

PRODUCT INFORMATION PACKET

Model No: QCA0221A1141GAA001

Catalog No: QCA0221A1141GAA001

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



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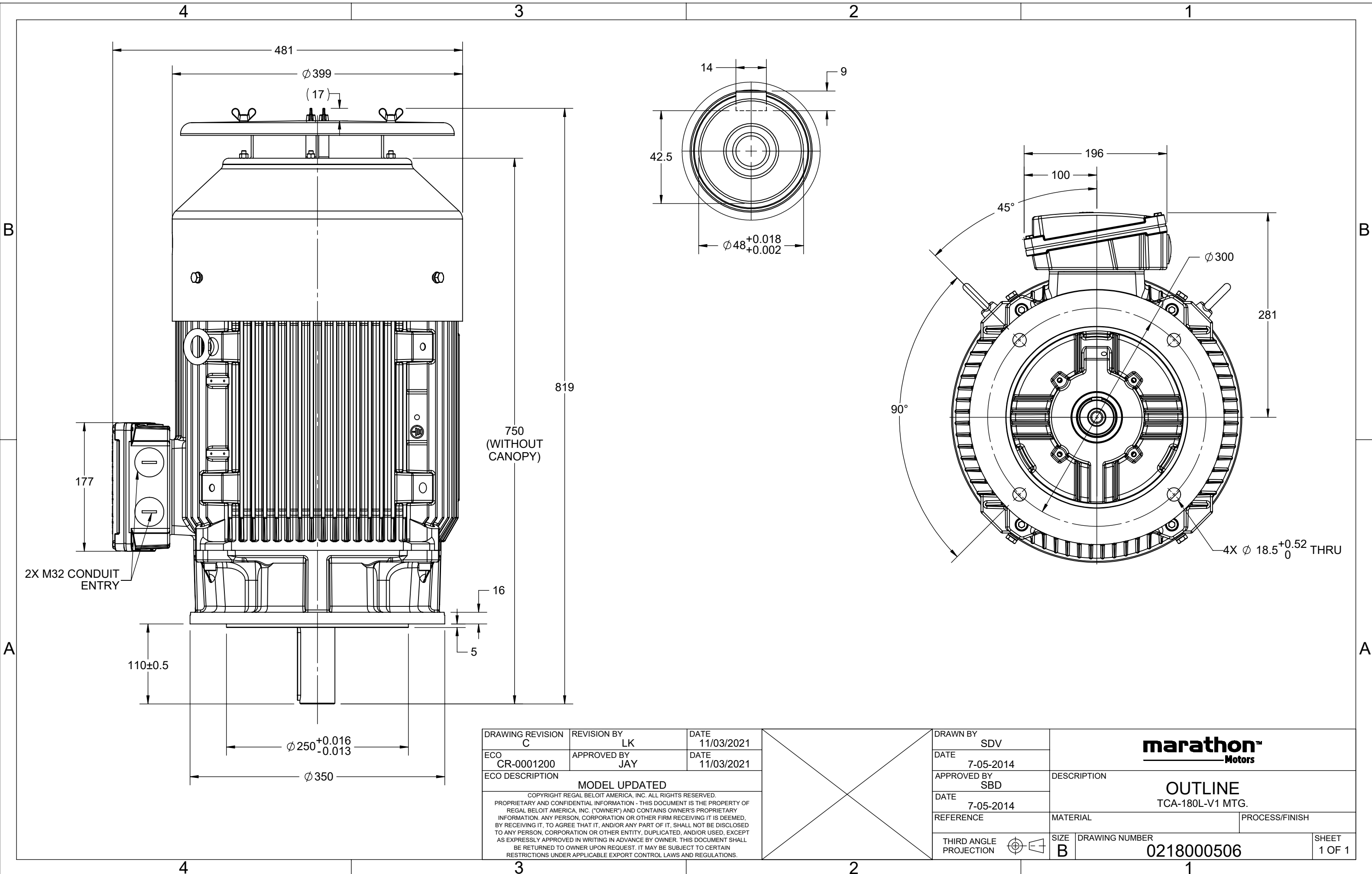
Nameplate Specifications

Output HP	30 Hp	Output KW	22.0 kW
Frequency	50 Hz	Voltage	400 V
Current	38.1 A	Speed	2963 rpm
Service Factor	1	Phase	3
Efficiency	94 %	Power Factor	0.89
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	IE4

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	819 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0218000506	Connection Drawing	8442000085

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DRAWING REVISION C	REVISION BY LK	DATE 11/03/2021
ECO CR-0001200	APPROVED BY JAY	DATE 11/03/2021
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SDV		
DATE 7-05-2014		
APPROVED BY SBD	DESCRIPTION OUTLINE TCA-180L-V1 MTG.	
DATE 7-05-2014	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER 0218000506
THIRD ANGLE PROJECTION	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	REFERENCE	MATERIAL	PROCESS/FINISH
	THIRD ANGLE PROJECTION 	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1

Model No. QCA0221A1141GAA001

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	38.0	2963	72.10	IE4	-	94	94	92.5	0.89	0.86	0.77	7.4	2.2	3.6

Motor type	QCA	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.	259 kg
Duty	S1	Gross weight - approx.	279 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.1801 kgm ²
Frequency variation *	$\pm 5\%$	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level (1meter distance from motor)	72 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)	15/30 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	NA

 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 combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency Standards	Europe IEC 60034-30-1	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC 60034-30-1

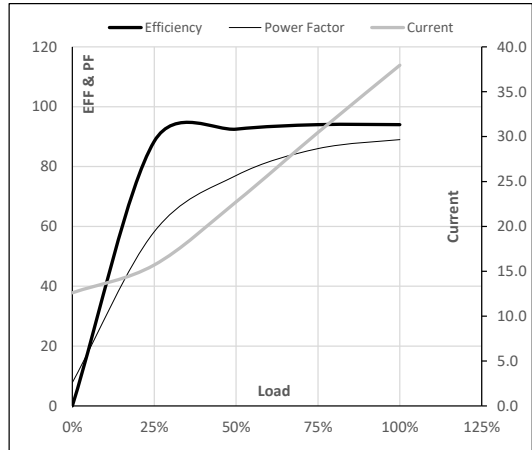
Model No. QCA0221A1141GAA001

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	38.0	2963	7.35	72.10	IE4	40	S1	1000	0.1801	259

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	12.6	15.7	22.7	30.5	38.0	
Torque	Nm	0.0	17.9	35.8	53.9	72.1	
Speed	r/min	3000	2991	2982	2973	2963	
Efficiency	%	0.0	88.4	92.5	94.0	94.0	
Power Factor	%	7.8	58.2	77.0	86.0	89.0	

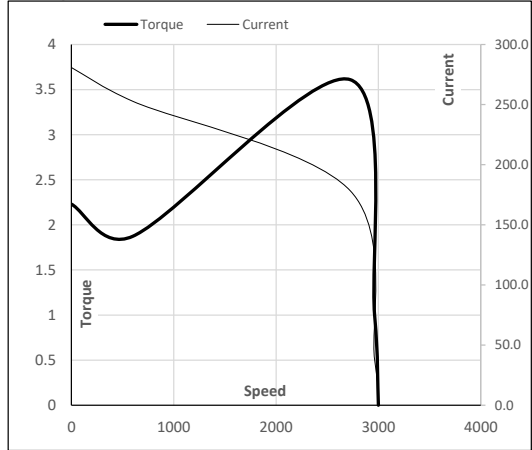
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2725	2963	3000
Current	A	280.9	252.8	178.4	38.0	12.6
Torque	pu	2.2	1.9	3.6	1	0

Starting Characteristics Chart



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

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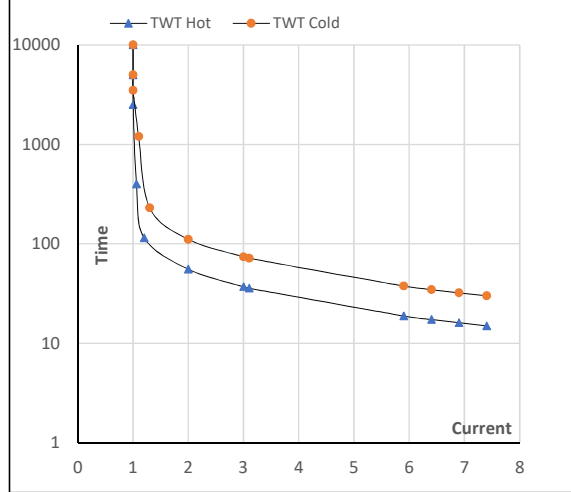
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Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	56	37	30	25	20	15	
TWT Cold	s 10000	111	74	65	50	45	30	
Current	pu	1	2	3	4	5	5.5	7.4

Thermal Characteristics Chart



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

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