

PRODUCT INFORMATION PACKET

Model No: TCN1101A1141GAC010

Catalog No: TCN1101A1141GAC010

TerraMAX® Cast Iron Motor, 150 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 315S Frame, TEFC



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Nameplate Specifications

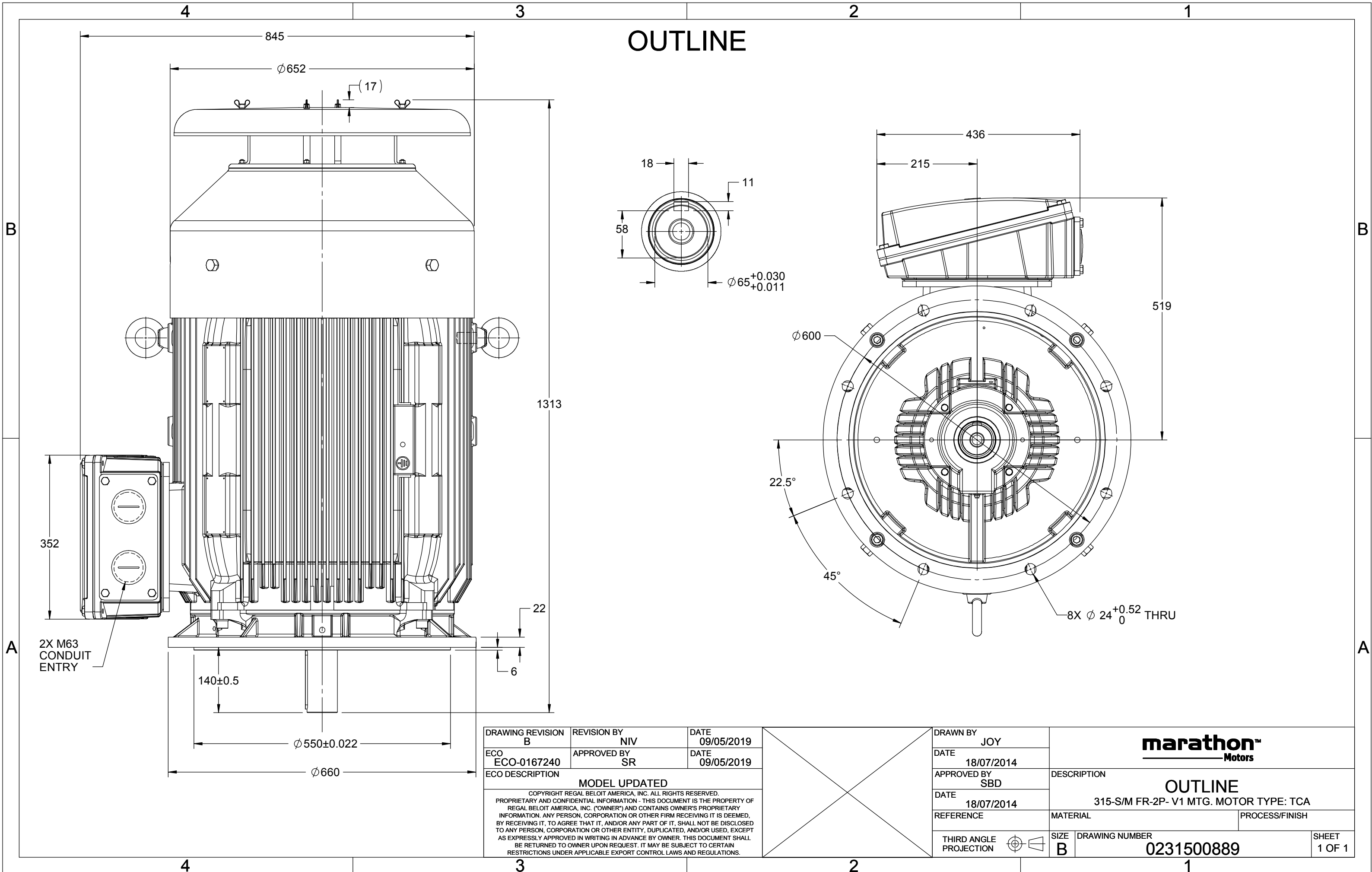
Output HP	150 Hp	Output KW	110.0 kW
Frequency	50 Hz	Voltage	400 V
Current	189.5 A	Speed	2983 rpm
Service Factor	1	Phase	3
Efficiency	95.2 %	Power Factor	0.88
Duty	S1	Insulation Class	F
Frame	315S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6316
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	V1	Motor Orientation	Shaftdown
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1311 mm	Frame Length	729 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Outline Drawing	0231500889	Connection Drawing	8442000085

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OUTLINE



DRAWING REVISION B	REVISION BY NIV	DATE 09/05/2019
ECO ECO-0167240	APPROVED BY SR	DATE 09/05/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY JOY			
DATE 18/07/2014			
APPROVED BY SBD		DESCRIPTION OUTLINE	
DATE 18/07/2014		315-S/M FR-2P- V1 MTG. MOTOR TYPE: TCA	
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231500889	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	DATE 16/12/2016		 Regal Beloit America, Inc.	
	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. TCN1101A1141GAC010

U (V)	Δ / Y Conn	f [Hz]	P		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]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Δ	50	110	150	189.5	2983	358.07	IE3	-	95.2	95.2	92.7	0.88	0.85	0.78	7.2	2.0	3.6

Motor type	TCN	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315S	Motor weight - approx.	982 kg
Duty	S1	Gross weight - approx.	1027 kg
Voltage variation *	± 10%	Motor inertia	2.2274 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)	83 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [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	Ex nA	Standard rotation	Clockwise form DE
Zone classification	Zone 2	Paint shade	RAL 5014
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6316 C3 / 6316 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	CHEVRON SRI-2 or Equivalent	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

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-15

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combined variation are as per IEC60034-1

Technical data are subject to change. There may be slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	IEC:60034-30-1	-	-	GEMS 2019	-	IEC:60034-30-1



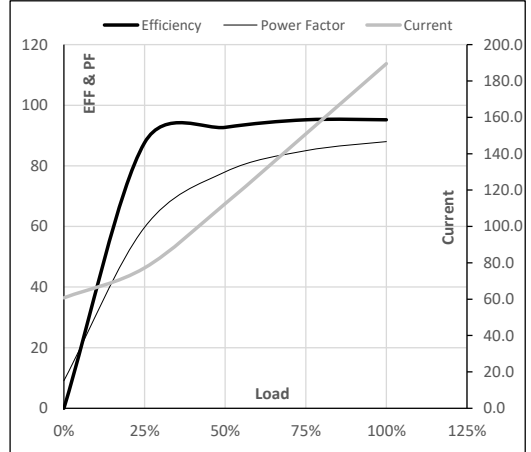
Model No. TCN1101A1141GAC010

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	400	Δ	50	110	150	189.5	2983	36.51	358.07	IE3	40	S1	1000	2.2274	982

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	60.7	77.2	112.5	150.9	189.5	
Torque	Nm	0.0	89.1	178.5	268.2	358.1	
Speed	r/min	3000	2996	2992	2987	2983	
Efficiency	%	0.0	87.6	92.7	95.2	95.2	
Power Factor	%	9.1	59.7	78.0	85.0	88.0	

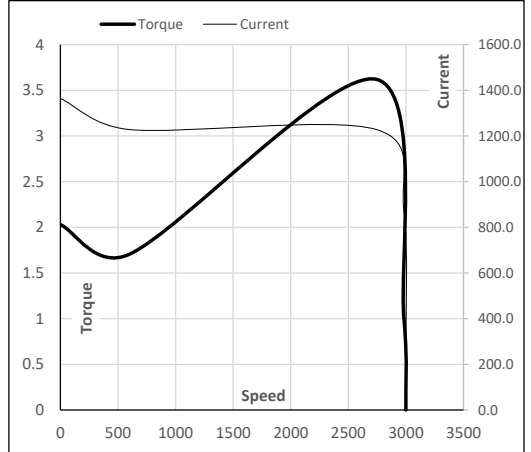
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2744	2983	3000
Current	A	1364.5	1228.1	869.8	189.5	60.7
Torque	pu	2.0	1.7	3.6	1	0

Starting Characteristics Chart



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

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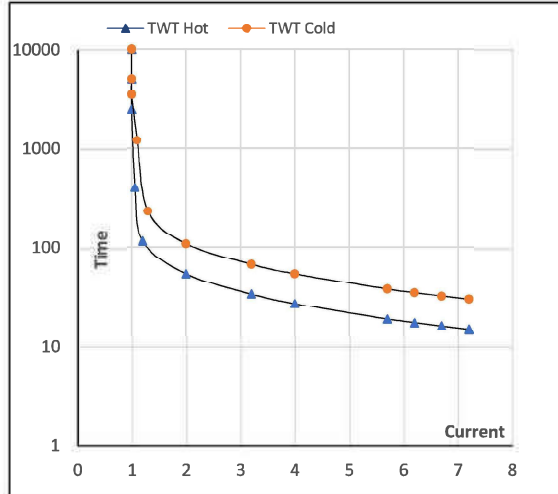
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	400	Δ	50	110	150.0	189.5	2983	36.51	358.07	IE3	40	S1	1000	2.2274	982

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	54	39	27	24	22	15	
TWT Cold	s 10000	108	80	54	50	40	30	
Current	pu	1	2	3	4	5	5.5	7.2

Thermal Characteristics Chart



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

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