

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA0034A3171GAAD01

Catalog No: SCA0034A3171GAAD01

TerraMAX® Cast Iron Motor, 4 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 132M Frame, TEFC



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**RegalRexnord**

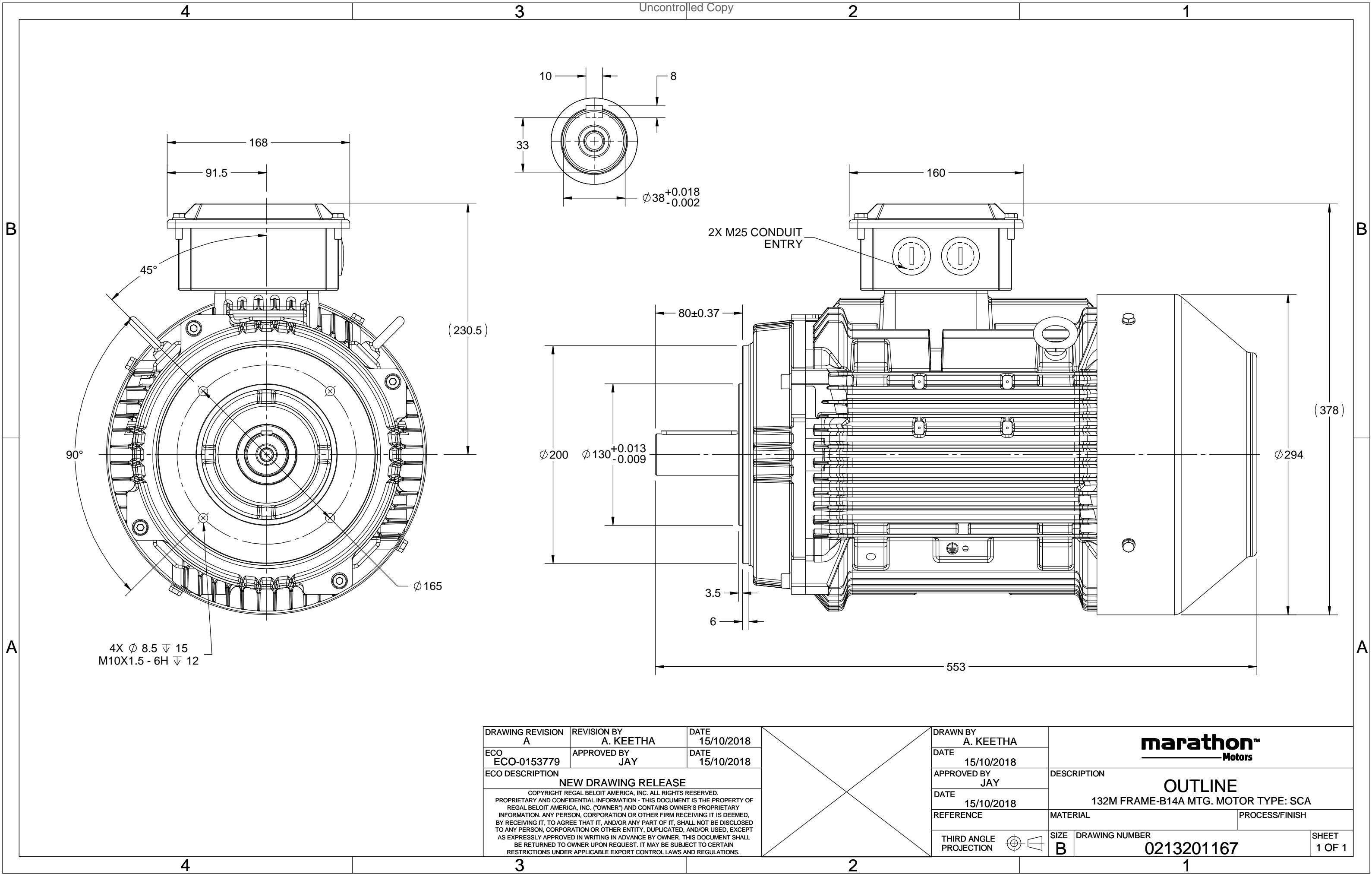
### Nameplate Specifications

Output HP	4 Hp	Output KW	3.0 kW
Frequency	50 Hz	Voltage	415 V
Current	7.7 A	Speed	707 rpm
Service Factor	1	Phase	3
Efficiency	80 %	Power Factor	0.6766
Duty	S1	Insulation Class	F
Frame	132M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6308	Opp Drive End Bearing Size	6208
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	8	Rotation	Bi-Directional
Mounting	B14A	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	553 mm	Frame Length	290 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0213201167

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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>	<b>DESCRIPTION</b> <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.** SCA0034A3171GAAD01

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]
415	Y	50	3	4.0	7.7	707	40.40	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	4.1	2.1	2.3

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14A
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132M	Motor weight - approx.	90 kg
Duty	S1	Gross weight - approx.	93 kg
Voltage variation *	± 10%	Motor inertia	0.0764 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)	58 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)	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	-
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6308-2Z / 6208-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 16mm <sup>2</sup> /2 x M25 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**

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.

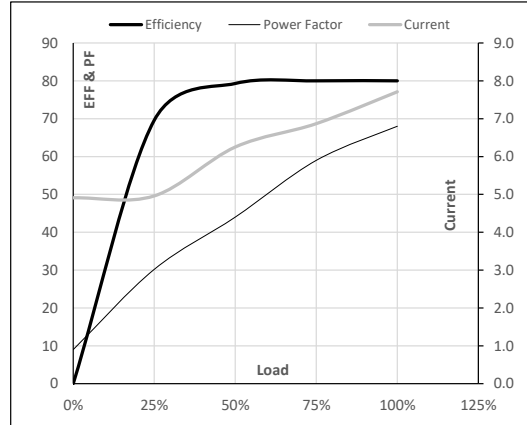
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-

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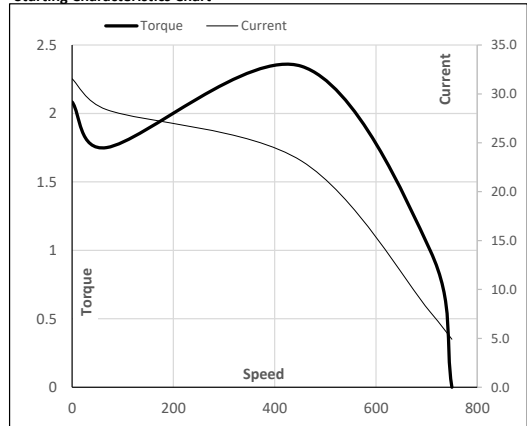
Enclosure	U (V)	$\Delta / Y$ Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	Y	50	3	4.0	7.7	707	4.12	40.40	IE2	50	S1	1000	0.0764	90.3

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	4.9	5.0	6.3	6.9	7.7	
Torque	Nm	0.0	9.7	19.6	29.8	40.4	
Speed	r/min	750	740	731	720	707	
Efficiency	%	0.0	69.6	79.3	80.0	80.0	
Power Factor	%	9.0	30.2	44.0	59.0	68.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	68	453	707	750
Current	A	31.5	28.4	23.1	7.7	4.9
Torque	pu	2.1	1.8	2.3	1	0

**Starting Characteristics Chart**

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

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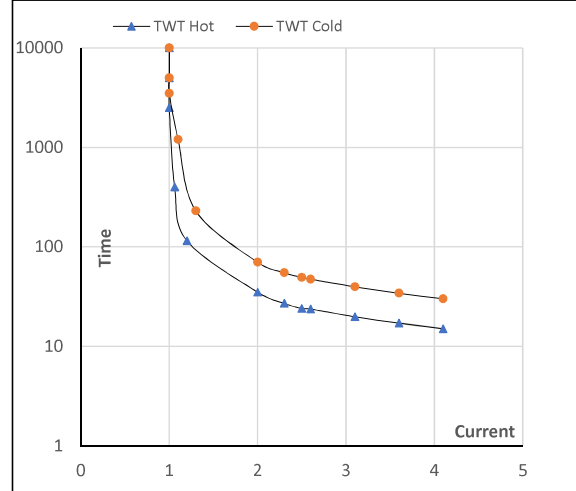
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Enclosure	U (V)	$\Delta / Y$ Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	Y	50	3	4.0	7.7	707	4.12	40.40	IE2	50	S1	1000	0.0764	90

**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	35	24	20	18	16	15	
TWT Cold	s 10000	70	49	40	35	32	30	
Current	pu	1	2	2.5	3	3.5	4	4.1

**Thermal Characteristics Chart**

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

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