PRODUCT INFORMATION PACKET

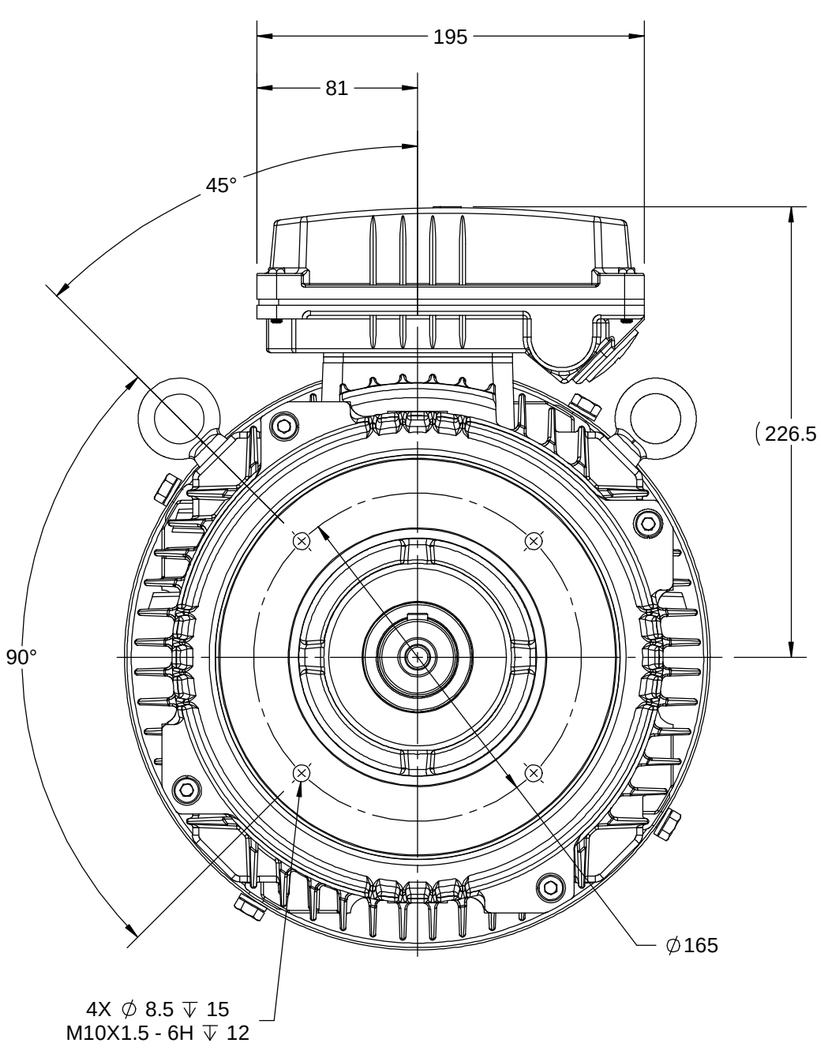
Model No: TCA5P51A3171GACD01
Catalog No: TCA5P51A3171GACD01
Cast Iron Motor, 7.50 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 132S Frame, TEFC

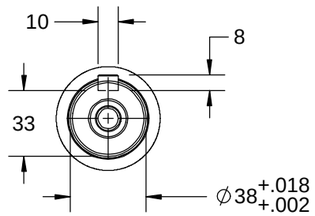
Nameplate Specifications

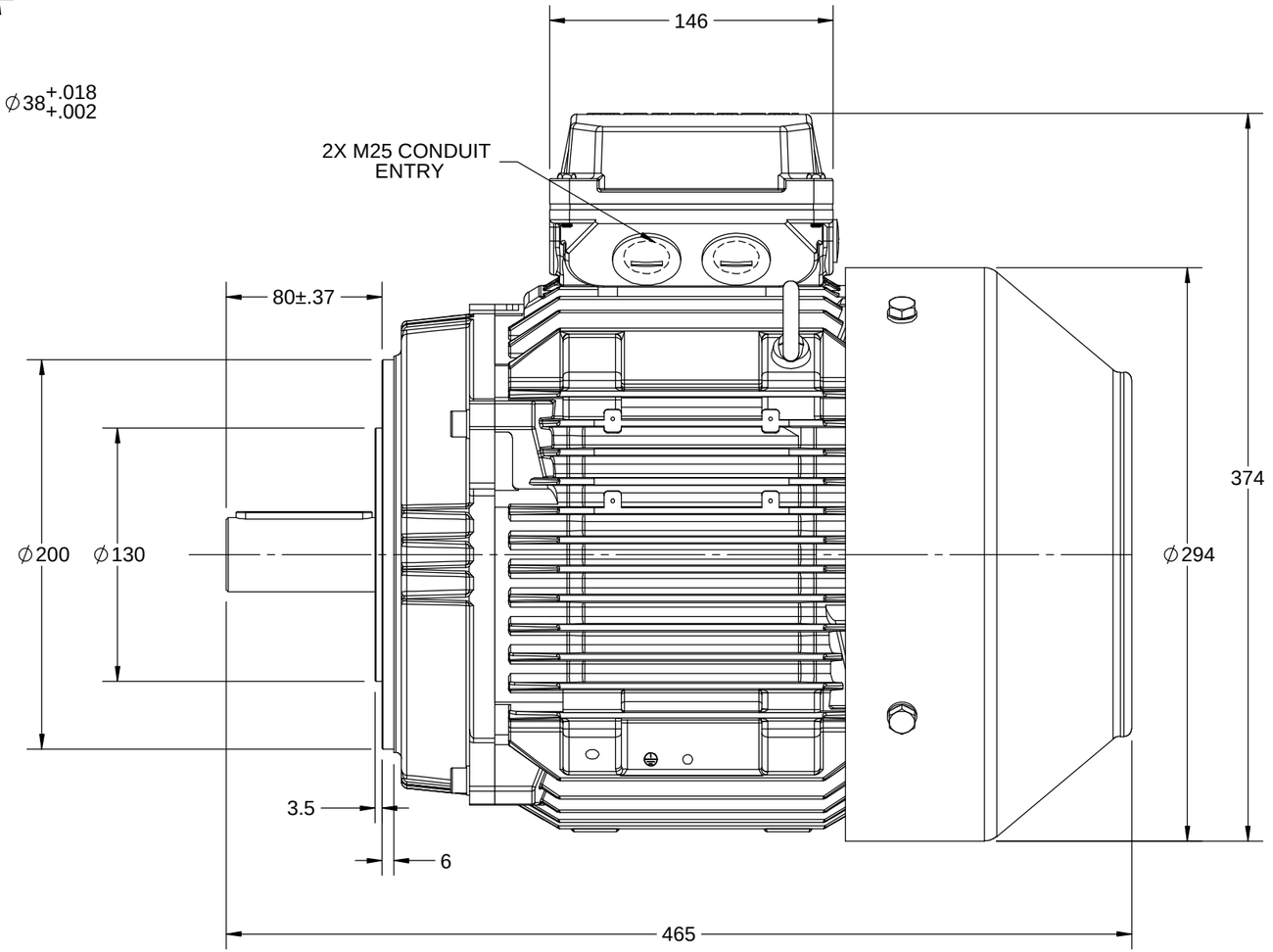
Output HP	7.50 Hp	Output KW	5.5 kW
Frequency	50 Hz	Voltage	415 V
Current	9.5 A	Speed	2934 rpm
Service Factor	1	Phase	3
Efficiency	89.2 %	Power Factor	0.9
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6308	Opp Drive End Bearing Size	6208
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	2	Rotation	Bi-Directional
Mounting	B14A	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	465 mm	Frame Length	202 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	Top		
Outline Drawing	0213200711	Connection Drawing	8442000085



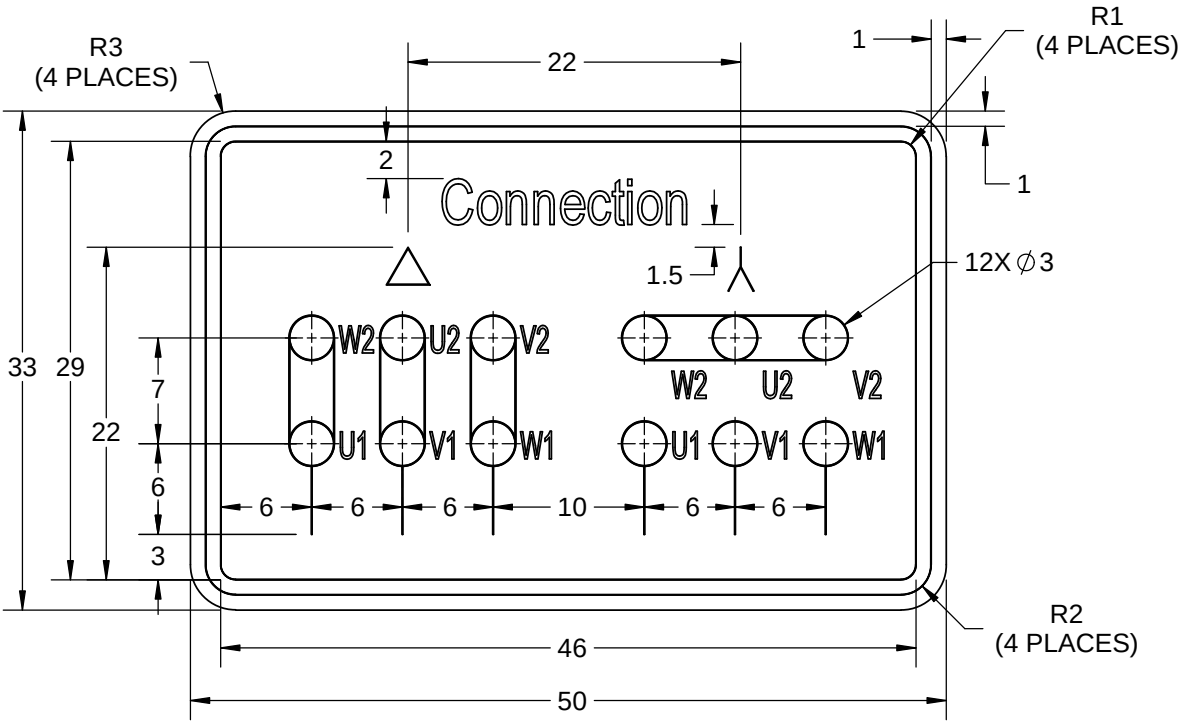




DRAWING REVISION: B	REVISION BY: A. KEETHA	DATE: 12/07/2018		DRAWN BY: KCS	marathon™ Motors
ECO: ECO-0147359	APPROVED BY: JAY	DATE: 12/07/2018		DATE: 26/05/2015	
ECO DESCRIPTION: OUTLINE UPDATED AS PER NEW 3D STRUCTURING				APPROVED BY: SBD	DESCRIPTION: OUTLINE
				DATE: 26/05/2015	132S FR.- B14A MTG. MOTOR TYPE: TCA
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: 0213200711 / 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. TCA5P51A3171GACD01

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	5.5	7.5	9.5	2934	18.21	IE3	-	89.2	89.2	87.8	0.9	0.86	0.76	7.3	2.2	3.5

Motor type	TCA	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	132S	
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	6308-2Z / 6208-2Z	
Lubrication method	Greased for life	
Type of grease	NA	

Degree of protection	IP 55	
Mounting type	IM B14A	
Cooling method	IC 411	
Motor weight - approx.	75	kg
Gross weight - approx.	78	kg
Motor inertia	0.0184	kgm^2
Load inertia	Customer to Provide	
Vibration level	1.6	mm/s
Noise level (1meter distance from motor)	64	dB(A)
No. of starts hot/cold/Equally spread	2/3/4	
Starting method	DOL	
Type of coupling	Direct	
LR withstand time (hot/cold)	10/20	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 16mm²/2 x M25 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®

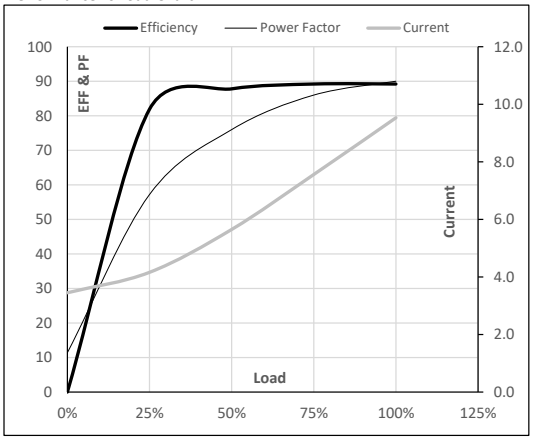
Model No. TCA5P51A3171GACD01

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	5.5	7.5	9.5	2934	1.86	18.21	IE3	50	S1	1000	0.0184	75

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	3.5	4.2	5.7	7.6	9.5	
Torque	Nm	0.0	4.5	9.0	13.6	18.2	
Speed	r/min	3000	2984	2968	2952	2934	
Efficiency	%	0.0	81.9	87.8	89.2	89.2	
Power Factor	%	11.4	57.2	76.0	86.0	90.0	

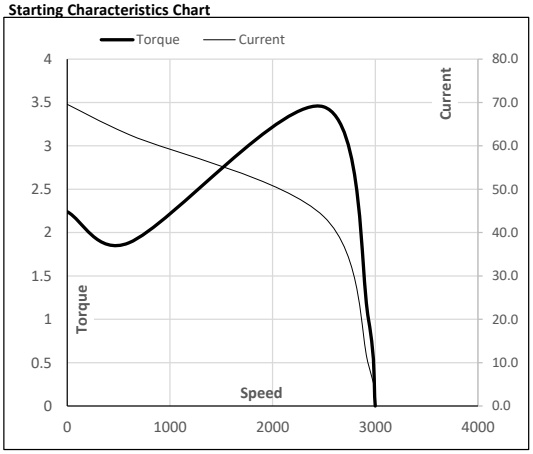
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2498	2934	3000
Current	A	69.6	62.6	43.7	9.5	3.5
Torque	pu	2.2	1.9	3.5	1	0

Starting Characteristics Chart



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

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marathon® Motors

TerraMAX®

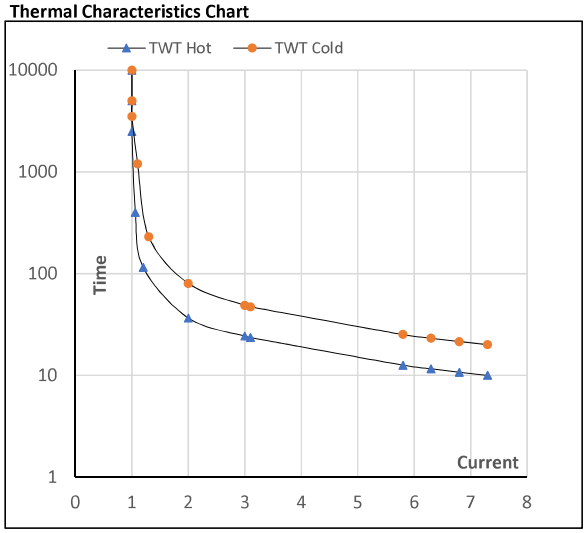
Model No. TCA5P51A3171GACD01

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	5.5	7.5	9.5	2934	1.86	18.21	IE3	50	S1	1000	0.0184	75

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	37	24	20	16	13	10
TWT Cold	s	10000	80	49	44	36	26	20
Current	pu	1	2	3	4	5	5.5	7.3

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 : TCA5P51A3171GACD01

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

Catalog No : TCA5P51A3171GACD01

Rework No : N/A

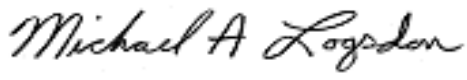
Directives :

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