PRODUCT INFORMATION PACKET

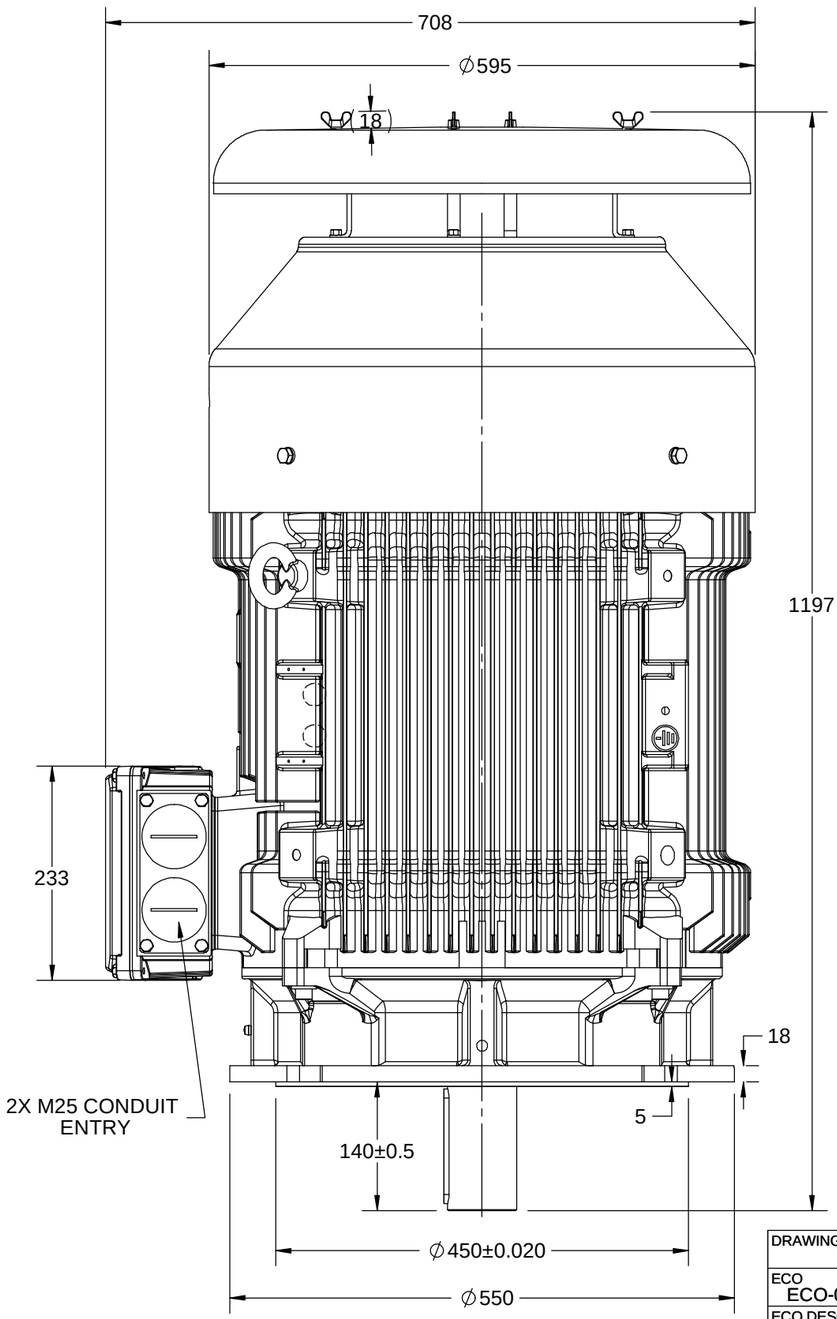
Model No: SCA0454A3143GAAD01
Catalog No: SCA0454A3143GAAD01
TerraMAX® Cast Iron Motor, 60 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 280M Frame, TEFC

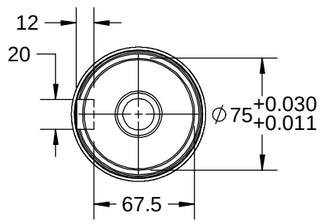
Nameplate Specifications

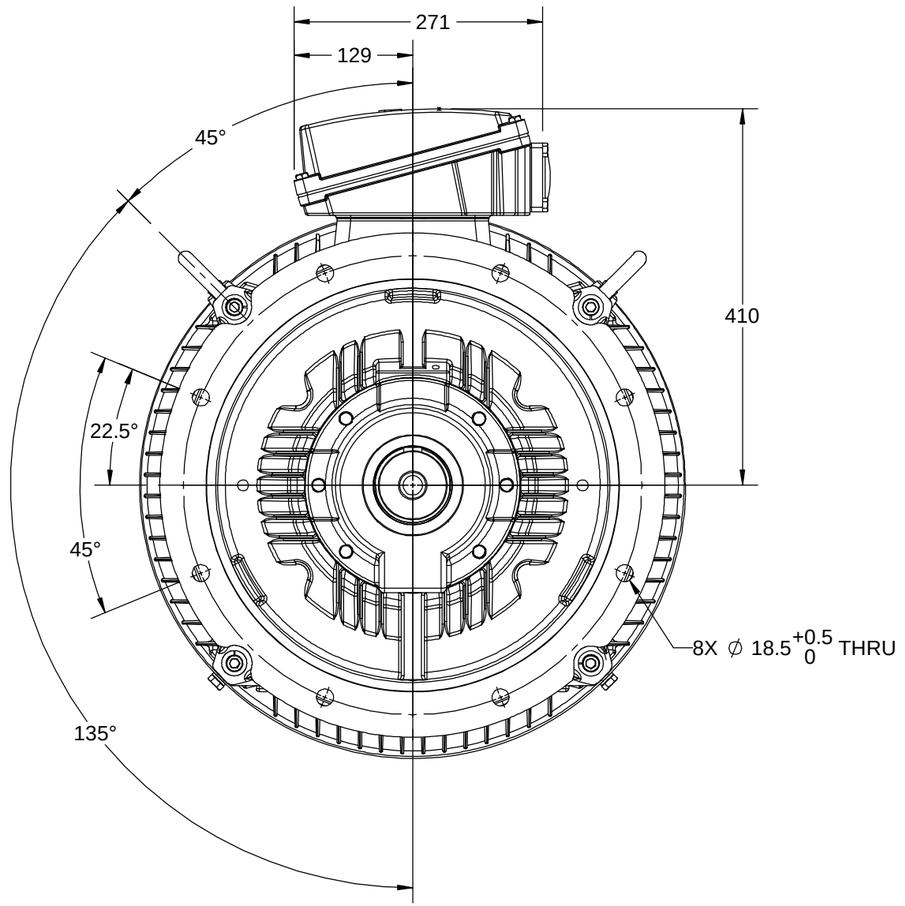
Output HP	60 Hp	Output KW	45.0 kW
Frequency	50 Hz	Voltage	415 V
Current	87.4 A	Speed	738 rpm
Service Factor	1	Phase	3
Efficiency	90.7 %	Power Factor	0.7899
Duty	S1	Insulation Class	F
Frame	280M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End Bearing Size	6314	Opp Drive End Bearing Size	6314
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	8	Rotation	Bi-Directional
Mounting	V1	Motor Orientation	Shaft Down
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1197 mm	Frame Length	550 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	TOP		
Connection Drawing	8442000085	Outline Drawing	0228001158







DRAWING REVISION	REVISION BY	DATE
A	VS	23/08/2018
ECO	APPROVED BY	DATE
ECO-0150628	JAY	23/08/2018

ECO DESCRIPTION
NEW DRAWING RELEASE

DRAWN BY	VS
DATE	23/08/2018
APPROVED BY	JAY
DATE	23/08/2018
REFERENCE	

marathon™ Motors

DESCRIPTION
OUTLINE
280M FR-4~8P-V1 MTG. TYPE SCA

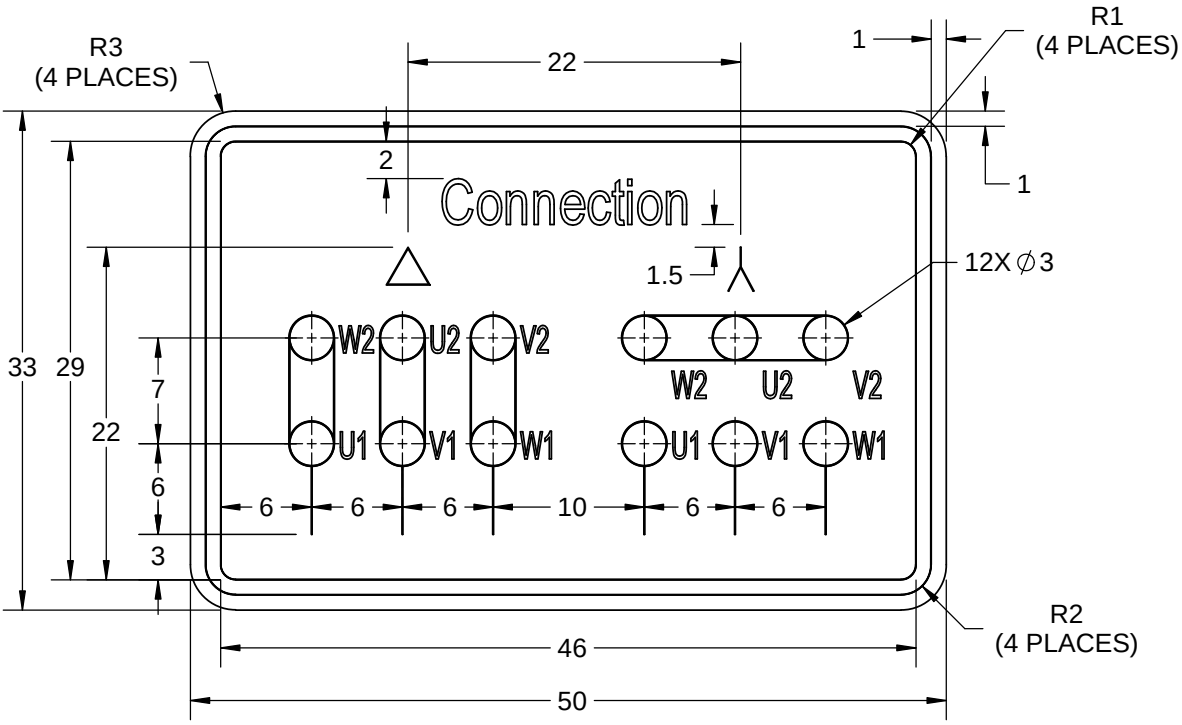
MATERIAL | PROCESS/FINISH

THIRD ANGLE PROJECTION

SIZE	DRAWING NUMBER	SHEET
B	0228001158	1 OF 1

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

GEOMENTRIC 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™ 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

marathon® Motors

TerraMAX®

Model No. SCA0454A3143GAAD01

U	Δ / Y	f	P	P	I	n	T	IE	% EFF at __ load				PF at __ load			I_A/I_N	T_A/T_N	T_K/T_N
(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[Nm]	Class	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	[pu]	[pu]	[pu]
415	Δ	50	45	60	87.4	738	579.12	IE2	-	90.7	90.7	92.9	0.79	0.75	0.64	4.7	1.9	2.2

Motor type	SCA		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM V1	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	280M		Motor weight - approx.	767	kg
Duty	S1		Gross weight - approx.	802	kg
Voltage variation *	± 10%		Motor inertia	3.5326	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)	64	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	Regreaseable		Maximum cable size/conduit size	1R x 3C x 95mm²/2 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 Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - Breakdown 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	-	-	-

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TerraMAX®

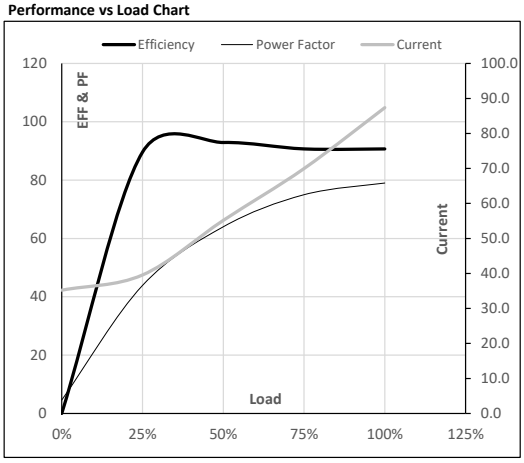
Model No. SCA0454A3143GAAD01

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	45	60	87.4	738	59.05	579.12	IE2	50	S1	1000	3.5326	767

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	35.2	39.6	55.2	70.0	87.4	
Torque	Nm	0.0	143.0	287.1	432.4	579.1	
Speed	r/min	750	747	744	741	738	
Efficiency	%	0.0	89.6	92.9	90.7	90.7	
Power Factor	%	4.6	43.9	64.0	75.0	79.0	

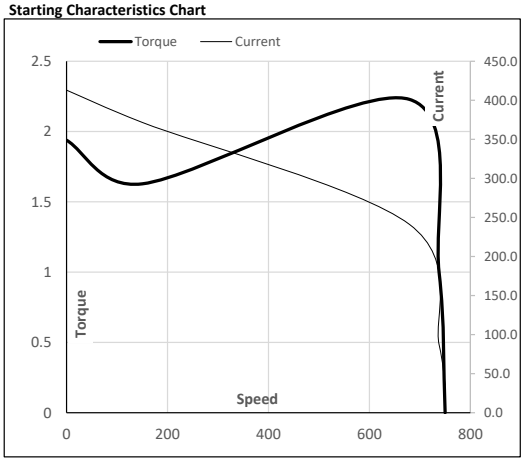
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	679	738	750
Current	A	413.0	371.7	241.3	87.4	35.2
Torque	pu	1.9	1.6	2.2	1	0

Starting Characteristics Chart



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

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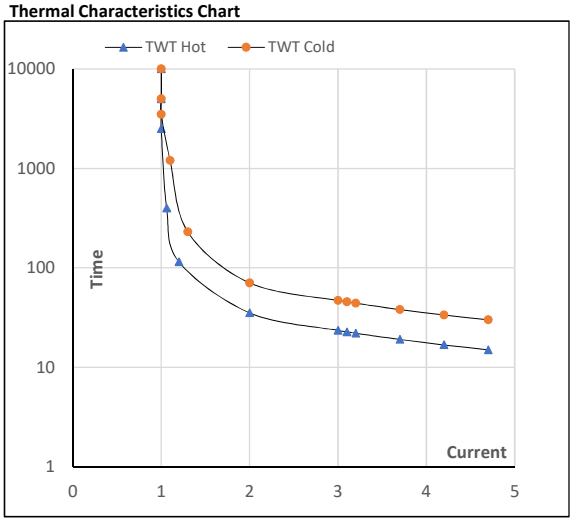
Model No. SCA0454A3143GAAD01

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	45	60	87.4	738	59.05	579.12	IE2	50	S1	1000	3.5326	767

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	35	24	20	18	16	15
TWT Cold	s	10000	71	47	40	37	32	30
Current	pu	1	2	3	3.5	4	4.5	4.7

Thermal Characteristics Chart



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