

PRODUCT INFORMATION PACKET

Model No: SCA0221A1141GAA001

Catalog No: SCA0221A1141GAA001

TerraMAX® Cast Iron Motor, 30 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 180M Frame, TEFC



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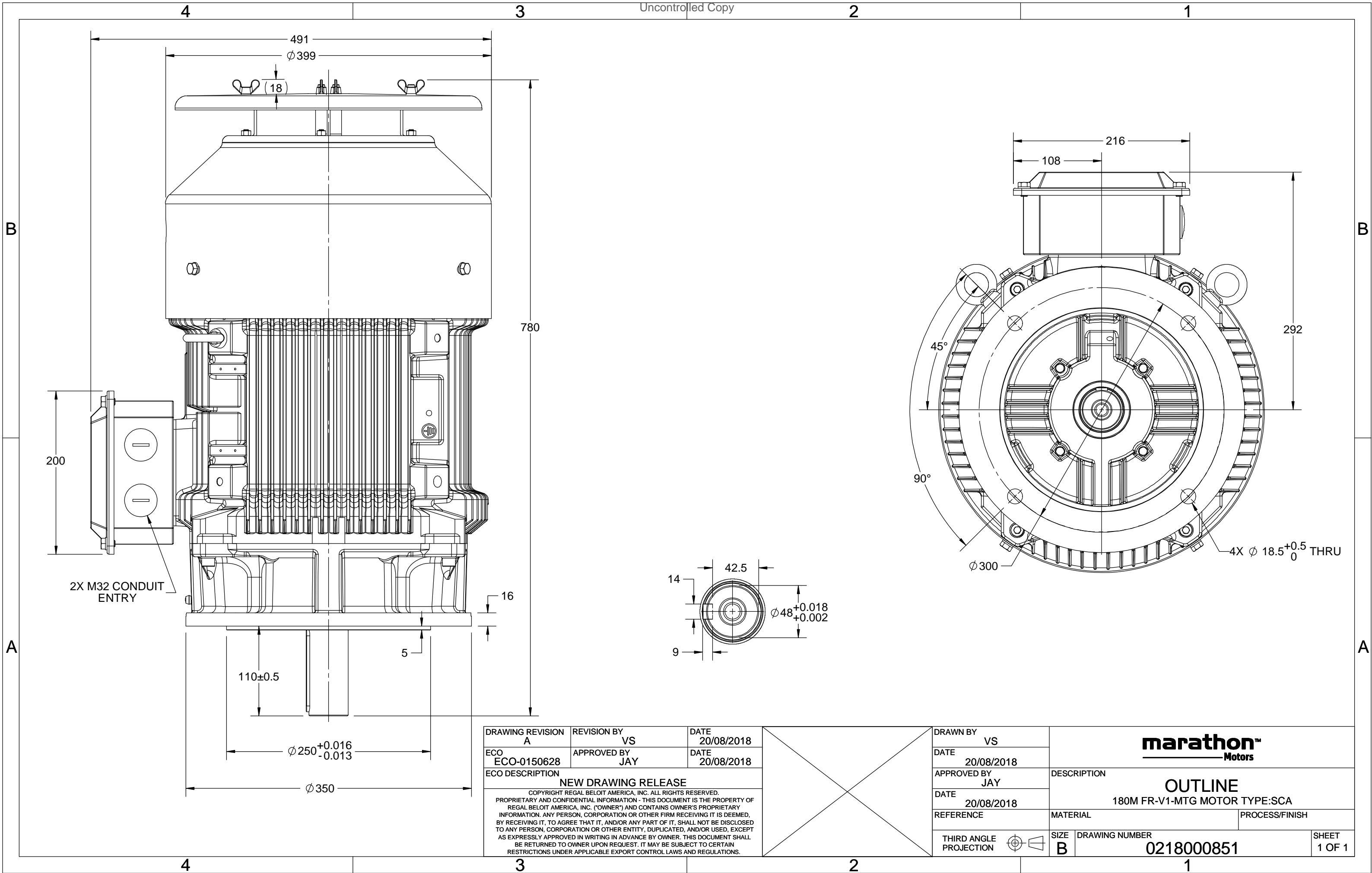
Nameplate Specifications

Output HP	30 Hp	Output KW	22.0 kW
Frequency	50 Hz	Voltage	400 V
Current	37.8 A	Speed	2946 rpm
Service Factor	1	Phase	3
Efficiency	91.3 %	Power Factor	0.92
Duty	S1	Insulation Class	F
Frame	180M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
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	V1	Motor Orientation	Shaftdown
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	780 mm	Frame Length	328 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0218000851

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DRAWING REVISION A	REVISION BY VS	DATE 20/08/2018
ECO ECO-0150628	APPROVED BY JAY	DATE 20/08/2018

NEW DRAWING RELEASE
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DRAWN BY VS	DESCRIPTION marathon™ Motors OUTLINE 180M FR-V1-MTG MOTOR TYPE:SCA		
DATE 20/08/2018			
APPROVED BY JAY			
DATE 20/08/2018			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0218000851	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		 Regal Beloit America, Inc.	
	APPROVED BY SBD	DESCRIPTION CONN DIAGRAM-NAMEPLATE		
	DATE 16/12/2016	MATERIAL	PROCESS/FINISH	
	REFERENCE	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1
	THIRD ANGLE PROJECTION 			

Model No. SCA0221A1141GAA001

U (V)	Δ / Y Conn	f [Hz]	P		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]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	22	30	37.8	2946	72.52	IE2	-	91.3	91.3	91.8	0.92	0.9	0.83	7.2	2.4	3.2

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180M	Motor weight - approx.	206 kg
Duty	S1	Gross weight - approx.	226 kg
Voltage variation *	± 10%	Motor inertia	0.0928 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level (1meter distance from motor)	75 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)	15/7 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	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6311-2Z / 6211-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 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 IEC: 60034-30	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC: 60034-30



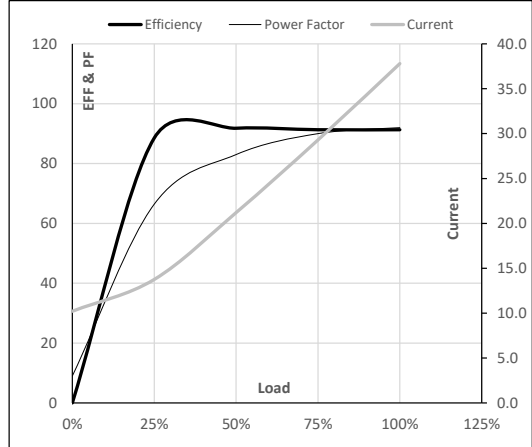
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	400	Δ	50	22	30	37.8	2946	7.39	72.52	IE2	40	S1	1000	0.0928	206

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	10.2	13.8	21.2	29.3	37.8	
Torque	Nm	0.0	17.9	35.9	54.1	72.5	
Speed	r/min	3000	2987	2974	2960	2946	
Efficiency	%	0.0	88.5	91.8	91.3	91.3	
Power Factor	%	9.0	66.4	83.0	90.0	92.0	

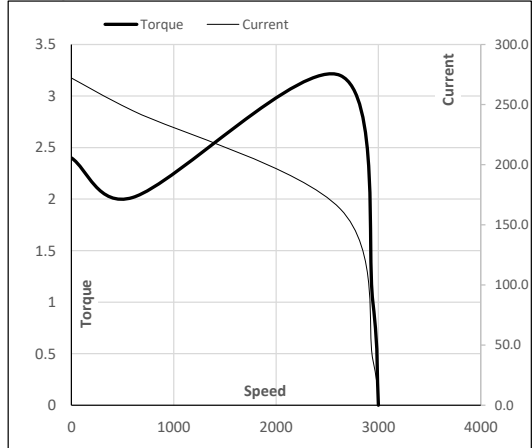
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2627	2946	3000
Current	A	272.2	244.9	163.3	37.8	10.2
Torque	pu	2.4	2.0	3.2	1	0

Starting Characteristics Chart



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

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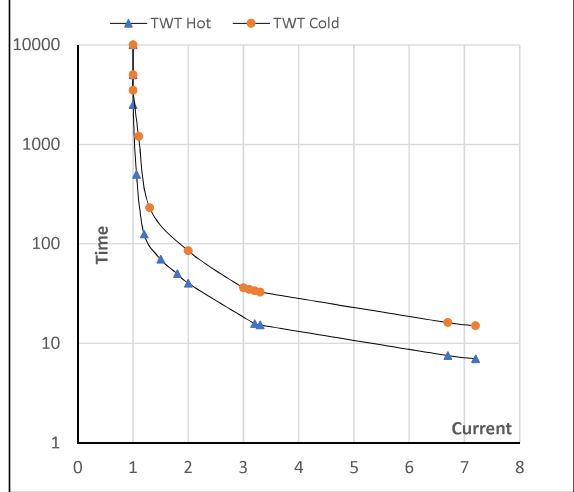
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Enclosure	U (V)	Δ / Y Conn	f (Hz)	P (kW)	P (hp)	I (A)	n (rpm)	T (kgm)	T (Nm)	IE Class	Amb (°C)	Duty	Elevation (m)	Inertia (kg-m ²)	Weight (kg)
TEFC	400	Δ	50	22	30	37.8	2946	7.39	72.52	IE2	40	S1	1000	0.0928	206

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	40	17	10	9	8	7
TWT Cold	s 10000	85	34	30	25	20	15
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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