

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCA0373A3113GACD01

Catalog No: TCA0373A3113GACD01

37.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1000 RPM, 415 V, 250M Frame, TEFC  
Cast Iron IE3 Efficiency Motors



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**REGAL**

### Nameplate Specifications

Output HP	50 Hp	Output KW	37.0 kW
Frequency	50 Hz	Voltage	415 V
Current	67.3 A	Speed	987 rpm
Service Factor	1	Phase	3
Efficiency	93.3 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	250M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6314
Opp Drive End Bearing Size	6314	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	941 mm	Frame Length	460 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0225000595	Connection Drawing	8442000085

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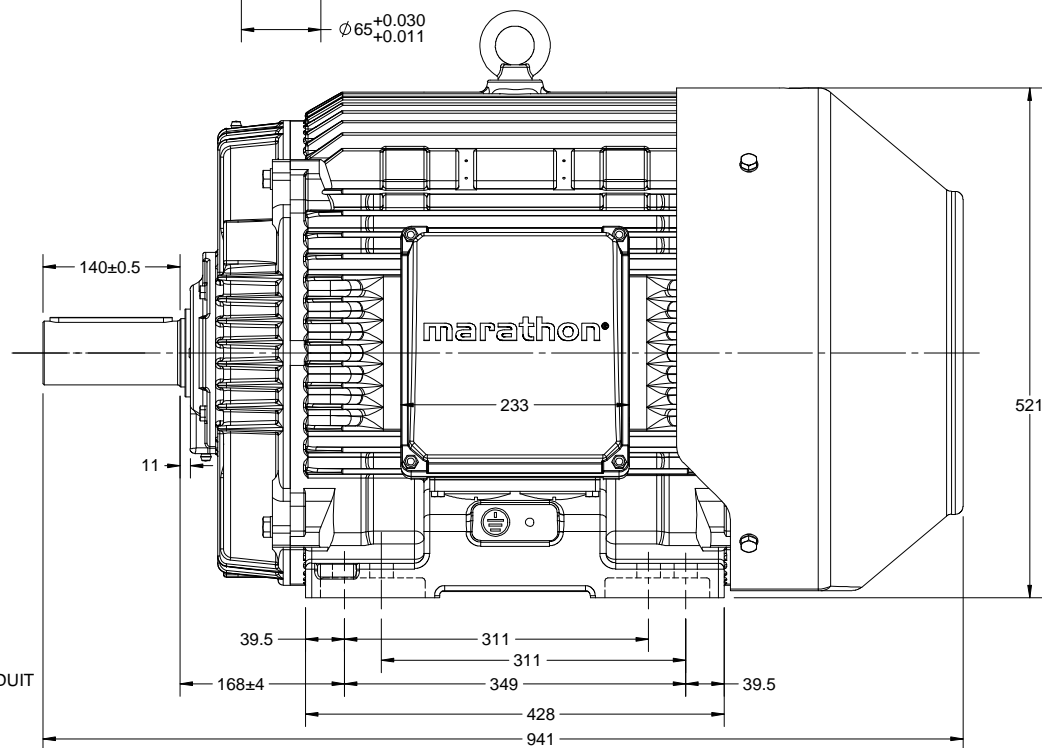
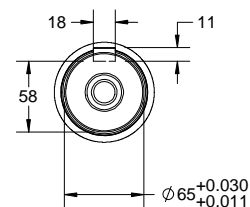
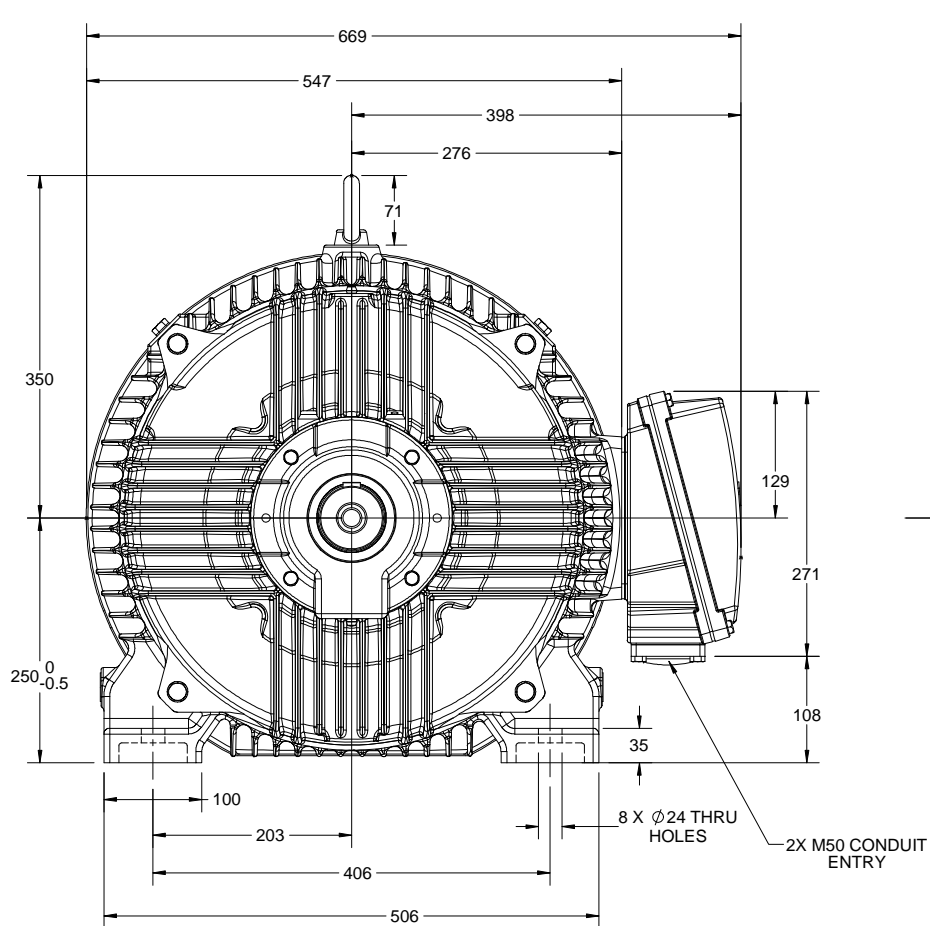
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DRAWING REVISION B	REVISION BY VS	DATE 08/08/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 08/08/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY LK	 Regal Beloit America, Inc.	
DATE 18/08/2016		
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b> 250M FR-4-8P-B3 MTG. TYPE: TCA/QCA-RHS TB	
DATE 18/08/2016		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0225000595
		SHEET 1 OF 1

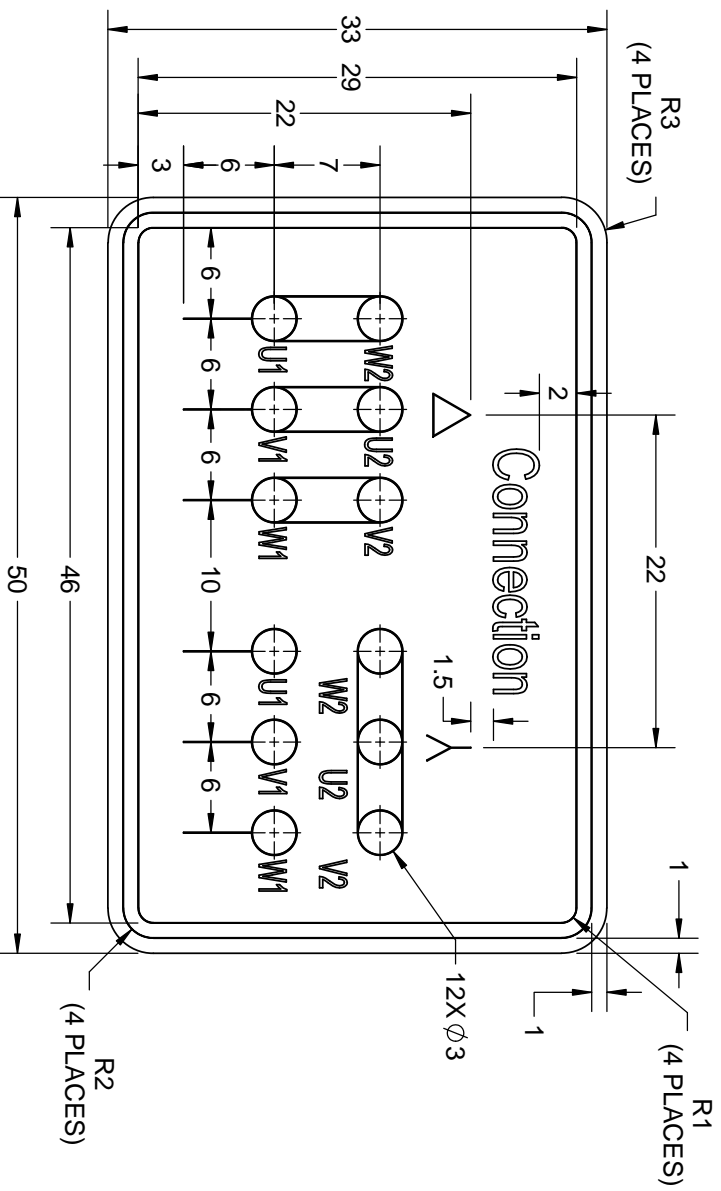
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GEOMETRIC TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



- 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.

<div><div></div></div>		DRAWN BY		SN	
		DATE		16/12/2016	
		APPROVED BY		SBD	
		DATE		16/12/2016	
		REFERENCE			
		DESCRIPTION		<div><div>REGAL<sup>TM</sup></div><div>Regal Beloit America, Inc.</div></div>	
		CONN DIAGRAM-NAMEPLATE			
MATERIAL		PROCESS/FINISH			
THIRD ANGLE PROJECTION					
SIZE	DRAWING NUMBER				
A	84420000085		SHEET 1 OF 1		

**Model No.** TCA0373A3113GACD01

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 <sub>a</sub> /I <sub>N</sub> [pu]	T <sub>a</sub> /T <sub>N</sub> [pu]	T <sub>b</sub> /T <sub>N</sub> [pu]
415	Δ	50	37	50	67.3	987	360.66	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.9	2.4	3.0

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	250M	Motor weight - approx.	499 kg
Duty	S1	Gross weight - approx.	534 kg
Voltage variation *	± 10%	Motor inertia	1.6820 kgm <sup>2</sup>
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)	12/25 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	6314 C3 / 6314 C3	Terminal box position	RHS
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 95mm <sup>2</sup> /2 x M50 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	NA

I<sub>a</sub>/I<sub>N</sub> - Locked Rotor Current / Rated CurrentT<sub>b</sub>/T<sub>N</sub> - Breakdown Torque / Rated TorqueT<sub>a</sub>/T<sub>N</sub> - 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	-	-	-

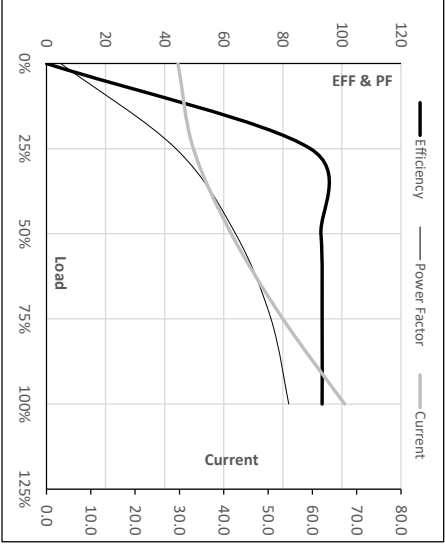
Model No. TCA0373A3113GACD01

Enclosure	U [V]	$\Delta$ / Y Com	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m <sup>2</sup> ]	Weight [kg]
TEFC	415	$\Delta$	50	37	50	67.3	987	36.78	360.66	IE3	50	S1	1000	1.682	499

Motor Speed Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	29.7	33.1	41.7	53.3	67.3
Torque	Nm	0.0	89.3	179.1	269.6	360.7
Speed	r/min	1000	997	994	991	987
Efficiency	%	0.0	89.3	92.9	93.3	93.3
Power Factor	%	4.8	43.8	64.0	76.0	82.0

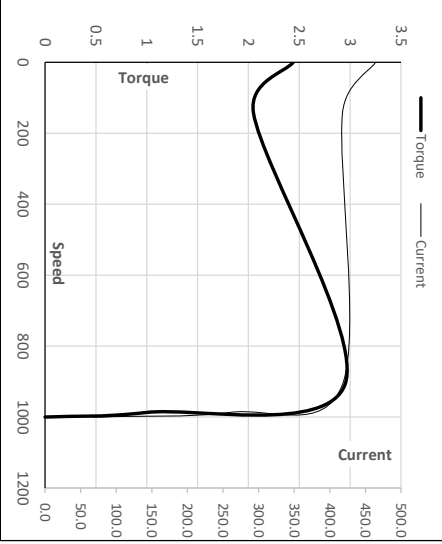
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	143	908	987	1000
Current	A	464.3	417.8	259.2	67.3	29.7
Torque	pu	2.4	2.0	3.0	1	0

Starting Characteristics Chart



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

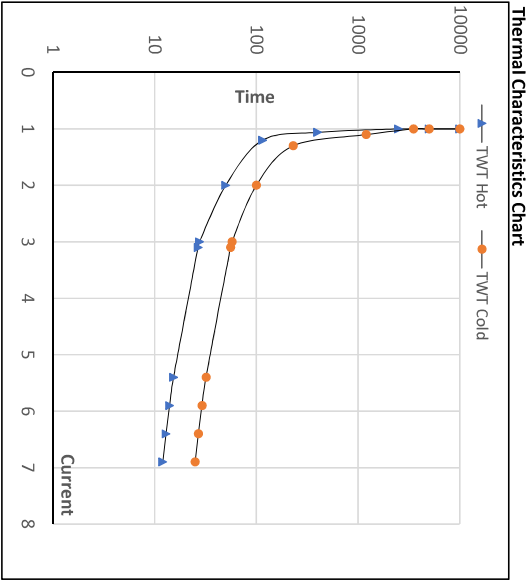
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Model No. TCA0373A3113GACD01

Enclosure	U (V)	$\Delta$ / 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 <sup>2</sup> ]	Weight [kg]
TEFC	415	$\Delta$	50	37	50	67.3	987	36.75	360.66	IE3	50	S1	1000	1.6820	499

Motor Speed Torque Data

Load	FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR	
TWT Hot	s	10000	50	28	25	20	15	12
TWT Cold	s	10000	100	58	23	40	30	25
Current	pu	1	2	3	4	5	5.5	6.9



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

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