

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: QCA0223AF131GAA001

Catalog No: QCA0223AF131GAA001

TerraMAX® Cast Iron Motor, 30 HP, 3 Ph, 50 Hz, 380 V, 1000 RPM, 200L Frame, TEFC



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Nameplate Specifications

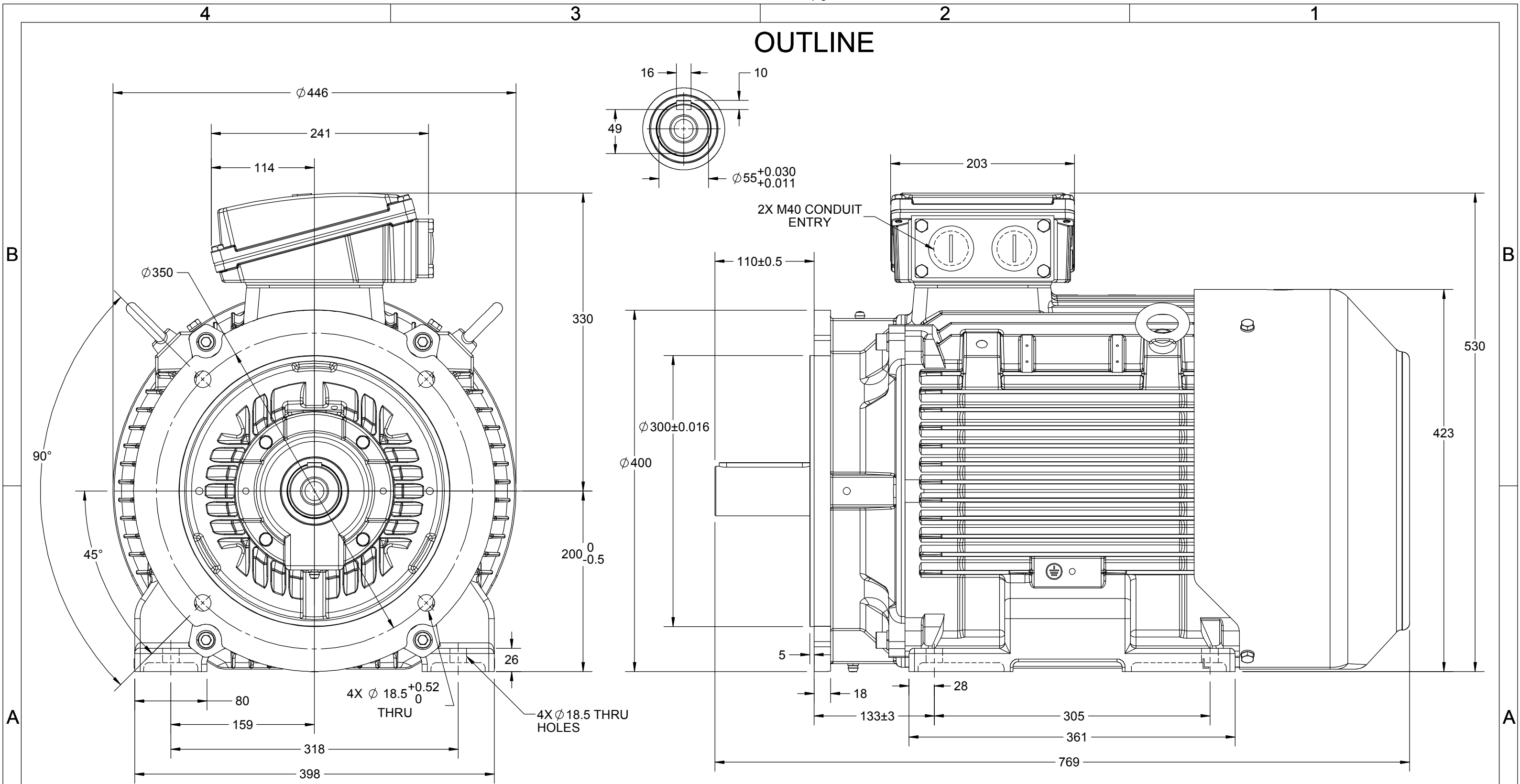
Output HP	30 Hp	Output KW	22.0 kW
Frequency	50 Hz	Voltage	380 V
Current	45.0 A	Speed	986 rpm
Service Factor	1	Phase	3
Efficiency	93.7 %	Power Factor	0.8
Duty	S1	Insulation Class	F
Frame	200L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing 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	B35	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	Top		
Connection Drawing	8442000085	Outline Drawing	0220000343

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OUTLINE



DRAWING REVISION C	REVISION BY NIV	DATE 26/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 26/04/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SDV	marathon™ Motors	
DATE 03/07/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 200FR-B35 MTG. MOTOR TYPE: TCA	
DATE 03/07/2014	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER 0220000343
THIRD ANGLE PROJECTION		SHEET 1 OF 1

Model No. QCA0223AF131GAA001

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			
380	Δ	50	22	30	44.6	986	216.70	IE4	-	93.7	93.7	92.8	0.8	0.74	0.63	6.5	2.2	2.7

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	200L	Motor weight - approx.	330 kg
Duty	S1	Gross weight - approx.	360 kg
Voltage variation *	± 10%	Motor inertia	0.7703 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)	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	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm ² /2 x M40 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



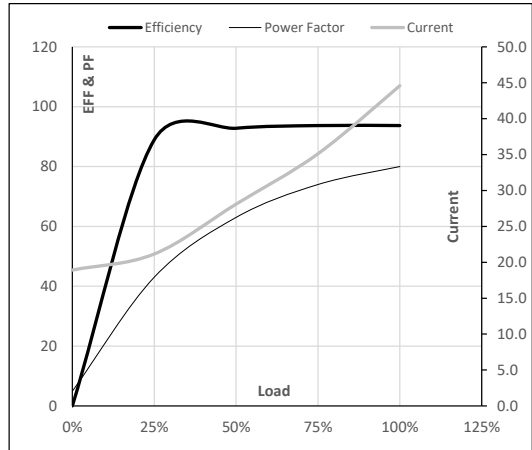
Model No. QCA0223AF131GAA001

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	44.6	986	22.10	216.70	IE4	40	S1	1000	0.7703	330

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	18.9	21.2	28.1	35.1	44.6	
Torque	Nm	0.0	53.6	107.6	161.9	216.7	
Speed	r/min	1000	997	993	990	986	
Efficiency	%	0.0	88.9	92.8	93.7	93.7	
Power Factor	%	4.9	43.0	63.0	74.0	80.0	

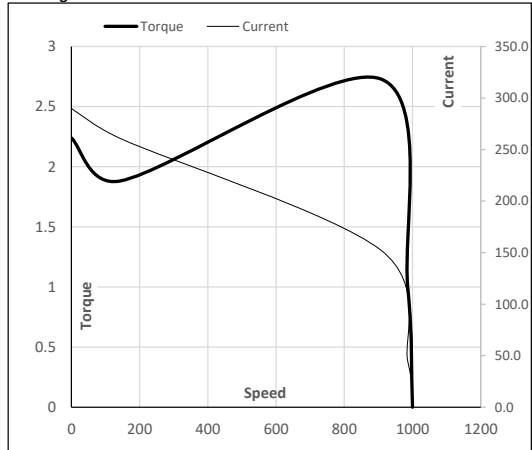
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	143	907	986	1000
Current	A	289.8	260.9	152.5	44.6	18.9
Torque	pu	2.2	1.9	2.7	1	0

Starting Characteristics Chart



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

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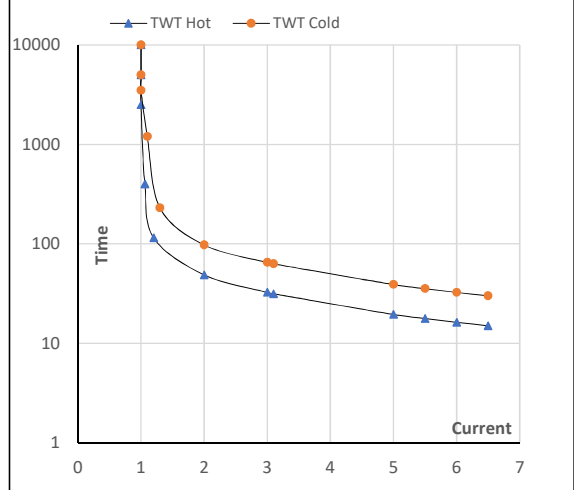
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	22	30	44.6	986	22.10	216.70	IE4	40	S1	1000	0.7703	330

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	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	3	4	5	5.5

Thermal Characteristics Chart



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

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