

# PRODUCT INFORMATION PACKET

Model No: QCA5P53AF111GAA001

Catalog No: QCA5P53AF111GAA001

TerraMAX® Cast Iron Motor, 7.50 HP, 3 Ph, 50 Hz, 380 V, 1000 RPM, 132M Frame, TEFC



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### Nameplate Specifications

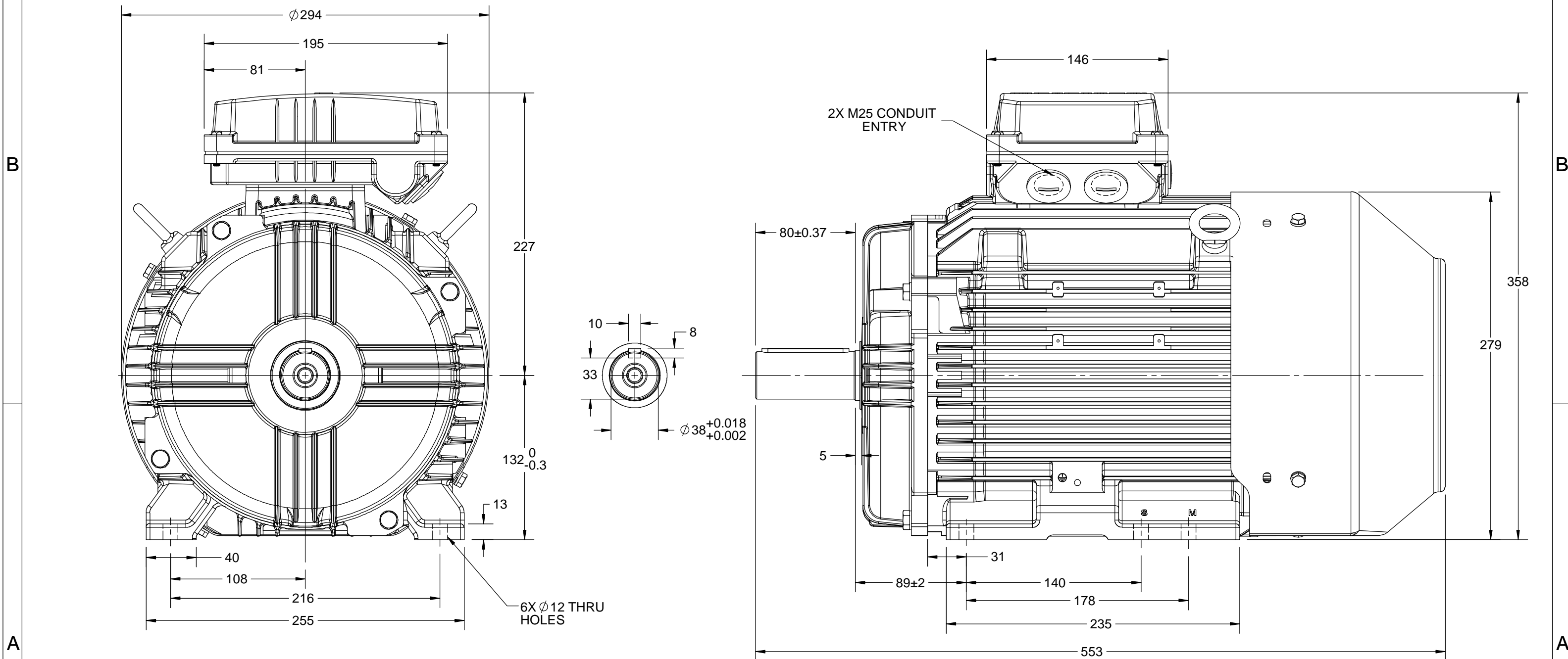
Output HP	<b>7.50 Hp</b>	Output KW	<b>5.5 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>380 V</b>
Current	<b>12.8 A</b>	Speed	<b>979 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>90.5 %</b>	Power Factor	<b>0.73</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>132M</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6308</b>	Opp Drive End Bearing Size	<b>6208</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>6</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>B3</b>	Motor Orientation	<b>Horizontal</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>553 mm</b>	Frame Length	<b>290 mm</b>
Shaft Diameter	<b>38 mm</b>	Shaft Extension	<b>80 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Outline Drawing	<b>0213201079</b>	Connection Drawing	<b>8442000085</b>

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# OUTLINE



DRAWING REVISION A	REVISION BY GSR	DATE 04/04/2018
ECO ECO-0142510	APPROVED BY JAY	DATE 04/04/2018
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DRAWN BY GSR
DATE 04/04/2018
APPROVED BY JAY
DATE 04/04/2018
REFERENCE
THIRD ANGLE PROJECTION

<b>marathon™ Motors</b>	
DESCRIPTION <b>OUTLINE</b>	
132 FR.- B3- MTG. MOTOR TYPE TCA(STRETCHED)	
MATERIAL	PROCESS/FINISH
SIZE <b>B</b>	DRAWING NUMBER <b>0213201079</b>
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>	DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>		
	DATE <b>16/12/2016</b>	MATERIAL	PROCESS/FINISH	
	REFERENCE	SIZE <b>A</b>	DRAWING NUMBER <b>8442000085</b>	SHEET <b>1 OF 1</b>
	THIRD ANGLE PROJECTION 			

**Model No.** QCA5P53AF111GAA001

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]	$T_R/T_N$ [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
380	$\Delta$	50	5.5	7.5	12.6	979	54.64	IE4	-	90.5	90.5	88.5	0.73	0.64	0.5	7.1	2.7	3.3

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132M	Motor weight - approx.	103 kg
Duty	S1	Gross weight - approx.	106 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.0868 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)	59 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	6308-2Z / 6208-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 16mm <sup>2</sup> /2 x M25 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

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

 $T_R/T_N$  - 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

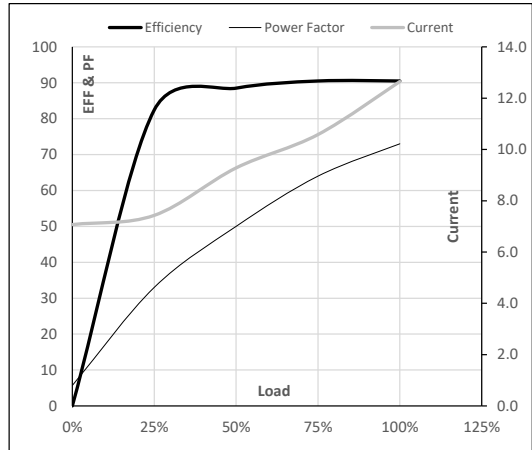
Model No. QCA5P53AF111GAA001

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	380	Δ	50	5.5	7.5	12.6	979	5.57	54.64	IE4	40	S1	1000	0.0868	103

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	7.1	7.4	9.3	10.6	12.6	
Torque	Nm	0.0	13.4	27.0	40.7	54.6	
Speed	r/min	1000	995	990	985	979	
Efficiency	%	0.0	82.4	88.5	90.5	90.5	
Power Factor	%	5.7	33.0	50.0	64.0	73.0	

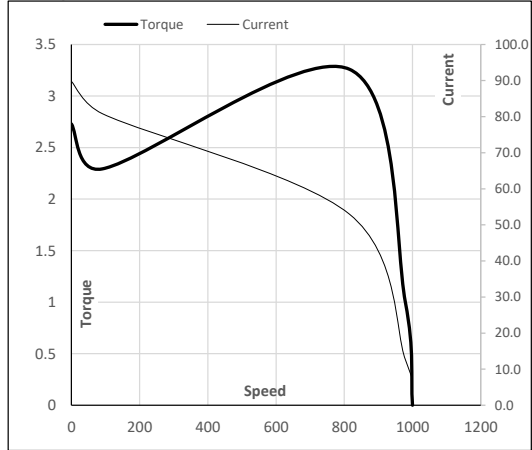
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	815	979	1000
Current	A	89.8	80.8	53.0	12.6	7.1
Torque	pu	2.7	2.3	3.3	1	0

**Starting Characteristics Chart**



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

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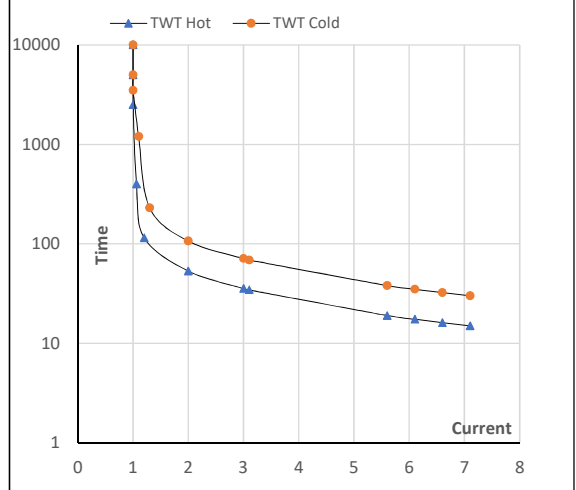
**Model No.** QCA5P53AF111GAA001

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	380	Y	50	5.5	7.5	12.6	979	5.57	54.64	IE4	40	S1	1000	0.0868	103

**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	53	36	30	25	20	15	
TWT Cold	s 10000	107	71	60	50	40	30	
Current	pu	1	2	3	4	5	5.5	7.1

**Thermal Characteristics Chart**



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

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