

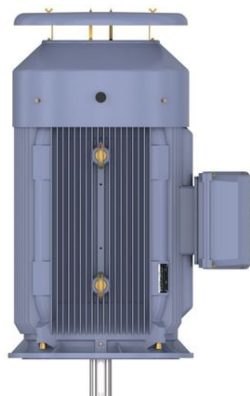
PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA3551A3143GAAD01

Catalog No: SCA3551A3143GAAD01

TerraMAX® Cast Iron Motor, 475 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 355L Frame, TEFC



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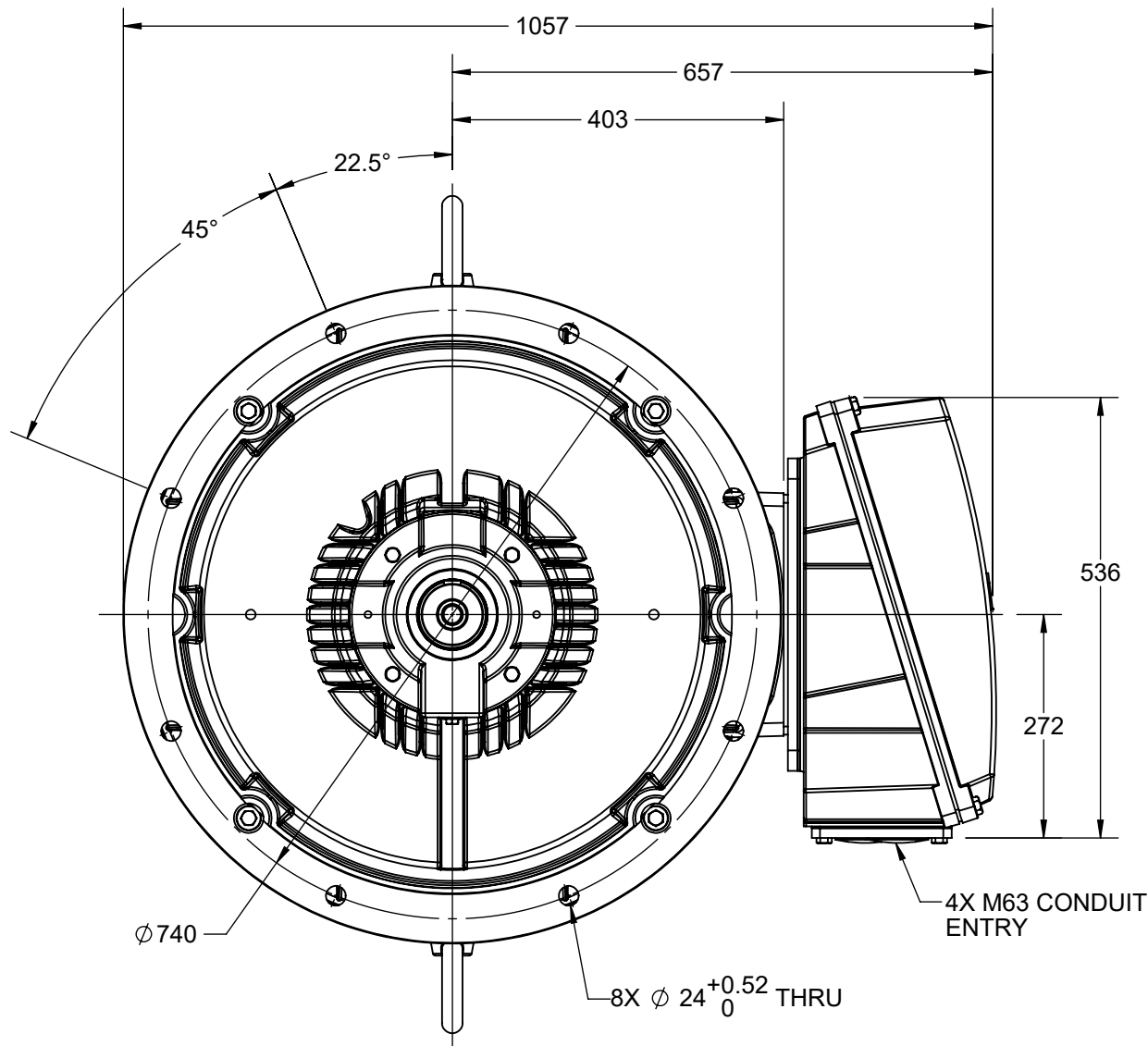
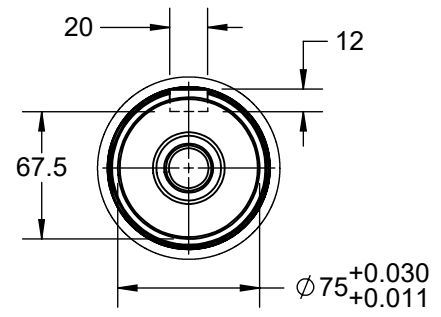
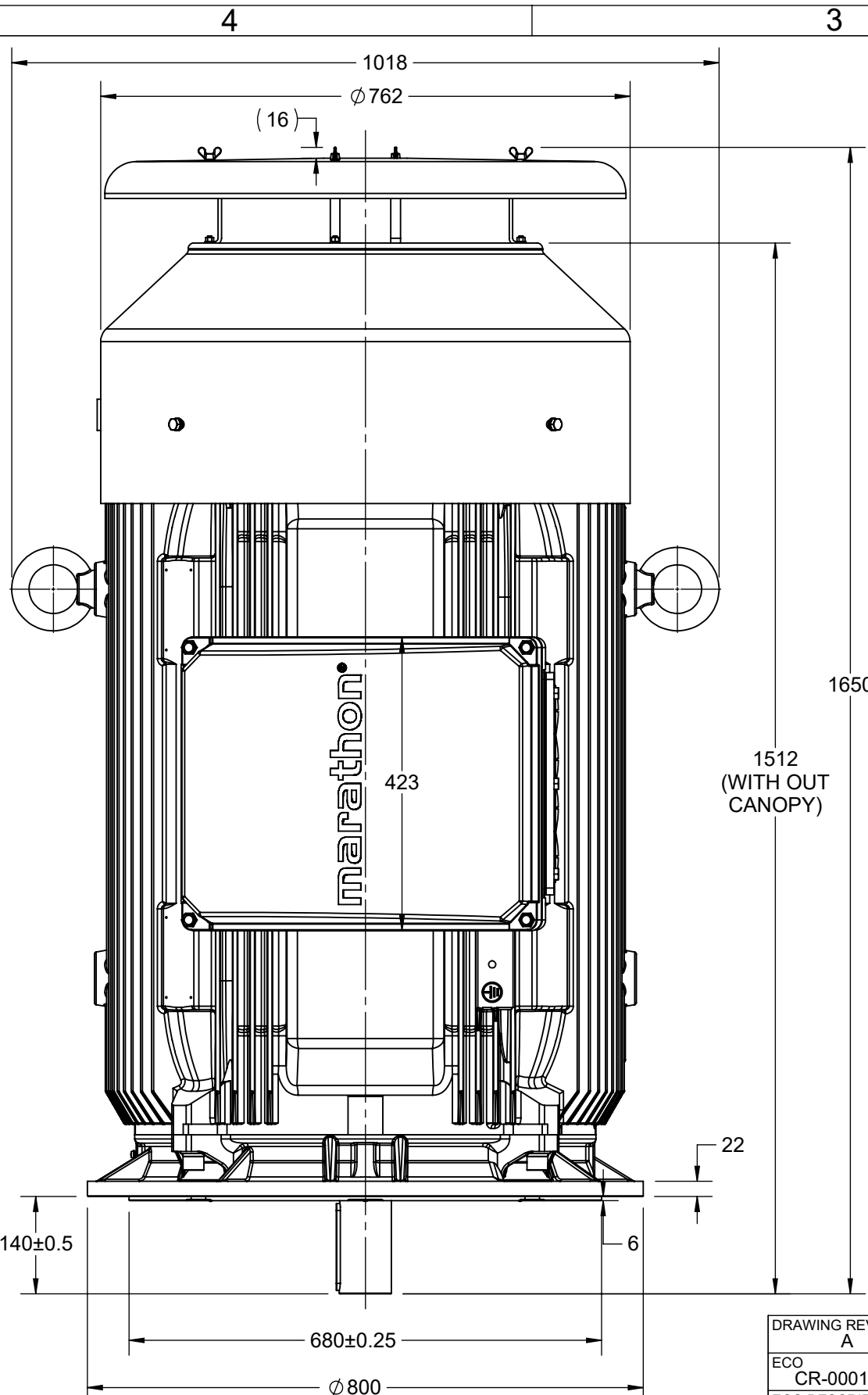
Nameplate Specifications

Output HP	475 Hp	Output KW	355.0 kW
Frequency	50 Hz	Voltage	415 V
Current	568.7 A	Speed	2982 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.91
Duty	S1	Insulation Class	F
Frame	355L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6317	Opp Drive End Bearing Size	6317
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE2

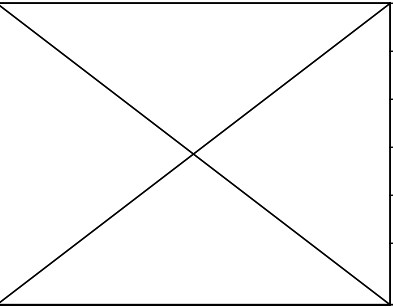
Technical Specifications

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	1650 mm	Frame Length	1010 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	SIDE		
Outline Drawing	0235502465	Connection Drawing	8442000085

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DRAWING REVISION A	REVISION BY LK	DATE 01/06/2021
ECO CR-0001200	APPROVED BY JAY	DATE 01/06/2021
ECO DESCRIPTION NEW DRAWING		
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DRAWN BY LK		
DATE 01/06/2021		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 01/06/2021	355FR-2P-V1 MTG	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0235502465
		SHEET 1 OF 1

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

Model No. SCA3551A3143GAAD01

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 _K /T _N [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	355	475	571.3	2982	1134.20	IE2	-	95.0	95.0	95.0	0.91	0.90	0.86	6.0	2.1	2.9

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	355L	Motor weight - approx.	1915 kg
Duty	S1	Gross weight - approx.	1960 kg
Voltage variation *	± 10%	Motor inertia	4.9821 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)	90 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	6317 C3 / 6317 C3	Terminal box position	RHS
Lubrication method	Regreasable	Maximum cable size/conduit size	1R x 3C x 300mm ² /4 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_K/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	-	-	-

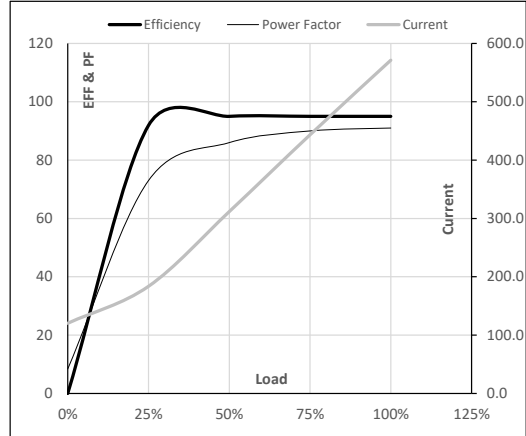
Model No. SCA3551A3143GAAD01

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	355	475	571.3	2982	115.66	1134.20	IE2	50	S1	1000	4.9821	1915

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	120.3	183.7	311.8	443.4	571.3	
Torque	Nm	0.0	282.3	565.4	849.3	1134.2	
Speed	r/min	3000	2996	2991	2987	2982	
Efficiency	%	0.0	91.9	95.0	95.0	95.0	
Power Factor	%	8.4	73.0	86.0	90.0	91.0	

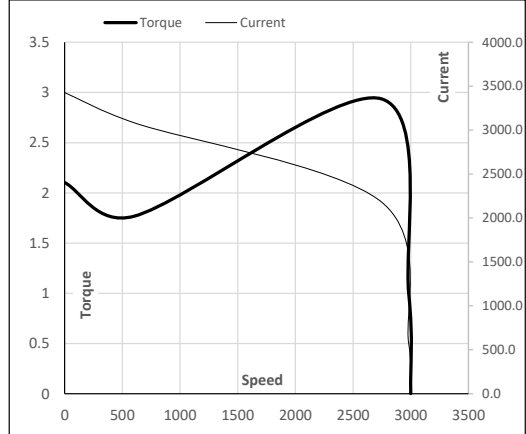
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2743	2982	3000
Current	A	3427.7	3085.0	2185.2	571.3	120.3
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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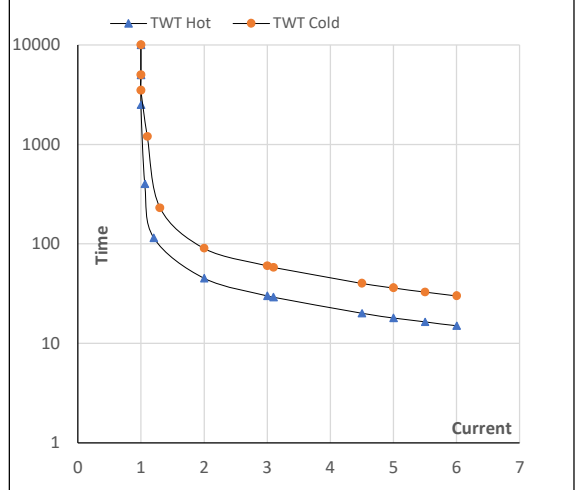
Model No. SCA3551A3143GAAD01

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	355	475	571.3	2982	115.66	1134.20	IE2	50	S1	1000	4.9821	1915

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	45	30	25	18	16	15	
TWT Cold	s 10000	90	60	55	36	33	30	
Current	pu	1	2	3	4	5	5.5	6

Thermal Characteristics Chart



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

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