

# PRODUCT INFORMATION PACKET

Model No: SCA2001A3143GAAD01

Catalog No: SCA2001A3143GAAD01

200kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B35, 50Hz, 95.0%, 315L Frame, TEFC  
Cast Iron IE2 Efficiency Motors





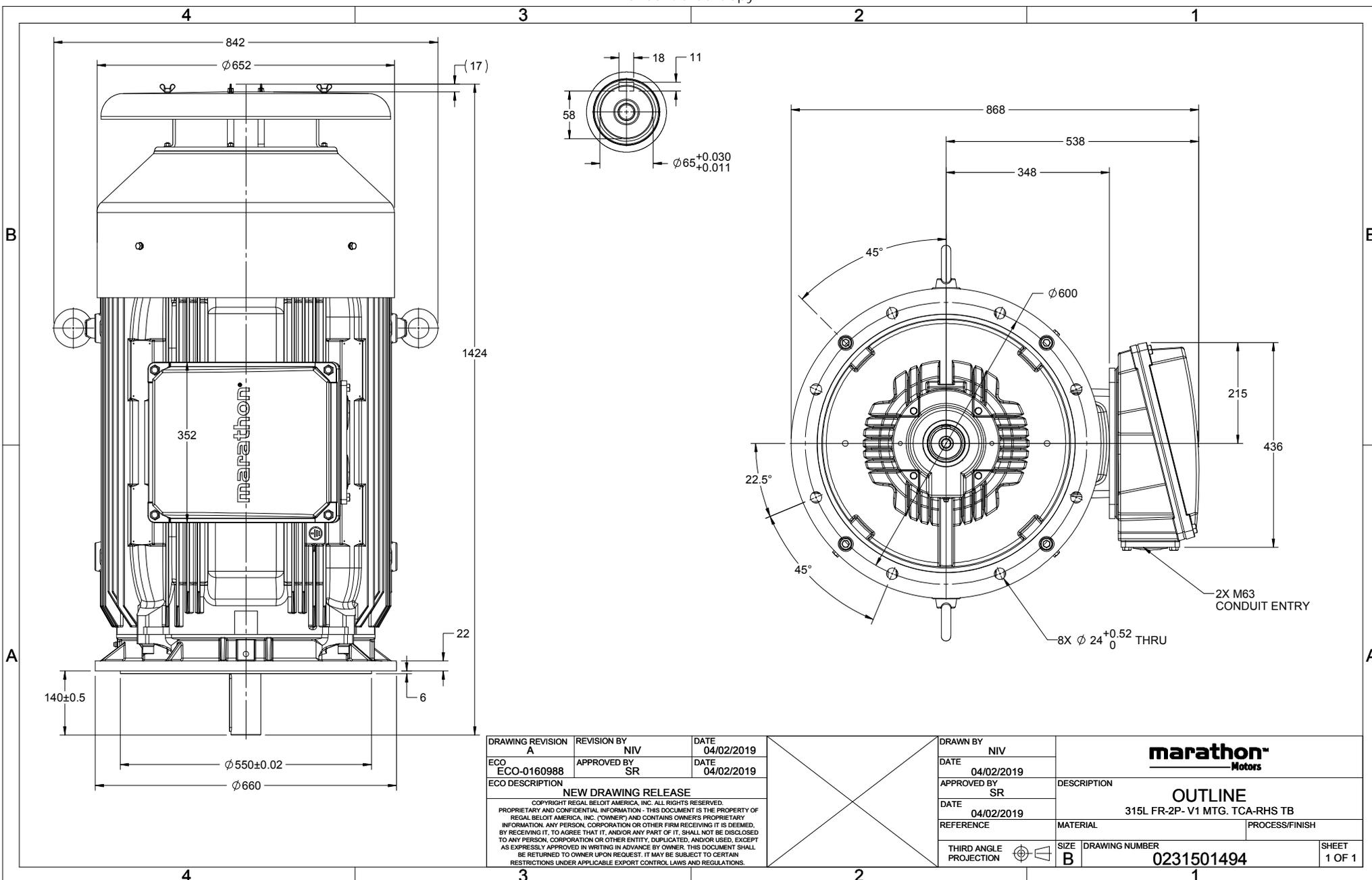
### Nameplate Specifications

Output HP	270 Hp	Output KW	200.0 kW
Frequency	50 Hz	Voltage	415 V
Current	319.2 A	Speed	2979 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.92
Duty	S1	Insulation Class	F
Frame	315L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6316
Opp Drive End Bearing Size	6316	UL	No
CSA	No	CE	Yes
IP Code	55		

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	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	1424 mm	Frame Length	840 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	SIDE		
Connection Drawing	8442000085	Outline Drawing	0231501494

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DRAWING REVISION A	REVISION BY NIV	DATE 04/02/2019
ECO ECO-0160988	APPROVED BY SR	DATE 04/02/2019
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY NIV		
DATE 04/02/2019		
APPROVED BY SR	DESCRIPTION OUTLINE	
DATE 04/02/2019	315L FR-2P- V1 MTG. TCA-RHS TB	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231501494
		SHEET 1 OF 1



**Model No.** SCA2001A3143GAAD01

U (V)	Δ / Y Conn	f (Hz)	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __load				PF at __load			I <sub>a</sub> /I <sub>N</sub> [pu]	T <sub>a</sub> /T <sub>N</sub> [pu]	T <sub>d</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	200	270	319.2	2979	645.36	IE2	-	95.0	95.0	94.6	0.92	0.91	0.88	5.3	1.8	2.7

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1220 kg
Duty	S1	Gross weight - approx.	1265 kg
Voltage variation *	± 10%	Motor inertia	3.0257 kgm <sup>2</sup>
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 +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	Accessory - 3	-
DE / NDE bearing	6316 C3 / 6316 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 240mm <sup>2</sup> /2 x M63 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	Available on Request

I<sub>a</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>d</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>a</sub>/T<sub>N</sub> - 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	-	-	-



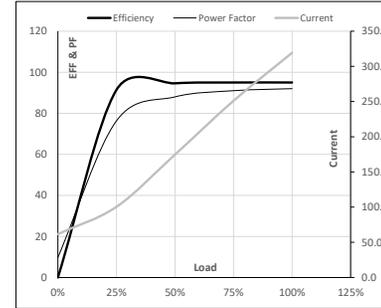
Model No. SCA2001A3143GAAD01

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 <sup>2</sup> ]	Weight [kg]
TEFC	415	Δ	50	200	270	319.2	2979	65.81	645.36	IE2	50	S1	1000	3.0257	1220

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	61.7	100.4	174.6	251.1	319.2	
Torque	Nm	0.0	160.5	321.5	483.1	645.4	
Speed	r/min	3000	2995	2990	2985	2979	
Efficiency	%	0.0	91.4	94.6	95.0	95.0	
Power Factor	%	9.8	76.3	88.0	91.0	92.0	

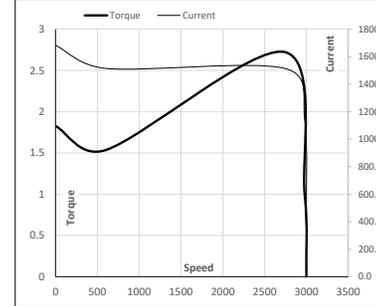
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2741	2979	3000
Current	A	1683.2	1514.8	1146.4	319.2	61.7
Torque	pu	1.8	1.5	2.7	1	0

**Starting Characteristics Chart**



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

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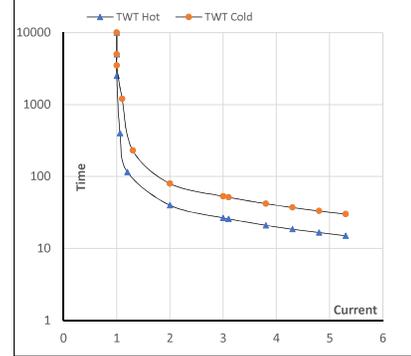
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TEFC	415	$\Delta$	50	200	270	319.2	2979	65.81	645.36	IE2	50	S1	1000	3.0257	1220

**Motor Speed Torque Data**

Load	FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR
TWT Hot	s 10000	40	27	20	17	16	15
TWT Cold	s 10000	80	53	40	36	32	30
Current	pu	1	2	3	4	4.5	5, 5.3

**Thermal Characteristics Chart**



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

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