

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA1P12A3171GAAD01

Catalog No: SCA1P12A3171GAAD01

TerraMAX® Cast Iron Motor, 1.50 HP, 3 Ph, 50 Hz, 415 V, 1500 RPM, 90S Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	1.50 Hp	Output KW	1.1 kW
Frequency	50 Hz	Voltage	415 V
Current	2.5 A	Speed	1443 rpm
Service Factor	1	Phase	3
Efficiency	81.4 %	Power Factor	0.76
Duty	S1	Insulation Class	F
Frame	90S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6205	Opp Drive End Bearing Size	6205
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	B14A	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	307 mm	Frame Length	128 mm
Shaft Diameter	24 mm	Shaft Extension	50 mm
Assembly/Box Mounting	TOP		
Outline Drawing	0209000872	Connection Drawing	8442000085

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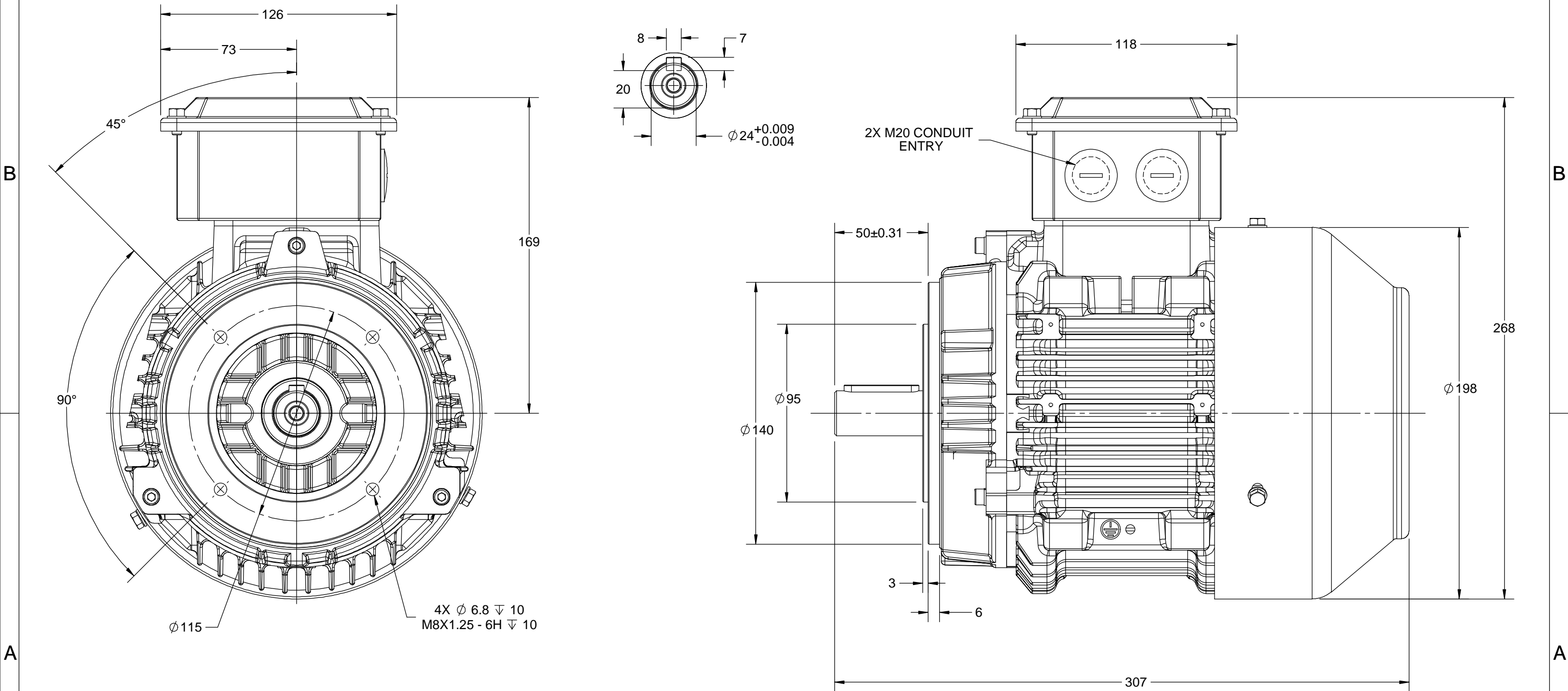
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OUTLINE



B

B

A

A

DRAWING REVISION A	REVISION BY LK	DATE 25/06/2018		DRAWN BY LK	<div>marathon™ Motors</div>			
ECO ECO-0147803	APPROVED BY JAY	DATE 25/06/2018		DATE 25/06/2018	<div>DESCRIPTION</div> <div>OUTLINE</div> <div>90S FR.- B14A MTG. MOTOR TYPE: SCA</div>			
ECO DESCRIPTION NEW DRAWING RELEASE				APPROVED BY JAY				
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				REFERENCE	MATERIAL		PROCESS/FINISH	
				THIRD ANGLE PROJECTION		SIZE B	DRAWING NUMBER 0209000872	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.** SCA1P12A3171GAAD01

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	1.1	1.5	2.5	1443	7.40	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.9	2.9	2.8

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14A
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	90S	Motor weight - approx.	25 kg
Duty	S1	Gross weight - approx.	26 kg
Voltage variation *	± 10%	Motor inertia	0.0034 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)	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	6205-2Z / 6205-2Z	Terminal box position	TOP
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**

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	-	-	-

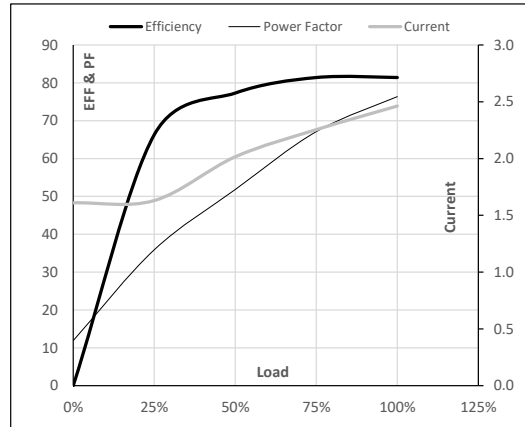
**Model No.** SCA1P12A3171GAAD01

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	Y	50	1.1	1.5	2.5	1443	0.75	7.40	IE2	50	S1	1000	0.0034	25

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.6	1.6	2.0	2.3	2.5	
Torque	Nm	0.0	1.8	3.6	5.5	7.4	
Speed	r/min	1500	1486	1473	1459	1443	
Efficiency	%	0.0	66.3	77.3	81.4	81.4	
Power Factor	%	11.9	35.9	51.8	67.1	76.4	

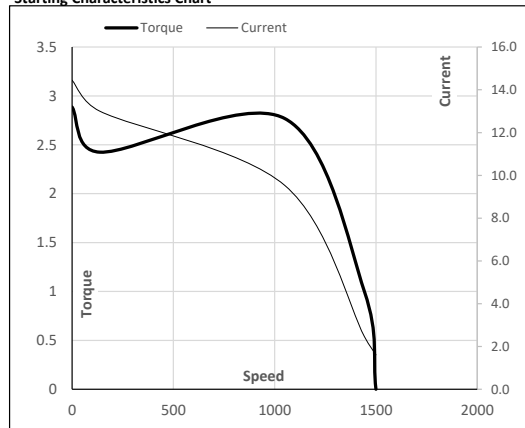
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	136	1050	1443	1500
Current	A	14.4	13.0	9.5	2.5	1.6
Torque	pu	2.9	2.4	2.8	1	0

**Starting Characteristics Chart**



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

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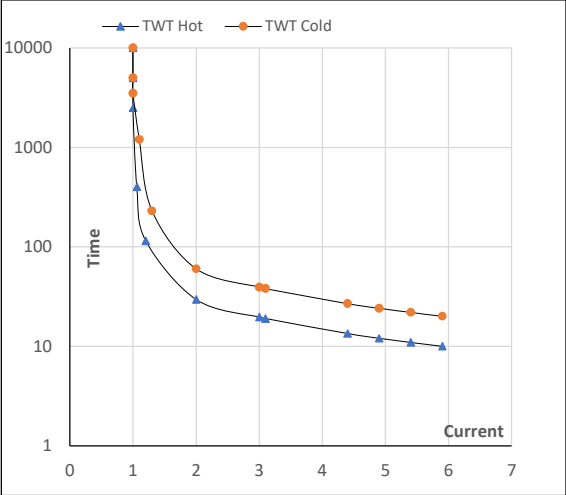
Model No. SCA1P12A3171GAAD01

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	Y	50	1.1	1.5	2.5	1443	0.75	7.40	IE2	50	S1	1000	0.0034	25

Motor Speed Torque Data

Load	FL	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	LR	
TWT Hot	s 10000	30	20	15	12	11	10	
TWT Cold	s 10000	60	39	30	24	22	20	
Current	pu	1	2	3	4	5	5.5	5.9

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 : SCA1P12A3171GAAD01

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

Catalog No : SCA1P12A3171GAAD01

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**