

PRODUCT INFORMATION PACKET

Model No: E3TN3002095B50S41100

Catalog No: E3TN3002095B50S41100

Made in Italy TCN Series, General Purpose Low Voltage IEC motor, Increased Safety, 2,20 kW,
3 phase, 2866 RPM, D230/Y400V 50Hz, 90L Frame B5, 2 Poles, IC411



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Nameplate Specifications

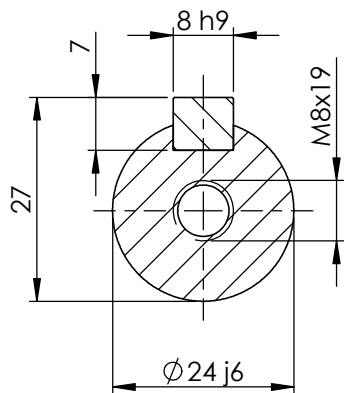
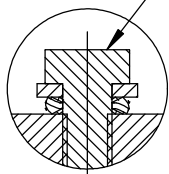
Output HP	3 Hp	Output KW	2.2 kW
Frequency	50 Hz	Voltage	230/400 V
Current	4.3 A	Speed	2866 rpm
Service Factor	1	Phase	3
Efficiency	86.2 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	90L	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	40 °C	Drive End Bearing Size	6205
Opp Drive End Bearing Size	6205	UL	No
CSA	No	CE	Yes
IP Code	IP55	Number of Speeds	1

Technical Specifications

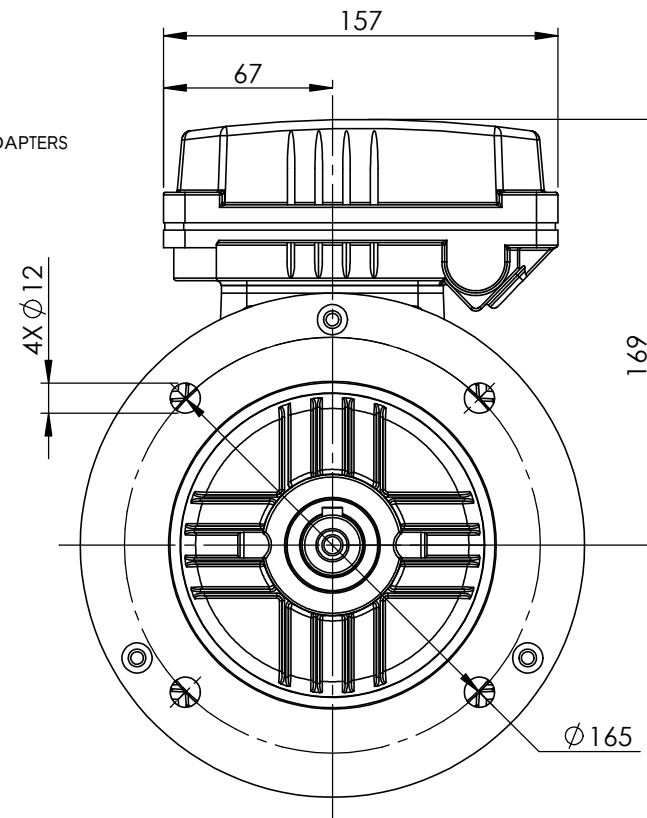
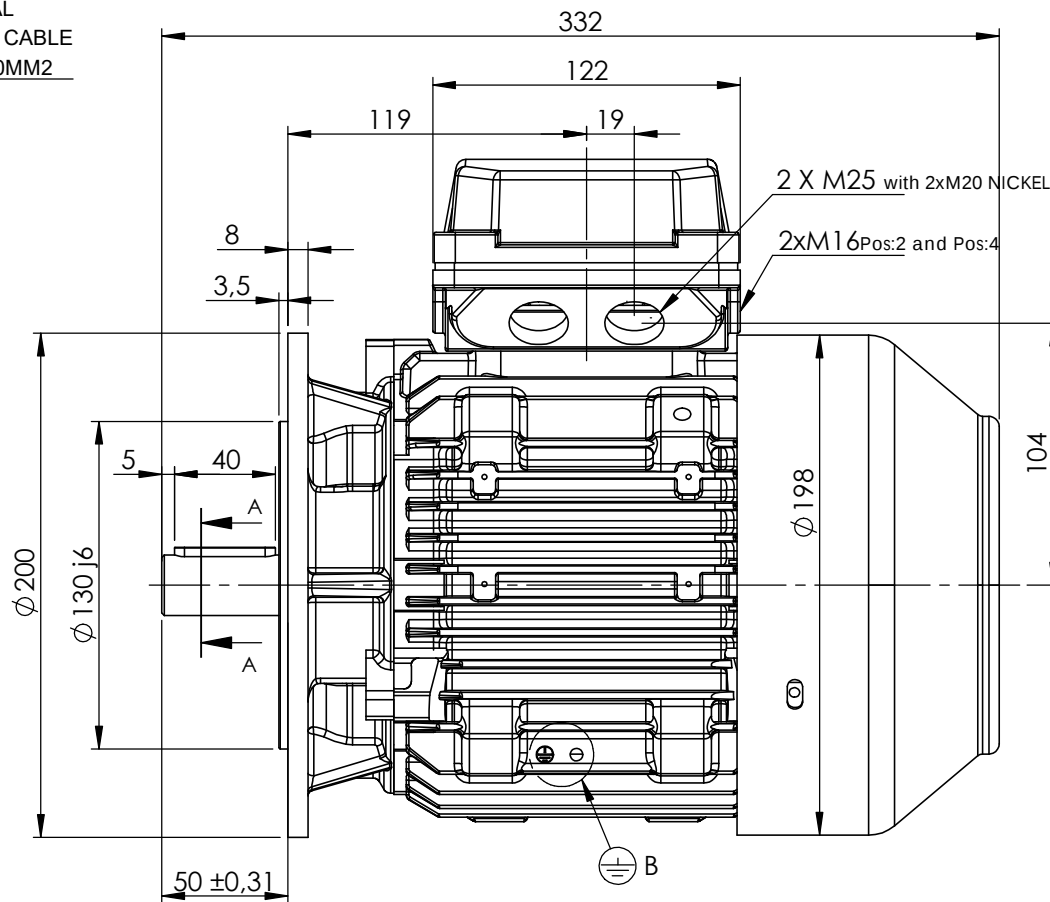
Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B5	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	332.00 mm	Frame Length	153.00 mm
Shaft Diameter	24.000 mm	Shaft Extension	50 mm
Assembly/Box Mounting	Top		
Outline Drawing	B5A04T8090001B01	Connection Drawing	SC-01-T-1v-1a

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EARTH TERMINAL
SUITABLE FOR CABLE
SECTION 1.5-10MM²



SECTION A-A
SCALE 1 : 1



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

CUSTOMER REFERENCE AND ADDITIONAL INFORMATION:

DOUBLE SEAL CABLE GLAND TYPE RAD.0 NIKEL M16 FOR ARMoured
CABLE INT. DIAM. 4-10MM (2 PIECES)
DOUBLE SEAL CABLE GLAND TYPE RAD.2 NIKEL M25 FOR ARMoured
CABLE INT. DIAM. 8-18MM (2 PIECES)

MOTOR TYPE AND DESCRIPTION:

TCI 90S 4 B5 3F 400D/690S/50 1,10

ITEM 10QCC30AP001 or 10QCC30AP002

DRAWING REVISION 1	REVISION BY TN	DATE 20/04/2022	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 21/04/2022		DATE 25/10/2021	DESCRIPTION Motor 90 TC (L) B5		
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			
				DATE 26/10/2021			
				SERIAL NUMBER			
			FIRST ANGLE PROJECTION		SIZE A4	DRAWING NUMBER B5A04T8090001B01	SHEET 1 OF 2

B5A04T8090001B01
3 of 11

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



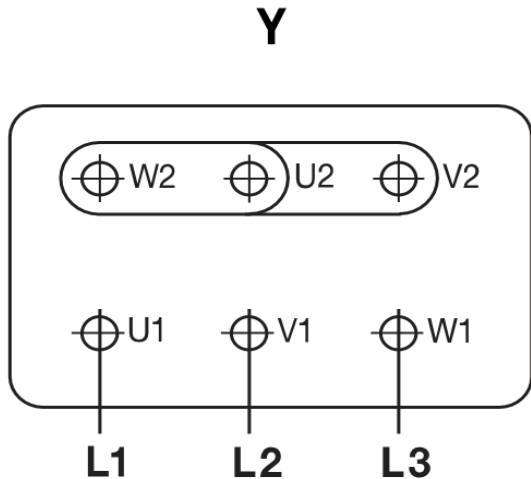
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SC - 01 - T - 1v.doc

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	-
Offerta / Offer :	-
Impianto / Plant	-

DATI DI PROGETTO - DESIGN DATA

Modo di protezione	II3G	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%	

Ex ec IIB T3 Gc	IP55
Ex ec IIB Gc	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					TCN 90L2
3	Numero di serie / Serial Number					
4	Forma costruttiva / Shape					B5
5	Certificato / Certificate		TÜV IT		20 ATEX 103X	
6						
Dati nominali / Rated data						
7	Poli / Pole		n°		2	
8	Potenza nominale / Rated power		kW		2,20	
9	Corrente nominale / Rated current		A		4,33	
10	Velocità nominale / Full Load speed		1/min		2866	
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	2866	2885	2927	
19	Corr. / Curr.	A	4,33	3,44	2,67	
20	Rend / Eff	%	86,2	86,2	85,1	
21	cos φ	-	0,85	0,80	0,70	
Performances all'avviamento / Starting performances						
22	Ia/In - LRC/FLC				%	840
23	Cosphi a rotore bloccato / LR power factor				0,70	
	Tempo a rotore bloccato / LRWT					
24	100% Un (A caldo / Warm)				sec	4
25	(A freddo / Cold)				sec	11
26	80% Un (A caldo / Warm)				sec	7
27	(A freddo / Cold)				sec	17
	Tempo di avviamento ammissibile / ART					
28	100% Un				sec	10
29	80% Un				sec	15
Curva di coppia / Speed-torque values						
30	Coppia nominale / Rated Torque				Nm	7,33
31	Ca/Cn - LRT/FLT				%	290
32	Cmax/Cn - BDT/FLT				%	365
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	-	6205 ZZ C3
45	Cuscinetto post / NDE bearing	-	6205 ZZ C3
46	Carico radiale max / Max radial load in X1	N	633
47	Carico assiale max / Max axial load	N	334
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	29
52	Momento d'inerzia / Moment of inertia	kgm2	0,0025
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A)	68
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			

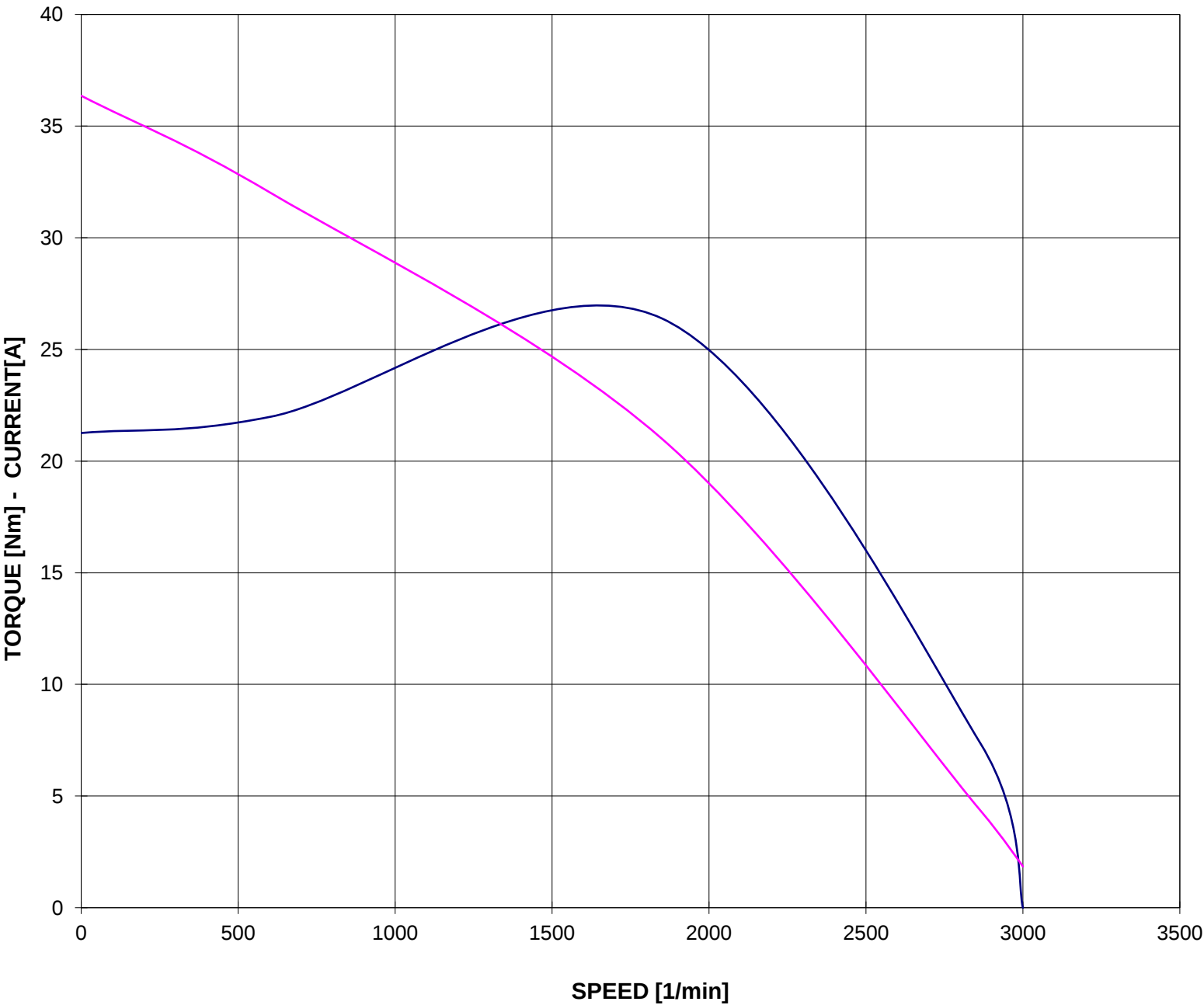
Documento preliminare - Preliminary data sheet

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

Cliente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor	TCN 90L2	
Potenza nominale / Rated power	2,20	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	4,33	A
Velocità / Speed	2866	rpm
Coppia / Torque	7,33	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



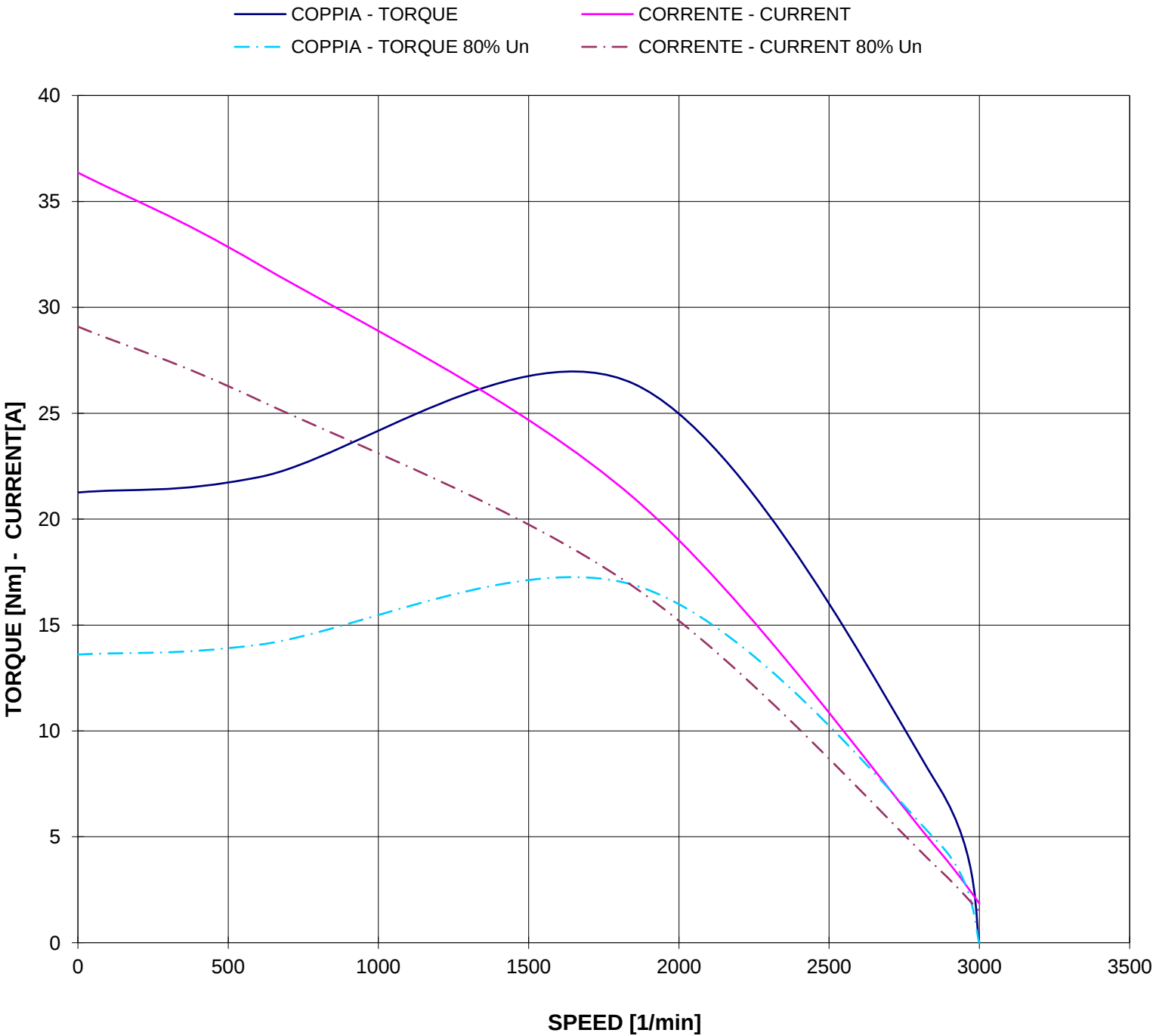
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

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

Cliente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor	TCN 90L2	
Potenza nominale / Rated power	2,20	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	4,33	A
Velocità / Speed	2866	rpm
Coppia / Torque	7,33	Nm



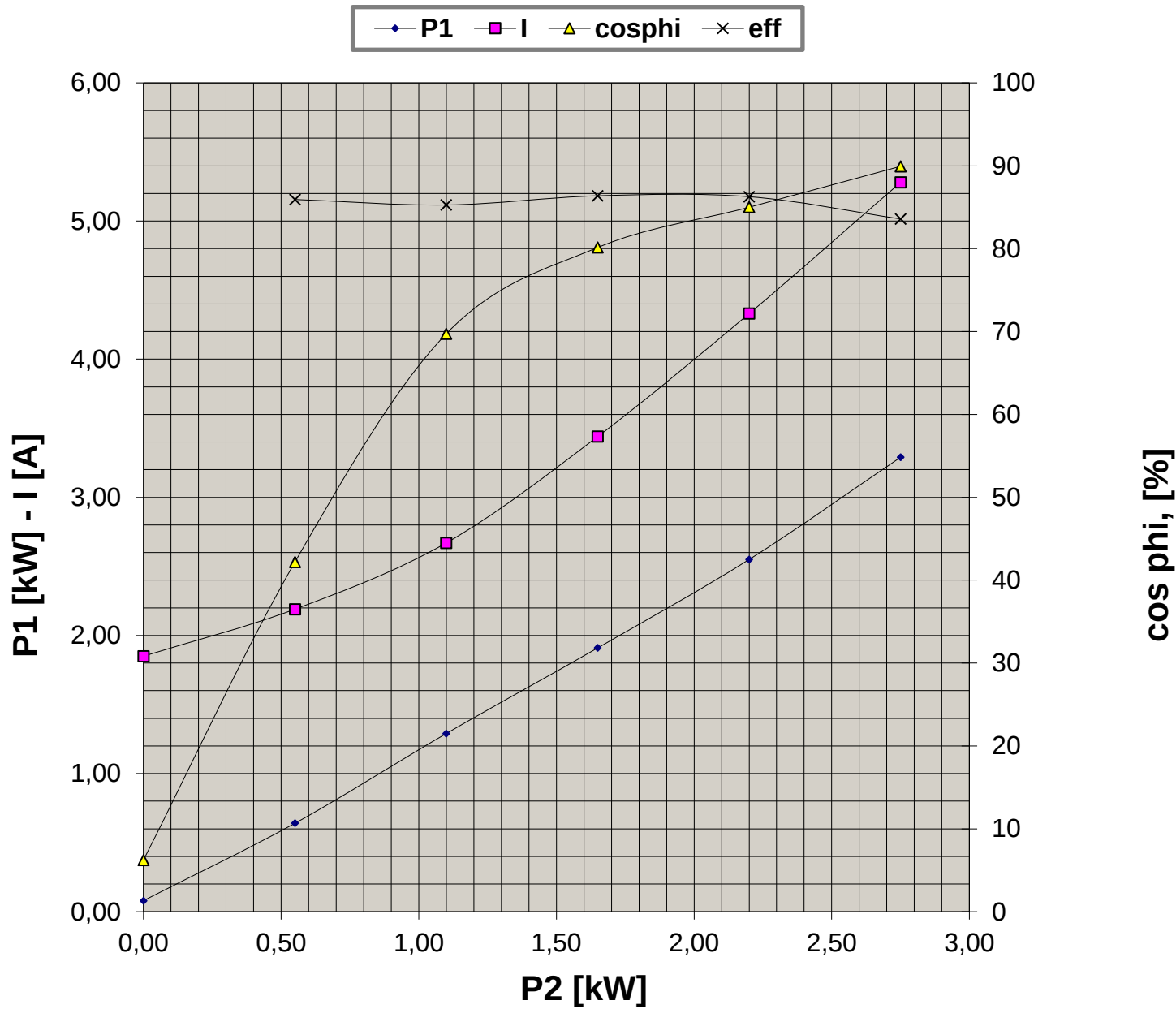
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

CURVE CARATTERISTICHE
PERFORMANCE CURVES

Cliente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor	TCN 90L2	
Potenza nominale / Rated power	2,20	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	4,33	A
Velocità / Speed	2866	rpm
Coppia / Torque	7,33	Nm



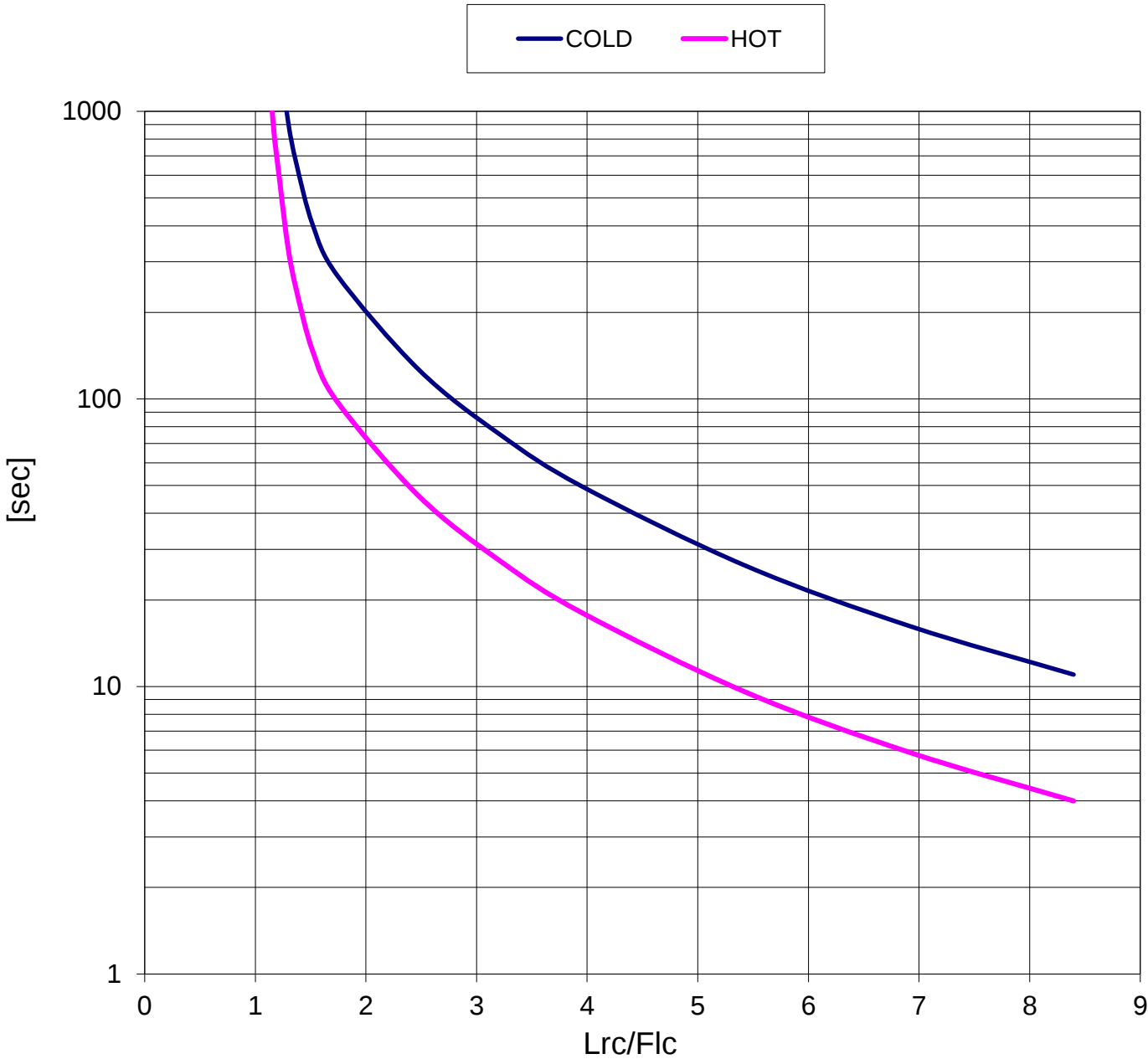
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

Cliente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor	TCN 90L2	
Potenza nominale / Rated power	2,20	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	4,33	A
Velocità / Speed	2866	rpm
Coppia / Torque	7,33	Nm



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

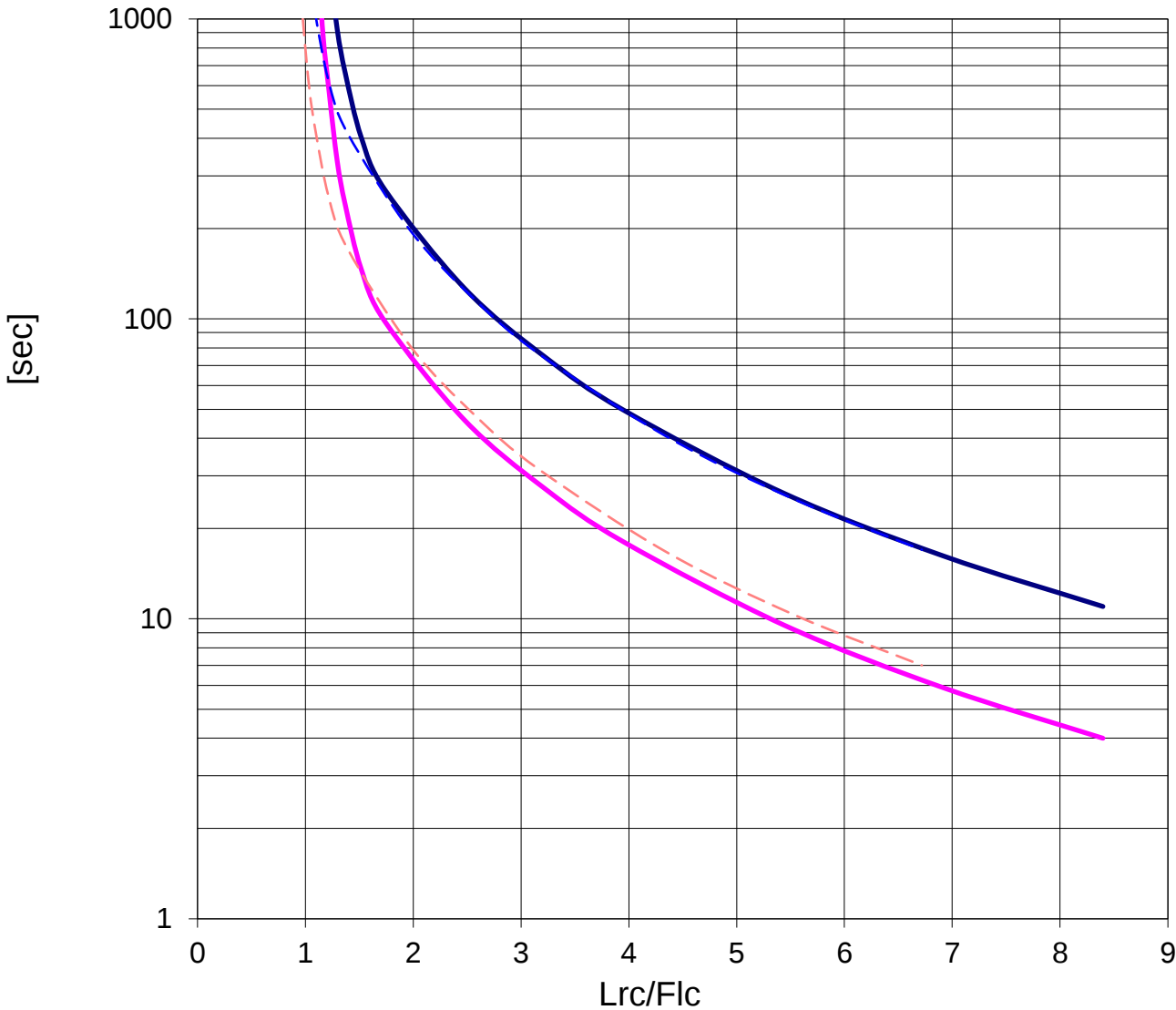
Data / Date 29-giu-22

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

Cliente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor	TCN 90L2	
Potenza nominale / Rated power	2,20	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	4,33	A
Velocità / Speed	2866	rpm
Coppia / Torque	7,33	Nm

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



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

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