

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0033A3141GACD01

Catalog No: TCA0033A3141GACD01

3.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1000 RPM, 415 V, 132S 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	4 Hp	Output KW	3.0 kW
Frequency	50 Hz	Voltage	415 V
Current	6.8 A	Speed	973 rpm
Service Factor	1	Phase	3
Efficiency	85.6 %	Power Factor	0.72
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6308
Opp Drive End Bearing Size	6208	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	V1	Motor Orientation	Shaftdown
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	528 mm	Frame Length	202 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	Top		
Outline Drawing	0213200712	Connection Drawing	8442000085

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

4

3

Uncontrolled Copy

2

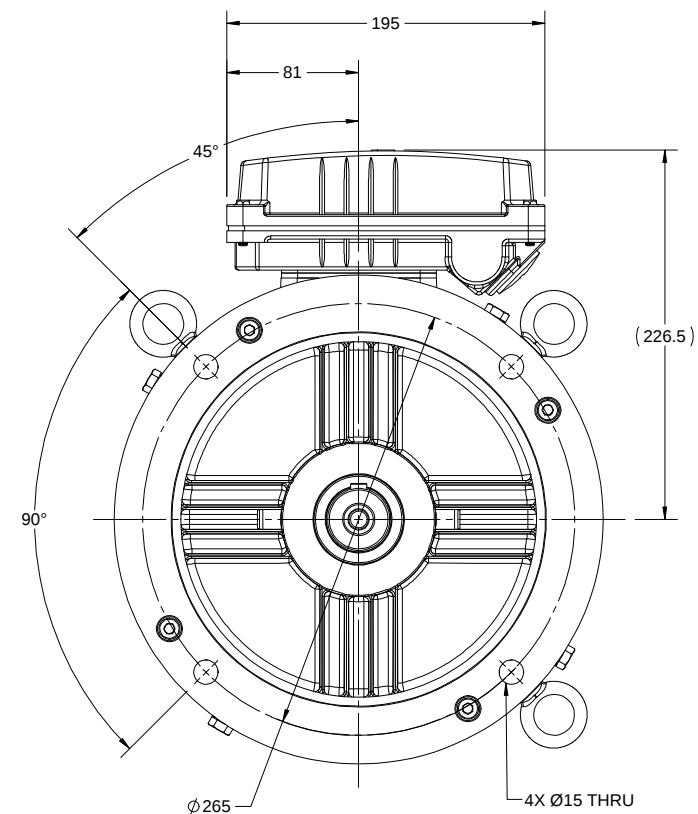
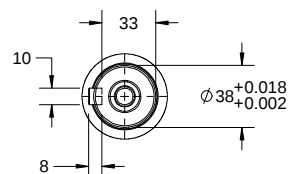
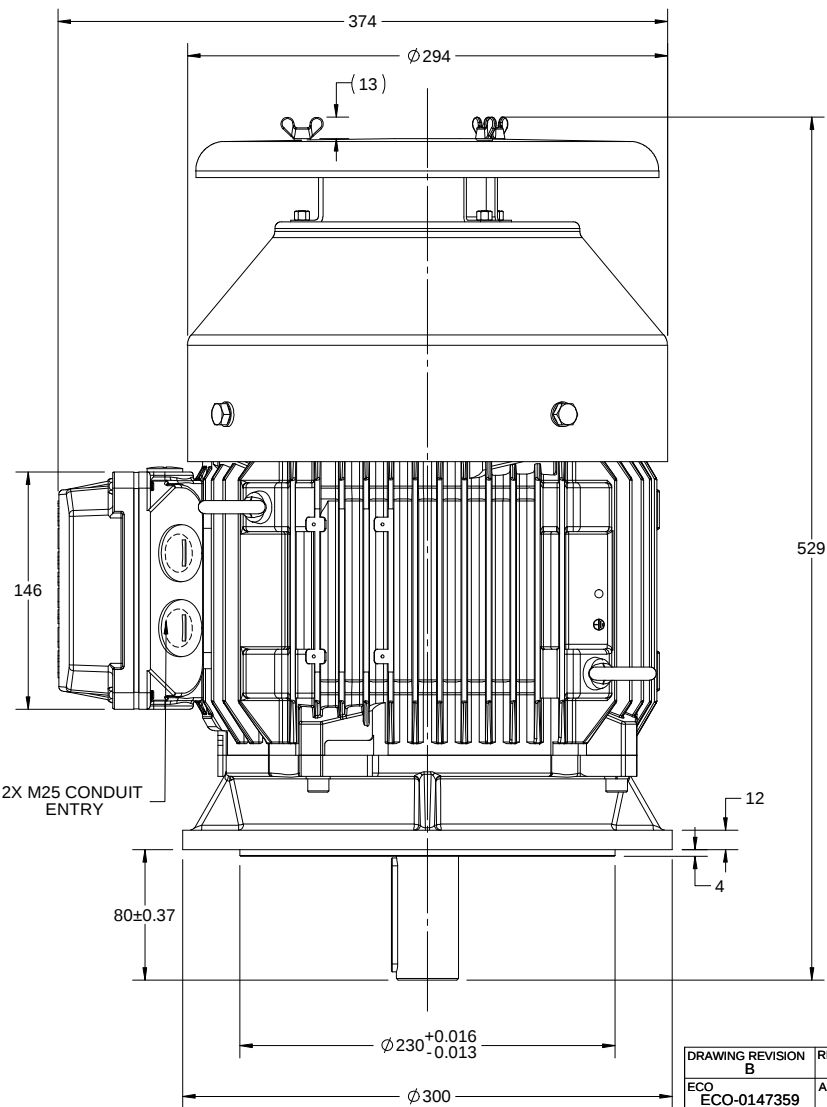
1

B

B

A

A



DRAWING REVISION B	REVISION BY A. KEETHA	DATE 12/07/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 12/07/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER NEW 3D STRUCTURING		
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 KCS		
DATE 26/05/2015		
APPROVED BY SBD	DESCRIPTION OUTLINE 132S FR.- V1 MTG. MOTOR TYPE: TCA	
DATE 26/05/2015		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0213200712
		SHEET 1 OF 1

DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
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:

- 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.

		DRAWN BY	SN
		DATE	16/12/2016
		APPROVED BY	SBD
		DATE	16/12/2016
REFERENCE		MATERIAL	
THIRD ANGLE PROJECTION		SIZE	DRAWING NUMBER
A		8442000085	SHEET 1 OF 1

8WD.442.2017

REGALTM
 Regal Beloit America, Inc.

DESCRIPTION
CONN DIAGRAM-NAMEPLATE

PROCESS/FINISH

Model No. TCA0033A3141GACD01

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	Y	50	3	4.0	6.8	973	29.35	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.4	2.0	2.5

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	132S	Motor weight - approx.	70 kg
Duty	S1	Gross weight - approx.	73 kg
Voltage variation *	± 10%	Motor inertia	0.0390 kgm ²
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level (1meter distance from motor)	59 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	6308-2Z / 6208-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 16mm ² /2 x M25 x 1.5
Type of grease	NA	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	-	-	-



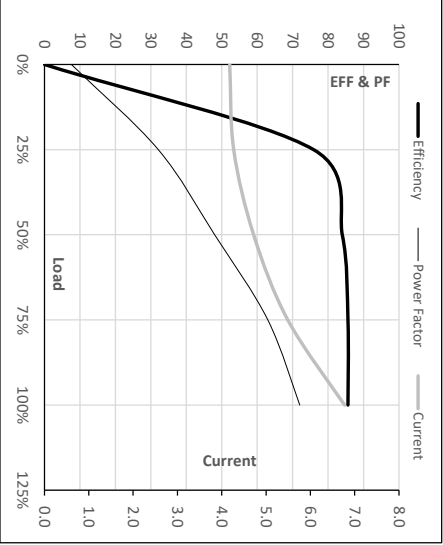
Model No. TCA0033A3141GACD01

Enclosure	U [V]	Δ / 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 ²]	Weight [kg]
TEFC	415	Y	50	3	4.0	6.8	973	2.99	29.35	IE3	50	S1	1000	0.039	70

Motor Load Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	4.2	4.3	4.7	5.5	6.8
Torque	Nm	0.0	7.2	14.5	21.8	29.4
Speed	r/min	1000	993	987	980	973
Efficiency	%	0.0	75.9	84.0	85.6	85.6
Power Factor	%	7.6	32.1	48.0	63.0	72.0

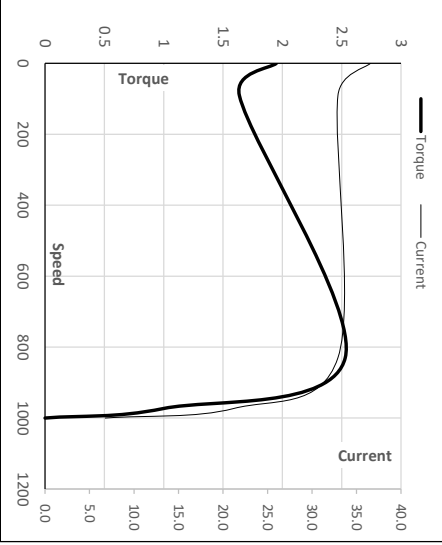
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	91	830	973	1000
Current	A	36.6	32.9	21.2	6.8	4.2
Torque	pu	2.0	1.6	2.5	1	0

Starting Characteristics Chart



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

Issued By
Issued Date

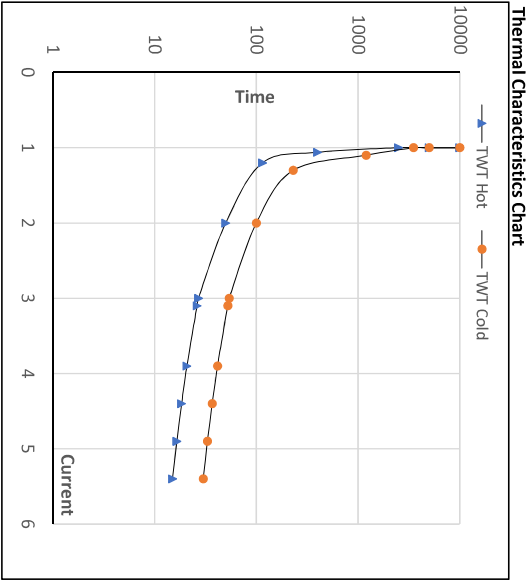


Model No. TCA0033A3141GACD01

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	Y	50	3	4.0	6.8	973	2.99	29.35	IE3	50	S1	1000	0.0390	70

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s	10000	50	27	20	18	16	15
TWT Cold	s	10000	100	54	41	36	33	30
Current	pu	1	2	3	4	4.5	5	5.4



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

Issued By
Issued Date