PRODUCT INFORMATION PACKET

Model No: TCE0903A2121GAA001
Catalog No: TCE0903A2121GAA001
TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 120 HP, 3 Ph, 50 Hz, 400 V, 992 RPM, 315M Frame

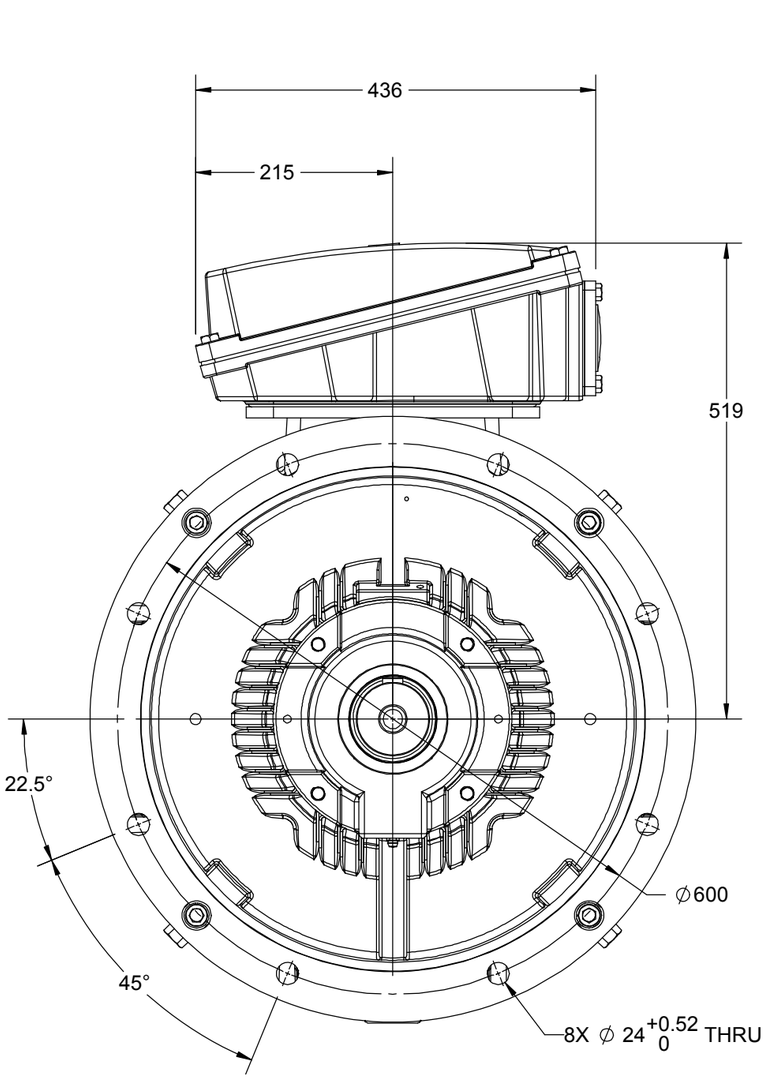
Nameplate Specifications

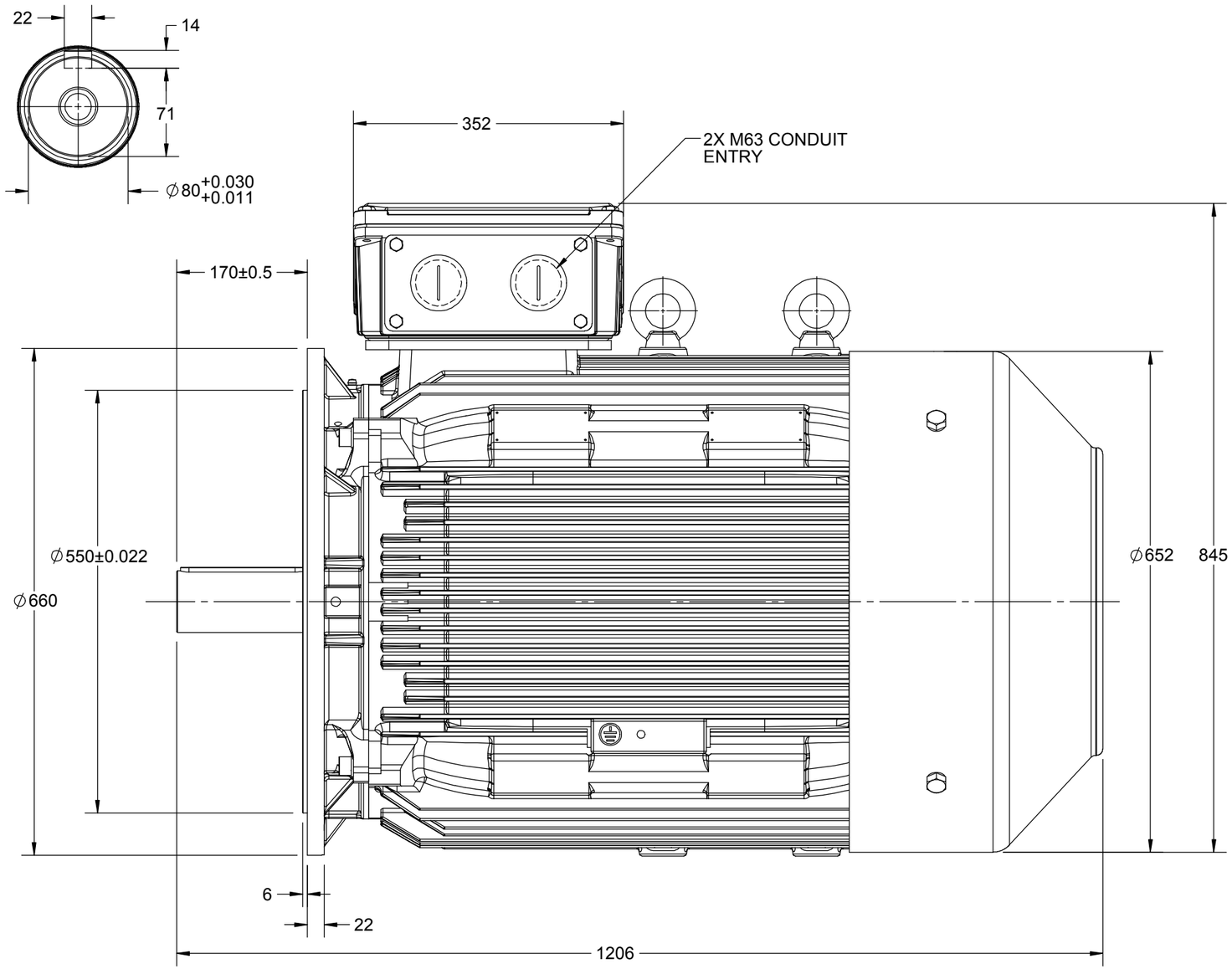
Output HP	120 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	400 V
Current	169.5 A	Speed	992 rpm
Service Factor	1	Phase	3
Efficiency	94.9 %	Power Factor	0.8
Duty	S1	Insulation Class	F
Frame	315M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	170	Opp Drive End Bearing Size	170
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	6	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	1206 mm	Frame Length	729 mm
Shaft Diameter	80.000 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Outline Drawing	0231500892	Connection Drawing	8442000085

OUTLINE

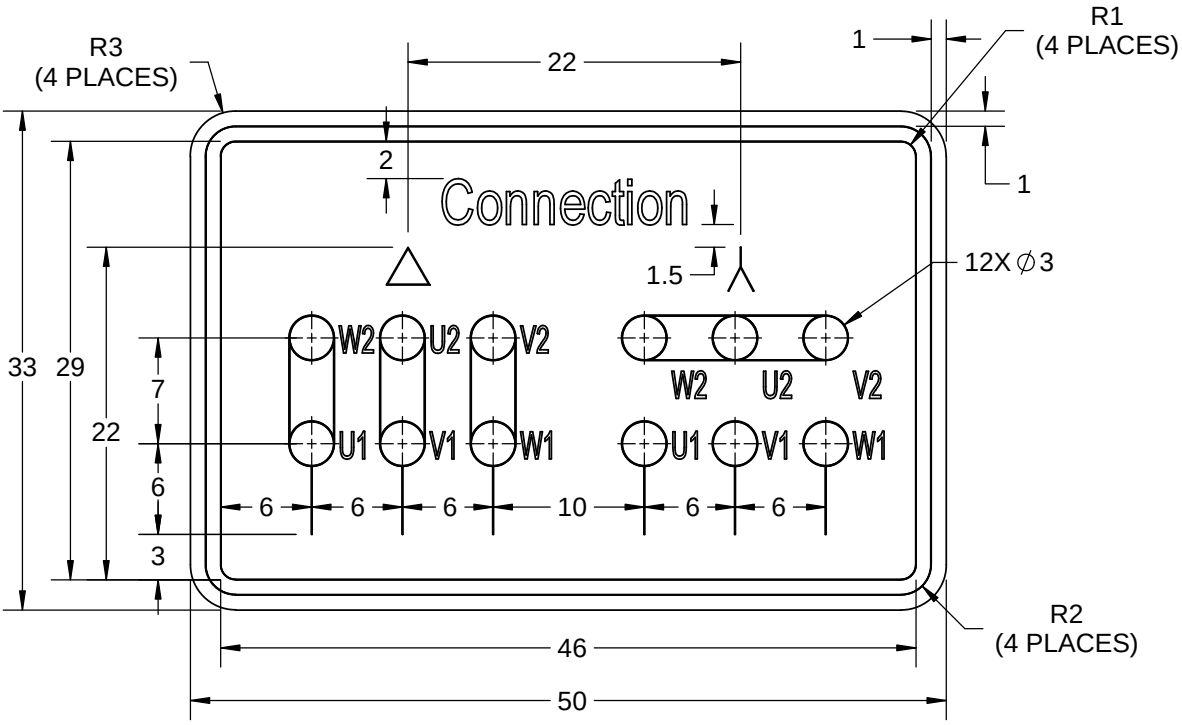




DRAWING REVISION B	REVISION BY NIV	DATE 14/05/2019		DRAWN BY JOY	marathon™ Motors
ECO ECO-0165600	APPROVED BY SR	DATE 14/05/2019		DATE 18/07/2014	
ECO DESCRIPTION MODEL UPDATED				APPROVED BY SBD	DESCRIPTION OUTLINE 315M-B5 MTG. MOTOR TYPE: TCA
				DATE 18/07/2014	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0231500892 / SHEET 1 OF 1

DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO	APPROVED BY	DATE
ECO-0116390	SBD	13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

GEOMENTRIC 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: SN	REGAL™ Regal Beloit America, Inc.	
DATE: 16/12/2016		
APPROVED BY: SBD	DESCRIPTION: CONN DIAGRAM-NAMEPLATE	
DATE: 16/12/2016		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: A / DRAWING NUMBER: 8442000085	SHEET: 1 OF 1

marathon® Motors

TerraMAX®

Model No. TCE0903A2121GAA001

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load 5/4FL	FL	3/4FL	1/2FL	PF at __ load FL	3/4FL	1/2FL	I_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
400	Δ	50	90	120.0	169.5	992	862.11	IE3	-	94.9	94.9	94.7	0.81	0.76	0.65	6.0	2.0	2.5

Motor type	TCE	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	315M	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-15 to +40	°C
Temperature rise (by resistance)	70 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	Ex eb	
Zone classification	Zone 2	
Gas group	IIC	
Temperature class	T3	
Rotor type	Aluminum Die cast	
Bearing type	Anti-friction ball	
DE / NDE bearing	6319 C3 / 6319 C3	
Lubrication method	Regreasable	
Type of grease	CHEVRON SRI-2 or Equivalent	

Degree of protection	IP 55	
Mounting type	IM B5	
Cooling method	IC 411	
Motor weight - approx.	961	kg
Gross weight - approx.	1006	kg
Motor inertia	4.6216	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.8	mm/s
Noise level (1meter distance from motor)	66	dB(A)
No. of starts hot/cold/Equally spread	2/3/4	
Starting method	DOL	
Type of coupling	Direct	
tE time	15	s
Direction of rotation	Bi-directional	
Standard rotation	Clockwise form DE	
Paint shade	RAL 7016	
Accessories		
Accessory - 1	PTC 150°C	
Accessory - 2	-	
Accessory - 3	-	
Terminal box position	TOP	
Maximum cable size/conduit size	1R x 3C x 240mm²/2 x M63 x 1.5	
Auxiliary terminal box	NA	

I_A/I_N - Locked Rotor Current / Rated Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - 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 Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	IEC:60034-30-1		-	-	-	IEC:60034-30-1

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marathon® Motors

TerraMAX®

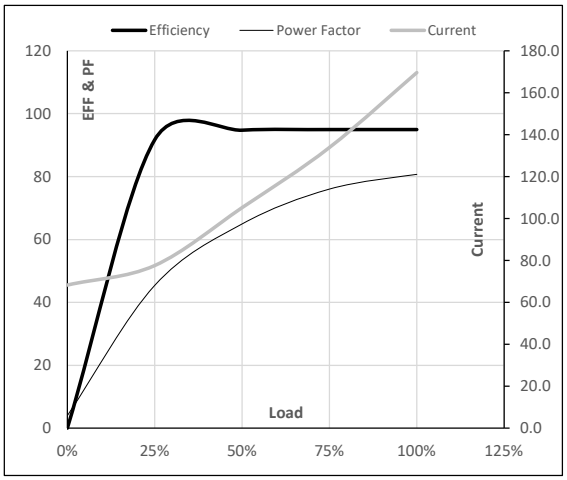
Model No. TCE0903A2121GAA001

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^2]	Weight [kg]
TEFC	400	Δ	50	90	120	169.5	992	87.91	862.11	IE3	40	S1	1000	4.6216	961

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	68.3	77.6	105.1	133.8	169.5	
Torque	Nm	0.0	290.3	581.9	874.6	862.1	
Speed	r/min	1000	998	996	994	992	
Efficiency	%	0.0	91.7	94.7	94.9	94.9	
Power Factor	%	4.0	45.4	64.9	76.0	80.8	

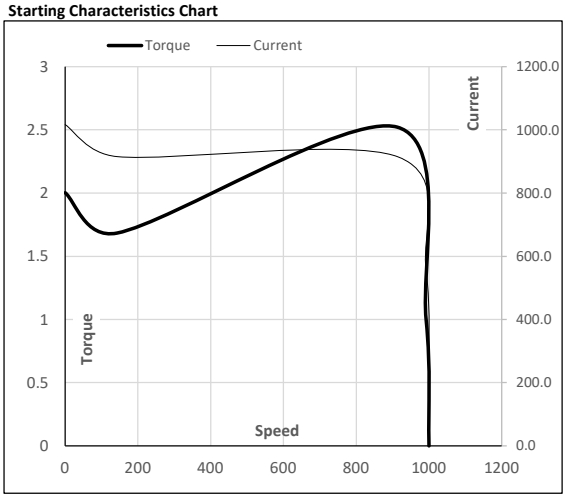
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	143	913	992	1000
Current	A	1017.1	915.4	553.6	169.5	68.3
Torque	pu	2.0	1.7	2.5	1	0

Starting Characteristics Chart



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

Issued By
Issued Date

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