

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: QCA0042AF111GAA001

Catalog No: QCA0042AF111GAA001

TerraMAX® Cast Iron Motor, 5.50 HP, 3 Ph, 50 Hz, 380 V, 1500 RPM, 112M Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	5.50 Hp	Output KW	4.0 kW
Frequency	50 Hz	Voltage	380 V
Current	8.3 A	Speed	1462 rpm
Service Factor	1	Phase	3
Efficiency	91.1 %	Power Factor	0.81
Duty	S1	Insulation Class	F
Frame	112M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6306	Opp Drive End Bearing Size	6206
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	4	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	475 mm	Frame Length	250 mm
Shaft Diameter	28 mm	Shaft Extension	60 mm
Assembly/Box Mounting	Top		
Outline Drawing	0211200534	Connection Drawing	8442000085

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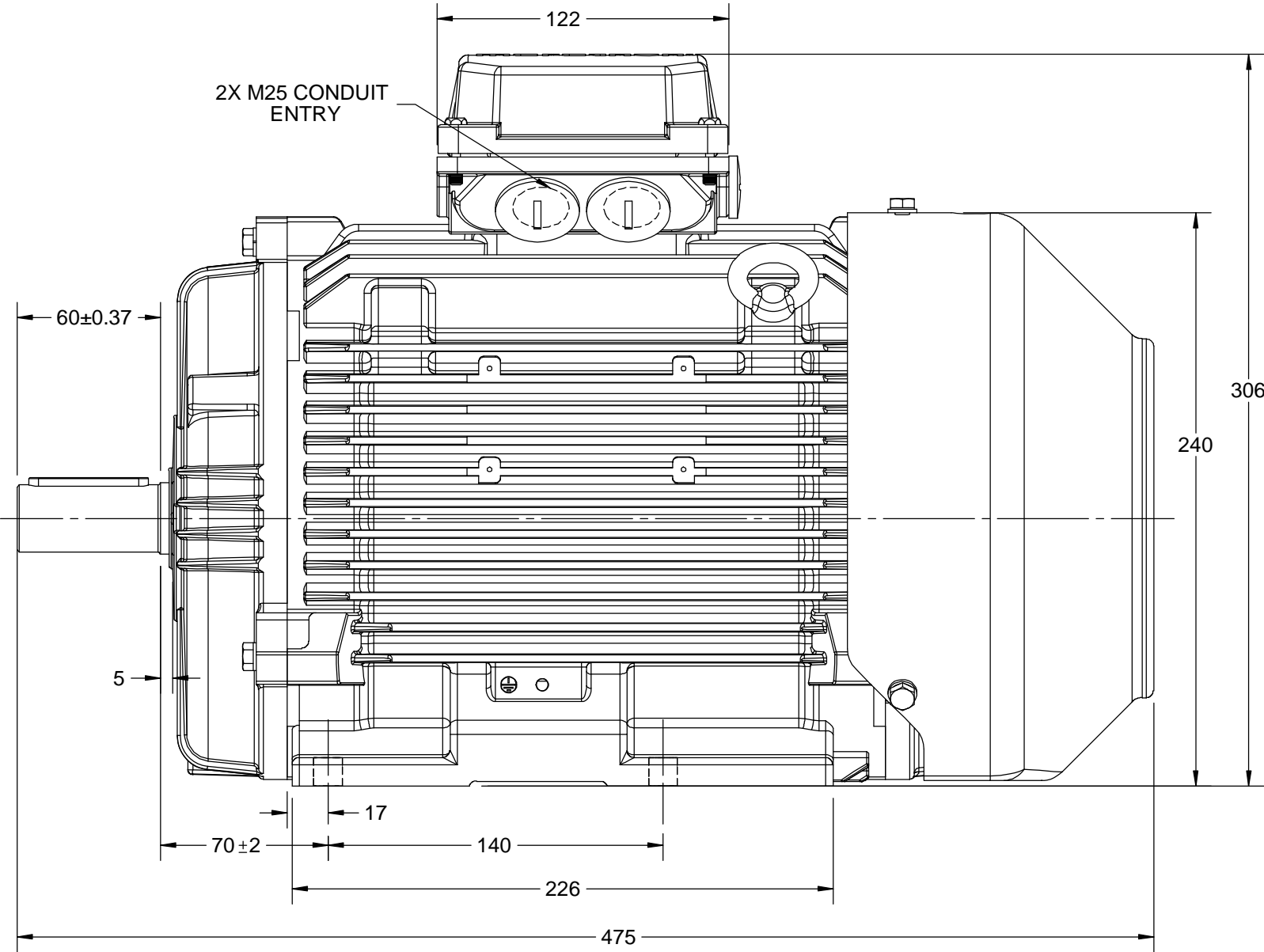
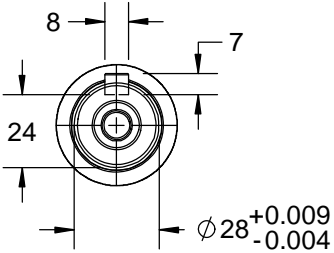
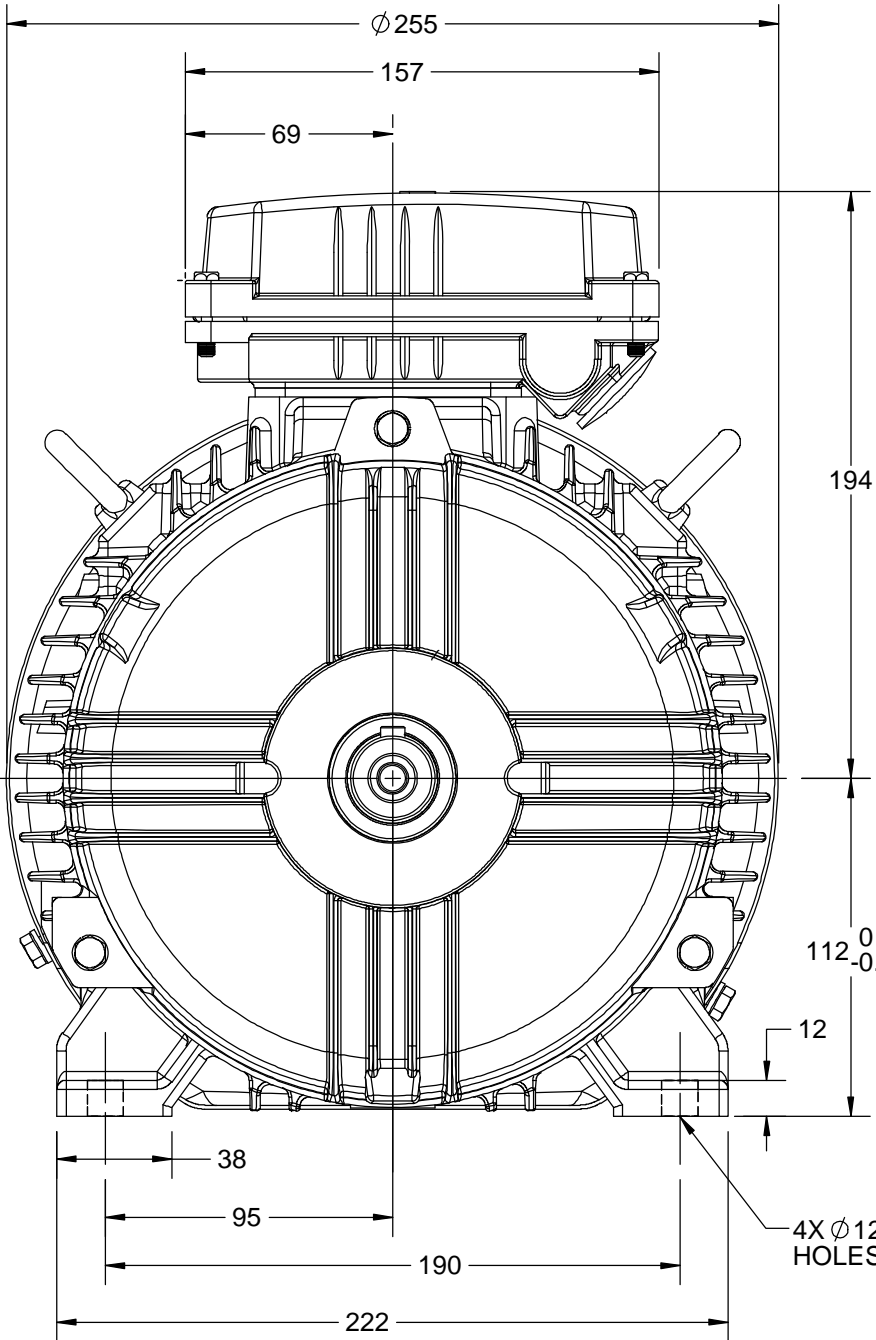
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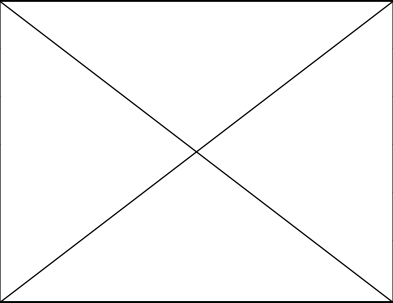
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A

A



DRAWING REVISION B	REVISION BY NIV	DATE 19/09/2017
ECO ECO-0131516	APPROVED BY JAY	DATE 19/09/2017
ECO DESCRIPTION		
UPDATED DRAWING		
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DRAWN BY NIV	<b>marathon™</b> Motors		
DATE 17/07/17			
APPROVED BY JAY	DESCRIPTION		
DATE 17/07/17	OUTLINE		
REFERENCE	112 FR.- B3 MTG. MOTOR TYPE: TCA/QCA		
	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0211200534	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>	Regal Beloit America, Inc.		
	DATE <b>16/12/2016</b>			
	APPROVED BY <b>SBD</b>	DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>		
	DATE <b>16/12/2016</b>			
	REFERENCE	MATERIAL	PROCESS/FINISH	
	THIRD ANGLE PROJECTION	SIZE <b>A</b>	DRAWING NUMBER <b>8442000085</b>	SHEET <b>1 OF 1</b>

**Model No.** QCA0042AF111GAA001

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at ___ load				PF at ___ load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
380	Δ	50	4	5.5	8.2	1462	26.79	IE4	-	91.1	91.1	90.4	0.81	0.74	0.61	9.3	3.7	4.2

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	112M	Motor weight - approx.	68 kg
Duty	S1	Gross weight - approx.	71 kg
Voltage variation *	± 10%	Motor inertia	0.0249 kgm <sup>2</sup>
Frequency variation *	± 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)	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	6306-2Z / 6206-2Z	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<sub>A</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>A</sub>/T<sub>N</sub> - 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.

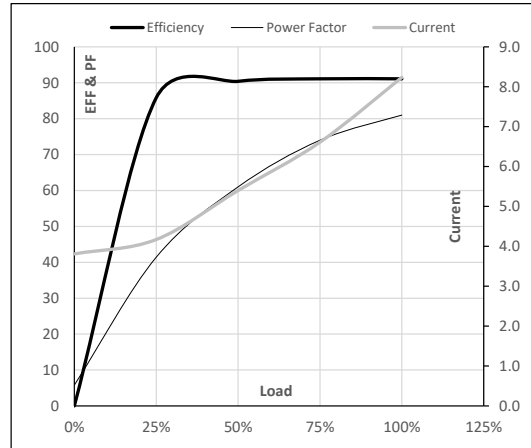
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

**Model No.** QCA0042AF111GAA001

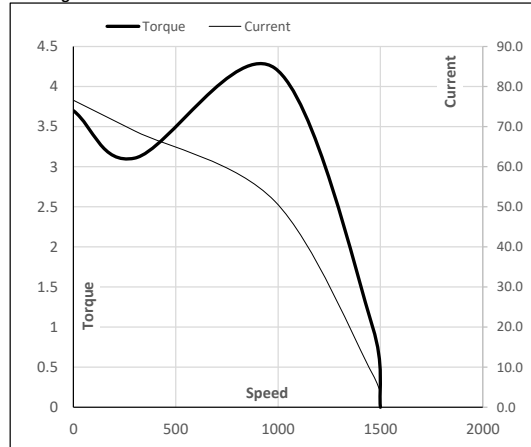
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380	Δ	50	4	5.5	8.2	1462	2.73	26.79	IE4	40	S1	1000	0.0249	68

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.8	4.2	5.4	6.6	8.2	
Torque	Nm	0.0	6.6	13.2	20.0	26.8	
Speed	r/min	1500	1491	1482	1473	1462	
Efficiency	%	0.0	85.8	90.4	91.1	91.1	
Power Factor	%	5.8	41.4	61.0	74.0	81.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	984	1462	1500
Current	A	76.6	68.9	51.4	8.2	3.8
Torque	pu	3.7	3.1	4.2	1	0

**Starting Characteristics Chart**

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

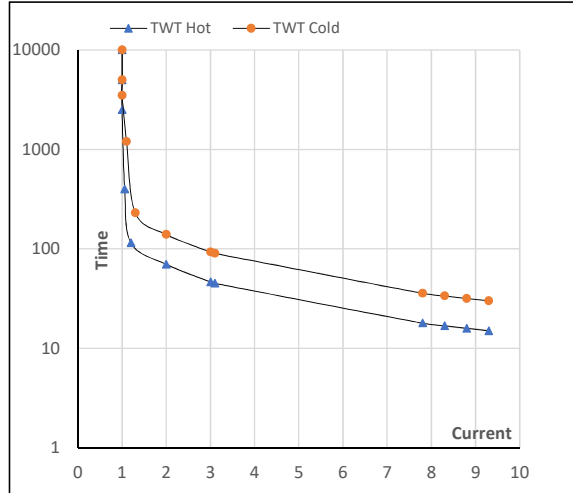
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**Model No.** QCA0042AF111GAA001

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	380	Y	50	4.0	5.5	8.2	1462	2.73	26.79	IE4	40	S1	1000	0.0249	68

**Motor Speed Torque Data**

Load	FL	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	LR
TWT Hot	s 10000	70	47	40	30	25	15
TWT Cold	s 10000	140	93	70	50	40	30
Current	pu	1	2	4	5	5.5	9.3

**Thermal Characteristics Chart**

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

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