

# PRODUCT INFORMATION PACKET

Model No: TCA0901A3111GACD01

Catalog No: TCA0901A3111GACD01

90.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 3000 RPM, 415 V, 280M Frame, TEFC  
Cast Iron IE3 Efficiency Motors





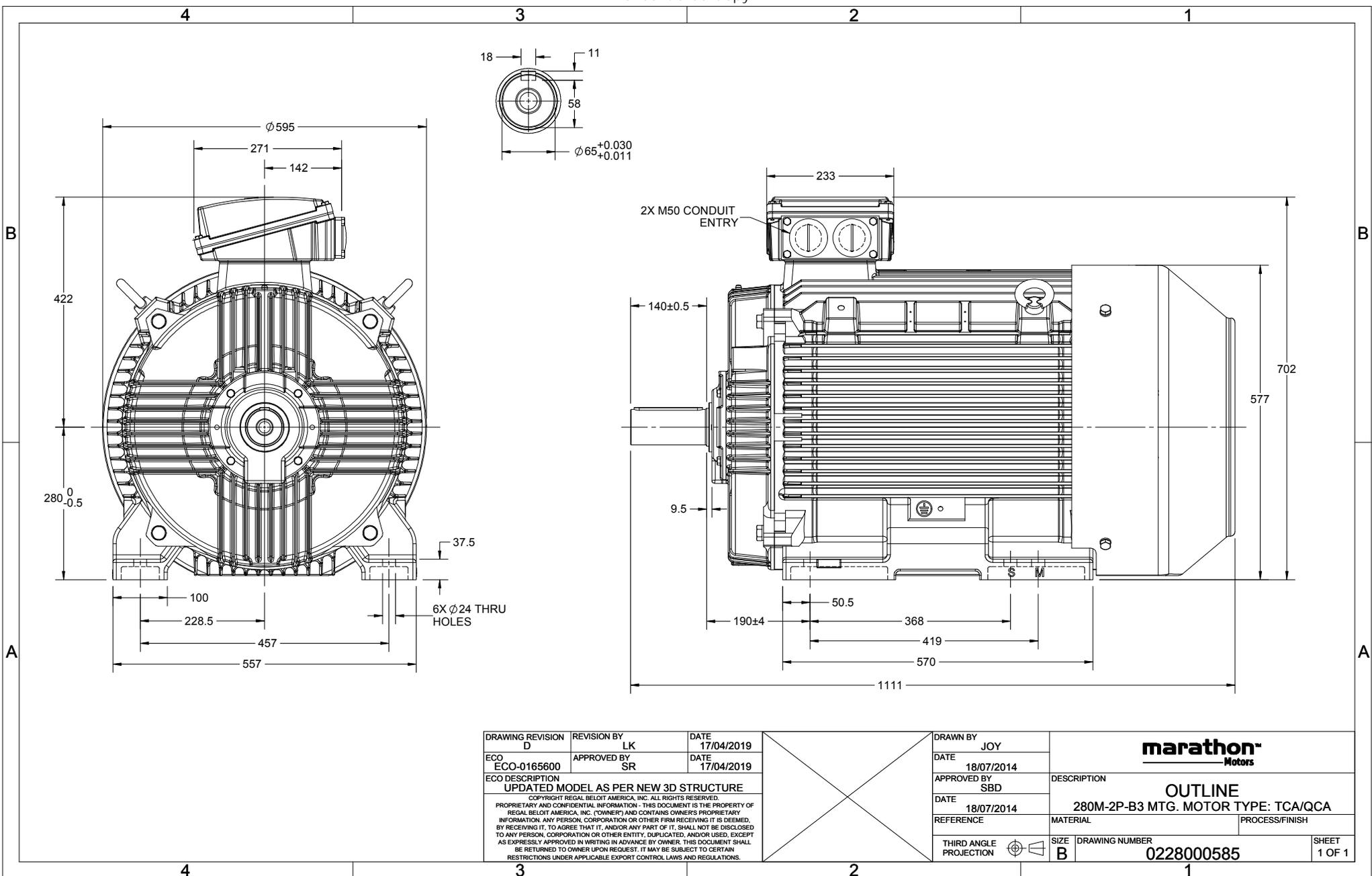
### Nameplate Specifications

Output HP	120 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	415 V
Current	144.8 A	Speed	2981 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.91
Duty	S1	Insulation Class	F
Frame	280M	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	2	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	1111 mm	Frame Length	600 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0228000585

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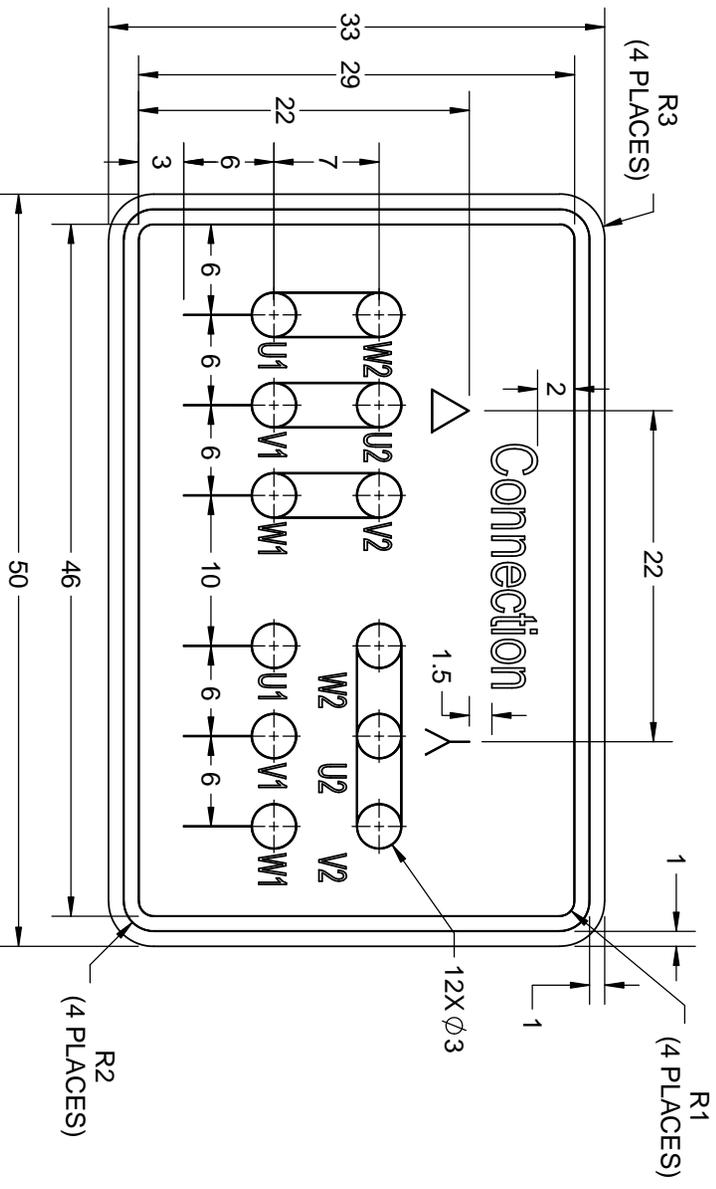
DRAWING REVISION D	REVISION BY LK	DATE 17/04/2019
ECO ECO-0165600	APPROVED BY SR	DATE 17/04/2019
ECO DESCRIPTION UPDATED MODEL AS PER NEW 3D STRUCTURE <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.                  PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF                  REGAL BELOIT AMERICA, INC. (OWNER) AND CONTAINS OWNER'S PROPRIETARY                  INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,                  BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED                  TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT                  AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL                  BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN                  RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>		

DRAWN BY JOY	
DATE 18/07/2014	
APPROVED BY SBD	DESCRIPTION OUTLINE
DATE 18/07/2014	280M-2P-B3 MTG. MOTOR TYPE: TCA/QCA
REFERENCE	MATERIAL
THIRD ANGLE PROJECTION	SIZE B
	DRAWING NUMBER 0228000585
	PROCESS/FINISH
	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		 Regal Beloit America, Inc.	
DATE 16/12/2016	APPROVED BY SBD		
DATE 16/12/2016	REFERENCE	DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>	
THIRD ANGLE PROJECTION	MATERIAL	PROCESS/FINISH	SIZE DRAWING NUMBER 8442000085
			SHEET 1 OF 1

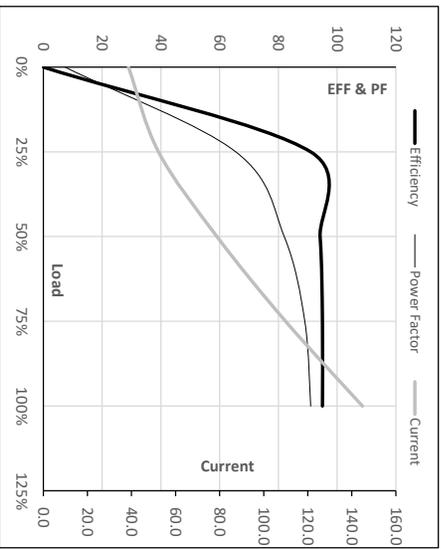
Model No. TCA0901A3111GACD01

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	144.8	2981	29.24	286.70	IE3	50	S1	1000	1.416	804

**Motor Load Data**

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A 38.6	52.3	78.8	109.9	144.8	
Torque	Nm 0.0	71.3	142.9	214.7	286.7	
Speed	r/min 3000	2995	2991	2986	2981	
Efficiency	% 0.0	91.0	94.2	95.0	95.0	
Power Factor	% 7.4	65.5	82.0	89.0	91.0	

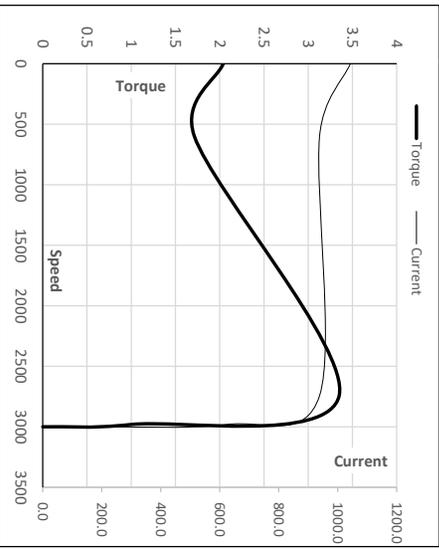
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point	LR	P-Up	BD	Rated	NL
Speed	r/min 0	600	2743	2981	3000
Current	A 1042.8	938.5	623.3	144.8	38.6
Torque	pu 2.0	1.7	3.4	1	0

**Starting Characteristics Chart**



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

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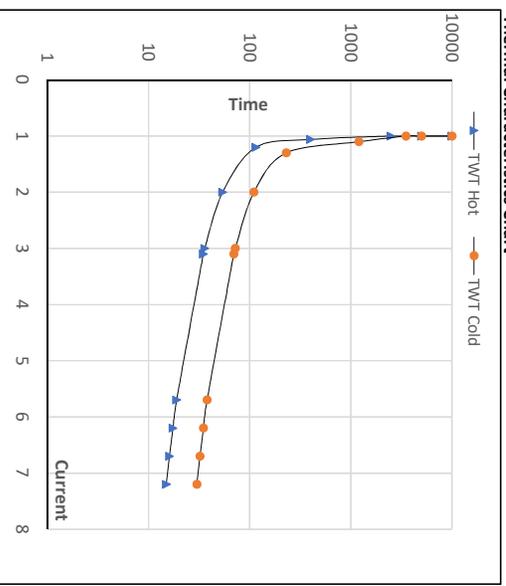
Model No. TCA0901A3111GACD01

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	144.8	2981	29.21	286.70	IE3	50	S1	1000	1.4160	804

**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	54	36	30	25	20	15
TWT Cold	s	10000	110	72	60	45	40	30
Current	pu	1	2	3	4	5	5.5	7.2

**Thermal Characteristics Chart**



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

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