PRODUCT INFORMATION PACKET

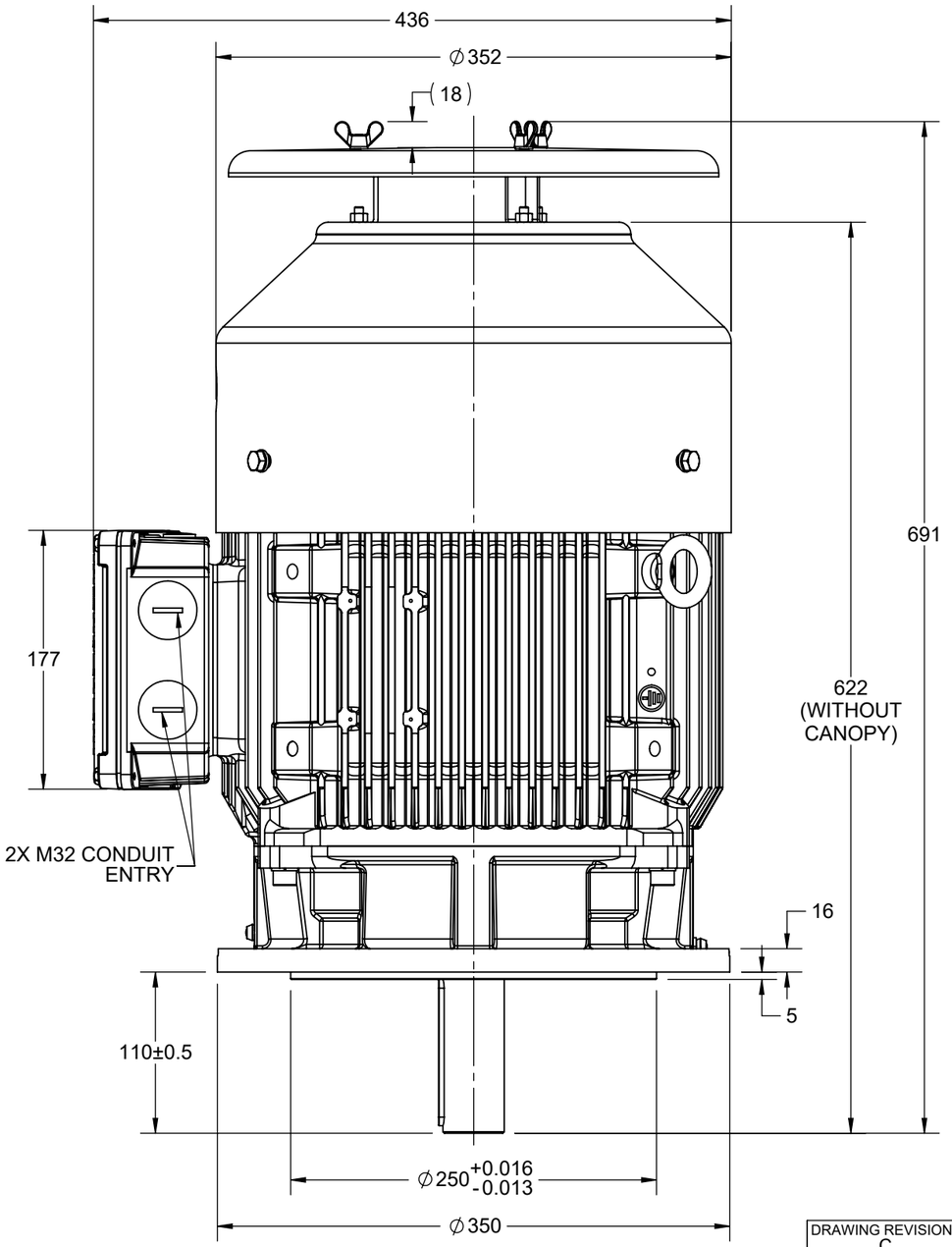
Model No: TCA7P53A3141GACD01
Catalog No: TCA7P53A3141GACD01
Cast Iron Motor, 10 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 160M Frame, TEFC

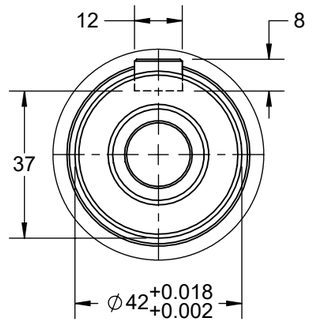
Nameplate Specifications

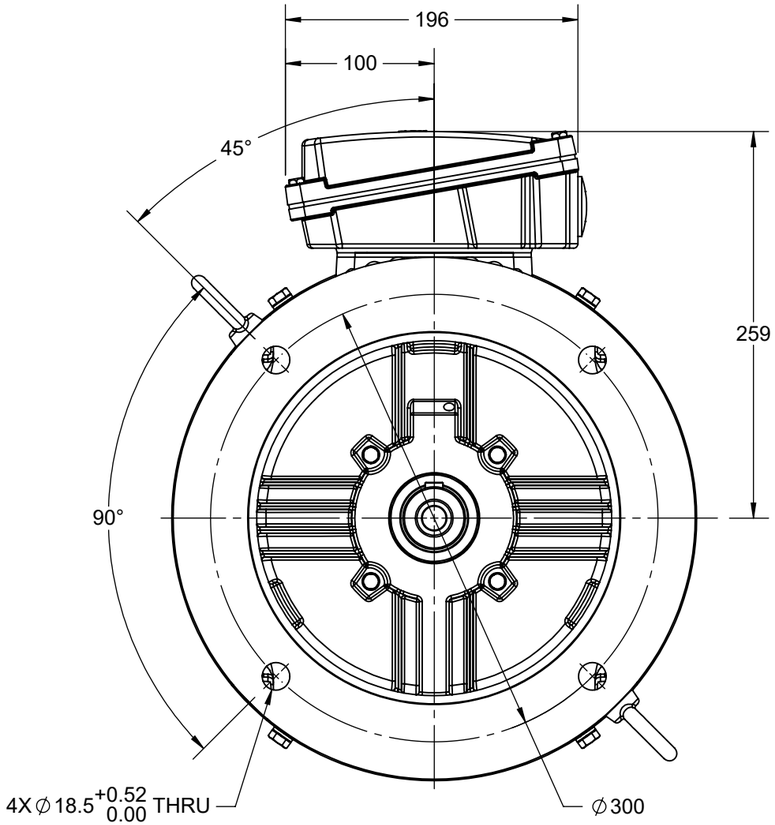
Output HP	**10 Hp**	Output KW	**7.5 kW**
Frequency	**50 Hz**	Voltage	**415 V**
Current	**14.8 A**	Speed	**977 rpm**
Service Factor	**1**	Phase	**3**
Efficiency	**89.1 %**	Power Factor	**0.79**
Duty	**S1**	Insulation Class	**F**
Frame	**160M**	Enclosure	**Totally Enclosed Fan Cooled**
Thermal Protection	**No Protection**	Ambient Temperature	**50 °C**
Drive End Bearing Size	**6309**	Opp Drive End Bearing Size	**6209**
UL	**No**	CSA	**No**
CE	**Yes**	IP Code	**55**
Number of Speeds	**1**	Efficiency Class	**IE3**

Technical Specifications

Electrical Type	**Squirrel Cage**	Starting Method	**Direct On Line**
Poles	**6**	Rotation	**Bi-Directional**
Mounting	**V1**	Motor Orientation	**Horizontal**
Drive End Bearing	**2z-C3**	Opp Drive End Bearing	**2z-C3**
Frame Material	**Cast Iron**	Shaft Type	**Keyed**
Overall Length	**691 mm**	Frame Length	**254 mm**
Shaft Diameter	**42 mm**	Shaft Extension	**110 mm**
Assembly/Box Mounting	**Top**		
Outline Drawing	**0216000554**	Connection Drawing	**8442000085**







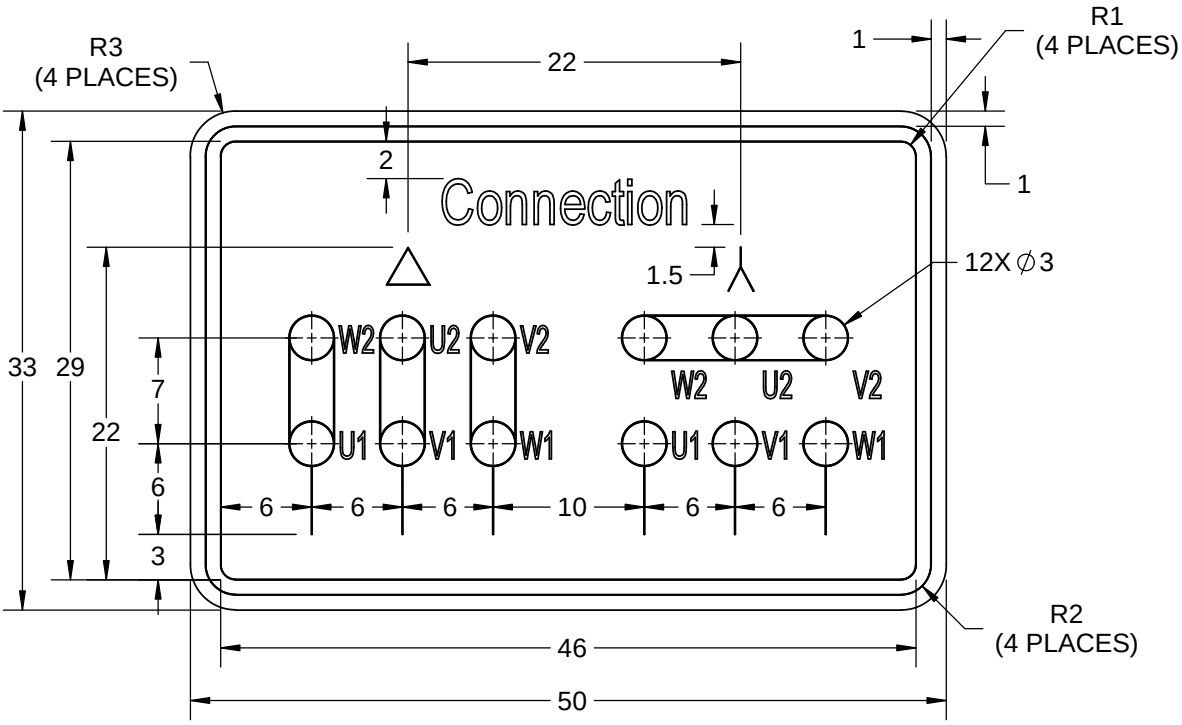
DRAWING REVISION C	REVISION BY LK	REV DATE/© DATE 17/02/2021
ECO CR-0001200	APPROVED BY JAY	DATE 17/02/2021
ECO DESCRIPTION: MODEL UPDATED		

PRIMARY DIMENSIONS ARE mm
INCH DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY KCS	marathon™ Motors	
DATE 26/05/2015		
APPROVED BY SBD	DESCRIPTION: OUTLINE TCA-160M-V1 MTG.	
DATE 26/05/2015		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0216000554	SHEET 1 OF 1

DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO	APPROVED BY	DATE
ECO-0116390	SBD	13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

GEOMENTRIC 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™ Regal Beloit America, Inc.	
DATE: 16/12/2016		
APPROVED BY: SBD	DESCRIPTION: CONN DIAGRAM-NAMEPLATE	
DATE: 16/12/2016		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: A / DRAWING NUMBER: 8442000085	SHEET: 1 OF 1

marathon® Motors

TerraMAX®

Model No. TCA7P53A3141GACD01

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load 5/4FL	FL	3/4FL	1/2FL	PF at __ load FL	3/4FL	1/2FL	I_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
415	Δ	50	7.5	10	14.8	977	72.92	IE3	-	89.1	89.1	88.5	0.79	0.73	0.59	5.5	1.9	2.5

Motor type	TCA	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	160M	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-20 to +50	°C
Temperature rise (by resistance)	70 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	NA	
Zone classification	NA	
Gas group	NA	
Temperature class	NA	
Rotor type	Aluminum Die cast	
Bearing type	Anti-friction ball bearing	
DE / NDE bearing	6309-2Z / 6209-2Z	
Lubrication method	Greased for life	
Type of grease	NA	

Degree of protection	IP 55
Mounting type	IM V1
Cooling method	IC 411
Motor weight - approx.	143 kg
Gross weight - approx.	163 kg
Motor inertia	0.1355 kgm^2
Load inertia	Customer to Provide
Vibration level	2.2 mm/s
Noise level (1meter distance from motor)	61 dB(A)
No. of starts hot/cold/Equally spread	2/3/4
Starting method	DOL
Type of coupling	Direct
LR withstand time (hot/cold)	15/30 s
Direction of rotation	Bi-directional
Standard rotation	Clockwise form DE
Paint shade	RAL 5014
Accessories	
Accessory - 1	-
Accessory - 2	-
Accessory - 3	-
Terminal box position	TOP
Maximum cable size/conduit size	1R x 3C x 35mm²/2 X M32 x 1.5
Auxiliary terminal box	NA

I_A/I_N - Locked Rotor Current / Rated Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - Breakdown 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	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

REGAL®

marathon® Motors

TerraMAX®

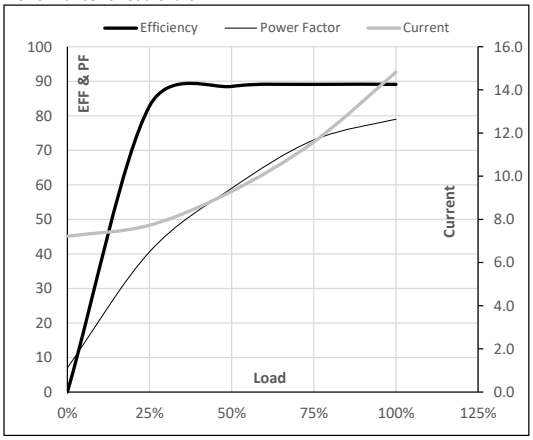
Model No. TCA7P53A3141GACD01

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	7.5	10.0	14.8	977	7.44	72.92	IE3	50	S1	1000	0.1355	143

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	7.2	7.7	9.3	11.6	14.8	
Torque	Nm	0.0	17.9	36.0	54.3	72.9	
Speed	r/min	1000	994	989	983	977	
Efficiency	%	0.0	82.8	88.5	89.1	89.1	
Power Factor	%	7.0	40.6	59.0	73.0	79.0	

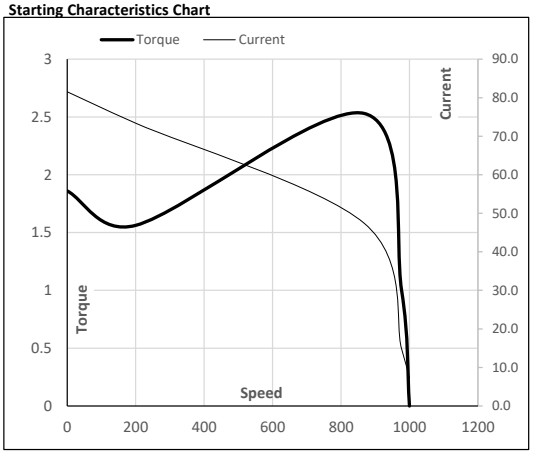
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	200	868	977	1000
Current	A	81.5	73.4	47.4	14.8	7.2
Torque	pu	1.9	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

REGAL®

marathon® Motors

TerraMAX®

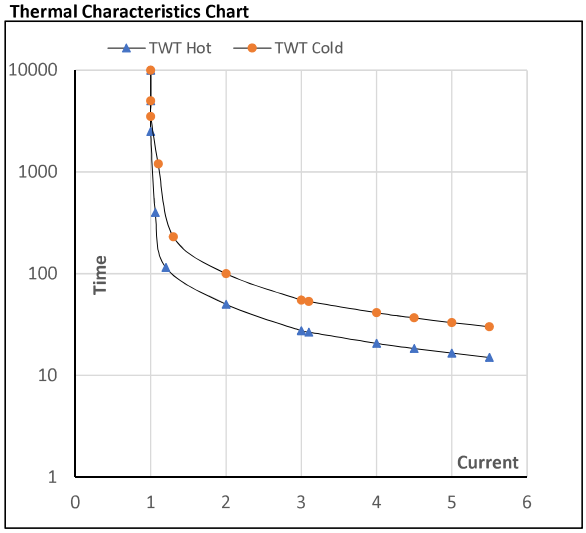
Model No. TCA7P53A3141GACD01

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	7.5	10	14.8	977	7.43	72.92	IE3	50	S1	1000	0.1355	143

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	50	28	21	18	17	15
TWT Cold	s	10000	100	55	41	37	33	30
Current	pu	1	2	3	4	4.5	5	5.5

Thermal Characteristics Chart



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

Issued By
Issued Date

REGAL

EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : TCA7P53A3141GACD01

(Model No. may contain prefix and/or suffix characters)

Catalog No : TCA7P53A3141GACD01

Rework No : N/A

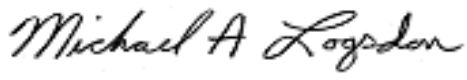
Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)
EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:

Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22