

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA0451A4131GAA001

Catalog No: SCA0451A4131GAA001

TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 380/660 V, 3000 RPM, 225M Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	60 Hp	Output KW	45.0 kW
Frequency	50 Hz	Voltage	380/660 V
Current	81.8 A	Speed	2968 rpm
Service Factor	1	Phase	3
Efficiency	92.9 %	Power Factor	0.90
Duty	S1	Insulation Class	F
Frame	225M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6213
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	B35	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	832 mm	Frame Length	425 mm
Shaft Diameter	55 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0222500909

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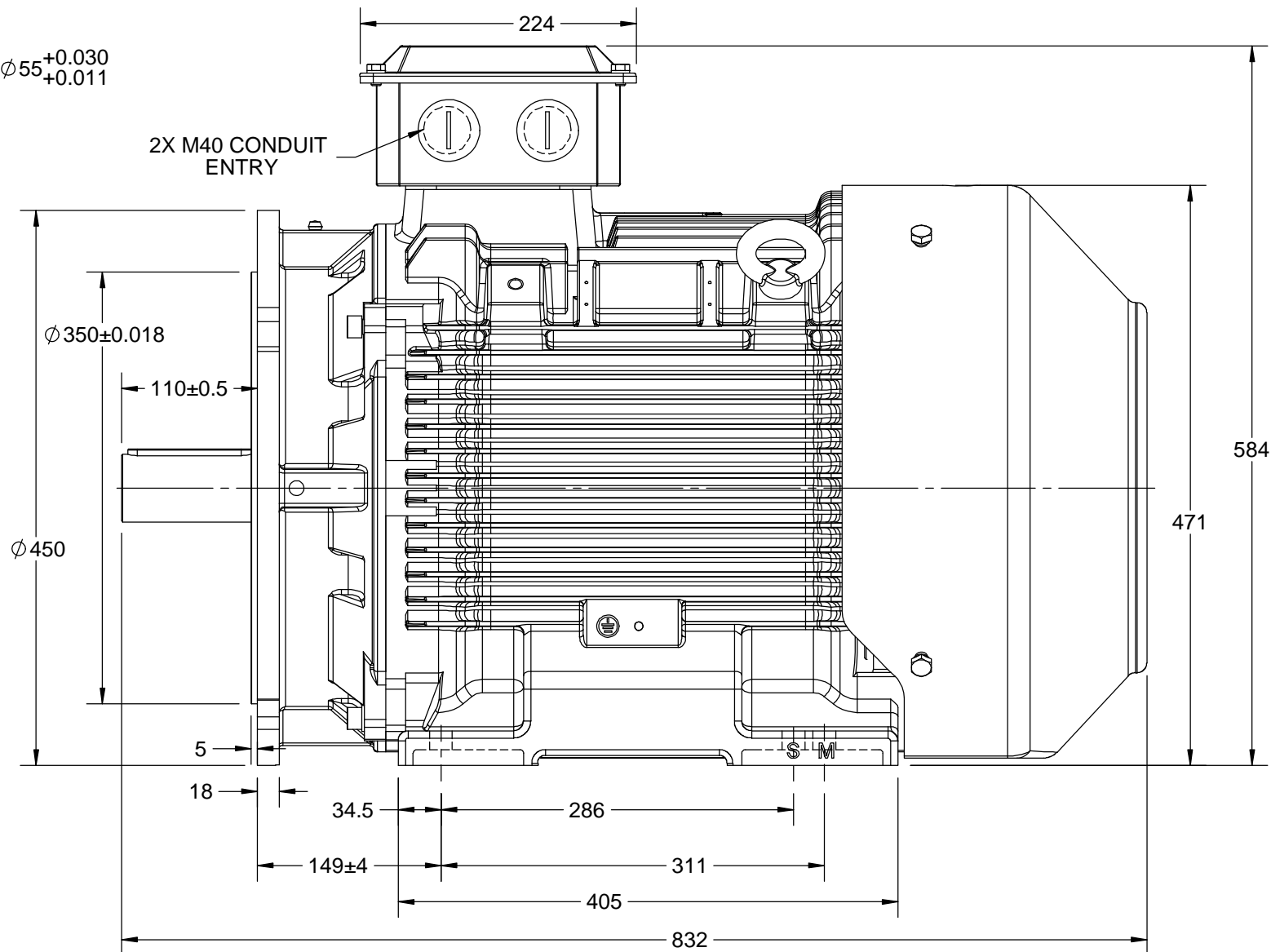
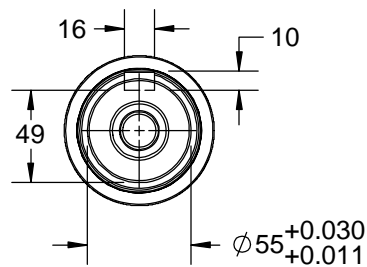
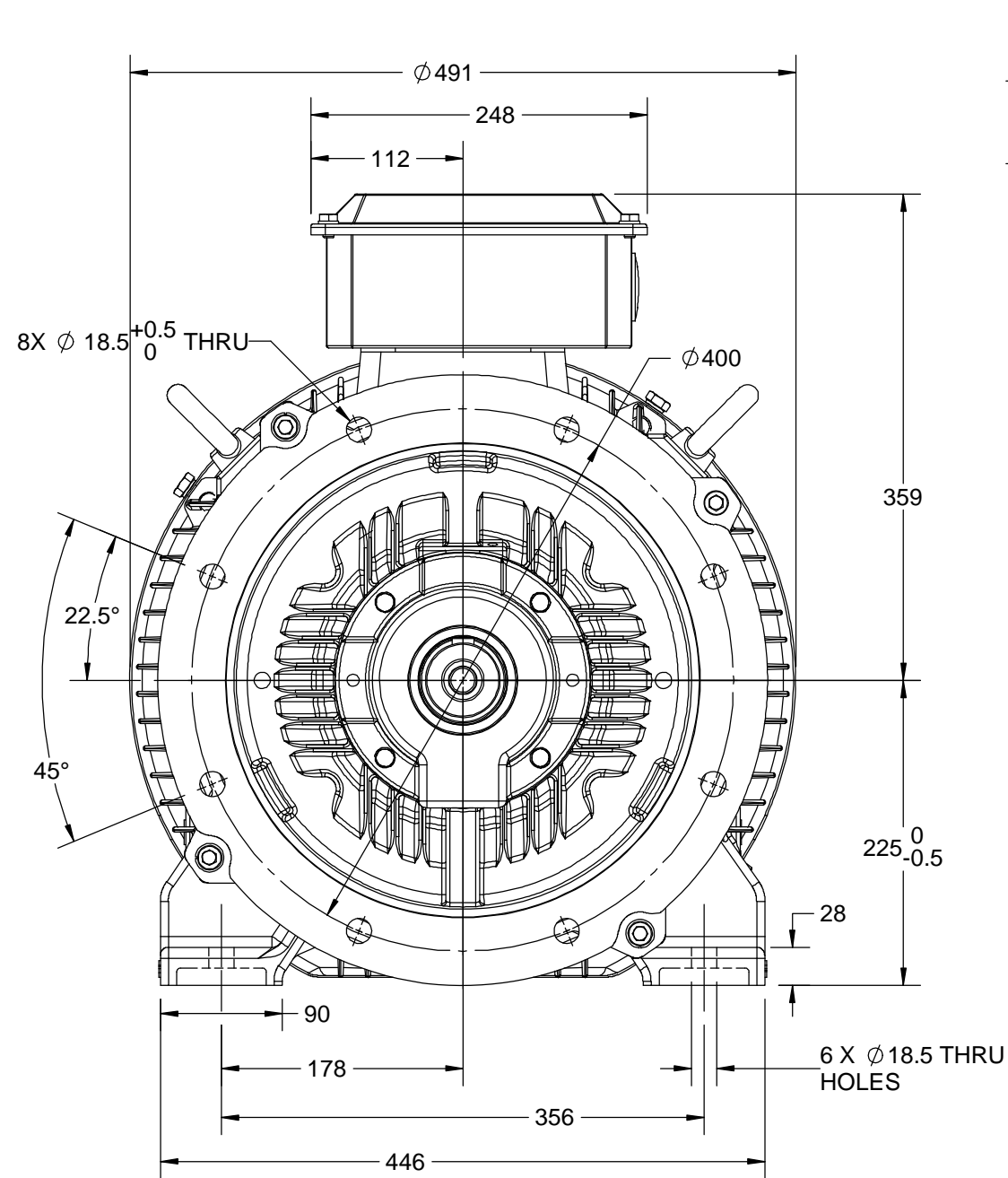
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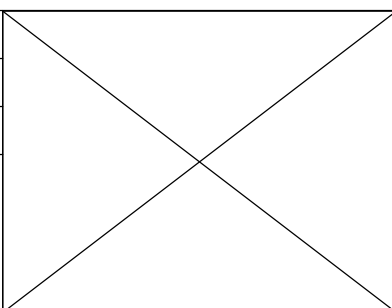
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DRAWING REVISION B	REVISION BY VS	DATE 21/08/2018
ECO ECO-0150628	APPROVED BY JAY	DATE 21/08/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY GSR	<b>marathon™</b> Motors		
DATE 02/04/2018			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 02/04/2018	225M-FR-2P-B35 MTG MOTOR TYPE: SCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0222500909	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>	Regal Beloit America, Inc.	
	DATE <b>16/12/2016</b>		
	APPROVED BY <b>SBD</b>	DESCRIPTION <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  
1 OF 1

**Model No.** SCA0451A4131GAA001

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]
380/660	Δ	50	45	60	81.8	2968	143.97	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.5	1.9	3.0

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	225M	Motor weight - approx.	393 kg
Duty	S1	Gross weight - approx.	423 kg
Voltage variation *	± 10%	Motor inertia	0.3376 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)	78 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	6313 C3 / 6213 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm <sup>2</sup> /2 x M40 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	Auxiliary terminal box	Available on Request

I<sub>A</sub>/I<sub>N</sub> - Locked Rotor Current / Rated CurrentT<sub>K</sub>/T<sub>N</sub> - Breakdown Torque / Rated TorqueT<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.

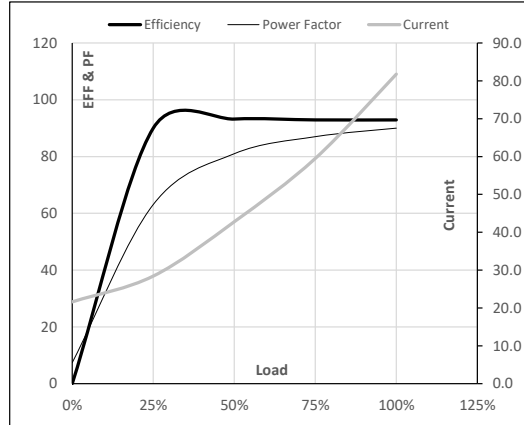
Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

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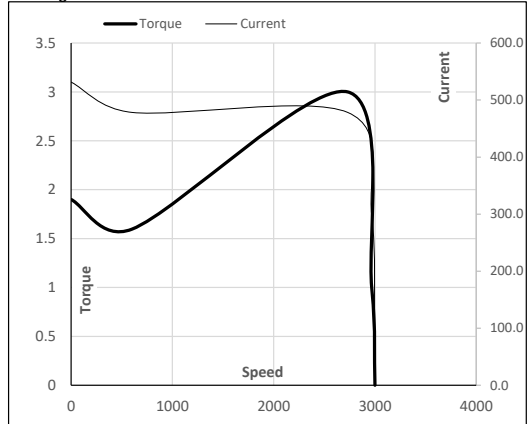
Enclosure	U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380/660	$\Delta$	50	45	60	81.8	2968	14.68	143.97	IE2	40	S1	1000	0.3376	393

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	21.6	28.4	42.8	59.5	81.8	
Torque	Nm	0.0	35.7	71.6	107.7	144.0	
Speed	r/min	3000	2992	2984	2976	2968	
Efficiency	%	0.0	90.0	93.2	92.9	92.9	
Power Factor	%	7.4	63.1	81.0	87.0	90.0	

**Performance vs Load Chart**

**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2731	2968	3000
Current	A	531.5	478.3	298.2	81.8	21.6
Torque	pu	1.9	1.6	3.0	1	0

**Starting Characteristics Chart**

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

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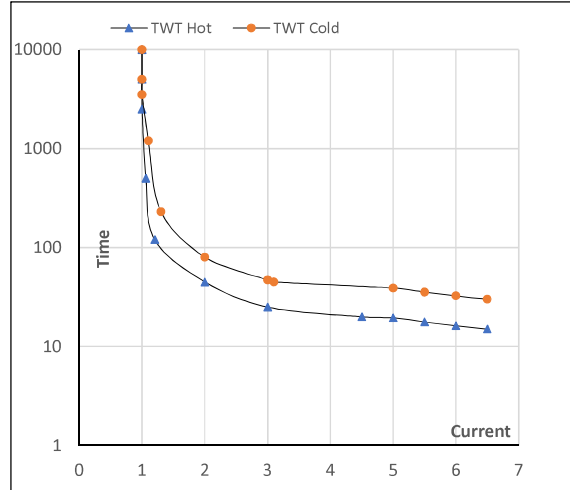
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**Model No.** SCA0451A4131GAA001

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	380/660	$\Delta$	50	45	60	81.8	2968	14.68	143.97	IE2	40	S1	1000	0.3376	393

**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	39	36	30
Current	pu	1	2	3	4	5	5.5	6.5

**Thermal Characteristics Chart**

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

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