

PRODUCT INFORMATION PACKET

Model No: SCA3P72A3171GAAD01

Catalog No: SCA3P72A3171GAAD01

TerraMAX® Cast Iron Motor, 5 HP, 3 Ph, 50 Hz, 415 V, 1500 RPM, 112M Frame, TEFC



Nameplate Specifications

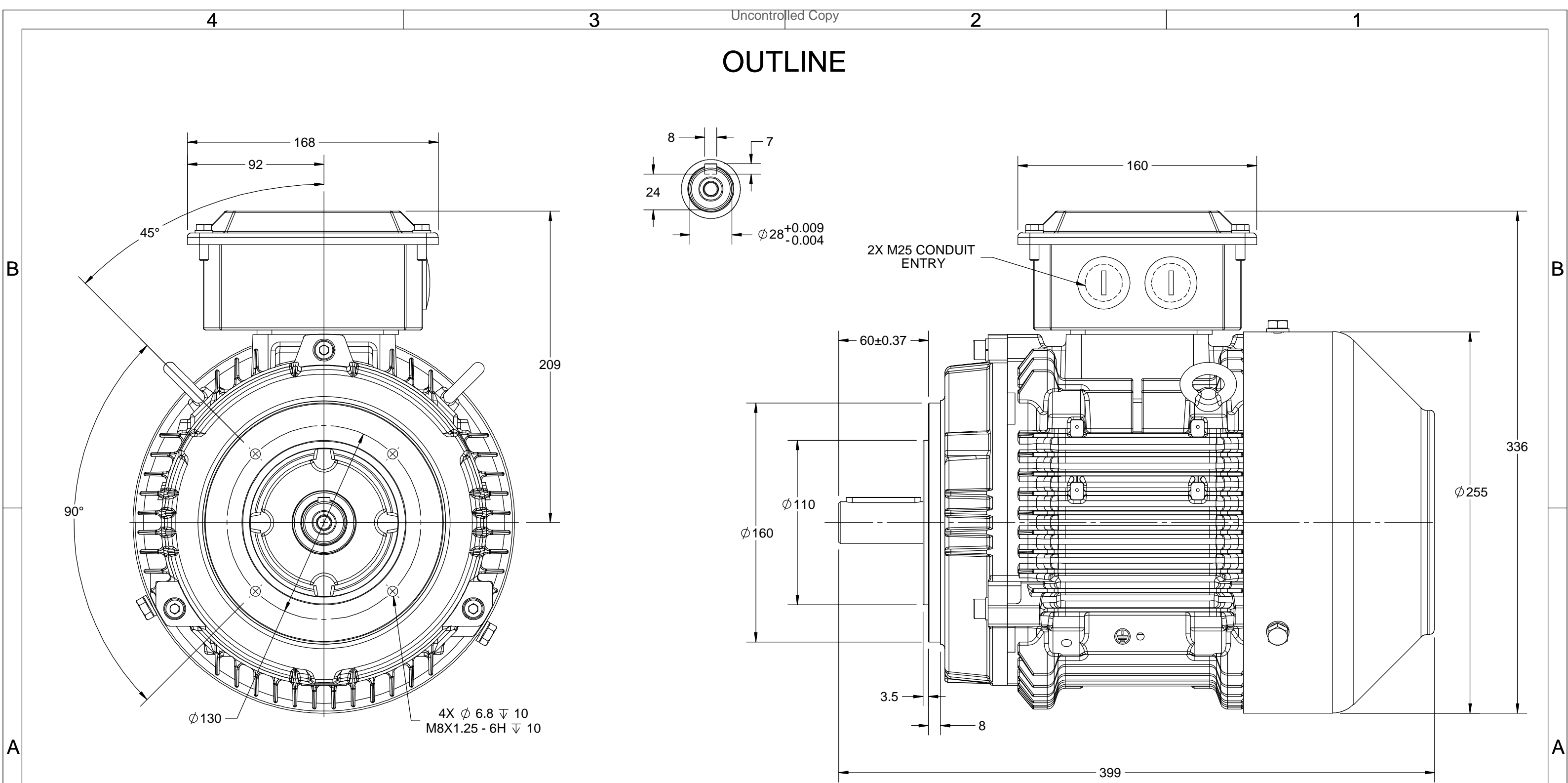
Output HP	5 Hp	Output KW	3.7 kW
Frequency	50 Hz	Voltage	415 V
Current	7.0 A	Speed	1451 rpm
Service Factor	1	Phase	3
Efficiency	86.3 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	112M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6306	Opp Drive End Bearing Size	6206
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

Technical Specifications

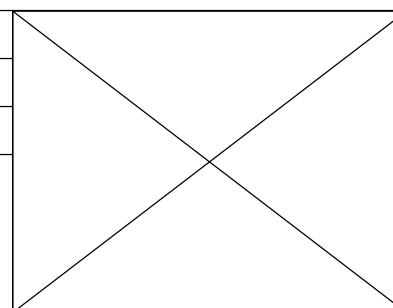
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B14A	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	399 mm	Frame Length	174 mm
Shaft Diameter	28 mm	Shaft Extension	60 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0211200572

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OUTLINE



DRAWING REVISION A	REVISION BY LK	DATE 26/06/2018
ECO ECO-0147803	APPROVED BY JAY	DATE 26/06/2018
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DRAWN BY LK		
DATE 26/06/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE 112 FR.- B14A MTG. MOTOR TYPE: SCA	
DATE 26/06/2018	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER 0211200572
THIRD ANGLE PROJECTION	SHEET 1 OF 1	

Model No. SCA3P72A3171GAAD01

U (V)	Δ / Y Conn	f [Hz]	P		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]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	3.7	5.0	7.0	1451	24.64	IE2	-	86.3	86.3	86.5	0.85	0.79	0.66	6.5	2.5	2.9

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14A
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	112M	Motor weight - approx.	48.0 kg
Duty	S1	Gross weight - approx.	51.0 kg
Voltage variation *	± 10%	Motor inertia	0.0145 kgm ²
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)	64 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	6306-2Z / 6206-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 16mm ² /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	-	-	-

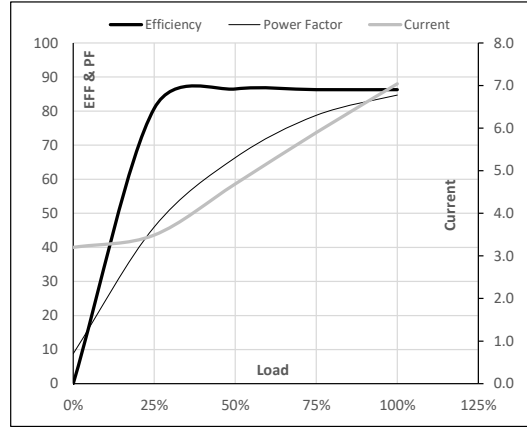
Model No. SCA3P72A3171GAAD01

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	415	Δ	50	3.7	5.0	7.0	1451	2.51	24.64	IE2	50	S1	1000	0.0145	48.0

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.2	3.5	4.7	5.9	7.0	
Torque	Nm	0.0	6.0	12.1	18.2	24.6	
Speed	r/min	1500	1489	1477	1465	1451	
Efficiency	%	0.0	80.8	86.5	86.3	86.3	
Power Factor	%	8.8	46.0	66.3	78.8	84.7	

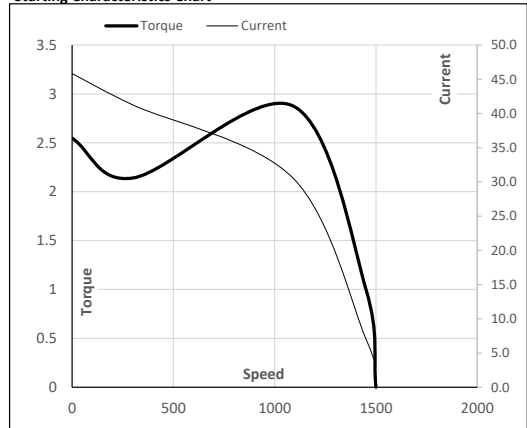
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1090	1451	1500
Current	A	45.8	41.2	30.6	7.0	3.2
Torque	pu	2.5	2.1	2.9	1	0

Starting Characteristics Chart



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

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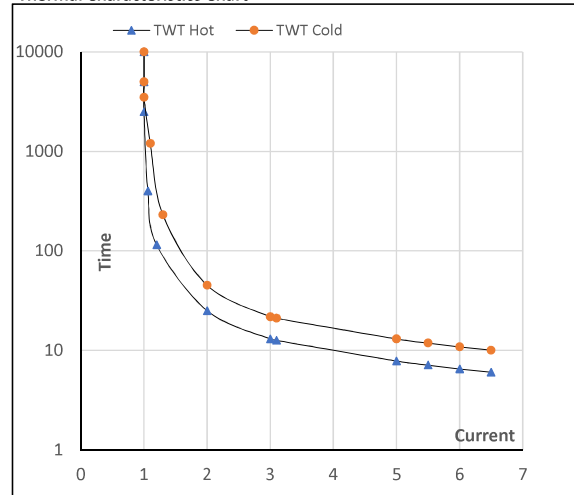
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Enclosure	U (V)	Δ / Y Conn	f (Hz)	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Δ	50	3.7	5.0	7.0	1451	2.51	24.64	IE2	50	S1	1000	0.0145	48

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	25	13	11	10	8	6
TWT Cold	s 10000	45	22	18	15	13	10
Current	pu	1	2	3	4	4.5	5

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 : SCA3P72A3171GAAD01

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

Catalog No : SCA3P72A3171GAAD01

Rework No : N/A

Directives :

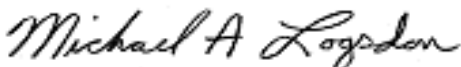
Low Voltage Directive 2014/35/EU

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