

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA3751A3113GAAD01

Catalog No: SCA3751A3113GAAD01

TerraMAX® Cast Iron Motor, 503 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 355L Frame, TEFC



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**RegalRexnord**

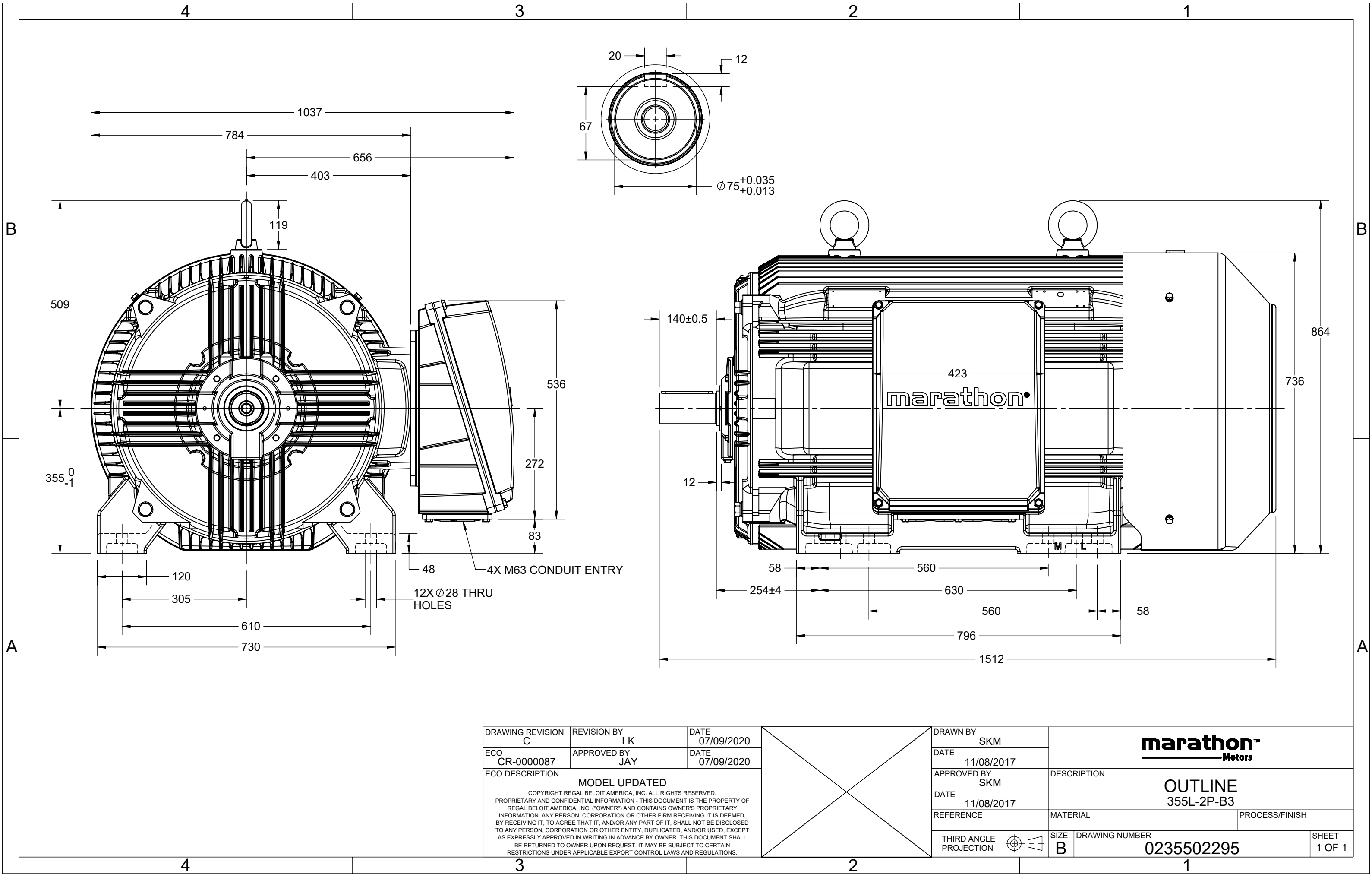
### Nameplate Specifications

Output HP	503 Hp	Output KW	375.0 kW
Frequency	50 Hz	Voltage	415 V
Current	596.9 A	Speed	2980 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.92
Duty	S1	Insulation Class	F
Frame	355L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6317	Opp Drive End Bearing Size	6317
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	2	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1512 mm	Frame Length	1010 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	SIDE		
Outline Drawing	0235502295	Connection Drawing	8442000085

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DRAWING REVISION C	REVISION BY LK	DATE 07/09/2020
ECO CR-0000087	APPROVED BY JAY	DATE 07/09/2020
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SKM	<b>marathon™</b> Motors		
DATE 11/08/2017			
APPROVED BY SKM	DESCRIPTION OUTLINE 355L-2P-B3		
DATE 11/08/2017			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0235502295	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>	<b>DESCRIPTION</b> <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.** SCA3751A3113GAAD01

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	Δ	50	375	503	596.9	2980	1199.3	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.5	1.9	2.5

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	355L	Motor weight - approx.	1974 kg
Duty	S1	Gross weight - approx.	2019 kg
Voltage variation *	± 10%	Motor inertia	5.2214 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.8 mm/s
Design	N	Noise level ( 1meter distance from motor)	90 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	6317 C3 / 6317 C3	Terminal box position	RHS
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 300mm <sup>2</sup> /4 x M63 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	Available on Request

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.

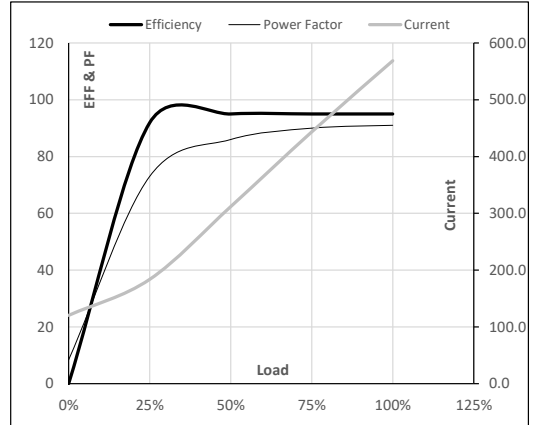
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-

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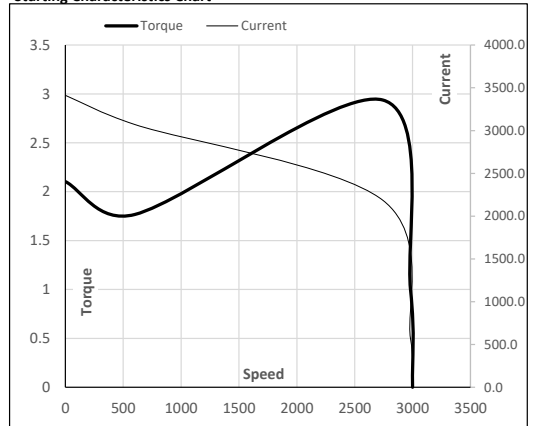
Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	$\Delta$	50	355	475.0	568.7	2982	115.66	1134.20	IE2	50	S1	1000	4.9821	1922

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	120.3	183.7	311.8	443.4	568.7	
Torque	Nm	0.0	282.3	565.4	849.3	1134.2	
Speed	r/min	3000	2996	2991	2987	2982	
Efficiency	%	0.0	91.9	95.0	95.0	95.0	
Power Factor	%	8.4	73.0	86.0	90.0	91.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2743	2982	3000
Current	A	3412.0	3070.8	2185.2	568.7	120.3
Torque	pu	2.1	1.8	2.9	1	0

**Starting Characteristics Chart**

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

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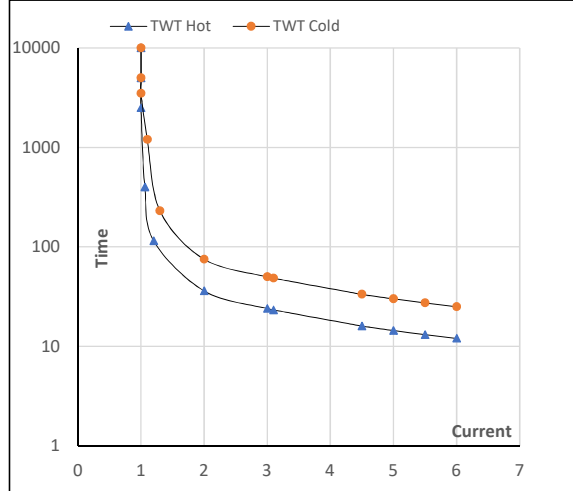
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Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	$\Delta$	50	355	475	568.7	2982	115.66	1134.20	IE2	50	S1	1000	4.9821	1922

**Motor Speed Torque Data**

Load	FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR
TWT Hot	s 10000	36	24	20	14	13	12
TWT Cold	s 10000	75	50	45	30	27	25
Current	pu	1	3	4	5	5.5	6

**Thermal Characteristics Chart**

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

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