PRODUCT INFORMATION PACKET

Model No: TCA3152A3121GACD01
Catalog No: TCA3152A3121GACD01
Cast Iron Motor, 425 HP, 3 Ph, 50 Hz, 415 V, 1500 RPM, 355L Frame, TEFC

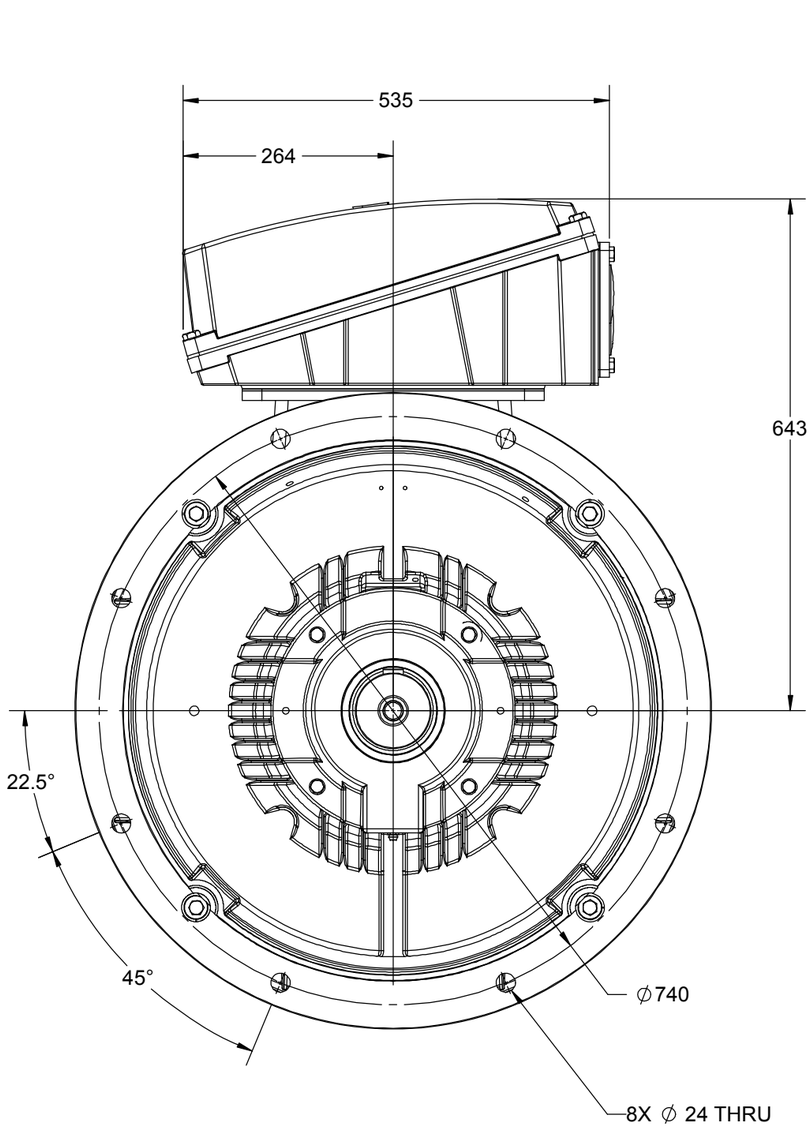
Nameplate Specifications

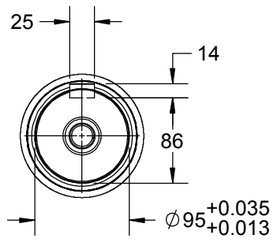
Output HP	**425 Hp**	Output KW	**315.0 kW**
Frequency	**50 Hz**	Voltage	**415 V**
Current	**507.2 A**	Speed	**1490 rpm**
Service Factor	**1**	Phase	**3**
Efficiency	**96 %**	Power Factor	**0.9**
Duty	**S1**	Insulation Class	**F**
Frame	**355L**	Enclosure	**Totally Enclosed Fan Cooled**
Thermal Protection	**No Protection**	Ambient Temperature	**50 °C**
Drive End Bearing Size	**6322**	Opp Drive End Bearing Size	**6322**
UL	**No**	CSA	**No**
CE	**Yes**	IP Code	**55**
Number of Speeds	**1**	Efficiency Class	**IE3**

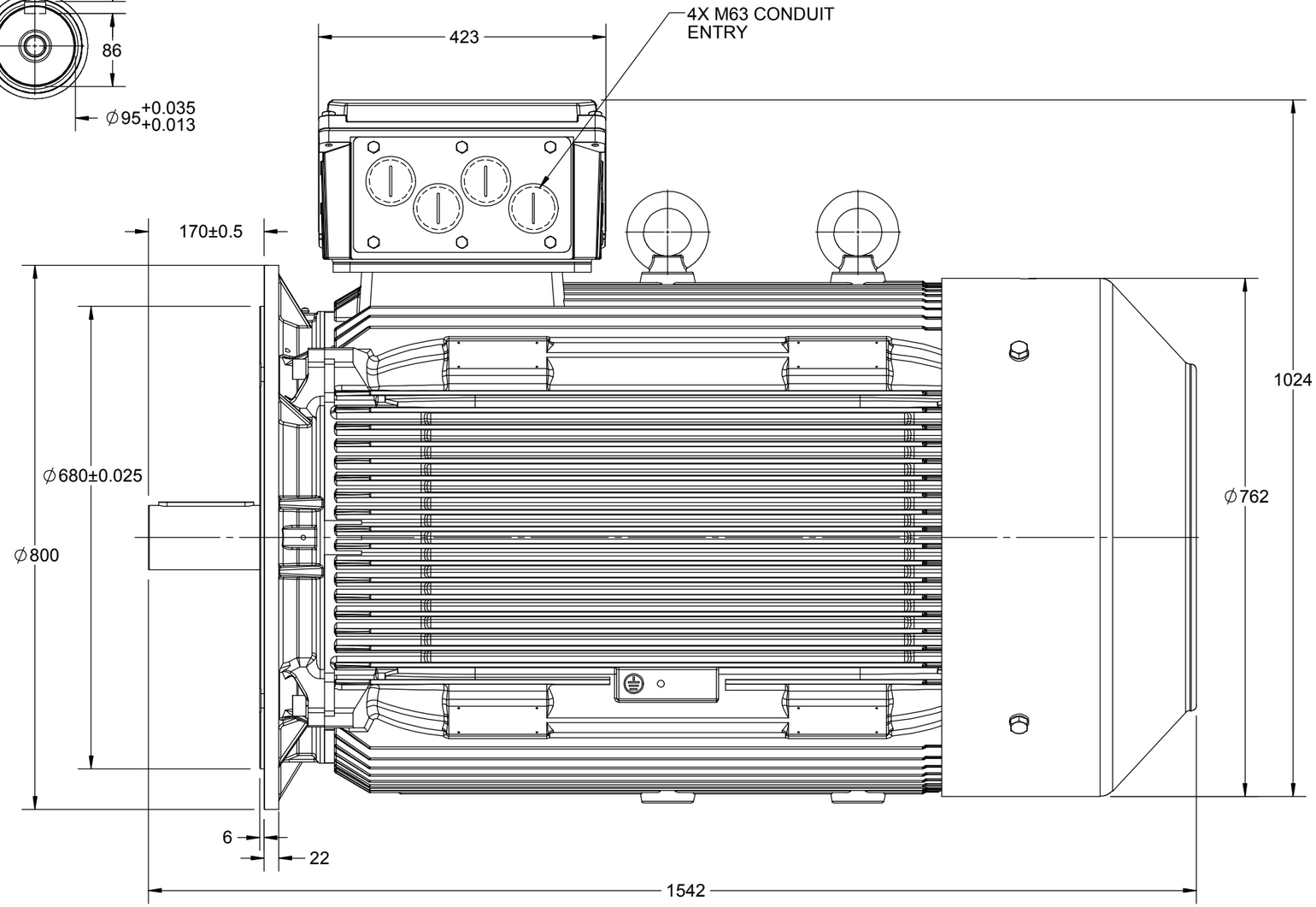
Technical Specifications

Electrical Type	**Squirrel Cage**	Starting Method	**Direct On Line**
Poles	**4**	Rotation	**Bi-Directional**
Mounting	**B5**	Motor Orientation	**Horizontal**
Drive End Bearing	**C3**	Opp Drive End Bearing	**C3**
Frame Material	**Cast Iron**	Shaft Type	**Keyed**
Overall Length	**1542 mm**	Frame Length	**1010 mm**
Shaft Diameter	**95 mm**	Shaft Extension	**170 mm**
Assembly/Box Mounting	**Top**		
Connection Drawing	**8442000085**	Outline Drawing	**0235501831**

OUTLINE



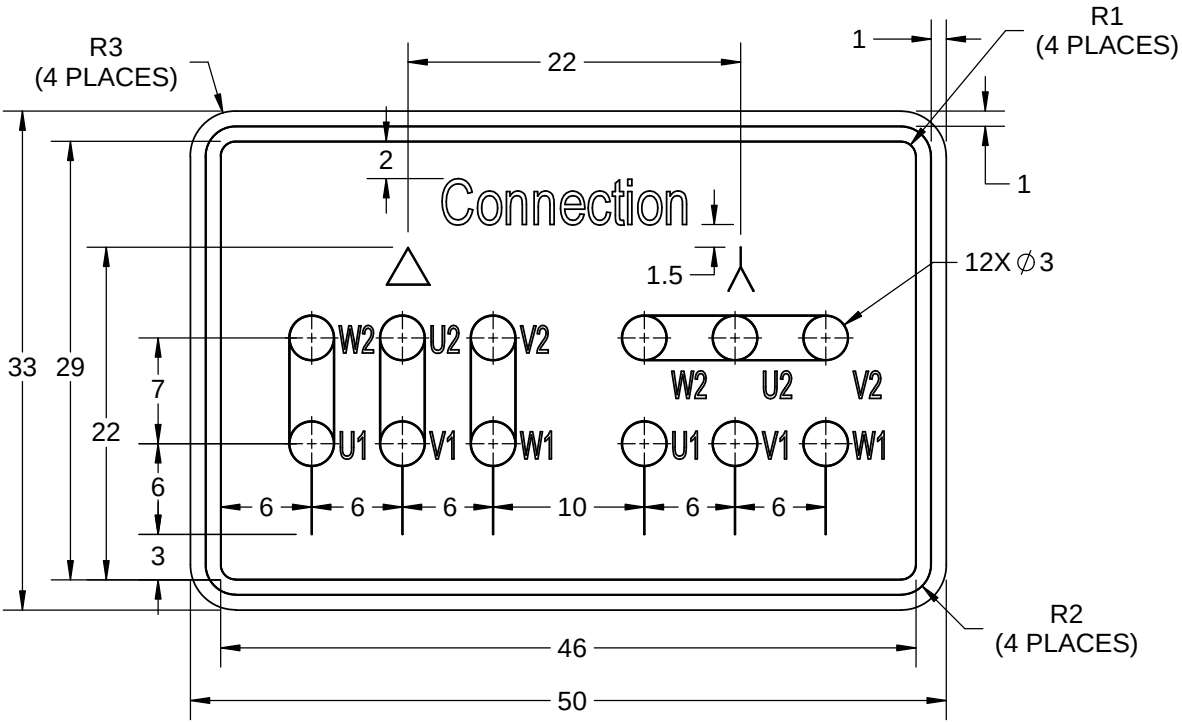




DRAWING REVISION B	REVISION BY NIV	DATE 08/05/2019		DRAWN BY JOY	marathon™ Motors
ECO ECO-0165600	APPROVED BY SR	DATE 08/05/2019		DATE 18/07/2014	
ECO DESCRIPTION MODEL UPDATED				APPROVED BY SBD	DESCRIPTION OUTLINE 355FR-B5 MTG. MOTOR TYPE: TCA
				DATE 18/07/2014	
				REFERENCE	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER 0235501831 / SHEET 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. TCA3152A3121GACD01

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	315	425	507.2	1490	2031.21	IE3	-	96.0	96.0	96.1	0.90	0.88	0.84	7	2.0	2.5

Motor type	TCA		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM B5	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	355L		Motor weight - approx.	1902	kg
Duty	S1		Gross weight - approx.	1947	kg
Voltage variation *	± 10%		Motor inertia	10.1755	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)	82	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 bearing		Accessory - 3	-	
DE / NDE bearing	6322 C3 / 6322 C3		Terminal box position	TOP	
Lubrication method	Regreasable		Maximum cable size/conduit size	1R x 3C x 300mm²/4 x M63 x 1.5	
Type of grease	Shell Gadus S5 V100 or Equivalent		Auxiliary terminal box	NA	

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 combined 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	-	-	-

REGAL

marathon® Motors

TerraMAX®

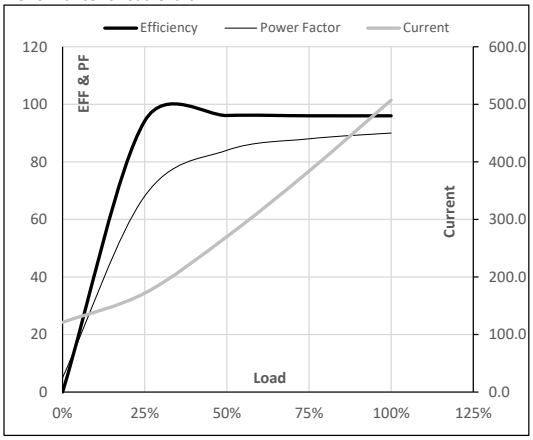
Model No. TCA3152A3121GACD01

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	315	425	507.2	1490	207.13	2031.21	IE3	50	S1	1000	10.1755	1902

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	121.1	171.9	270.0	383.8	507.2	
Torque	Nm	0.0	505.2	1012.0	1520.6	2031.2	
Speed	r/min	1500	1498	1495	1493	1490	
Efficiency	%	0.0	94.2	96.1	96.0	96.0	
Power Factor	%	5.0	68.1	84.0	88.0	90.0	

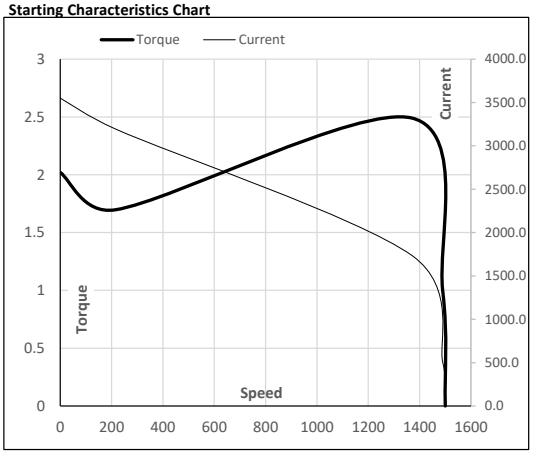
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1371	1490	1500
Current	A	3550.6	3195.5	1734.5	507.2	121.1
Torque	pu	2.0	1.7	2.5	1	0

Starting Characteristics Chart



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

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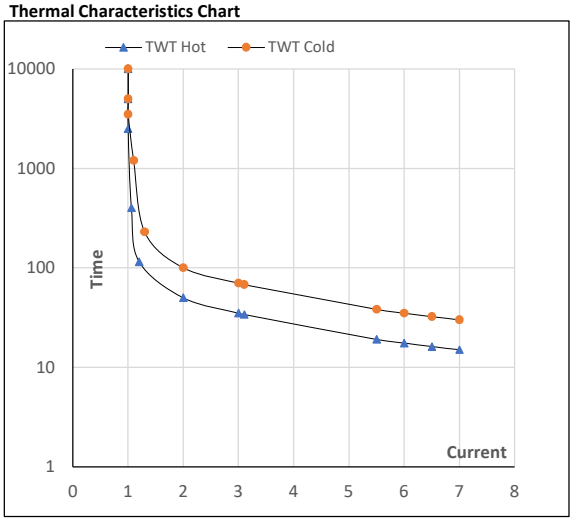
Model No. TCA3152A3121GACD01

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	315	425	507.2	1490	207.13	2031.21	IE3	50	S1	1000	10.1755	1902

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	50	35	29	23	18	15
TWT Cold	s	10000	100	70	55	45	35	30
Current	pu	1	2	3	4	5	6	7

Thermal Characteristics Chart



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