

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCE2P21A5111GAA001

Catalog No: TCE2P21A5111GAA001

TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 3 HP, 3 Ph, 50 Hz, 400 V,  
2889 RPM, 90L Frame



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**RegalRexnord**

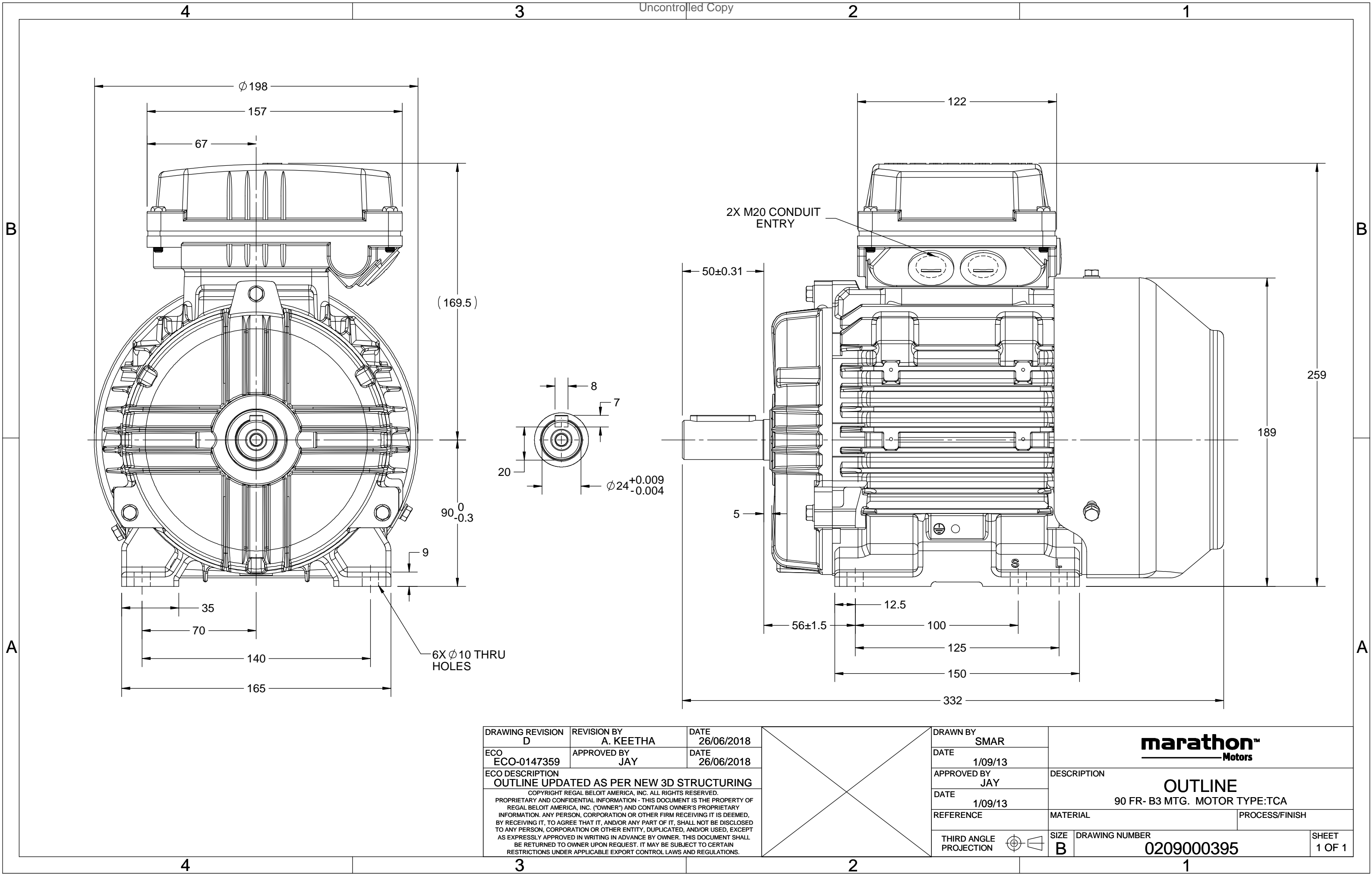
### Nameplate Specifications

Output HP	3 Hp	Output KW	2.2 kW
Frequency	50 Hz	Voltage	400 V
Current	4.3 A	Speed	2889 rpm
Service Factor	1	Phase	3
Efficiency	85.9 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	90L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6205	Opp Drive End Bearing Size	6205
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	3		

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	332 mm	Frame Length	128 mm
Shaft Diameter	24.000 mm	Shaft Extension	50 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0209000395

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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.** TCE2P21A5111GAA001

U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			$I_A/I_N$ [pu]	$T_A/T_N$ [pu]	$T_K/T_N$ [pu]
400	Y	50	2.2	3.0	4.3	2889	7.39	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	8.8	4.6	4.4

Motor type	TCE	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	90L	Motor weight - approx.	29 kg
Duty	S1	Gross weight - approx.	30 kg
Voltage variation *	± 10%	Motor inertia	0.0029 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level ( 1 meter 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	-15 to +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [ Class B ] K	tE time	5 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	Ex eb	Standard rotation	Clockwise form DE
Zone classification	Zone 2	Paint shade	RAL 7016
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6205-2Z / 6205-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm <sup>2</sup> /2 x M20 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

 $I_A/I_N$  - Locked Rotor Current / Rated Current

 $T_K/T_N$  - Breakdown Torque / Rated Torque

 $T_A/T_N$  - Locked Rotor Torque / Rated Torque

**NOTE**

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-7

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 -	Brazil -	Global IEC IEC:60034-30-1
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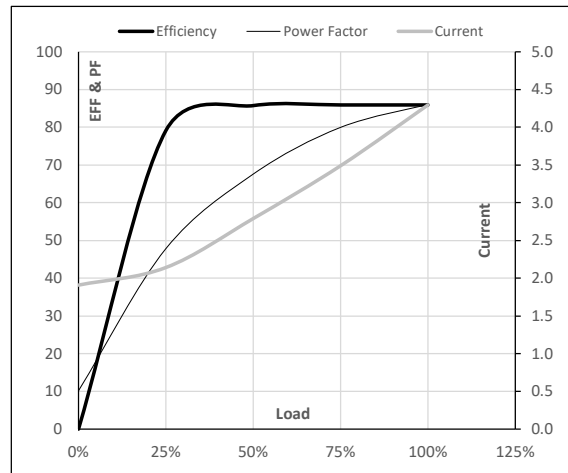
**Model No.** TCE2P21A5111GAA001

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	400	Y	50	2.2	3	4.3	2889	0.75	7.39	IE3	40	S1	1000	0.0029	29

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.9	2.1	2.8	3.5	4.3	
Torque	Nm	0.0	2.4	4.9	7.4	7.4	
Speed	r/min	3000	2973	2947	2919	2889	
Efficiency	%	0.0	79.1	85.7	85.9	85.9	
Power Factor	%	10.2	47.8	67.6	80.0	86.0	

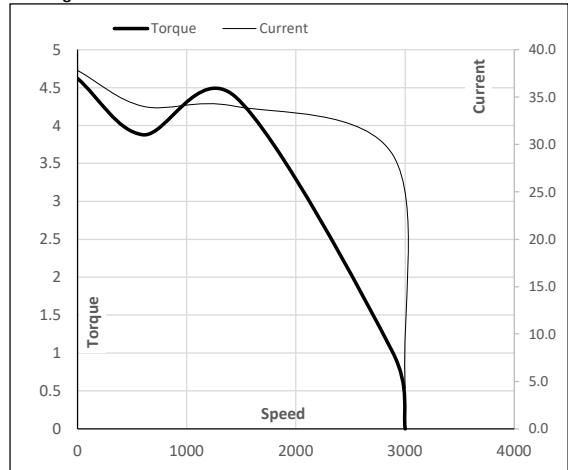
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	1445	2889	3000
Current	A	37.8	34.0	28.9	4.3	1.9
Torque	pu	4.6	3.9	4.4	1	0

**Starting Characteristics Chart**



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

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