PRODUCT INFORMATION PACKET

Model No: TCA1604A3141GACD01
Catalog No: TCA1604A3141GACD01
Cast Iron Motor, 215 HP, 3 Ph, 50 Hz, 415 V, 750 RPM, 355M Frame, TEFC

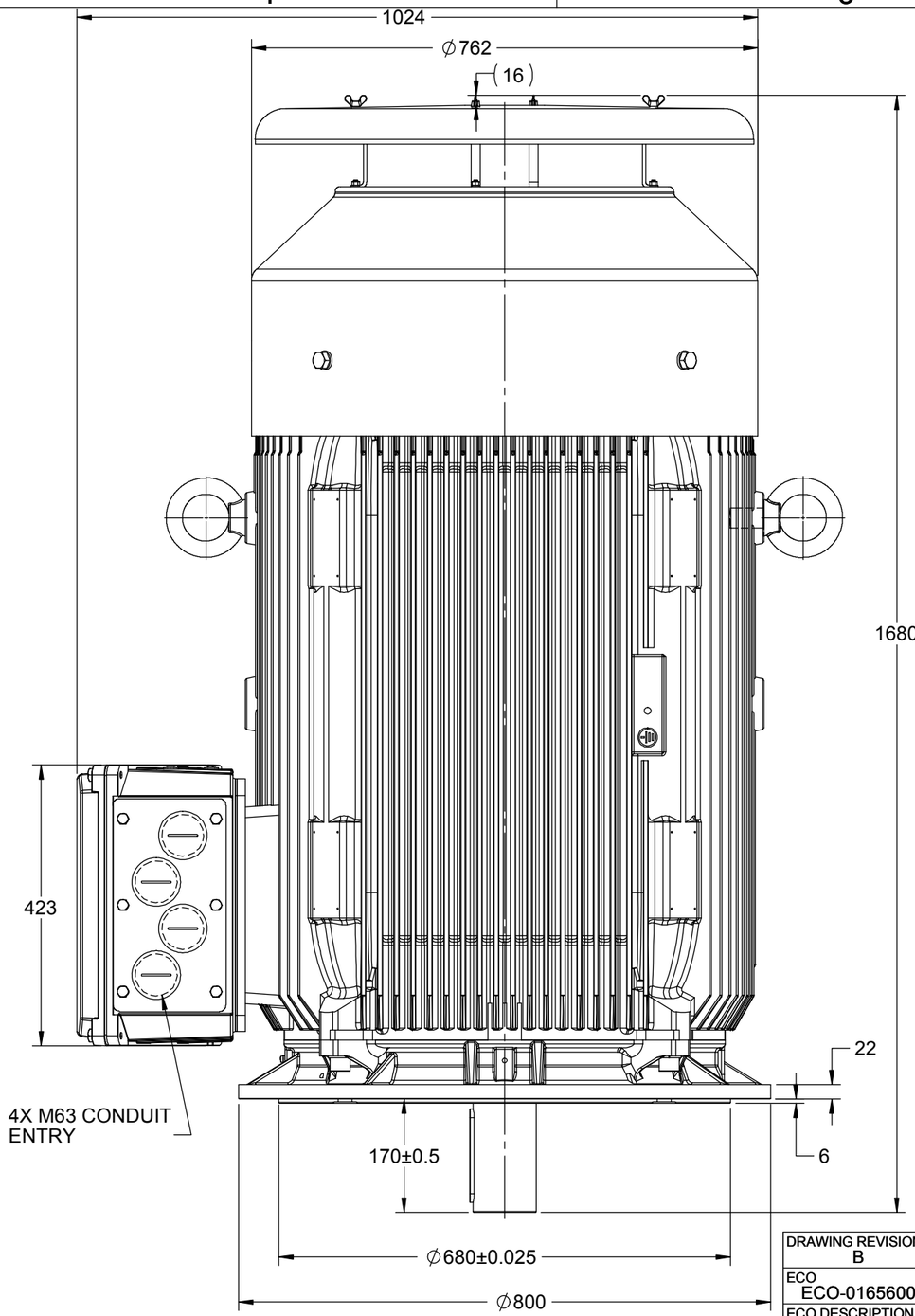
Nameplate Specifications

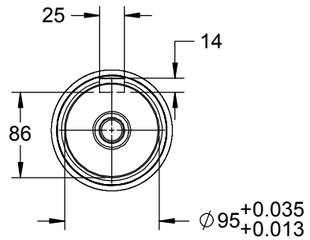
Output HP	215 Hp	Output KW	160.0 kW
Frequency	50 Hz	Voltage	415 V
Current	287.9 A	Speed	742 rpm
Service Factor	1	Phase	3
Efficiency	94.3 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	355M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	50 °C
Drive End 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

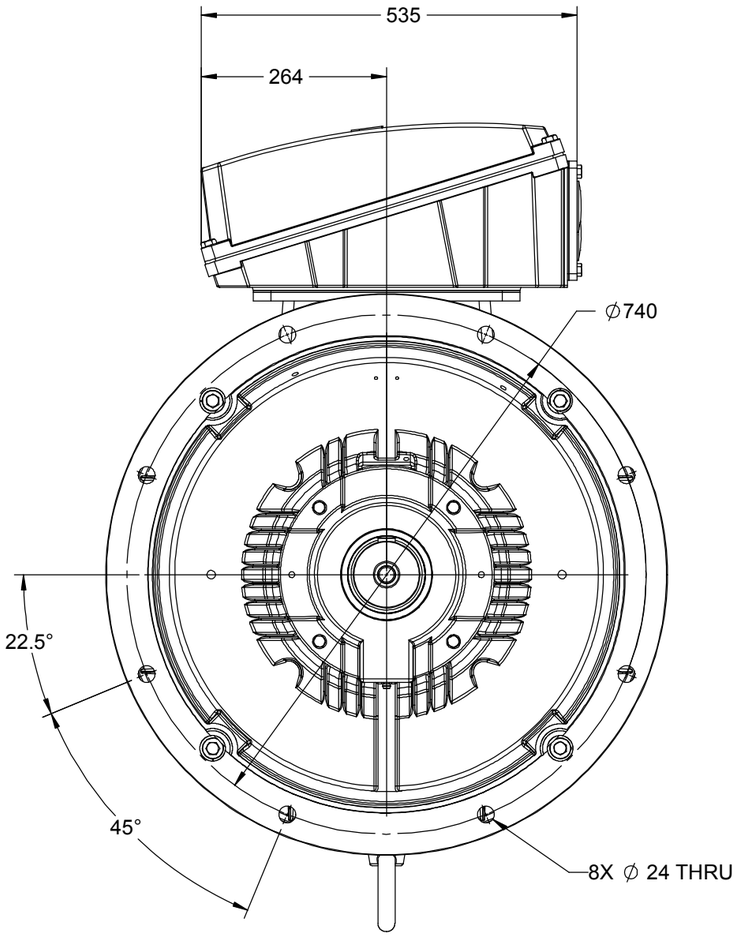
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	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	1677 mm	Frame Length	1010 mm
Shaft Diameter	95 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Outline Drawing	0235501832	Connection Drawing	8442000085

OUTLINE







DRAWING REVISION	REVISION BY	DATE
B	NIV	09/05/2019
ECO	APPROVED BY	DATE
ECO-0165600	SR	09/05/2019

ECO DESCRIPTION: MODEL UPDATED

DRAWN BY	JOY
DATE	18/07/2014
APPROVED BY	SBD
DATE	18/07/2014
REFERENCE	

marathon™ Motors

DESCRIPTION: OUTLINE
355FR-4-8P-V1 MTG. MOTOR TYPE: TCA

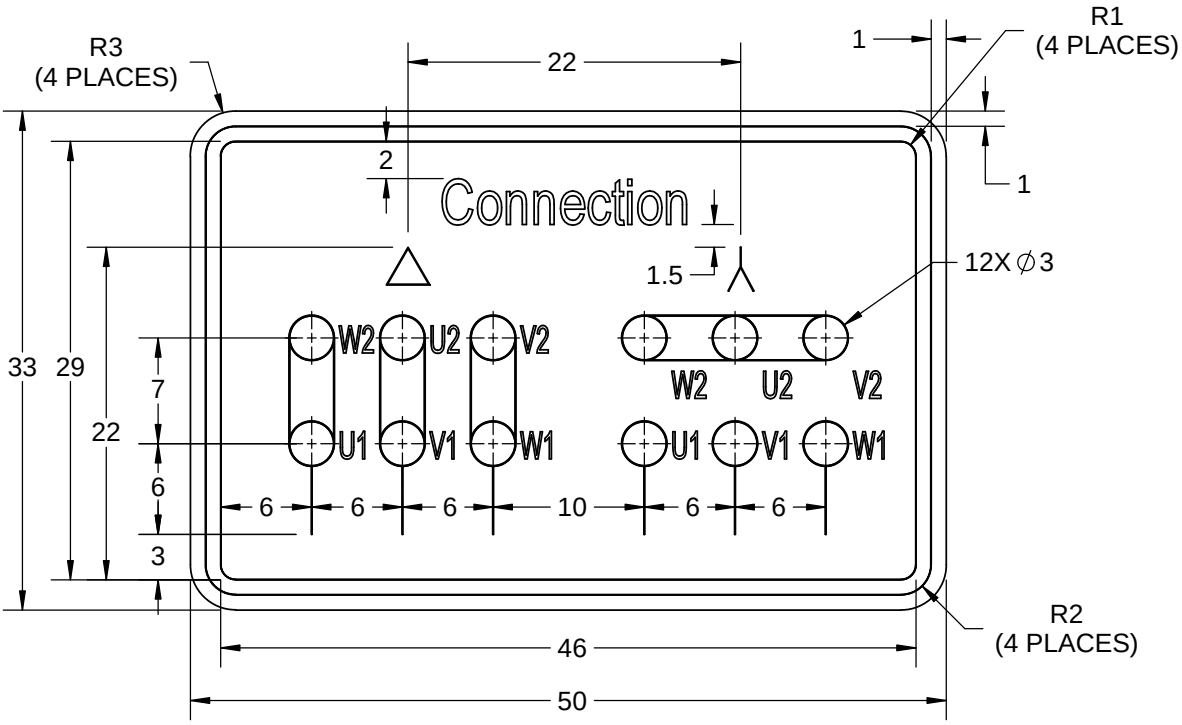
MATERIAL	PROCESS/FINISH

THIRD ANGLE PROJECTION

SIZE	DRAWING NUMBER	SHEET
B	0235501832	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. TCA1604A3141GACD01

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load 5/4FL	FL	3/4FL	1/2FL	PF at __ load FL	3/4FL	1/2FL	I_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
415	Δ	50	160	215	287.9	742	2063.23	IE3	-	94.3	94.3	94.8	0.82	0.79	0.69	6.1	1.6	2.5

Motor type	TCA		Degree of protection	IP 55	
Enclosure	TEFC		Mounting type	IM V1	
Frame Material	Cast Iron		Cooling method	IC 411	
Frame size	355M		Motor weight - approx.	1787	kg
Duty	S1		Gross weight - approx.	1832	kg
Voltage variation *	± 10%		Motor inertia	10.5659	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)	65	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 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	-	-	-

REGAL

marathon® Motors

TerraMAX®

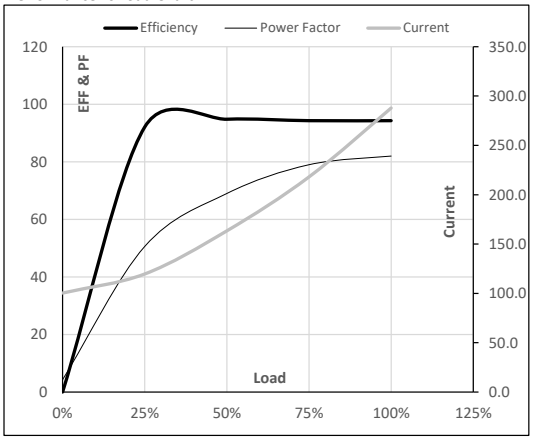
Model No. TCA1604A3141GACD01

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	160	215.0	287.9	742	210.39	2063.23	IE3	50	S1	1000	10.5659	1787

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	100.3	119.7	163.4	218.0	287.9	
Torque	Nm	0.0	511.9	1026.2	1543.1	2063.2	
Speed	r/min	750	748	746	744	742	
Efficiency	%	0.0	92.1	94.8	94.3	94.3	
Power Factor	%	4.3	50.6	69.0	79.0	82.0	

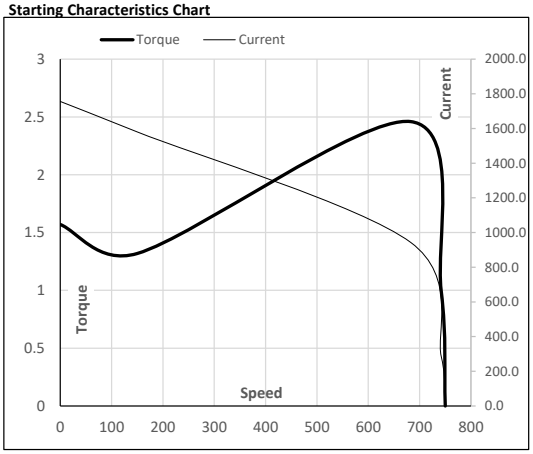
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	683	742	750
Current	A	1756.0	1580.4	943.3	287.9	100.3
Torque	pu	1.6	1.3	2.5	1	0

Starting Characteristics Chart



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

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TerraMAX®

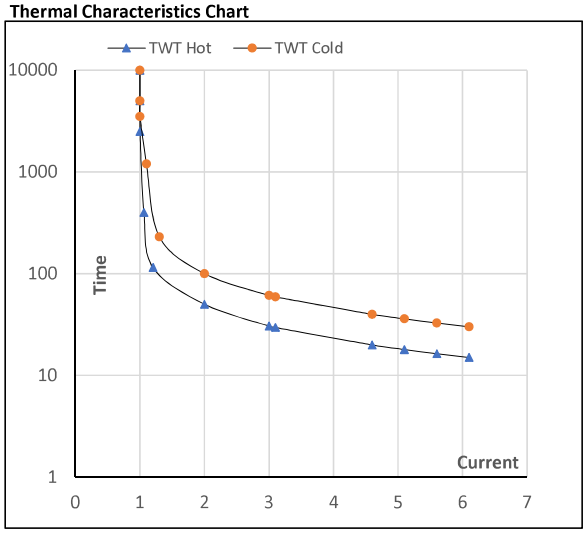
Model No. TCA1604A3141GACD01

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	160	215	287.9	742	210.24	2063.23	IE3	50	S1	1000	10.5659	1787

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	50	31	25	18	17	15
TWT Cold	s	10000	100	61	50	37	34	30
Current	pu	1	2	3	4	5	5.5	6.1

Thermal Characteristics Chart



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

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