

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: QCA18P3AF113GAA001

Catalog No: QCA18P3AF113GAA001

TerraMAX® Cast Iron Motor, 25 HP, 3 Ph, 50 Hz, 380 V, 1000 RPM, 200L Frame, TEFC



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**RegalRexnord**

## Nameplate Specifications

Output HP	25 Hp	Output KW	18.5 kW
Frequency	50 Hz	Voltage	380 V
Current	38.3 A	Speed	986 rpm
Service Factor	1	Phase	3
Efficiency	93.4 %	Power Factor	0.79
Duty	S1	Insulation Class	F
Frame	200L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6312	Opp Drive End Bearing Size	6212
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	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	769 mm	Frame Length	370 mm
Shaft Diameter	55 mm	Shaft Extension	110 mm
Assembly/Box Mounting	R Side		
Connection Drawing	8442000085	Outline Drawing	0220000522

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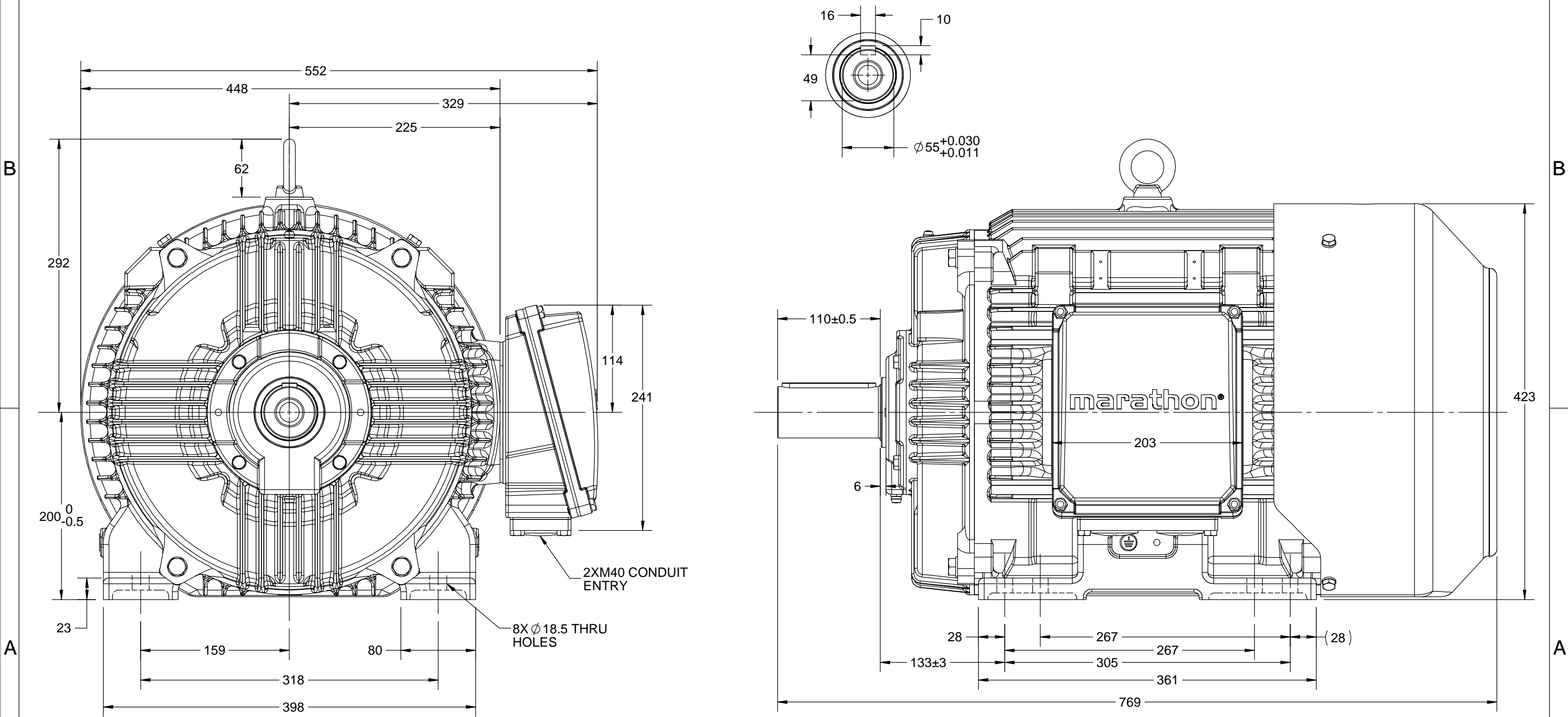
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OUTLINE



DRAWING REVISION C	REVISION BY BISWA	DATE 1/08/2018		DRAWN BY UDAY			
ECO ECO-0148344	APPROVED BY SBD	DATE 1/08/2018		DATE 16/08/2016			
ECO DESCRIPTION				APPROVED BY SBD	DESCRIPTION		
DRAWING UPDATED				DATE 16/08/2016	OUTLINE		
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				THIRD ANGLE PROJECTION		SIZE B	DRAWING NUMBER 0220000522

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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.** QCA18P3AF113GAA001

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I <sub>A</sub> /I <sub>N</sub>	T <sub>A</sub> /T <sub>N</sub>	T <sub>K</sub> /T <sub>N</sub>
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
380	Δ	50	18.5	25	38.1	986	180.57	IE4	-	93.4	93.4	92.3	0.79	0.73	0.61	6.5	2.3	2.8

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	200L	Motor weight - approx.	293 kg
Duty	S1	Gross weight - approx.	323 kg
Voltage variation *	± 10%	Motor inertia	0.6664 kgm <sup>2</sup>
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)	62 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	6312 C3 / 6212 C3	Terminal box position	RHS
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm <sup>2</sup> /2 x M40 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	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.

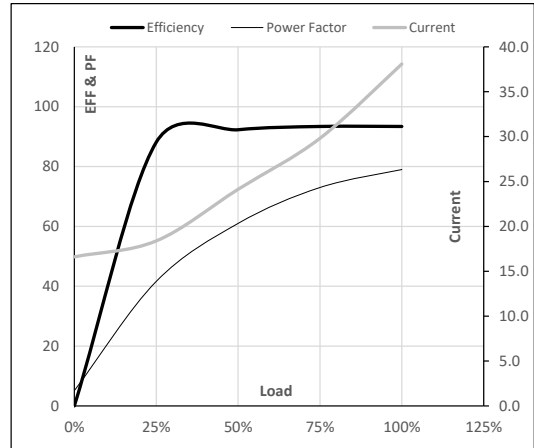
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

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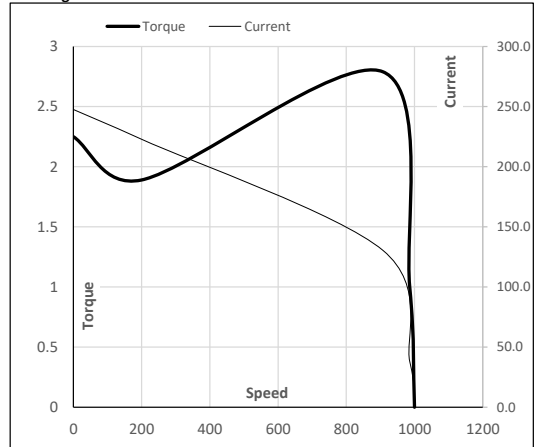
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380	Δ	50	18.5	25	38.1	986	18.41	180.57	IE4	40	S1	1000	0.6664	293

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	16.6	18.4	24.1	29.8	38.1	
Torque	Nm	0.0	44.7	89.6	134.9	180.6	
Speed	r/min	1000	997	993	990	986	
Efficiency	%	0.0	88.1	92.3	93.4	93.4	
Power Factor	%	5.1	41.6	61.0	73.0	79.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	907	986	1000
Current	A	247.6	222.8	130.5	38.1	16.6
Torque	pu	2.3	1.9	2.8	1	0

**Starting Characteristics Chart**

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

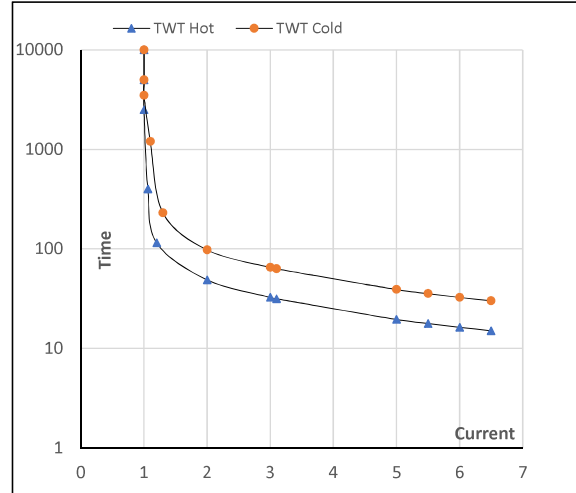
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Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380	$\Delta$	50	18.5	25	38.1	986	18.41	180.57	IE4	40	S1	1000	0.6664	293

**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	49	33	25	20	18	15
TWT Cold	s 10000	98	65	50	39	36	30
Current	pu	1	2	4	5	5.5	6.5

**Thermal Characteristics Chart**

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

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