

PRODUCT INFORMATION PACKET

Model No: TCA1854A3133GACD01

Catalog No: TCA1854A3133GACD01

Cast Iron Motor, 250 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 355M Frame, TEFC



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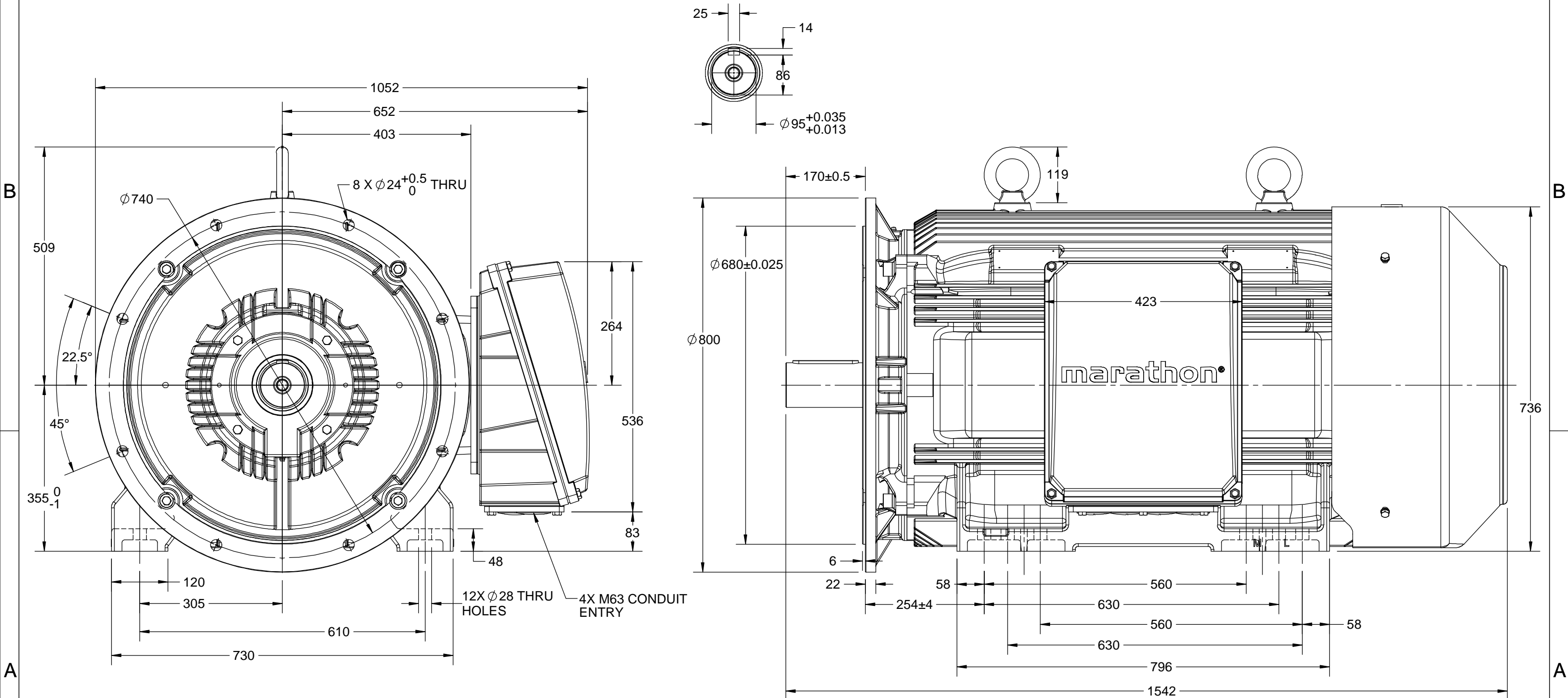
Nameplate Specifications

Output HP	250 Hp	Output KW	185.0 kW
Frequency	50 Hz	Voltage	415 V
Current	328.2 A	Speed	742 rpm
Service Factor	1	Phase	3
Efficiency	94.5 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
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

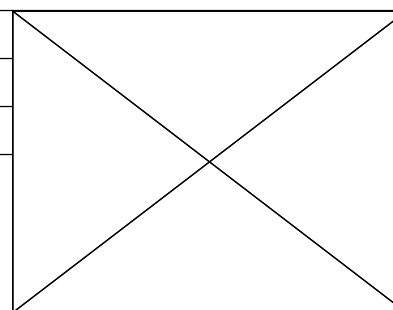
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	Rotation	Bi-Directional
Mounting	B35	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	0235502333	Connection Drawing	8442000085

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DRAWING REVISION B	REVISION BY VS	DATE 05/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 05/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY GSR	marathon™ Motors	
DATE 15/011/2017		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 15/011/2017	355L FR-4~8P-B35 MTG. TCA/QCA-RHS TB	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0235502333
		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.		
			DESCRIPTION CONN DIAGRAM-NAMEPLATE
	DATE 16/12/2016	MATERIAL	
	APPROVED BY SBD	PROCESS/FINISH	
	DATE 16/12/2016	SIZE A	DRAWING NUMBER 8442000085
REFERENCE	THIRD ANGLE PROJECTION 		

Model No. TCA1854A3133GACD01

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 _R /T _N [pu]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	185	250	328.1	742	2399.88	IE3	-	94.5	94.5	95.1	0.83	0.81	0.72	6	1.5	2.4

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 B35
Cooling method	IC 411
Motor weight - approx.	1960 kg
Gross weight - approx.	2005 kg
Motor inertia	12.0967 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	RHS
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_R/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 combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

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



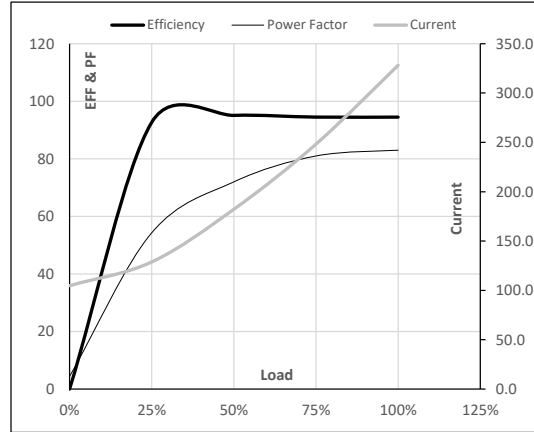
Model No. TCA1854A3133GACD01

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	185	245.0	328.1	742	244.72	2399.88	IE3	50	S1	1000	12.0967	1960

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	104.8	128.8	182.2	248.2	328.1	
Torque	Nm	0.0	595.2	1193.3	1794.6	2399.9	
Speed	r/min	750	748	746	744	742	
Efficiency	%	0.0	92.7	95.1	94.5	94.5	
Power Factor	%	4.4	54.3	72.0	81.0	83.0	

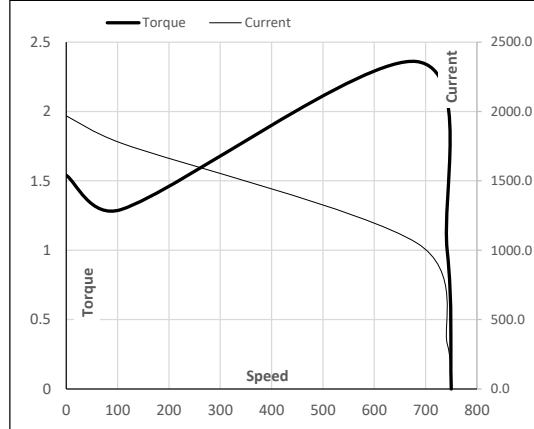
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	107	683	742	750
Current	A	1968.9	1772.0	1053.0	328.1	104.8
Torque	pu	1.5	1.3	2.4	1	0

Starting Characteristics Chart



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

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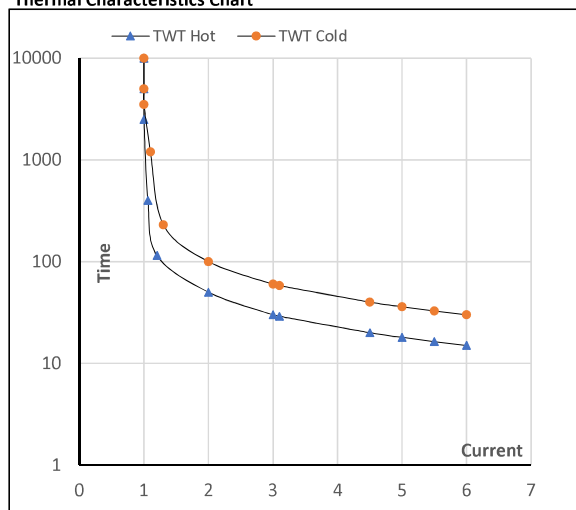
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TEFC	415	Δ	50	185	245	328.1	742	244.55	2399.88	IE3	50	S1	1000	12.0967	1960

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s 10000	50	30	25	18	16	15	
TWT Cold	s 10000	100	60	50	36	33	30	
Current	pu	1	2	3	4	5	5.5	6

Thermal Characteristics Chart



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

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