

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCE1602A2121GAA001

Catalog No: TCE1602A2121GAA001

TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 215 HP, 3 Ph, 50 Hz, 400 V,  
1489 RPM, 315L Frame



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**RegalRexnord**

### Nameplate Specifications

Output HP	215 Hp	Output KW	160.0 kW
Frequency	50 Hz	Voltage	400 V
Current	276.3 A	Speed	1489 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.87
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6319	Opp Drive End Bearing Size	6319
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	4	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1317 mm	Frame Length	840 mm
Shaft Diameter	65.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0231500897

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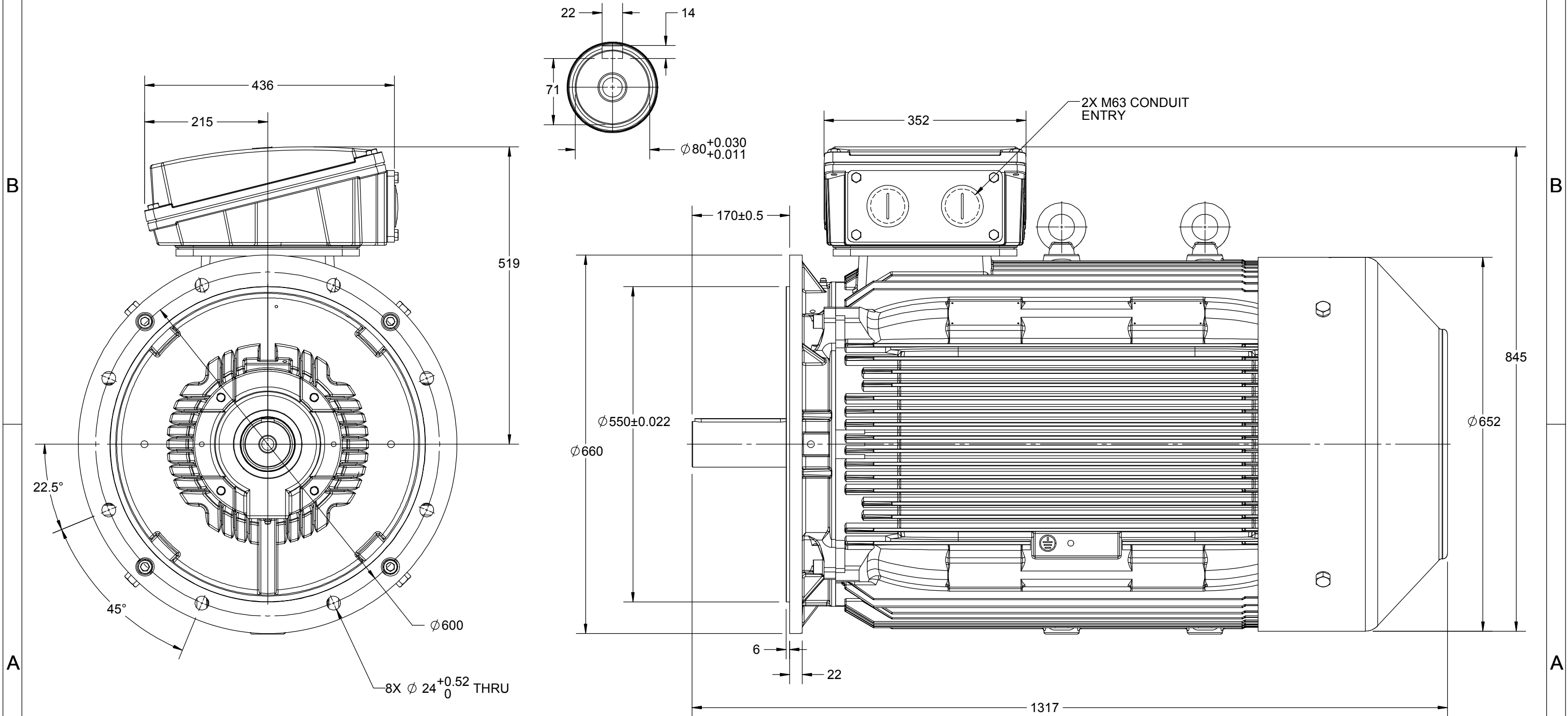
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# OUTLINE



DRAWING REVISION B	REVISION BY NIV	DATE 14/05/2019		DRAWN BY JOY	<div>marathon™ Motors</div>					
ECO ECO-0165600	APPROVED BY SR	DATE 14/05/2019		DATE 18/07/2014	DESCRIPTION  OUTLINE FR-315L-B5 MTG. MOTOR TYPE: TCA					
ECO DESCRIPTION MODEL UPDATED				APPROVED BY SBD						
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				THIRD ANGLE PROJECTION			SIZE B	DRAWING NUMBER 0231500897		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>	
	DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>	
	DATE <b>16/12/2016</b>	
APPROVED BY <b>SBD</b>	MATERIAL	
	PROCESS/FINISH	
DATE <b>16/12/2016</b>	SIZE <b>A</b>	
	DRAWING NUMBER <b>8442000085</b>	
THIRD ANGLE PROJECTION 		SHEET <b>1 OF 1</b>

**Model No.** TCE1602A2121GAA001

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]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	160	215.0	276.3	1489	1027.97	IE3	-	95.8	95.8	95.4	0.87	0.84	0.75	7.5	2.4	3.4

Motor type	TCE	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1239 kg
Duty	S1	Gross weight - approx.	1284 kg
Voltage variation *	± 10%	Motor inertia	5.0106 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.8 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	-15 to +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [ Class B ] K	tE time	10 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 1	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	6319 C3 / 6319 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 240mm <sup>2</sup> /2 x M63 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>A</sub>/T<sub>N</sub> - Locked Rotor Torque / Rated Torque

T<sub>K</sub>/T<sub>N</sub> - Breakdown 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	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC:60034-30-1		-	-	-	IEC:60034-30-1

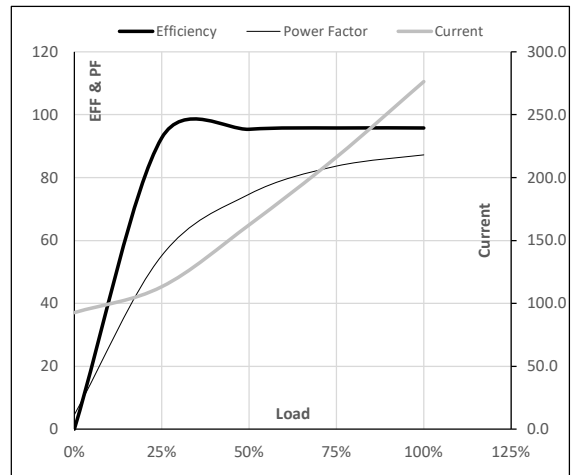
**Model No.** TCE1602A2121GAA001

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	160	215	276.3	1489	104.82	1027.97	IE3	40	S1	1000	5.0106	1239

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	92.7	113.2	162.4	216.2	276.3	
Torque	Nm	0.0	346.6	694.4	1043.4	1028.0	
Speed	r/min	1500	1497	1495	1492	1489	
Efficiency	%	0.0	92.6	95.4	95.8	95.8	
Power Factor	%	4.6	55.2	74.7	83.6	87.2	

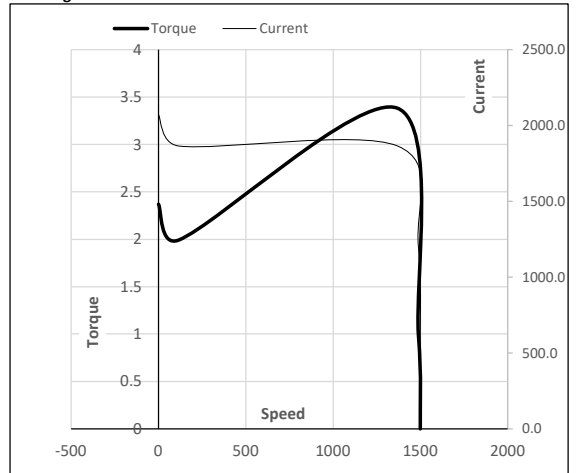
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	115	1370	1489	1500
Current	A	2072.5	1865.2	1205.5	276.3	92.7
Torque	pu	2.4	2.0	3.4	1	0

**Starting Characteristics Chart**



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

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