

# PRODUCT INFORMATION PACKET

Model No: TCA0902A3133GACD01

Catalog No: TCA0902A3133GACD01

90.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1500 RPM, 415 V, 280M Frame, TEFC  
Cast Iron IE3 Efficiency Motors





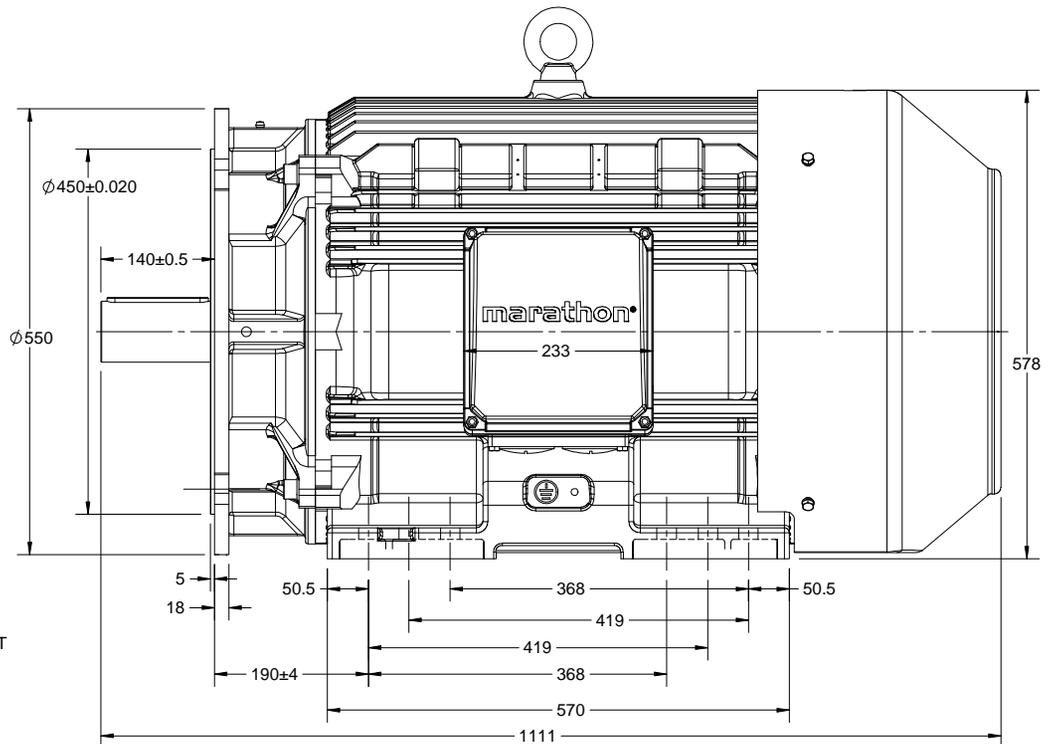
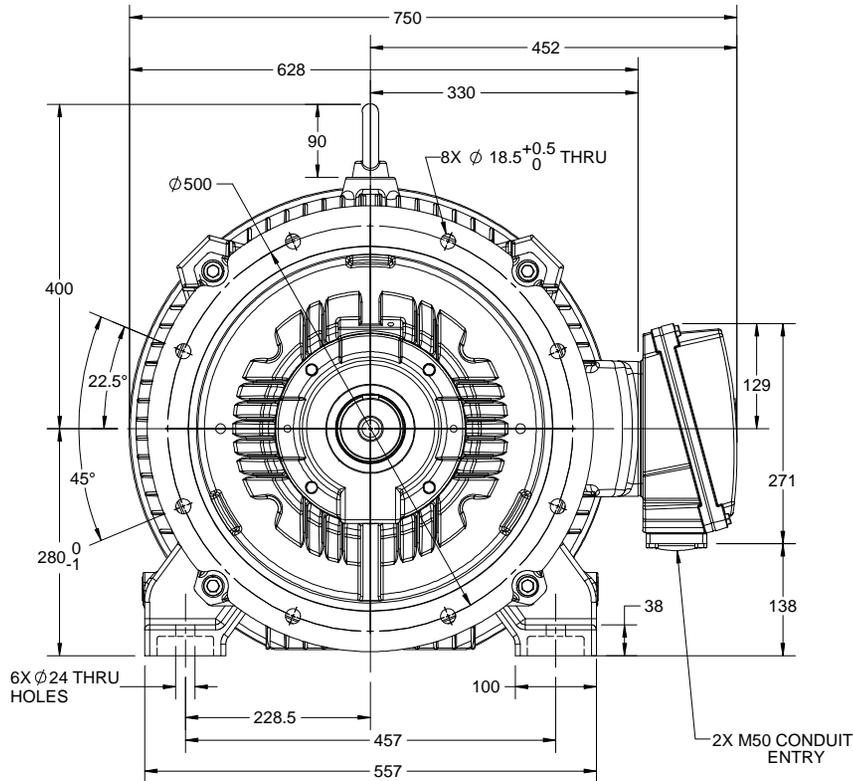
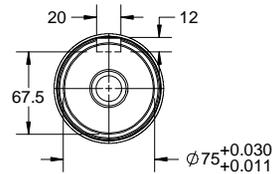
### Nameplate Specifications

Output HP	120 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	415 V
Current	151.2 A	Speed	1490 rpm
Service Factor	1	Phase	3
Efficiency	95.2 %	Power Factor	0.87
Duty	S1	Insulation Class	F
Frame	280M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6317
Opp Drive End Bearing Size	6317	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	B35	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1111 mm	Frame Length	600 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	R Side		
Outline Drawing	0228000973	Connection Drawing	8442000085

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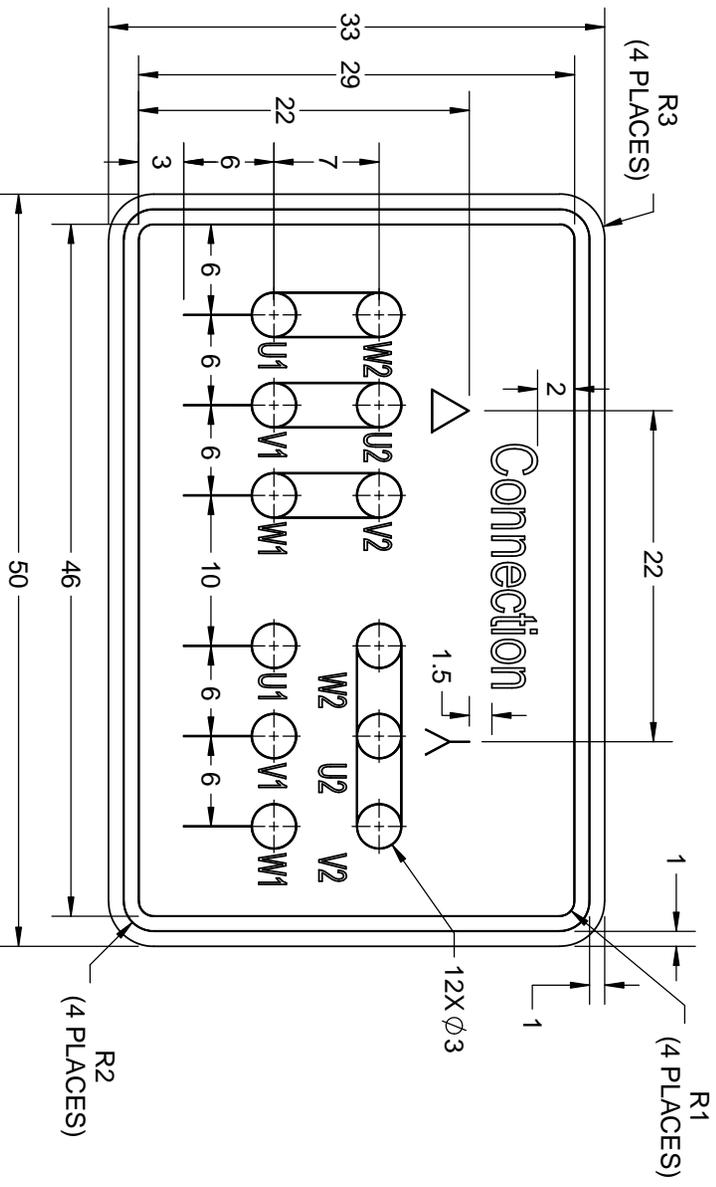
DRAWING REVISION C	REVISION BY VS	DATE 20/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 20/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY UDAY	<b>marathon</b> Motors
DATE 17/08/2016	
APPROVED BY SBD	DESCRIPTION <b>OUTLINE</b>
DATE 17/08/2016	280M FR-B35- 4-8P MTG. TYPE: TCA/QCA-RHS TB
REFERENCE	MATERIAL PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B
	DRAWING NUMBER <b>0228000973</b>
	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:
- PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
  - AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
  - 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> <sup>TM</sup> 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	

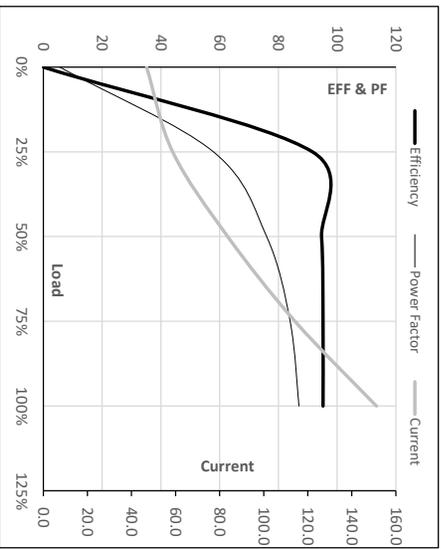
Model No. TCA0902A3133GACD01

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	90	120	151.2	1490	58.49	573.57	IE3	50	S1	1000	2.7914	847

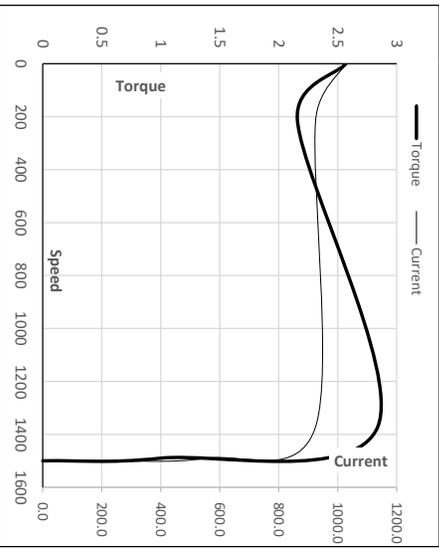
**Motor Load Data**

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	46.9	58.7	83.7	114.2	151.2
Torque	Nm	0.0	142.7	285.8	429.4	573.6
Speed	r/min	1500	1498	1495	1493	1490
Efficiency	%	0.0	91.6	94.7	95.2	95.2
Power Factor	%	5.6	57.9	76.0	84.0	87.0

**Performance vs Load Chart**



**Starting Characteristics Chart**



**Motor Speed Torque Data**

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	214	1371	1490	1500
Current	A	1028.0	925.2	557.3	151.2	46.9
Torque	pu	2.6	2.2	2.8	1	0

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

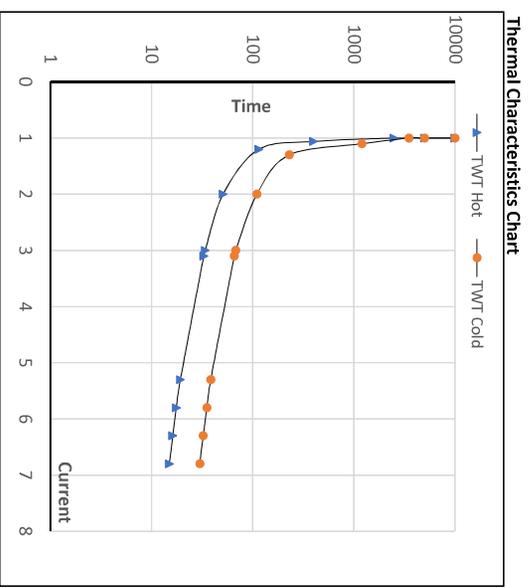
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Issued Date

Model No. TCA0902A3133GACD01

Enclosure	U	Δ/Y	f	P	P	I	n	T	T	IE	Amb	Duty	Elevation	Inertia	Weight
(V)	415	Δ	50	[kW]	[hp]	[A]	[rpm]	[kgm]	[Nm]	Class	[°C]	S1	[m]	[kg·m <sup>2</sup> ]	[kg]
TEFC				90	120	151.2	1490	58.45	573.57	IE3	50	S1	1000	2.7914	847

**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	51	34	30	22	18	15
TWT Cold	s	10000	110	68	60	40	37	30
Current	pu	1	2	3	4	5	5.5	6.8



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

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