

# PRODUCT INFORMATION PACKET



Model No: TCA0451A3131GACD01

Catalog No: TCA0451A3131GACD01

TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 415 V, 225M Frame





### Nameplate Specifications

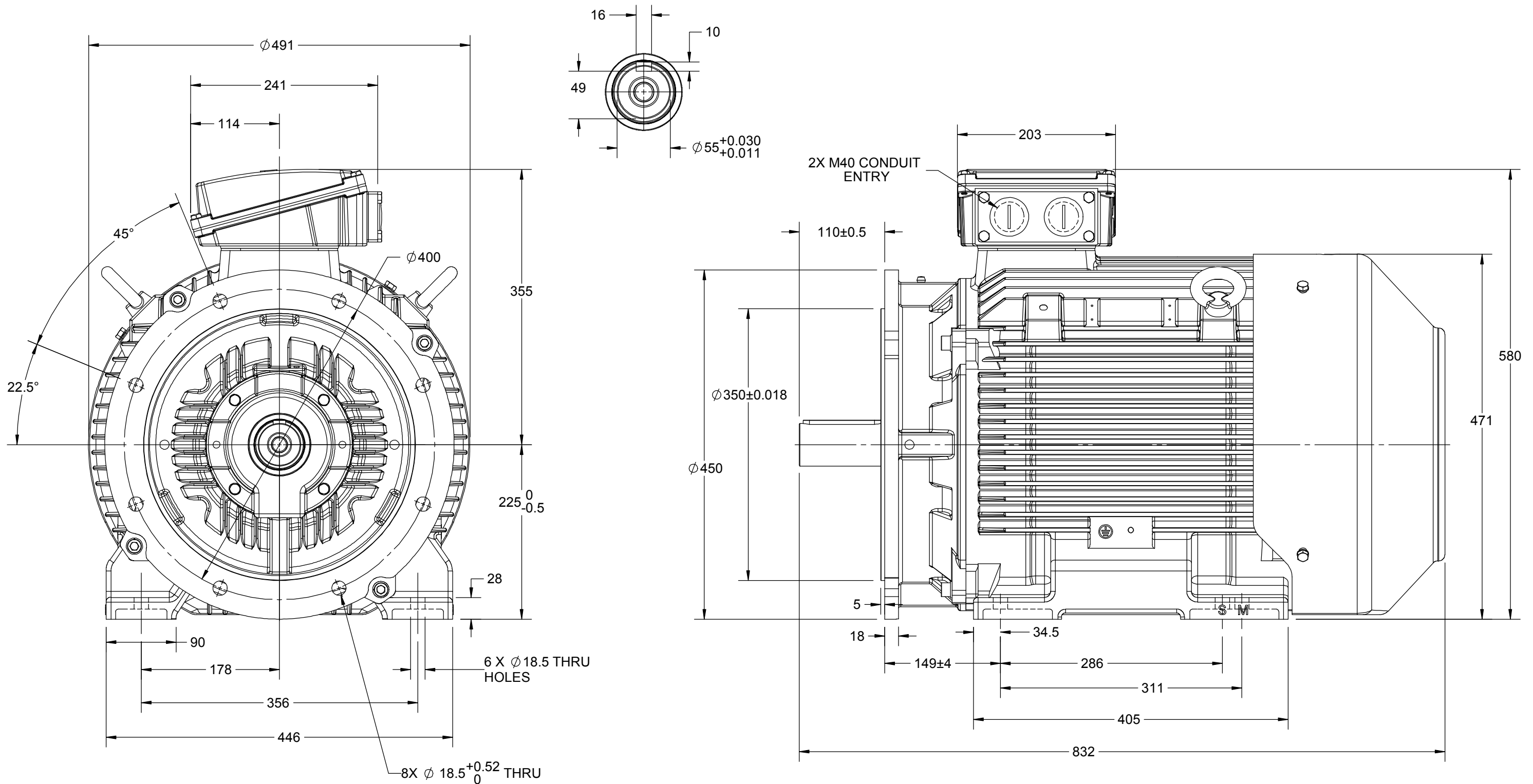
Phase	3	Output HP	60 Hp
Output KW	45.0 kW	Voltage	415 V
Speed	2975 r/min	Service Factor	1
Frame	225M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	94 %
Ambient Temperature	50 °C	Frequency	50 Hz
Current	75.7 A	Power Factor	0.88
Duty	S1	Insulation Class	F
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6213
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	2	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	832 mm	Frame Length	425 mm
Shaft Diameter	55 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Outline Drawing	0222500458	Connection Drawing	8442000085

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# OUTLINE



DRAWING REVISION B	REVISION BY NIV	DATE 23/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 23/04/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY JOY	<b>marathon™</b> Motors		
DATE 18/07/2014			
APPROVED BY SBD	DESCRIPTION OUTLINE		
DATE 18/07/2014	225FR-2P-B35 MTG MOTOR TYPE: TCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0222500458	SHEET 1 OF 1

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DRAWING REVISION <b>A</b>	REVISION BY <b>SN</b>	DATE <b>13/01/2017</b>
ECO <b>ECO-0116390</b>	APPROVED BY <b>SBD</b>	DATE <b>13/01/2017</b>
ECO DESCRIPTION <b>NEW DRAWING RELEASE</b>		

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

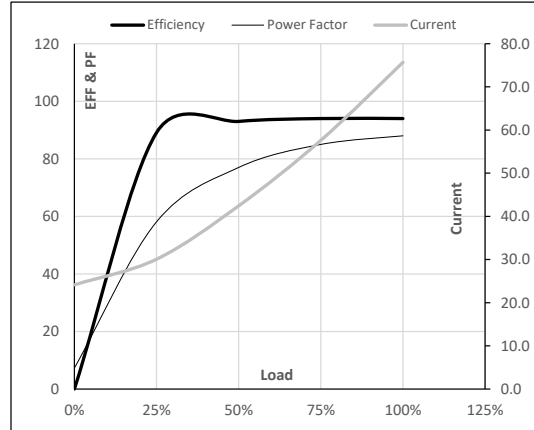
	DRAWN BY <b>SN</b>		<b>Regal Beloit America, Inc.</b>				
	DATE <b>16/12/2016</b>						
	APPROVED BY <b>SBD</b>		DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>				
	DATE <b>16/12/2016</b>						
	REFERENCE		MATERIAL		PROCESS/FINISH		
	THIRD ANGLE PROJECTION		SIZE <b>A</b>		DRAWING NUMBER <b>8442000085</b>		SHEET <b>1 OF 1</b>

**Model No.** TCA0451A3131GACD01

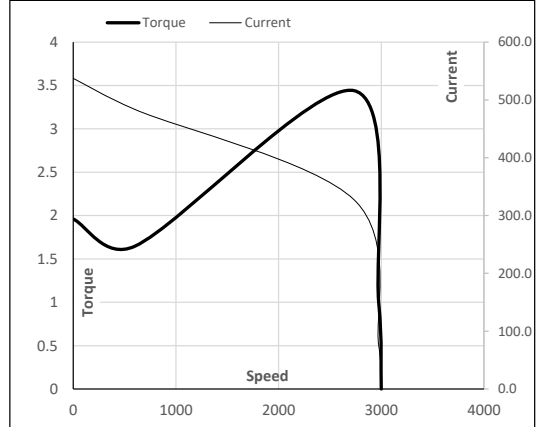
Enclosure	U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	Δ	50	45	60.0	75.7	2975	14.64	143.61	IE3	50	S1	1000	0.4264	414

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	24.1	30.1	42.4	57.6	75.7	
Torque	Nm	0.0	35.7	71.5	107.5	143.6	
Speed	r/min	3000	2994	2988	2982	2975	
Efficiency	%	0.0	89.1	93.0	94.0	94.0	
Power Factor	%	7.3	58.1	77.0	85.0	88.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2737	2975	3000
Current	A	537.4	483.6	327.1	75.7	24.1
Torque	pu	2.0	1.6	3.4	1	0

**Starting Characteristics Chart**

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

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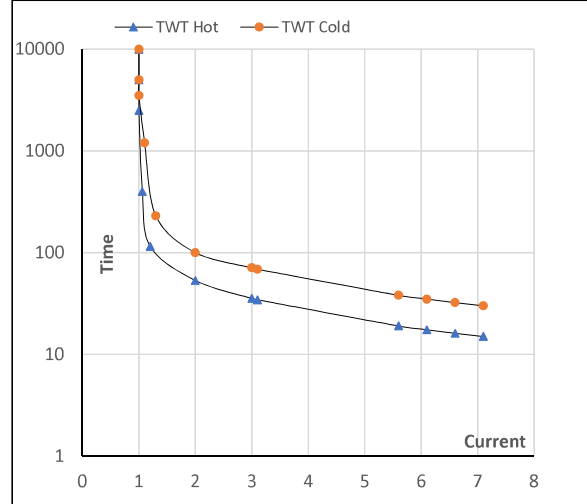
**Model No.** TCA0451A3131GACD01

Enclosure	U (V)	$\Delta$ / 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	415	$\Delta$	50	45	60	75.7	2975	14.63	143.61	IE3	50	S1	1000	0.4264	414

#### Motor Speed Torque Data

Load	FL	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	LR	
TWT Hot	s 10000	53	36	30	25	19	15	
TWT Cold	s 10000	100	71	60	45	38	30	
Current	pu	1	2	3	4	5	5.5	7.1

#### Thermal Characteristics Chart



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

Issued By

Issued Date



## EC Declaration of Conformity

The undersigned representing  
the manufacturer:

Regal Beloit America  
100 East Randolph St.  
Wausau, WI 54401

and the authorized representative  
established within the Community:

Marathon Electric UK  
6F Thistleton Road Ind. Estate  
Market Overton  
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : TCA0451A3131GACD01

(Model No. may contain prefix and/or suffix characters)

Catalog No : TCA0451A3131GACD01

Rework No : N/A

Directives :

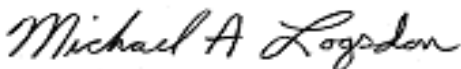
Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon  
Vice President, Technology

Authorized Representative in the Community:



Julian Clark  
Marketing Engineer

Created on 09/01/2022

**CE 22**