

# PRODUCT INFORMATION PACKET

Model No: SCA0151A3121GAAD01

Catalog No: SCA0151A3121GAAD01

15kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B5, 50Hz, 90.3%, 160M Frame, TEFC  
Cast Iron IE2 Efficiency Motors





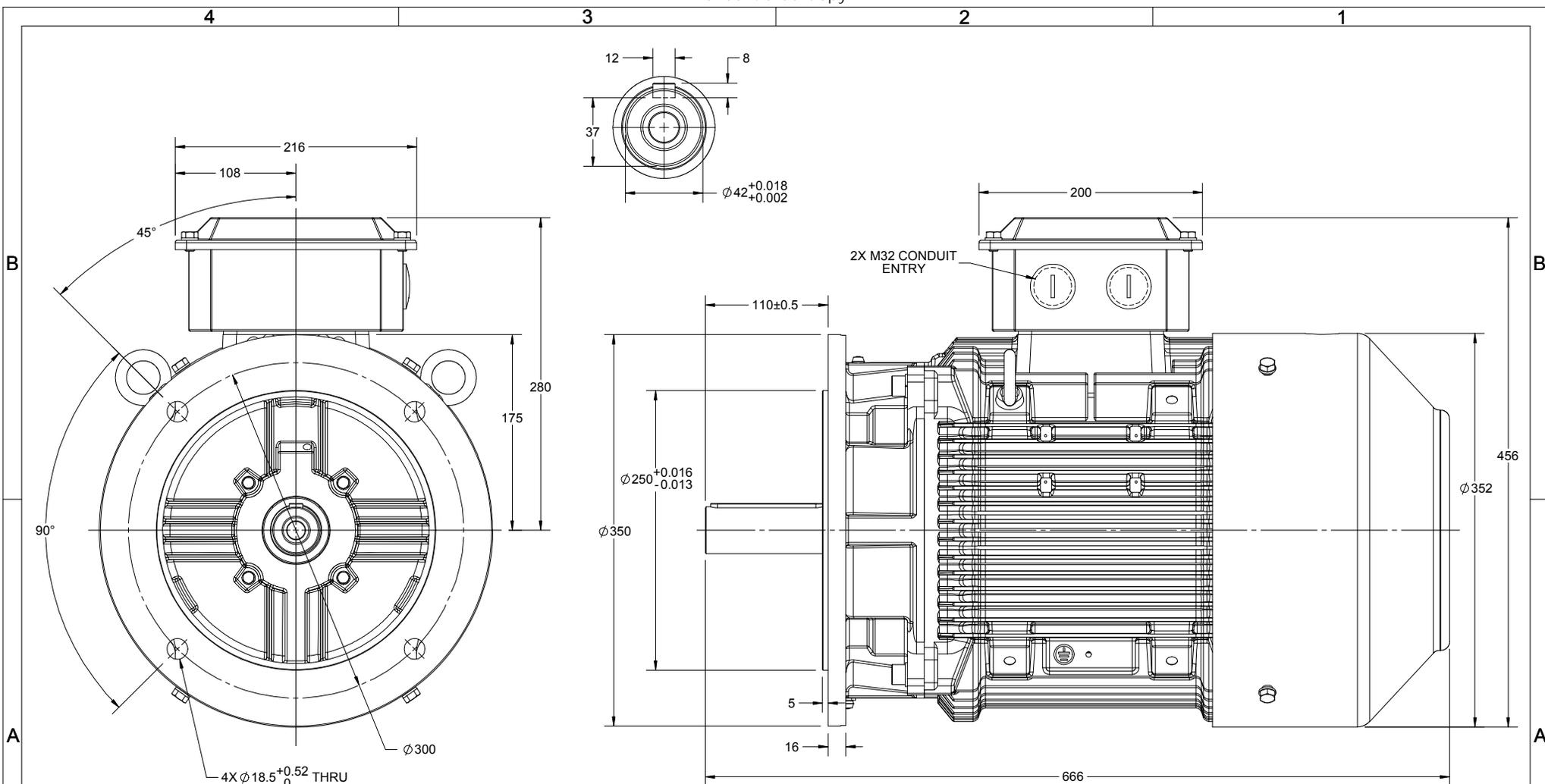
### Nameplate Specifications

Output HP	20 Hp	Output KW	15.0 kW
Frequency	50 Hz	Voltage	415 V
Current	25.0 A	Speed	2931 rpm
Service Factor	1	Phase	3
Efficiency	90.3 %	Power Factor	0.92
Duty	S1	Insulation Class	F
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6309
Opp Drive End Bearing Size	6209	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	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	666 mm	Frame Length	298 mm
Shaft Diameter	42 mm	Shaft Extension	110 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0216000932

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DRAWING REVISION B	REVISION BY LK	DATE 27/06/2019	X	DRAWN BY PRIYA	<b>marathon</b> Motors
ECO ECO-0169536	APPROVED BY SR	DATE 27/06/2019		DATE 03/04/2018	
ECO DESCRIPTION MODEL UPDATED AS PER NEW 3D STRUCTURE <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. (OWNER) AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				APPROVED BY JAY	
				DATE 03/04/2018	DESCRIPTION OUTLINE 160L FR B5-MTG MOTOR TYPE:SCA
				REFERENCE	MATERIAL
				THIRD ANGLE PROJECTION	PROCESS/FINISH
				SIZE B	DRAWING NUMBER 0216000932
					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> ™ 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. SCA0151A3121GAAD01

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>k</sub> /T <sub>N</sub> [pu]	T <sub>k</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					S/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	15	20	25.0	2931	48.87	IE2	-	90.3	90.3	90.5	0.92	0.91	0.87	6.3	2.1	2.9

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	160M	Motor weight - approx.	161 kg
Duty	S1	Gross weight - approx.	181 kg
Voltage variation *	± 10%	Motor inertia	0.0563 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	2.2 mm/s
Design	N	Noise level ( 1meter distance from motor)	79 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	6309-2Z / 6209-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm <sup>2</sup> /2 X M32 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

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

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

T<sub>k</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	-	-	-





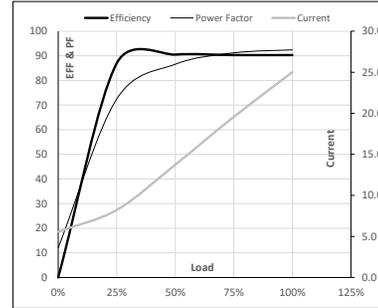
Model No. SCA0151A3121GAAD01

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	15	20	25.0	2931	4.98	48.87	IE2	50	S1	1000	0.0563	161

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	5.6	8.2	13.7	19.6	25.0	
Torque	Nm	0.0	11.9	24.0	36.2	48.9	
Speed	r/min	3000	2984	2968	2950	2931	
Efficiency	%	0.0	87.0	90.5	90.3	90.3	
Power Factor	%	12.1	72.5	86.6	91.2	92.4	

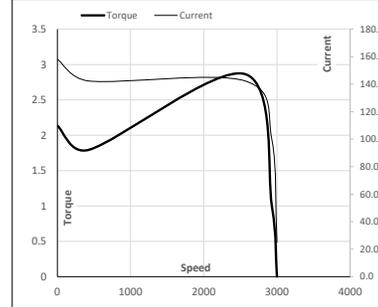
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	429	2566	2931	3000
Current	A	158.2	142.4	99.7	25.0	5.6
Torque	pu	2.1	1.8	2.9	1	0

**Starting Characteristics Chart**



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

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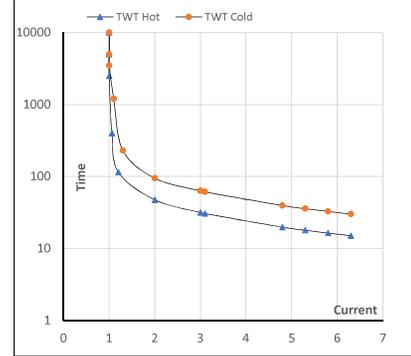
Model No. SCA0151A3121GAAD01

Enclosure	U (V)	$\Delta / Y$ 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	$\Delta$	50	15	20	25.0	2931	4.98	48.87	IE2	50	S1	1000	0.0563	161

**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	47	32	25	18	17	15
TWT Cold	s 10000	95	63	50	37	34	30
Current	pu	1	2	3	4	5	5.5 6.3

**Thermal Characteristics Chart**



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

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