

PRODUCT INFORMATION PACKET

Model No: E3TI3004113B50S41100

Catalog No: E3TI3004113B50S41100

Made in Italy TCI Series, General Purpose Low Voltage IEC motor, Safe Area, 4,00 kW, 3 phase,
1451 RPM, D230/Y400V 50Hz, 112MB Frame B5, 4 Poles, IC411



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Nameplate Specifications

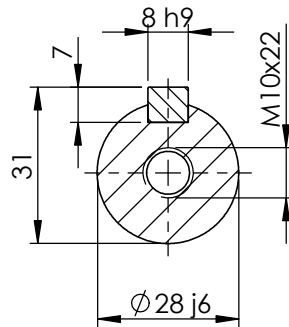
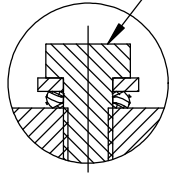
Output HP	5.50 Hp	Output KW	4.0 kW
Frequency	50 Hz	Voltage	230/400 V
Current	7.7 A	Speed	1451 rpm
Service Factor	1	Phase	3
Efficiency	88.7 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	112MB	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6306	Opp Drive End Bearing Size	6206
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	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	399.00 mm	Frame Length	174.00 mm
Shaft Diameter	28.000 mm	Shaft Extension	60 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B5A04T8110001B01

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DETAIL B



Technical drawing of a motor showing two views: a front view (left) and a top view (right).

Front View Dimensions:

- Total width: 399
- Top flange width: 122
- Distance from left edge to centerline: 140
- Flange thickness: 19
- Bolt specifications: 2xM25x1.5 and 1xM16x1.5
- Motor body diameter: $\phi 255$
- Motor body height: 130
- Terminal box width: 60 ± 0,37
- Terminal box mounting holes: 4x $\phi 14,5$
- Terminal box mounting hole offset: 5
- Terminal box mounting hole distance: 50
- Terminal box mounting hole diameter: $\phi 180 \pm 6$
- Terminal box mounting hole position: A
- Terminal box mounting hole position: B

Top View Dimensions:

- Total width: 157
- Flange width: 67
- Motor body diameter: $\phi 215$



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

MOTOR TYPE AND DESCRIPTION:

DRAWING REVISION 1	REVISION BY TN	DATE 21/04/2022	TOLERANCES (EXCEPT AS NOTED) TOLERANCES: ±2 * TOLERANCES: ±0.8 DIMENSIONS ARE IN mm ACCORDING TO IEC 60072	DRAWN BY TN	REGAL™ cemp		
ECO	APPROVED BY LP	DATE 22/04/2022		DATE 02/11/2021			
ECO DESCRIPTION COPYRIGHT CEMP Srl. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF CEMP Srl. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.				APPROVED BY LP	DESCRIPTION Motor 112 TC (L) B5		
				DATE 03/11/2021			
				SERIAL NUMBER			REFERENCE
			FIRST ANGLE PROJECTION 				

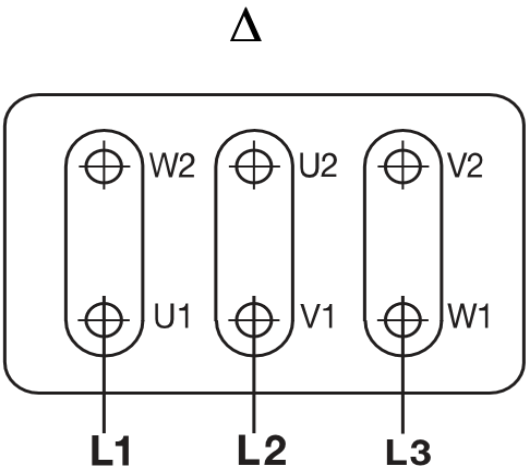
Schema di collegamento - *Connection diagram*
Schemas de branchement - *Schaltplän*
Esquemas de conexión



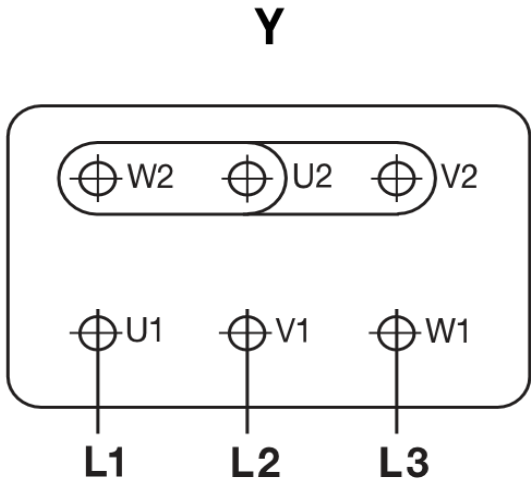
DTE 01/01/2004
SC - 01 - T - 1v.doc

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				01
2	Motore tipo / Motor type				TCI 112MB4
3	Numero di serie / Serial Number				
4	Forma costruttiva / Shape				B5
5					
6					
Dati nominali / Rated data					
7	Poli / Pole			n°	4
8	Potenza nominale / Rated power			kW	4,00
9	Corrente nominale / Rated current			A	7,66
10	Velocità nominale / Full Load speed			1/min	1451
11	Collegamento / Winding connection				Y
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	2/4
18	Giri / Speed	1/min	1451	1465	1477
19	Corr. / Curr.	A	7,66	6,30	4,21
20	Rend / Eff	%	88,7	88,8	88,9
21	cos φ	-	0,85	0,78	0,77
Performances all'avviamento / Starting performances					
22	Ia/In - LRC/FLC			%	830
23	Cosphi a rotore bloccato / LR power factor				0,61
	Tempo a rotore bloccato / LRWT				
24	100% Un (A caldo / Warm)			sec	6
25	(A freddo / Cold)			sec	17
26	80% Un (A caldo / Warm)			sec	10
27	(A freddo / Cold)			sec	26
	Tempo di avviamento ammissibile / ART				
28	100% Un			sec	15
29	80% Un			sec	23
Curva di coppia / Speed-torque values					
30	Coppia nominale / Rated Torque			Nm	26,33
31	Ca/Cn - LRT/FLT			%	270
32	Cmax/Cn - BDT/FLT			%	310
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	-	6306 ZZ
45	Cuscinetto post / NDE bearing	-	6206 ZZ
46	Carico radiale max / Max radial load in X1	N	1311
47	Carico assiale max / Max axial load	N	856
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent	
49	Intervallo lubrificazione / Lubrication	h	-
50	Quantità grasso / Quantity grease	gr	-
Caratteristiche meccaniche / mechanical specification			
51	Massa / Mass	kg	52
52	Momento d'inerzia / Moment of inertia	kgm2	0,0194
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A)	62
54	Vibrazioni / Vibration level	IEC 34-14	A
55	Limite norma / Vibration limit	mm/sec	1,60
56			
57			
Dati entrata cavi - verniciatura / Cable entry and painting			
63	Entrata cavi / Cable entry	IEC 60423	2xM25+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		NO
77			

Documento preliminare - Preliminary data sheet

Prepared by : GC

Tolleranze secondo - Tolerances according IEC 60034-1

Rev. 0

Data / Date 21 February 2022

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

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

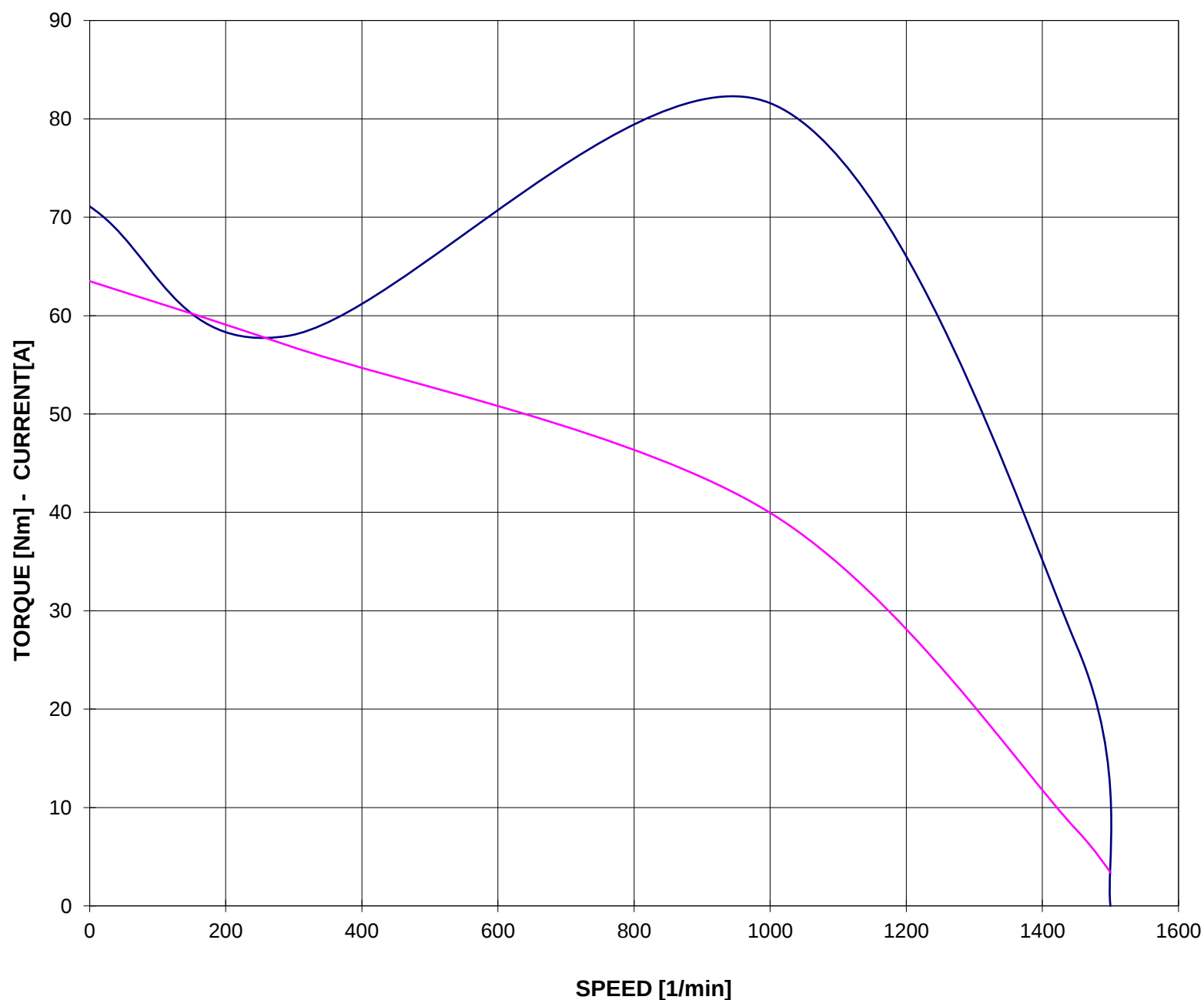
Conferma ordine / Acknowledgment -
Numero di serie / Serial Number -

Motore / Motor

TCI 112MB4

Potenza nominale / Rated power	4,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	7,66	A
Velocità / Speed	1451	rpm
Coppia / Torque	26,33	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



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

Data / Date 24-feb-22

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

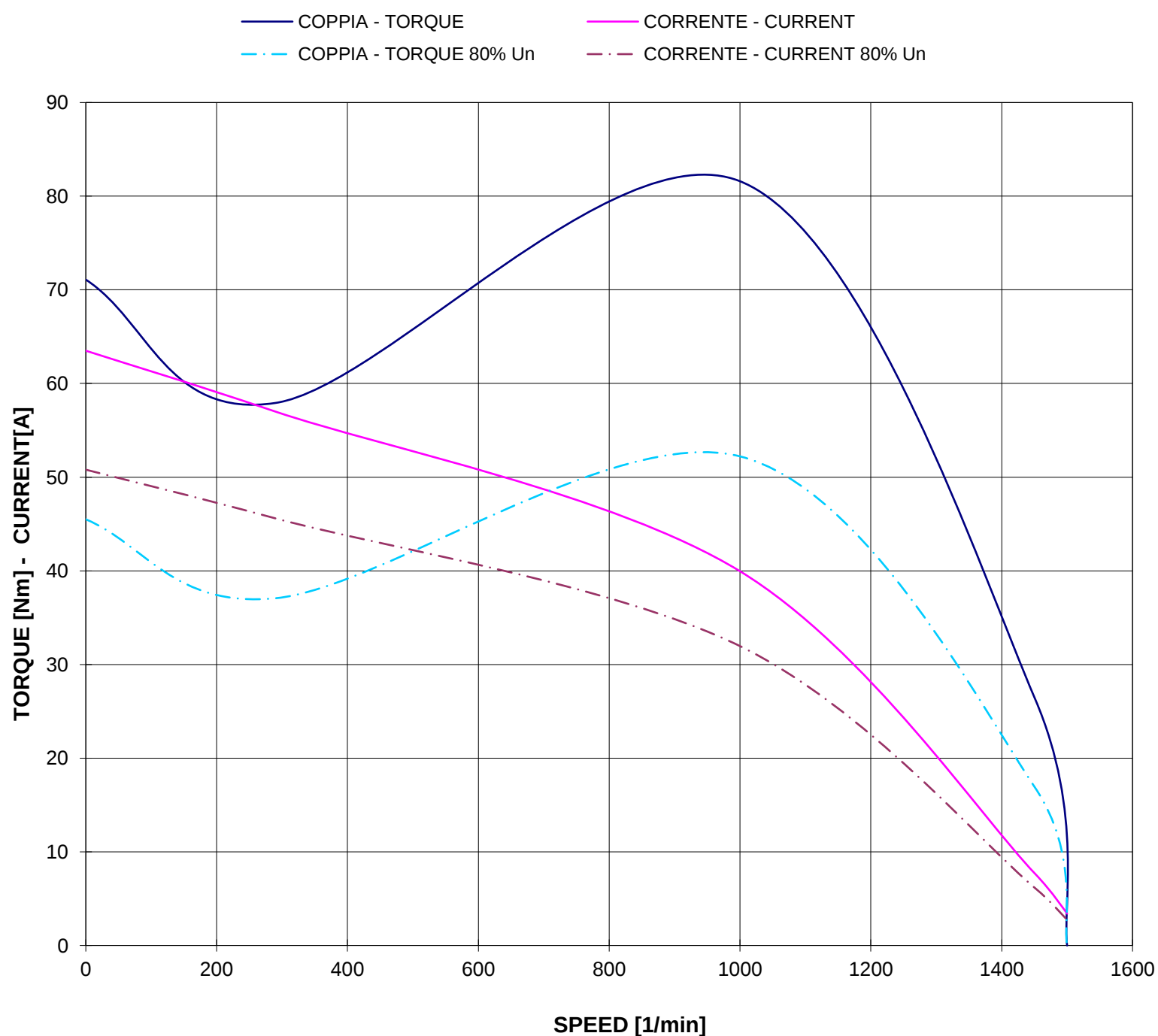
Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

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

Motore / Motor

TCI 112MB4

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Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	7,66	A
Velocità / Speed	1451	rpm
Coppia / Torque	26,33	Nm



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

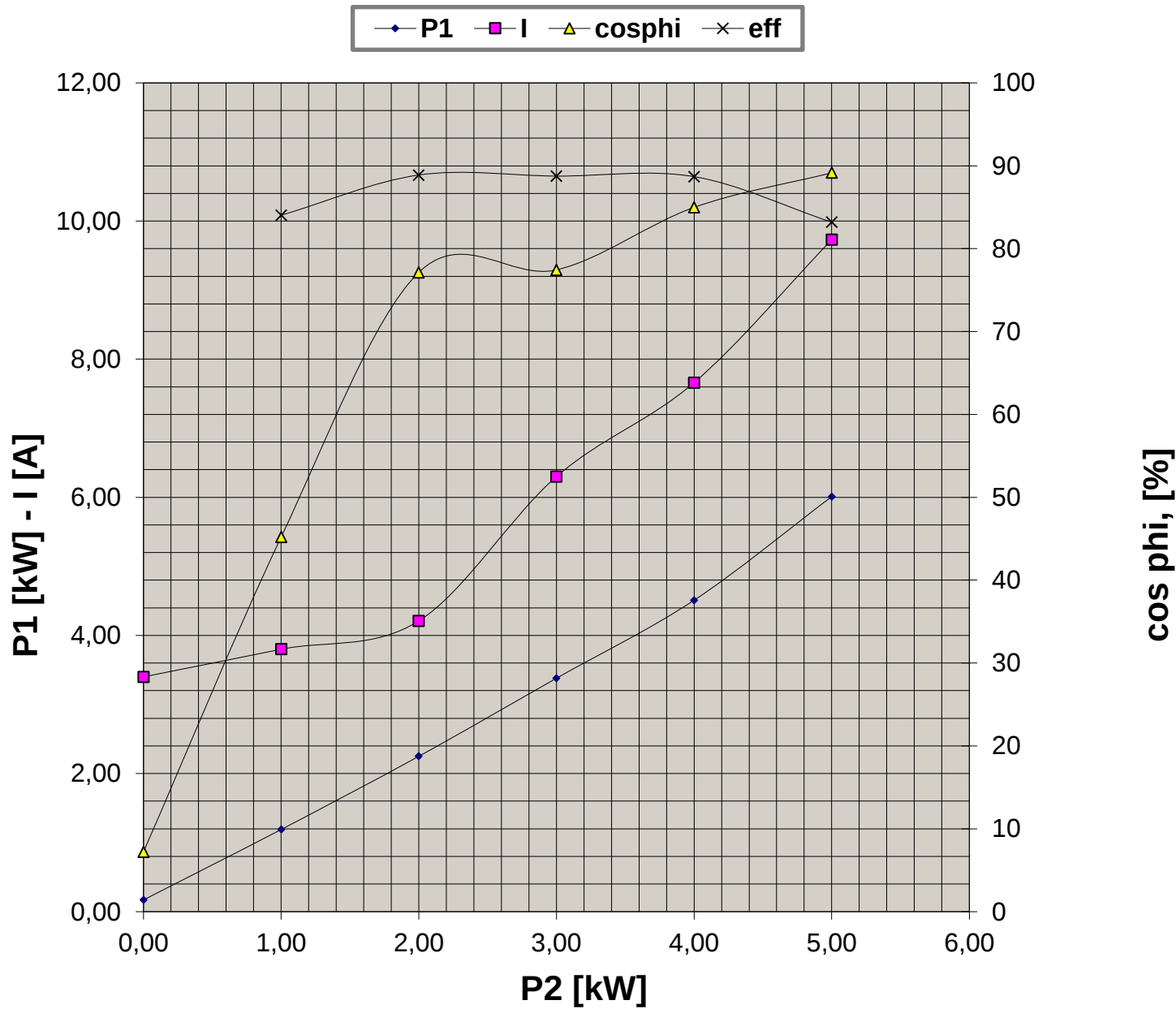
Data / Date 24-feb-22

CURVE CARATTERISTICHE
PERFORMANCE CURVES

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

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

Motore / Motor	TCI 112MB4	
Potenza nominale / Rated power	4,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	7,66	A
Velocità / Speed	1451	rpm
Coppia / Torque	26,33	Nm



CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

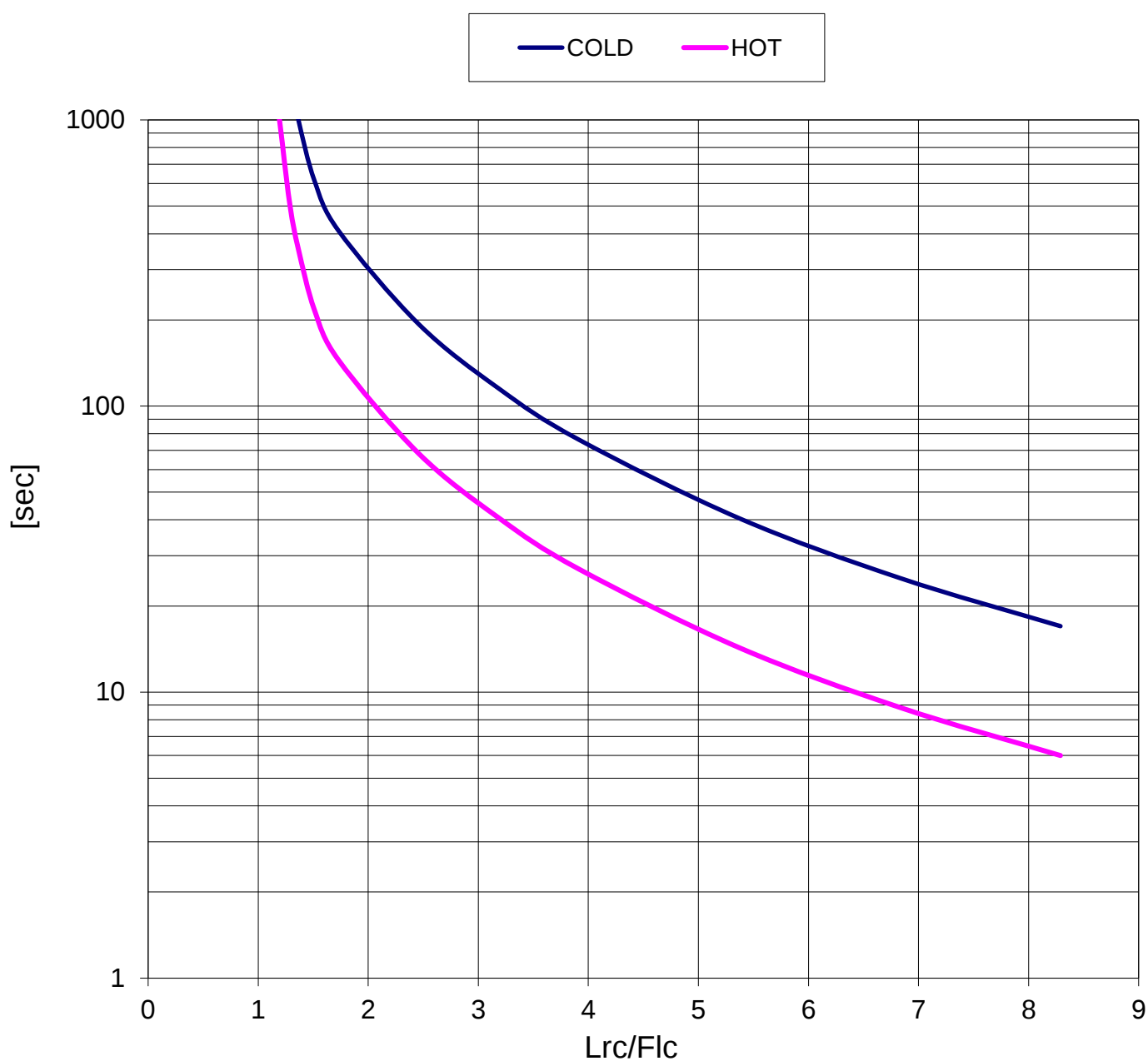
Cliente / Customer -
Ordine cliente / Customer order -
Impianto / Plant -
ITEM -

Conferma ordine / Acknowledgment -
Numero di serie / Serial Number

Motore / Motor

TCI 112MB4

Potenza nominale / Rated power	4,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	7,66	A
Velocità / Speed	1451	rpm
Coppia / Torque	26,33	Nm



Valori calcolati - Data obtained by calculation method
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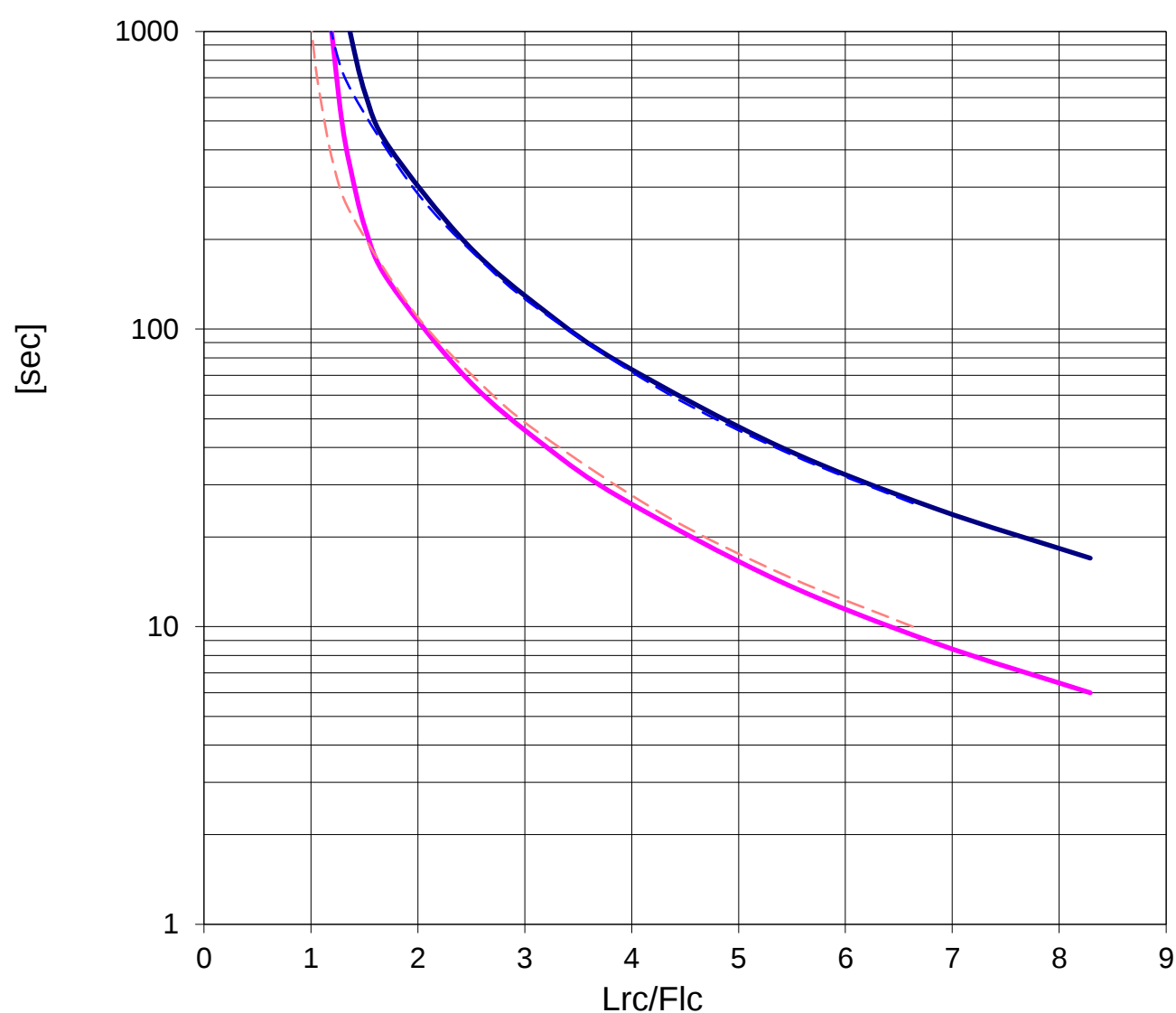
CURVA LIMITE CORRENTE TEMPO (Tensione ridotta)
THERMAL WITHSTAND CURVE (Reduced voltage)

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

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

Motore / Motor	TCI 112MB4	
Potenza nominale / Rated power	4,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	7,66	A
Velocità / Speed	1451	rpm
Coppia / Torque	26,33	Nm

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



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

Data / Date 24-feb-22