

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0752A3111GACD01

Catalog No: TCA0752A3111GACD01

75.0 kW General Purpose Low Voltage IEC Motor, 3 phase, 1500 RPM, 415 V, 280S Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL

Nameplate Specifications

Output HP	100 Hp	Output KW	75.0 kW
Frequency	50 Hz	Voltage	415 V
Current	126.3 A	Speed	1489 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.87
Duty	S1	Insulation Class	F
Frame	280S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	50 °C	Drive End Bearing Size	6317
Opp Drive End Bearing Size	6317	UL	No
CSA	No	CE	Yes
IP Code	55		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	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	1060 mm	Frame Length	549 mm
Shaft Diameter	75 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Outline Drawing	0228000609	Connection Drawing	8442000085

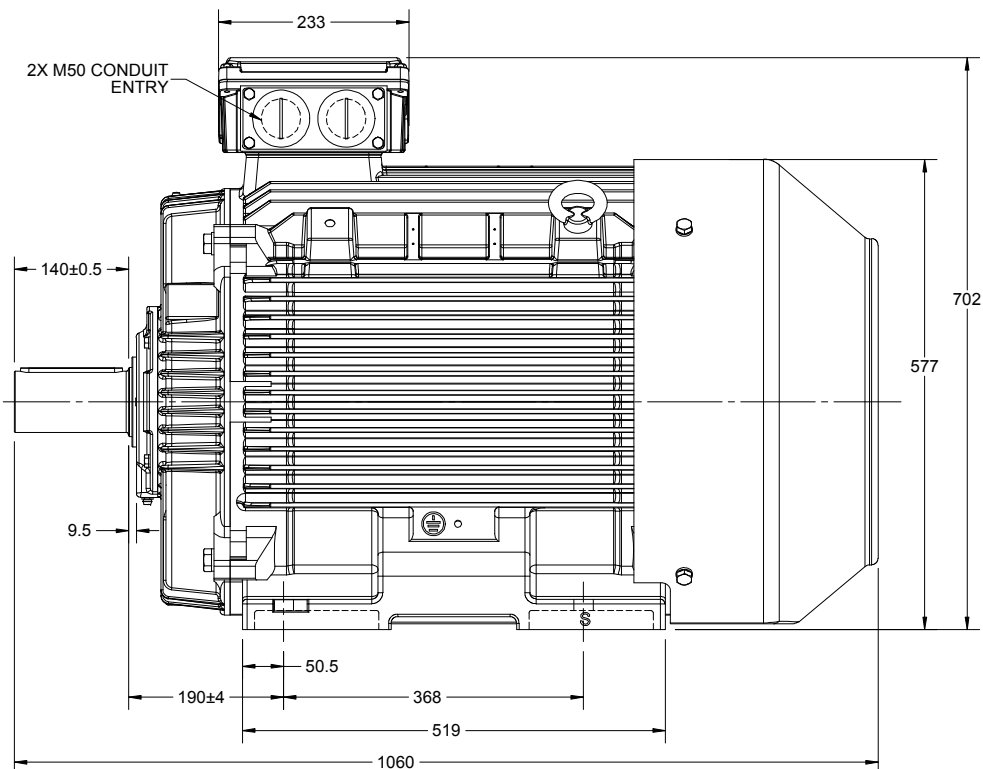
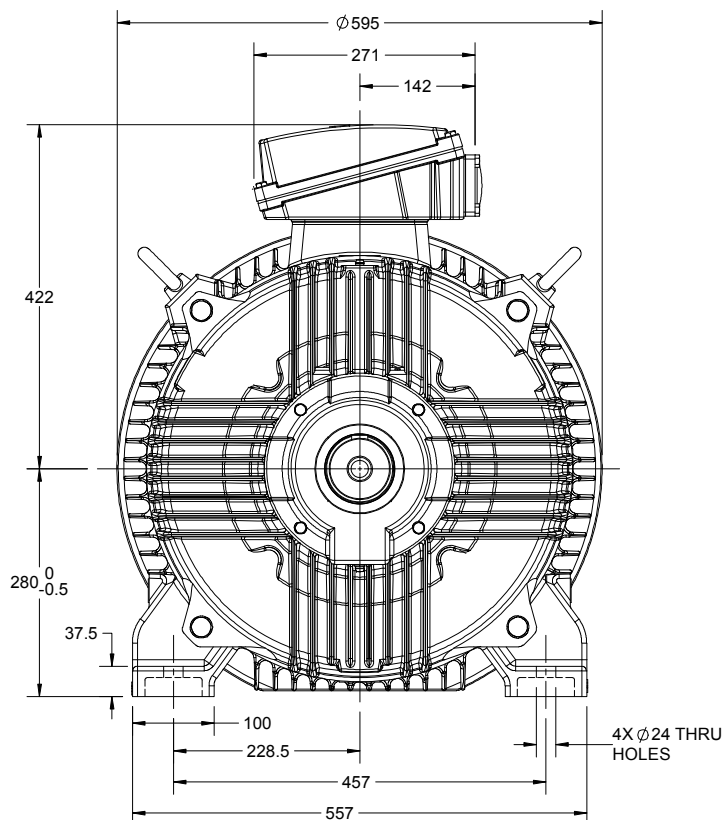
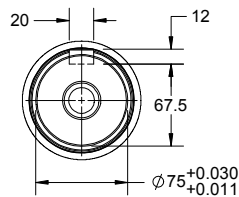
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DRAWING REVISION C	REVISION BY LK	DATE 23/04/2019
ECO-0165600	APPROVED BY SR	DATE 23/04/2019
ECO DESCRIPTION UPDATED MODEL AS PER NEW 3D STRUCTURE		
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DRAWN BY KCS		
DATE 11/11/2014		
APPROVED BY SBD	DESCRIPTION OUTLINE 280-S FR-B3 MTG. MOTOR TYPE: TCA	
DATE 11/11/2014		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0228000609
		SHEET 1 OF 1

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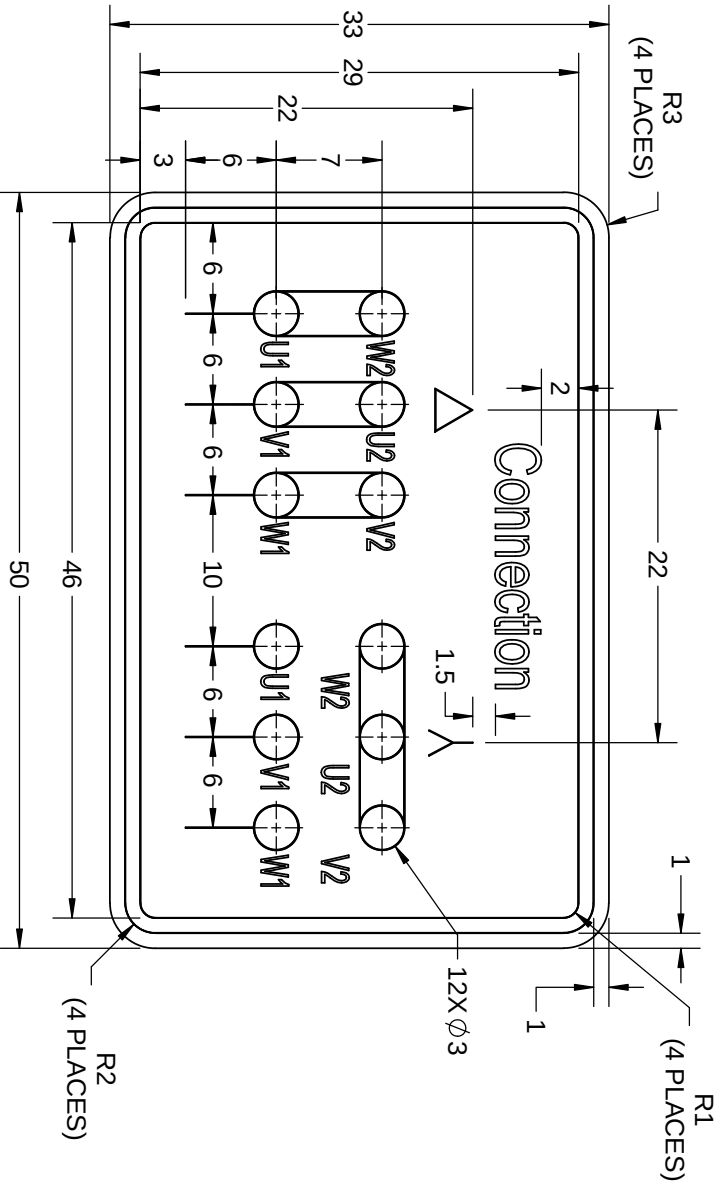
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DRAWING REVISION		REVISION BY	DATE
A		SN	13/01/2017
ECO	ECO-0116390	APPROVED BY	DATE
		SBD	13/01/2017
ECO DESCRIPTION			
NEW DRAWING RELEASE			

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.

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

8WD.442.2017

Model No. TCA0752A3111GACD01

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 _b /T _N [pu]
415	Δ	50	75	100	126.2	1489	478.12	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.5	2.4	2.8

Motor type	TCA		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM B3	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	280S		Motor weight - approx.	715	kg
Duty	S1		Gross weight - approx.	750	kg
Voltage variation *	± 10%		Motor inertia	2.2302	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)	68	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		Type of coupling	Direct	
Temperature rise (by resistance)	70 [Class B]		LR withstand time (hot/cold)	15/30	s
Altitude above sea level	1000		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 bearing		Accessory - 3	-	
DE / NDE bearing	6317 C3 / 6317 C3		Terminal box position	TOP	
Lubrication method	Regreasable		Maximum cable size/conduit size	1R x 3C x 95mm ² /2 x M50 x 1.5	
Type of grease	Shell Gadus S5 V100 or Equivalent		Auxiliary terminal box	NA	

I_a/I_N - Locked Rotor Current / Rated CurrentT_b/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 Standards	Europe	China	India	Aus/Nz	Brazil	Global IEC
	-	-	IS 12615 : 2018	-	-	-



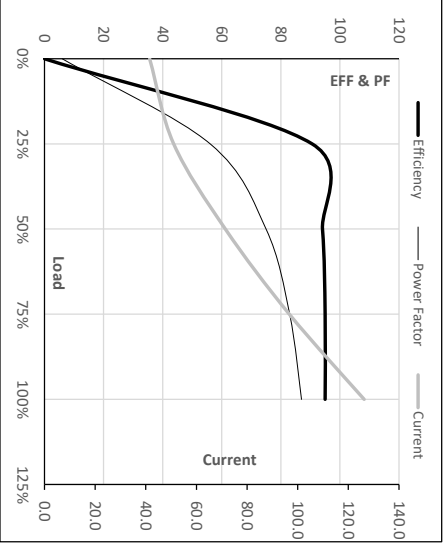
Model No. TCA0752A3111GACD01

Enclosure	U	Δ / Y	f	P	P	I	n	T	T	IE	Amb	Duty	Elevation	Inertia	Weight
	[V]	Com	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]	S1	[m]	[kg·m ²]	[kg]
TEFC	415	Δ	50	75	100	126.2	1489	48.75	478.12	IE3	50	S1	1000	2.2302	715

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	41.5	51.0	71.4	96.7	126.2	
Torque	Nm	0.0	118.9	238.2	357.9	478.1	
Speed	r/min	1500	1497	1495	1492	1489	
Efficiency	%	0.0	90.6	94.1	95.0	95.0	
Power Factor	%	6.0	56.1	75.0	83.0	87.0	

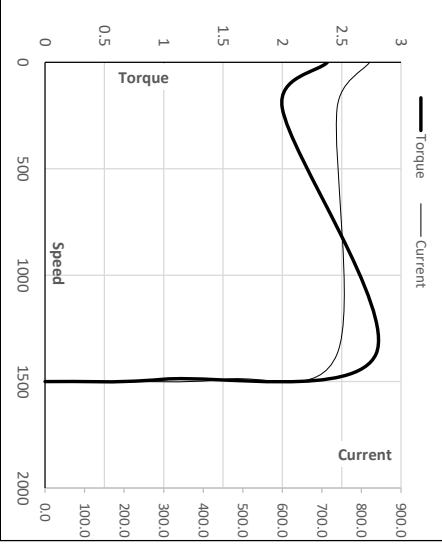
Performance vs Load Chart



Motor Speed Torque Data

Load Point	LR	P-Up	BD	Rated	NL	
Speed	r/min	0	214	1370	1489	1500
Current	A	820.6	738.5	457.4	126.2	41.5
Torque	pu	2.4	2.0	2.8	1	0

Starting Characteristics Chart



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

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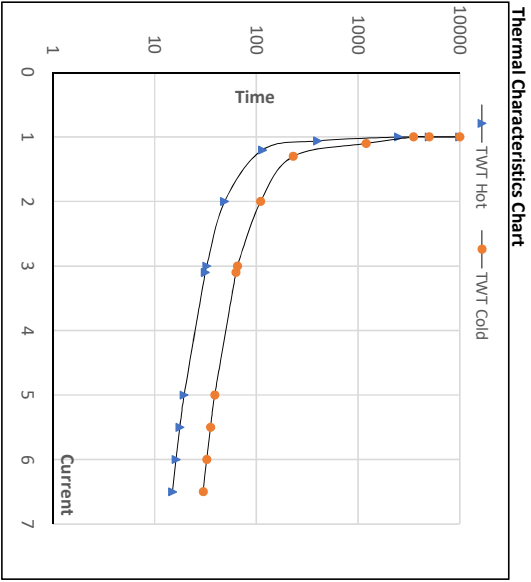


Model No. TCA0752A3111GACD01

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	126.2	1489	48.72	478.12	IE3	50	S1	1000	2.2302	715

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s	10000	49	33	30	20	18	15
TWT Cold	s	10000	110	65	55	39	36	30
Current	pu	1	2	3	4	5	5.5	6.5



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

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