

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: QCA3552AF133GAA001

Catalog No: QCA3552AF133GAA001

TerraMAX® Cast Iron Motor, 475 HP, 3 Ph, 50 Hz, 380 V, 1500 RPM, 355L Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Output HP	475 Hp	Output KW	355.0 kW
Frequency	50 Hz	Voltage	380 V
Current	628.3 A	Speed	1490 rpm
Service Factor	1	Phase	3
Efficiency	96.7 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	355L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °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	IE4

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B35	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	R Side		
Connection Drawing	8442000085	Outline Drawing	0235502333

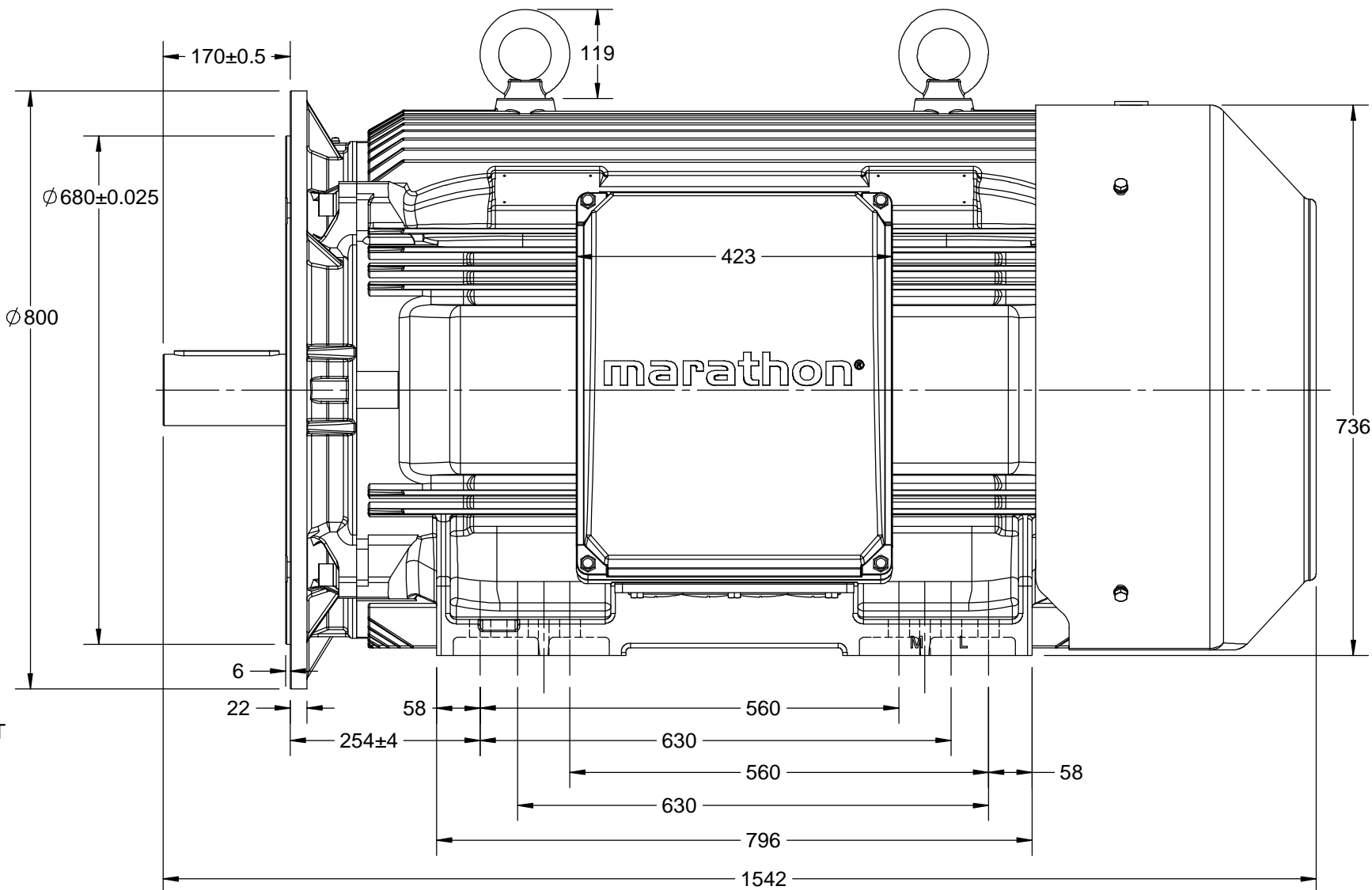
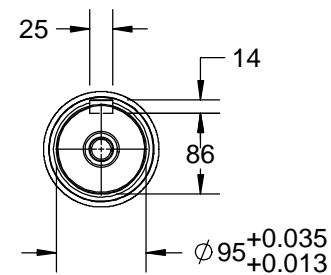
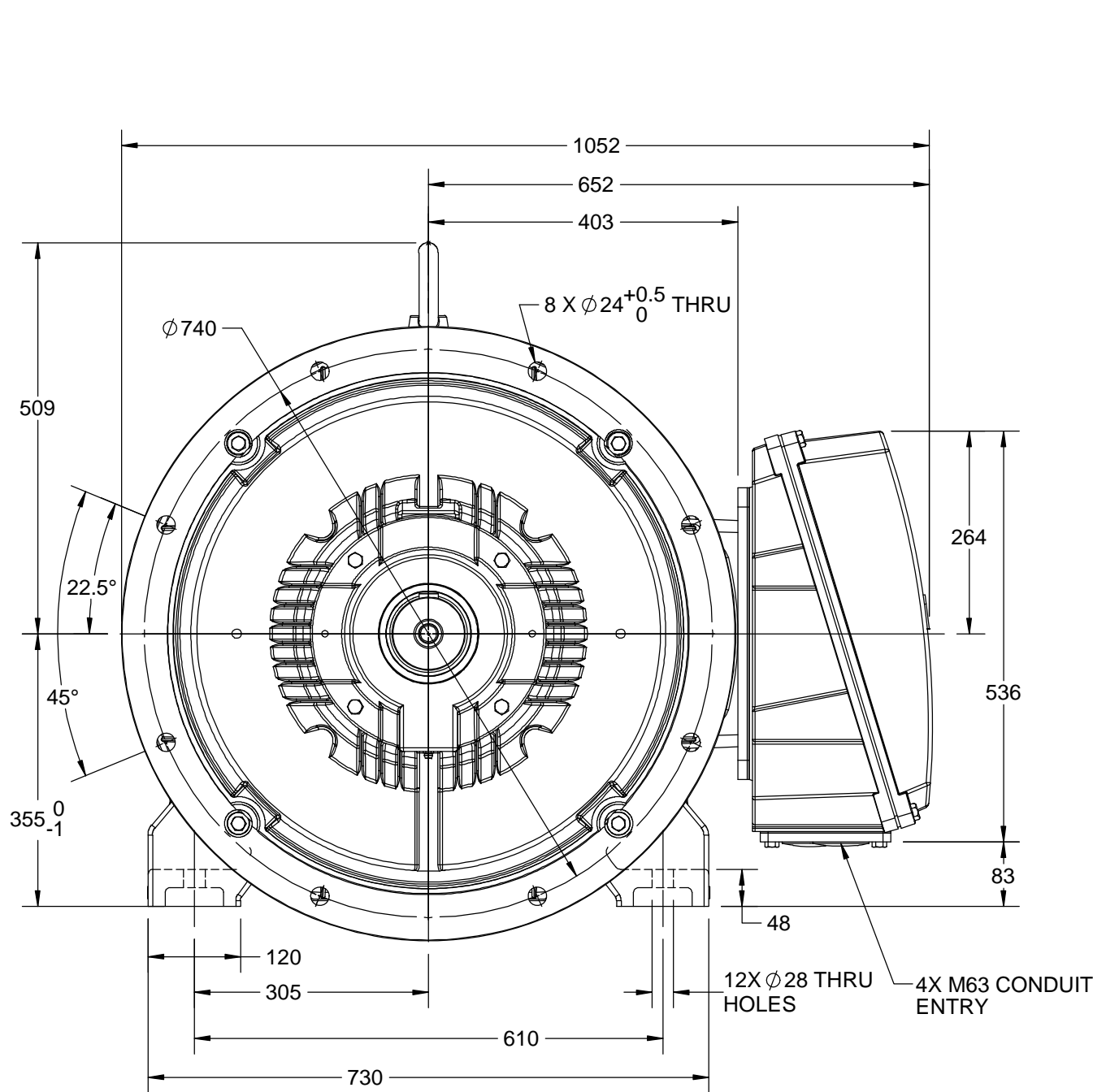
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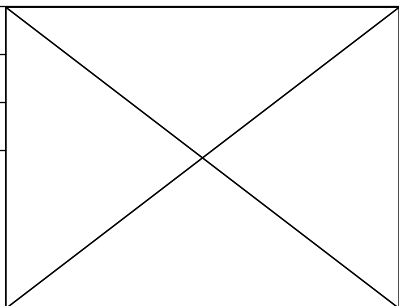
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DRAWING REVISION B	REVISION BY VS	DATE 05/07/2018
ECO ECO-0148344	APPROVED BY SBD	DATE 05/07/2018
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY GSR	<b>marathon™</b> Motors		
DATE 15/011/2017			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 15/011/2017	355L FR-4~8P-B35 MTG. TCA/QCA-RHS TB		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0235502333	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>		<b>Regal Beloit America, Inc.</b>				
	DATE <b>16/12/2016</b>						
	APPROVED BY <b>SBD</b>		DESCRIPTION <b>CONN DIAGRAM-NAMEPLATE</b>				
	DATE <b>16/12/2016</b>						
	REFERENCE		MATERIAL		PROCESS/FINISH		
	THIRD ANGLE PROJECTION		SIZE <b>A</b>		DRAWING NUMBER <b>8442000085</b>		SHEET <b>1 OF 1</b>

**Model No.** QCA3552AF133GAA001

U (V)	$\Delta$ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
380	$\Delta$	50	355	475	626.7	1490	2270.06	IE4	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.6	2.0	2.5

Motor type	QCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B35
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	355L	Motor weight - approx.	2099 kg
Duty	S1	Gross weight - approx.	2144 kg
Voltage variation *	± 10%	Motor inertia	11.5226 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)	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 +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	6322 C3 / 6322 C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 300mm <sup>2</sup> /4 x M63 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	Auxiliary terminal box	NA

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

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

T<sub>A</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.

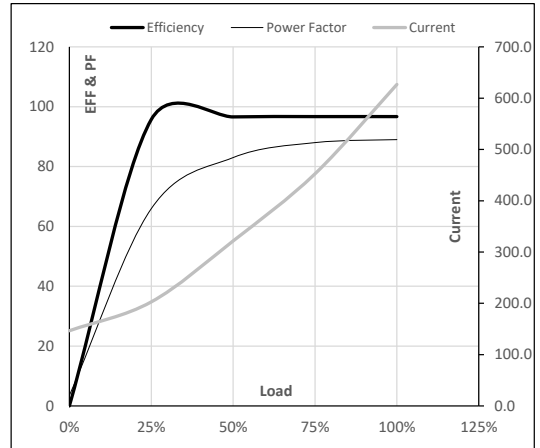
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

**Model No.** QCA3552AF133GAA001

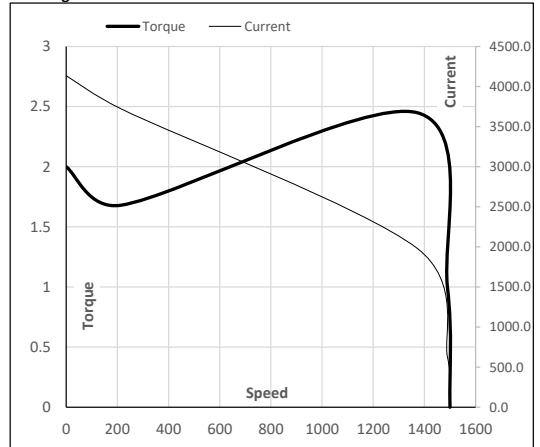
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m <sup>2</sup> ]	Weight [kg]
TEFC	380	Δ	50	355	475	626.7	1490	231.48	2270.06	IE4	40	S1	1000	11.5226	2099

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	146.5	202.8	321.7	452.5	626.7	
Torque	Nm	0.0	564.7	1131.1	1699.5	2270.1	
Speed	r/min	1500	1498	1495	1493	1490	
Efficiency	%	0.0	95.7	96.6	96.7	96.7	
Power Factor	%	3.5	65.9	83.0	88.0	89.0	

**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	4136.3	3722.7	1984.6	626.7	146.5
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

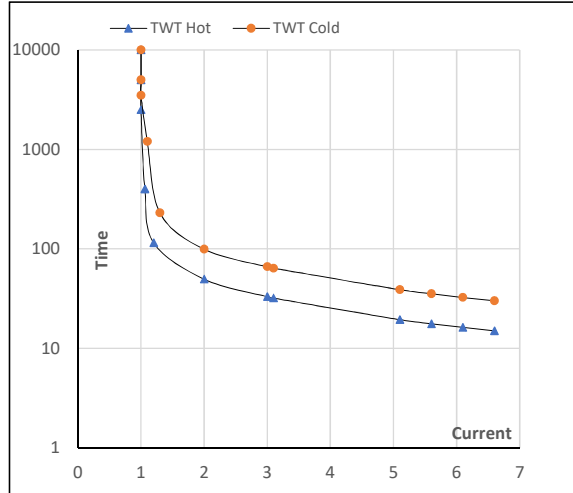
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**Model No.** QCA3552AF133GAA001

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	355	475	626.7	1490	231.48	2270.06	IE4	40	S1	1000	11.5226	2099

**Motor Speed Torque Data**

Load	FL	I <sub>1</sub>	I <sub>2</sub>	I <sub>3</sub>	I <sub>4</sub>	I <sub>5</sub>	LR	
TWT Hot	s 10000	50	33	28	20	18	15	
TWT Cold	s 10000	99	66	55	39	36	30	
Current	pu	1	2	3	4	5	5.5	6.6

**Thermal Characteristics Chart**

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

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