

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA2002AF133GAC010

Catalog No: TCA2002AF133GAC010

TerraMAX® Cast Iron Motor, 270 HP, 3 Ph, 50 Hz, 380 V, 1500 RPM, 315L Frame, TEFC



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RegalRexnord

Nameplate Specifications

Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	380 V
Current	355.7 A	Speed	1488 rpm
Service Factor	1	Phase	3
Efficiency	96 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6319	Opp Drive End Bearing Size	6319
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	4	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	1317 mm	Frame Length	840 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0231501391	Connection Drawing	8442000085

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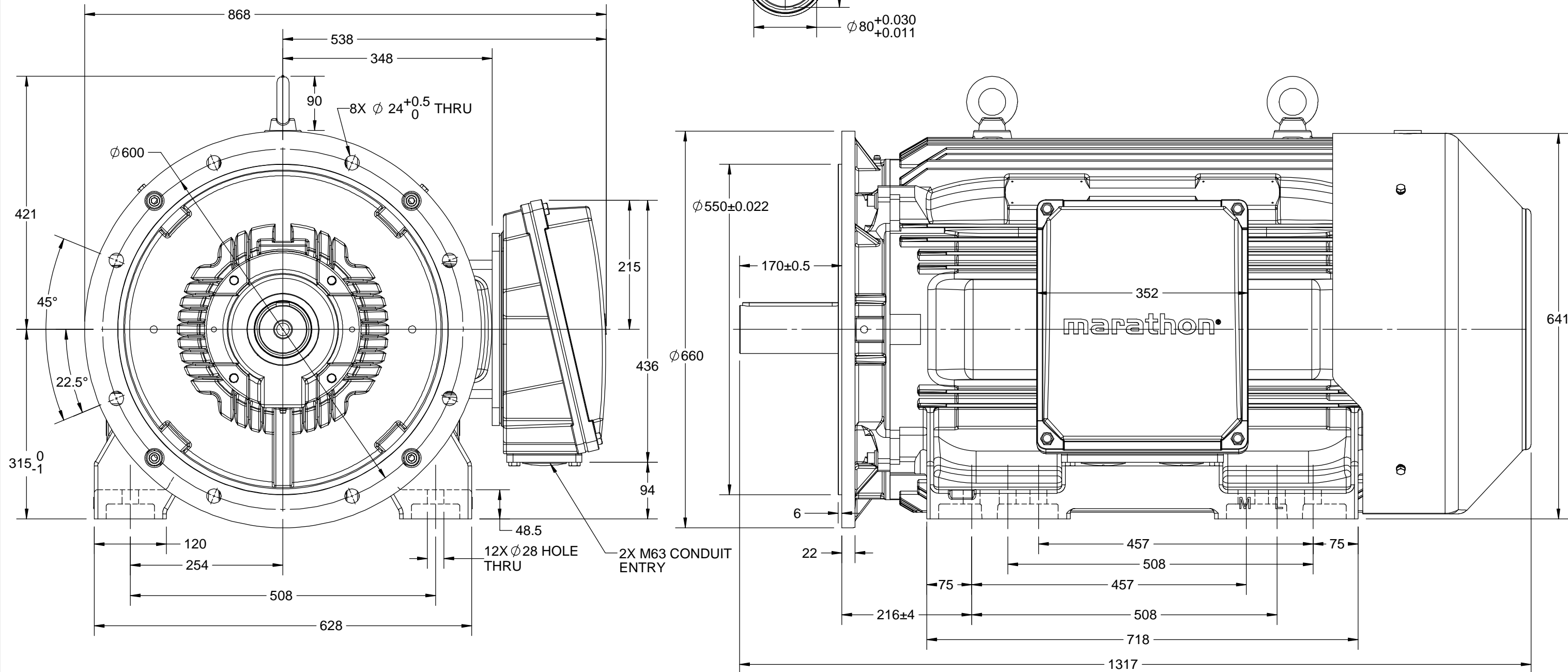
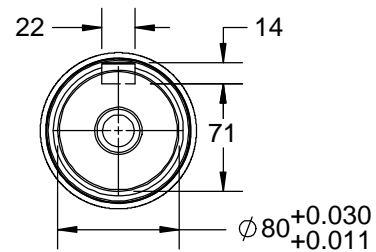
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DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY GSR	marathon™ Motors		
DATE 16/11/2017			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 16/11/2017	315L 4~8P B35 MTG. TCA/QCA-RHS TB		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231501391	SHEET 1 OF 1

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REVISION BY

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DATE

13/01/2017

ECO
ECO-0116390

APPROVED BY
SBD

DATE

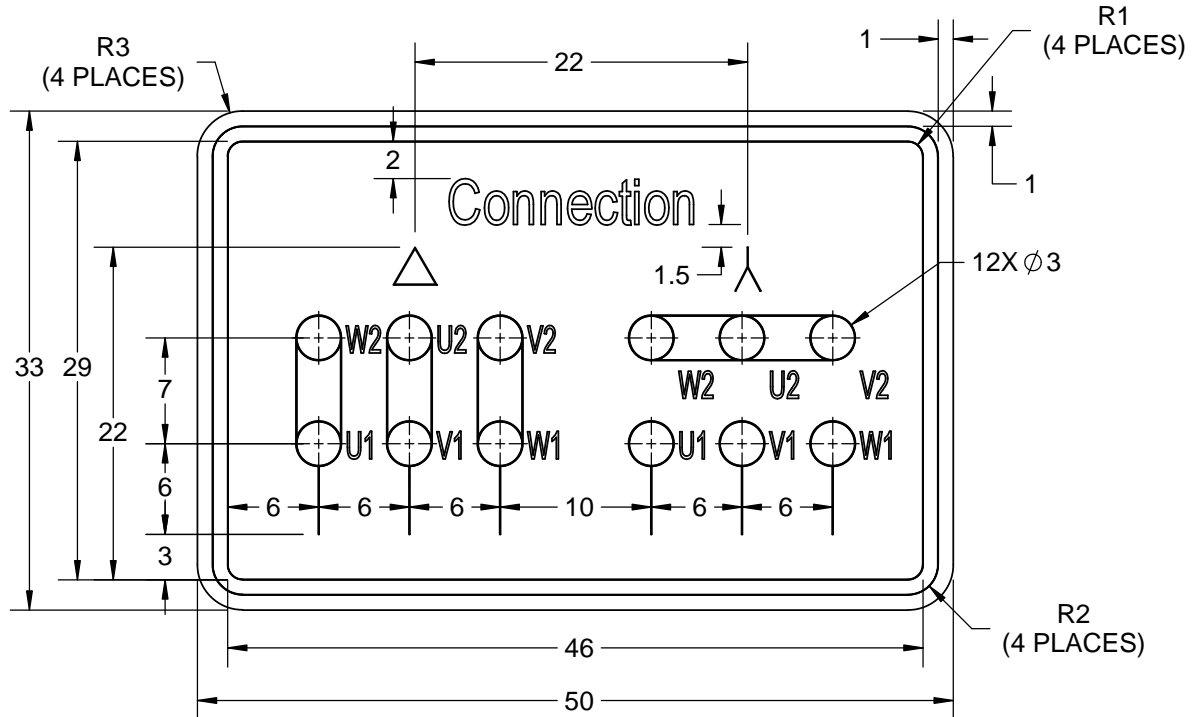
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ECO DESCRIPTION

NEW DRAWING RELEASE

GEOMETRIC TOLERANCE

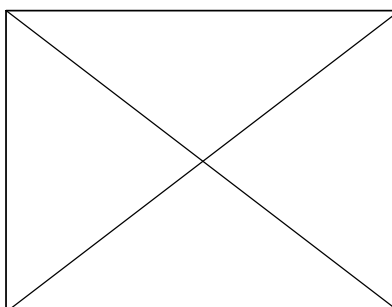
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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



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SN
DATE
16/12/2016
APPROVED BY
SBD
DATE
16/12/2016
REFERENCE
THIRD ANGLE
PROJECTION

REGALTM Regal Beloit America, Inc.
DESCRIPTION
CONN DIAGRAM-NAMEPLATE
MATERIAL
PROCESS/FINISH
SIZE
A
DRAWING NUMBER
8442000085
SHEET
1 OF 1

Model No. TCA2002AF133GAC010

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 _A /I _N [pu]	T _A /T _N [pu]	T _K /T _N [pu]
380	Δ	50	200	270	355.65	1488	1292.2	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.9	2.2	3

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1269 kg
Duty	S1	Gross weight - approx.	1314 kg
Voltage variation *	± 10%	Motor inertia	5.0623 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.8 mm/s
Design	N	Noise level (1meter distance from motor)	69 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	6319 C3 / 6319 C3	Terminal box position	RHS
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 240mm ² /2 x M63 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.

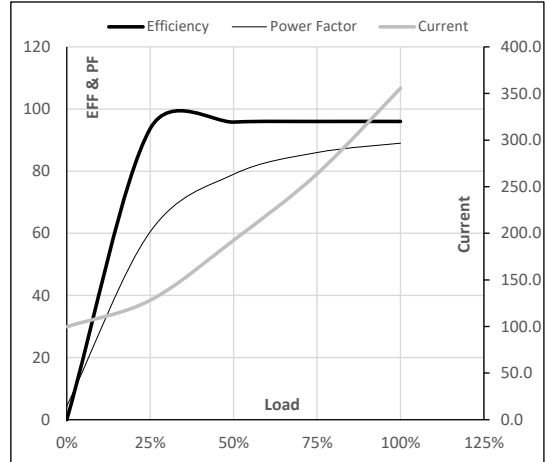
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

Model No. TCA2002AF133GAC010

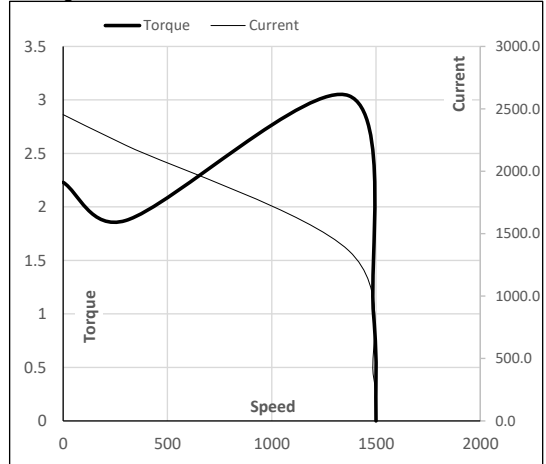
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	200	270	355.7	1488	131.77	1292.23	IE3	40	S1	1000	5.0623	1269

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	99.7	128.2	192.6	263.7	355.7	
Torque	Nm	0.0	321.1	643.4	967.1	1292.2	
Speed	r/min	1500	1497	1494	1491	1488	
Efficiency	%	0.0	93.7	95.8	96.0	96.0	
Power Factor	%	4.4	60.5	79.0	86.0	89.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1369	1488	1500
Current	A	2454.0	2208.6	1364.7	355.7	99.7
Torque	pu	2.2	1.9	3.0	1	0

Starting Characteristics Chart

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

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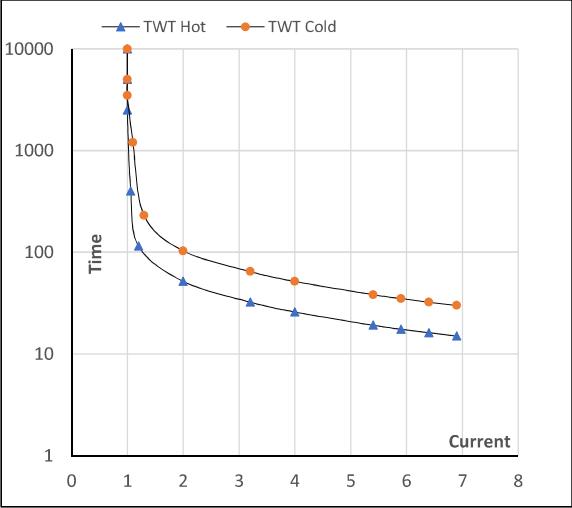
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	200	270.0	355.7	1488	131.77	1292.23	IE3	40	S1	1000	5.0623	1269

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	52	36	26	22	18	15
TWT Cold	s 10000	104	70	52	41	36	30
Current	pu 1	2	3	4	5	5.5	6.9

Thermal Characteristics Chart



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

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