

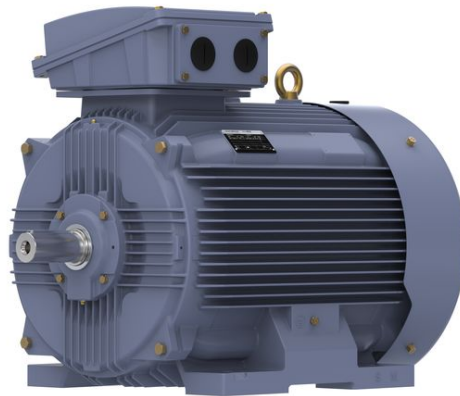
PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0754A3111GACD01

Catalog No: TCA0754A3111GACD01

75.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 750 RPM, 415 V, 315M Frame, TEFC
Cast Iron IE3 Efficiency Motors



Regal and Marathon are trademarks of Regal Beloit Corporation or one of its affiliated companies.
©2020 Regal Beloit Corporation, All Rights Reserved. MC017097E

REGAL

Nameplate Specifications

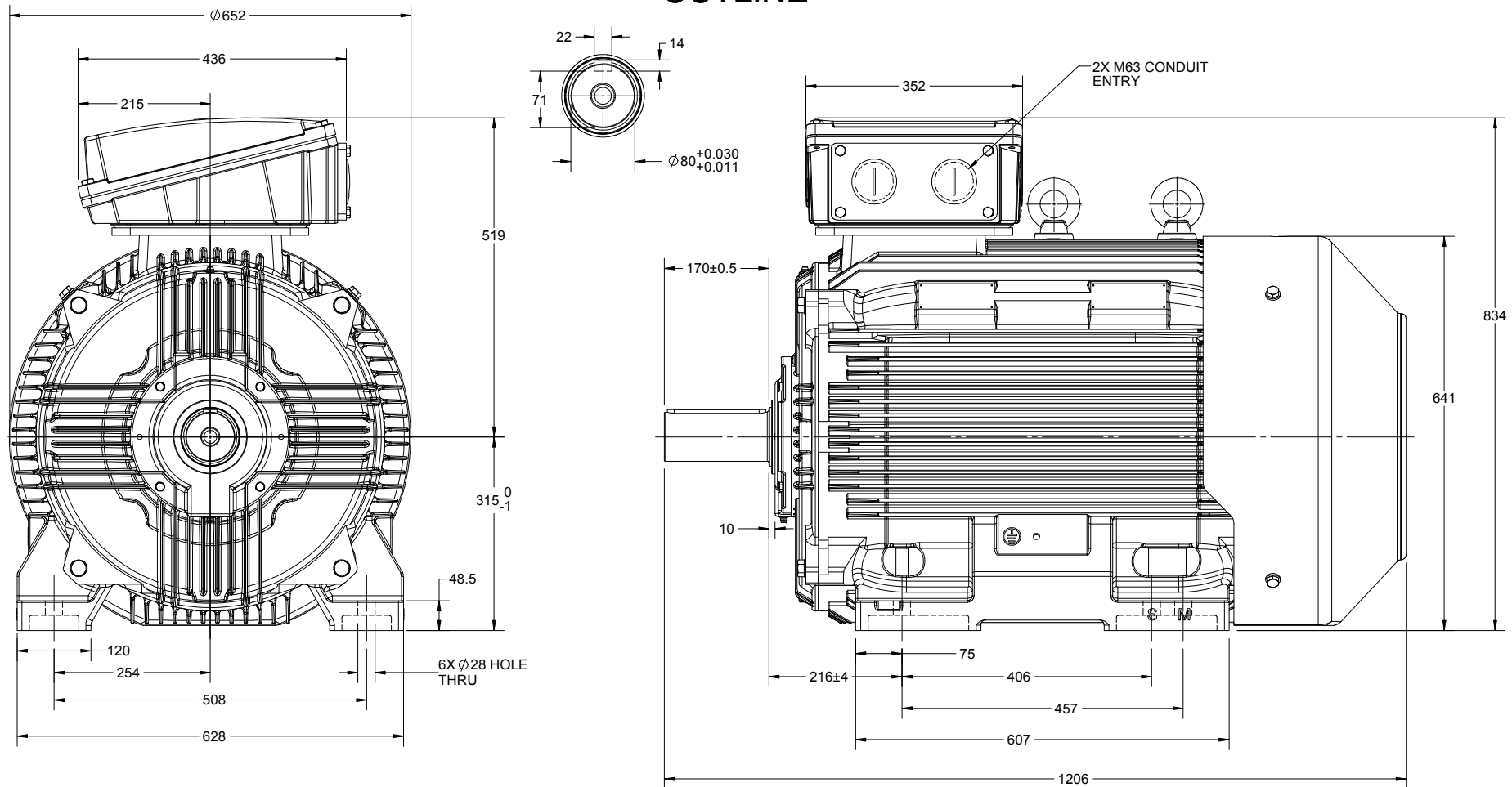
Output HP	100 Hp	Output KW	75.0 kW
Frequency	50 Hz	Voltage	415 V
Current	155.7 A	Speed	743 rpm
Service Factor	1	Phase	3
Efficiency	93.1 %	Power Factor	0.72
Duty	S1	Insulation Class	F
Frame	315M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6319
Opp Drive End Bearing Size	6319	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	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	1206 mm	Frame Length	729 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0231500890

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:06/01/2020

OUTLINE

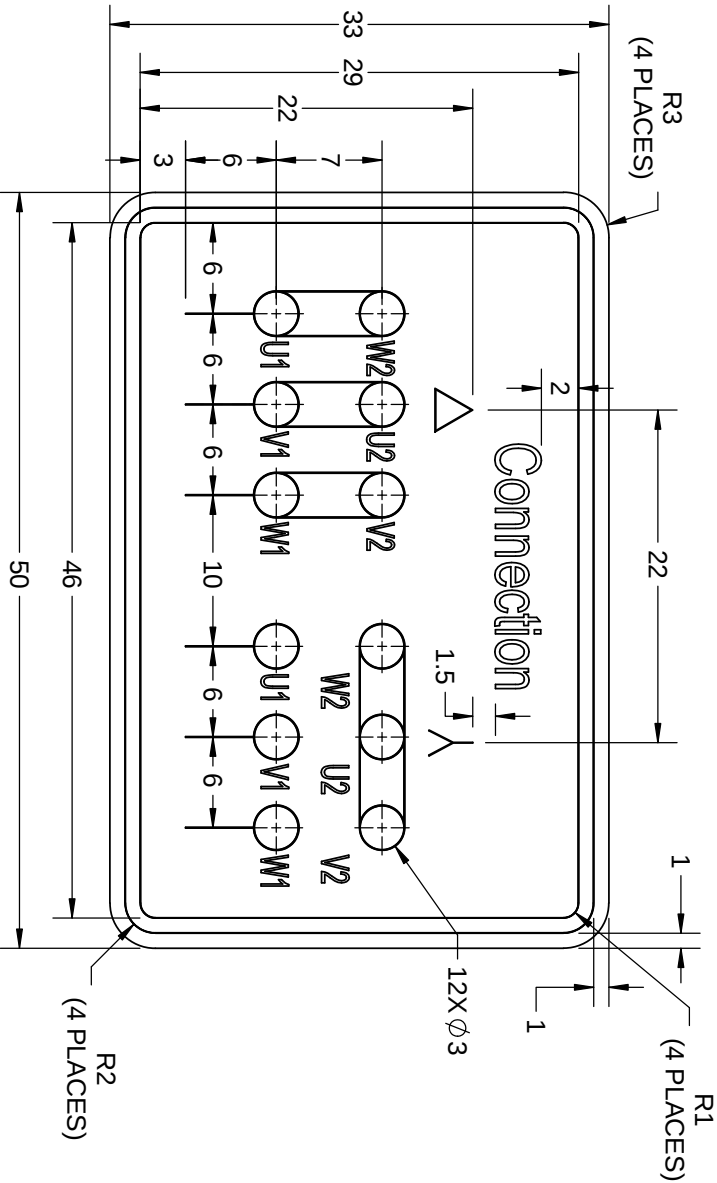


DRAWING REVISION C	REVISION BY NIV	DATE 14/05/2019
ECO ECO-0165600	APPROVED BY SR	DATE 14/05/2019
ECO DESCRIPTION MODEL UPDATED		
COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. (OWNER) AND 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.		

DRAWN BY JOY		
DATE 18/07/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 315M FR-B3 4-8P MTG. MOTOR TYPE: TCA/QCA	
DATE 18/07/2014		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231500890
		SHEET 1 OF 1

DRAWING REVISION		REVISION BY	DATE
A		SN	13/01/2017
ECO	ECO-0116390	APPROVED BY	DATE
ECO DESCRIPTION		SBD	13/01/2017
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		 Regal Beloit America, Inc.	
		DESCRIPTION CONN DIAGRAM-NAMEPLATE	
DATE	16/12/2016	APPROVED BY	SBD
DATE	16/12/2016	REFERENCE	
THIRD ANGLE PROJECTION		SIZE	A
		DRAWING NUMBER	8442000085
		PROCESS/FINISH	
		SHEET	1 OF 1

Model No. TCA0754A3111GACD01

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	75	100	155.7	743	959.57	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	4.9	1.9	2.1

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315M	Motor weight - approx.	899 kg
Duty	S1	Gross weight - approx.	944 kg
Voltage variation *	± 10%	Motor inertia	4.8296 kgm ²
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)	64 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	TOP
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 240mm ² /2 x M63 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	-	-	-



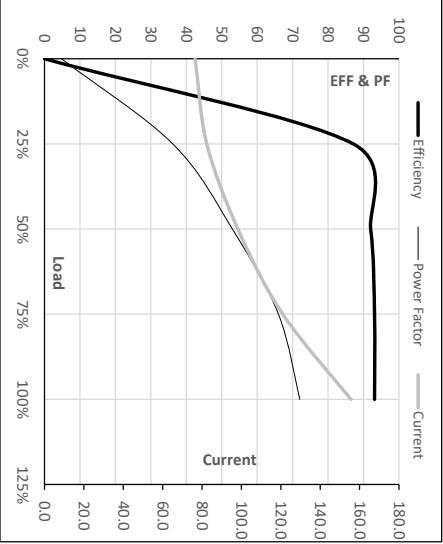
Model No. TCA0754A3111GACD01

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	75	100	155.7	743	97.85	959.57	IE3	50	S1	1000	4.8296	899

Motor Load Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	76.5	82.4	98.2	121.0	155.7
Torque	Nm	0.0	236.2	477.4	717.8	959.6
Speed	r/min	750	748	747	745	743
Efficiency	%	0.0	87.1	92.0	93.1	93.1
Power Factor	%	4.8	36.2	53.0	66.0	72.0

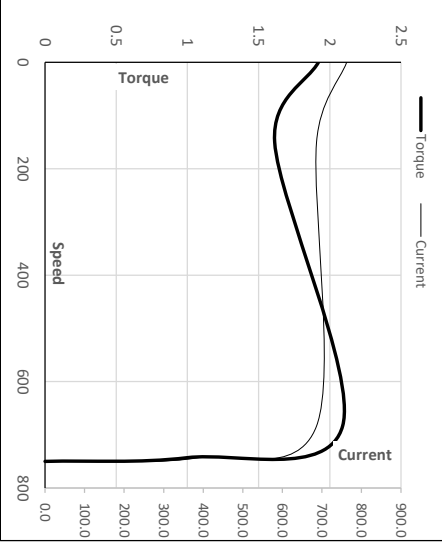
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	150	684	743	750
Current	A	762.7	686.5	387.1	155.7	76.5
Torque	pu	1.9	1.6	2.1	1	0

Starting Characteristics Chart



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

Issued By
Issued Date



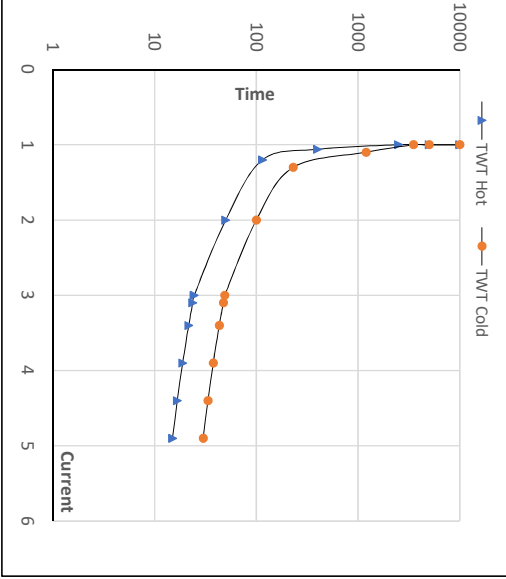
Model No. TCA075A4A3111GACD01

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	75	100	155.7	743	97.78	959.57	IE3	50	S1	1000	4.8296	899

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s	10000	50	25	21	18	16	15
TWT Cold	s	10000	100	49	42	37	31	30
Current	pu	1	2	3	3.5	4	4.5	4.9

Thermal Characteristics Chart



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

Issued By
Issued Date