

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: QCA7P51A1181GAA001

Catalog No: QCA7P51A1181GAA001

TerraMAX® Cast Iron Motor, 10 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 132S Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	10 Hp	Output KW	7.5 kW
Frequency	50 Hz	Voltage	400 V
Current	13.3 A	Speed	2943 rpm
Service Factor	1	Phase	3
Efficiency	91.7 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6308	Opp Drive End Bearing Size	6208
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	B14B	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	503 mm	Frame Length	240 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0213201188

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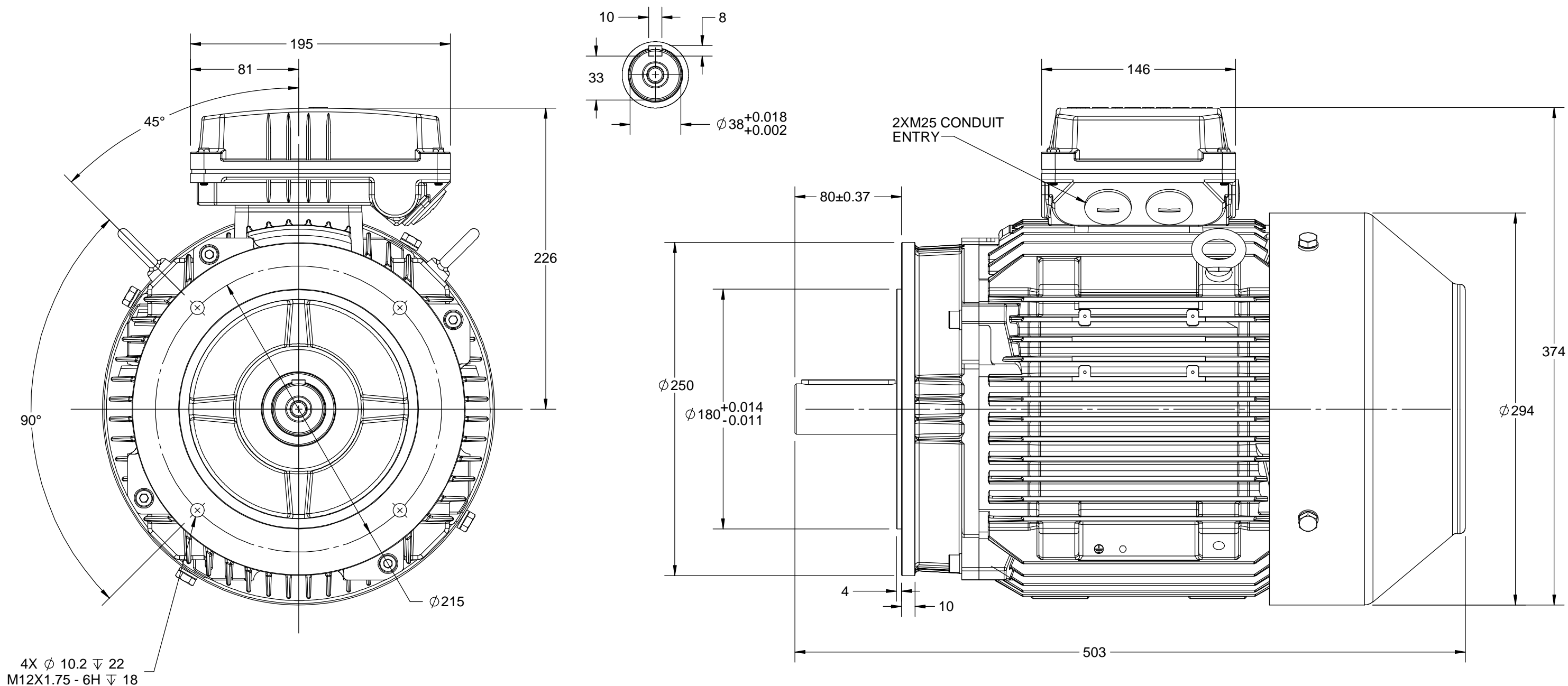
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DRAWING REVISION A	REVISION BY NIV	DATE 17/12/2018
ECO ECO-0158679	APPROVED BY SBD	DATE 17/12/2018
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DRAWN BY NIV	<b>marathon™</b> Motors		
DATE 17/12/2018			
APPROVED BY SBD	DESCRIPTION OUTLINE		
DATE 17/12/2018	132 FR- B14B MTG. MOTOR TYPE: TCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0213201188	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>		<b>Regal Beloit America, Inc.</b>		
	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.** QCA7P51A1181GAA001

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			
400	Δ	50	7.5	10	13.3	2943	24.20	IE4	-	91.7	91.7	90.3	0.89	0.85	0.75	8.8	3.1	4.3

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132S	Motor weight - approx.	91 kg
Duty	S1	Gross weight - approx.	94 kg
Voltage variation *	± 10%	Motor inertia	0.0252 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)	64 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<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 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.

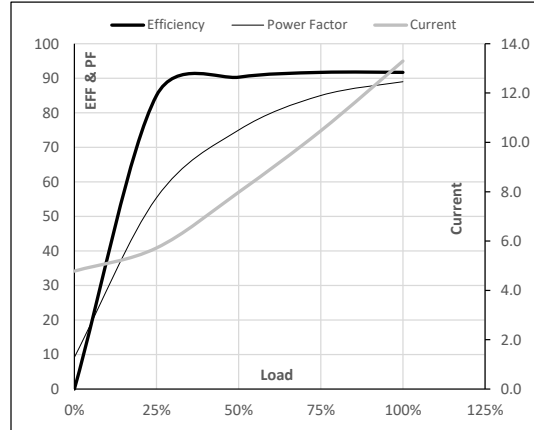
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC 60034-30-1	-	-	AS/NZ 1359:5:2004	-	IEC 60034-30-1

**Model No.** QCA7P51A1181GAA001

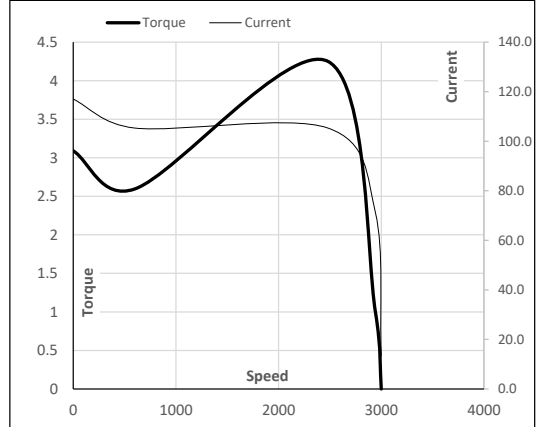
Enclosure	U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	400	Δ	50	7.5	10	13.3	2943	2.47	24.20	IE4	40	S1	1000	0.0252	91

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	4.8	5.7	8.0	10.5	13.3	
Torque	Nm	0.0	6.0	12.0	18.1	24.2	
Speed	r/min	3000	2986	2972	2958	2943	
Efficiency	%	0.0	85.0	90.3	91.7	91.7	
Power Factor	%	9.2	55.4	75.0	85.0	89.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2481	2943	3000
Current	A	117.0	105.3	71.2	13.3	4.8
Torque	pu	3.1	2.6	4.3	1	0

**Starting Characteristics Chart**

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

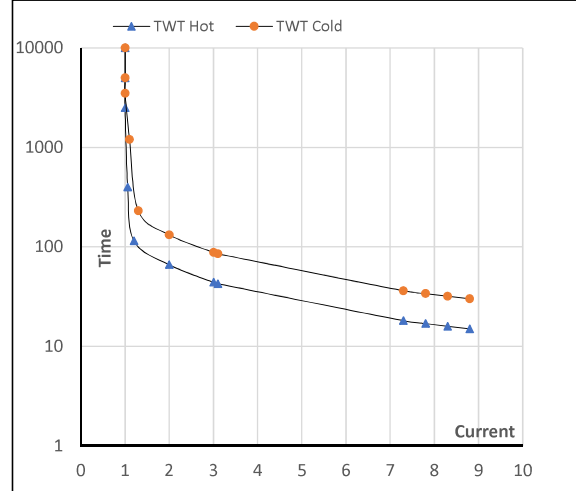
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**Model No.** QCA7P51A1181GAA001

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	400	$\Delta$	50	7.5	10	13.3	2943	2.47	24.20	IE4	40	S1	1000	0.0252	91

**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	66	44	35	25	20	15
TWT Cold	s	10000	132	88	70	50	40	30
Current	pu	1	2	3	4	5	5.5	8.8

**Thermal Characteristics Chart**

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

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