PRODUCT INFORMATION PACKET

Model No: SCA0901A3143GAAD01
Catalog No: SCA0901A3143GAAD01
90kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B35, 50Hz, 94.1%, 280M Frame, TEFC
Cast Iron IE2 Efficiency Motors

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Nameplate Specifications

Output HP	120 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	415 V
Current	144.9 A	Speed	2977 rpm
Service Factor	1	Phase	3
Efficiency	94.1 %	Power Factor	0.92
Duty	S1	Insulation Class	F
Frame	280M	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	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	1197 mm	Frame Length	550 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	SIDE		
Outline Drawing	0228001205	Connection Drawing	8442000085

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DRAWING REVISION A	REVISION BY A.KEETHA	DATE 04/10/2018	DRAWN BY A.KEETHA	marathon Motors
ECO ECO-0153779	APPROVED BY JAY	DATE 04/10/2018	DATE 04/10/2018	
ECO DESCRIPTION NEW DRAWING RELEASE			APPROVED BY JAY	DESCRIPTION OUTLINE 280M FR-2P-V1 MTG. TYPE SCA-415V
			DATE 04/10/2018	
			REFERENCE	MATERIAL / PROCESS/FINISH
			THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0228001205 / SHEET 1 OF 1

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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

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marathon® Motors

TerraMAX®

Model No. SCA0901A3143GAAD01

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	90	120	144.8	2977	287.07	IE2	-	94.1	94.1	94.0	0.92	0.90	0.85	6.4	2.2	3.2

Motor type	SCA	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	280M	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-20 to +50	°C
Temperature rise (by resistance)	70 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	NA	
Zone classification	NA	
Gas group	NA	
Temperature class	NA	
Rotor type	Aluminum Die cast	
Bearing type	Anti-friction ball	
DE / NDE bearing	6314 C3 / 6314 C3	
Lubrication method	Regreasable	
Type of grease	Shell Gadus S5 V100 or Equivalent	

Degree of protection	IP 55	
Mounting type	IM V1	
Cooling method	IC 411	
Motor weight - approx.	787	kg
Gross weight - approx.	822	kg
Motor inertia	1.0702	kgm^2
Load inertia	Customer to Provide	
Vibration level	2.2	mm/s
Noise level (1meter distance from motor)	86	dB(A)
No. of starts hot/cold/Equally spread	2/3/4	
Starting method	DOL	
Type of coupling	Direct	
LR withstand time (hot/cold)	12/25	s
Direction of rotation	Bi-directional	
Standard rotation	Clockwise form DE	
Paint shade	RAL 5014	
Accessories		
Accessory - 1	-	
Accessory - 2	-	
Accessory - 3	-	
Terminal box position	RHS	
Maximum cable size/conduit size	1R x 3C x 95mm²/2 x M50 x 1.5	
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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marathon® Motors

TerraMAX®

Model No. SCA0901A3143GAAD01

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	90	120	144.8	2977	29.27	287.07	IE2	50	S1	1000	1.0702	787

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	34.6	49.3	81.0	113.9	144.8	
Torque	Nm	0.0	71.3	143.0	214.9	287.1	
Speed	r/min	3000	2994	2989	2983	2977	
Efficiency	%	0.0	91.0	94.0	94.1	94.1	
Power Factor	%	8.1	69.5	85.0	90.0	92.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2739	2977	3000
Current	A	921.8	829.6	598.8	144.8	34.6
Torque	pu	2.2	1.8	3.2	1	0

Starting Characteristics Chart

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

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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	90	120	144.8	2977	29.27	287.07	IE2	50	S1	1000	1.0702	787

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	38	26	20	15	14	12
TWT Cold	s	10000	80	53	45	32	29	25
Current	pu	1	2	3	4	5	5.5	6.4

Thermal Characteristics Chart

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

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