

# PRODUCT INFORMATION PACKET

Model No: QCA0752A1131GAA001

Catalog No: QCA0752A1131GAA001

TerraMAX® Cast Iron Motor, 100 HP, 3 Ph, 50 Hz, 400 V, 1500 RPM, 280S Frame, TEFC



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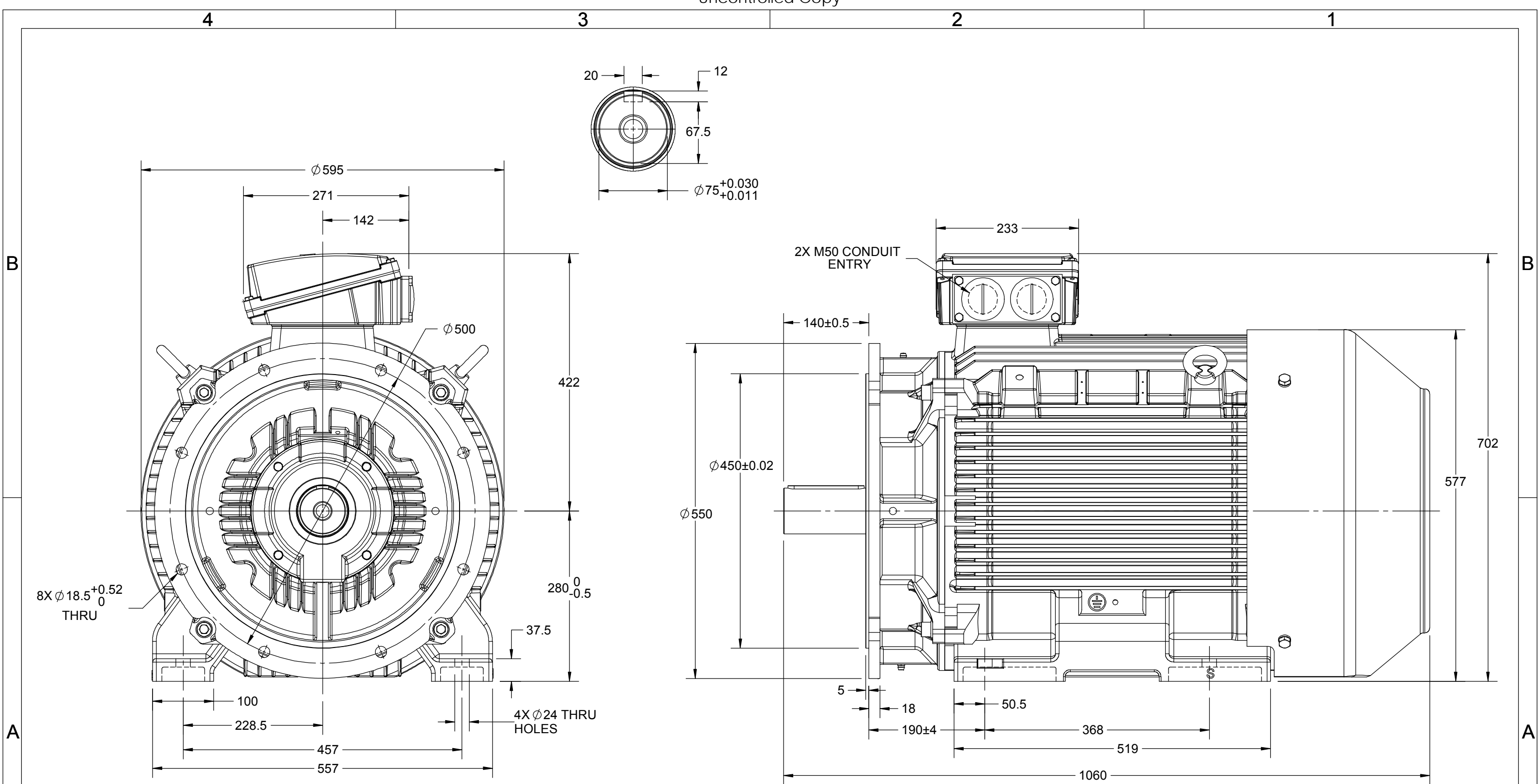
### Nameplate Specifications

Output HP	<b>100 Hp</b>	Output KW	<b>75.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>400 V</b>
Current	<b>131.3 A</b>	Speed	<b>1491 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>96 %</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>IE4</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>4</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>1060 mm</b>	Frame Length	<b>549 mm</b>
Shaft Diameter	<b>75 mm</b>	Shaft Extension	<b>140 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Outline Drawing	<b>0228000610</b>	Connection Drawing	<b>8442000085</b>

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DRAWING REVISION C	REVISION BY LK	DATE 25/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 25/04/2019
ECO DESCRIPTION UPDATED MODEL AS PER NEW 3D STRUCTURE		
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DRAWN BY KCS		
DATE 11/11/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE	
DATE 11/11/2014	280-S FR-B35 MTG. MOTOR TYPE: TCA	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0228000610
		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>	DATE <b>16/12/2016</b>		 <b>Regal Beloit America, Inc.</b>	
	APPROVED BY <b>SBD</b>	DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>		
	DATE <b>16/12/2016</b>	MATERIAL	PROCESS/FINISH	
	REFERENCE	SIZE <b>A</b>	DRAWING NUMBER <b>8442000085</b>	SHEET <b>1 OF 1</b>
	THIRD ANGLE PROJECTION 			

Model No. QCA0752A1131GAA001

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			
400	Δ	50	75	100	131.1	1491	477.76	IE4	-	96	96	94.8	0.86	0.83	0.74	6.8	2.5	3.0

Motor type	QCA	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.	805 kg
Duty	S1	Gross weight - approx.	840 kg
Voltage variation *	± 10%	Motor inertia	2.6005 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)	68 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	PTC 150°C
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	Regreaseable	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	NA

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 combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency Standards	Europe IEC 60034-30-1	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC 60034-30-1



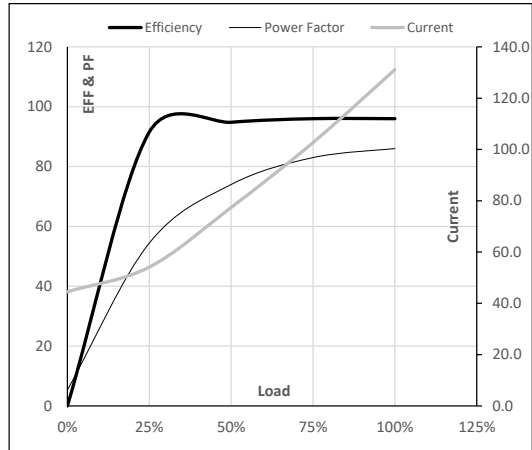
Model No. QCA0752A1131GAA001

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	400	Δ	50	75	100	131.1	1491	48.72	477.76	IE4	40	S1	1000	2.6005	805

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	44.5	54.1	77.4	102.7	131.1	
Torque	Nm	0.0	118.9	238.1	357.7	477.8	
Speed	r/min	1500	1498	1495	1493	1491	
Efficiency	%	0.0	91.5	94.8	96.0	96.0	
Power Factor	%	5.3	54.4	74.0	83.0	86.0	

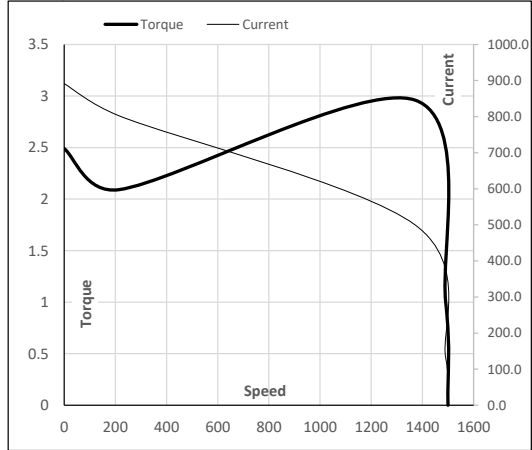
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1372	1491	1500
Current	A	891.6	802.5	499.8	131.1	44.5
Torque	pu	2.5	2.1	3.0	1	0

**Starting Characteristics Chart**



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

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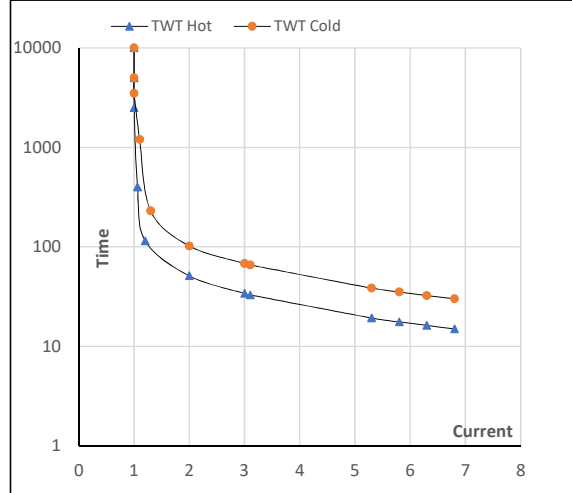
**Model No.** QCA0752A1131GAA001

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	400	Δ	50	75	100	131.1	1491	48.72	477.76	IE4	40	S1	1000	2.6005	805

**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	51	34	30	25	18	15	
TWT Cold	s 10000	102	68	60	55	37	30	
Current	pu	1	2	3	4	5	5.5	6.8

**Thermal Characteristics Chart**



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

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