

# PRODUCT INFORMATION PACKET

Model No: TCNP751A1171GAC010

Catalog No: TCNP751A1171GAC010

TerraMAX® Cast Iron Motor, 1 HP, 3 Ph, 50 Hz, 400 V, 3000 RPM, 80M Frame, TEFC



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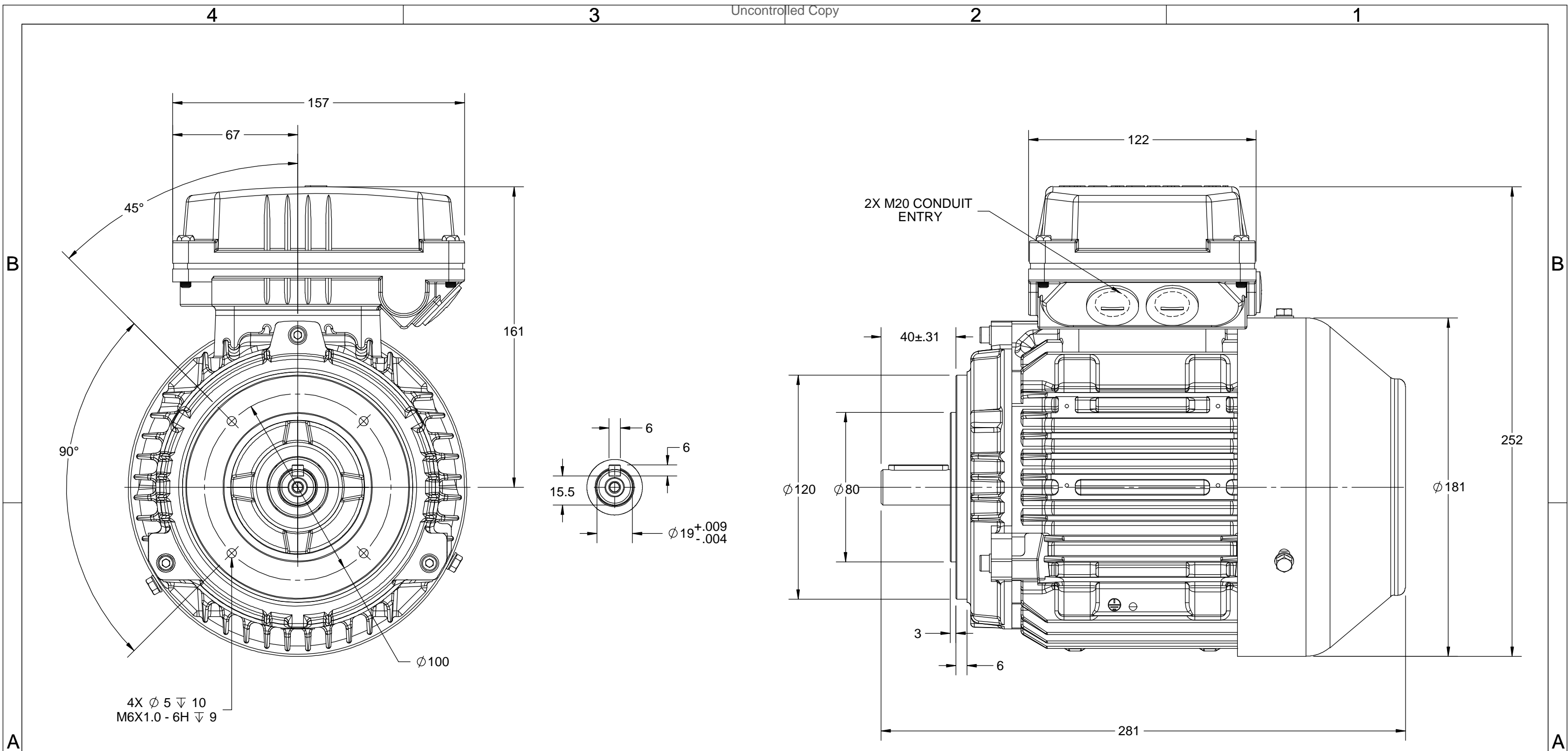
### Nameplate Specifications

Output HP	1 Hp	Output KW	0.75 kW
Frequency	50 Hz	Voltage	400 V
Current	1.6 A	Speed	2880 rpm
Service Factor	1	Phase	3
Efficiency	80.7 %	Power Factor	0.83
Duty	S1	Insulation Class	F
Frame	80M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6204	Opp Drive End Bearing Size	6204
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	2	Rotation	Bi-Directional
Mounting	B14A	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	281 mm	Frame Length	140 mm
Shaft Diameter	19 mm	Shaft Extension	40 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0208000182

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DRAWING REVISION B	REVISION BY S.MUDDA	DATE 21/6/2018
ECO ECO-0147359	APPROVED BY JAY	DATE 21/06/2018
ECO DESCRIPTION OUTLINE UPDATED AS PER THE NEW 3D STRUCTURING		
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DRAWN BY SMAR	 <b>Regal Beloit America, Inc.</b>
DATE 30/08/13	
APPROVED BY JAY	DESCRIPTION <b>OUTLINE</b> 80 FR.- B14A MTG. MOTOR TYPE: TCA
DATE 30/08/13	MATERIAL
REFERENCE	PROCESS/FINISH
THIRD ANGLE PROJECTION 	SIZE <b>B</b>
	DRAWING NUMBER <b>0208000182</b>
	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. TCNP751A1171GAC010

U (V)	$\Delta$ / Y Conn	f [Hz]	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load				PF at __ load			$I_A/I_N$ [pu]	$T_A/T_N$ [pu]	$T_K/T_N$ [pu]
			[kW]	[hp]					5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	Y	50	0.75	1.0	1.6	2880	2.47	IE3	-	80.7	80.7	75.6	0.83	0.75	0.61	6.5	3.0	3.3

Motor type	TCN	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM B14A
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	80M	Motor weight - approx.	19 kg
Duty	S1	Gross weight - approx.	20 kg
Voltage variation *	± 10%	Motor inertia	0.0013 kgm <sup>2</sup>
Frequency variation *	± 5%	Load inertia	Customer to Provide
Combined variation *	10%	Vibration level	1.6 mm/s
Design	N	Noise level ( 1meter distance from motor)	56 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)	10/20 s
Altitude above sea level	1000 meter	Direction of rotation	Bi-directional
Hazardous area classification	Ex nA	Standard rotation	Clockwise form DE
Zone classification	Zone 2	Paint shade	RAL 5014
Gas group	IIC	Accessories	
Temperature class	T3	Accessory - 1	PTC 150°C
Rotor type	Aluminum Die cast	Accessory - 2	-
Bearing type	Anti-friction ball	Accessory - 3	-
DE / NDE bearing	6204-2Z / 6204-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 10mm <sup>2</sup> /2 x M20 x 1.5
Type of grease	NA	Auxiliary terminal box	NA

 $I_A/I_N$  - Locked Rotor Current / Rated Current $T_K/T_N$  - Breakdown Torque / Rated Torque $T_A/T_N$  - Locked Rotor Torque / Rated Torque**NOTE**

ATEX/IEC Ex certified as per IEC/EN 60079-0; IEC/EN 60079-15

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 Standards	Europe IEC:60034-30-1	China -	India -	Aus/Nz GEMS 2019	Brazil -	Global IEC IEC:60034-30-1

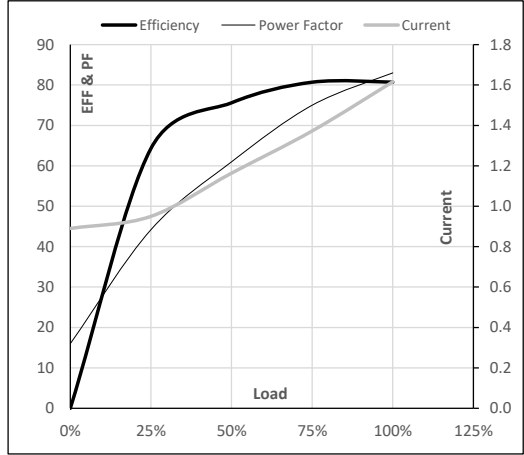
**Model No.** TCNP751A1171GAC010

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	Y	50	0.75	1.0	1.6	2880	0.25	2.47	IE3	40	S1	1000	0.0013	18.7

**Motor Load Data**

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	0.9	1.0	1.2	1.4	1.6	
Torque	Nm	0.0	0.6	1.2	1.8	2.5	
Speed	r/min	3000	2969	2943	2913	2880	
Efficiency	%	0.0	64.3	75.6	80.7	80.7	
Power Factor	%	16.0	44.2	61.0	75.0	83.0	

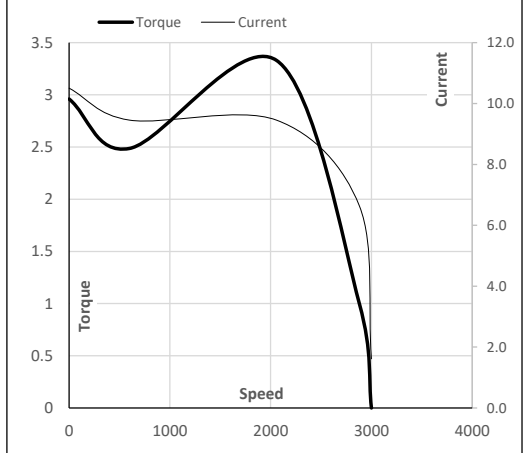
**Performance vs Load Chart**



**Motor Speed Torque Data**

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2058	2880	3000
Current	A	10.5	9.5	6.6	1.6	0.9
Torque	pu	3.0	2.5	3.3	1	0

**Starting Characteristics Chart**



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

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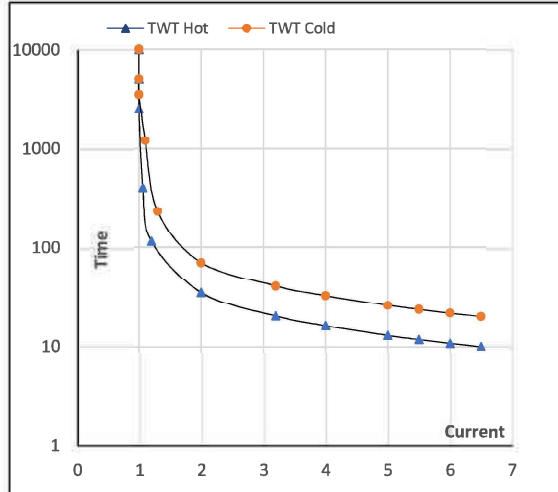
**Model No. TCNP751A1171GAC010**

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	400	Y	50	0.75	1.0	1.6	2880	0.25	2.47	IE3	40	S1	1000	0.0013	18.7

**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	35	22	16	13	12	10	
TWT Cold	s 10000	70	43	33	26	24	20	
Current	pu	1	2	3	4	5	5.5	6.5

**Thermal Characteristics Chart**



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

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