

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: SCA0453A4131GAA001

Catalog No: SCA0453A4131GAA001

TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 380/660 V, 1000 RPM, 280S Frame, TEFC



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**RegalRexnord**

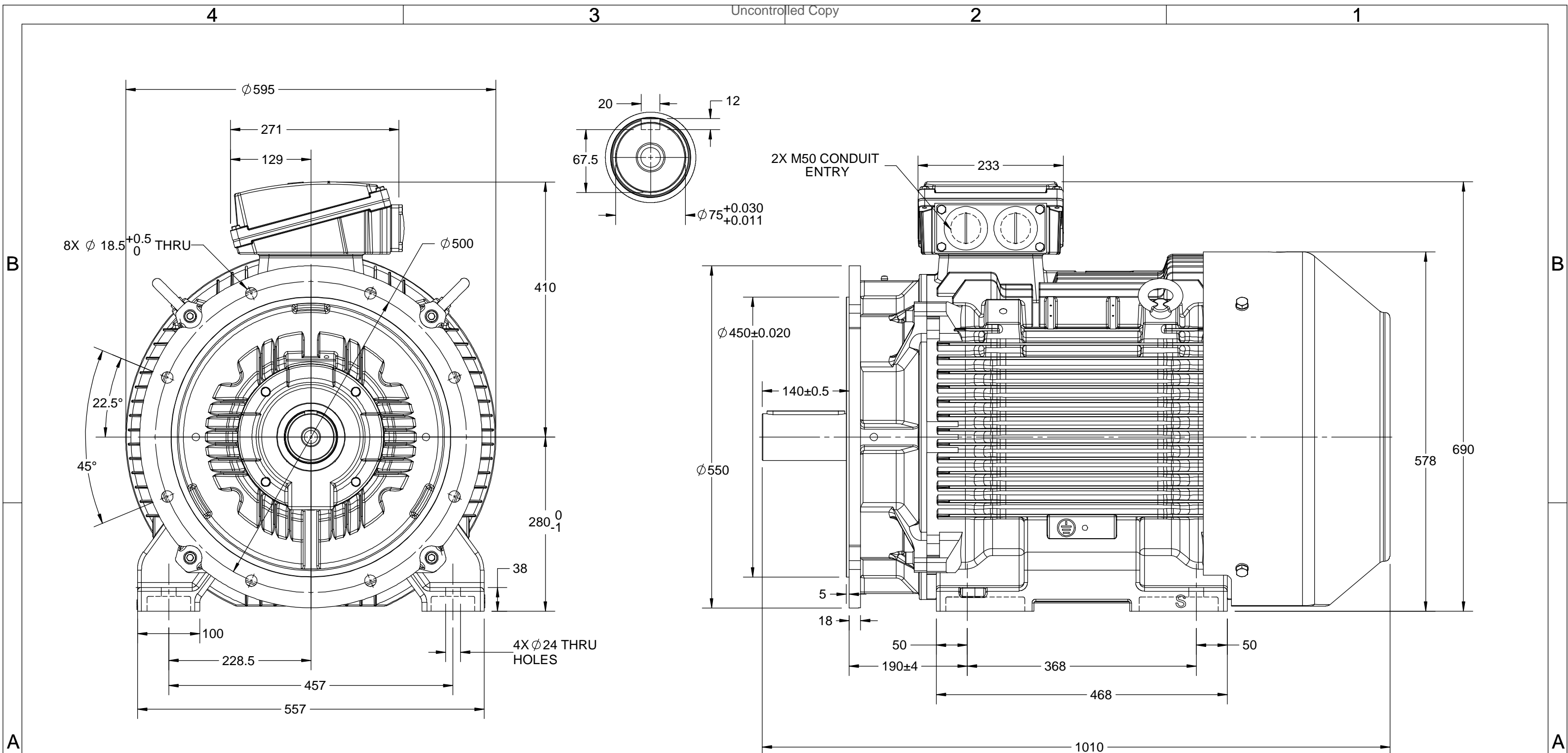
### Nameplate Specifications

Output HP	<b>60 Hp</b>	Output KW	<b>45.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>380/660 V</b>
Current	<b>85.8 A</b>	Speed	<b>984 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>92.7 %</b>	Power Factor	<b>0.86</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>280S</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6317</b>	Opp Drive End Bearing Size	<b>6317</b>
UL	<b>No</b>	CSA	<b>No</b>
CE	<b>Yes</b>	IP Code	<b>55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE2</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>6</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>B35</b>	Motor Orientation	<b>Horizontal</b>
Drive End Bearing	<b>C3</b>	Opp Drive End Bearing	<b>C3</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>Keyed</b>
Overall Length	<b>1010 mm</b>	Frame Length	<b>499 mm</b>
Shaft Diameter	<b>75 mm</b>	Shaft Extension	<b>140 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Outline Drawing	<b>0228001153</b>	Connection Drawing	<b>8442000085</b>

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DRAWING REVISION B	REVISION BY VS	DATE 22/08/2018
ECO ECO-0150628	APPROVED BY JAY	DATE 22/08/2018
ECO DESCRIPTION <b>MODEL UPDATED</b>		
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DRAWN BY GSR		
DATE 05/04/2018		
APPROVED BY JAY	DESCRIPTION <b>OUTLINE</b>	
DATE 05/04/2018	280S FR-4~8P-B35 MTG. TYPE: SCA	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0228001153
		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>		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 <b>1 OF 1</b>

**Model No.** SCA0453A4131GAA001

U (V)	Δ / Y Conn	f [Hz]	P		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]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
380/660	Δ	50	45	60	85.8	984	434.2	IE2	-	92.7	92.7	93.6	0.86	0.83	0.74	5.7	2.0	2.4

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	280S	Motor weight - approx.	618 kg
Duty	S1	Gross weight - approx.	653 kg
Voltage variation *	± 10%	Motor inertia	1.9403 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)	69 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	6317 C3 / 6317 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 95mm <sup>2</sup> /2 x M50 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 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
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30



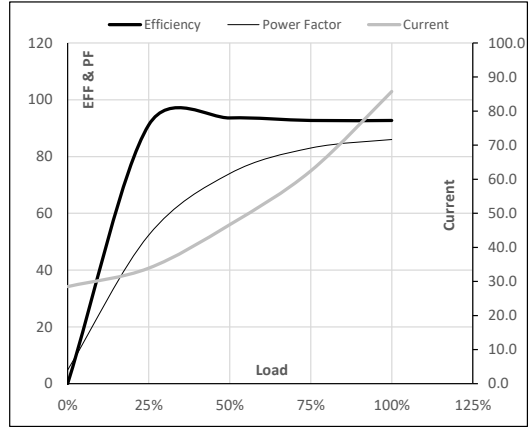
Model No. SCA0453A4131GAA001

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 <sup>2</sup> ]	Weight [kg]
TEFC	380/660	Δ	50	45	60	85.8	984	44.28	434.20	IE2	40	S1	1000	1.9403	618

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	28.5	33.9	46.7	62.4	85.8	
Torque	Nm	0.0	107.2	215.3	324.2	434.2	
Speed	r/min	1000	996	993	989	984	
Efficiency	%	0.0	91.1	93.6	92.7	92.7	
Power Factor	%	4.8	52.3	74.0	83.0	86.0	

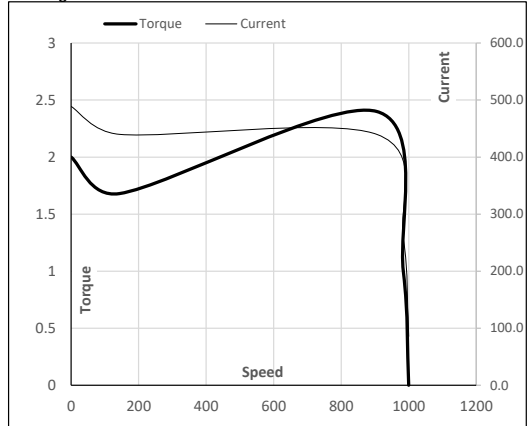
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	143	905	984	1000
Current	A	488.8	439.9	257.3	85.8	28.5
Torque	pu	2.0	1.7	2.4	1	0

**Starting Characteristics Chart**



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

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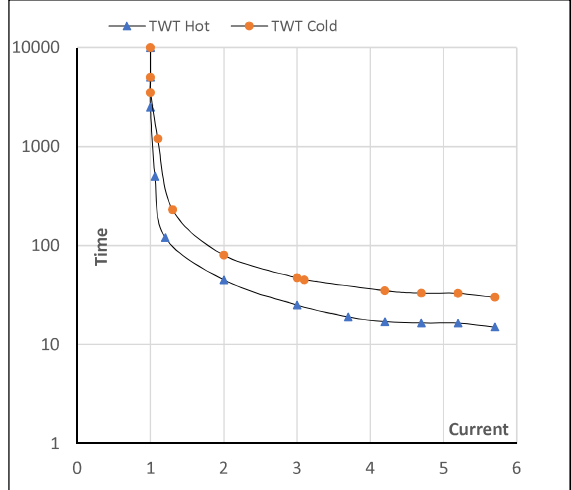
Model No. SCA0453A4131GAA001

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	85.8	984	44.28	434.20	IE2	40	S1	1000	1.9403	618

**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	45	25	18	17	16	15
TWT Cold	s 10000	80	47	37	32	31	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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