

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCT0032A1113GAA001

Catalog No: TCT0032A1113GAA001

IE3, 3kW, DUST IGNITION PROOF MOTORS, 3 phase, 4 Pole, 400V, 1458RPM, 50Hz, 87.7%, 100L Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	4 Hp	Output KW	3.0 kW
Frequency	50 Hz	Voltage	400 V
Current	5.9 A	Speed	1458 rpm
Service Factor	1	Phase	3
Efficiency	87.7 %	Power Factor	0.84
Duty	S1	Insulation Class	F
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	No	CSA	No
CE	Yes	IP Code	66
Number of Speeds	1	Efficiency Class	IE3

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	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	398 mm	Frame Length	200 mm
Shaft Diameter	28 mm	Shaft Extension	60 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0210000505	Connection Drawing	8442000085

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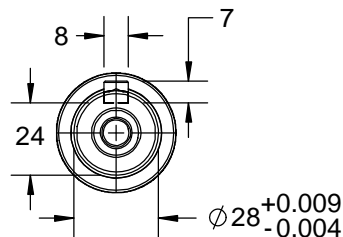
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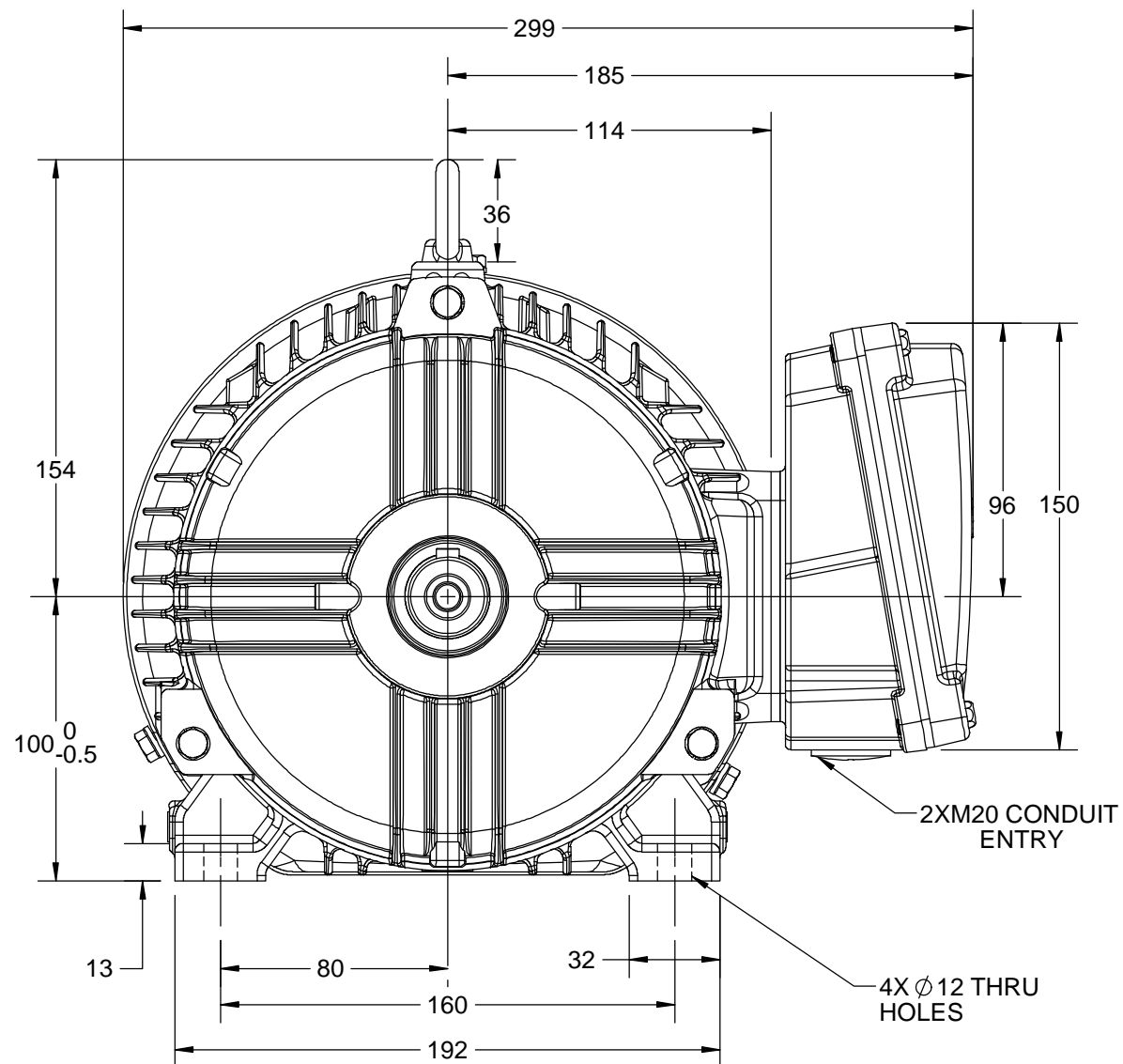
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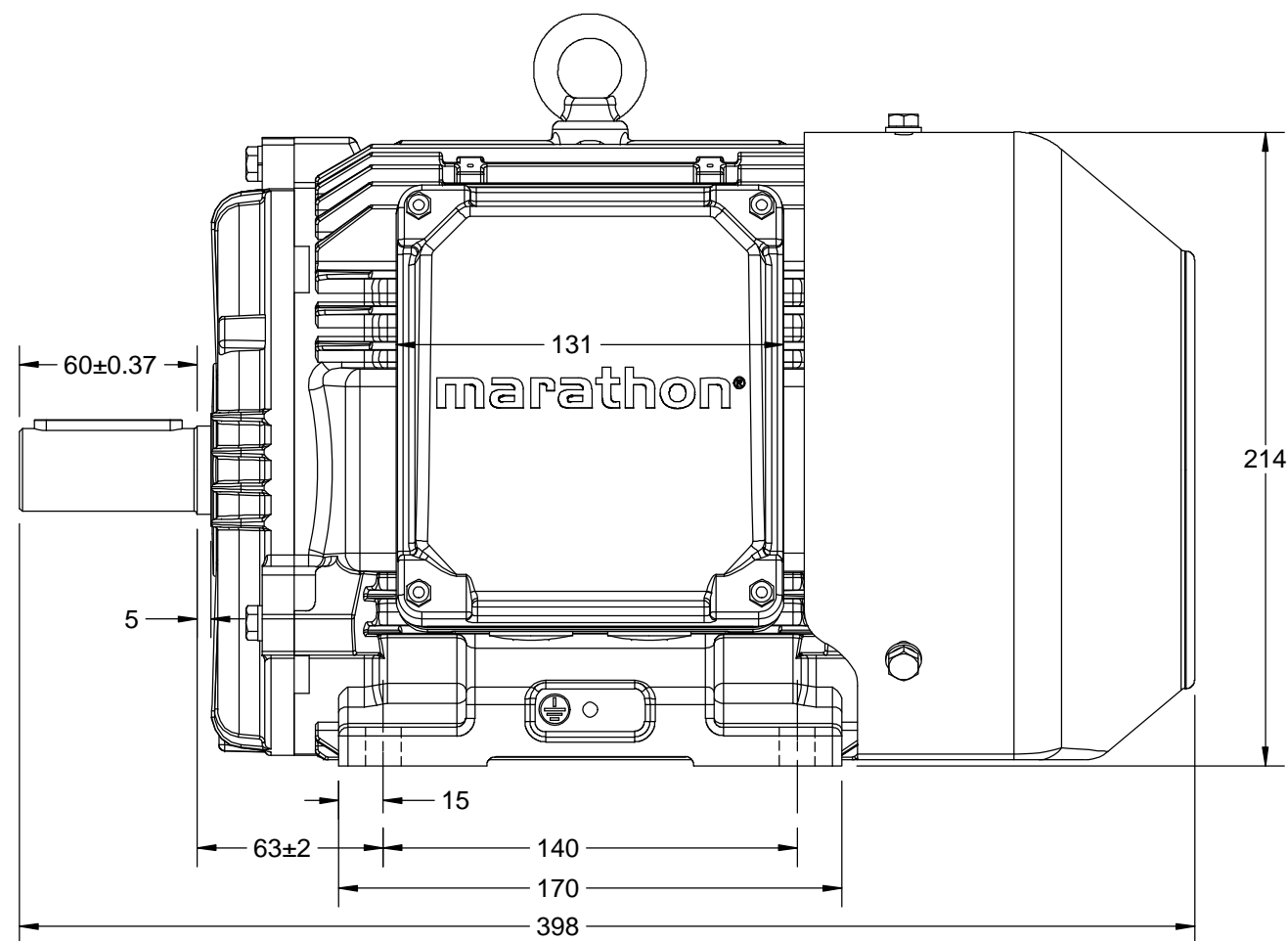
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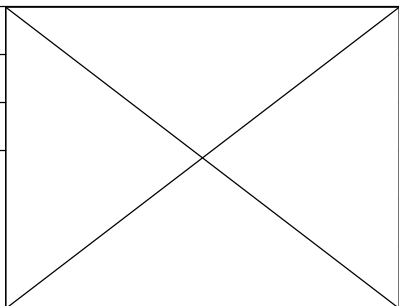


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DRAWING REVISION A	REVISION BY BISWA	DATE 12/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 12/07/2018
ECO DESCRIPTION <b>NEW DRAWING RELEASE</b> <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>		



DRAWN BY BISWA	<b>marathon™</b> Motors		
DATE 12/07/2018			
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b>		
DATE 12/07/2018	100L FR.- B3 MTG. MOTOR TYPE: TCA/QCA-RHS TB		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE <b>B</b>	DRAWING NUMBER <b>0210000505</b>	SHEET 1 OF 1

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3

2

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DRAWING REVISION  
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REVISION BY  
SN

DATE  
13/01/2017

ECO  
ECO-0116390

APPROVED BY  
SBD

DATE  
13/01/2017

ECO DESCRIPTION

NEW DRAWING RELEASE

GEOMETRIC TOLERANCE

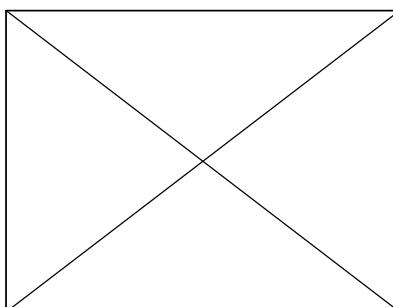
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



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

REGAL<sup>TM</sup> Regal Beloit America, Inc.  
DESCRIPTION  
CONN DIAGRAM-NAMEPLATE  
MATERIAL  
PROCESS/FINISH  
SIZE  
A  
DRAWING NUMBER  
8442000085  
SHEET  
1 OF 1

**Model No.** TCT0032A1113GAA001

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	Y	50	3	4	5.9	1458	19.54	IE3	-	87.7	87.7	86.2	0.84	0.78	0.65	7.7	2.6	3.1

Motor type	TCT	Degree of protection	IP 66
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	100L	Motor weight - approx.	44 kg
Duty	S1	Gross weight - approx.	47 kg
Voltage variation *	± 10%	Motor inertia	0.0145 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)	55 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)	10/20 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	Ex tb	Standard rotation	Clockwise form DE
Zone classification	Zone 21	Paint shade	RAL 5014
Gas group	Group III	Accessories	
Temperature class	T135	Accessory - 1	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6206-2Z / 6206-2Z	Terminal box position	RHS
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm <sup>2</sup> /2 x M20 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**

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-31

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

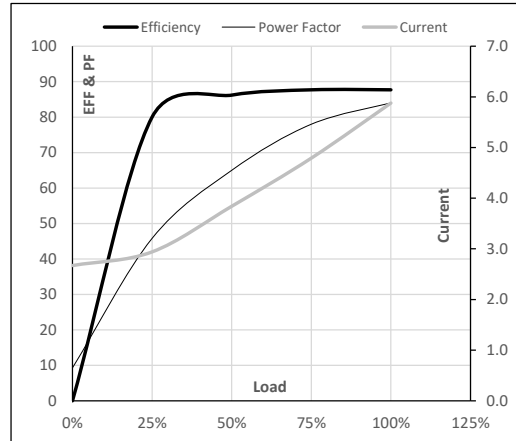
**Model No.** TCT0032A1113GAA001

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	Y	50	3	4.0	5.9	1458	1.99	19.54	IE3	40	S1	1000	0.0145	44

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	2.7	2.9	3.8	4.8	5.9	
Torque	Nm	0.0	4.8	9.6	14.5	19.5	
Speed	r/min	1500	1490	1480	1470	1458	
Efficiency	%	0.0	80.0	86.2	87.7	87.7	
Power Factor	%	9.3	45.8	65.0	78.0	84.0	

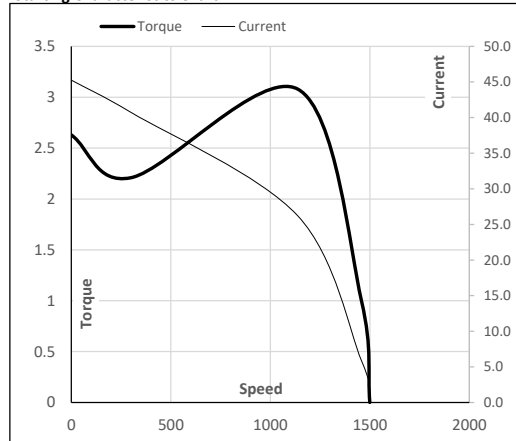
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1138	1458	1500
Current	A	45.3	40.7	26.2	5.9	2.7
Torque	pu	2.6	2.2	3.1	1	0

**Starting Characteristics Chart**



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

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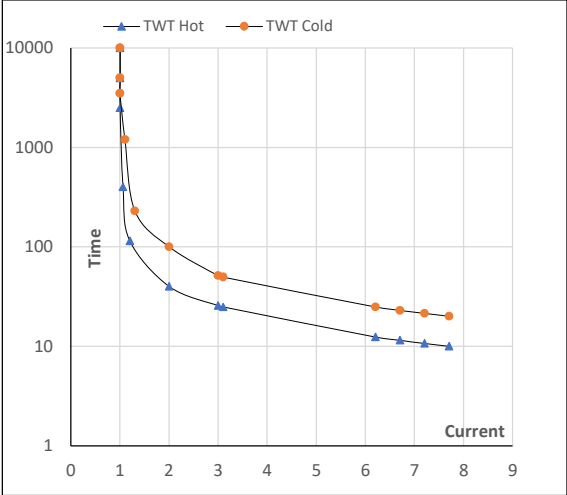
Model No.    TCT0032A1113GAA001

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	Y	50	3	4.0	5.9	1458	1.99	19.54	IE3	40	S1	1000	0.0145	44

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	40	26	20	17	13	10
TWT Cold	s	10000	100	51	45	35	26	20
Current	pu	1	2	3	4	5	6	7.7

Thermal Characteristics Chart



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

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