

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0222AF141GAC010

Catalog No: TCA0222AF141GAC010

TerraMAX® Cast Iron Motor, 30 HP, 3 Ph, 50 Hz, 380 V, 1500 RPM, 180L Frame, TEFC



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RegalRexnord

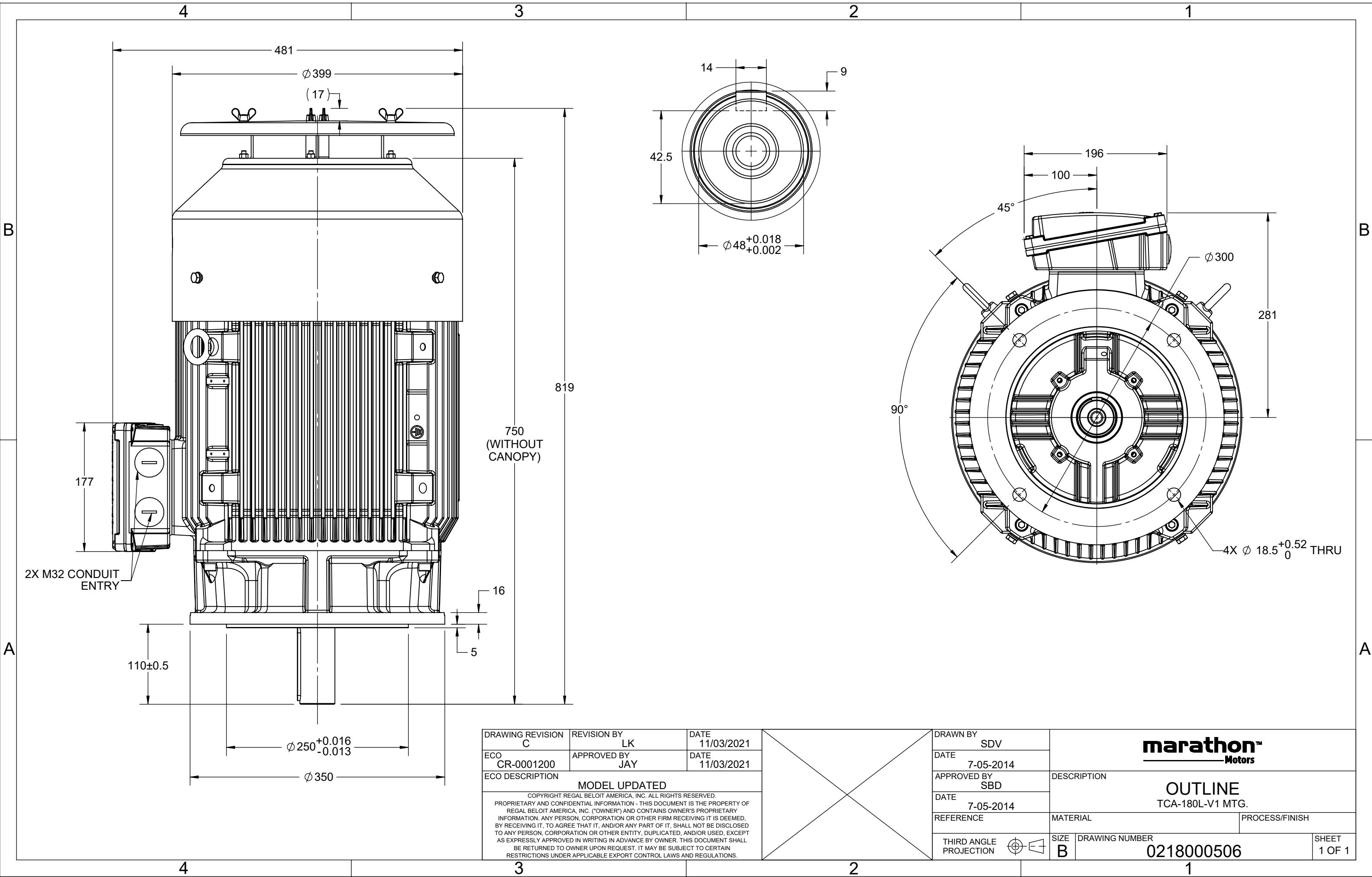
Nameplate Specifications

Output HP	30 Hp	Output KW	22.0 kW
Frequency	50 Hz	Voltage	380 V
Current	43.8 A	Speed	1478 rpm
Service Factor	1	Phase	3
Efficiency	93 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
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	4	Rotation	Bi-Directional
Mounting	V1	Motor Orientation	Shaftdown
Drive End Bearing	2Z-C3	Opp Drive End Bearing	2Z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	819 mm	Frame Length	366 mm
Shaft Diameter	48 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085	Outline Drawing	0218000506

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DRAWING REVISION C	REVISION BY LK	DATE 11/03/2021
ECO CR-0001200	APPROVED BY JAY	DATE 11/03/2021
ECO DESCRIPTION MODEL UPDATED		
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DRAWN BY SDV	marathon™ Motors		
DATE 7-05-2014			
APPROVED BY SBD	DESCRIPTION OUTLINE TCA-180L-V1 MTG.		
DATE 7-05-2014			
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER 0218000506	SHEET 1 OF 1

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A

REVISION BY
SN

DATE
13/01/2017

ECO
ECO-0116390

APPROVED BY
SBD

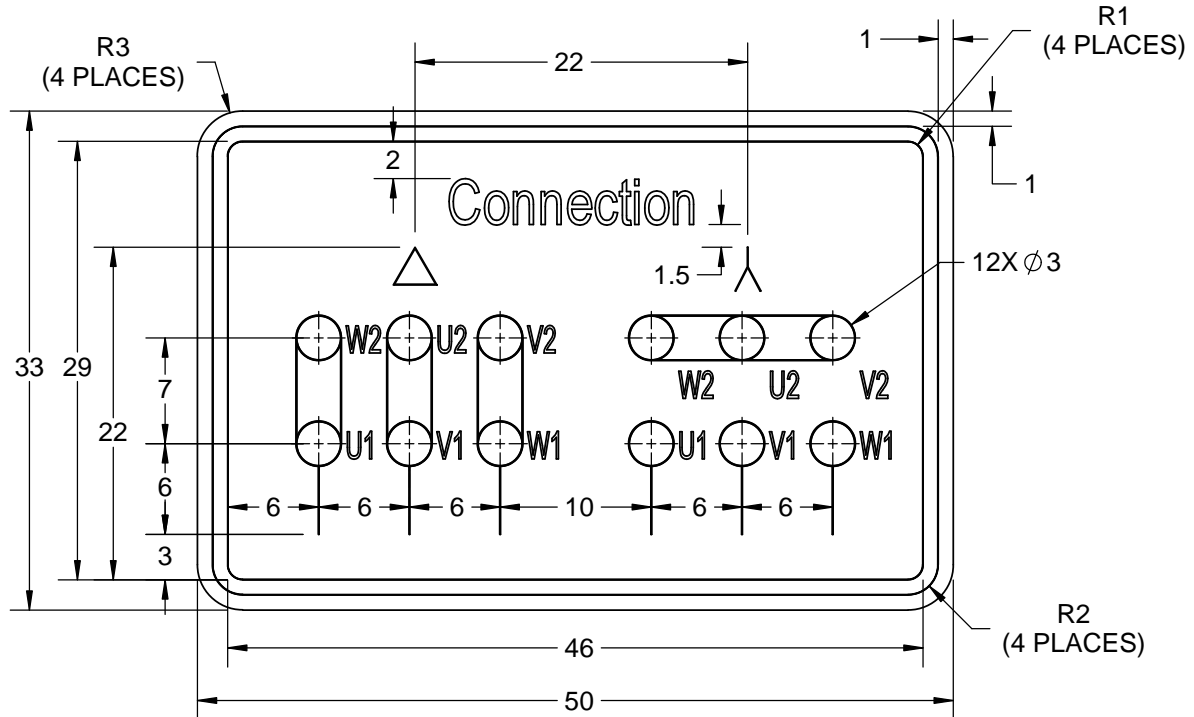
DATE
13/01/2017

ECO DESCRIPTION

NEW DRAWING RELEASE

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
DATE
16/12/2016
APPROVED BY
SBD
DATE
16/12/2016
REFERENCE
THIRD ANGLE
PROJECTION

REGALTM Regal Beloit America, Inc.
DESCRIPTION
CONN DIAGRAM-NAMEPLATE
MATERIAL
PROCESS/FINISH
SIZE
A
DRAWING NUMBER
8442000085
SHEET
1 OF 1

Model No. TCA0222AF141GAC010

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_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
									5/4FL	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
380	Δ	50	22	30	43.83	1478	144.6	IE3	-	93	93	92.5	0.82	0.76	0.63	7.5	2.7	3.5

Motor type	TCA	Degree of protection	IP 55
Enclosure	TEFC	Mounting type	IM V1
Frame Material	Cast Iron	Cooling method	IC 411
Frame size	180L	Motor weight - approx.	249 kg
Duty	S1	Gross weight - approx.	269 kg
Voltage variation *	± 10%	Motor inertia	0.2415 kgm ²
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	-20 to +40 °C	Type of coupling	Direct
Temperature rise (by resistance)	80 [Class B] K	LR withstand time (hot/cold)	12/25 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	6311-2Z / 6211-2Z	Terminal box position	TOP
Lubrication method	Greased for life	Maximum cable size/conduit size	1R x 3C x 35mm ² /2 X M32 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

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.

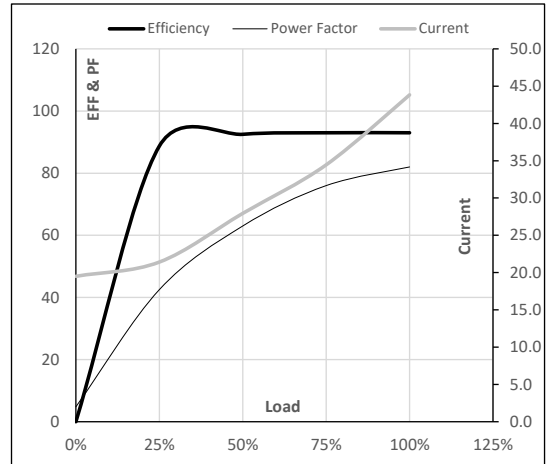
Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	GB 18613-2012 Grade 2	-	-	-	IEC: 60034-30

Model No. TCA0222AF141GAC010

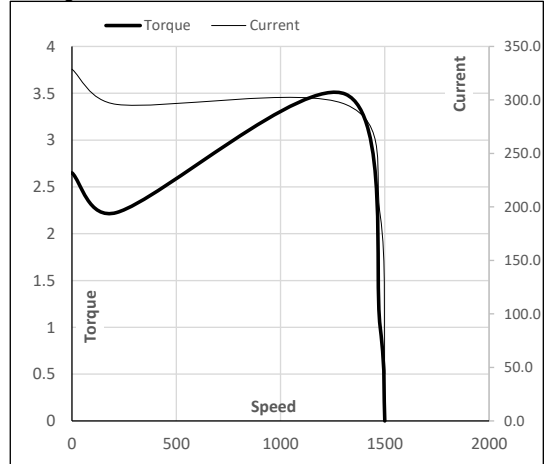
Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	22	30.0	43.8	1478	14.74	144.60	IE3	40	S1	1000	0.2415	249

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	19.5	21.4	27.9	34.5	43.8	
Torque	Nm	0.0	35.7	71.7	108.0	144.6	
Speed	r/min	1500	1495	1489	1484	1478	
Efficiency	%	0.0	88.7	92.5	93.0	93.0	
Power Factor	%	4.8	42.5	63.0	76.0	82.0	

Performance vs Load Chart

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	214	1312	1478	1500
Current	A	328.7	295.9	192.4	43.8	19.5
Torque	pu	2.7	2.2	3.5	1	0

Starting Characteristics Chart

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

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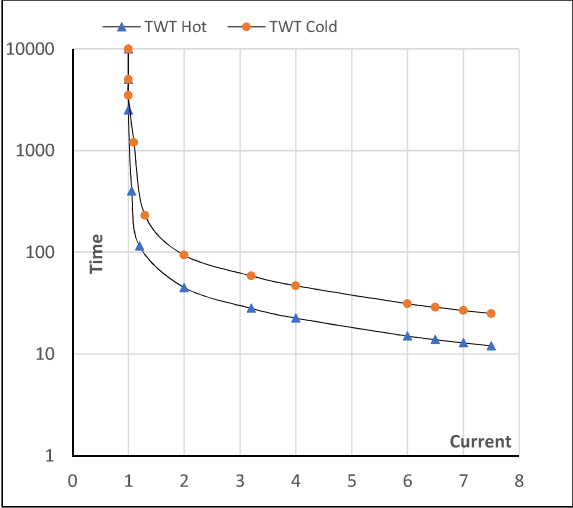
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Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m ²]	Weight [kg]
TEFC	380	Δ	50	22	30.0	43.8	1478	14.74	144.60	IE3	40	S1	1000	0.2415	249

Motor Speed Torque Data

Load	FL	I_1	I_2	I_3	I_4	I_5	LR	
TWT Hot	s	10000	45	31	23	20	14	12
TWT Cold	s	10000	94	60	47	44	40	25
Current	pu	1	2	3	4	5	5.5	7.5

Thermal Characteristics Chart



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

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