

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCM0153A2121GAC011

Catalog No: TCM0153A2121GAC011

TerraMAX® IE3, Mining Duty Motors, 15 kW, 3Ph, 6 Pole, 400/690V, B5, 50Hz, 180L Frame, TEFC



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RegalRexnord



Nameplate Specifications

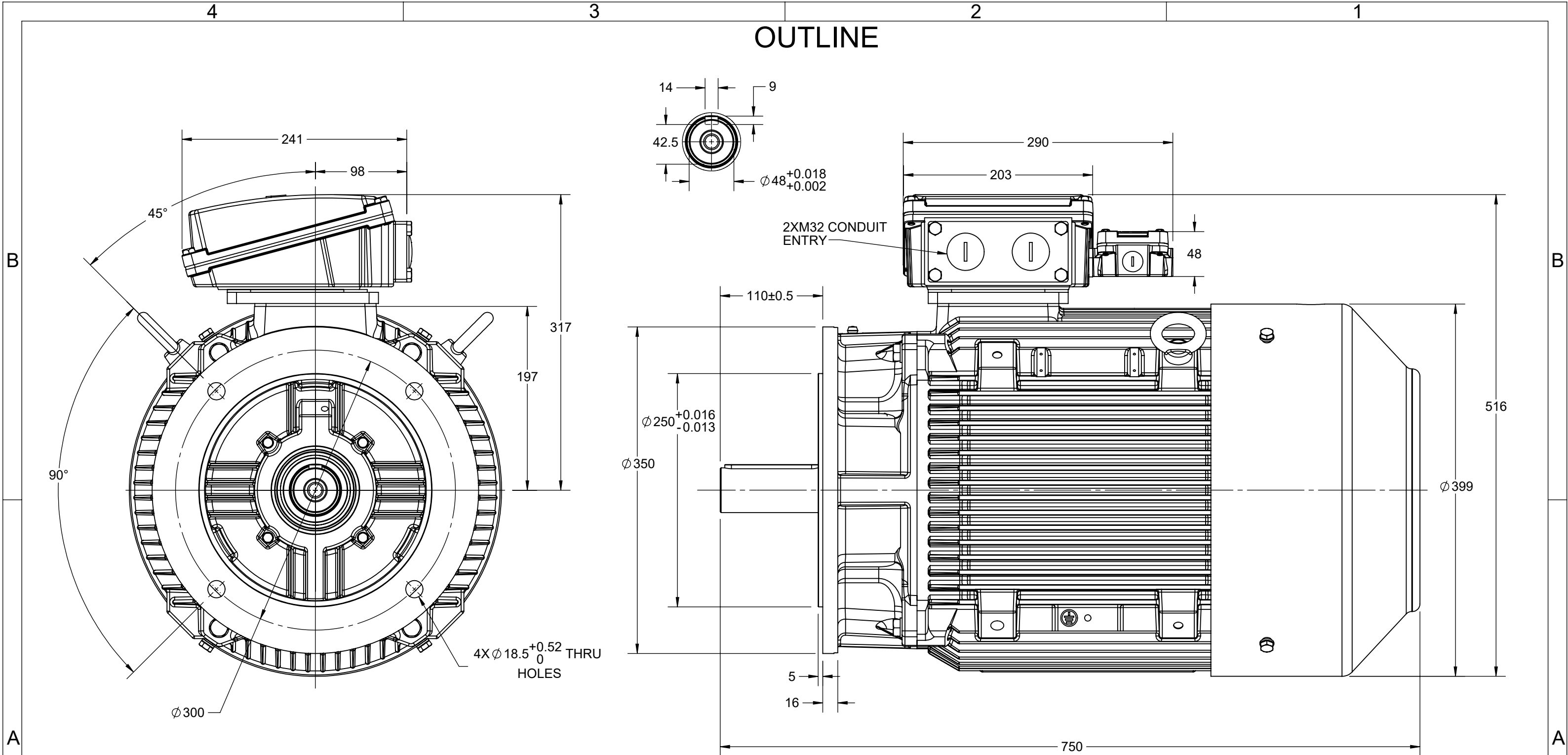
Output HP	20 Hp	Output KW	15.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	30.4 A	Speed	982 rpm
Service Factor	1	Phase	3
Efficiency	91.2 %	Power Factor	0.78
Duty	S1	Insulation Class	H
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
UL	NO	CSA	NO
CE	YES	IP Code	66
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

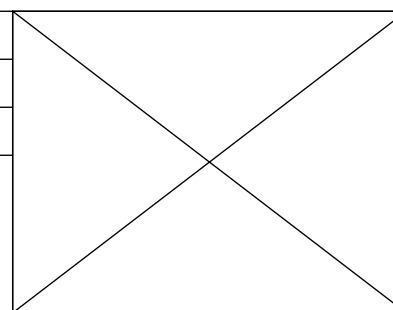
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	750 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0218000825

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OUTLINE



DRAWING REVISION B	REVISION BY BS	DATE 22/07/2022
ECO CR-0010295	APPROVED BY BISWA	DATE 22/07/2022
ECO DESCRIPTION		
DRAWING UPDATED		
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DRAWN BY BISWA		
DATE 27/08/2018		
APPROVED BY SBD	DESCRIPTION	
DATE 27/08/2018	OUTLINE	
REFERENCE	180L FR-B5 MTG. MOTOR TYPE: TCM	
	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0218000825
		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. TCM0153A2121GAC011

U (V)	Δ / Y Conn	f [Hz]	P		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]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	15	20	30.4	982	145.17	IE3	-	91.2	91.2	90.7	0.78	0.72	0.58	6.1	2.1	2.7

Motor type	TCM	Degree of protection	IP 66
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180L	Motor weight - approx.	234 kg
Duty	S1	Gross weight - approx.	254 kg
Voltage variation *	± 10%	Motor inertia	0.3035 kgm ²
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)	62 dB(A)
Service factor	1.15	No. of starts hot/cold/Equally spread	2/3/4
Insulation class	H	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)	20/40 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 2008
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	6311-C3 / 6211-C3	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 50mm ² /2 X M40 x 1.5
Type of grease	NA	Auxiliary terminal box	YES

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

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

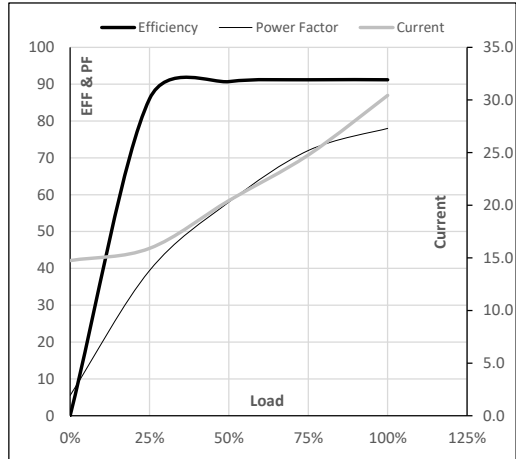
Model No. TCM0153A2121GAC011

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	15	20	30.4	982	14.80	145.17	IE3	40	S1	1000	0.3035	234

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	14.7	15.9	20.4	24.8	30.4	
Torque	Nm	0.0	35.8	71.9	108.3	145.2	
Speed	r/min	1000	996	991	987	982	
Efficiency	%	0.0	86.0	90.7	91.2	91.2	
Power Factor	%	5.5	39.4	58.0	72.0	78.0	

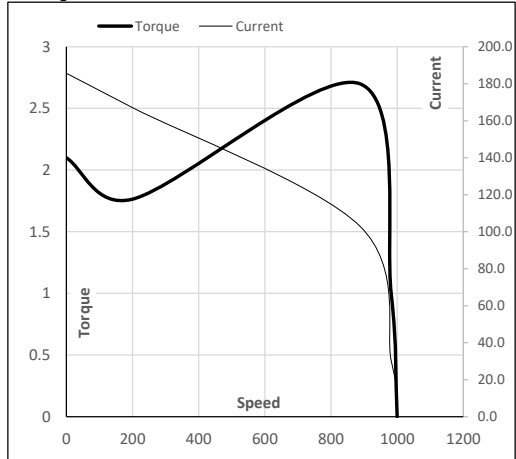
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	887	982	1000
Current	A	185.7	167.1	103.1	30.4	14.7
Torque	pu	2.1	1.8	2.7	1	0

Starting Characteristics Chart



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

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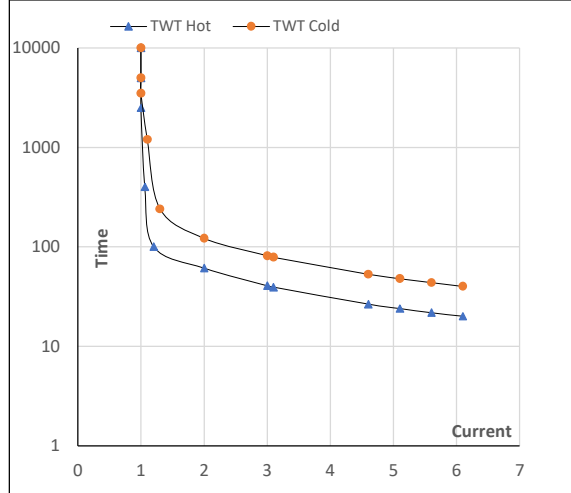
Model No. TCM0153A2121GAC011

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	15	20	30.4	982	14.80	145.17	IE3	40	S1	1000	0.3035	234

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	61	41	35	23	21	20
TWT Cold	s 10000	122	81	60	47	41	40
Current	pu	1	2	3	4	5	6

Thermal Characteristics Chart



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

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