

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCE0374A2121GAA001  
Catalog No: TCE0374A2121GAA001

TerraMAX® Increased Safety Motors Ex eb, Totally Enclosed Fan Cooled, 50 HP, 3 Ph, 50 Hz, 400 V,  
742 RPM, 280S Frame



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**RegalRexnord**

### Nameplate Specifications

Output HP	50 Hp	Output KW	37.0 kW
Frequency	50 Hz	Voltage	400 V
Current	74.9 A	Speed	742 rpm
Service Factor	1	Phase	3
Efficiency	91.8 %	Power Factor	0.8
Duty	S1	Insulation Class	F
Frame	280S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6317	Opp Drive End Bearing Size	6317
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	3		

### Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	8	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1060 mm	Frame Length	549 mm
Shaft Diameter	75.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Outline Drawing	0228000659	Connection Drawing	8442000085

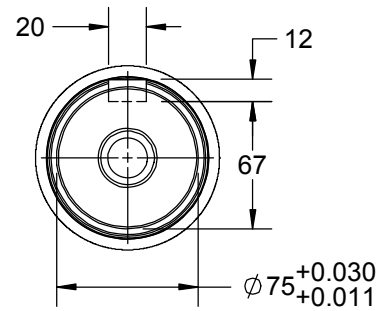
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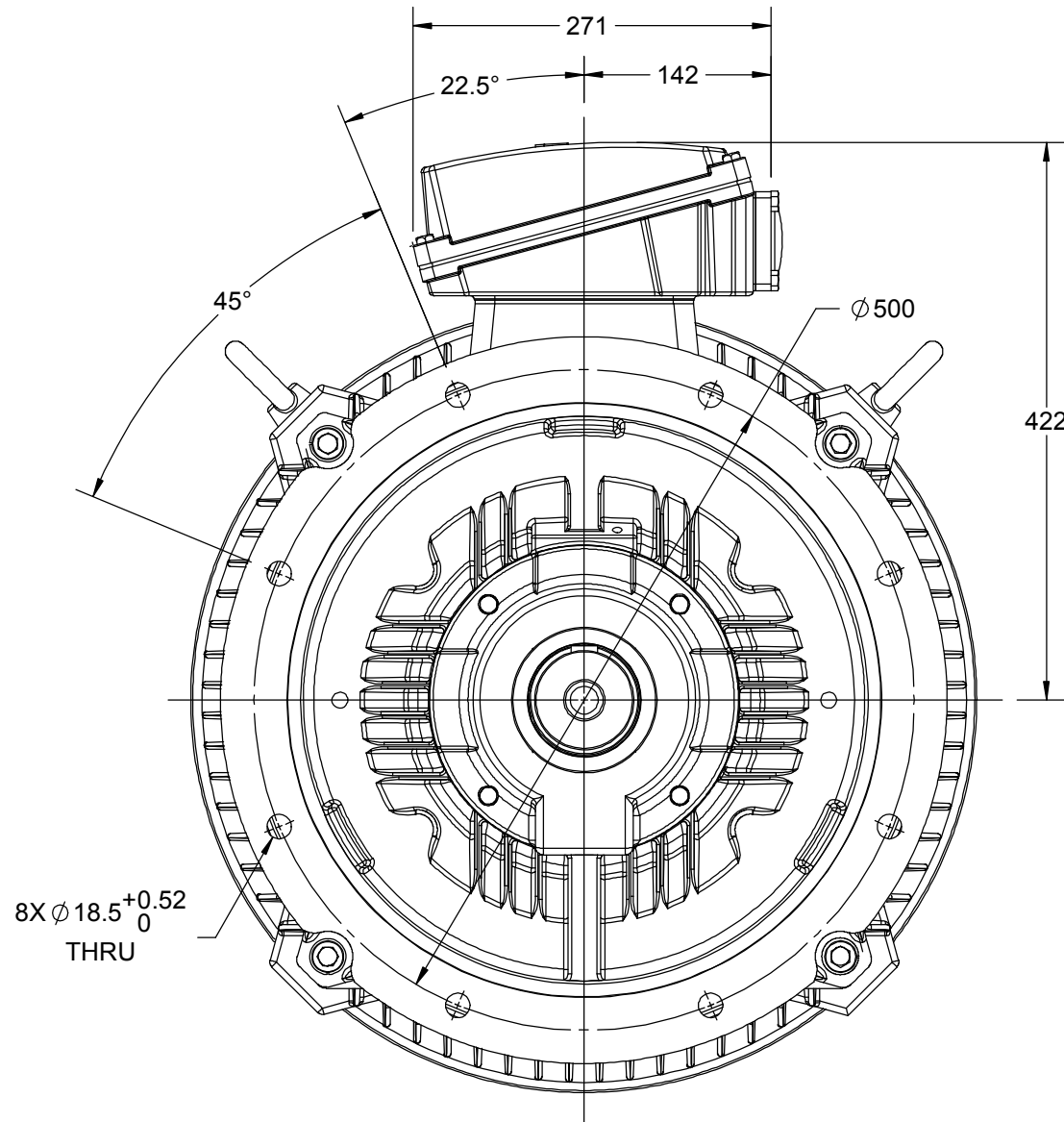
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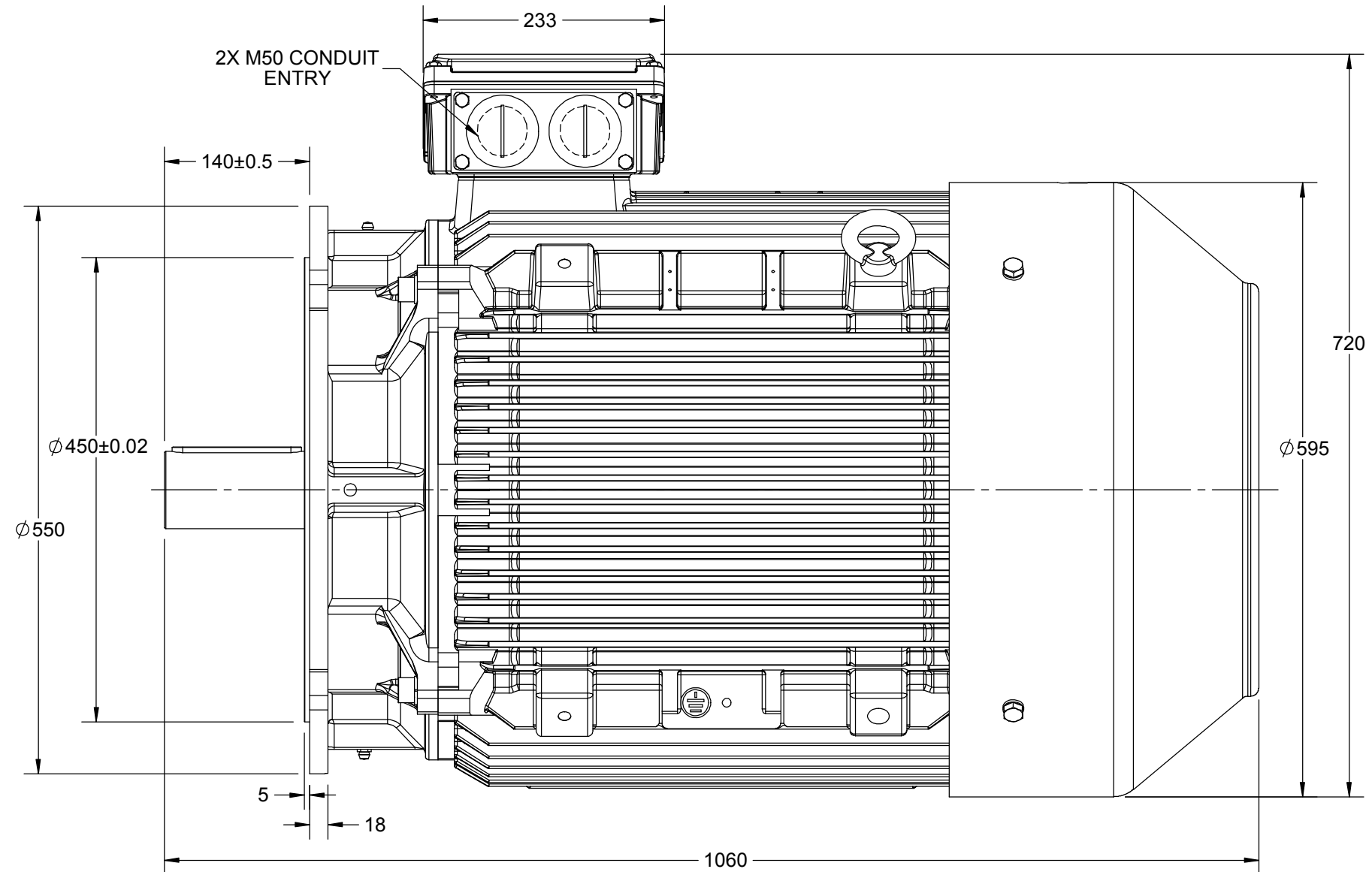
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A

A



DRAWING REVISION C		REVISION BY LK		DATE 23/04/2019			DRAWN BY MR							
ECO ECO-0165600		APPROVED BY SR		DATE 23/04/2019			DATE 17/04/2015							
ECO DESCRIPTION UPDATED MODEL AS PER NEW 3D STRUCTURE							APPROVED BY SBD		DESCRIPTION					
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							REFERENCE		MATERIAL			PROCESS/FINISH		
						THIRD ANGLE PROJECTION			SIZE B	DRAWING NUMBER 0228000659			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>		

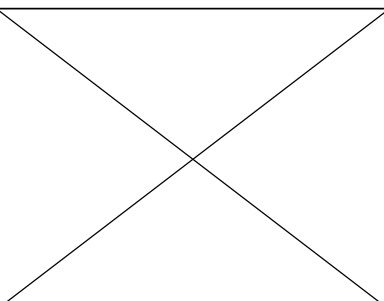


GEOMETRIC TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



# 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 SN		 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	

**Model No.** TCE0374A2121GAA001

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]
400	$\Delta$	50	37	50.0	74.9	742	479.97	IE3	5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	6.0	2.1	2.4

Motor type	TCE	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B5
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	280S	Motor weight - approx.	721 kg
Duty	S1	Gross weight - approx.	756 kg
Voltage variation *	± 10%	Motor inertia	3.2584 kgm <sup>2</sup>
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)	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	-15 to +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	70 [ Class B ] K	tE time	25 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	Ex eb	Standard rotation	Clockwise form DE
Zone classification	Zone 1	Paint shade	RAL 7016
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
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 <sup>2</sup> /2 x M50 x 1.5
Type of grease	Shell Gadus S5 V100 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

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-7

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 slight variations between calculated values in this datasheet and the motor nameplate figures.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	IEC:60034-30-1		-	-	-	IEC:60034-30-1

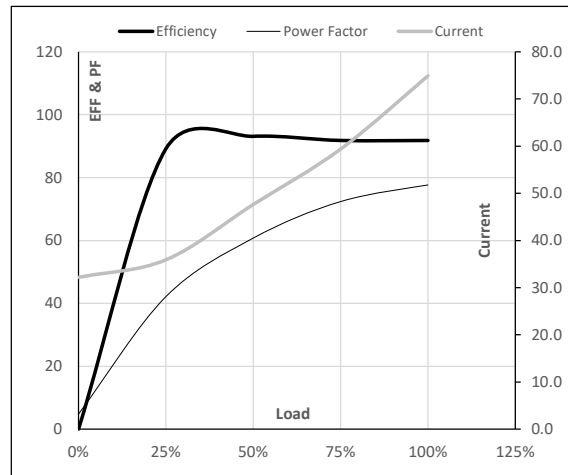
**Model No.** TCE0374A2121GAA001

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	400	$\Delta$	50	37	50	74.9	742	48.94	479.97	IE3	40	S1	1000	3.2584	721

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	32.2	35.9	47.6	59.4	74.9	
Torque	Nm	0.0	161.4	323.6	486.7	480.0	
Speed	r/min	750	748	746	744	742	
Efficiency	%	0.0	89.1	93.1	91.8	91.8	
Power Factor	%	4.8	42.1	60.7	72.4	77.7	

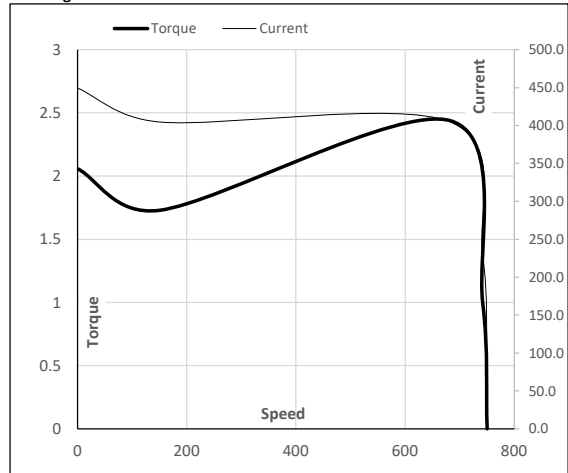
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	150	683	742	750
Current	A	449.4	404.5	228.0	74.9	32.2
Torque	pu	2.1	1.7	2.4	1	0

**Starting Characteristics Chart**



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

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