

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: QCA2003AF121GAA001

Catalog No: QCA2003AF121GAA001

TerraMAX® Cast Iron Motor, 270 HP, 3 Ph, 50 Hz, 380 V, 1000 RPM, 355M Frame, TEFC



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RegalRexnord

Nameplate Specifications

Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	380 V
Current	381.4 A	Speed	992 rpm
Service Factor	1	Phase	3
Efficiency	96.3 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6322	Opp Drive End Bearing Size	6322
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	6	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1542 mm	Frame Length	1010 mm
Shaft Diameter	95 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0235501831

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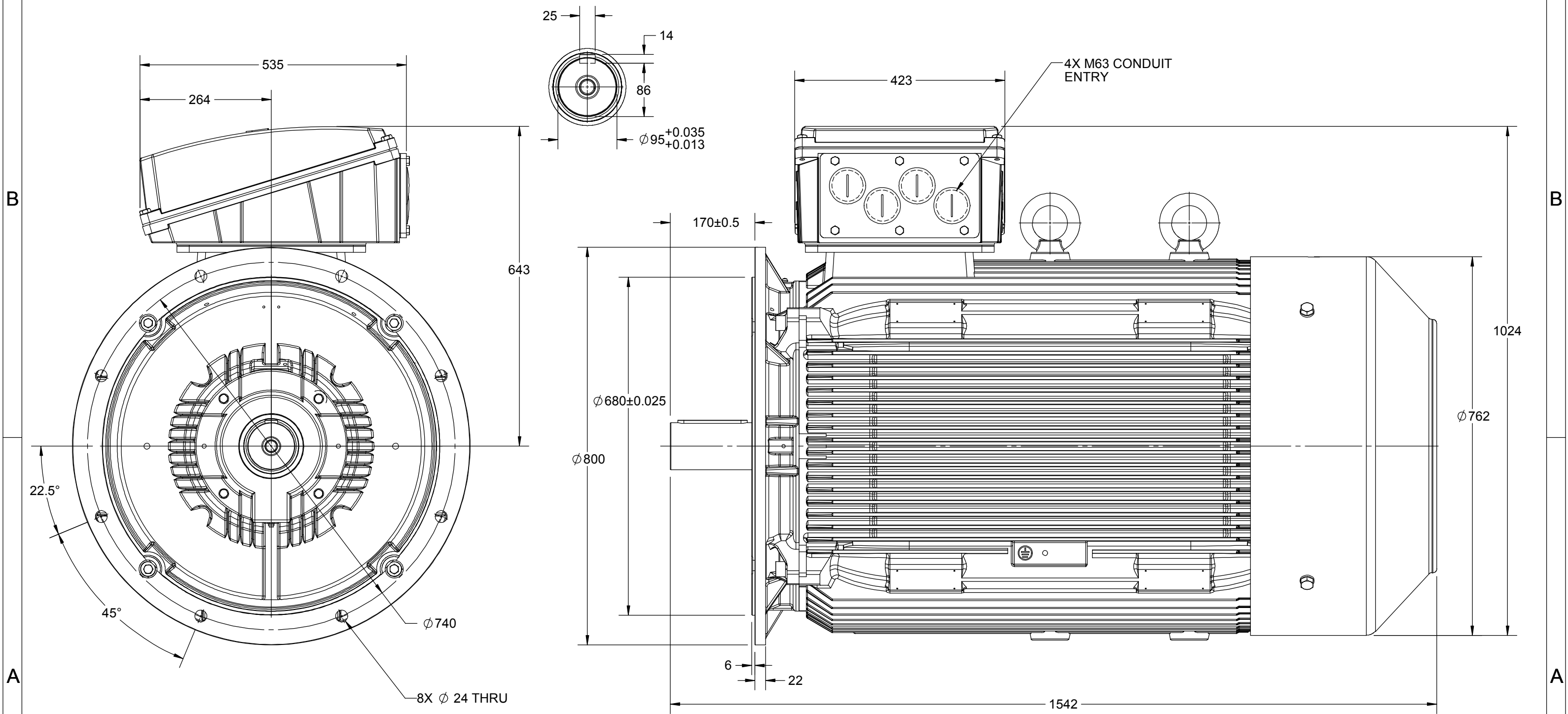
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OUTLINE



DRAWING REVISION B		REVISION BY NIV		DATE 08/05/2019			DRAWN BY JOY		<div>marathon™ Motors</div>			
ECO ECO-0165600		APPROVED BY SR		DATE 08/05/2019			DATE 18/07/2014					
ECO DESCRIPTION							APPROVED BY SBD		DESCRIPTION OUTLINE 355FR-B5 MTG. MOTOR TYPE: TCA			
MODEL UPDATED							DATE 18/07/2014					
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							THIRD ANGLE PROJECTION		SIZE B		DRAWING NUMBER 0235501831	

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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	Regal Beloit America, Inc.	
	DATE 16/12/2016		
	APPROVED BY SBD	DESCRIPTION CONN DIAGRAM-NAMEPLATE	
	DATE 16/12/2016		
	REFERENCE	MATERIAL	PROCESS/FINISH
	THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER 8442000085

SHEET
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Model No. QCA2003AF121GAA001

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 _A /I _N [pu]	T _A /T _N [pu]	T _K /T _N [pu]
380	Δ	50	200	270	380.2	992	1937.91	IE4	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.9	2.2	2.9

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	355M	Motor weight - approx.	1866 kg
Duty	S1	Gross weight - approx.	1911 kg
Voltage variation *	± 10%	Motor inertia	11.5959 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.8 mm/s
Design	N	Noise level (1meter distance from motor)	70 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	6322 C3 / 6322 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 300mm ² /4 x M63 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 combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

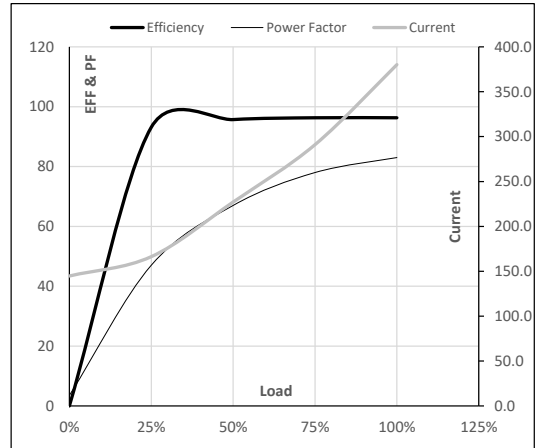
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

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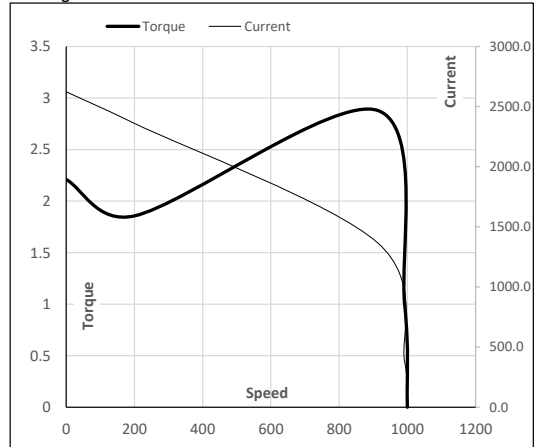
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	200	270	380.2	992	197.61	1937.91	IE4	40	S1	1000	11.5959	1866

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	144.7	166.3	227.1	291.0	380.2	
Torque	Nm	0.0	481.7	965.1	1450.4	1937.9	
Speed	r/min	1000	998	996	994	992	
Efficiency	%	0.0	93.1	95.7	96.3	96.3	
Power Factor	%	3.5	47.0	67.0	78.0	83.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	913	992	1000
Current	A	2623.2	2360.9	1368.1	380.2	144.7
Torque	pu	2.2	1.9	2.9	1	0

Starting Characteristics Chart

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

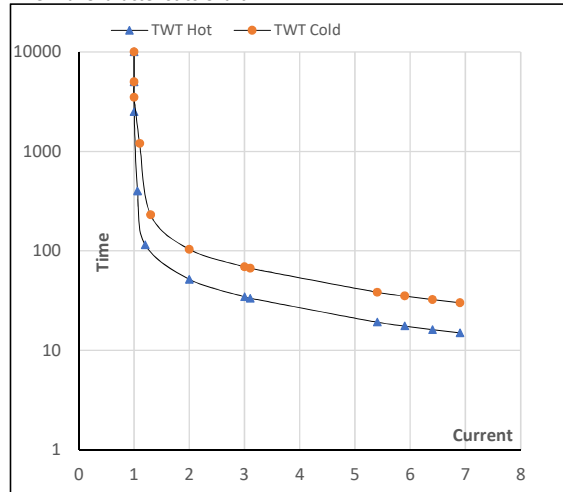
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	200	270	380.2	992	197.61	1937.91	IE4	40	S1	1000	11.5959	1866

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	52	35	25	20	18	15
TWT Cold	s	10000	104	69	45	40	36	30
Current	pu	1	2	3	4	5	5.5	6.9

Thermal Characteristics Chart

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

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