

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: QCA0221AF121GAA001

Catalog No: QCA0221AF121GAA001

TerraMAX® Cast Iron Motor, 30 HP, 3 Ph, 50 Hz, 380 V, 3000 RPM, 180M Frame, TEFC



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RegalRexnord

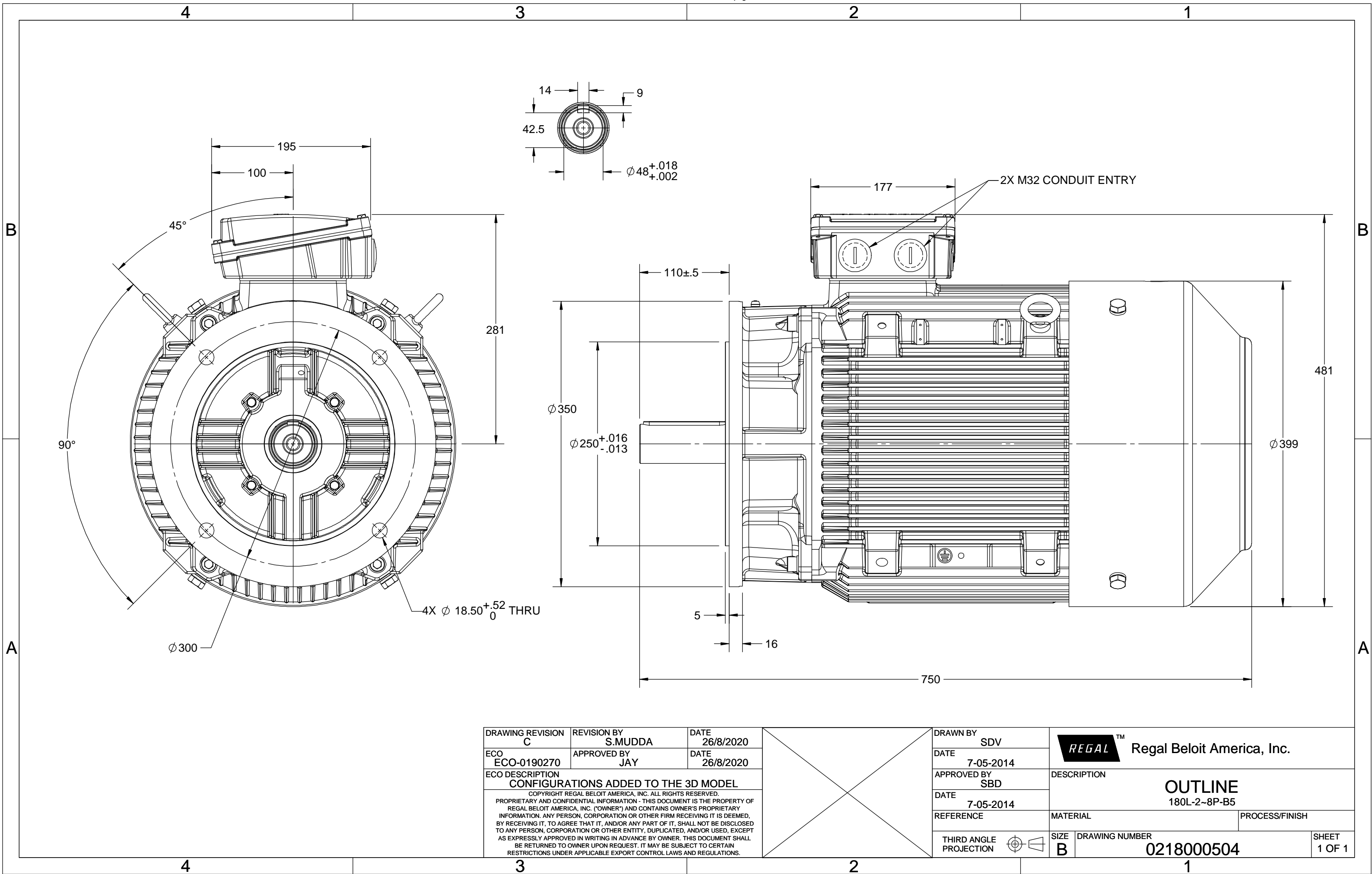
Nameplate Specifications

Output HP	30 Hp	Output KW	22.0 kW
Frequency	50 Hz	Voltage	380 V
Current	40.1 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

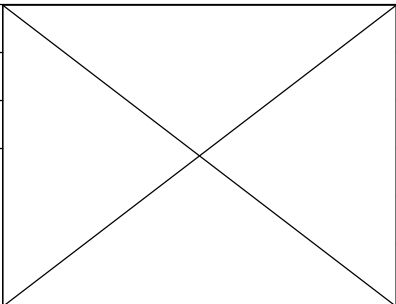
Technical Specifications



Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	750 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0218000504

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DRAWING REVISION C	REVISION BY S.MUDDA	DATE 26/8/2020
ECO ECO-0190270	APPROVED BY JAY	DATE 26/8/2020
ECO DESCRIPTION CONFIGURATIONS ADDED TO THE 3D MODEL		
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DRAWN BY SDV	 Regal Beloit America, Inc.	
DATE 7-05-2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 180L-2-8P-B5	
DATE 7-05-2014		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION 	SIZE B	DRAWING NUMBER 0218000504
		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	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 1 OF 1

Model No. QCA0221AF121GAA001

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	22	30	40.0	2963	72.10	IE4	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	7.4	2.2	3.6

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180M	Motor weight - approx.	257 kg
Duty	S1	Gross weight - approx.	277 kg
Voltage variation *	± 10%	Motor inertia	0.1801 kgm ²
Frequency variation *	± 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 combine variation are as per IEC60034-1

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

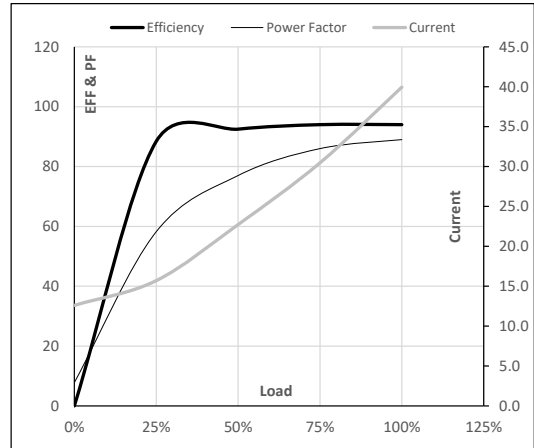
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

Model No. QCA0221AF121GAA001

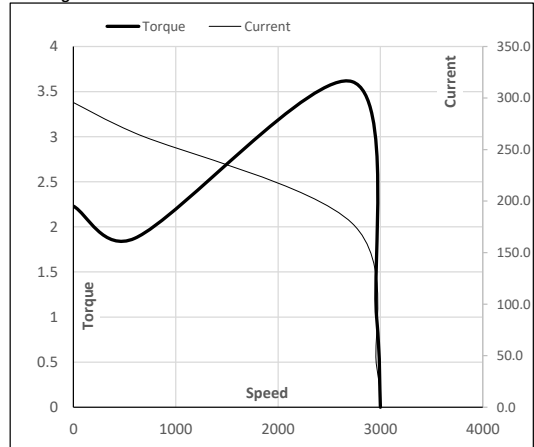
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	22	30	40.0	2963	7.35	72.10	IE4	40	S1	1000	0.1801	257

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	40.0	
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	295.7	266.1	178.4	40.0	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

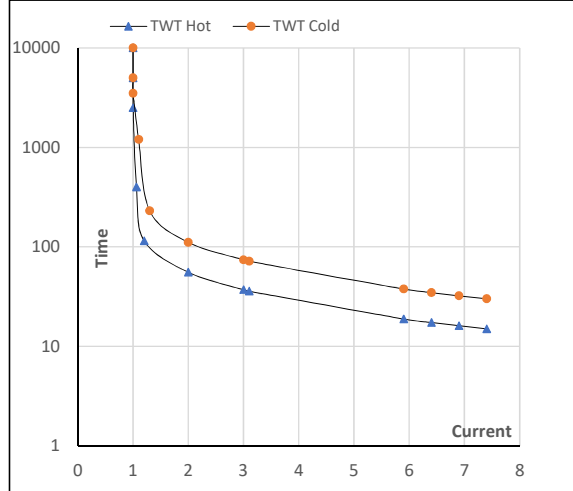
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Issued Date

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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	22	30	40.0	2963	7.35	72.10	IE4	40	S1	1000	0.1801	257

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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