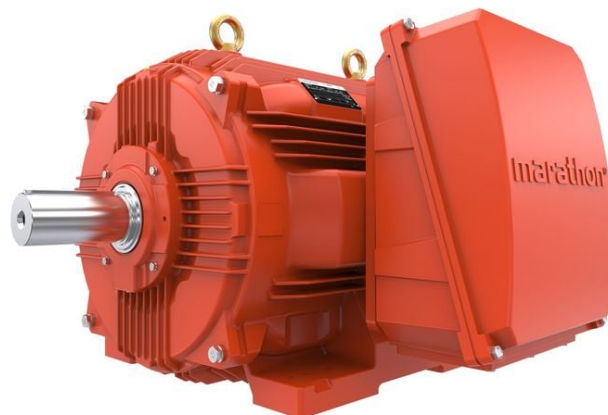


PRODUCT INFORMATION PACKET

Model No: TCM1321A2113GAC011

Catalog No: TCM1321A2113GAC011

TerraMAX® IE3, Mining Duty Motors, 132 kW, 3Ph, 2 Pole, 400/690V, B3, 50Hz, 315M Frame, TEFC



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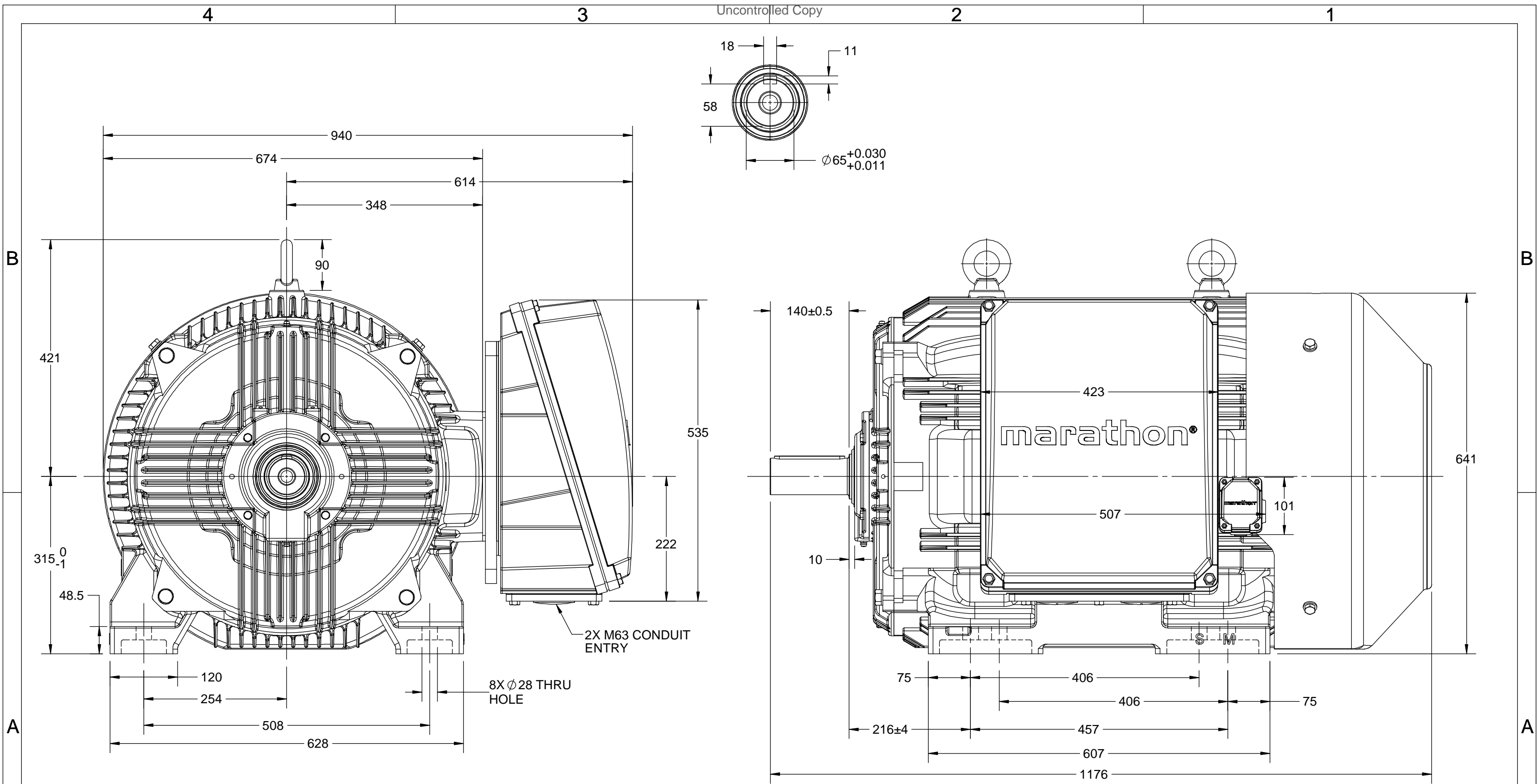
Nameplate Specifications

Output HP	175 Hp	Output KW	132.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	224.0 A	Speed	2984 rpm
Service Factor	1	Phase	3
Efficiency	95.4 %	Power Factor	0.89
Duty	S1	Insulation Class	H
Frame	315M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6316
UL	NO	CSA	NO
CE	YES	IP Code	66
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1176 mm	Frame Length	729 mm
Shaft Diameter	65 mm	Shaft Extension	140 mm
Assembly/Box Mounting	RHS		
Connection Drawing	8442180001	Outline Drawing	0231501412

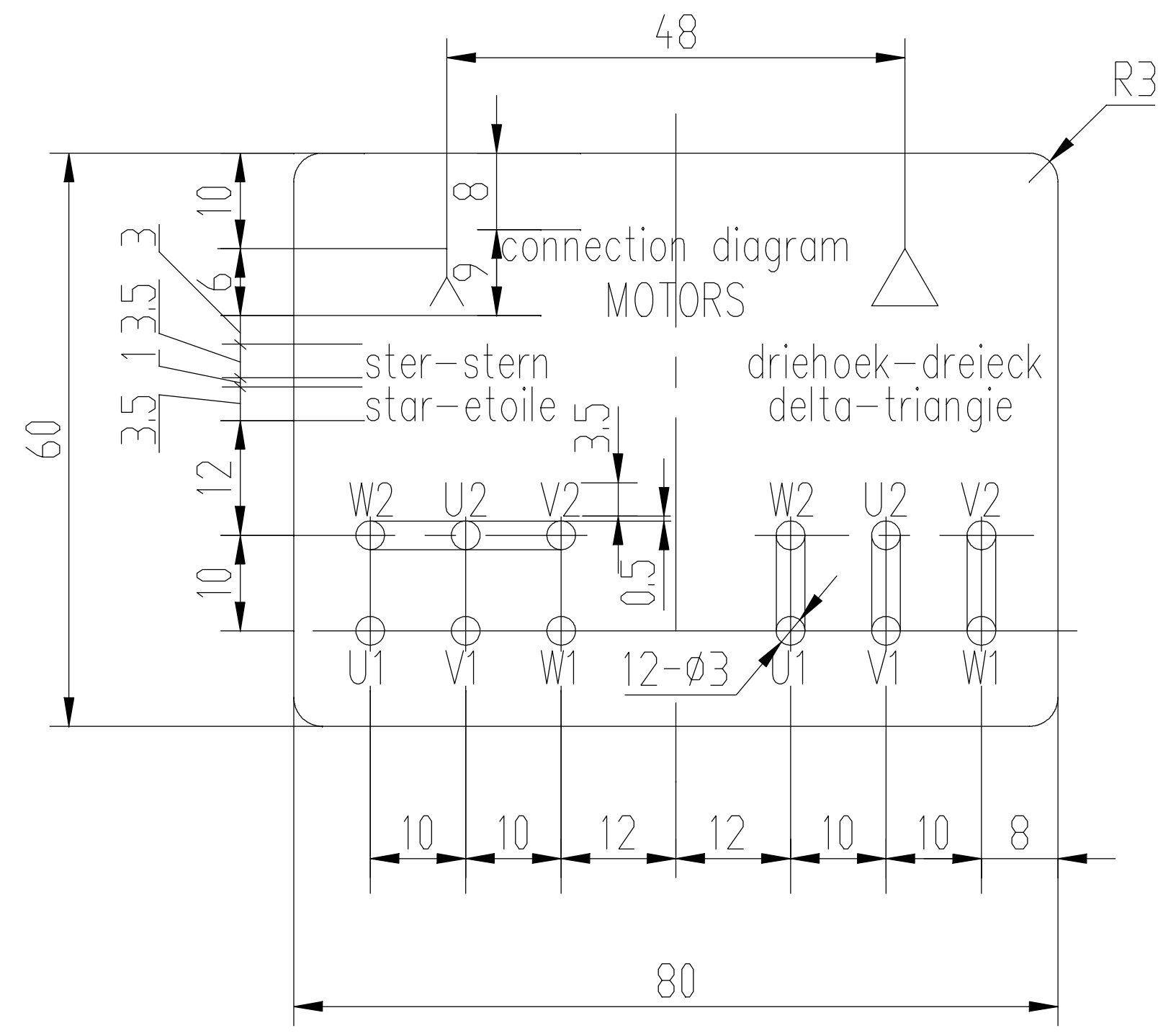
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DRAWING REVISION B	REVISION BY LK	DATE 03/08/2018
ECO ECO-0158551	APPROVED BY SBD	DATE 03/08/2018
ECO DESCRIPTION MODEL UPDATED WITH NEW STRUCTURE		
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DRAWN BY LK		
DATE 22/01/2018		
APPROVED BY SBD	DESCRIPTION OUTLINE	
DATE 22/01/2018	FR-315M-B3 MTG. 2P MOTOR TYPE: TCM	
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0231501412
		SHEET 1 OF 1

8442180001



技术要求

- 1、字母小号3.5，大号5，字母应整齐清晰，Δ、Y下面的字母分别关于Δ、Y对称；
- 2、底为黄色，文字线条为黑色；
- 3、压敏胶纸反面涂不干胶。

修改	
校对	
审核	
工艺	
标准	
修改	
校对	
审核	
工艺	
标准	
设计	
校对	
审核	
工艺	
标准	
批准	
工艺	

						8442180001			
						压敏胶纸			
标记	处数	分区	更改文件号	签名	年月日	阶段标记	重量	比例	接线指示 DM1-180
设计			标准化					1:1	
审核			审定						
批准						共 页	第 页		无锡华达电机有限公司
工艺			批准						

Model No. TCM1321A2113GAC011

U (V)	Δ / 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	Δ	50	132	175	224.4	2984	417.66	IE3	-	95.4	95.4	93.3	0.89	0.85	0.77	7.4	2.2	3.7

Motor type	TCM	Degree of protection	IP 66
Enclosure	TEFC	Mounting type	IM B3
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	315M	Motor weight - approx.	1037 kg
Duty	S1	Gross weight - approx.	1082 kg
Voltage variation *	± 10%	Motor inertia	2.4236 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)	83 dB(A)
Service factor	1.15	No. of starts hot/cold/Equally spread	2/3/4
Insulation class	H	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)	25/50 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 2008
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	6316-C3 / 6316-C3	Terminal box position	RHS
Lubrication method	Regreaseable	Maximum cable size/conduit size	1R x 3C x 300mm ² /2 x M63 x 1.5
Type of grease	CHEVRON SRI-2 or Equivalent	Auxiliary terminal box	YES

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

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

Efficiency Standards	Europe IEC:60034-30-1	China -	India -	Aus/Nz AS/NZ 1359:5:2004	Brazil -	Global IEC IEC:60034-30-1

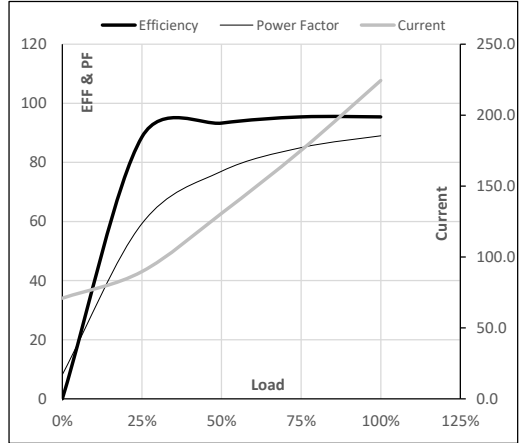
Model No. TCM1321A2113GAC011

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	400	Δ	50	132	175.0	224.4	2984	42.59	417.66	IE3	40	S1	1000	2.4236	1037

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	70.9	89.7	130.8	175.2	224.4	
Torque	Nm	0.0	104.0	208.3	312.8	417.7	
Speed	r/min	3000	2996	2992	2988	2984	
Efficiency	%	0.0	88.6	93.3	95.4	95.4	
Power Factor	%	8.2	59.3	77.0	85.0	89.0	

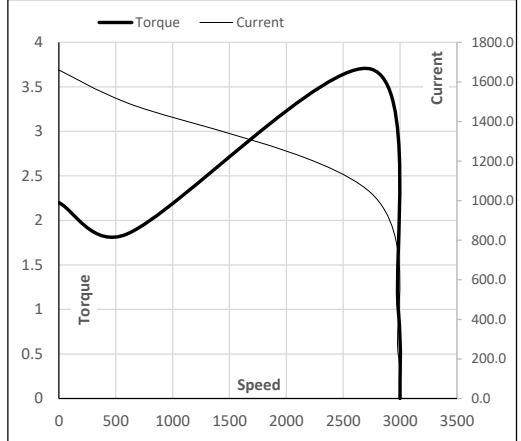
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2745	2984	3000
Current	A	1660.5	1494.5	1038.4	224.4	70.9
Torque	pu	2.2	1.8	3.7	1	0

Starting Characteristics Chart



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

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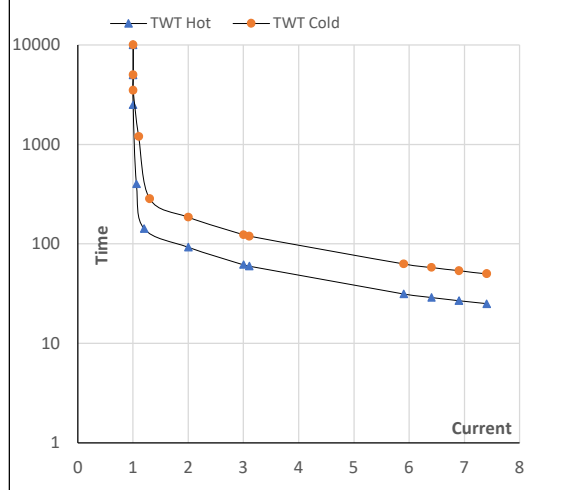
Model No. TCM1321A2113GAC011

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	400	Δ	50	132	175	224.4	2984	42.59	417.66	IE3	40	S1	1000	2.4236	1037

Motor Speed Torque Data

Load	FL	I ₁	I ₂	I ₃	I ₄	I ₅	LR	
TWT Hot	s 10000	93	62	55	43	30	25	
TWT Cold	s 10000	185	123	102	74	62	50	
Current	pu	1	2	3	4	5	6	7.4

Thermal Characteristics Chart



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

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