

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCN0044A1141GAC010

Catalog No: TCN0044A1141GAC010

TerraMAX® Cast Iron Motor, 5.50 HP, 3 Ph, 50 Hz, 400 V, 750 RPM, 160M Frame, TEFC



Regal and Marathon are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2022 Regal Rexnord Corporation, All Rights Reserved. MC017097E

RegalRexnord

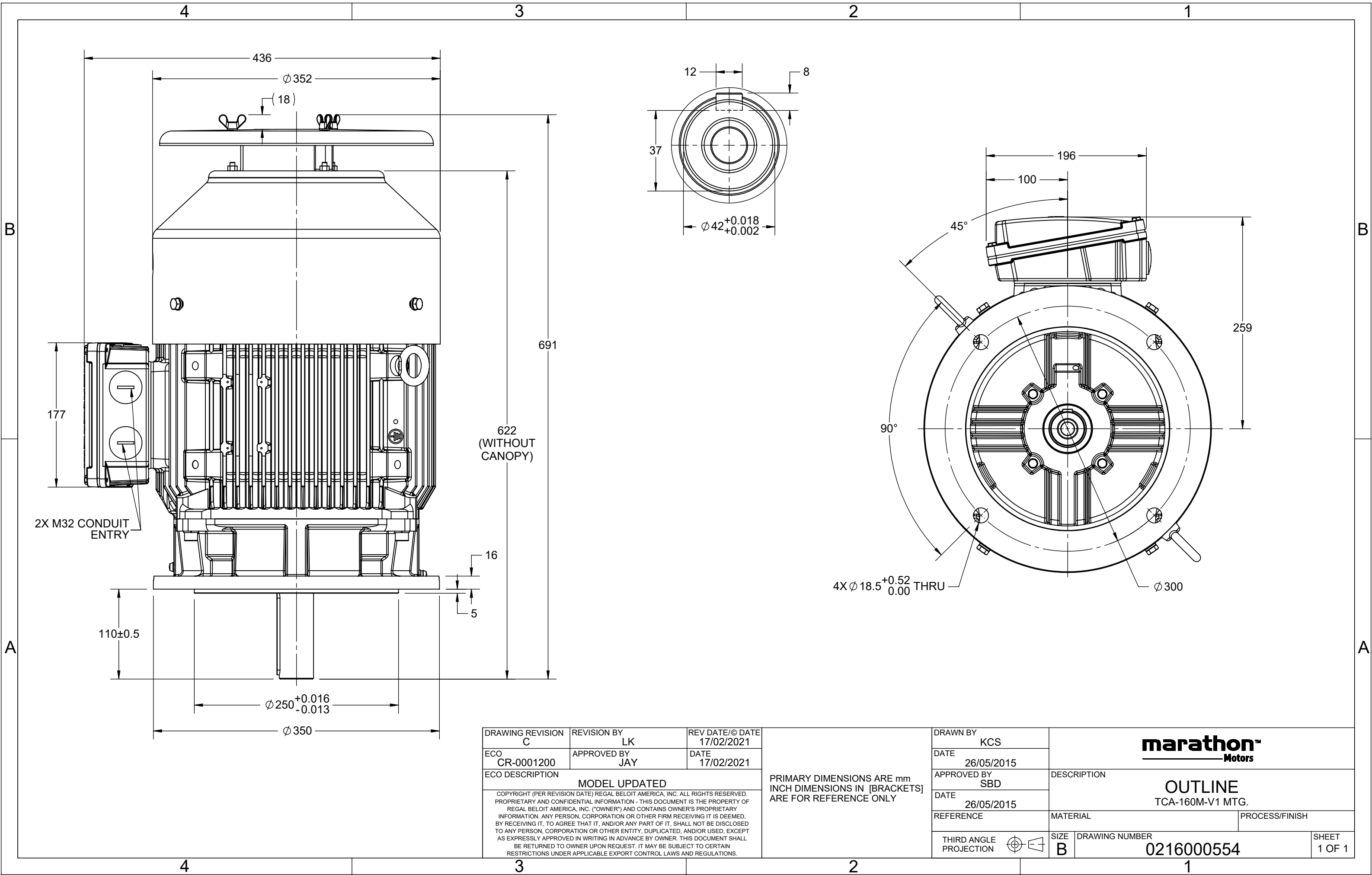
Nameplate Specifications

Output HP	5.50 Hp	Output KW	4.0 kW
Frequency	50 Hz	Voltage	400 V
Current	9.9 A	Speed	730 rpm
Service Factor	1	Phase	3
Efficiency	84.8 %	Power Factor	0.69
Duty	S1	Insulation Class	F
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
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	8	Rotation	Bi-Directional
Mounting	V1	Motor Orientation	Shaftdown
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	691 mm	Frame Length	254 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0216000554	Connection Drawing	8442000085

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:12/02/2022



DRAWING REVISION C	REVISION BY LK	REV DATE/© DATE 17/02/2021
ECO CR-0001200	APPROVED BY JAY	DATE 17/02/2021
ECO DESCRIPTION MODEL UPDATED		
COPYRIGHT (PER REVISION DATE) 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.		

PRIMARY DIMENSIONS ARE mm
INCH DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY KCS	marathon™ Motors		
DATE 26/05/2015			
APPROVED BY SBD	DESCRIPTION OUTLINE TCA-160M-V1 MTG.		
DATE 26/05/2015			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0216000554	SHEET 1 OF 1

COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. UNCONTROLLED COPY
 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.

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. TCN0044A1141GAC010

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]
400	Δ	50	4	5.5	9.9	730	53.77	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.3	1.8	2.4

Motor type	TCN	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160M	Motor weight - approx.	141 kg
Duty	S1	Gross weight - approx.	161 kg
Voltage variation *	± 10%	Motor inertia	0.1312 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)	59 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	Ex nA	Standard rotation	Clockwise form DE
Zone classification	Zone 2	Paint shade	RAL 5014
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
Rotor type	Aluminum die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6309-2Z / 6209-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 x 1.5
Type of grease	NA	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

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-15

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC:60034-30-1	-	-	GEMS 2019	-	IEC:60034-30-1

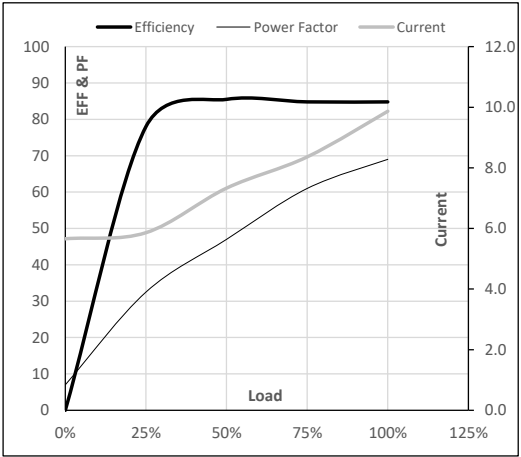
Model No. TCN0044A1141GAC010

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	400	Δ	50	4	5.5	9.9	730	5.48	53.77	IE3	40	S1	1000	0.1312	141

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	5.7	5.9	7.3	8.4	9.9	
Torque	Nm	0.0	13.2	26.5	40.0	53.8	
Speed	r/min	750	745	741	735	730	
Efficiency	%	0.0	78.0	85.5	84.8	84.8	
Power Factor	%	7.0	32.5	47.0	61.0	69.0	

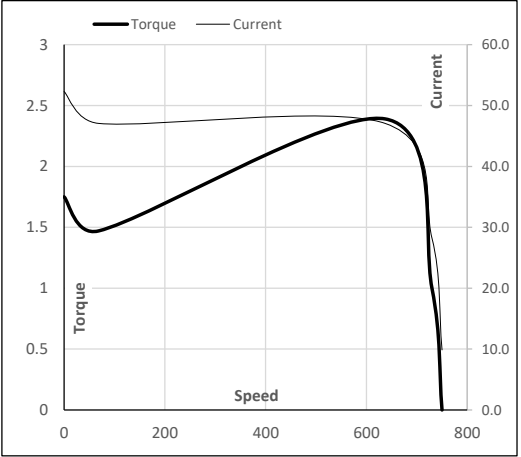
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	68	637	730	750
Current	A	52.3	47.1	28.2	9.9	5.7
Torque	pu	1.8	1.5	2.4	1	0

Starting Characteristics Chart



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

Issued By
Issued Date

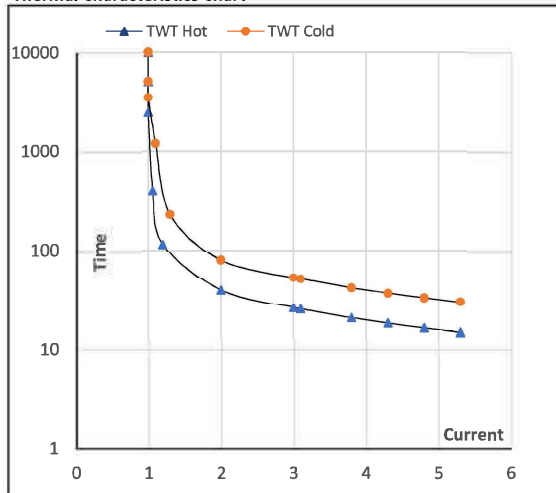
Model No. TCN0044A1141GAC010

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	400	Δ	50	4	5.5	9.9	730	5.48	53.77	IE3	40	S1	1000	0.1312	141

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s 10000	40	27	19	17	16	15	
TWT Cold	s 10000	80	53	39	35	32	30	
Current	pu	1	2	3	4	4.5	5	5.3

Thermal Characteristics Chart



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

Issued By
Issued Date