

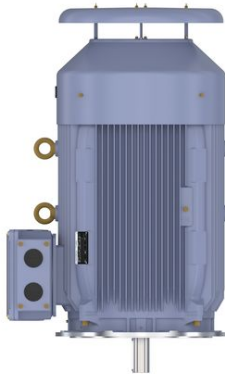
PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0753A3141GACD01

Catalog No: TCA0753A3141GACD01

75.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1000 RPM, 415 V, 315S Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL

Nameplate Specifications

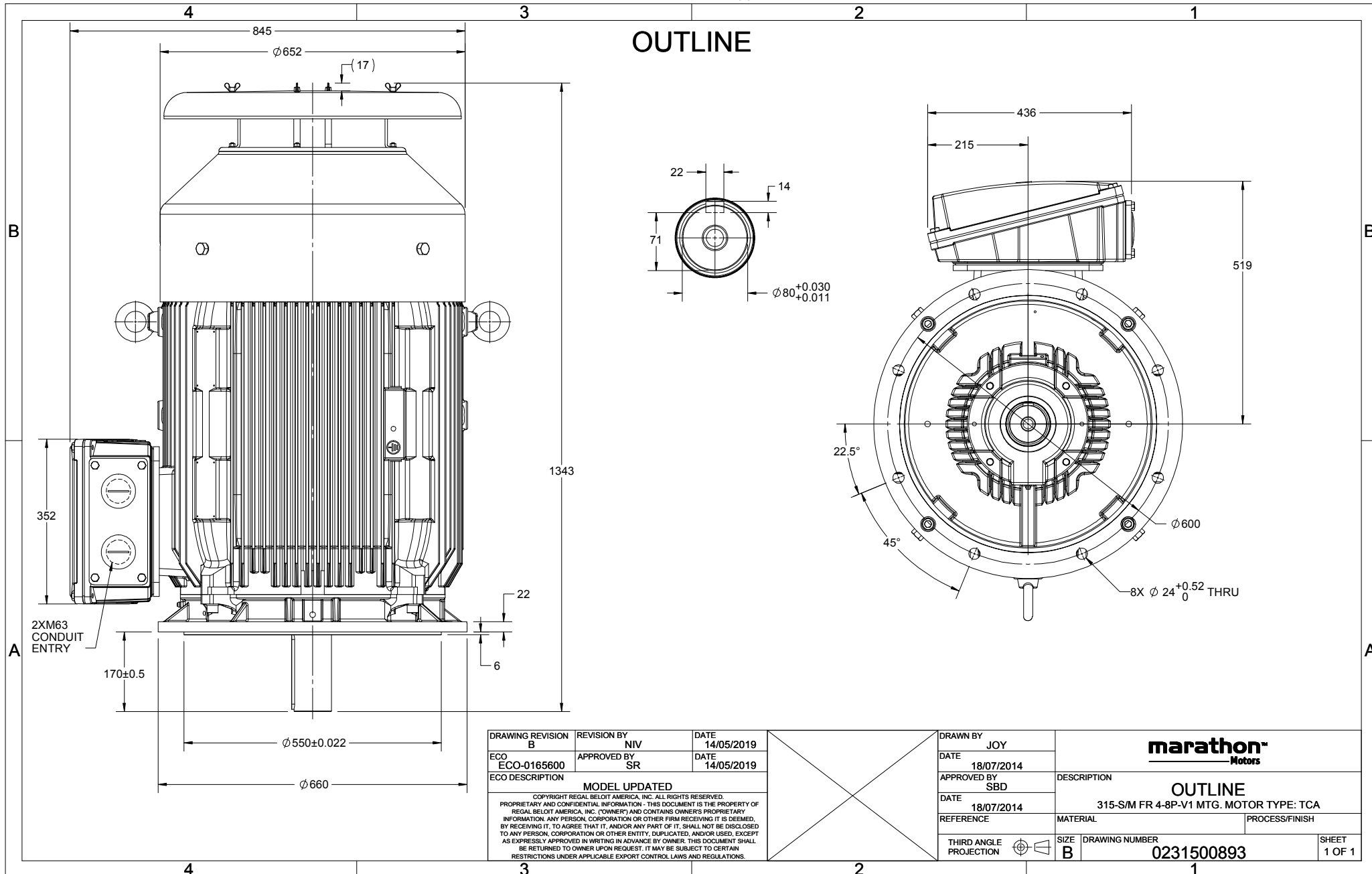
Output HP	100 Hp	Output KW	75.0 kW
Frequency	50 Hz	Voltage	415 V
Current	137.9 A	Speed	990 rpm
Service Factor	1	Phase	3
Efficiency	94.6 %	Power Factor	0.8
Duty	S1	Insulation Class	F
Frame	315S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6319
Opp Drive End Bearing Size	6319	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

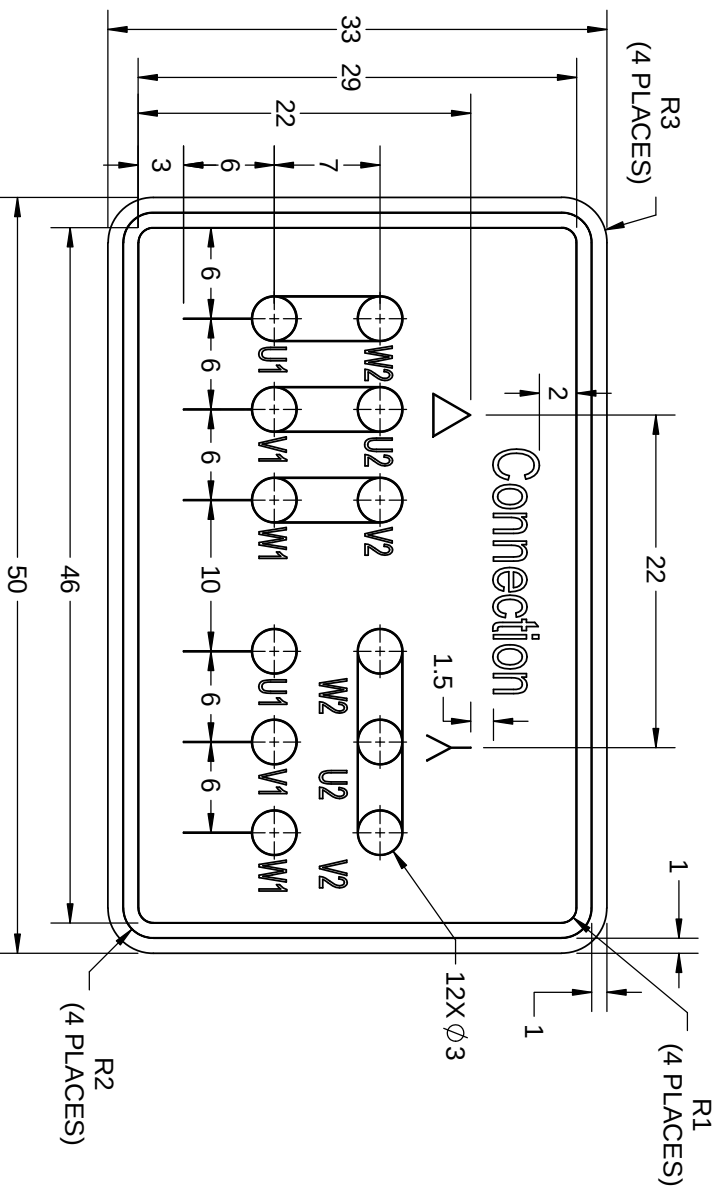
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	V1	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1341 mm	Frame Length	729 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0231500893

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OUTLINE



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. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
 2. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
 - 3.

Regal Beloit America, Inc.

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

Model No. TCA0753A3141GACD01

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 _b /T _N [pu]
415	Δ	50	75	100	137.9	990	719.72	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.2	1.7	2.2

Motor type	TCA	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.	832 kg
Duty	S1	Gross weight - approx.	877 kg
Voltage variation *	± 10%	Motor inertia	3.3734 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)	66 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 +50 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [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	NA	Standard rotation	Clockwise form DE
Zone classification	NA	Paint shade	RAL 5014
Gas group	NA	Accessories	
Temperature class	NA	Accessory - 1	-
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball bearing	Accessory - 3	-
DE / NDE bearing	6319 C3 / 6319 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	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	NA

I_a/I_N - Locked Rotor Current / Rated CurrentT_b/T_N - Breakdown Torque / Rated TorqueT_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	-	-	-



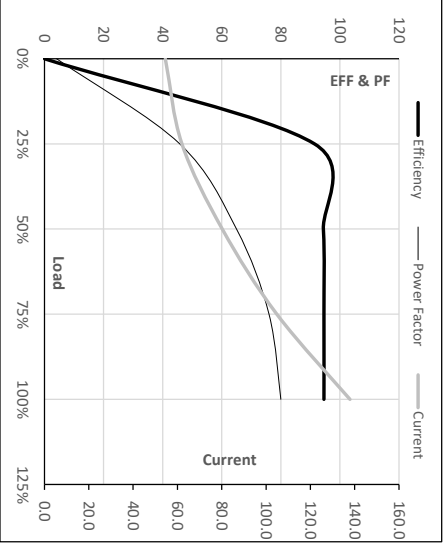
Model No. TCA0753A3141GACD01

Enclosure	U [V]	Δ / Y Com	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb Temp [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TFC	415	Δ	50	75	100	137.9	990	73.39	719.72	IE3	50	S1	1000	3.3734	832

Motor Speed Data

Load Point	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	54.5	62.0	80.2	104.9	137.9
Torque	Nm	0.0	178.5	357.9	538.3	719.7
Speed	r/min	1000	998	995	993	990
Efficiency	%	0.0	91.4	94.4	94.6	94.6
Power Factor	%	4.1	45.8	65.0	76.0	80.0

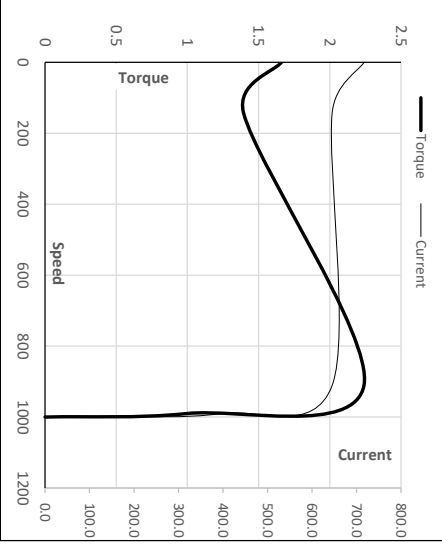
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	143	911	990	1000
Current	A	716.9	645.3	397.0	137.9	54.5
Torque	pu	1.7	1.4	2.2	1	0

Starting Characteristics Chart



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

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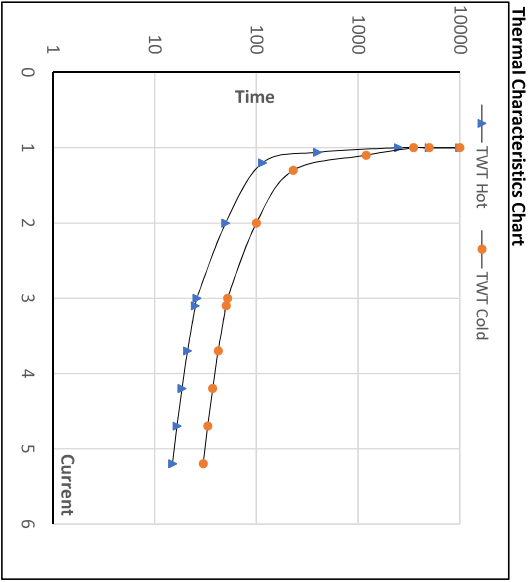


Model No. TCA0753A3141GACD01

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	75	100	137.9	990	73.34	719.72	IE3	50	S1	1000	3.3734	832

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s	10000	50	26	20	18	16	15
TWT Cold	s	10000	100	52	41	36	32	30
Current	pu	1	2	3	4	4.5	5	5.2



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

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