

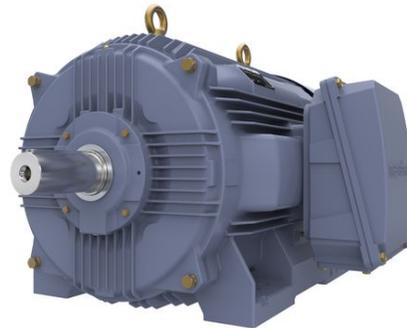
PRODUCT INFORMATION PACKET

marathon[®]
Motors

Model No: SCA1102A3113GAAD01

Catalog No: SCA1102A3113GAAD01

110kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B3, 50Hz, 94.5%, 315S Frame, TEFC
Cast Iron IE2 Efficiency Motors



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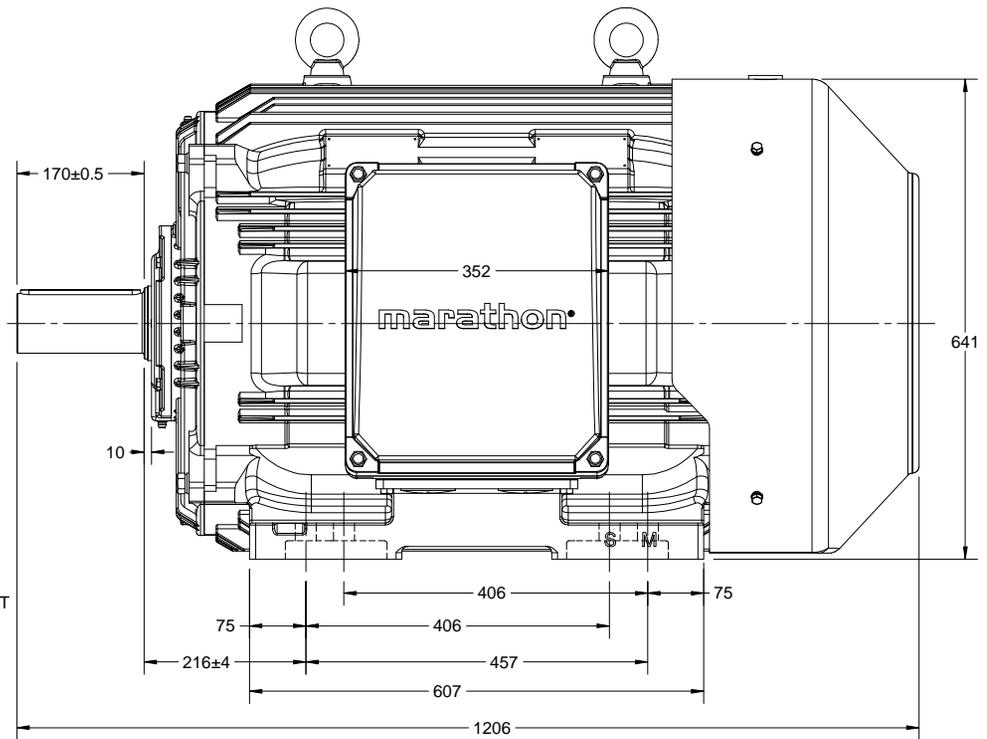
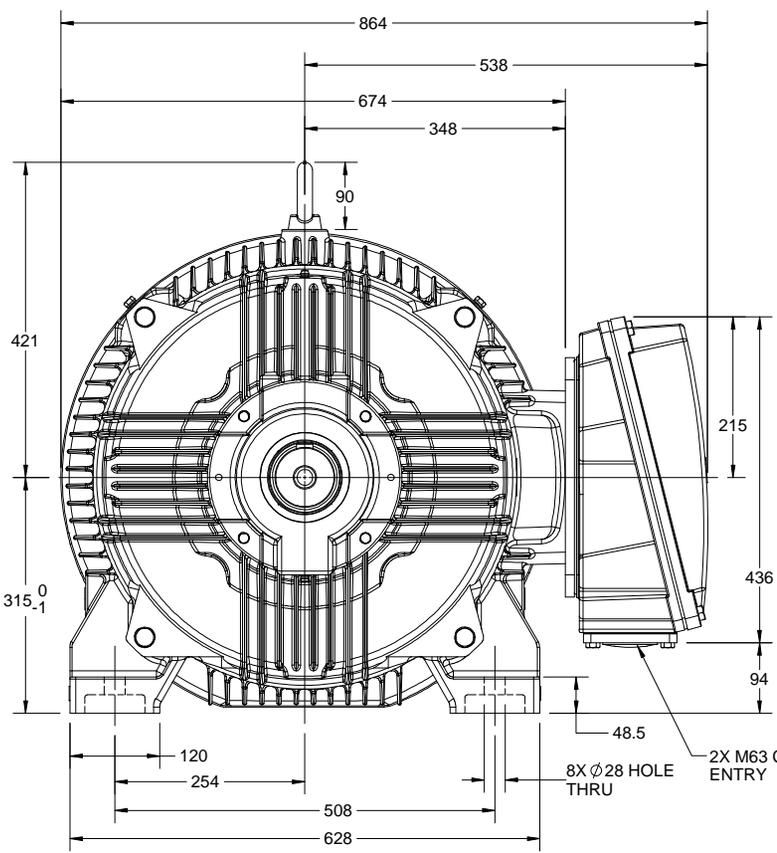
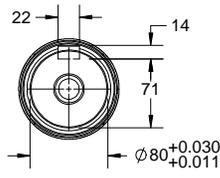
Nameplate Specifications

Output HP	150 Hp	Output KW	110.0 kW
Frequency	50 Hz	Voltage	415 V
Current	183.5 A	Speed	1486 rpm
Service Factor	1	Phase	3
Efficiency	94.5 %	Power Factor	0.88
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	4	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1206 mm	Frame Length	729 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	SIDE		
Connection Drawing	8442000085	Outline Drawing	0231501362

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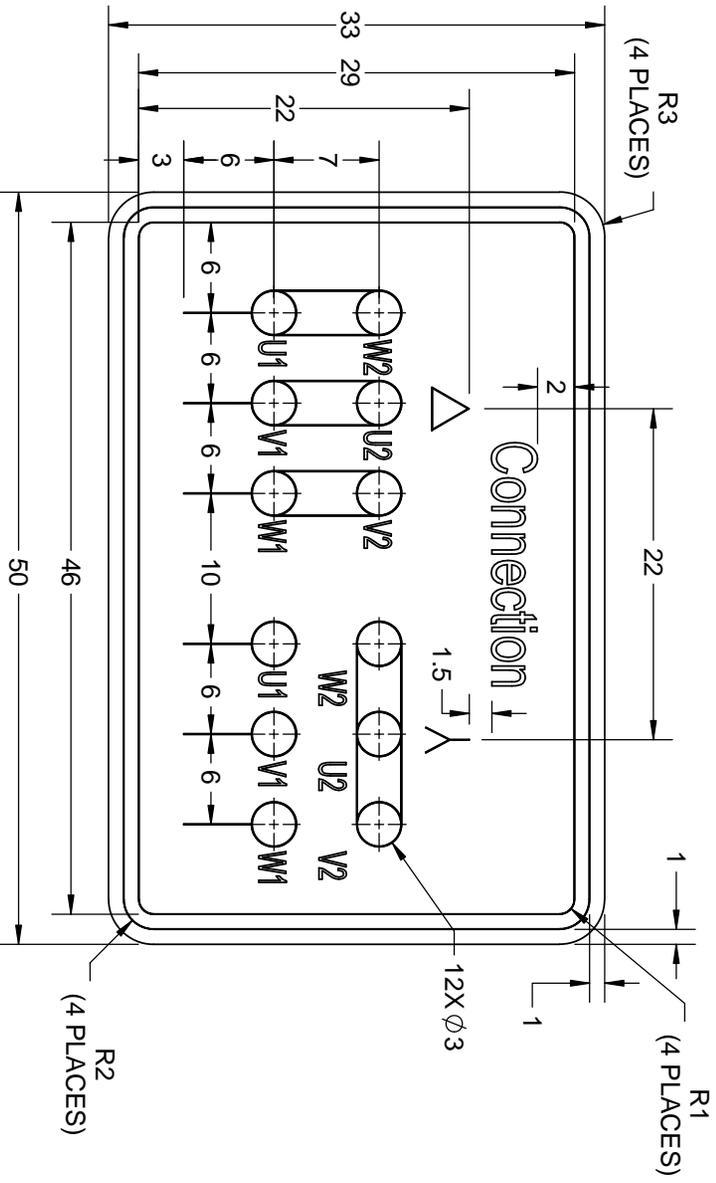
DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SKM	
DATE 08/11/2017	
APPROVED BY JAY	DESCRIPTION OUTLINE 315S/M 4P-8P B3 MTG. TCA/QCA-RHS TB
DATE 08/11/2017	
REFERENCE	MATERIAL
THIRD ANGLE PROJECTION	PROCESS/FINISH DRAWING NUMBER 0231501362
SIZE B	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		 Regal Beloit America, Inc.	
DATE 16/12/2016			
APPROVED BY SBD		DESCRIPTION CONN DIAGRAM-NAMEPLATE	
DATE 16/12/2016			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE A	DRAWING NUMBER 8442000085	SHEET 1 OF 1

Model No. SCA1102A3113GAAD01

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 _b /T _N [pu]	
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL				1/2FL
415	Δ	50	110	150	183.5	1486	718.63	IE2	-	94.5	94.5	95.0	0.88	0.86	0.79	5.6	1.8	2.8

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315S	Motor weight - approx.	934 kg
Duty	S1	Gross weight - approx.	979 kg
Voltage variation *	± 10%	Motor inertia	3.2416 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)	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 ² /2 x M63 x 1.5
Type of grease	Shell Gadus S5 V100 or Equivalent	Auxiliary terminal box	Available on Request

I_a/I_N - Locked Rotor Current / Rated Current

T_b/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	-	-	-



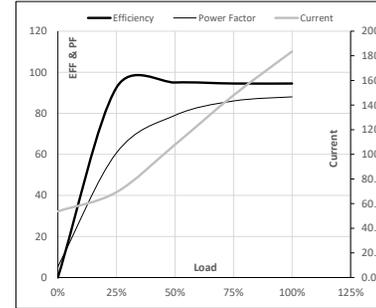
Model No. SCA1102A3113GAAD01

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	110	150	183.5	1486	73.28	718.63	IE2	50	S1	1000	3.2416	934

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	53.7	69.3	107.9	148.0	183.5	
Torque	Nm	0.0	178.4	357.6	537.6	718.6	
Speed	r/min	1500	1497	1493	1490	1486	
Efficiency	%	0.0	92.5	95.0	94.5	94.5	
Power Factor	%	5.3	60.7	79.0	86.0	88.0	

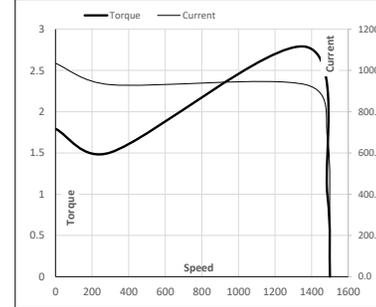
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	300	1367	1486	1500
Current	A	1034.5	931.1	676.4	183.5	53.7
Torque	pu	1.8	1.5	2.8	1	0

Starting Characteristics Chart



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

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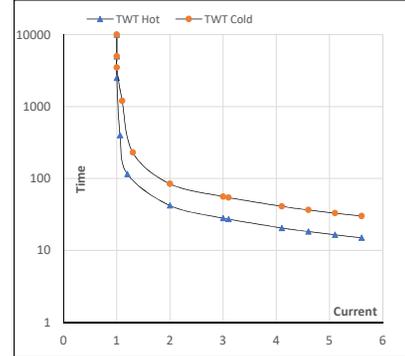
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Enclosure	U (V)	Δ / Y Conn	f (Hz)	P (kW)	P (hp)	I (A)	n (rpm)	T (kgm)	T (Nm)	IE Class	Amb (°C)	Duty	Elevation (m)	Inertia (kg·m ²)	Weight (kg)
TEFC	415	Δ	50	110	150	183.5	1486	73.28	718.63	IE2	50	S1	1000	3.2416	934

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s 10000	42	28	20	17	16	15
TWT Cold	s 10000	84	56	39	35	31	30
Current	pu	1	2	3	4	5	5.5, 5.6

Thermal Characteristics Chart



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

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