

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCE1P51A5111GAA001

Catalog No: TCE1P51A5111GAA001

TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 2 HP, 3 Ph, 50 Hz, 400 V,
2892 RPM, 90S Frame



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RegalRexnord

Nameplate Specifications

Output HP	2 Hp	Output KW	1.5 kW
Frequency	50 Hz	Voltage	400 V
Current	3.1 A	Speed	2892 rpm
Service Factor	1	Phase	3
Efficiency	84.2 %	Power Factor	0.84
Duty	S1	Insulation Class	F
Frame	90S	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	307 mm	Frame Length	128 mm
Shaft Diameter	24.000 mm	Shaft Extension	50 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0209000426

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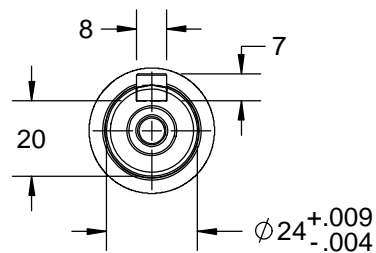
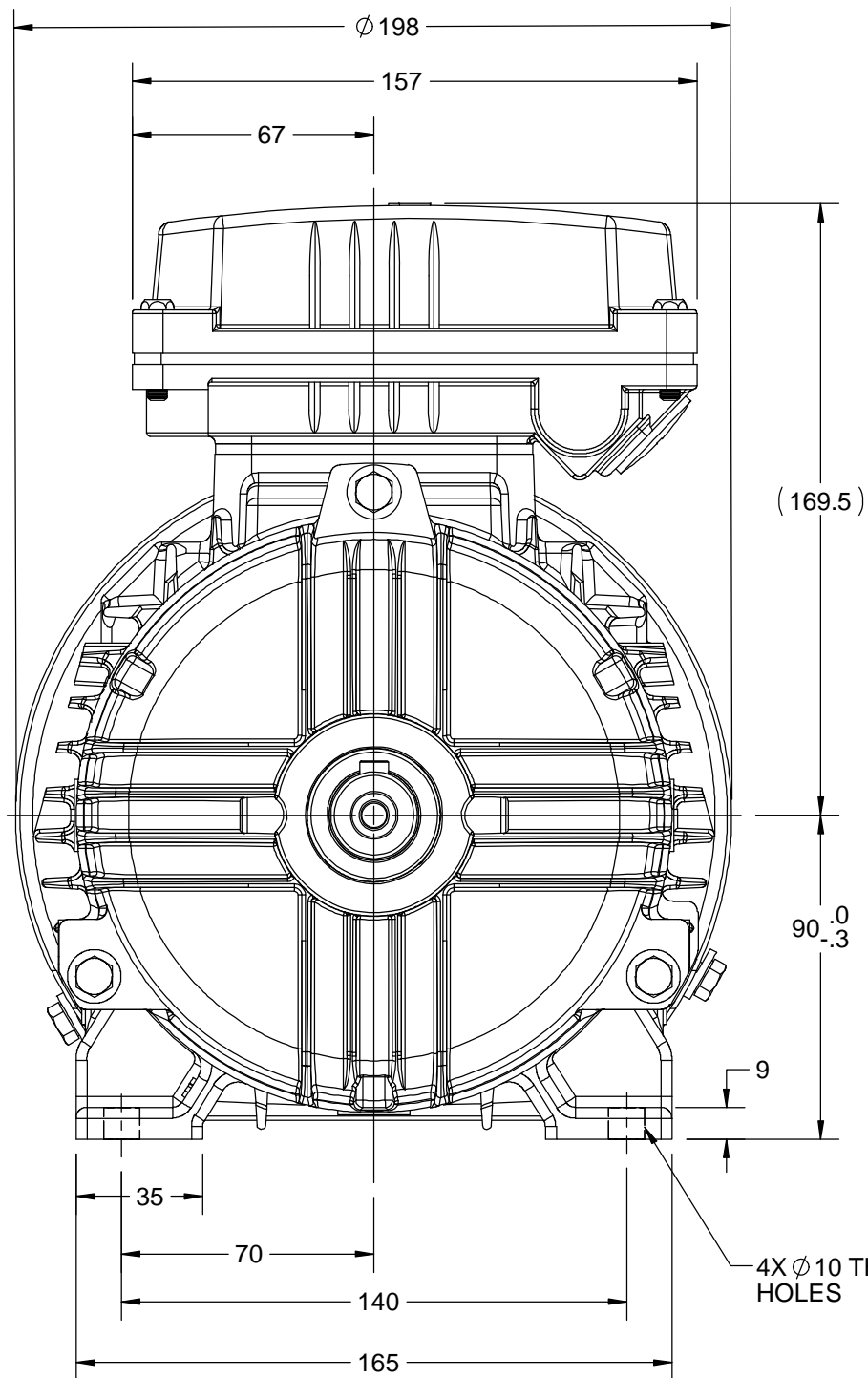
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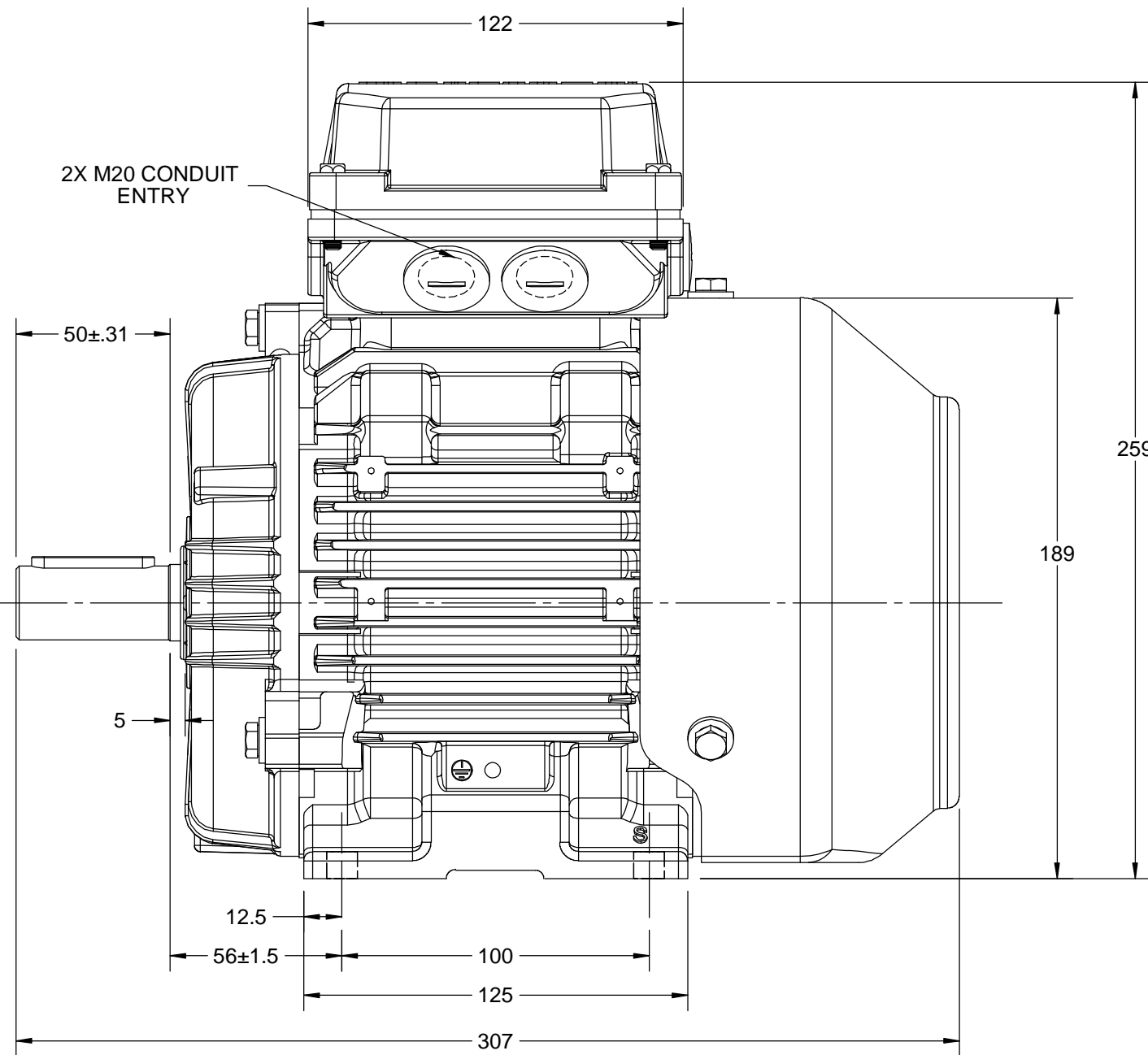
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2X M20 CONDUIT ENTRY



DRAWING REVISION D	REVISION BY I. RAMDAS	DATE 29/06/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 29/06/2018
ECO DESCRIPTION OUTLINE UPDATE AS PER 3D STRUCTURING		
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DRAWN BY RAF			
DATE 07/11/2014			
APPROVED BY KRK	DESCRIPTION OUTLINE		
DATE 07/11/2014	90-S FR- B3 MTG. MOTOR TYPE:TCA/QCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0209000426	SHEET 1 OF 1

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

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 SN	 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

Model No. TCE1P51A5111GAA001

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_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
400	Y	50	1.5	2.0	3.1	2892	4.92	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	8.3	4.2	4.2

Motor type	TCE	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	90S	Motor weight - approx.	25 kg
Duty	S1	Gross weight - approx.	26 kg
Voltage variation *	± 10%	Motor inertia	0.0023 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level (1meter 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	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 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 ² /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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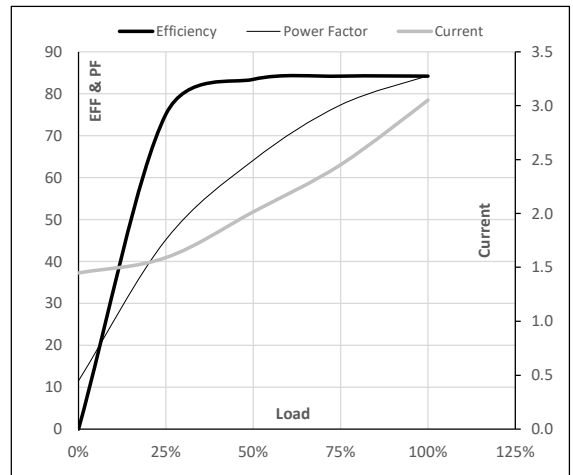
Model No. TCE1P51A5111GAA001

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	Y	50	1.5	2	3.1	2892	0.50	4.92	IE3	40	S1	1000	0.0023	25

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.5	1.6	2.0	2.5	3.1	
Torque	Nm	0.0	1.6	3.3	5.0	4.9	
Speed	r/min	3000	2973	2948	2921	2892	
Efficiency	%	0.0	75.1	83.4	84.2	84.2	
Power Factor	%	11.5	45.2	64.1	77.3	84.3	

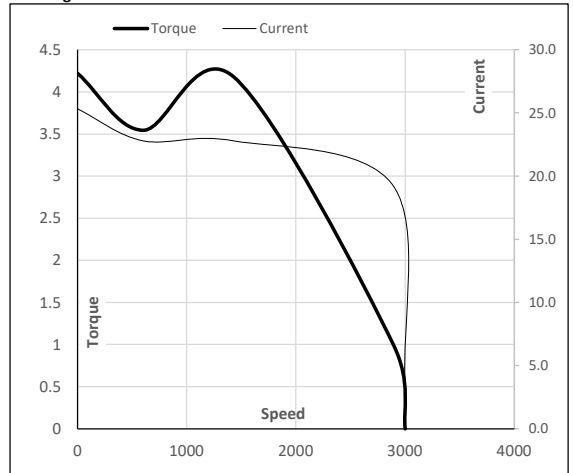
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	1430	2892	3000
Current	A	25.3	22.8	19.2	3.1	1.5
Torque	pu	4.2	3.5	4.2	1	0

Starting Characteristics Chart



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

Issued By

Issued Date