

# PRODUCT INFORMATION PACKET

Model No: SCA3P71A3141GAAD01

Catalog No: SCA3P71A3141GAAD01

3.7kW, General Purpose Low Voltage IEC Motor, 3 phase, 2 Pole, 415V, B35, 50Hz, 85.5%, 100L Frame, TEFC  
Cast Iron IE2 Efficiency Motors





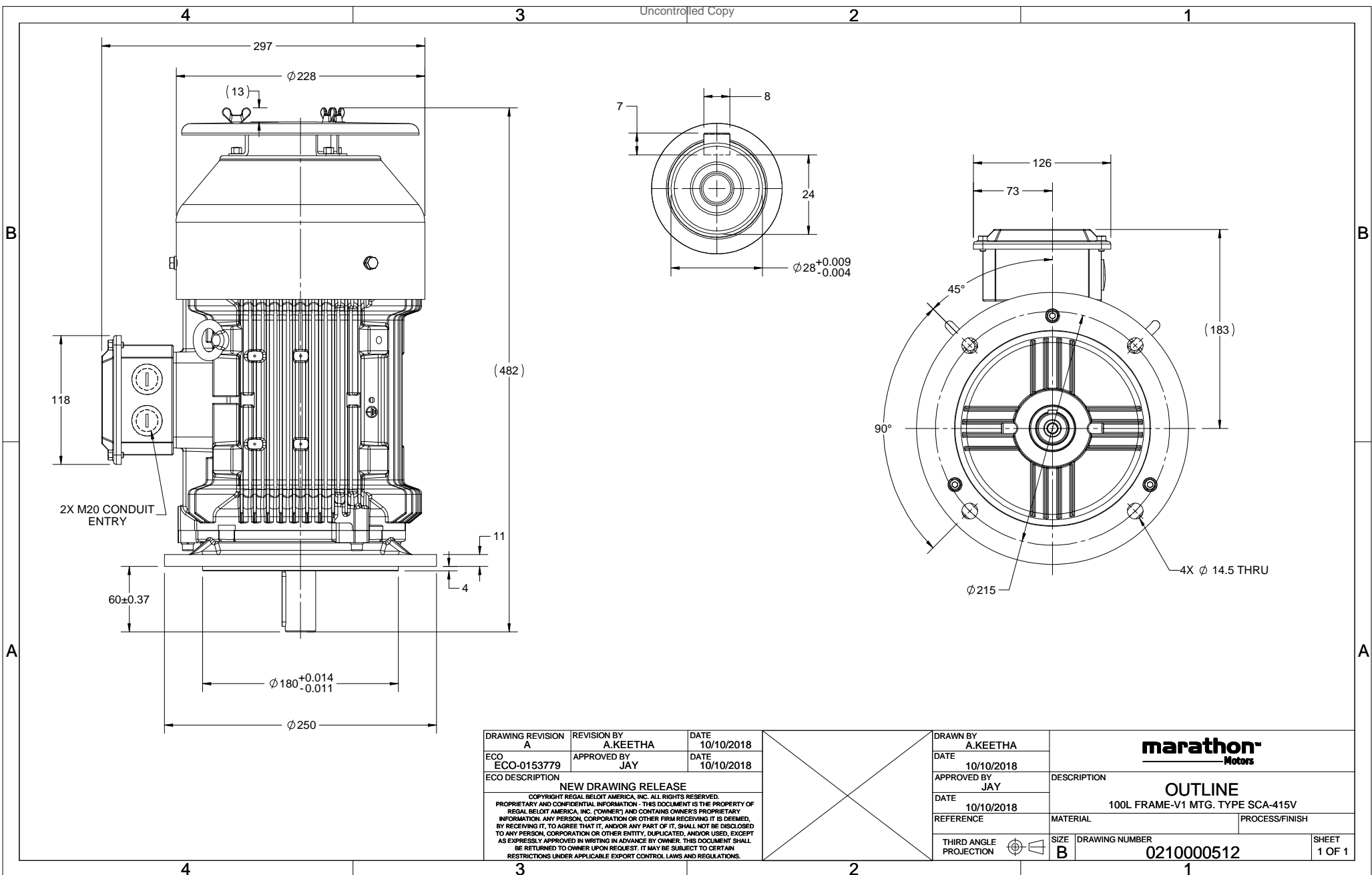
### Nameplate Specifications

Output HP	5 Hp	Output KW	3.7 kW
Frequency	50 Hz	Voltage	415 V
Current	6.6 A	Speed	2874 rpm
Service Factor	1	Phase	3
Efficiency	85.5 %	Power Factor	0.92
Duty	S1	Insulation Class	F
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6206
Opp Drive End Bearing Size	6206	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	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	482 mm	Frame Length	240 mm
Shaft Diameter	28 mm	Shaft Extension	60 mm
Assembly/Box Mounting	TOP		
Outline Drawing	0210000512	Connection Drawing	8442000085

This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:16/01/2020



DRAWING REVISION A	REVISION BY A.KEETHA	DATE 10/10/2018
ECO ECO-0153779	APPROVED BY JAY	DATE 10/10/2018
ECO DESCRIPTION NEW DRAWING RELEASE		
<small>COPYRIGHT REGAL BELT AMERICA, INC. ALL RIGHTS RESERVED.                  PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF                  REGAL BELT AMERICA, INC. (OWNER) AND CONTAINS OWNER'S PROPRIETARY                  INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,                  BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED                  TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT                  AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL                  BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN                  RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>		

DRAWN BY A.KEETHA		
DATE 10/10/2018		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 10/10/2018	100L FRAME-V1 MTG. TYPE SCA-415V	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0210000512
		SHEET 1 OF 1





Model No. SCA3P71A3141GAAD01

U (V)	Δ / Y Conn	f (Hz)	P		I (A)	n (RPM)	T (Nm)	IE Class	% EFF at __ load				PF at __ load			I <sub>a</sub> /I <sub>N</sub> (pu)	T <sub>k</sub> /T <sub>N</sub> (pu)	T <sub>k</sub> /T <sub>N</sub> (pu)
			[kW]	[hp]					S/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
415	Δ	50	3.7	5.0	6.6	2874	12.39	IE2	-	85.5	85.5	86.6	0.92	0.88	0.79	7.1	3.5	3.2

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	100L	Motor weight - approx.	48 kg
Duty	S1	Gross weight - approx.	51 kg
Voltage variation *	± 10%	Motor inertia	0.0044 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level ( 1meter distance from motor)	74 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	6206-2Z / 6206-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm <sup>2</sup> /2 x M20 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

I<sub>a</sub>/I<sub>N</sub> - Locked Rotor Current / Rated Current

T<sub>k</sub>/T<sub>N</sub> - Breakdown Torque / Rated Torque

T<sub>k</sub>/T<sub>N</sub> - 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	-	-	-



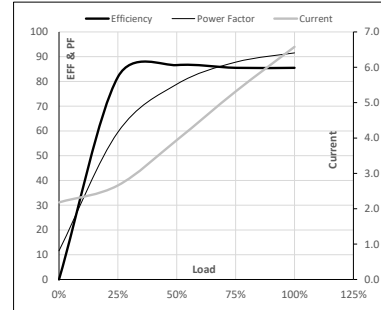
Model No. SCA3P71A3141GAAD01

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 <sup>2</sup> ]	Weight [kg]
TEFC	415	Δ	50	3.7	5.0	6.6	2874	1.26	12.39	IE2	50	S1	1000	0.0044	48

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	2.2	2.7	3.9	5.3	6.6	
Torque	Nm	0.0	3.0	6.0	9.2	12.4	
Speed	r/min	3000	2970	2941	2910	2874	
Efficiency	%	0.0	81.8	86.6	85.5	85.5	
Power Factor	%	11.6	59.5	78.9	87.8	91.5	

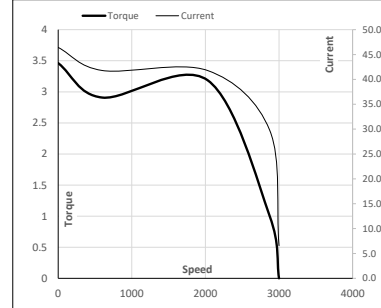
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2030	2874	3000
Current	A	46.4	41.8	29.8	6.6	2.2
Torque	pu	3.5	2.9	3.2	1	0

**Starting Characteristics Chart**



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

Issued By  
Issued Date



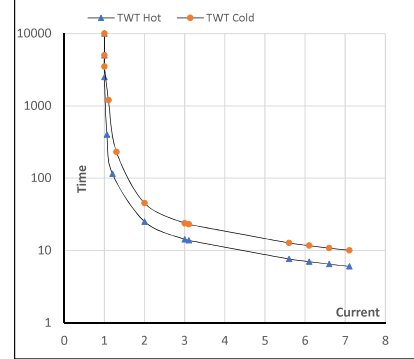
Model No. SCA3P71A3141GAAD01

Enclosure	U (V)	$\Delta / Y$ 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 <sup>2</sup> ]	Weight [kg]
TEFC	415	$\Delta$	50	3.7	5.0	6.6	2874	1.26	12.39	IE2	50	S1	1000	0.0044	48

**Motor Speed Torque Data**

Load	FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR	
TWT Hot	s 10000	25	14	12	10	8	6	
TWT Cold	s 10000	45	24	20	15	13	10	
Current	pu	1	2	3	4	5	5.5	7.1

**Thermal Characteristics Chart**



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

Issued By  
Issued Date

