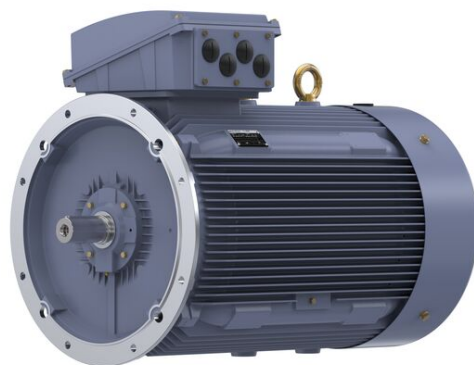


PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA1324A3121GACD01
Catalog No: TCA1324A3121GACD01
TerraMAX® Cast Iron Motor, 175 HP, 3 Ph, 50 Hz, 415 V, 355M Frame



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RegalRexnord

Nameplate Specifications

Phase	3	Output HP	175 Hp
Output KW	132.0 kW	Voltage	415 V
Speed	742 r/min	Service Factor	1
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	94 %
Ambient Temperature	50 °C	Frequency	50 Hz
Current	238.3 A	Power Factor	0.82
Duty	S1	Insulation Class	F
Drive End Bearing Size	6322	Opp Drive End Bearing Size	6322
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	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	1542 mm	Frame Length	1010 mm
Shaft Diameter	95 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0235501831

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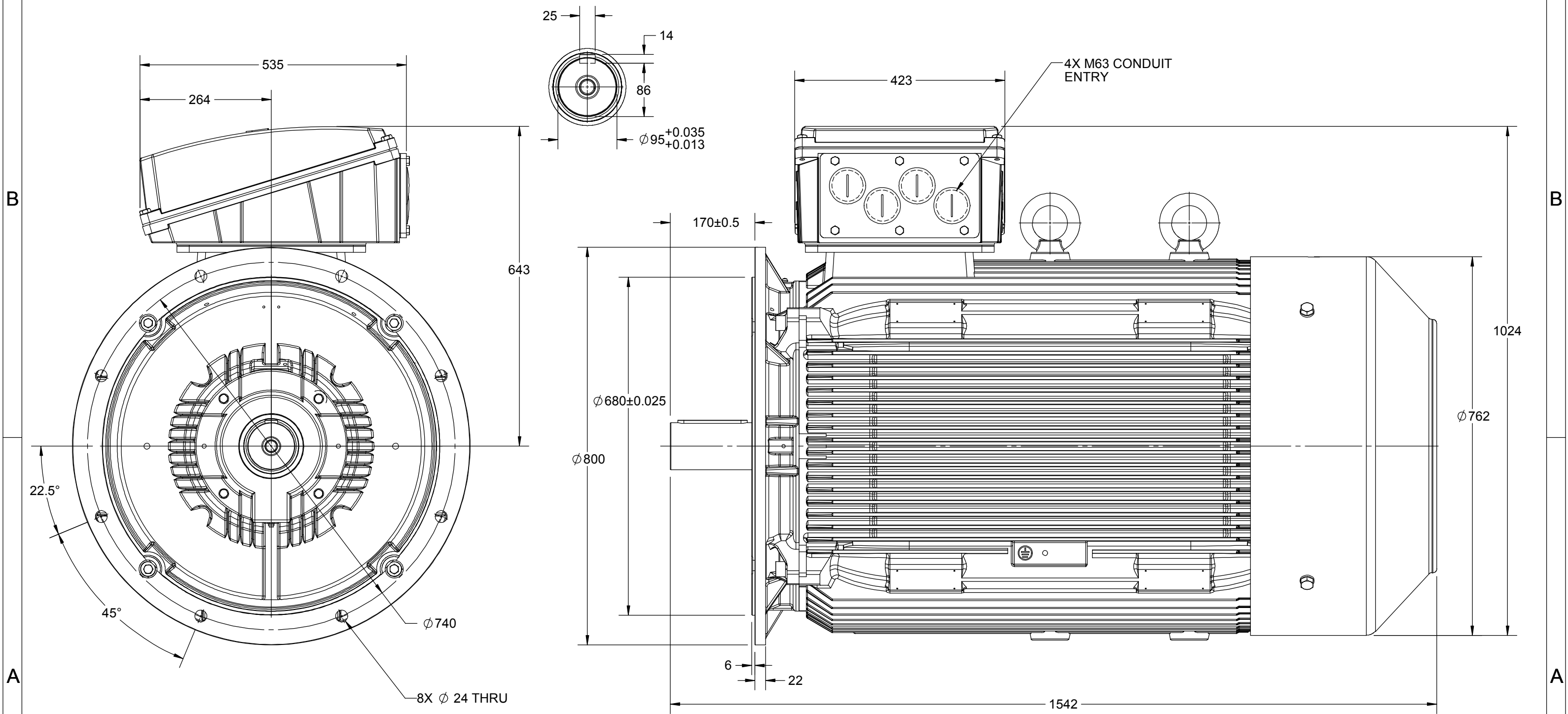
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OUTLINE



DRAWING REVISION B		REVISION BY NIV		DATE 08/05/2019			DRAWN BY JOY		<div>marathon™ Motors</div>			
ECO ECO-0165600		APPROVED BY SR		DATE 08/05/2019			DATE 18/07/2014					
ECO DESCRIPTION							APPROVED BY SBD		DESCRIPTION			
<div>MODEL UPDATED</div> <div>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</div>							DATE 18/07/2014		OUTLINE 355FR-B5 MTG. MOTOR TYPE: TCA			
							REFERENCE		MATERIAL		PROCESS/FINISH	
							THIRD ANGLE PROJECTION				SIZE B	

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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.		
	DESCRIPTION CONN DIAGRAM-NAMEPLATE		
	MATERIAL		PROCESS/FINISH
	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1

Model No. TCA1324A3121GACD01

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I _A /I _N	T _A /T _N	T _K /T _N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
415	Δ	50	132	175	238.2	742	1679.33	IE3	-	94	94	94.5	0.82	0.79	0.69	6.1	1.5	2.5

Motor type	TCA
Enclosure	TEFC
Frame Material	Cast Iron
Frame size	355M
Duty	S1
Voltage variation *	± 10%
Frequency variation *	± 5%
Combined variation *	10%
Design	N
Service factor	1.0
Insulation class	F
Ambient temperature	-20 to +50 °C
Temperature rise (by resistance)	70 [Class B] K
Altitude above sea level	1000 meter
Hazardous area classification	NA
Zone classification	NA
Gas group	NA
Temperature class	NA
Rotor type	Aluminum die cast
Bearing type	Anti-friction ball bearing
DE / NDE bearing	6322 C3 / 6322 C3
Lubrication method	Regreasable
Type of grease	Shell Gadus S5 V100 or Equivalent

Degree of protection	IP 55
Mounting type	IM B5
Cooling method	IC 411
Motor weight - approx.	1631 kg
Gross weight - approx.	1676 kg
Motor inertia	8.9257 kgm ²
Load inertia	Customer to Provide
Vibration level	2.8 mm/s
Noise level (1meter distance from motor)	65 dB(A)
No. of starts hot/cold/Equally spread	2/3/4
Starting method	DOL
Type of coupling	Direct
LR withstand time (hot/cold)	15/30 s
Direction of rotation	Bi-directional
Standard rotation	Clockwise form DE
Paint shade	RAL 5014
Accessories	
Accessory - 1	-
Accessory - 2	-
Accessory - 3	-
Terminal box position	TOP
Maximum cable size/conduit size	1R x 3C x 300mm ² /4 x M63 x 1.5
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

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 discrepancies between calculated and name plate values.

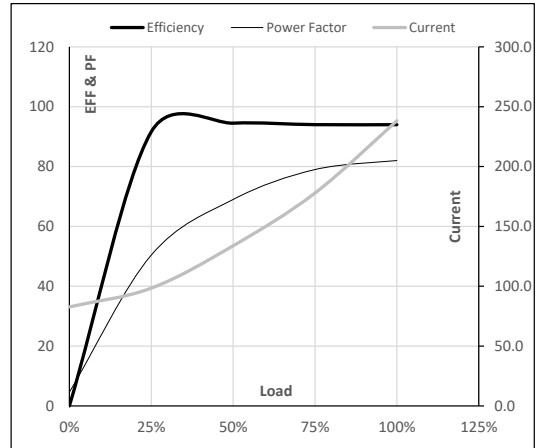
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

Model No. TCA1324A3121GACD01

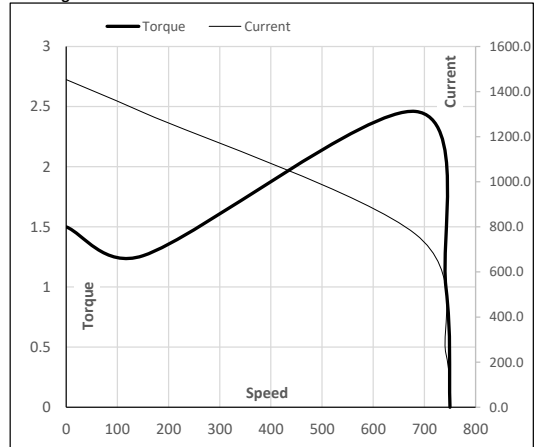
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Δ	50	132	175	238.2	742	171.24	1679.33	IE3	50	S1	1000	8.9257	1631

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	82.7	98.4	133.8	177.9	238.2	
Torque	Nm	0.0	416.6	835.2	1256.0	1679.3	
Speed	r/min	750	748	746	745	742	
Efficiency	%	0.0	91.6	94.5	94.0	94.0	
Power Factor	%	4.6	50.4	69.0	79.0	82.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	683	742	750
Current	A	1453.3	1308.0	767.6	238.2	82.7
Torque	pu	1.5	1.3	2.5	1	0

Starting Characteristics Chart

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

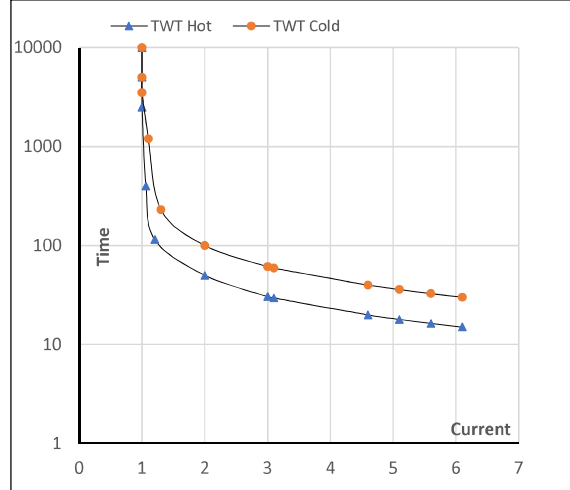
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Model No. TCA1324A3121GACD01

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	415	Δ	50	132	175	238.2	742	171.12	1679.33	IE3	50	S1	1000	8.9257	1631

Motor Speed Torque Data

Load		FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s	10000	50	31	25	18	17	15
TWT Cold	s	10000	100	61	50	37	34	30
Current	pu	1	2	3	4	5	5.5	6.1

Thermal Characteristics Chart

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

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