

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0113A3133GACD01

Catalog No: TCA0113A3133GACD01

11.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1000 RPM, 415 V, 160L Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL

Nameplate Specifications

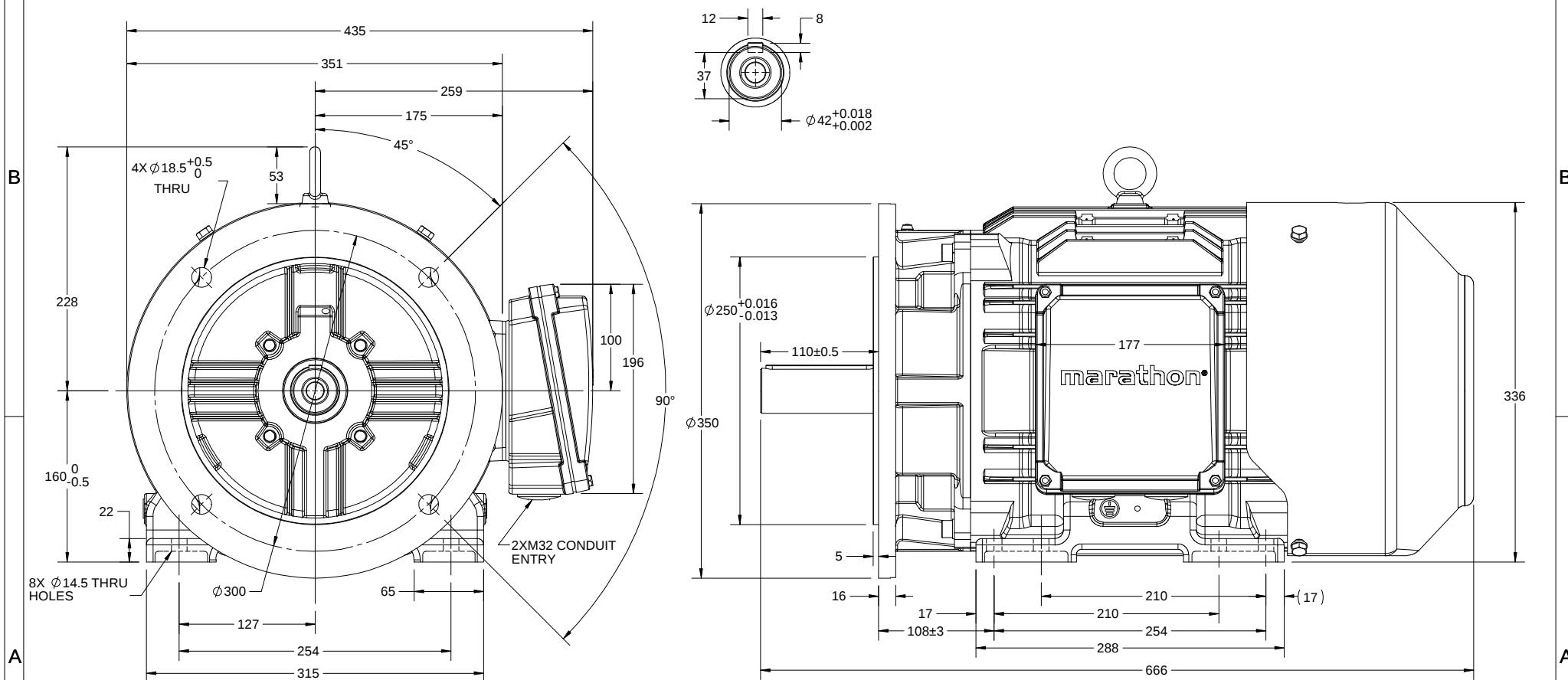
Output HP	15 Hp	Output KW	11.0 kW
Frequency	50 Hz	Voltage	415 V
Current	21.5 A	Speed	979 rpm
Service Factor	1	Phase	3
Efficiency	90.3 %	Power Factor	0.79
Duty	S1	Insulation Class	F
Frame	160L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6309
Opp Drive End Bearing Size	6209	UL	No
CSA	No	CE	Yes
IP Code	55		

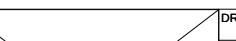
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	666 mm	Frame Length	298 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0216000814	Connection Drawing	8442000085

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OUTLINE



DRAWING REVISION B	REVISION BY BISWA	DATE 27/07/2018		DRAWN BY SN		OUTLINE 160LFR B35-MTG.TYPE:TCA/QCA-RHS TB PROCESS/FINISH	
ECO ECO-0148344	APPROVED BY SBD	DATE 27/07/2018		DATE 19/08/2016			
DRAWING UPDATED				APPROVED BY SBD			DESCRIPTION
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				REFERENCE			SIZE DRAWING NUMBER 0216000814

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.

DRAWN BY		SN	REGAL™ Regal Beloit America, Inc. DESCRIPTION CONN DIAGRAM-NAMEPLATE	
DATE		16/12/2016		
APPROVED BY		SBD		
DATE		16/12/2016		
REFERENCE		MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION		SIZE	DRAWING NUMBER	SHEET
		A	8442000085	1 OF 1

8WD.442.2017

Model No. TCA0113A3133GACD01

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 _b /T _N [pu]
415	Δ	50	11	15	21.5	979	109.21	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.9	2.1	2.7

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160L	Motor weight - approx.	175 kg
Duty	S1	Gross weight - approx.	195 kg
Voltage variation *	± 10%	Motor inertia	0.1946 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)	61 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	6309-2Z / 6209-2Z	Terminal box position	RHS
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

I_a/I_N - Locked Rotor Current / Rated CurrentT_b/T_N - Breakdown Torque / Rated TorqueT_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	-	-	-

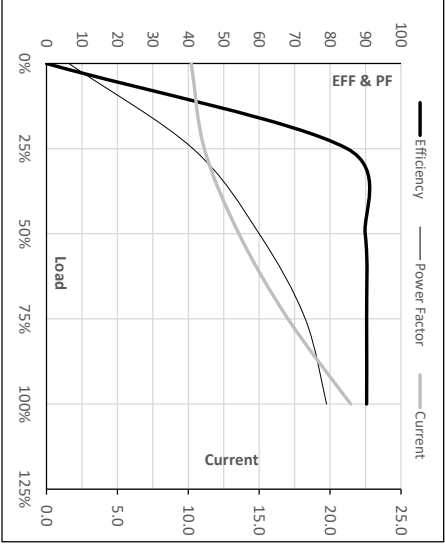
Model No. TCA0113A3133GACD01

Enclosure	U	Δ / Y	f	P	P	I	n	T	T	IE	Amb	Duty	Elevation	Inertia	Weight
(V)	Com	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]	S0	S1	[m]	[kg·m ²]	[kg]
TEFC	415	Δ	50	11	15	21.5	979	11.14	109.21	IE3	50	S1	1000	0.1946	175

Motor Load Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	10.2	11.1	13.6	17.0	21.5
Torque	Nm	0.0	26.9	54.0	81.4	109.2
Speed	r/min	1000	995	990	984	979
Efficiency	%	0.0	84.8	89.9	90.3	90.3
Power Factor	%	6.3	41.3	60.0	73.0	79.0

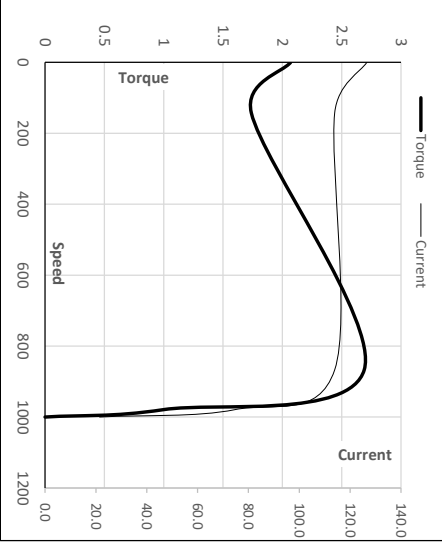
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	143	867	979	1000
Current	A	126.6	113.9	74.7	21.5	10.2
Torque	pu	2.1	1.7	2.7	1	0

Starting Characteristics Chart



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

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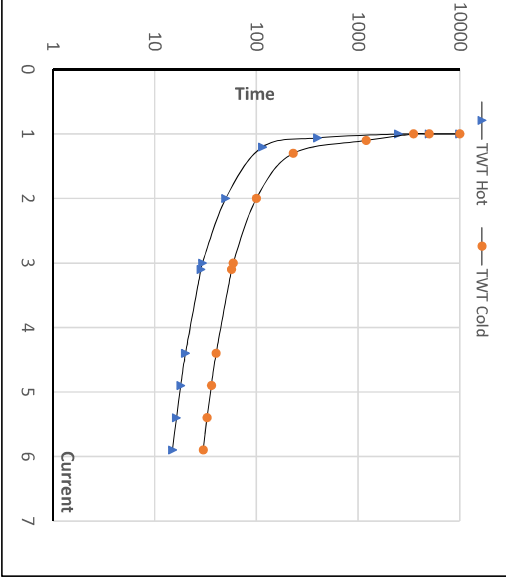
Model No. TCA0113A3133GACD01

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	11	15	21.5	979	11.13	109.21	IE3	50	S1	1000	0.1946	175

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	59	50	35	31	30
Current	pu	1	2	3	4	5	5.5	5.9

Thermal Characteristics Chart



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

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