

PRODUCT INFORMATION PACKET

Model No: SCA7P53A1141GAA001

Catalog No: SCA7P53A1141GAA001

TerraMAX® Cast Iron Motor, 10 HP, 3 Ph, 50 Hz, 400 V, 1000 RPM, 160M Frame, TEFC



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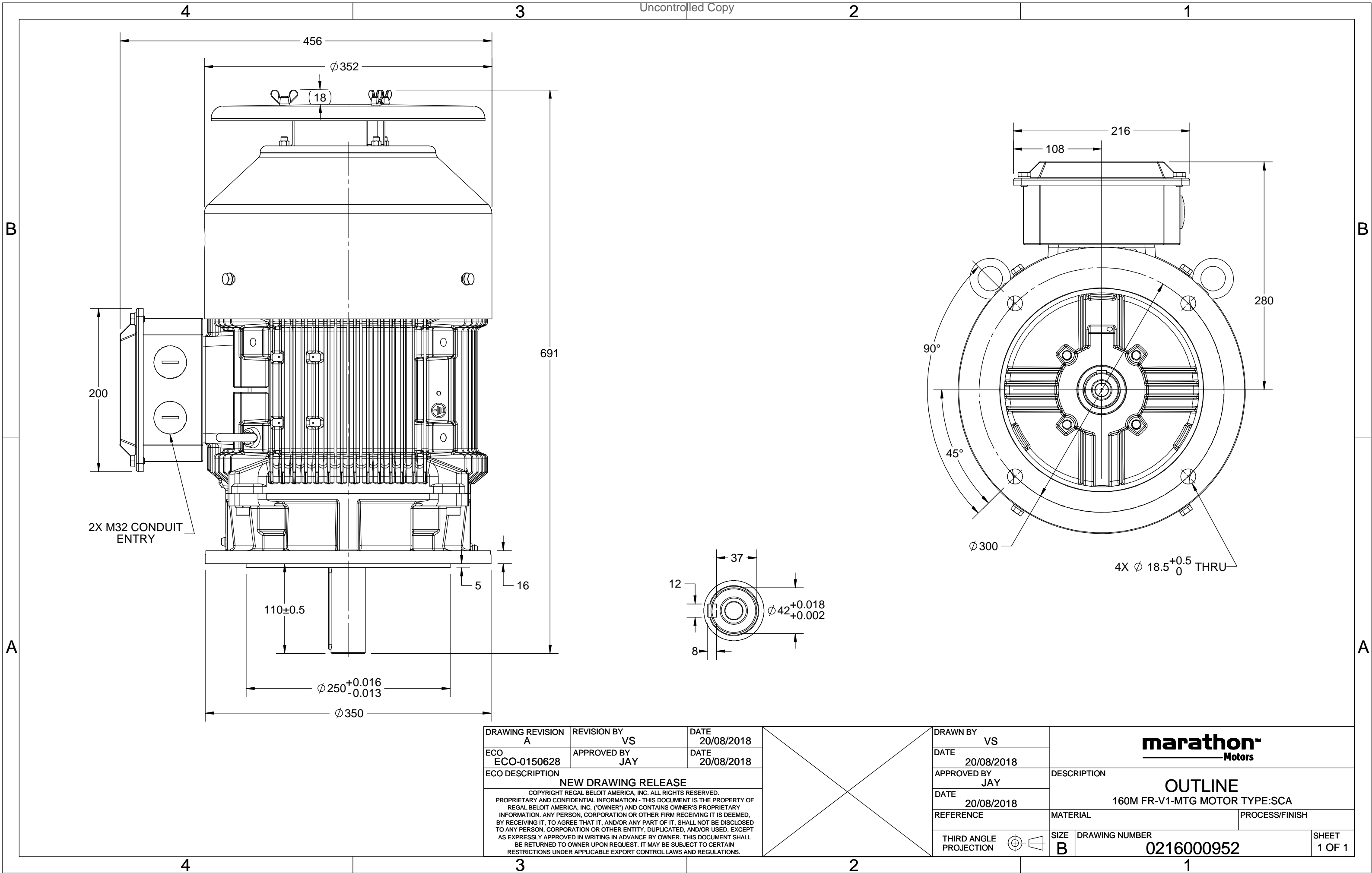
Nameplate Specifications

Output HP	10 Hp	Output KW	7.5 kW
Frequency	50 Hz	Voltage	400 V
Current	16.1 A	Speed	970 rpm
Service Factor	1	Phase	3
Efficiency	87.2 %	Power Factor	0.77
Duty	S1	Insulation Class	F
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

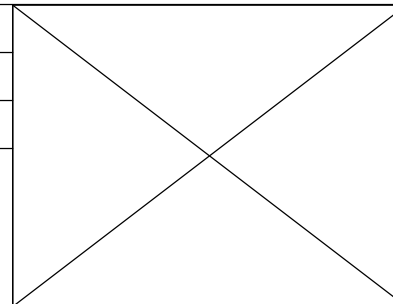
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	V1	Motor Orientation	Shaftdown
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	691 mm	Frame Length	254 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0216000952

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DRAWING REVISION A	REVISION BY VS	DATE 20/08/2018
ECO ECO-0150628	APPROVED BY JAY	DATE 20/08/2018
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DRAWN BY VS	marathon™ Motors	
DATE 20/08/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE 160M FR-V1-MTG MOTOR TYPE:SCA	
DATE 20/08/2018	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER 0216000952
THIRD ANGLE PROJECTION	SHEET 1 OF 1	

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

Model No. SCA7P53A1141GAA001

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			
400	Δ	50	7.5	10	16.1	970	73.80	IE2	-	87.2	87.2	86.2	0.77	0.73	0.63	5.86134454	2.4	3.6

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160M	Motor weight - approx.	124 kg
Duty	S1	Gross weight - approx.	144 kg
Voltage variation *	$\pm 10\%$	Motor inertia	0.1140 kgm ²
Frequency variation *	$\pm 5\%$	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [Class B] K	LR withstand time (hot/cold)	30/15 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	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6309-2Z / 6209-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 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 IEC: 60034-30	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC: 60034-30

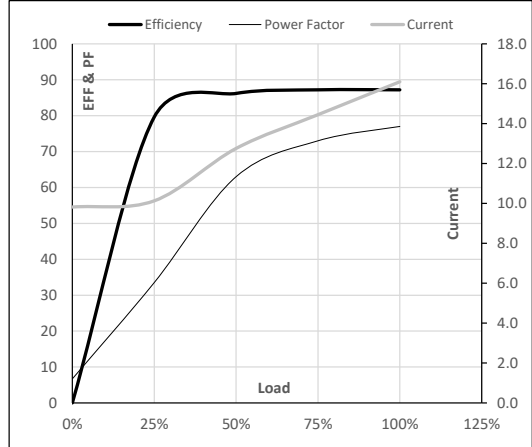
Model No. SCA7P53A1141GAA001

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	400	Δ	50	7.5	10	16.1	970	7.53	73.80	IE2	40	S1	1000	0.1140	124

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	9.8	10.1	12.8	14.4	16.1	
Torque	Nm	0.0	18.0	36.1	54.5	73.8	
Speed	r/min	1000	994	988	982	970	
Efficiency	%	0.0	79.6	86.2	87.2	87.2	
Power Factor	%	6.7	33.5	63.0	73.0	77.0	

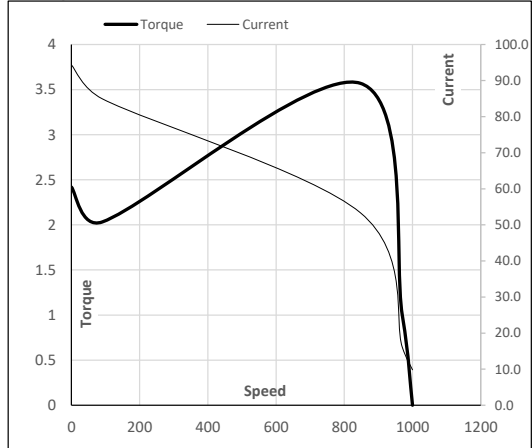
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	91	847	970	1000
Current	A	94.4	84.9	53.4	16.1	9.8
Torque	pu	2.4	2.0	3.6	1	0

Starting Characteristics Chart



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

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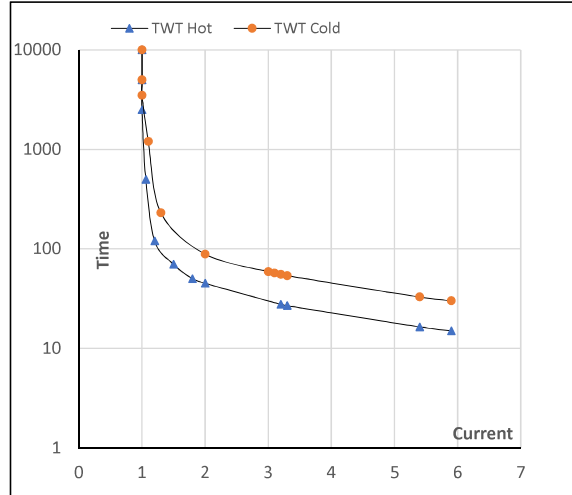
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Enclosure	U (V)	Δ / Y Conn	f (Hz)	P (kW)	P (hp)	I (A)	n (rpm)	T (kgm)	T (Nm)	IE Class	Amb [°C]	Duty	Elevation (m)	Inertia (kg-m ²)	Weight (kg)
TEFC	400	Δ	50	7.5	10	16.1	970	7.53	73.80	IE2	40	S1	1000	0.1140	124

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	45	36	25	20	16	15
TWT Cold	s 10000	59	56	50	45	32	30
Current	pu	1	2	3	4	5	5.5

Thermal Characteristics Chart



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

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