

PRODUCT INFORMATION PACKET

Model No: E3TI3006313B30D41100

Catalog No: E3TI3006313B30D41100

Made in Italy TCI Series, General Purpose Low Voltage IEC motor, Safe Area, 90,00 kW, 3 phase,
990 RPM, D400/Y690V 50Hz, 315MA Frame B3, 6 Poles, IC411



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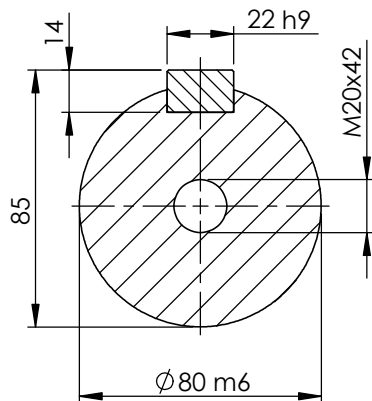
Nameplate Specifications

Output HP	120 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	168.2 A	Speed	990 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	315MA	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6319	Opp Drive End Bearing Size	6319
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	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	1206.00 mm	Frame Length	729.00 mm
Shaft Diameter	80.000 mm	Shaft Extension	170 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B3A04T8315011A01

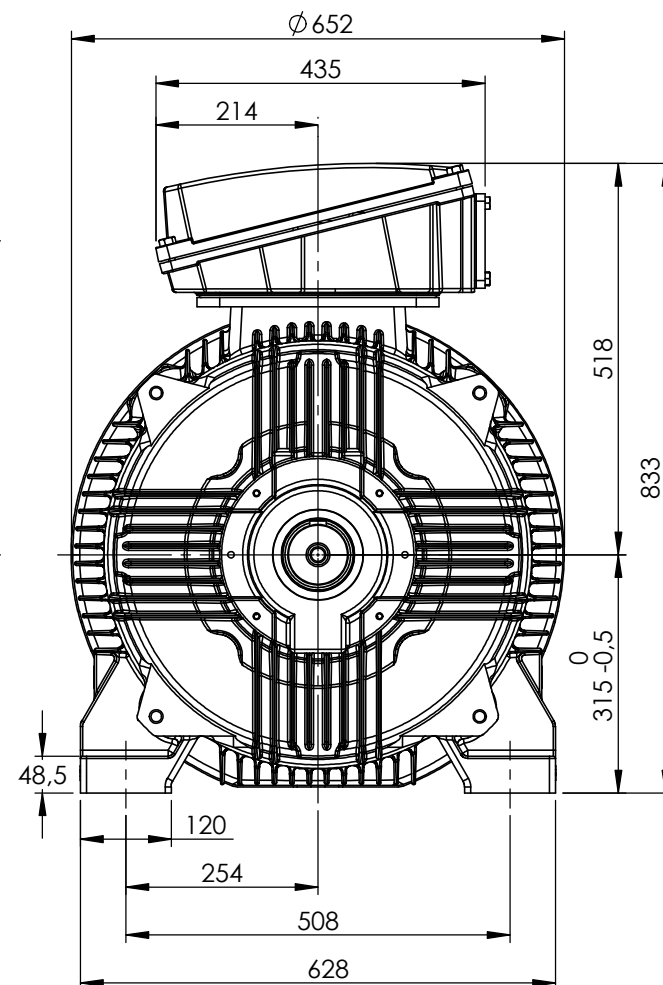
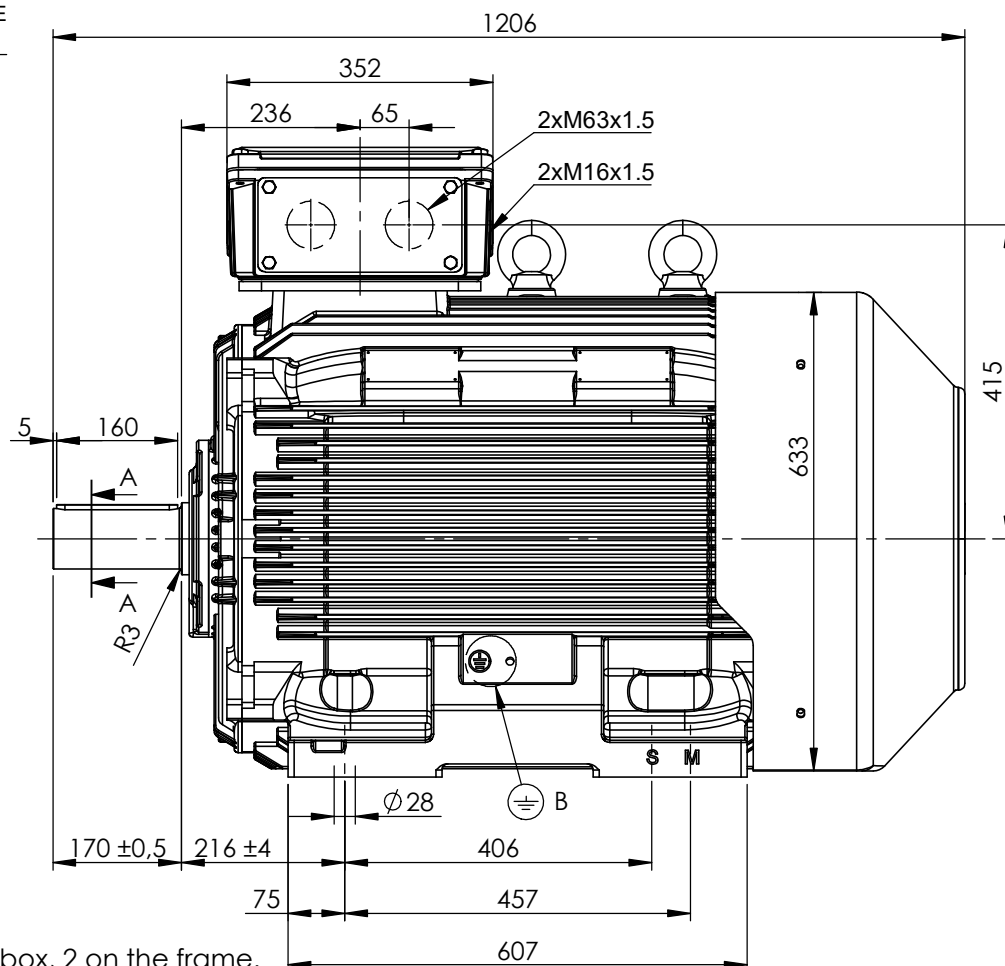
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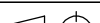
SECTION A-A
SCALE 1 : 2.5



Earth terminal: 1 in the terminal box, 2 on the frame.



MOTOR TYPE AND DESCRIPTION:

DRAWING REVISION 1	REVISION BY TN	DATE 13/05/2022	TOLERANCES (EXCEPT AS NOTED) TOLERANCES: ±2 * TOLERANCES: ±0.8	DRAWN BY TN	REGAL™ cemp			
ECO	APPROVED BY LP	DATE 16/05/2022		DATE 01/12/2021				
ECO DESCRIPTION			DIMENSIONS ARE IN mm ACCORDING TO IEC 60072	APPROVED BY LP	DESCRIPTION Motor 315 4-6P TC (S/M) B3			
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			SERIAL NUMBER			REFERENCE		
				FIRST ANGLE PROJECTION		SIZE A4	DRAWING NUMBER B3A04T8315011A01	SHEET 1 OF 2

Schema di collegamento - *Connection diagram*
Schemas de branchement - *Schaltplän*
Esquemas de conexión



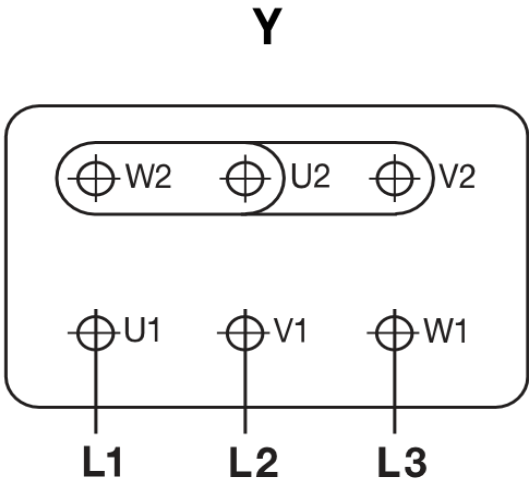
DTE 01/01/2004
SC - 01 - T - 1v.doc

**Motori trifase una velocità - *Single speed, three phase motors* - Moteurs triphasé une vitesse
Drehstrommotor Eine Drehzahlstufe - Motores trifásico una velocidad**

Collegamento - *Connection* - Connexion - *Schaltung* - Conexión



Collegamento - *Connection* - Connexion - *Schaltung* - Conexión



L1 - L2 - L3 = Linea - *Supply* - Reseau - *Netz* - Red

Per invertire la rotazione invertire due fasi - *To change the rotation reverse two phases* - Pour changer le sens de rotation inverser deux phases - *Zur Drehrichtungsänderung zwei Phasen vertauschen* - Para invertir el sentido de rotación invertir dos fases

Marcatura Morsetti Ausiliari - <i>Additional terminals marking (IEC60034-8)</i>		
Marcatura <i>Marking</i>	No. morsetti <i>terminals</i>	Morsetto ausiliare per: <i>Additional terminal for:</i>
TP1A - TP2A (allarme- <i>warning</i>)	2	Termistori PTC (alta velocità) - <i>Thermistor PTC (high speed)</i> [*]
TP1B - TP2B (allarme- <i>warning</i>)	2	Termistori PTC (bassa velocità) - <i>Thermistor PTC (low speed)</i> [*]
R1 - R2 - R3 (I sensore - <i>sensor</i>)	3	Termistore PT100 3 fili - <i>Thermistor PT 100 with 3 wires</i>
R4 - R5 - R6 (II sensore - <i>sensor</i>)	3	
R7 - R8 - R9 (III sensore - <i>sensor</i>)	3	
R11 - R12 - R13 (anteriore - <i>DE</i>)	3	Termistore PT100 su cuscinetto - <i>Thermistor PT 100 on bearing</i>
R21 - R22 - R23 (posteriore - <i>NDE</i>)	3	
TB1 - TB2 (allarme- <i>warning</i>)	2	Protettore bimetallico normalmente chiuso - <i>Normally closed bi-metallic switch</i> (**)
TB3 - TB4 (intervento- <i>switch off</i>)	2	Protettore bimetallico del freno normalmente chiuso - <i>NC brake bi-metallic switch</i> (**)
TB8 - TB9 (intervento- <i>switch off</i>)	2	
TM1 - TM2 (allarme- <i>warning</i>)	2	Protettore bimetallico normalmente aperto - <i>Normally open bi-metallic switch</i> (**)
TM3 - TM4 (intervento- <i>switch off</i>)	2	
HE1- HE2	2	Resistenze riscaldanti - <i>Space heaters</i>
U1 - U2	2	Ventilazione ausiliaria monofase - <i>Single phase forced ventilation</i>
U - V - W	2	Ventilazione ausiliaria trifase - <i>Three phase forced ventilation</i>
colori secondo schema del produttore - <i>colours according manufacturer</i>	9	Encoder
CA1 - CA2	2	Condensatore - <i>Capacitor</i>
PE	1	Conduttore di terra - <i>Earth cable</i>

[*] U nominale - *U rated* = 6V - max 30V

(**) U nominale - *U rated* = 250V



FOGLIO DATI PER MOTORI ELETTRICI ASINCRONI TRIFASI : SERIE IEC
DATA SHEET FOR ASYNCHRONOUS THREEPHASE INDUCTION MOTORS: IEC SERIES

Cliente / Customer	-
Ordine cliente / Customer order	-
Item	-

Conferma ordine / Acknowledgment	: N° -
Impianto / Plant	-

DATI DI PROGETTO - DESIGN DATA

Modo di protezione		Motore / Frame
Type of protection		Scatola morsetti / Terminal box
Tem. Amb. Min. / Min Amb.Temp.	-20 °C	
Umidità relativa / Relative humidity	90%	
Tensione nominale / Rated Voltage	400 V +/- 10%	

	IP55
	IP55
Tem. Amb. Max. / Max Amb. Temp.	40 °C
Altitudine / Altitude	< 1000 mslm / masl
Frequenza / Frequency	50 Hz +/- 3%

DATI FUNZIONALI E COSTRUTTIVI - PERFORMANCE AND CONSTRUCTION DATA

1	Quantità / Quantity		-
2	Motore tipo / Motor type		TCI 315MA6
3	Numero di serie / Serial Number		
4	Forma costruttiva / Shape		B3
5			
6			
Dati nominali / Rated data			
7	Poli / Pole	n°	6
8	Potenza nominale / Rated power	kW	90,00
9	Corrente nominale / Rated current	A	168,20
10	Velocità nominale / Full Load speed	1/min	990
11	Collegamento / Winding connection		D
12	Isolamento / Insulation class		F
13	Sovratemperatura / Temperature rise		DT80K
14	Raffreddamento / Cooling type		IC411
15	Fattore di servizio / Service factor		1
16			
17	Classe di rendimento / Efficiency level	IEC 34-30	IE3
Performances elettriche / Electrical performances			
	Carico / Load	4/4	3/4
18	Giri / Speed	1/min	990
19	Corr. / Curr.	A	168,20
20	Rend / Eff	%	95,0
21	cos φ	-	0,81
Performances all'avviamento / Starting performances			
22	Ia/In - LRC/FLC	%	610
23	Cosphi a rotore bloccato / LR power factor		0,33
	Tempo a rotore bloccato / LRWT		
24	100% Un (A caldo / Warm)	sec	17
25	(A freddo / Cold)	sec	59
26	80% Un (A caldo / Warm)	sec	27
27	(A freddo / Cold)	sec	92
	Tempo di avviamento ammissibile / ART		
28	100% Un	sec	51
29	80% Un	sec	80
Curva di coppia / Speed-torque values			
30	Coppia nominale / Rated Torque	Nm	868,20
31	Ca/Cn - LRT/FLT	%	190
32	Cmax/Cn - BDT/FLT	%	200
33			
34			
35			
Varie / Other			
36			
37			
38			
39			

Servizio / Duty		
40	Servizio / Duty type	- S1
41	Intermittenza / Cyclic duration factor	- -
42	Avviamenti-ora / Starting-hour	- -
43	Tempo ciclo / Time	- -
Cuscinetti / Bearings		
44	Cuscinetto ant / DE bearing	- 6319 C3
45	Cuscinetto post / NDE bearing	- 6319 C3
46	Carico radiale max / Max radial load in X1	N 7286
47	Carico assiale max / Max axial load	N 5048
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent
49	Intervallo lubrificazione / Lubrication	h 5000
50	Quantità grasso / Quantity grease	gr 45
Caratteristiche meccaniche / mechanical specification		
51	Massa / Mass	kg 877
52	Momento d'inerzia / Moment of inertia	kgm2 3,7478
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A) 70
54	Vibrazioni / Vibration level	IEC 34-14 A
55	Limite norma / Vibration limit	mm/sec 2,80
56		
57		
58		
59		
60		
61		
62		
Dati entrata cavi - verniciatura / Cable entry and painting		
63	Entrata cavi / Cable entry	IEC 60423 2xM63+1xM16
64	Ciclo verniciatura / Painting cycle	STD
65	Colore finale / Final colour	RAL 5010
66		
67		
68		
69		
70		
71		
Ausiliari - Auxiliaries		
72	Sonde termiche / Temperature detector	winding PTC
73	Sonde termiche / Temperature detector	bearing -
74	Scaldiglie / Heaters	V / W -
75	Preparation for SPM sensor	-
76	Pressacavi / Cable glands	-
77		

Documento preliminare - Preliminary data sheet

Prepared by : MP

Tolleranze secondo - Tolerances according IEC 60034-1

Rev. 0

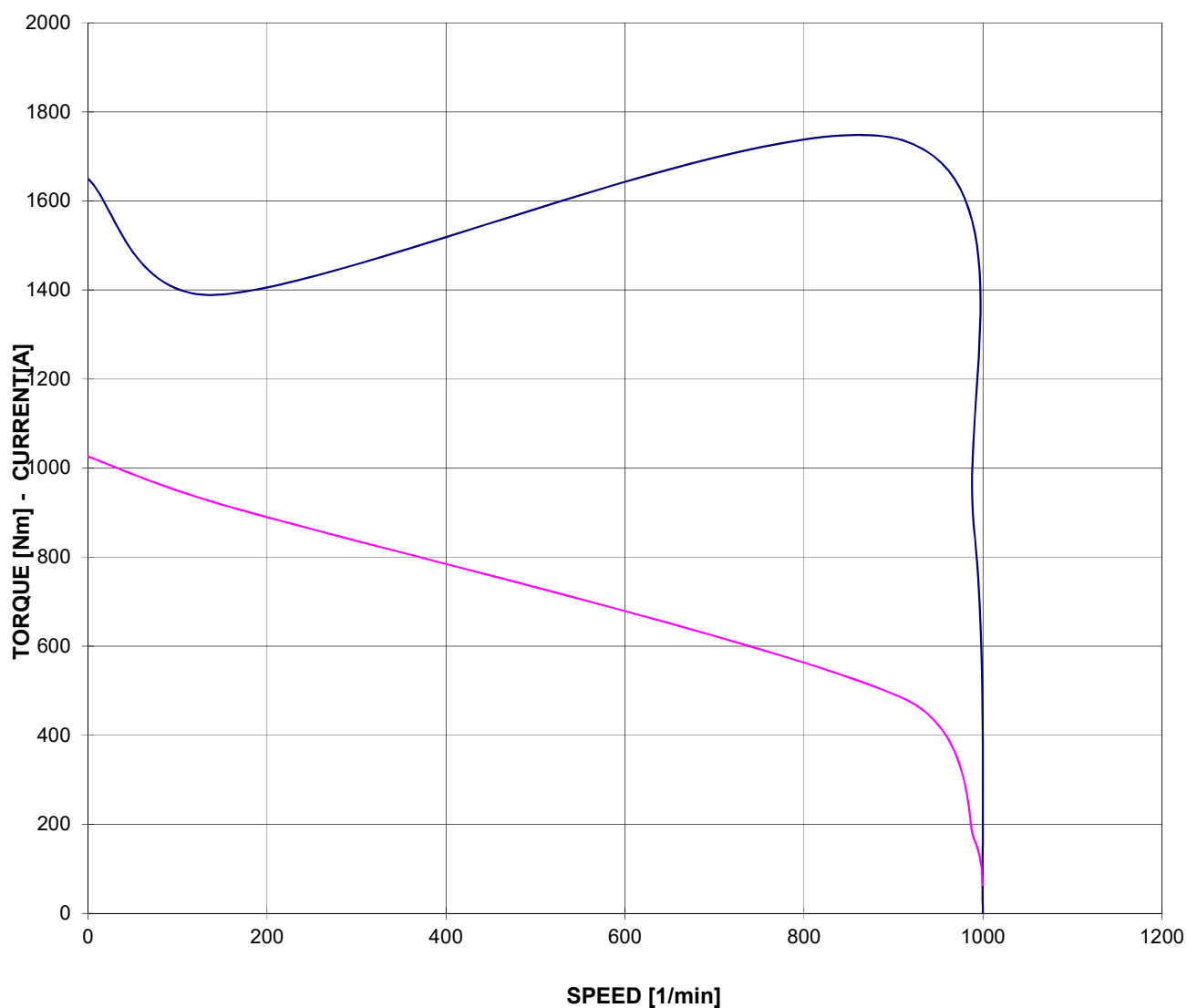
Data / Date 1 February 2021

CURVA COPPIA/CORRENTE-GIRI TORQUE/CURRENT-SPEED DIAGRAM

Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -
 Conferma ordine / Acknowledgment -
 Numero di serie / Serial Number -

Motore / Motor	TCI 315MA6	
Potenza nominale / Rated power	90,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	168,20	A
Velocità / Speed	990	rpm
Coppia / Torque	868,20	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



Valori calcolati - Data obtained by calculation method
 Documento preliminare - Preliminary document

Data / Date 01-feb-21

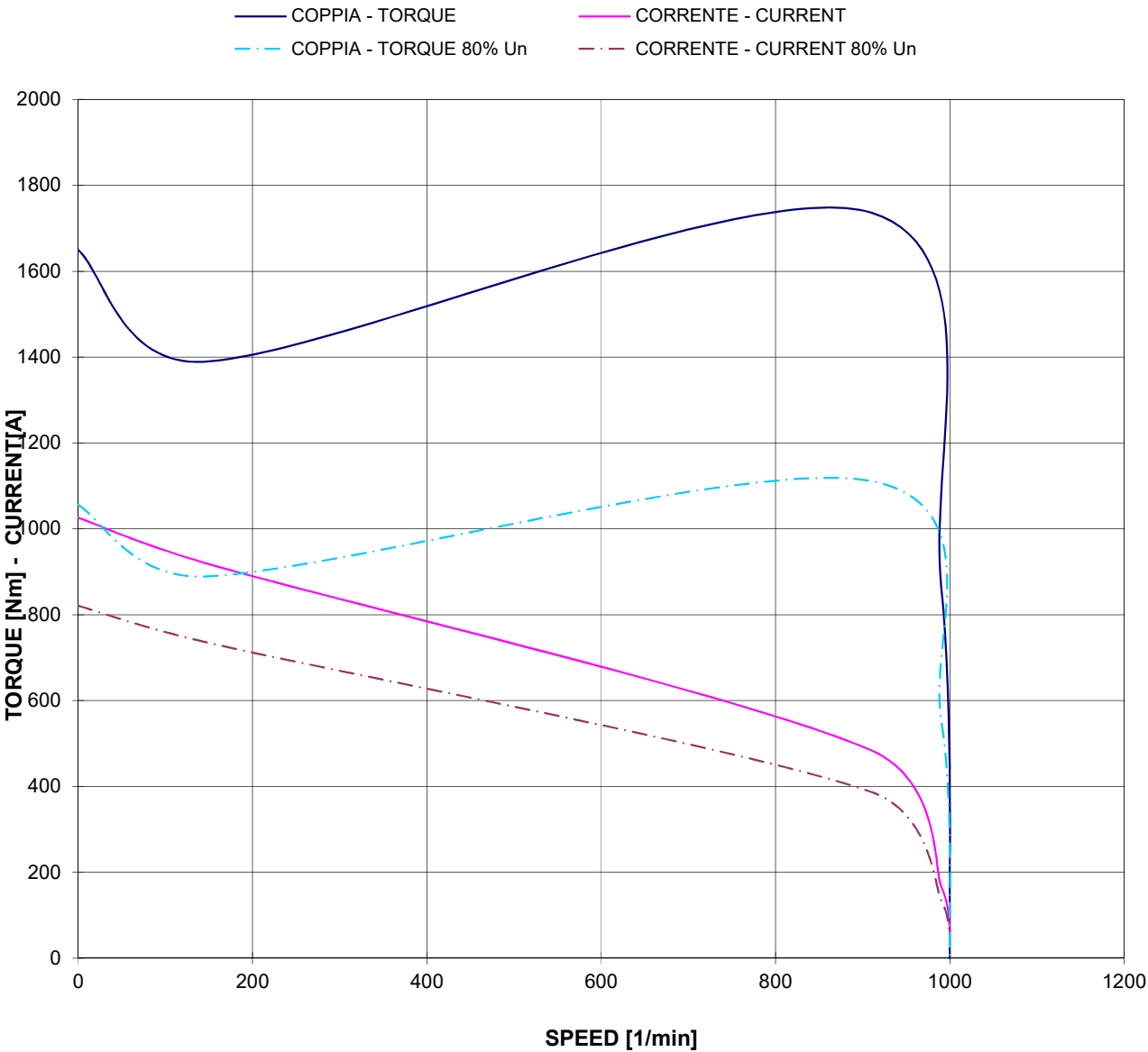


CURVA COPPIA/CORRENTE-GIRI (Tensione ridotta)
TORQUE/CURRENT-SPEED DIAGRAM (Reduced voltage)

Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor	TCI 315MA6	
Potenza nominale / Rated power	90,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	168,20	A
Velocità / Speed	990	rpm
Coppia / Torque	868,20	Nm



CURVE CARATTERISTICHE PERFORMANCE CURVES

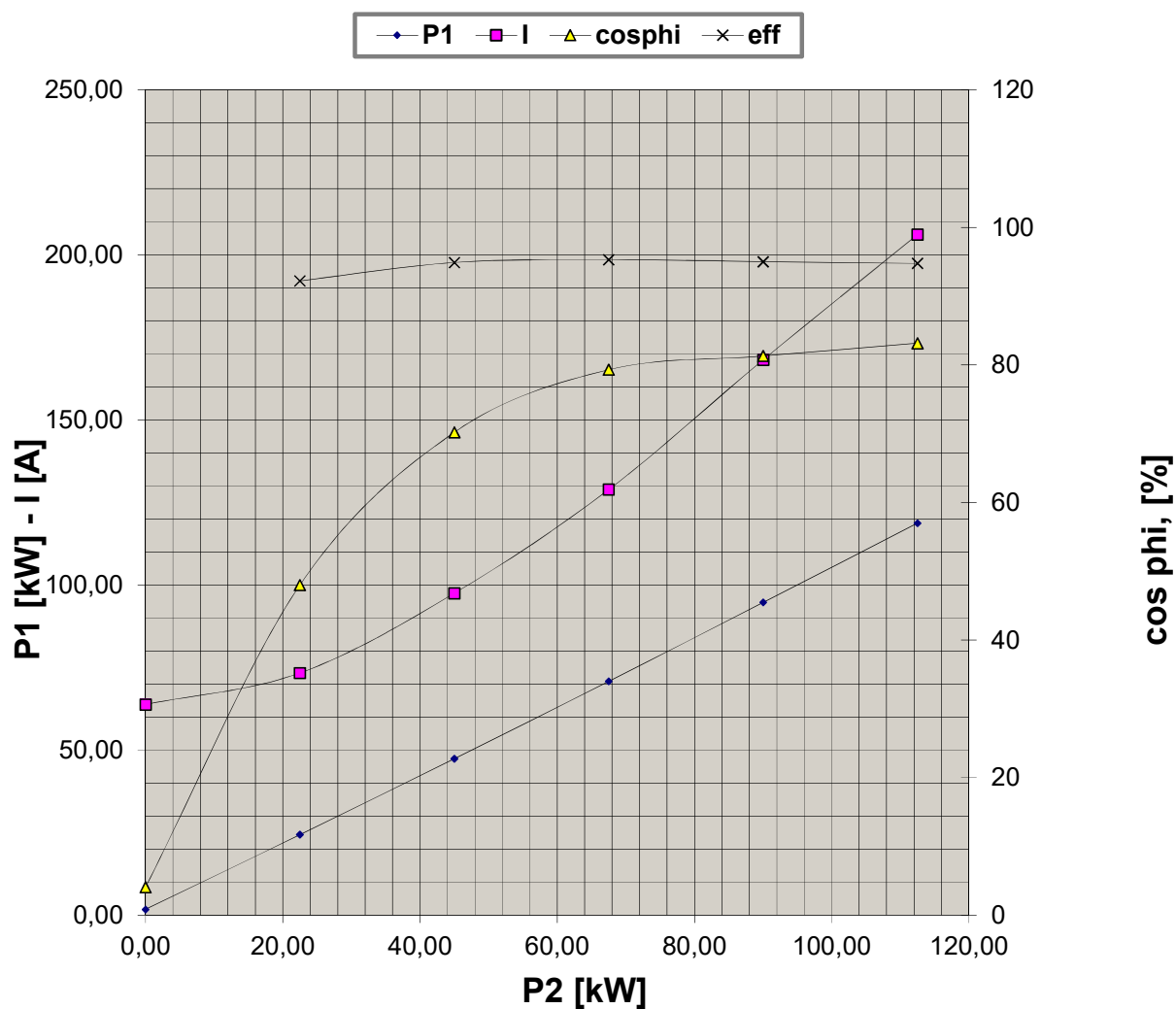
Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
 Numero di serie / Serial Number -

Motore / Motor

TCI 315MA6

Potenza nominale / Rated power	90,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	168,20	A
Velocità / Speed	990	rpm
Coppia / Torque	868,20	Nm



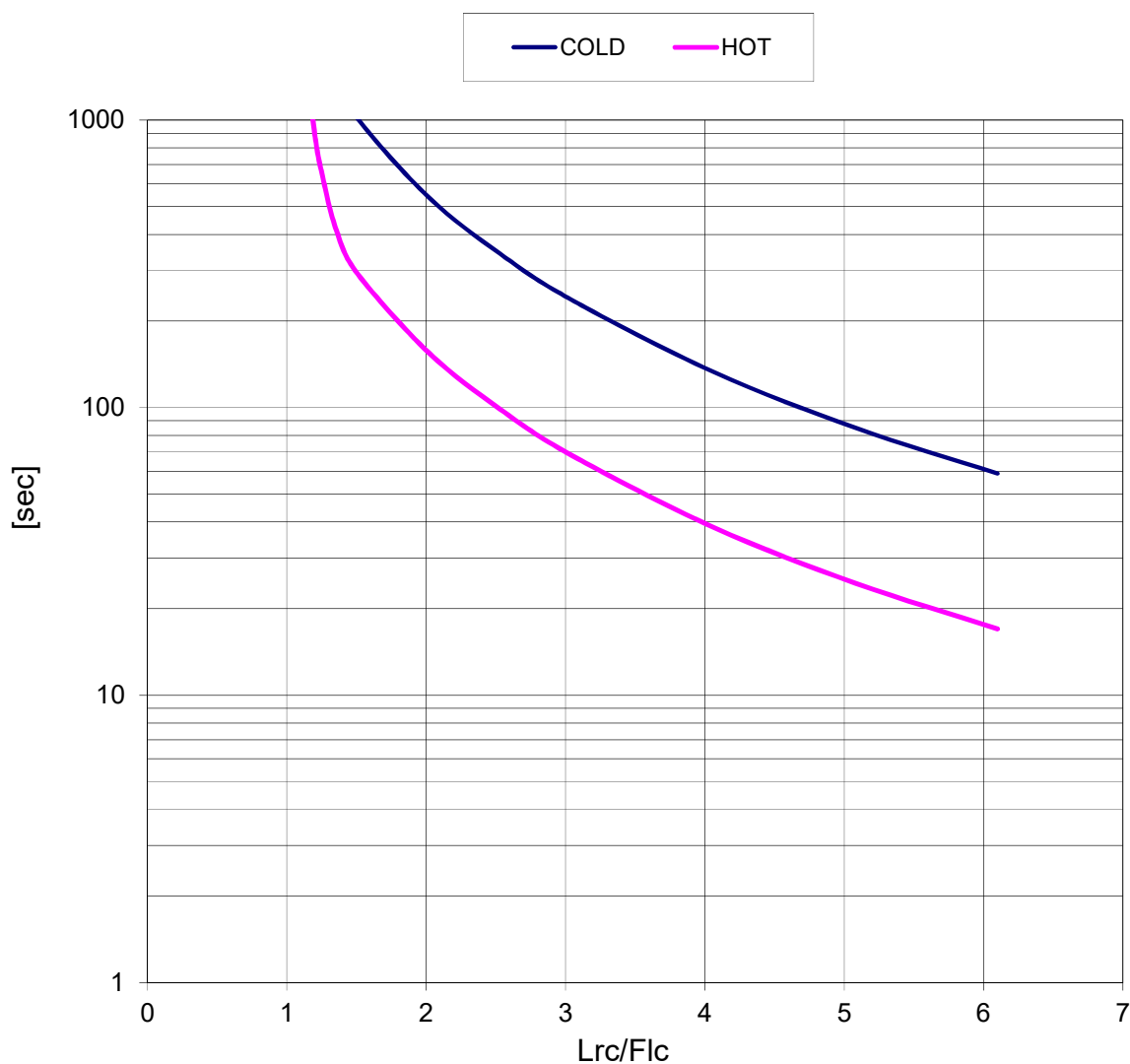
Valori calcolati - Data obtained by calculation method
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Data / Date 01-feb-21

CURVA LIMITE CORRENTE TEMPO THERMAL WITHSTAND CURVE

Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -
 Conferma ordine / Acknowledgment -
 Numero di serie / Serial Number -

Motore / Motor	TCI 315MA6	
Potenza nominale / Rated power	90,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	168,20	A
Velocità / Speed	990	rpm
Coppia / Torque	868,20	Nm



Valori calcolati - Data obtained by calculation method
 Documento preliminare - Preliminary document

Data / Date 01-feb-21

CURVA LIMITE CORRENTE TEMPO (Tensione ridotta) THERMAL WITHSTAND CURVE (Reduced voltage)

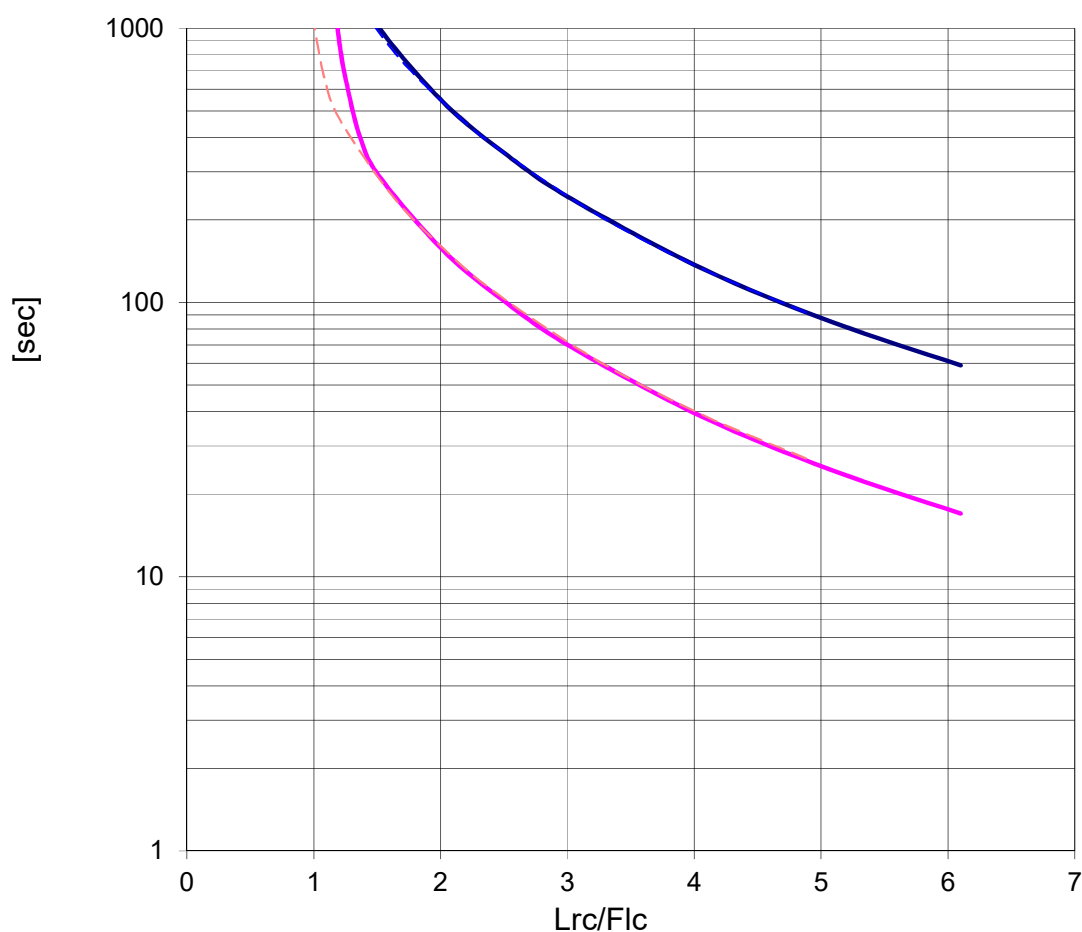
Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
 Numero di serie / Serial Number -

Motore / Motor**TCI 315MA6**

Potenza nominale / Rated power	90,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	168,20	A
Velocità / Speed	990	rpm
Coppia / Torque	868,20	Nm

— COLD (100% Un) — HOT (100% Un) - - COLD (80% Un) - - HOT (80% Un)



Valori calcolati - Data obtained by calculation method
 Documento preliminare - Preliminary document

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