

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA5P53A4181GAA001
Catalog No: SCA5P53A4181GAA001

TerraMAX® Cast Iron Motor, 7.50 HP, 3 Ph, 50 Hz, 380/660 V, 1000 RPM, 132M Frame, TEFC



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RegalRexnord



Nameplate Specifications

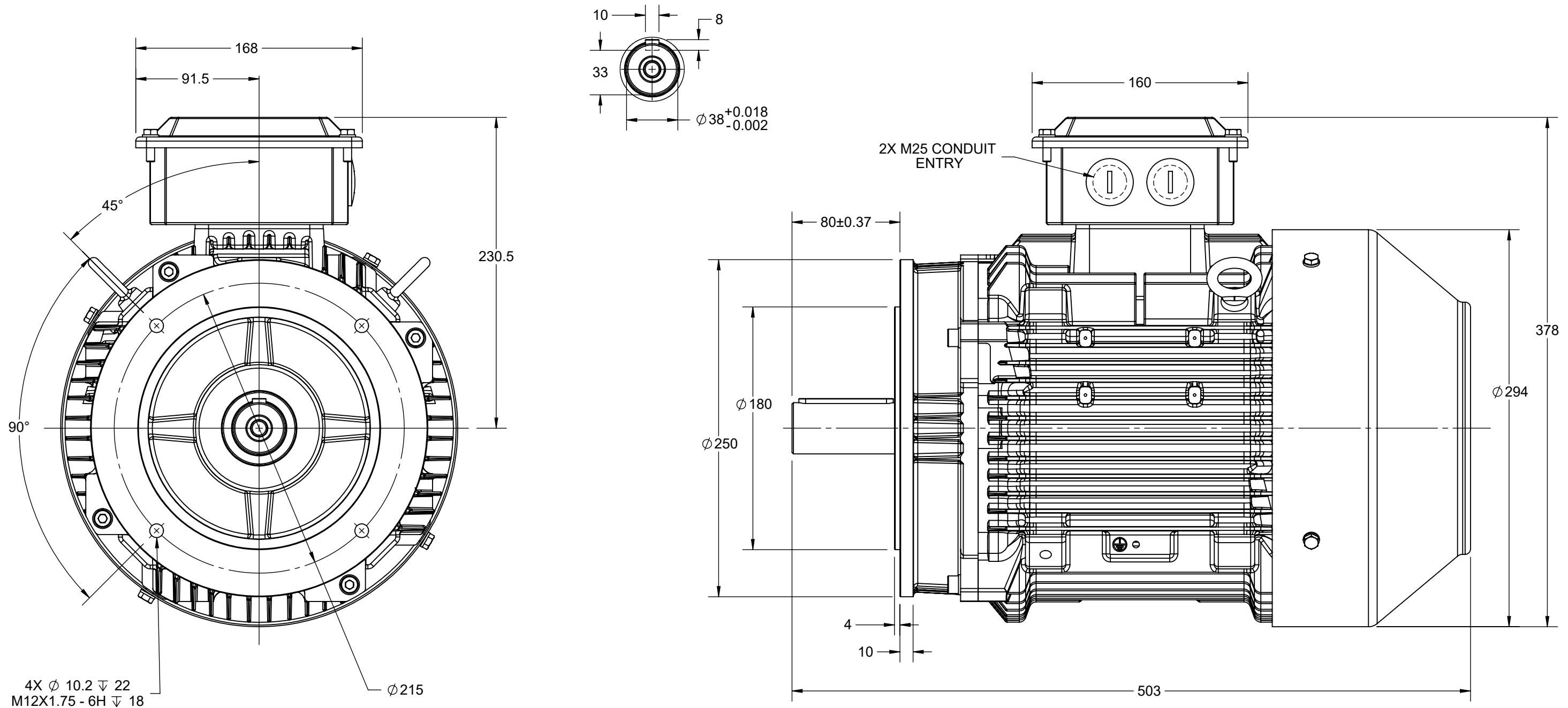
Output HP	7.50 Hp	Output KW	5.5 kW
Frequency	50 Hz	Voltage	380/660 V
Current	12.6 A	Speed	956 rpm
Service Factor	1	Phase	3
Efficiency	86 %	Power Factor	0.77
Duty	S1	Insulation Class	F
Frame	132M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End 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	6	Rotation	Bi-Directional
Mounting	B14B	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	503 mm	Frame Length	240 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0213201132

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OUTLINE



DRAWING REVISION A	REVISION BY LK	DATE 06/07/2018		DRAWN BY LK		
ECO ECO-0147803	APPROVED BY JAY	DATE 06/07/2018		DATE 06/07/2018		
ECO DESCRIPTION NEW DRAWING RELEASE <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. 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.</small>				APPROVED BY JAY		DESCRIPTION OUTLINE 132M-FR-B14B MTG. MOTOR TYPE SCA
			DATE 06/07/2018	MATERIAL		PROCESS/FINISH
			REFERENCE	SIZE B		DRAWING NUMBER 0213201132

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DRAWING REVISION A	REVISION BY SN	DATE 13/01/2017
ECO 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		Regal Beloit America, Inc.
	DATE 16/12/2016		
	APPROVED BY SBD		DESCRIPTION CONN DIAGRAM-NAMEPLATE
	DATE 16/12/2016		
	REFERENCE		
	MATERIAL		PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1

Model No. SCA5P53A4181GAA001

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			
380/660	Δ	50	5.5	7.5	12.6	956	55.94	IE2	-	86	86	85.3	0.77	0.69	0.57	6.7	3.1	3.2

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14B
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132M	Motor weight - approx.	93 kg
Duty	S1	Gross weight - approx.	96 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.0332 kgm ²
Frequency variation *	$\pm 5\%$	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level (1meter distance from motor)	59 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [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 ² /2 x M25 x 1.5
Type of grease	NA	Auxiliary terminal box	Available on Request

 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
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

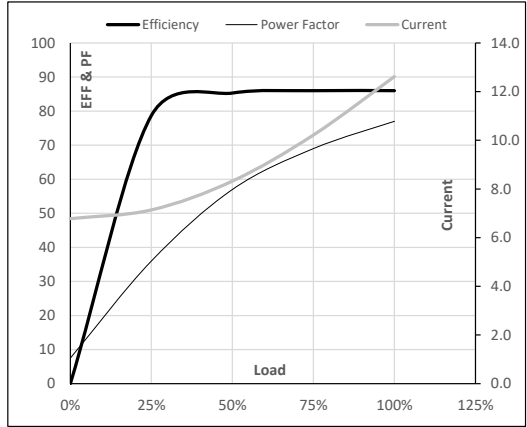
Model No. SCA5P53A4181GAA001

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	380/660	Δ	50	5.5	7.5	12.6	956	5.70	55.94	IE2	40	S1	1000	0.0332	93

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	6.8	7.1	8.3	10.2	12.6	
Torque	Nm	0.0	13.5	27.3	41.4	55.9	
Speed	r/min	1000	990	980	969	956	
Efficiency	%	0.0	78.7	85.3	86.0	86.0	
Power Factor	%	7.5	36.0	57.0	69.0	77.0	

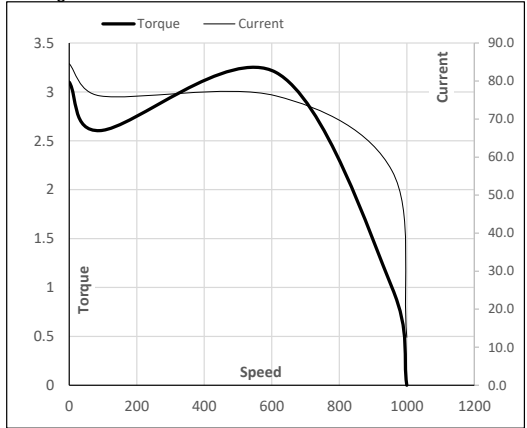
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	612	956	1000
Current	A	84.6	76.1	56.4	12.6	6.8
Torque	pu	3.1	2.6	3.2	1	0

Starting Characteristics Chart



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

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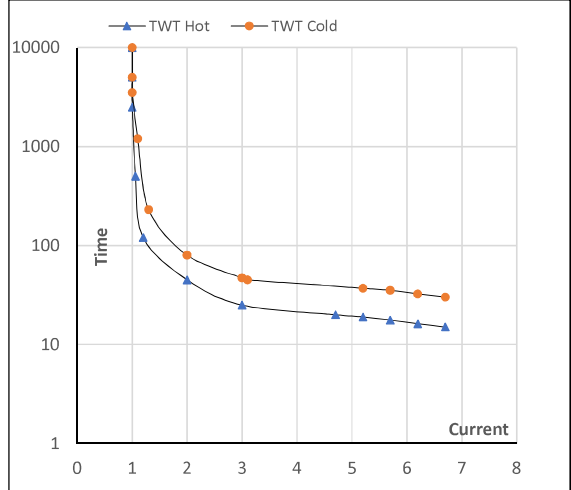
Model No. SCA5P53A4181GAA001

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	380/660	Y	50	5.5	7.5	12.6	956	5.70	55.94	IE2	40	S1	1000	0.0332	93

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	45	25	23	20	18	15	
TWT Cold	s 10000	80	47	46	40	36	30	
Current	pu	1	2	3	4	5	5.5	6.7

Thermal Characteristics Chart



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

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