

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0372A3111GACD01

Catalog No: TCA0372A3111GACD01

37.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1500 RPM, 415 V, 225S Frame, TEFC
Cast Iron IE3 Efficiency Motors



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Nameplate Specifications

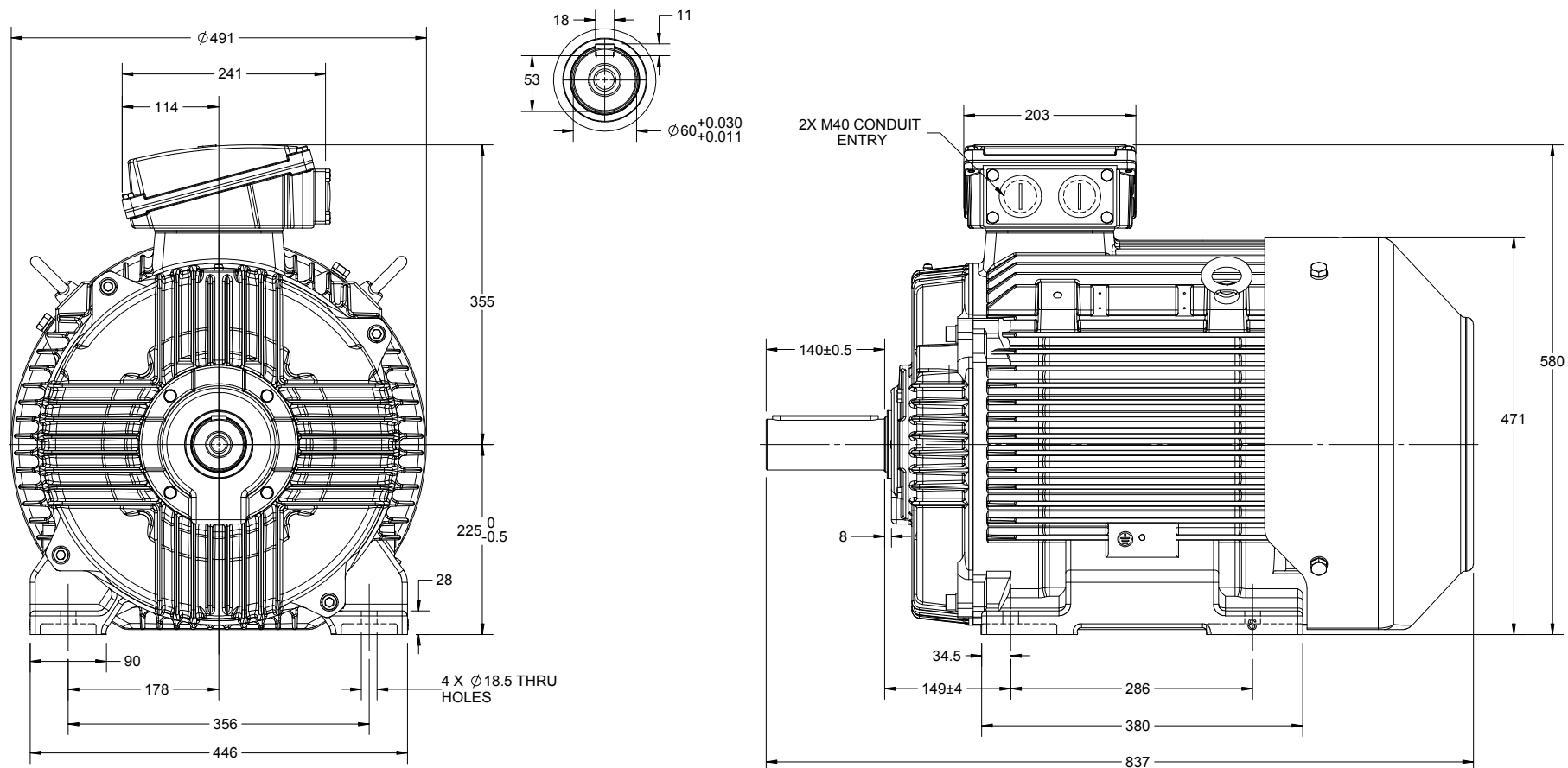
Output HP	50 Hp	Output KW	37.0 kW
Frequency	50 Hz	Voltage	415 V
Current	64.5 A	Speed	1484 rpm
Service Factor	1	Phase	3
Efficiency	93.9 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	225S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6313
Opp Drive End Bearing Size	6213	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	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	837 mm	Frame Length	400 mm
Shaft Diameter	60 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0222500473

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OUTLINE



DRAWING REVISION C	REVISION BY NIV	DATE 16/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 16/04/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SDV		 Regal Beloit America, Inc.	
DATE 18/07/2014			
APPROVED BY SBD			
DATE 18/07/2014			
REFERENCE		DESCRIPTION OUTLINE 225-S FR-B3 MTG MOTOR TYPE: TCA	
		MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION 		SIZE B	DRAWING NUMBER 0222500473
			SHEET 1 OF 1

Model No. TCA0372A3111GACD01

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	37	50	64.5	1484	239.99	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	7.3	2.4	3.1

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	225S	Motor weight - approx.	381 kg
Duty	S1	Gross weight - approx.	411 kg
Voltage variation *	± 10%	Motor inertia	0.6683 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)	65 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	6313 C3 / 6213 C3	Terminal box position	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 50mm ² /2 x M40 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	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	-	-	-



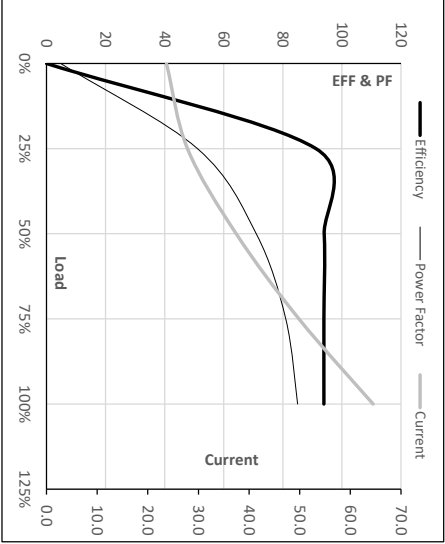
Model No. TCA0372A3111GACD01

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]
TFC	415	Δ	50	37	50	64.5	1484	24.47	239.99	IE3	50	S1	1000	0.6683	381

Motor Speed Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	23.7	27.8	37.5	49.9	64.5
Torque	Nm	0.0	59.5	119.3	179.5	240.0
Speed	r/min	1500	1496	1492	1488	1484
Efficiency	%	0.0	91.2	94.0	93.9	93.9
Power Factor	%	4.8	51.1	71.0	81.0	85.0

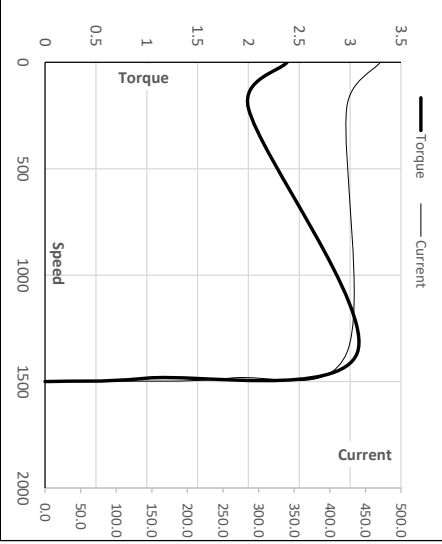
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	214	1365	1484	1500
Current	A	470.8	423.7	259.5	64.5	23.7
Torque	pu	2.4	2.0	3.1	1	0

Starting Characteristics Chart



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

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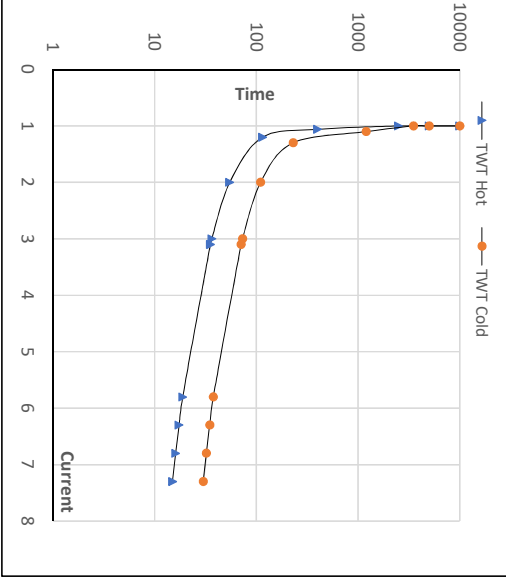
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Enclosure	U [V]	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Δ	50	37	50	64.5	1484	24.46	239.99	IE3	50	S1	1000	0.6683	381

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	55	37	30	25	20	15
TWT Cold	s 10000	110	73	65	50	40	30
Current	pu 1	2	3	4	5	5.5	7.3

Thermal Characteristics Chart



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

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