

# PRODUCT INFORMATION PACKET

Model No: TCA2002A3113GACD01

Catalog No: TCA2002A3113GACD01

200.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1500 RPM, 415 V, 315L Frame, TEFC  
Cast Iron IE3 Efficiency Motors





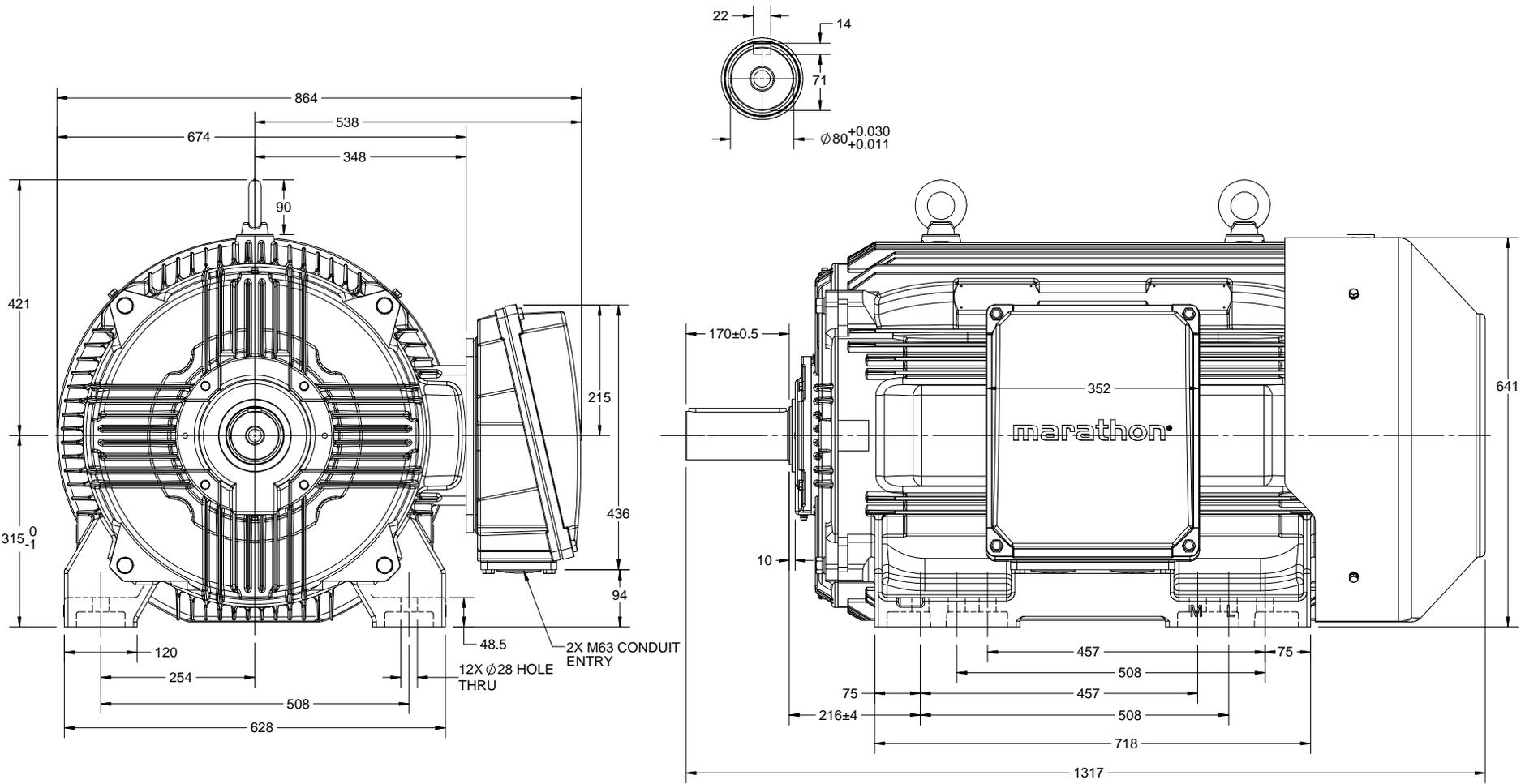
### Nameplate Specifications

Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	415 V
Current	329.4 A	Speed	1489 rpm
Service Factor	1	Phase	3
Efficiency	96 %	Power Factor	0.88
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6319
Opp Drive End Bearing Size	6319	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	1317 mm	Frame Length	840 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0231501363	Connection Drawing	8442000085

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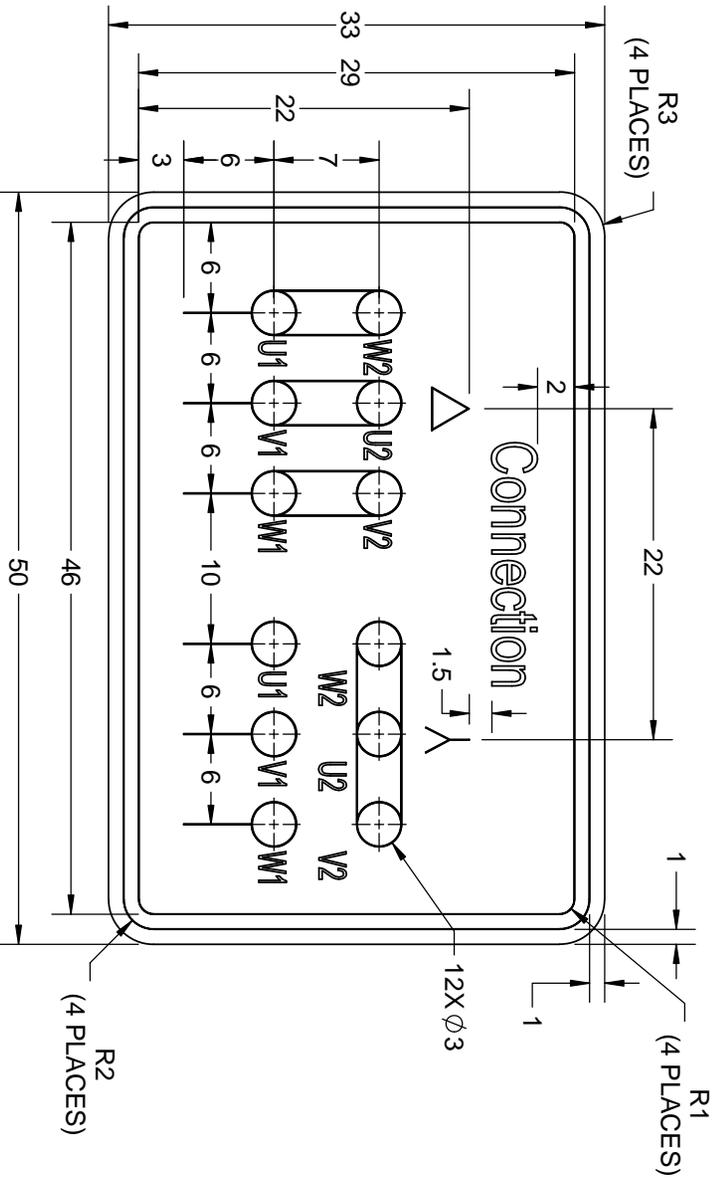
DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SKM	
DATE 08/11/2017	
APPROVED BY JAY	
DATE 08/11/2017	
REFERENCE	DESCRIPTION OUTLINE 315L FR 4-8P B3 MTG. TCA/QCA-RHS TB
THIRD ANGLE PROJECTION	MATERIAL
SIZE B	PROCESS/FINISH
DRAWING NUMBER 0231501363	SHEET 1 OF 1

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DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
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		DESCRIPTION <b>REGAL</b> ™ Regal Beloit America, Inc. CONN DIAGRAM-NAMEPLATE	
DATE 16/12/2016	APPROVED BY SBD	MATERIAL	PROCESS/FINISH
DATE 16/12/2016	REFERENCE	SIZE A	DRAWING NUMBER 8442000085
THIRD ANGLE PROJECTION		SIZE A	DRAWING NUMBER 8442000085
		SHEET 1 OF 1	

Model No. TCA2002A3113GACD01

U (V)	Δ / Y Conn	f (Hz)	P		I			T (Nm)	IE Class	% EFF at __ load				PF at __ load			I <sub>L</sub> /I <sub>N</sub> [pu]	T <sub>M</sub> /T <sub>N</sub> [pu]	T <sub>L</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]	[A]	[RPM]	5/4FL			FL	3/4FL	1/2FL	FL	3/4FL	1/2FL				
415	Δ	50	200	270	329.4	1489	1291.43		IE3	-	96	96	95.7	0.88	0.85	0.76	7.5	2.5	3.3

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1248 kg
Duty	S1	Gross weight - approx.	1293 kg
Voltage variation *	± 10%	Motor inertia	5.0623 kgm <sup>2</sup>
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)	69 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	6319 C3 / 6319 C3	Terminal box position	RHS
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 240mm <sup>2</sup> /2 x M63 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	NA

I<sub>L</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>M</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>L</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	-	-	-

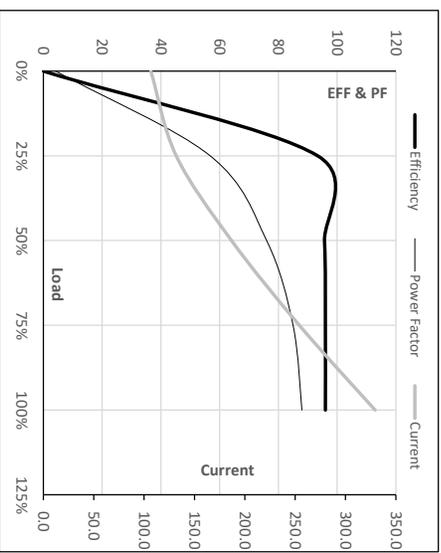
Model No. TCA2002A3113GACD01

Enclosure	U [V]	$\Delta$ /Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb Temp [°C]	Duty	Elevation [m]	Inertia [kg·m <sup>2</sup> ]	Weight [kg]
TFC	415	$\Delta$	50	200	270	329.4	1489	131.69	1291.43	IE3	50	S1	1000	5.0623	1248

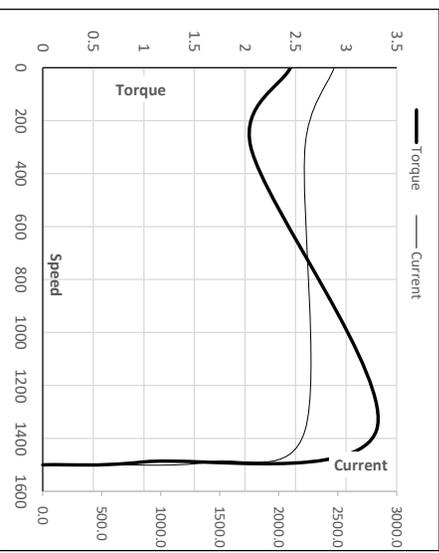
**Motor Load Data**

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A 106.7	131.9	186.8	254.2	329.4	
Torque	Nm 0.0	321.0	643.2	966.6	1291.4	
Speed	r/min 1500	1497	1495	1492	1489	
Efficiency	% 0.0	93.4	95.7	96.0	96.0	
Power Factor	% 4.2	56.8	76.0	85.0	88.0	

**Performance vs Load Chart**



**Starting Characteristics Chart**



**Motor Speed Torque Data**

Load Point	LR	P-Up	BD	Rated	NL
Speed	r/min 0	300	1370	1489	1500
Current	A 2470.3	2223.2	1426.1	329.4	106.7
Torque	pu 2.5	2.1	3.3	1	0

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

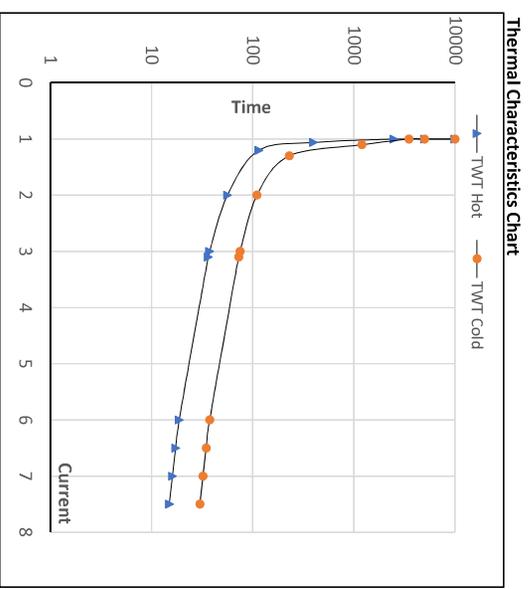
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Model No. TCA2002A3113GACD01

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 <sup>2</sup> ]	Weight [kg]
TEFC	415	Δ	50	200	270	329.4	1489	131.60	1291.43	IE3	50	S1	1000	5.0623	1248

**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	56	38	35	30	25	15
TWT Cold	s	10000	110	75	70	50	40	30
Current	pu	1	2	3	4	5	5.5	7.5



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

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