg]
TEFC	220/380	Y	50	3	4.0	6.3	1434	2.03	19.86	IE2	40	S1	1000	0.0074	41

**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	39	26	17	13	11	10	
TWT Cold	s 10000	75	49	35	26	23	20	
Current	pu	1	2	3	4	5	5.5	6.4

**Thermal Characteristics Chart**



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

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