

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0033A3113GACD01

Catalog No: TCA0033A3113GACD01

Cast Iron Motor, 4 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 132S Frame, TEFC



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RegalRexnord

Nameplate Specifications

Output HP	4 Hp	Output KW	3.0 kW
Frequency	50 Hz	Voltage	415 V
Current	6.8 A	Speed	973 rpm
Service Factor	1	Phase	3
Efficiency	85.6 %	Power Factor	0.72
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °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	IE3

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	465 mm	Frame Length	202 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	R Side		
Connection Drawing	8442000085	Outline Drawing	0213200962

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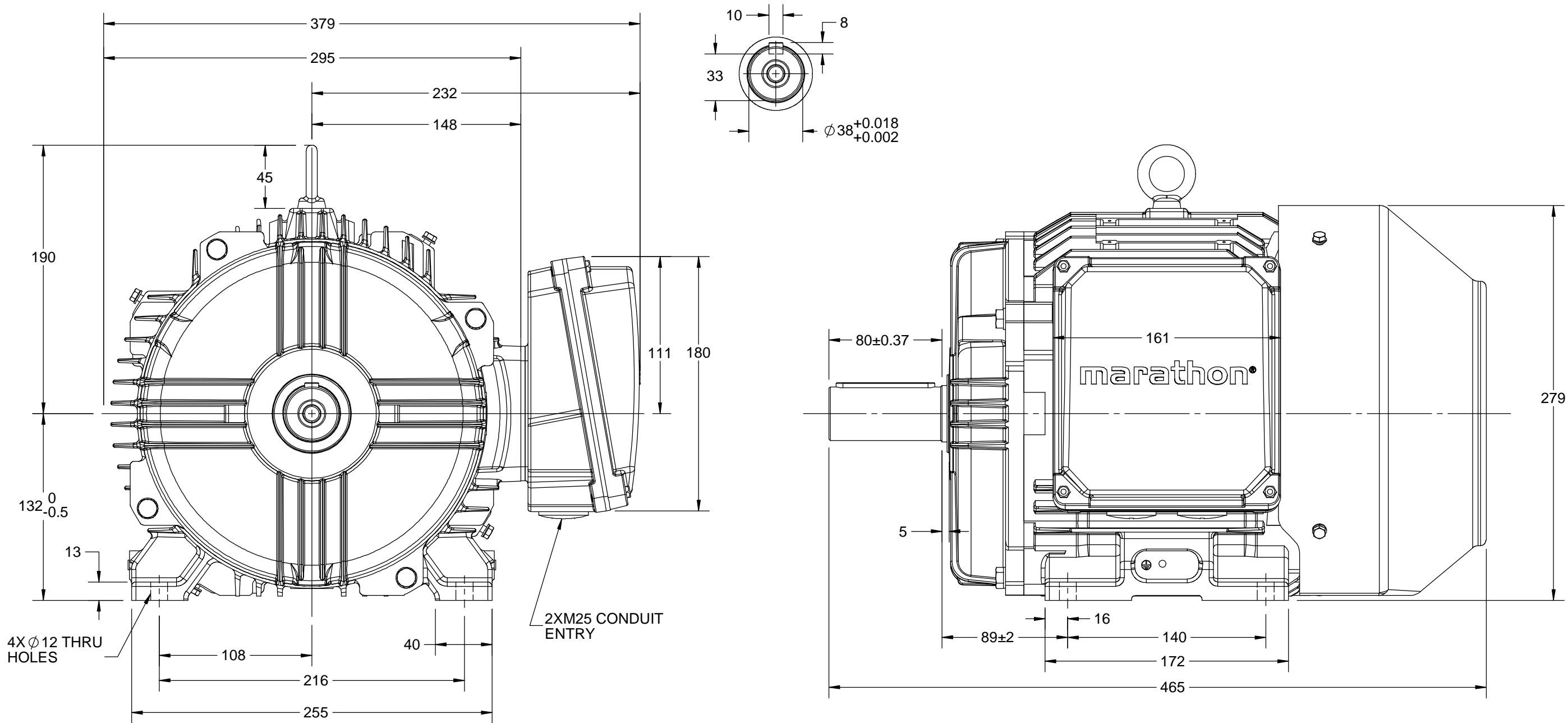
OUTLINE

B

B

A

A



DRAWING REVISION B	REVISION BY BISWA	DATE 16/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 16/07/2018
DRAWING UPDATED		
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<div></div>	DRAWN BY SN	<div>marathon™ Motors</div>		
	DATE 11/08/2016			
	APPROVED BY SBD	DESCRIPTION <div>OUTLINE</div> <div>132S FR- B3 MTG. TYPE: TCA/QCA-RHS TB</div>		
	DATE 11/08/2016			
	REFERENCE	MATERIAL		PROCESS/FINISH
	THIRD ANGLE PROJECTION	<div></div>	SIZE B	DRAWING NUMBER 0213200962

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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.		
	DESCRIPTION CONN DIAGRAM-NAMEPLATE		
	MATERIAL		PROCESS/FINISH
	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1

Model No. TCA0033A3113GACD01

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I_A/I_N	T_A/T_N	T_K/T_N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
415	Y	50	3	4.0	6.8	973	29.35	IE3	-	85.6	85.6	84	0.72	0.63	0.48	5.4	2.0	2.5

Motor type	TCA
Enclosure	TEFC
Frame Material	Cast Iron
Frame size	132S
Duty	S1
Voltage variation *	± 10%
Frequency variation *	± 5%
Combined variation *	10%
Design	N
Service factor	1.0
Insulation class	F
Ambient temperature	-20 to +50 °C
Temperature rise (by resistance)	70 [Class B] K
Altitude above sea level	1000 meter
Hazardous area classification	NA
Zone classification	NA
Gas group	NA
Temperature class	NA
Rotor type	Aluminum Die cast
Bearing type	Anti-friction ball bearing
DE / NDE bearing	6308-2Z / 6208-2Z
Lubrication method	Greased for life
Type of grease	NA

Degree of protection	IP 55
Mounting type	IM B3
Cooling method	IC 411
Motor weight - approx.	67 kg
Gross weight - approx.	70 kg
Motor inertia	0.0390 kgm ²
Load inertia	Customer to Provide
Vibration level	1.6 mm/s
Noise level (1meter distance from motor)	59 dB(A)
No. of starts hot/cold/Equally spread	2/3/4
Starting method	DOL
Type of coupling	Direct
LR withstand time (hot/cold)	15/30 s
Direction of rotation	Bi-directional
Standard rotation	Clockwise form DE
Paint shade	RAL 5014
Accessories	
Accessory - 1	-
Accessory - 2	-
Accessory - 3	-
Terminal box position	RHS
Maximum cable size/conduit size	1R x 3C x 16mm ² /2 x M25 x 1.5
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.

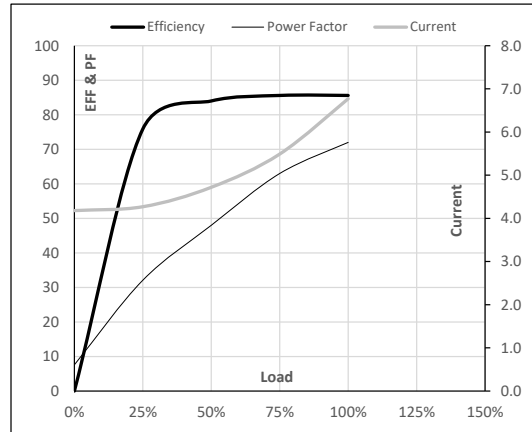
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

Model No. TCA0033A3113GACD01

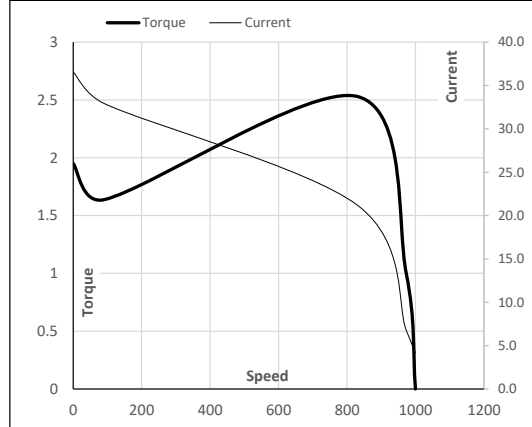
Enclosure	U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Y	50	3	4.0	6.8	973	2.99	29.35	IE3	50	S1	1000	0.039	67

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	4.2	4.3	4.7	5.5	6.8	
Torque	Nm	0.0	7.2	14.5	21.8	29.4	
Speed	r/min	1000	993	987	980	973	
Efficiency	%	0.0	75.9	84.0	85.6	85.6	
Power Factor	%	7.6	32.1	48.0	63.0	72.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	830	973	1000
Current	A	36.6	32.9	21.2	6.8	4.2
Torque	pu	2.0	1.6	2.5	1	0

Starting Characteristics Chart

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

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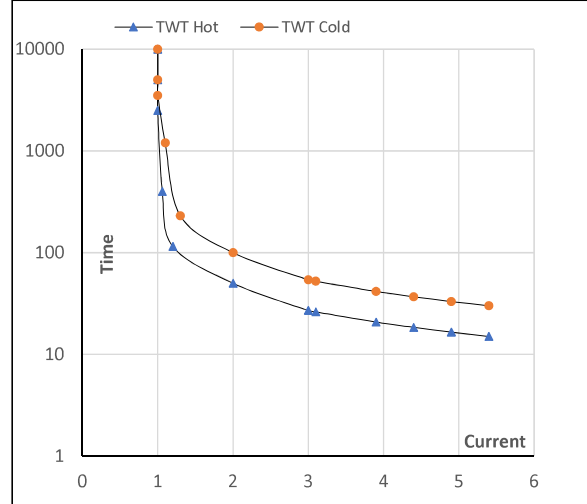
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Y	50	3	4.0	6.8	973	2.99	29.35	IE3	50	S1	1000	0.0390	67

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s 10000	50	27	20	18	16	15	
TWT Cold	s 10000	100	54	41	36	33	30	
Current	pu	1	2	3	4	4.5	5	5.4

Thermal Characteristics Chart



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

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