

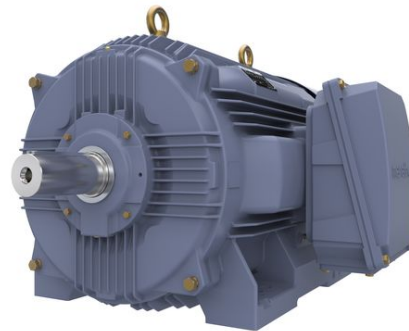
PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: SCA0753A3113GAAD01

Catalog No: SCA0753A3113GAAD01

75kW, General Purpose Low Voltage IEC Motor, 3 phase, 6 Pole, 415V, B3, 50Hz, 93.7%, 315S Frame, TEFC
Cast Iron IE2 Efficiency Motors



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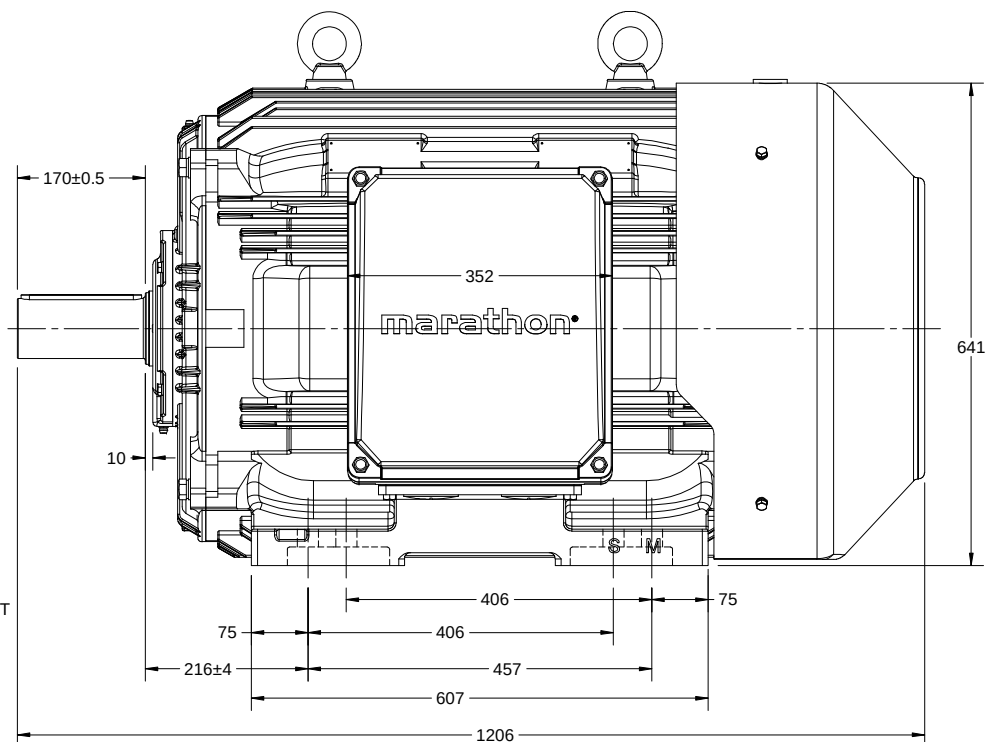
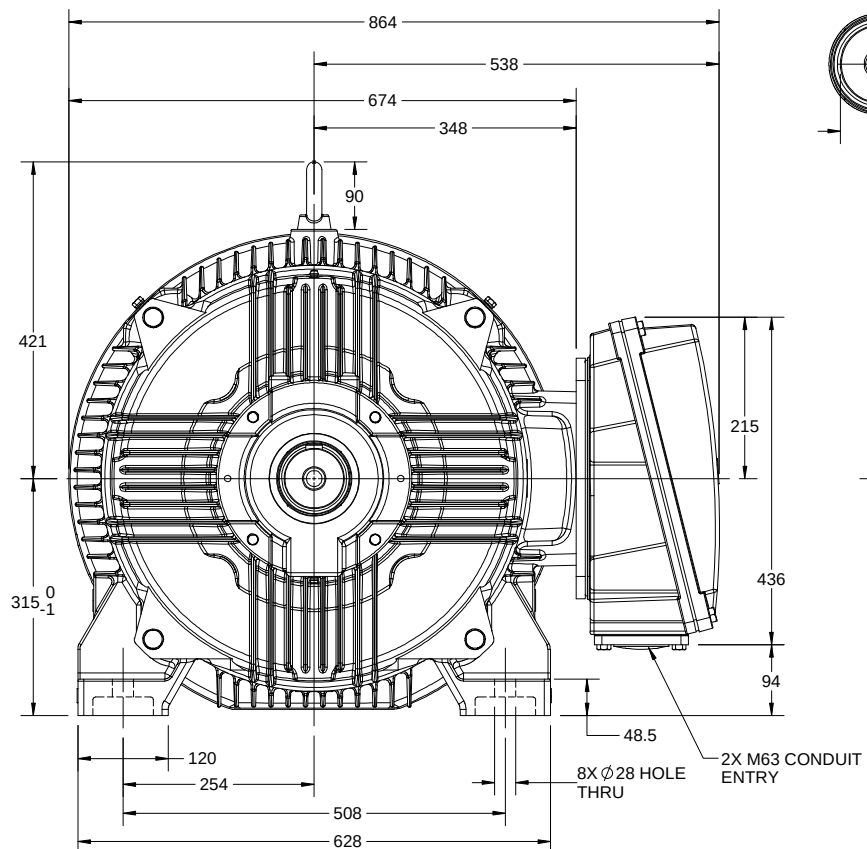
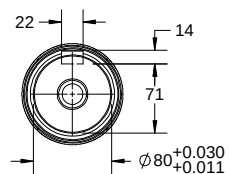
Nameplate Specifications

Output HP	100 Hp	Output KW	75.0 kW
Frequency	50 Hz	Voltage	415 V
Current	134.2 A	Speed	989 rpm
Service Factor	1	Phase	3
Efficiency	93.7 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	315S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6319
Opp Drive End Bearing Size	6319	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1206 mm	Frame Length	729 mm
Shaft Diameter	80 mm	Shaft Extension	170 mm
Assembly/Box Mounting	SIDE		
Connection Drawing	8442000085	Outline Drawing	0231501362

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DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SKM				
DATE 08/11/2017				
APPROVED BY JAY				
DATE 08/11/2017				
REFERENCE		DESCRIPTION 315S/M 4P-8P B3 MTG. TCA/QCA-RHS TB		
		MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION			SIZE DRAWING NUMBER 0231501362	SHEET 1 OF 1

Model No. SCA0753A3113GAAD01

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	75	100	134.2	989	719.17	IE2	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	5.0	1.5	2.1
									-	93.7	93.7	94.6	0.83	0.80	0.72			

Motor type	SCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315S	Motor weight - approx.	847 kg
Duty	S1	Gross weight - approx.	892 kg
Voltage variation *	± 10%	Motor inertia	3.6508 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)	66 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	6319 C3 / 6319 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 240mm ² /2 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 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	-	-	-



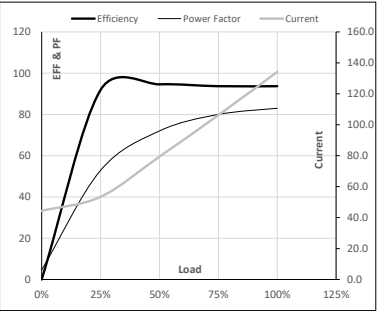
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg·m ²]	Weight [kg]
TEFC	415	Δ	50	75	100	134.2	989	73.33	719.17	IE2	50	S1	1000	3.6508	847

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	44.4	53.4	79.4	106.2	134.2	
Torque	Nm	0.0	178.5	357.9	538.3	719.2	
Speed	r/min	1000	998	995	992	989	
Efficiency	%	0.0	91.9	94.6	93.7	93.7	
Power Factor	%	4.6	52.9	72.0	80.0	83.0	

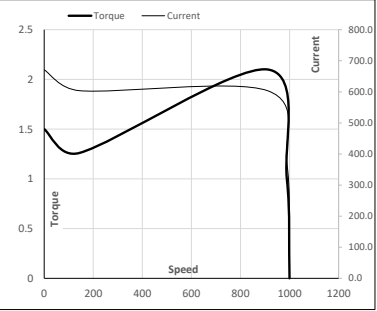
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	143	910	989	1000
Current	A	670.8	603.8	369.8	134.2	44.4
Torque	pu	1.5	1.3	2.1	1	0

Starting Characteristics Chart



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

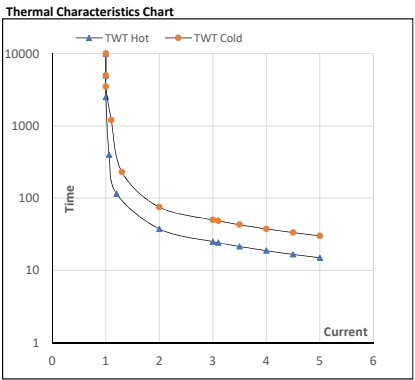
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Enclosure	U (V)	Δ / Y Conn	f (Hz)	P (kW)	P (hp)	I (A)	n (rpm)	T (kgm)	T (Nm)	IE Class	Amb (°C)	Duty	Elevation (m)	Inertia (kg·m ²)	Weight (kg)
TEFC	415	Δ	50	75	100	134.2	989	73.33	719.17	IE2	50	S1	1000	3.6508	847

Motor Speed Torque Data								
Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	38	25	21	19	17	15	
TWT Cold	s 10000	75	50	43	38	33	30	
Current	pu	1	2	3	3.5	4	4.5	5



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

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