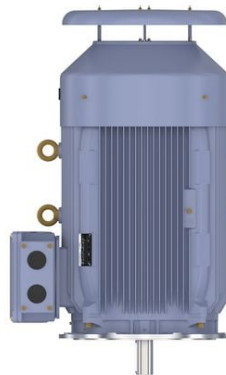


PRODUCT INFORMATION PACKET

Model No: TCA2001A3141GACD01

Catalog No: TCA2001A3141GACD01

Cast Iron Motor, 270 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 315L Frame, TEFC



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Nameplate Specifications

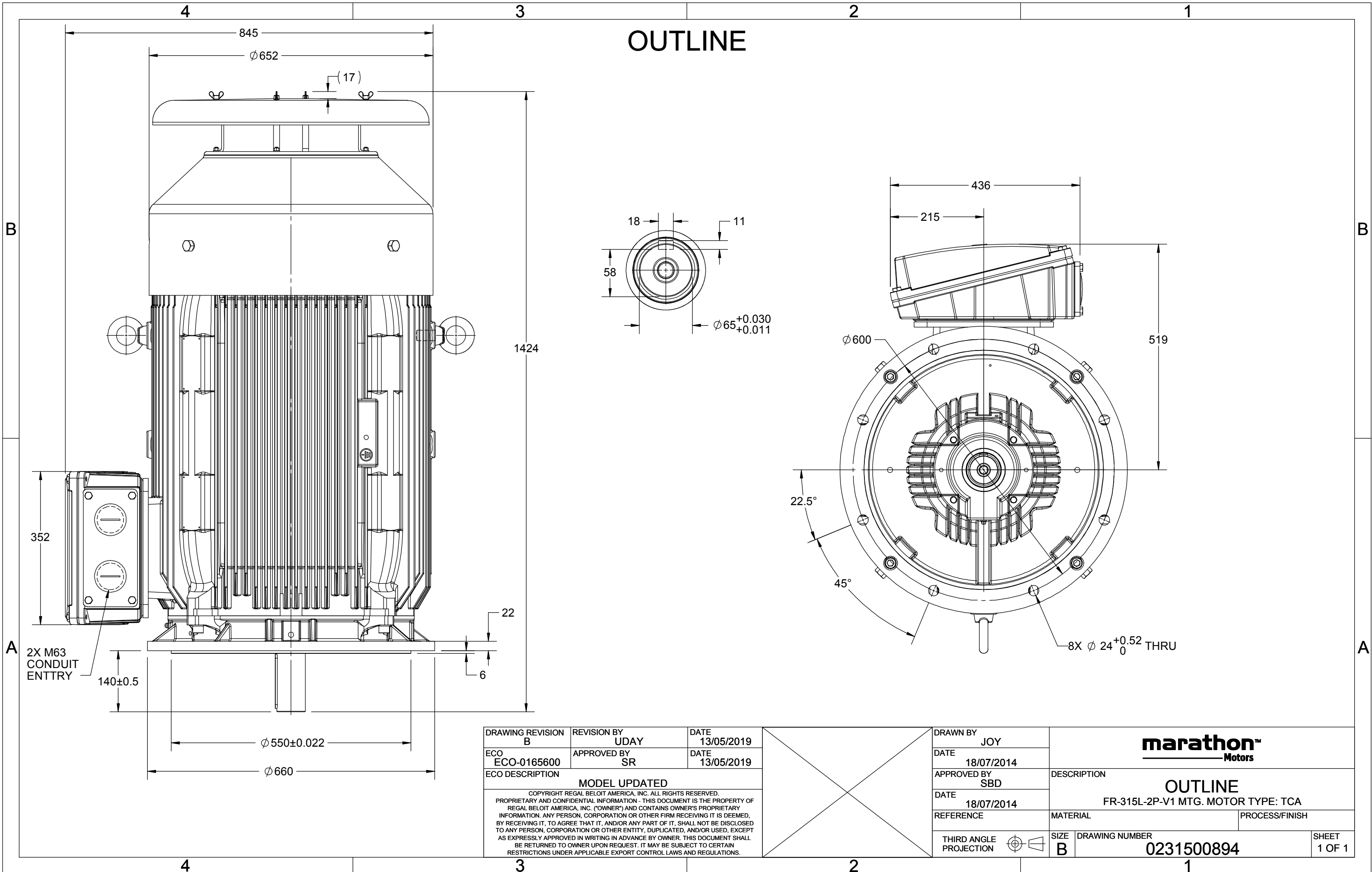
Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	415 V
Current	326.4 A	Speed	2984 rpm
Service Factor	1	Phase	3
Efficiency	95.8 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End 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	1423 mm	Frame Length	840 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0231500894

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OUTLINE



DRAWING REVISION B	REVISION BY UDAY	DATE 13/05/2019
ECO ECO-0165600	APPROVED BY SR	DATE 13/05/2019
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY JOY		
DATE 18/07/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE FR-315L-2P-V1 MTG. MOTOR TYPE: TCA	
DATE 18/07/2014	MATERIAL	PROCESS/FINISH
REFERENCE	SIZE B	DRAWING NUMBER 0231500894
THIRD ANGLE PROJECTION	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	MATERIAL		PROCESS/FINISH
	REFERENCE	SIZE A		DRAWING NUMBER 8442000085
	THIRD ANGLE PROJECTION 	SHEET 1 OF 1		

Model No. TCA2001A3141GACD01

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 _R /T _N [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	200	270	326.3	2984	644.22	IE3	-	95.8	95.8	94.7	0.89	0.87	0.79	7.7	2.4	3.7

Motor type	TCA
Enclosure	TEFC
Frame Material	Cast Iron
Frame size	315L
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	6316 C3 / 6316 C3
Lubrication method	Regreasable
Type of grease	Shell Gadus S5 V100 or Equivalent

Degree of protection	IP 55
Mounting type	IM V1
Cooling method	IC 411
Motor weight - approx.	1268 kg
Gross weight - approx.	1313 kg
Motor inertia	3.2219 kgm ²
Load inertia	Customer to Provide
Vibration level	2.8 mm/s
Noise level (1meter distance from motor)	83 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 240mm ² /2 x M63 x 1.5
Auxiliary terminal box	NA

I_A/I_N - Locked Rotor Current / Rated Current

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



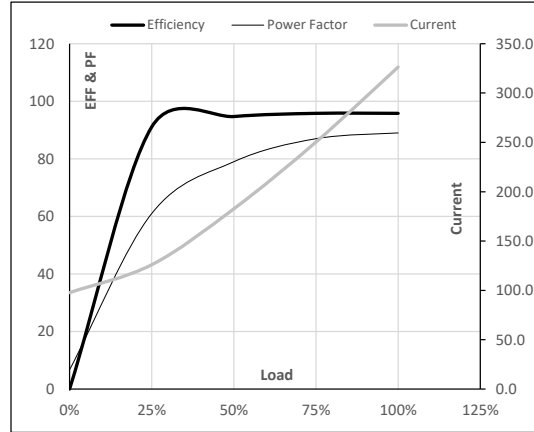
Model No. TCA2001A3141GACD01

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	200	270.0	326.3	2984	65.69	644.22	IE3	50	S1	1000	3.2219	1268

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	97.7	126.0	182.7	250.4	326.3	
Torque	Nm	0.0	160.4	321.3	482.5	644.2	
Speed	r/min	3000	2996	2992	2989	2984	
Efficiency	%	0.0	91.1	94.7	95.8	95.8	
Power Factor	%	6.7	61.0	79.0	87.0	89.0	

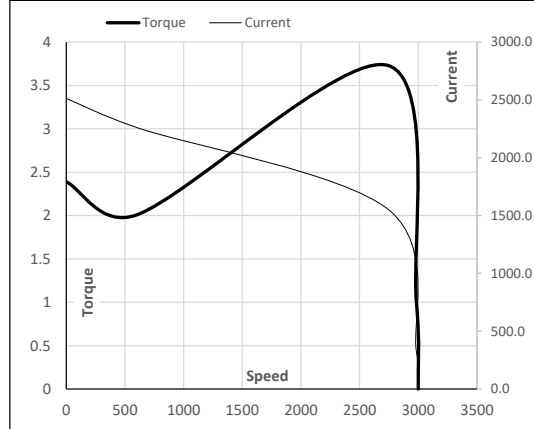
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2745	2984	3000
Current	A	2512.9	2261.6	1552.5	326.3	97.7
Torque	pu	2.4	2.0	3.7	1	0

Starting Characteristics Chart



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

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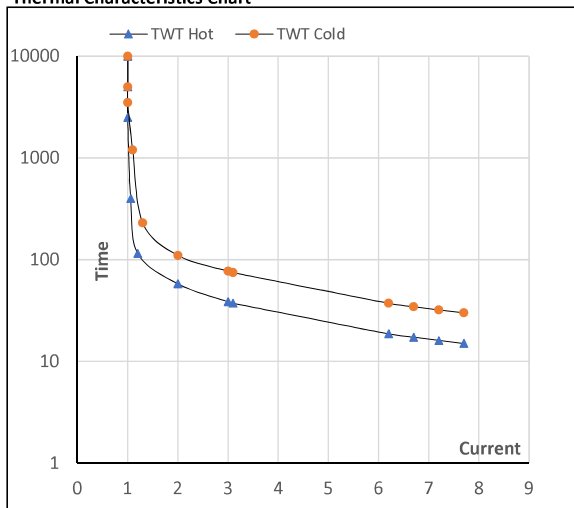
Model No. TCA2001A3141GACD01

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	200	270	326.3	2984	65.65	644.22	IE3	50	S1	1000	3.2219	1268

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	58	39	35	25	20	15	
TWT Cold	s 10000	110	77	60	45	40	30	
Current	pu	1	2	3	4	5	5.5	7.7

Thermal Characteristics Chart



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

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