

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA0302A3131GAAD01

Catalog No: SCA0302A3131GAAD01

TerraMAX® Cast Iron Motor, 40 HP, 3 Ph, 50 Hz, 415 V, 1500 RPM, 200L Frame, TEFC



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**RegalRexnord**

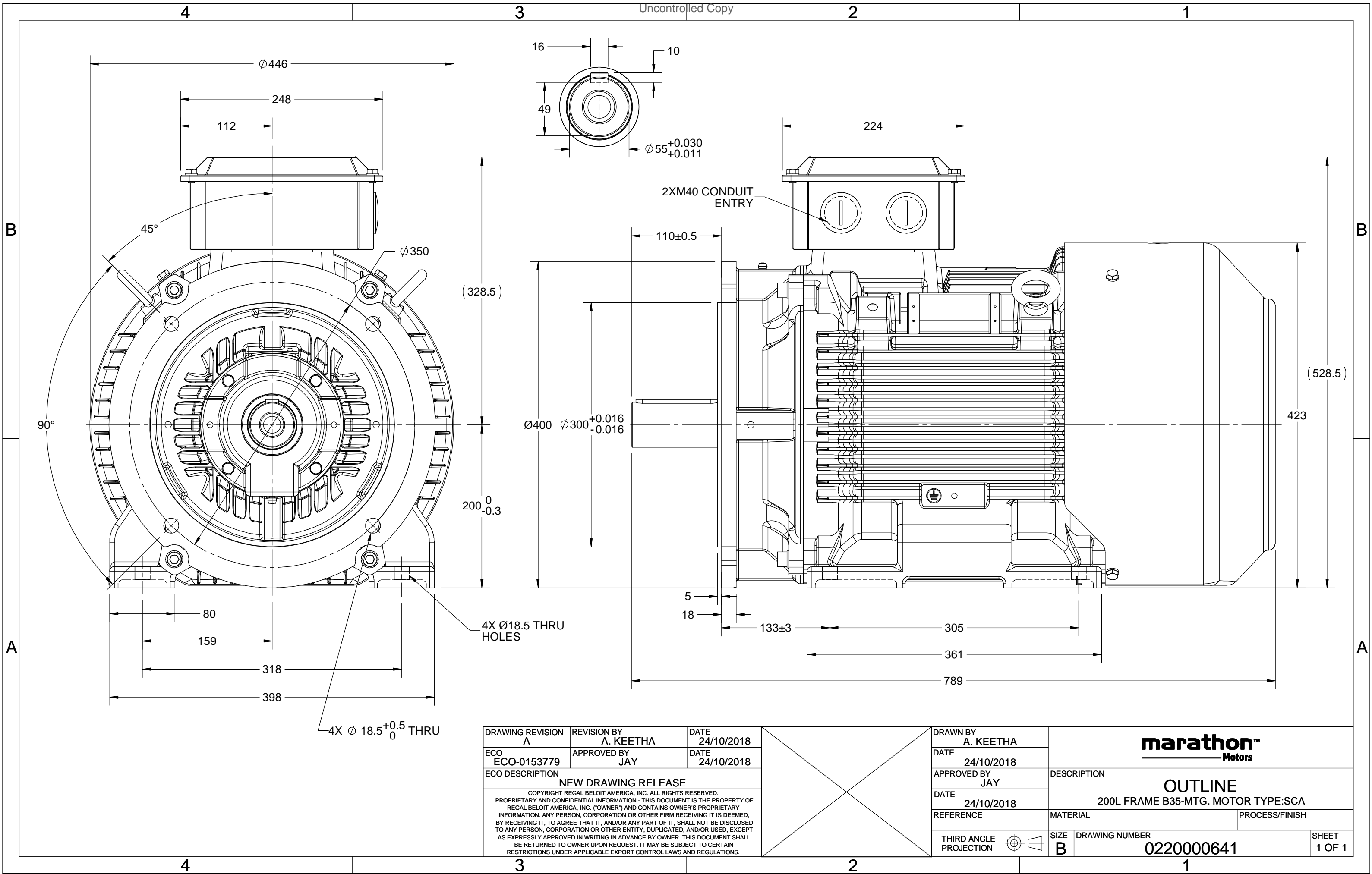
### Nameplate Specifications

Output HP	40 Hp	Output KW	30.0 kW
Frequency	50 Hz	Voltage	415 V
Current	53.5 A	Speed	1476 rpm
Service Factor	1	Phase	3
Efficiency	92.3 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	200L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6312	Opp Drive End Bearing Size	6212
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

### 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	789 mm	Frame Length	370 mm
Shaft Diameter	55 mm	Shaft Extension	110 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0220000641

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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>	Regal Beloit America, Inc.	
	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  
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**Model No.** SCA0302A3131GAAD01

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at ___ load				PF at ___ load			I <sub>A</sub> /I <sub>N</sub>	T <sub>A</sub> /T <sub>N</sub>	T <sub>K</sub> /T <sub>N</sub>
(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	Δ	50	30	40	53.5	1476	193.41	IE2	-	92.3	92.3	92.9	0.85	0.80	0.68	6.6	2.6	3.3

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	200L	Motor weight - approx.	302 kg
Duty	S1	Gross weight - approx.	332 kg
Voltage variation *	± 10%	Motor inertia	0.3013 kgm <sup>2</sup>
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)	75 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 +50 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [ 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	NA	Standard rotation	Clockwise form DE
Zone classification	NA	Paint shade	RAL 5014
Gas group	NA	Accessories	
Temperature class	NA	Accessory - 1	-
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6312 C3 / 6212 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm <sup>2</sup> /2 x M40 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	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

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	-	-	-

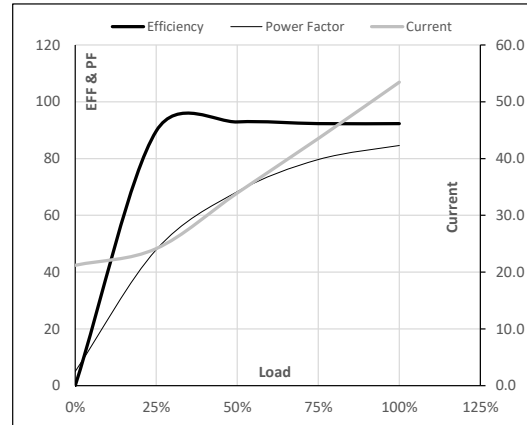
Model No. SCA0302A3131GAAD01

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	30	40.0	53.5	1476	19.72	193.41	IE2	50	S1	1000	0.3013	302.0

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	21.2	24.1	33.9	43.5	53.5	
Torque	Nm	0.0	47.7	95.7	144.1	193.4	
Speed	r/min	1500	1494	1488	1482	1476	
Efficiency	%	0.0	89.7	92.9	92.3	92.3	
Power Factor	%	5.0	47.9	68.3	79.7	84.6	

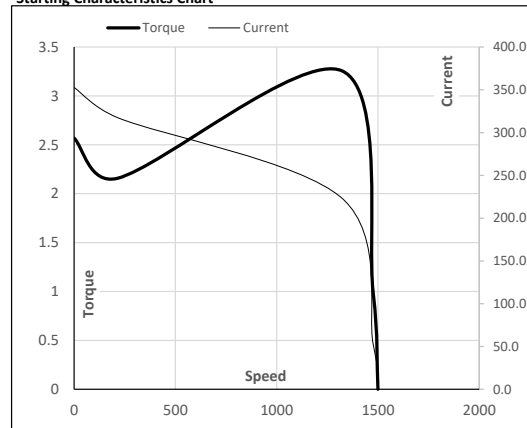
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1323	1476	1500
Current	A	352.8	317.5	223.2	53.5	21.2
Torque	pu	2.6	2.2	3.3	1	0

**Starting Characteristics Chart**



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

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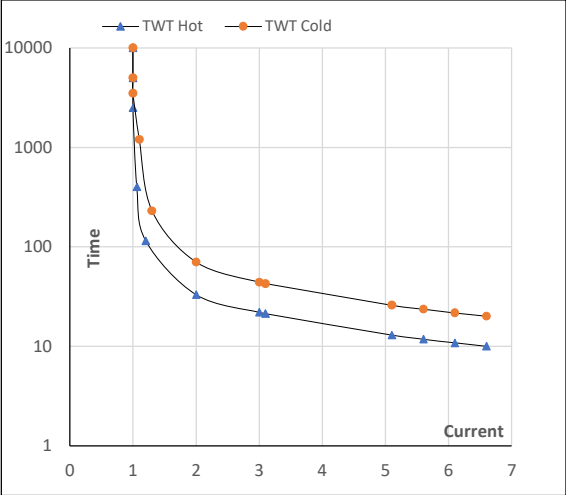
Model No. SCA0302A3131GAAD01

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	30	40	53.5	1476	19.72	193.41	IE2	50	S1	1000	0.3013	302

Motor Speed Torque Data

Load	FL	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	LR	
TWT Hot	s 10000	33	22	16	13	12	10	
TWT Cold	s 10000	70	44	35	26	24	20	
Current	pu	1	2	3	4	5	5.5	6.6

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 : SCA0302A3131GAAD01

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

Catalog No : SCA0302A3131GAAD01

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**