

# PRODUCT INFORMATION PACKET

Model No: QCA0301A1141GAA001

Catalog No: QCA0301A1141GAA001

TerraMAX® Cast Iron Motor, 40 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 200L Frame, TEFC





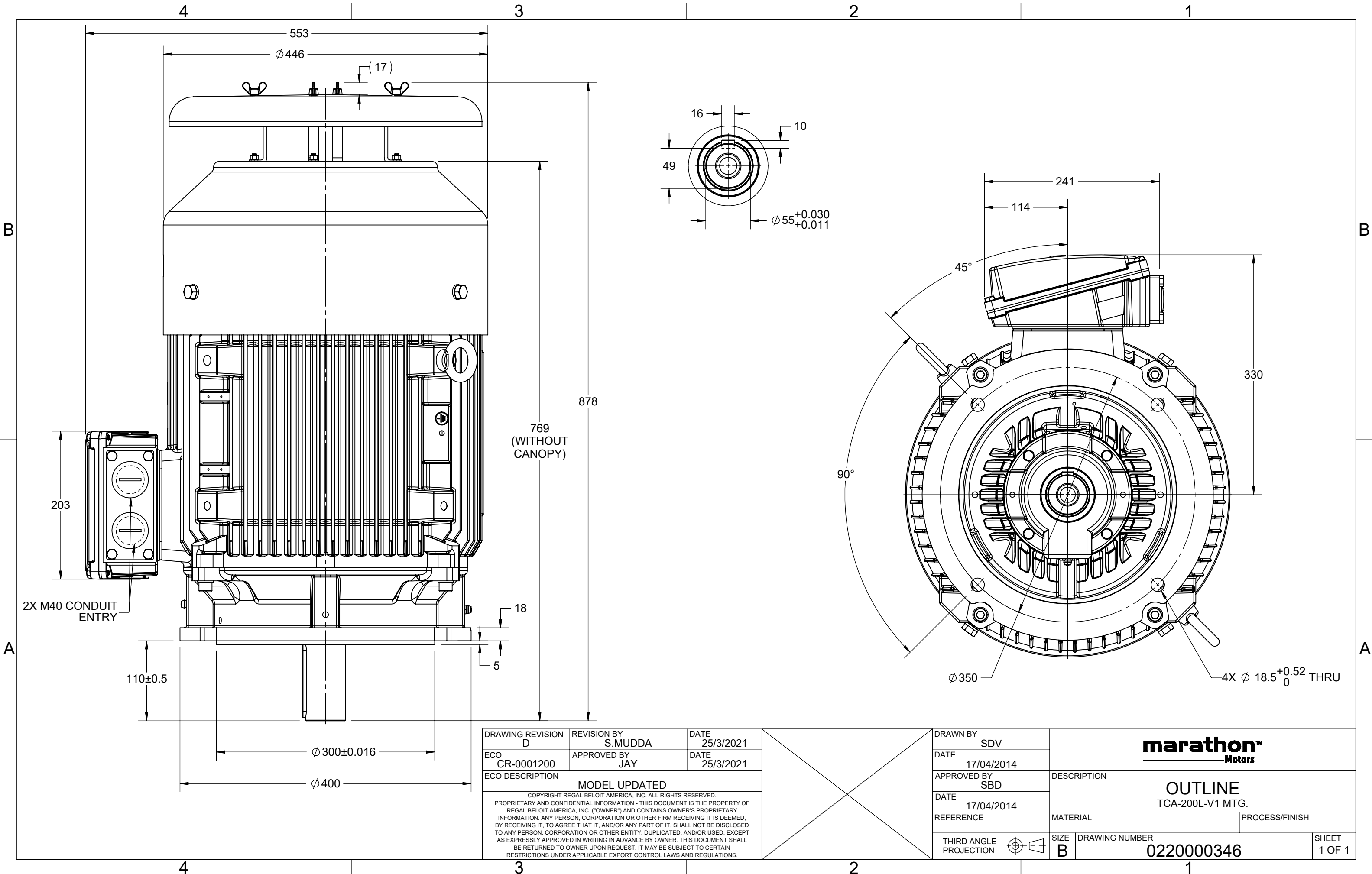
### Nameplate Specifications

Output HP	<b>40 Hp</b>	Output KW	<b>30.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>400 V</b>
Current	<b>52.7 A</b>	Speed	<b>2974 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>94.5 %</b>	Power Factor	<b>0.87</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>200L</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>6312</b>	Opp Drive End Bearing Size	<b>6212</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>IE4</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>2</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>V1</b>	Motor Orientation	<b>Shaftdown</b>
Drive End Bearing	<b>C3</b>	Opp Drive End Bearing	<b>C3</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>Keyed</b>
Overall Length	<b>876 mm</b>	Frame Length	<b>370 mm</b>
Shaft Diameter	<b>55 mm</b>	Shaft Extension	<b>110 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Outline Drawing	<b>0220000346</b>	Connection Drawing	<b>8442000085</b>

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DRAWING REVISION D	REVISION BY S.MUDDA	DATE 25/3/2021
ECO CR-0001200	APPROVED BY JAY	DATE 25/3/2021
ECO DESCRIPTION <b>MODEL UPDATED</b>		
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DRAWN BY SDV		
DATE 17/04/2014		
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b> TCA-200L-V1 MTG.	
DATE 17/04/2014	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE <b>B</b>	DRAWING NUMBER <b>0220000346</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>	 <b>Regal Beloit America, Inc.</b>		
			DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>
	DATE <b>16/12/2016</b>	MATERIAL	
	APPROVED BY <b>SBD</b>	PROCESS/FINISH	
	DATE <b>16/12/2016</b>	SIZE <b>A</b>	DRAWING NUMBER <b>8442000085</b>
REFERENCE			
THIRD ANGLE PROJECTION 			

Model No. QCA0301A1141GAA001

U (V)	$\Delta$ / 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	$\Delta$	50	30	40	52.7	2974	95.79	IE4	-	94.5	94.5	92.8	0.87	0.83	0.74	7.2	2.1	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	200L	Motor weight - approx.	320 kg
Duty	S1	Gross weight - approx.	350 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.3060 kgm <sup>2</sup>
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)	73 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	6312 C3 / 6212 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm <sup>2</sup> /2 x M40 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	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

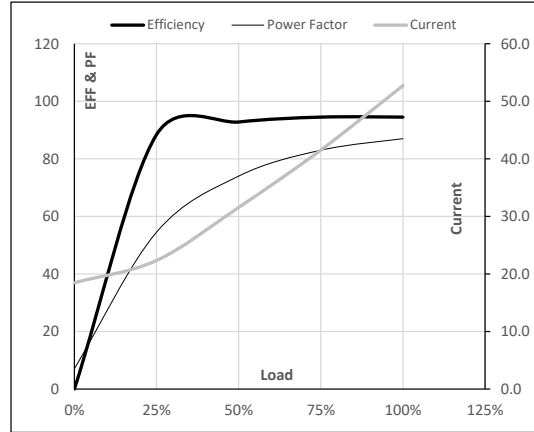
**Model No.** QCA0301A1141GAA001

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	400	Δ	50	30	40	52.7	2974	9.77	95.79	IE4	40	S1	1000	0.3060	320

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	18.5	22.3	31.6	41.5	52.7	
Torque	Nm	0.0	23.8	47.7	71.7	95.8	
Speed	r/min	3000	2993	2987	2981	2974	
Efficiency	%	0.0	88.4	92.8	94.5	94.5	
Power Factor	%	7.1	54.5	74.0	83.0	87.0	

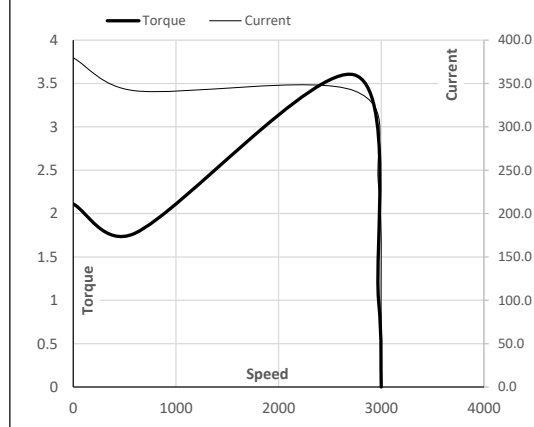
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2736	2974	3000
Current	A	379.6	341.7	232.1	52.7	18.5
Torque	pu	2.1	1.8	3.6	1	0

**Starting Characteristics Chart**



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

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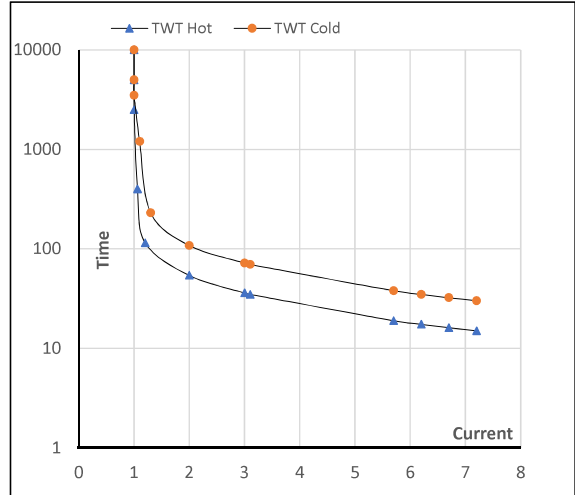
Model No. QCA0301A1141GAA001

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	400	$\Delta$	50	30	40	52.7	2974	9.77	95.79	IE4	40	S1	1000	0.3060	320

**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	54	36	30	25	20	15	
TWT Cold	s 10000	108	72	65	50	45	30	
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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