

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA0304A3143GAAD01

Catalog No: SCA0304A3143GAAD01

TerraMAX® Cast Iron Motor, 40 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 250M Frame, TEFC



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**RegalRexnord**

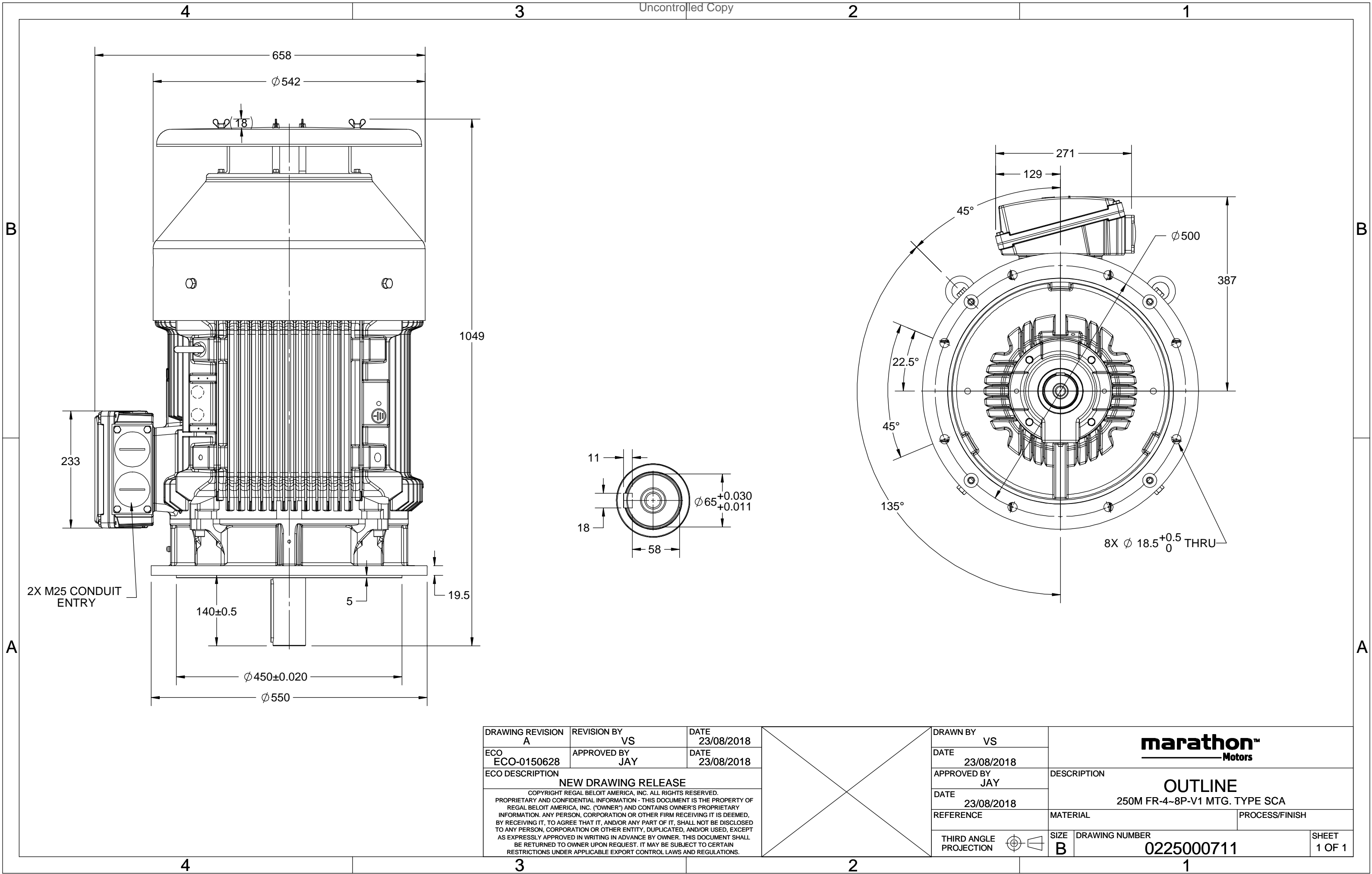
### Nameplate Specifications

Output HP	40 Hp	Output KW	30.0 kW
Frequency	50 Hz	Voltage	415 V
Current	60.8 A	Speed	739 rpm
Service Factor	1	Phase	3
Efficiency	89.8 %	Power Factor	0.7646
Duty	S1	Insulation Class	F
Frame	250M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6314	Opp Drive End Bearing Size	6314
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	8	Rotation	Bi-Directional
Mounting	V1	Motor Orientation	Shaft Down
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1049 mm	Frame Length	460 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	TOP		
Outline Drawing	0225000711	Connection Drawing	8442000085

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DRAWING REVISION A	REVISION BY VS	DATE 23/08/2018
ECO ECO-0150628	APPROVED BY JAY	DATE 23/08/2018
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DRAWN BY VS		<div>marathon™ Motors</div>	
DATE 23/08/2018			
APPROVED BY JAY		DESCRIPTION <div>OUTLINE</div> <div>250M FR-4~8P-V1 MTG. TYPE SCA</div>	
DATE 23/08/2018			
REFERENCE		MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION		SIZE B	DRAWING NUMBER 0225000711
			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 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.** SCA0304A3143GAAD01

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	30	40	60.4	739	385.83	IE2	-	89.8	89.8	90.8	0.77	0.71	0.58	4.9	1.9	2.4

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	250M	Motor weight - approx.	564 kg
Duty	S1	Gross weight - approx.	599 kg
Voltage variation *	± 10%	Motor inertia	2.1617 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level ( 1meter distance from motor)	63 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)	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	6314 C3 / 6314 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 95mm <sup>2</sup> /2 x M50 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	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.

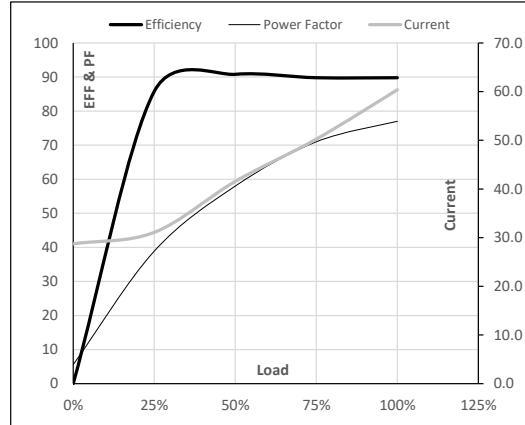
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-

**Model No.** SCA0304A3143GAAD01

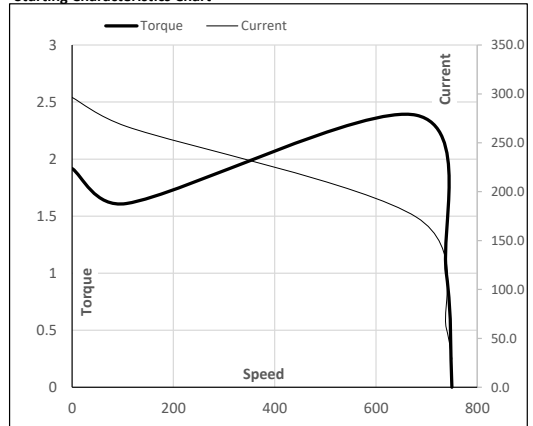
Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	415	$\Delta$	50	30	40	60.4	739	39.34	385.83	IE2	50	S1	1000	2.1617	564

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	28.7	31.1	41.6	50.2	60.4	
Torque	Nm	0.0	95.4	191.4	288.2	385.8	
Speed	r/min	750	747	745	742	739	
Efficiency	%	0.0	85.8	90.8	89.8	89.8	
Power Factor	%	5.6	38.9	58.0	71.0	77.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	107	680	739	750
Current	A	296.4	266.8	174.0	60.4	28.7
Torque	pu	1.9	1.6	2.4	1	0

**Starting Characteristics Chart**

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

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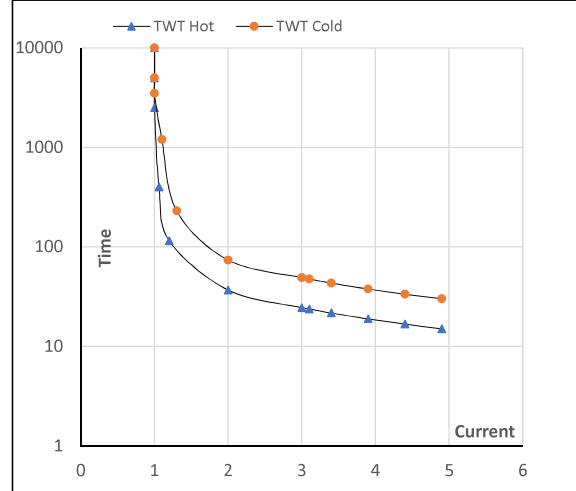
Issued Date

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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	30	40	60.4	739	39.34	385.83	IE2	50	S1	1000	2.1617	564

**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	37	25	21	18	16	15	
TWT Cold	s 10000	74	49	42	36	32	30	
Current	pu	1	2	3	3.5	4	4.5	4.9

**Thermal Characteristics Chart**

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

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