

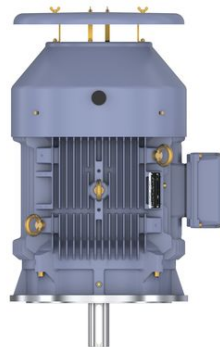
PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA0552A3143GAAD01

Catalog No: SCA0552A3143GAAD01

55kW, General Purpose Low Voltage IEC Motor, 3 phase, 4 Pole, 415V, B35, 50Hz, 93.5%, 250M Frame, TEFC
Cast Iron IE2 Efficiency Motors



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Nameplate Specifications

Output HP	75 Hp	Output KW	55.0 kW
Frequency	50 Hz	Voltage	415 V
Current	94.0 A	Speed	1481 rpm
Service Factor	1	Phase	3
Efficiency	93.5 %	Power Factor	0.87
Duty	S1	Insulation Class	F
Frame	250M	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6314
Opp Drive End Bearing Size	6314	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	V1	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1049 mm	Frame Length	460 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	SIDE		
Outline Drawing	0225000748	Connection Drawing	8442000085

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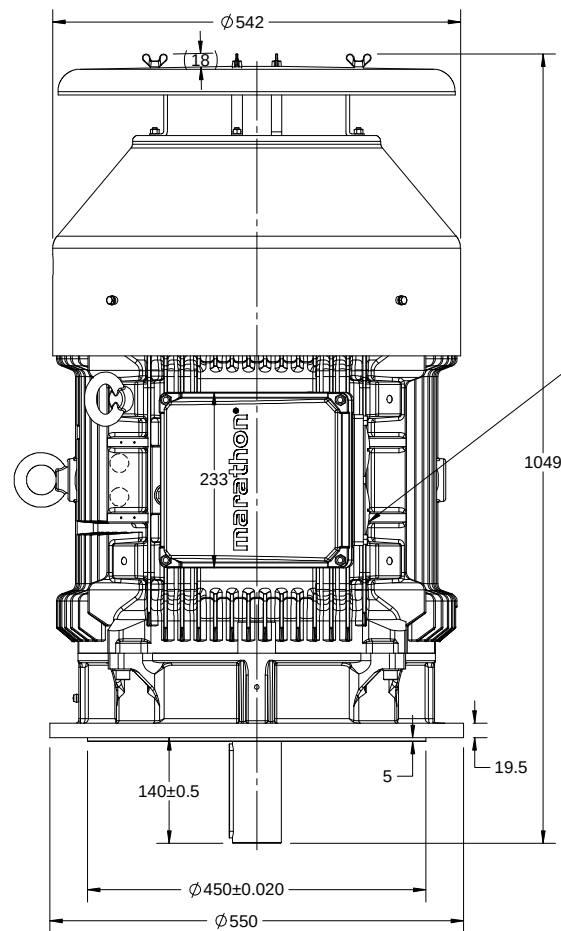
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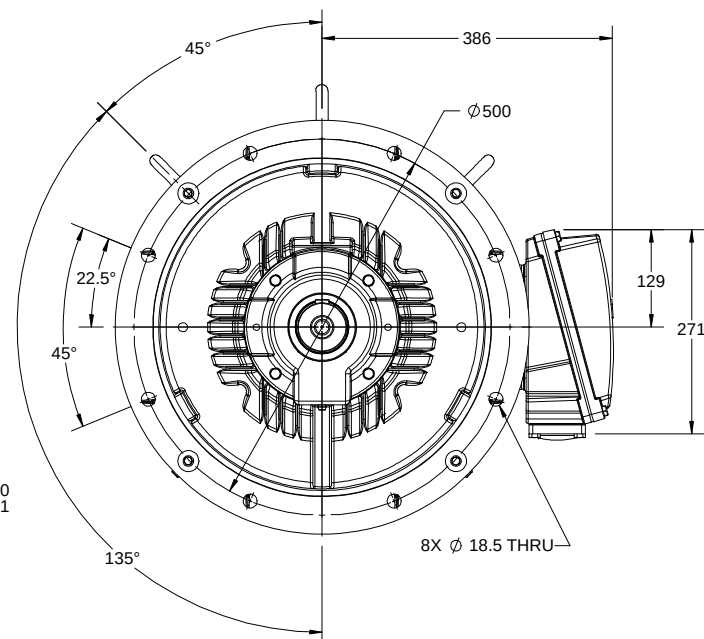
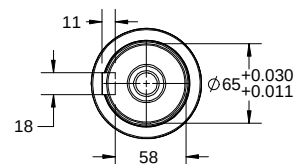
2X M25 CONDUIT
ENTRY

1049

140±0.5

5

19.5

 $\phi 450 \pm 0.020$ $\phi 550$ 

DRAWING REVISION A	REVISION BY NIV	DATE 28/09/2018
ECO ECO-0153779	APPROVED BY JAY	DATE 28/09/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
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DRAWN BY NIV		
DATE 28/09/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE 250M FR-4P-8P-V1 MTG. TYPE SCA-415V	
DATE 23/08/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0225000748
		SHEET 1 OF 1

4

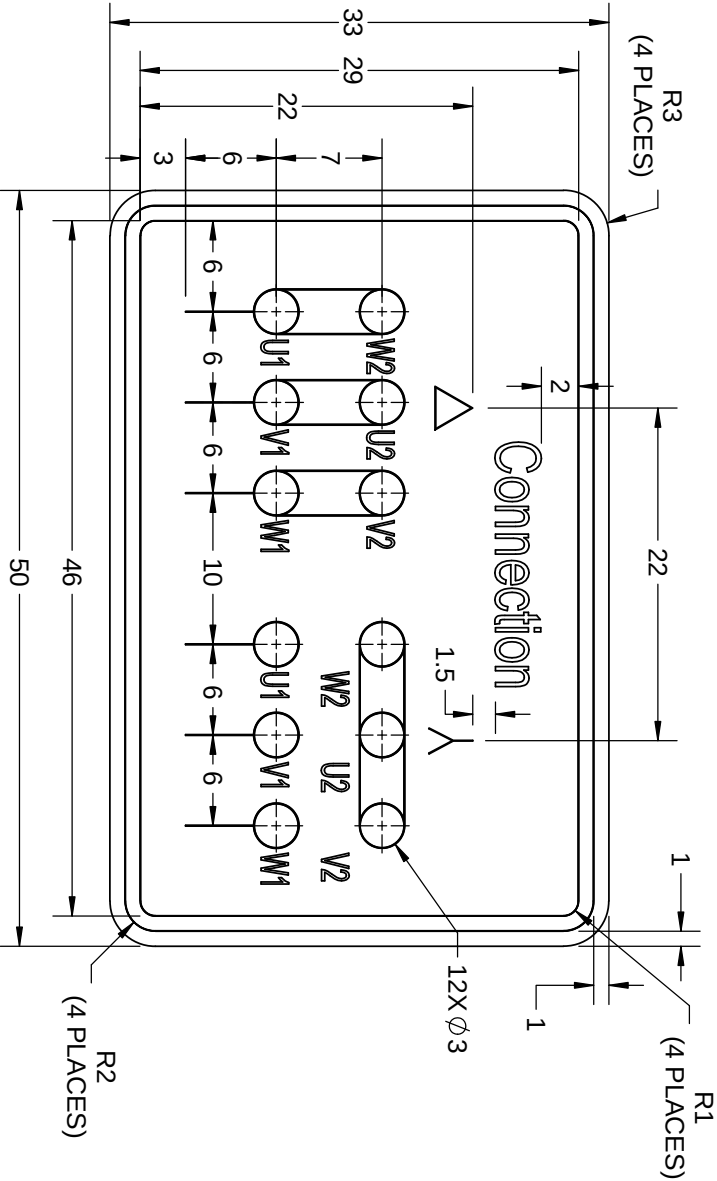
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DRAWING REVISION		REVISION BY	DATE
A		SN	13/01/2017
ECO	ECO-0116390	APPROVED BY	DATE
ECO DESCRIPTION		SBD	13/01/2017
NEW DRAWING RELEASE			

GEOMETRIC TOLERANCE		
	>0~6	±0.1
LINEAR DIM	>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	
				DATE		16/12/2016	
				APPROVED BY		SBD	
				DATE		16/12/2016	
				REFERENCE			
				DESCRIPTION		CONN DIAGRAM-NAMEPLATE	
				MATERIAL		PROCESS/FINISH	
THIRD ANGLE PROJECTION				SIZE	DRAWING NUMBER		SHEET
				A	8442000085		1 OF 1

Model No. SCA0552A3143GAAD01

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 _d /T _N [pu]
415	Δ	50	55	75	94.0	1481	360.76	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.8	2.2	2.6
									-	93.5	93.5	94.0	0.87	0.84	0.77			

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	250M	Motor weight - approx.	507 kg
Duty	S1	Gross weight - approx.	542 kg
Voltage variation *	± 10%	Motor inertia	0.8148 kgm ²
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)	77 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)	6/10 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	6314 C3 / 6314 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 95mm ² /2 x M50 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 CurrentT_d/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	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-



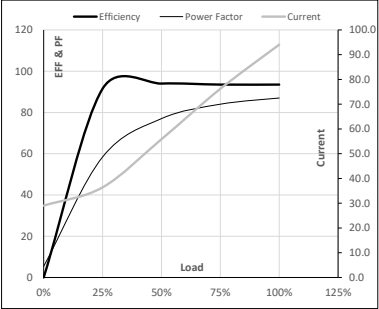
Model No. SCA0552A3143GAAD01

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	55	75	94.0	1481	36.79	360.76	IE2	50	S1	1000	0.8148	507

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	29.0	36.4	55.9	76.2	94.0	
Torque	Nm	0.0	89.3	179.1	269.6	360.8	
Speed	r/min	1500	1495	1491	1486	1481	
Efficiency	%	0.0	91.5	94.0	93.5	93.5	
Power Factor	%	5.4	58.4	77.0	84.0	87.0	

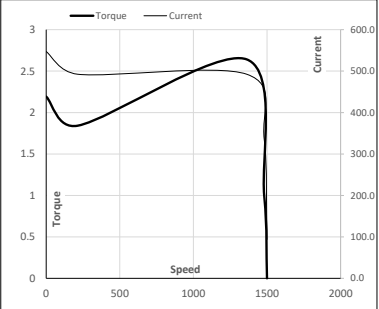
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1363	1481	1500
Current	A	547.2	492.4	335.9	94.0	29.0
Torque	pu	2.2	1.8	2.6	1	0

Starting Characteristics Chart



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

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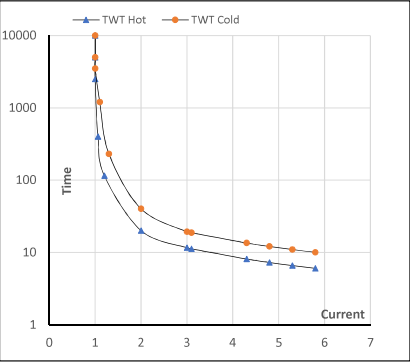
Model No. SCA0552A3143GAAD01

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·m²]	Weight [kg]
TEFC	415	Δ	50	55	75	94.0	1481	36.79	360.76	IE2	50	S1	1000	0.8148	507

Motor Speed Torque Data

Load		FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR
TWT Hot	s	10000	20	12	10	8	7	6
TWT Cold	s	10000	40	19	17	12	11	10
Current	pu	1	2	3	4	5	5.5	5.8

Thermal Characteristics Chart



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

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