

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0033A3131GACD01

Catalog No: TCA0033A3131GACD01

Cast Iron Motor, 4 HP, 3 Ph, 50 Hz, 415 V, 1000 RPM, 132S Frame, TEFC



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RegalRexnord

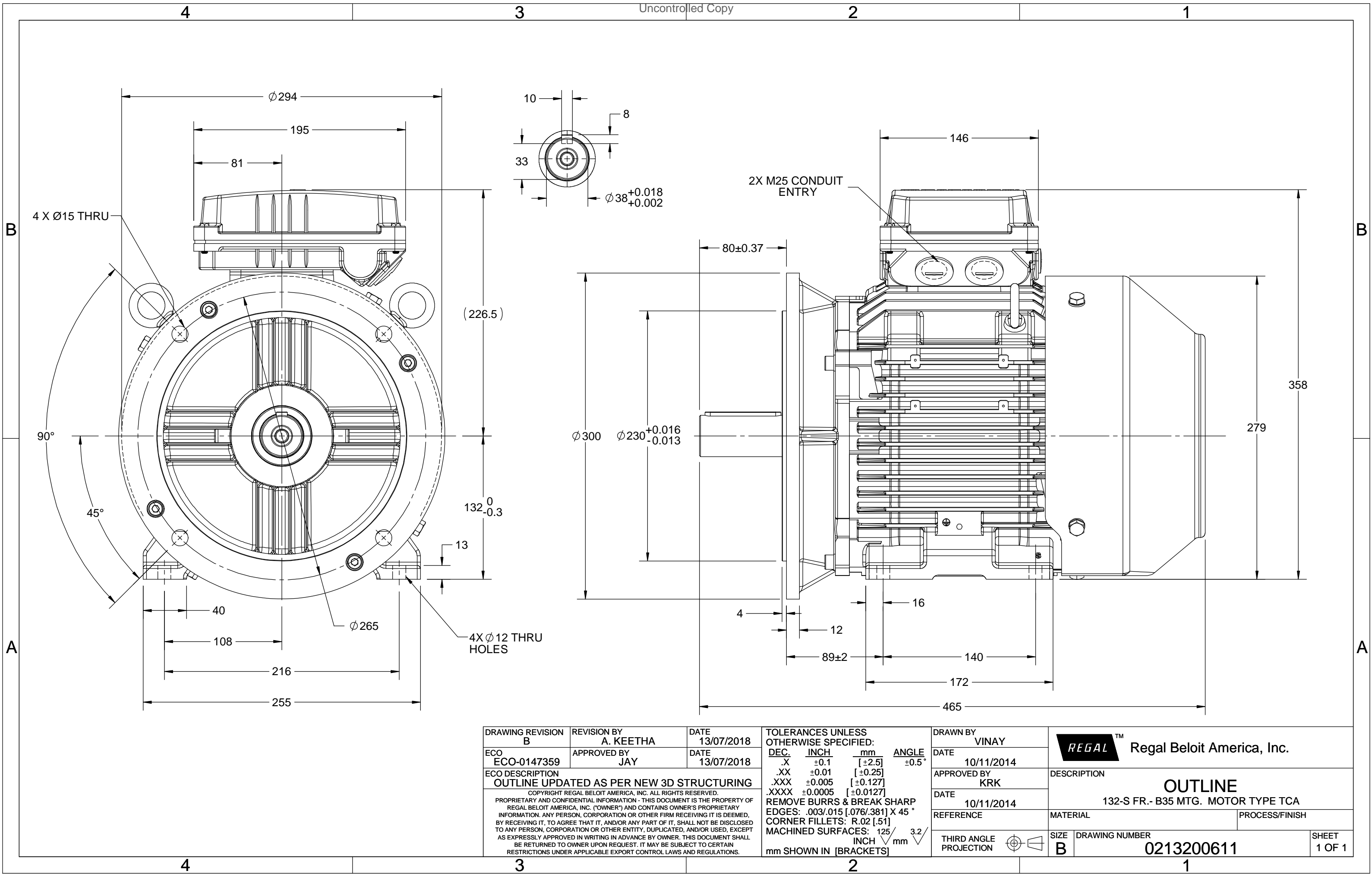
Nameplate Specifications

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
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	6	Rotation	Bi-Directional
Mounting	B35	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		
Connection Drawing	8442000085	Outline Drawing	0213200611

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DRAWING REVISION B	REVISION BY A. KEETHA	DATE 13/07/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 13/07/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER NEW 3D STRUCTURING		
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TOLERANCES UNLESS OTHERWISE SPECIFIED:			
DEC.	INCH	mm	ANGLE
.X	± 0.1	[± 2.5]	$\pm 0.5^\circ$
.XX	± 0.01	[± 0.25]	
.XXX	± 0.005	[± 0.127]	
.XXXX	± 0.0005	[± 0.0127]	
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45° CORNER FILLETS: R.02 [.51] MACHINED SURFACES: 125 3.2 INCH mm			
mm SHOWN IN [BRACKETS]			

DRAWN BY VINAY	 Regal Beloit America, Inc.		
DATE 10/11/2014			
APPROVED BY KRK	DESCRIPTION OUTLINE		
DATE 10/11/2014	132-S FR.- B35 MTG. MOTOR TYPE TCA		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0213200611	SHEET 1 OF 1

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

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.				
	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

Model No. TCA0033A3131GACD01

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 _K /T _N [pu]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Y	50	3	4.0	6.8	973	29.35	IE3	-	85.6	85.6	84	0.72	0.63	0.48	5.4	2.0	2.5

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 B35
Cooling method	IC 411
Motor weight - approx.	70 kg
Gross weight - approx.	73 kg
Motor inertia	0.0390 kgm ²
Load inertia	Customer to Provide
Vibration level	1.6 mm/s
Noise level (1meter distance from motor)	59 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 16mm ² /2 x M25 x 1.5
Auxiliary terminal box	NA

I_A/I_N - Locked Rotor Current / Rated Current

T_K/T_N - Breakdown Torque / Rated Torque

T_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.

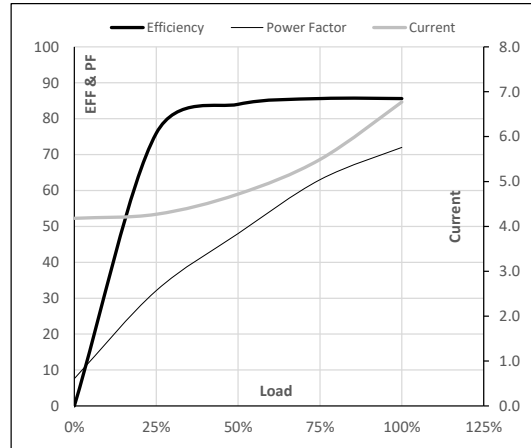
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

Model No. TCA0033A3131GACD01

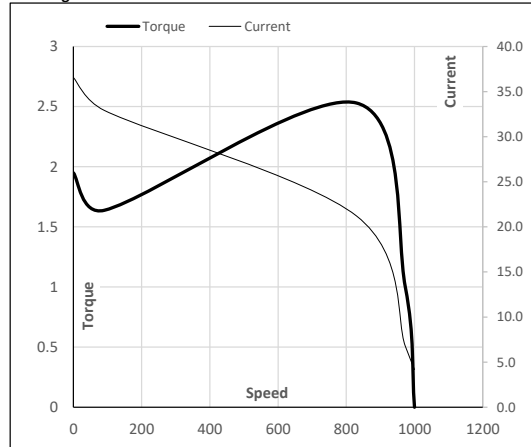
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	415	Y	50	3	4.0	6.8	973	2.99	29.35	IE3	50	S1	1000	0.039	70

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

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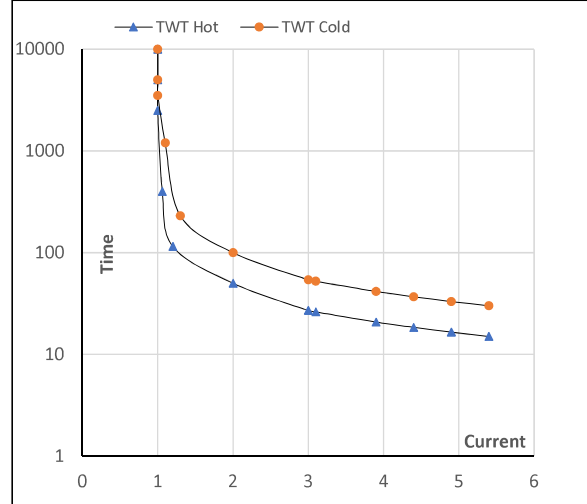
Model No. TCA0033A3131GACD01

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

Thermal Characteristics Chart



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

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