

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: QCA0551A1121GAA001

Catalog No: QCA0551A1121GAA001

TerraMAX® Cast Iron Motor, 75 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 250M Frame, TEFC



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RegalRexnord

Nameplate Specifications

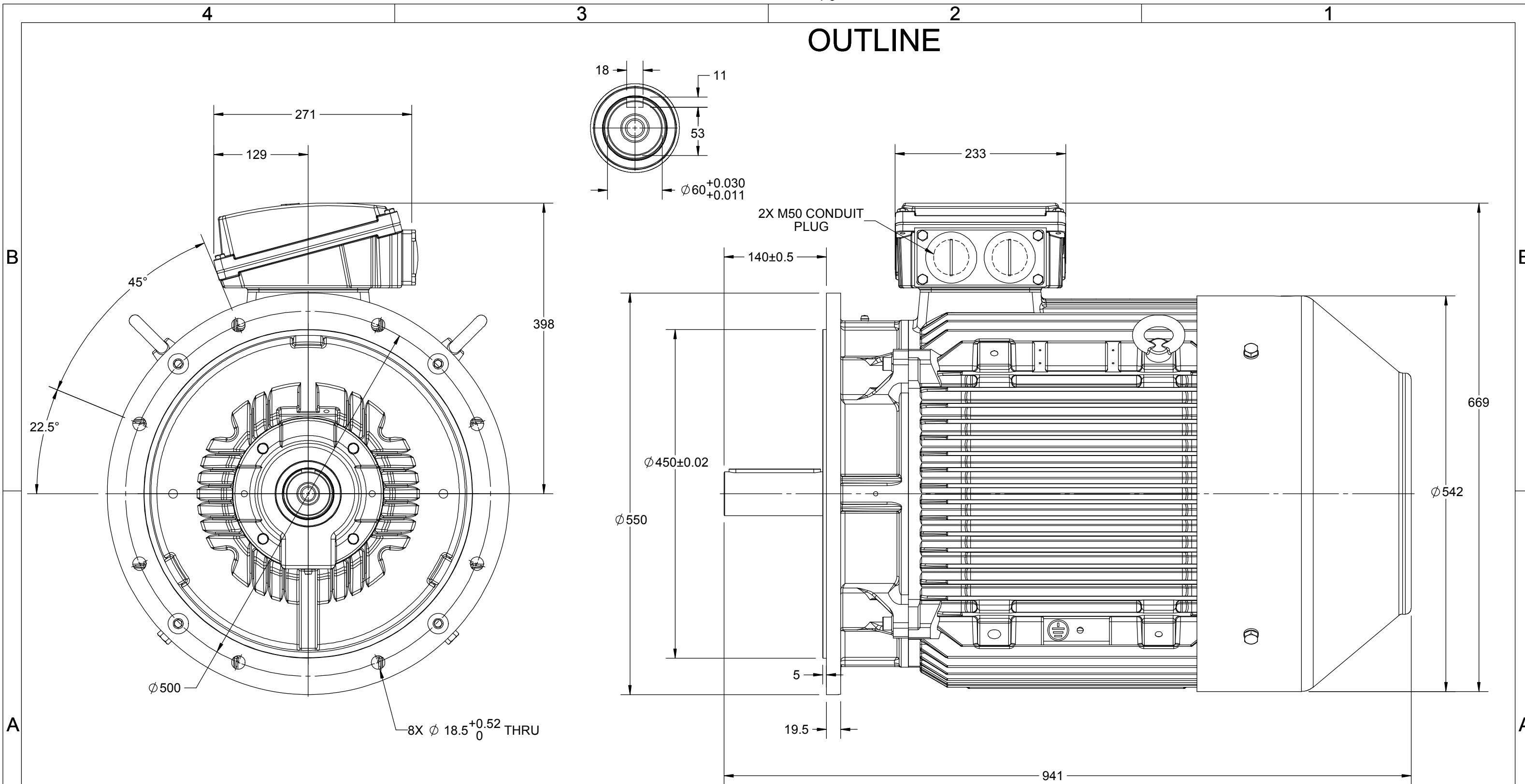
Output HP	75 Hp	Output KW	55.0 kW
Frequency	50 Hz	Voltage	400 V
Current	94.0 A	Speed	2981 rpm
Service Factor	1	Phase	3
Efficiency	95.3 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	250M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6314	Opp Drive End Bearing Size	6314
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	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	938 mm	Frame Length	460 mm
Shaft Diameter	60 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0225000376

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OUTLINE



DRAWING REVISION B	REVISION BY NIV	DATE 29/04/2019
ECO ECO-0167240	APPROVED BY SR	DATE 29/04/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY KCS
DATE 18/07/2014
APPROVED BY SBD
DATE 18/07/2014
REFERENCE

marathon™ Motors	
OUTLINE	
250FR-2P-B5 MTG. MOTOR TYPE: TCA	
MATERIAL	PROCESS/FINISH
SIZE B	DRAWING NUMBER 0225000376
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	DATE 16/12/2016		 Regal Beloit America, Inc.
	APPROVED BY SBD		
	DATE 16/12/2016		DESCRIPTION CONN DIAGRAM-NAMEPLATE
	REFERENCE	MATERIAL	PROCESS/FINISH
	THIRD ANGLE PROJECTION 	SIZE A	DRAWING NUMBER 8442000085

Model No. QCA0551A1121GAA001

U (V)	Δ / 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	Δ	50	55	75	93.9	2981	179.17	IE4	-	95.3	95.3	93.8	0.89	0.86	0.77	7.9	2.3	3.9

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	250M	Motor weight - approx.	572 kg
Duty	S1	Gross weight - approx.	607 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.7846 kgm ²
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)	75 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	6314 C3 / 6314 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 95mm ² /2 x M50 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

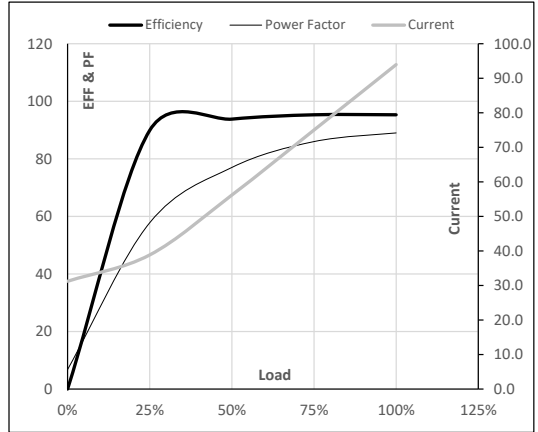
Model No. QCA0551A1121GAA001

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	400	Δ	50	55	75	93.9	2981	18.27	179.17	IE4	40	S1	1000	0.7846	572

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	31.2	38.8	56.2	75.0	93.9	
Torque	Nm	0.0	44.6	89.3	134.2	179.2	
Speed	r/min	3000	2995	2991	2986	2981	
Efficiency	%	0.0	89.9	93.8	95.3	95.3	
Power Factor	%	6.8	57.8	77.0	86.0	89.0	

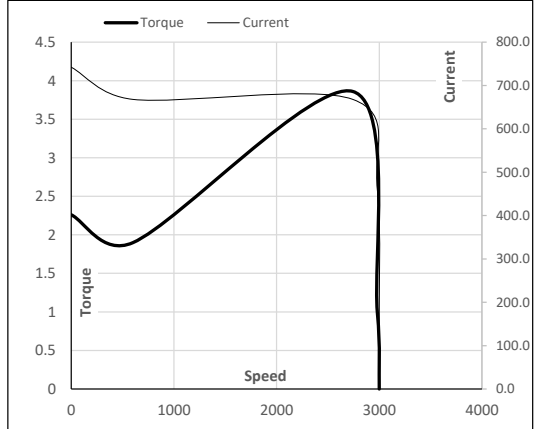
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2743	2981	3000
Current	A	742.2	668.0	460.3	93.9	31.2
Torque	pu	2.3	1.9	3.9	1	0

Starting Characteristics Chart



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

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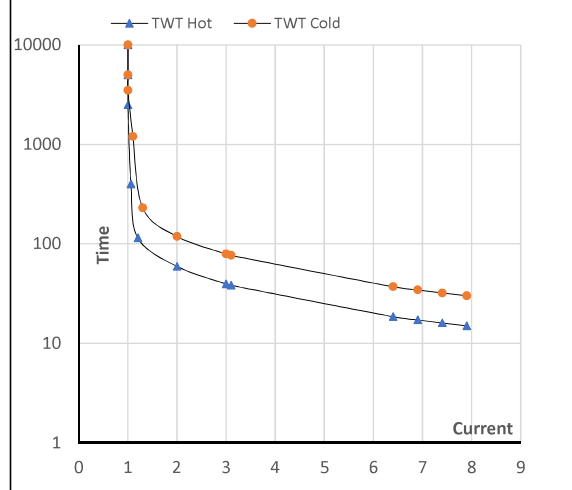
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	400	Δ	50	55	75	93.9	2981	18.27	179.17	IE4	40	S1	1000	0.7846	572

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	59	40	30	25	20	15	
TWT Cold	s 10000	119	79	65	50	45	30	
Current	pu	1	2	3	4	5	5.5	7.9

Thermal Characteristics Chart



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

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