

# PRODUCT INFORMATION PACKET

marathon®  
Motors

Model No: TCA0554AF133GAC010

Catalog No: TCA0554AF133GAC010

TerraMAX® Cast Iron Motor, 75 HP, 3 Ph, 50 Hz, 380 V, 750 RPM, 315S Frame, TEFC



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RegalRexnord



### Nameplate Specifications

Output HP	<b>75 Hp</b>	Output KW	<b>55.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>380 V</b>
Current	<b>125.5 A</b>	Speed	<b>742 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>92.5 %</b>	Power Factor	<b>0.72</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>315S</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6319</b>	Opp Drive End Bearing Size	<b>6319</b>
UL	<b>No</b>	CSA	<b>No</b>
CE	<b>Yes</b>	IP Code	<b>55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE3</b>

### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>8</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>B35</b>	Motor Orientation	<b>Horizontal</b>
Drive End Bearing	<b>C3</b>	Opp Drive End Bearing	<b>C3</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>Keyed</b>
Overall Length	<b>1206 mm</b>	Frame Length	<b>729 mm</b>
Shaft Diameter	<b>80 mm</b>	Shaft Extension	<b>170 mm</b>
Assembly/Box Mounting	<b>R Side</b>		
Connection Drawing	<b>8442000085</b>	Outline Drawing	<b>0231501398</b>

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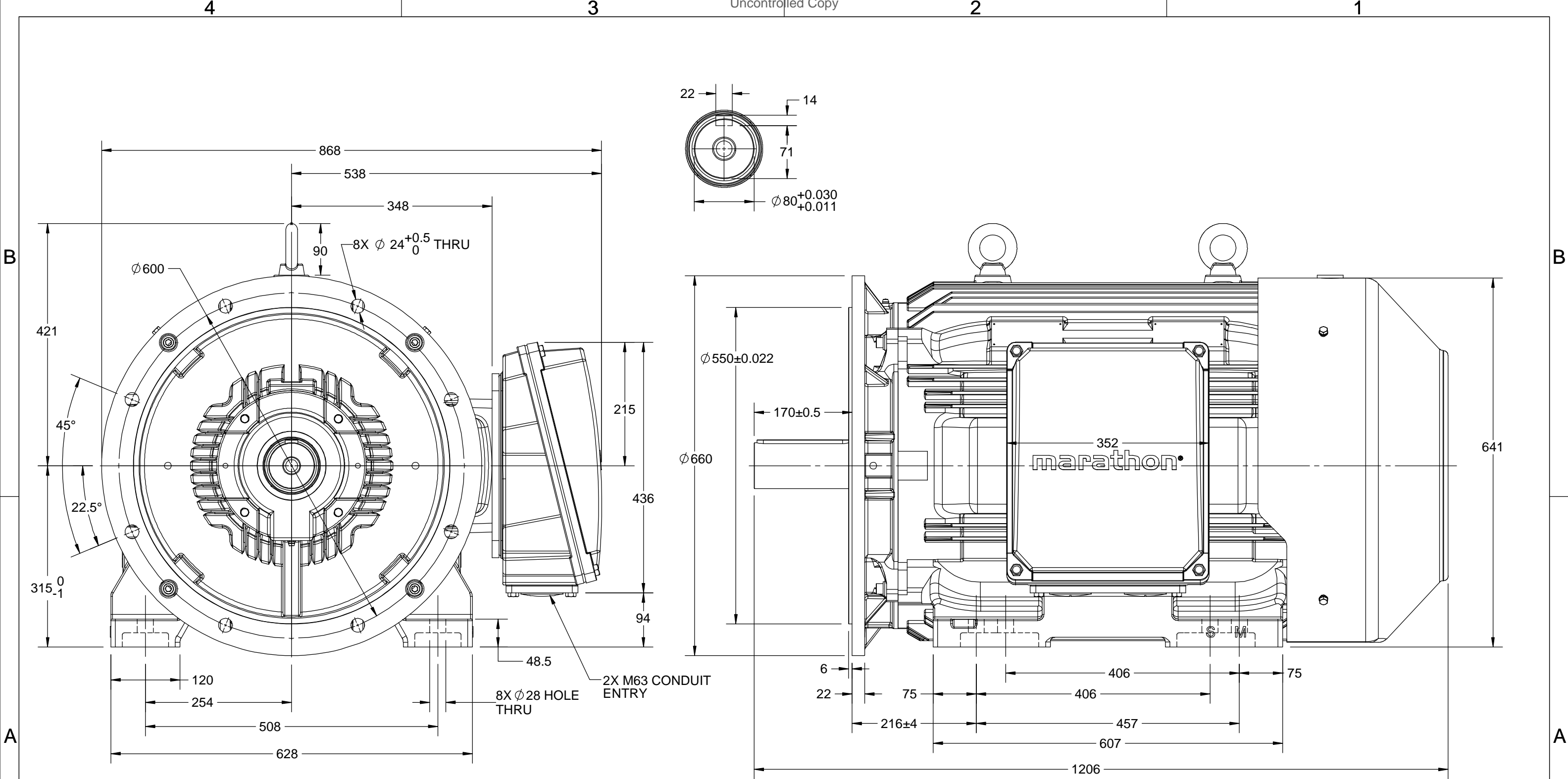
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DRAWING REVISION B	REVISION BY VS	DATE 11/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 11/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY GSR		
DATE 15/11/2017		
APPROVED BY JAY	DESCRIPTION OUTLINE	
DATE 15/11/2017	315S/M 4-8P B35 MTG. TCA/QCA-RHS TB	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231501398
		SHEET 1 OF 1

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

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.

8WD.442.2017



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

Model No. TCA0554AF133GAC010

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 <sub>L</sub> /I <sub>N</sub> [pu]	T <sub>L</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]	
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL				1/2FL
380	Δ	50	55	75	125.47	742	719.98	IE3	-	92.5	92.5	91.4	0.72	0.66	0.53	4.7	1.8	2.1

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315S	Motor weight - approx.	910 kg
Duty	S1	Gross weight - approx.	955 kg
Voltage variation *	± 10%	Motor inertia	3.7895 kgm <sup>2</sup>
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)	64 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 +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [ 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	PTC 150°C
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	Regreasable	Maximum cable size/conduit size	1R x 3C x 240mm <sup>2</sup> /2 x M63 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	Auxiliary terminal box	NA

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

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

T<sub>L</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
	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30





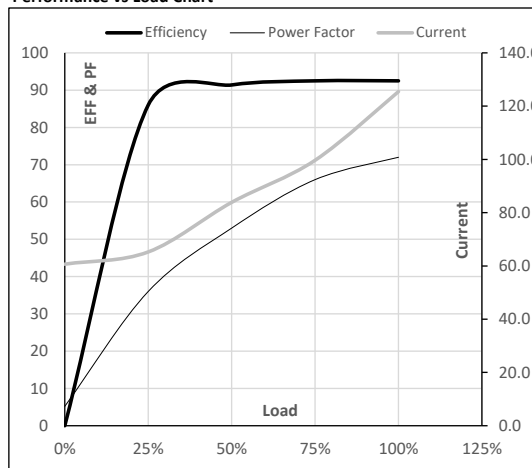
Model No. TCA0554AF133GAC010

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	380	Δ	50	55	75	125.5	742	73.42	719.98	IE3	40	S1	1000	3.7895	910

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	60.7	65.3	83.9	99.7	125.5	
Torque	Nm	0.0	178.7	358.1	538.5	720.0	
Speed	r/min	750	748	746	745	742	
Efficiency	%	0.0	86.0	91.4	92.5	92.5	
Power Factor	%	5.2	36.0	53.0	66.0	72.0	

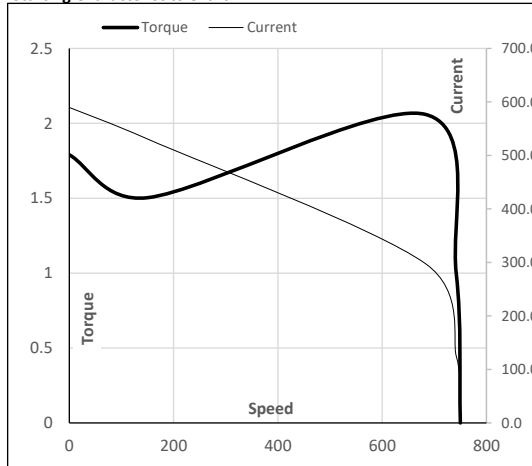
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	683	742	750
Current	A	589.7	530.7	298.1	125.5	60.7
Torque	pu	1.8	1.5	2.1	1	0

**Starting Characteristics Chart**



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

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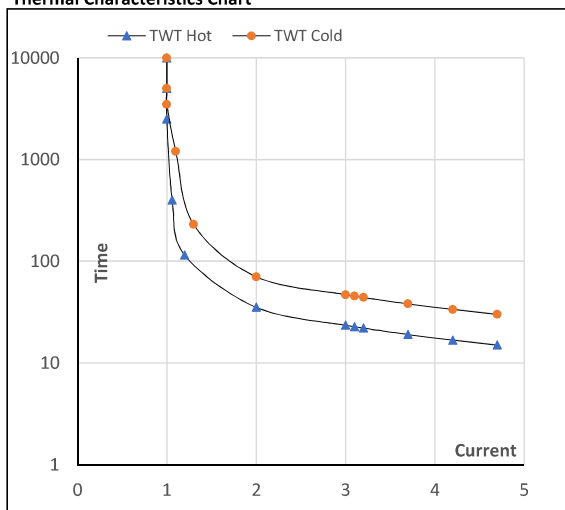
Model No. TCA0554AF133GAC010

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	380	$\Delta$	50	55	75.0	125.5	742	73.42	719.98	IE3	40	S1	1000	3.7895	910

**Motor Speed Torque Data**

Load	FL	$I_1$	$I_2$	$I_3$	$I_4$	$I_5$	LR
TWT Hot	s 10000	35	24	21	18	16	15
TWT Cold	s 10000	71	47	41	36	32	30
Current	pu	1	2	3	3.5	4	4.5

**Thermal Characteristics Chart**



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

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