

PRODUCT INFORMATION PACKET

Model No: SCA5P53A3171GAAD01

Catalog No: SCA5P53A3171GAAD01

5.5kW, General Purpose Low Voltage IEC Motor, 3 phase, 6 Pole, 415V, B14B, 50Hz, 86.0%, 132M Frame, TEFC
Cast Iron IE2 Efficiency Motors





Nameplate Specifications

Output HP	7.50 Hp	Output KW	5.5 kW
Frequency	50 Hz	Voltage	415 V
Current	11.8 A	Speed	955 rpm
Service Factor	1	Phase	3
Efficiency	86 %	Power Factor	0.76
Duty	S1	Insulation Class	F
Frame	132M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6308
Opp Drive End Bearing Size	6208	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	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

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:16/01/2020

4

3

Uncontrolled Copy

2

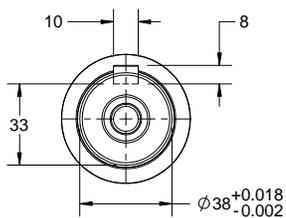
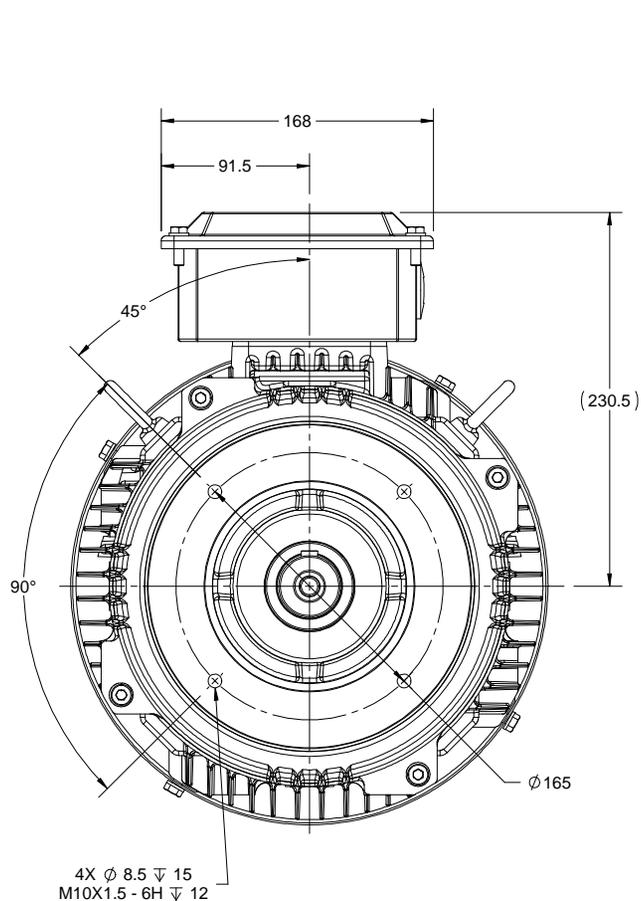
1

B

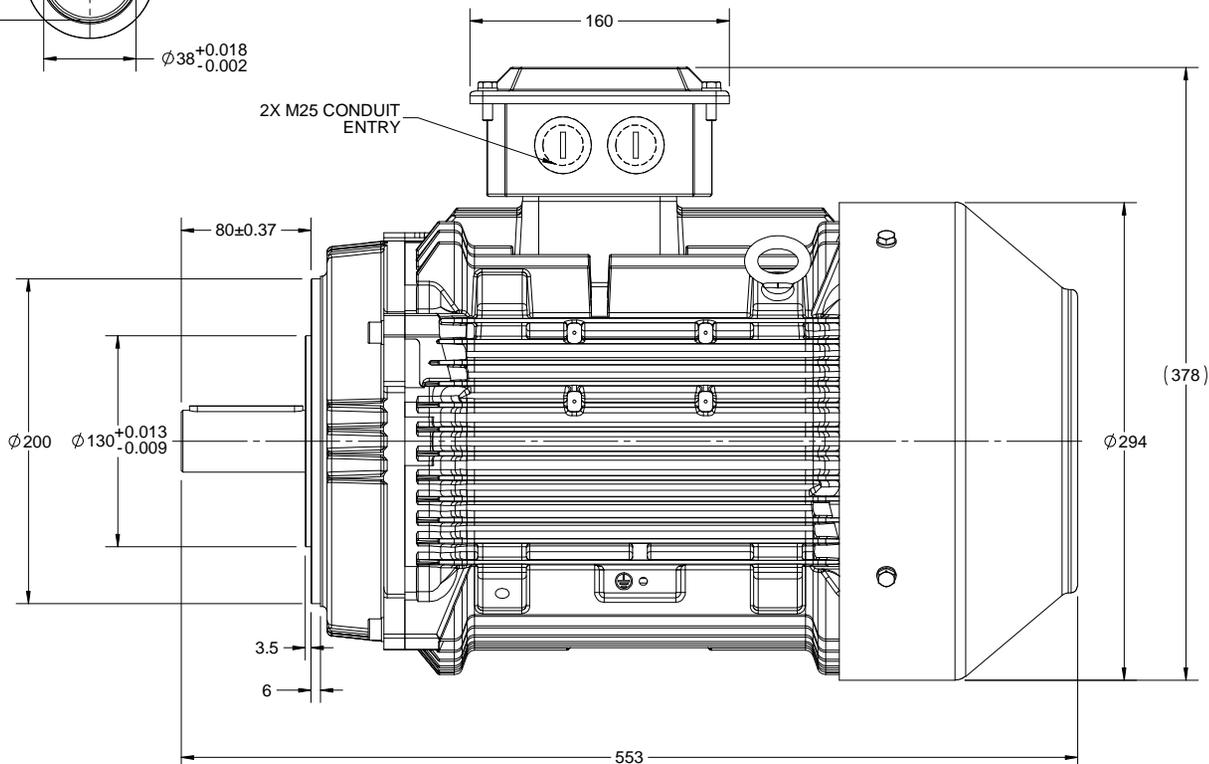
B

A

A



2X M25 CONDUIT ENTRY



DRAWING REVISION A	REVISION BY A. KEETHA	DATE 15/10/2018
ECO ECO-0153779	APPROVED BY JAY	DATE 15/10/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
<small>COPYRIGHT REGAL BELDOT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELDOT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>		

DRAWN BY A. KEETHA
DATE 15/10/2018
APPROVED BY JAY
DATE 15/10/2018
REFERENCE
THIRD ANGLE PROJECTION

marathon
Motors

DESCRIPTION
OUTLINE
132M FRAME-B14A MTG. MOTOR TYPE: SCA

MATERIAL
PROCESS/FINISH

SIZE
B
DRAWING NUMBER
0213201167

SHEET
1 OF 1

4

3

2

1

COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. This is an Unapproved Copy
 PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF
 REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY
 INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED
 BY RECEIVING IT TO AGREE THAT IT AND/OR ANY PART OF IT SHALL NOT BE DISCLOSED
 TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT
 AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL
 BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN
 RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.

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

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



Model No. SCA5P53A3171GAAD01

U (V)	Δ / Y Conn	f (Hz)	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I _w /I _N [pu]	T _k /T _N [pu]	T _k /T _N [pu]
			[kW]	[hp]					S/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	5.5	7.5	11.8	955	56.00	IE2	-	86.0	86.0	85.5	0.76	0.68	0.55	6.1	3.0	3.1

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.	96 kg
Duty	S1	Gross weight - approx.	99 kg
Voltage variation *	± 10%	Motor inertia	0.0332 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)	65 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)	12/25 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 ² /2 x M25 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

I_w/I_N - Locked Rotor Current / Rated Current

T_k/T_N - Breakdown Torque / Rated Torque

T_k/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	-	-	-



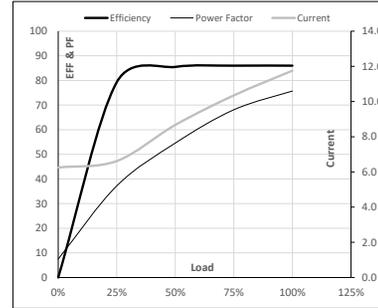
Model No. SCA5P53A3171GAAD01

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	5.5	7.5	11.8	955	5.71	56.00	IE2	50	S1	1000	0.0332	96

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	6.3	6.6	8.7	10.3	11.8	
Torque	Nm	0.0	13.5	27.3	41.4	56.0	
Speed	r/min	1000	990	980	968	955	
Efficiency	%	0.0	79.3	85.5	86.0	86.0	
Power Factor	%	7.5	37.2	54.6	68.1	75.7	

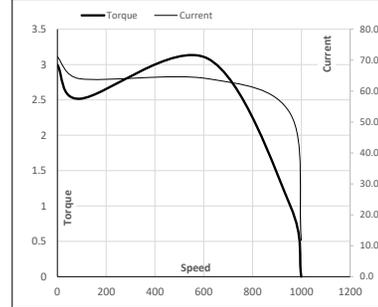
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	616	955	1000
Current	A	71.1	64.0	52.7	11.8	6.3
Torque	pu	3.0	2.5	3.1	1	0

Starting Characteristics Chart



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

Issued By
Issued Date



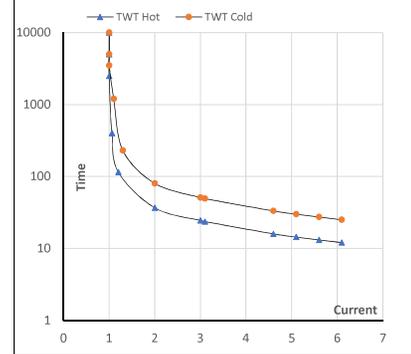
Model No. SCA5P53A3171GAAD01

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	5.5	7.5	11.8	955	5.71	56.00	IE2	50	S1	1000	0.0332	96

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	37	24	20	15	14	12	
TWT Cold	s 10000	80	51	45	30	28	25	
Current	pu	1	2	3	4	5	5.5	6.1

Thermal Characteristics Chart



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

Issued By
Issued Date

