

# PRODUCT INFORMATION PACKET

Model No: SCA2002A3133GAAD01

Catalog No: SCA2002A3133GAAD01

200kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B35, 50Hz, 95.1%, 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	327.1 A	Speed	1487 rpm
Service Factor	1	Phase	3
Efficiency	95.1 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	315L	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	4	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1317 mm	Frame Length	840 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	SIDE		
Connection Drawing	8442000085	Outline Drawing	0231501391

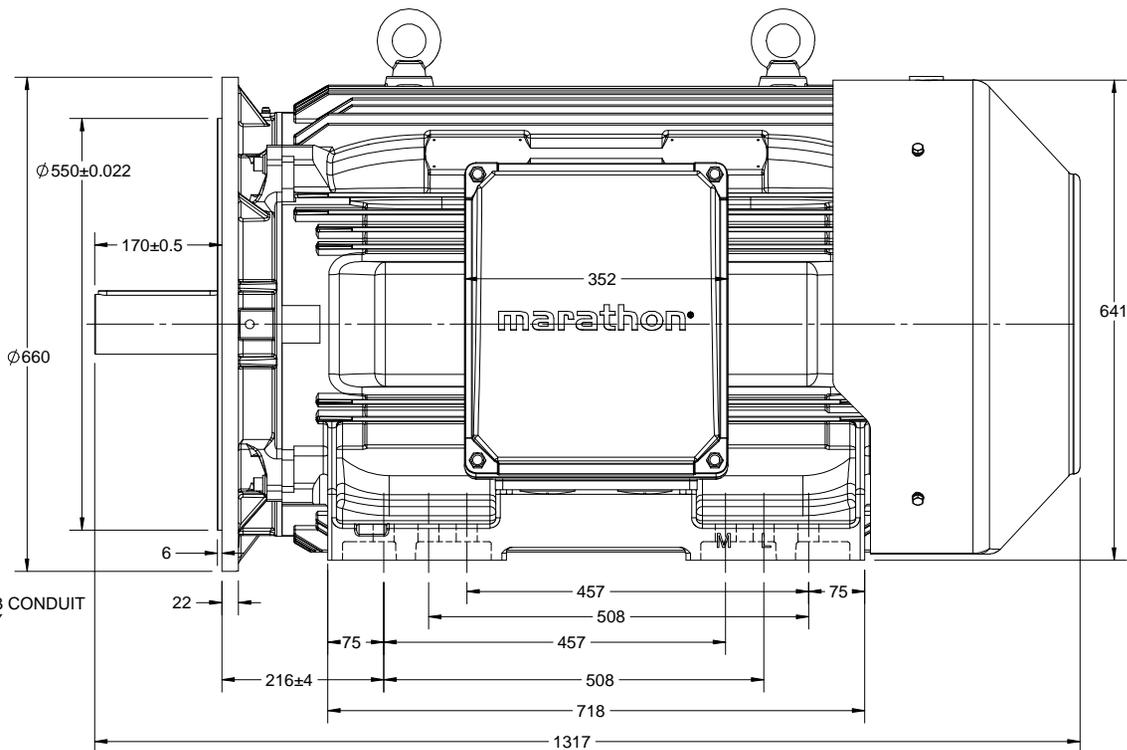
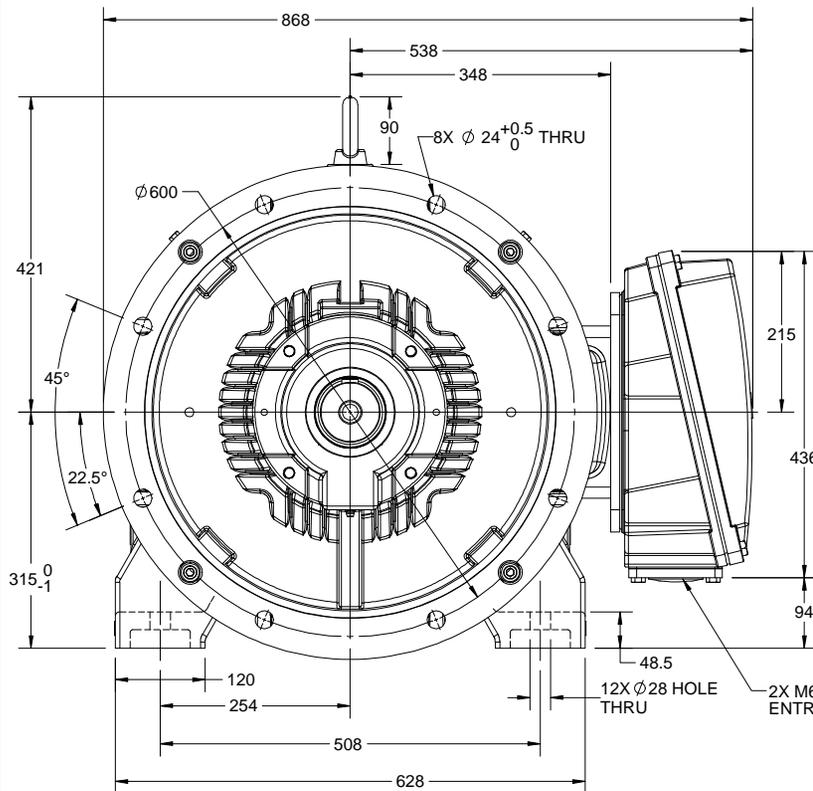
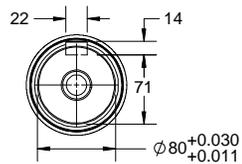
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B

B

A

A



DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY GSR
DATE 16/11/2017
APPROVED BY JAY
DATE 16/11/2017
REFERENCE

**marathon**  
Motors

DESCRIPTION  
**OUTLINE**  
315L 4-8P B35 MTG. TCA/QCA-RHS TB

MATERIAL PROCESS/FINISH

THIRD ANGLE  
PROJECTION

SIZE  
B

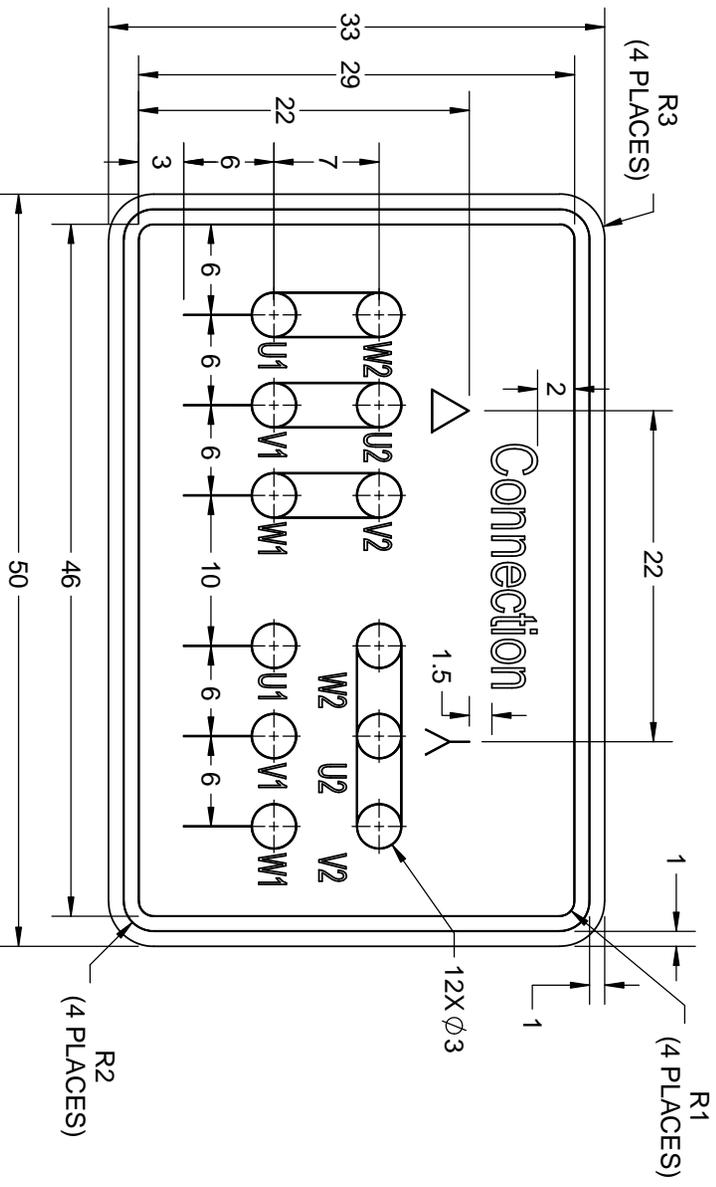
DRAWING NUMBER  
**0231501391**

SHEET  
1 OF 1

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DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
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		DESCRIPTION <b>REGAL</b> <sup>TM</sup> Regal Beloit America, Inc. CONN DIAGRAM-NAMEPLATE	
DATE 16/12/2016		DATE 16/12/2016	
APPROVED BY SBD		MATERIAL	
DATE 16/12/2016		PROCESS/FINISH	
REFERENCE		SIZE A	
THIRD ANGLE PROJECTION		DRAWING NUMBER 8442000085	
		SHEET 1 OF 1	

**Model No.** SCA2002A3133GAAD01

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>b</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	327.1	1487	1294	IE2	-	95.1	95.1	95.9	0.89	0.87	0.81	5.4	2.0	2.7

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315L	Motor weight - approx.	1269 kg
Duty	S1	Gross weight - approx.	1314 kg
Voltage variation *	± 10%	Motor inertia	5.0623 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)	69 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	6319 C3 / 6319 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>b</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	-	-	-



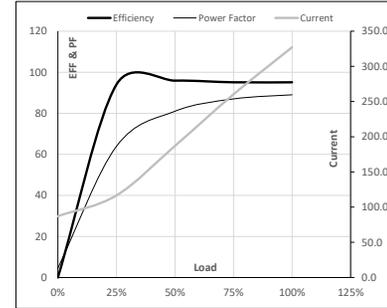
Model No. SCA2002A3133GAAD01

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	327.1	1487	131.95	1293.99	IE2	50	S1	1000	5.0623	1269

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	87.1	116.6	187.0	260.3	327.1	
Torque	Nm	0.0	321.1	643.6	967.6	1294.0	
Speed	r/min	1500	1497	1494	1490	1487	
Efficiency	%	0.0	94.0	95.9	95.1	95.1	
Power Factor	%	4.6	63.9	81.0	87.0	89.0	

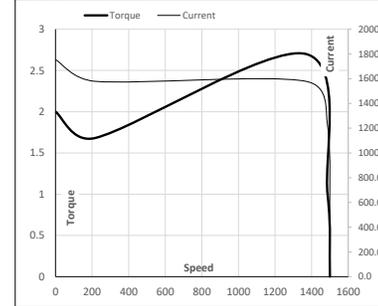
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1368	1487	1500
Current	A	1754.6	1579.2	1220.5	327.1	87.1
Torque	pu	2.0	1.7	2.7	1	0

**Starting Characteristics Chart**



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

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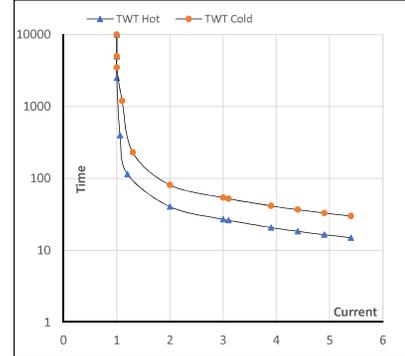
Model No. SCA2002A3133GAAD01

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	327.1	1487	131.95	1293.99	IE2	50	S1	1000	5.0623	1269

**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	41	27	20	18	16	15
TWT Cold	s 10000	81	54	40	36	32	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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