PRODUCT INFORMATION PACKET

Model No: TCA2503A3113GACD01
Catalog No: TCA2503A3113GACD01
250.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1000 RPM, 415 V, 355L Frame, TEFC
Cast Iron IE3 Efficiency Motors

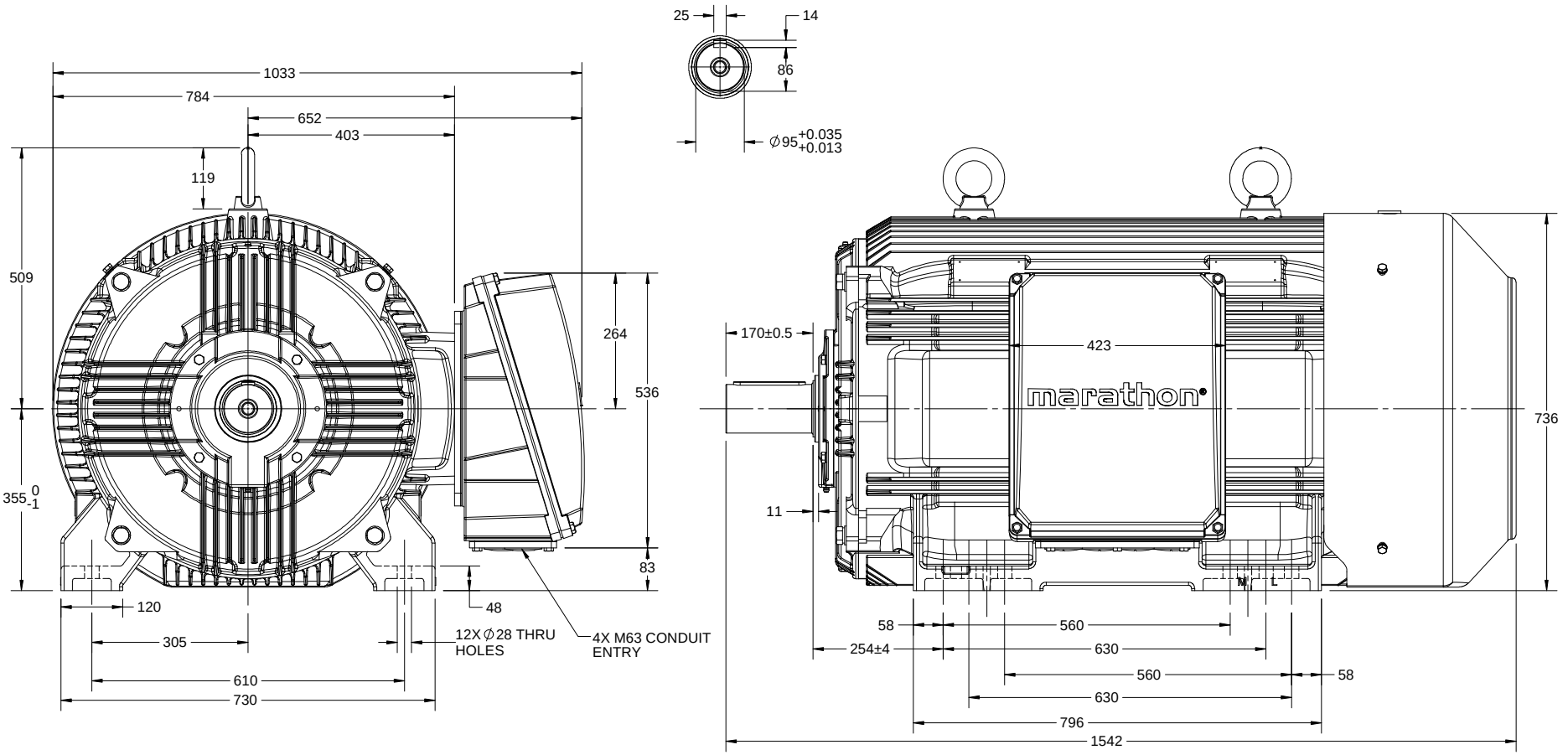
marathon® Motors

Nameplate Specifications

Output HP	335 Hp	Output KW	250.0 kW
Frequency	50 Hz	Voltage	415 V
Current	427.1 A	Speed	992 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	355L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6322
Opp Drive End Bearing Size	6322	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

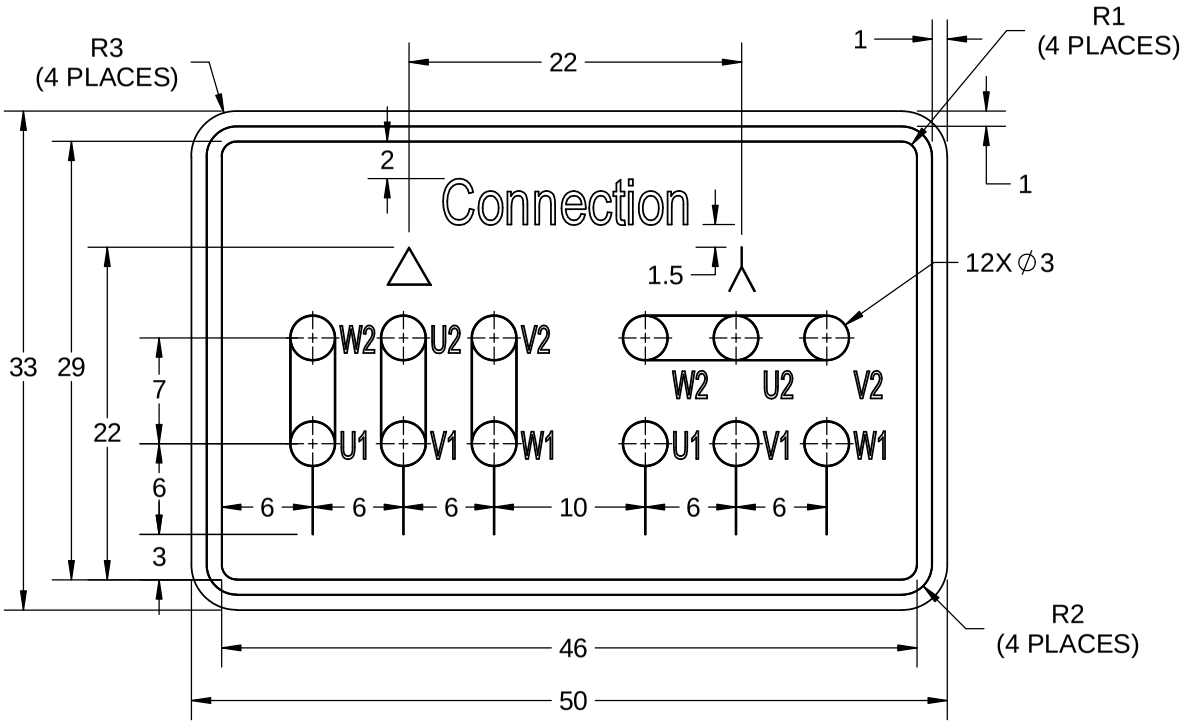
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1542 mm	Frame Length	1010 mm
Shaft Diameter	95 mm	Shaft Extension	170 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0235502296	Connection Drawing	8442000085



DRAWING REVISION B	REVISION BY VS	DATE 09/07/2018	DRAWN BY SKM	marathon Motors
ECO ECO-0148344	APPROVED BY SBD	DATE 09/07/2018	DATE 11/08/2017	
ECO DESCRIPTION MODEL UPDATED			APPROVED BY JAY	DESCRIPTION OUTLINE 355L FR-4~8P-B3 MTG. TCA/QCA-RHS TB
			DATE 11/08/2017	
			REFERENCE	MATERIAL / PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0235502296 / 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. TCA2503A3113GACD01

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]
415	Δ	50	250	335	427.1	992	2406.21	IE3	-	95.8	95.8	95.9	0.85	0.81	0.71	6.7	2.3	2.7

Motor type	TCA		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM B3	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	355L		Motor weight - approx.	1929	kg
Duty	S1		Gross weight - approx.	1974	kg
Voltage variation *	± 10%		Motor inertia	12.1563	kgm^2
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)	70	dB(A)
Service factor	1.0		No. of starts hot/cold/Equally spread	2/3/4	
Insulation class	F		Starting method	DOL	
Ambient temperature	-20 to +50	°C	Type of coupling	Direct	
Temperature rise (by resistance)	70 [Class B]	K	LR withstand time (hot/cold)	15/30	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 5014	
Gas group	NA		Accessories		
Temperature class	NA		Accessory - 1	-	
Rotor type	Aluminum Die cast		Accessory - 2	-	
Bearing type	Anti-friction ball bearing		Accessory - 3	-	
DE / NDE bearing	6322 C3 / 6322 C3		Terminal box position	RHS	
Lubrication method	Regreasable		Maximum cable size/conduit size	1R x 3C x 300mm^2/4 x M63 x 1.5	
Type of grease	Shell Gadus S5 V100 or Equivalent		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

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combine 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	-	-	-

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marathon® Motors

TerraMAX®

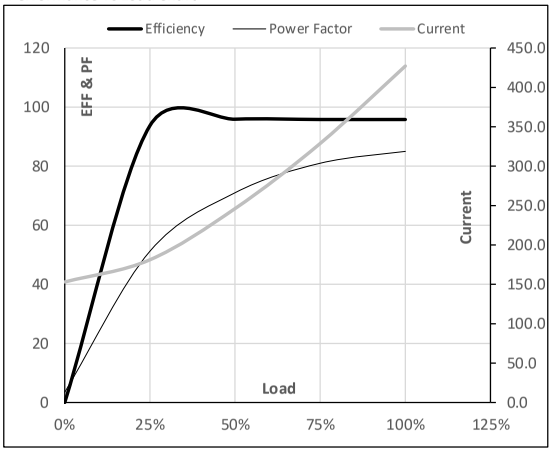
Model No. TCA2503A3113GACD01

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	250	335	427.1	992	245.37	2406.21	IE3	50	S1	1000	12.1563	1929

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	153.0	181.2	246.2	328.8	427.1	
Torque	Nm	0.0	597.7	1197.8	1800.5	2406.2	
Speed	r/min	1000	998	996	994	992	
Efficiency	%	0.0	93.7	95.9	95.8	95.8	
Power Factor	%	3.5	51.2	71.0	81.0	85.0	

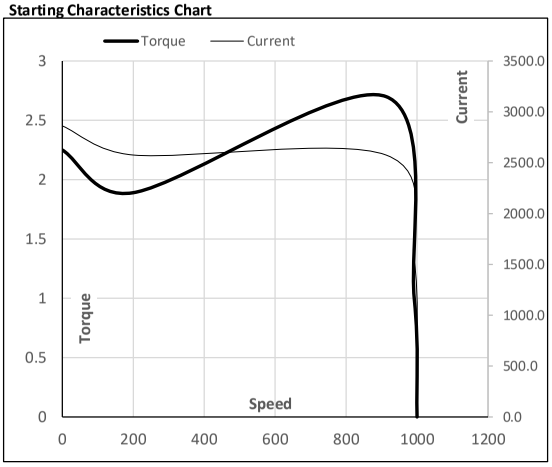
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	913	992	1000
Current	A	2861.8	2575.6	1535.0	427.1	153.0
Torque	pu	2.3	1.9	2.7	1	0

Starting Characteristics Chart



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

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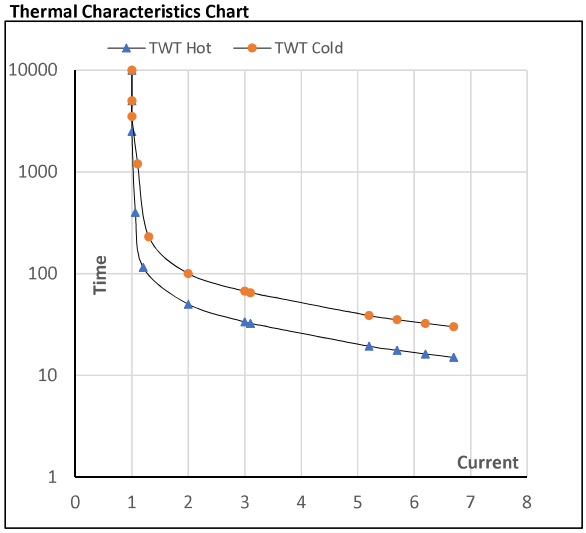
Model No. TCA2503A3113GACD01

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	250	335	427.1	992	245.19	2406.21	IE3	50	S1	1000	12.1563	1929

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	50	34	30	25	18	15
TWT Cold	s	10000	100	67	60	50	37	30
Current	pu	1	2	3	4	5	5.5	6.7

Thermal Characteristics Chart



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