PRODUCT INFORMATION PACKET

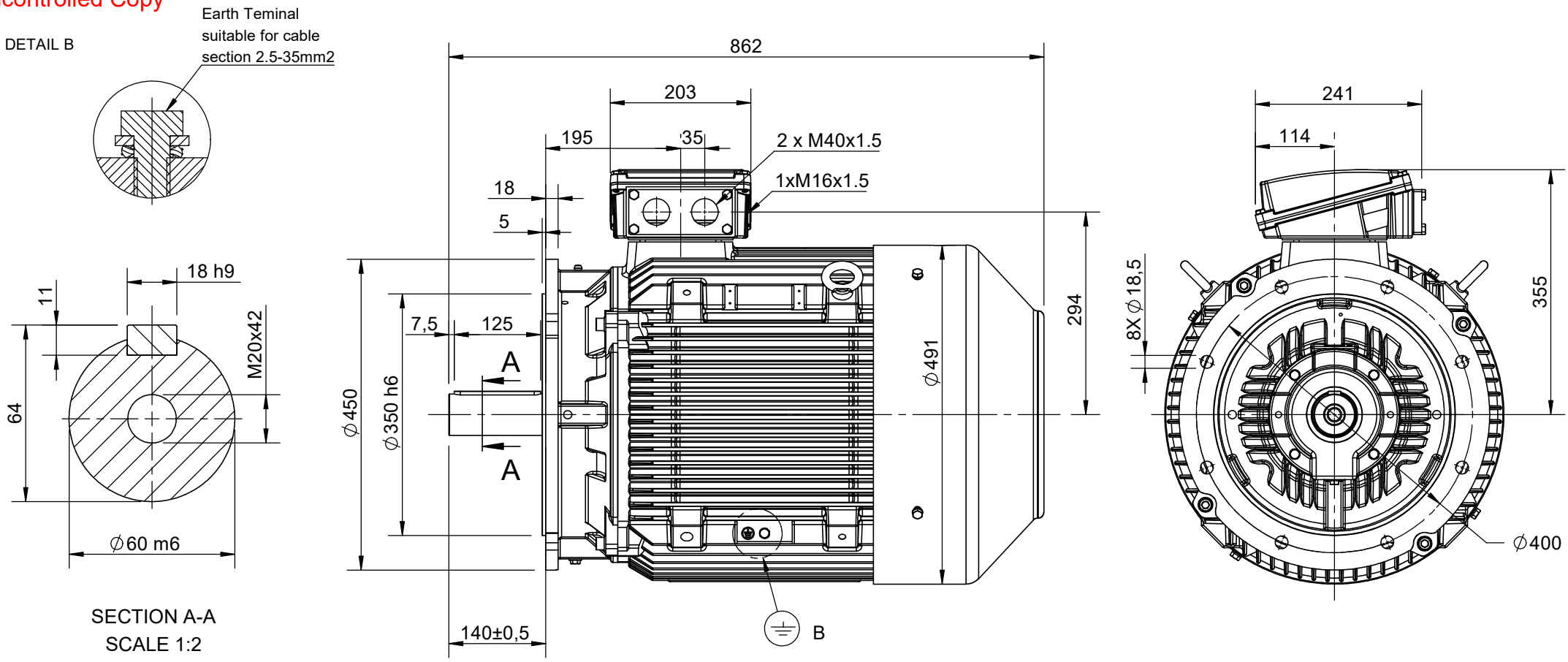
Model No: E3TN3004223B50D41100
Catalog No: E3TN3004223B50D41100
Made in Italy TCN Series, General Purpose Low Voltage IEC motor, Increased Safety, 45,00 kW, 3 phase, 1484 RPM, D400/Y690V 50Hz, 225MA Frame B5, 4 Poles, IC411

Nameplate Specifications

Output HP	60 Hp	Output KW	45.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	80.7 A	Speed	1484 rpm
Service Factor	1	Phase	3
Efficiency	94.2 %	Power Factor	0.85
Duty	S1	Insulation Class	F
Frame	225MA	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	40 °C	Drive End Bearing Size	6313
Opp Drive End Bearing Size	6213	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	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	862.00 mm	Frame Length	425.00 mm
Shaft Diameter	60.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B5A04T8220021B01



SECTION A-A
SCALE 1:2

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

CUSTOMER REFERENCE AND ADDITIONAL INFORMATION:

MOTOR TYPE AND DESCRIPTION:

DRAWING REVISION	REVISION BY	DATE
ECO	APPROVED BY	DATE
ECO DESCRIPTION		

TOLERANCES (EXCEPT AS NOTED)
TOLERANCES: ±2

DIMENSIONS ARE IN mm
ACCORDING TO IEC 60072

SERIAL NUMBER

DRAWN BY	TN
DATE	17/11/2021
APPROVED BY	LP
DATE	18/11/2021
REFERENCE	
FIRST ANGLE PROJECTION	

REGAL™ cemp

DESCRIPTION
Motor 225 4-6P TC (L) B5

SIZE	DRAWING NUMBER	SHEET
A4	B5A04T8220021B01	1 OF 2

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

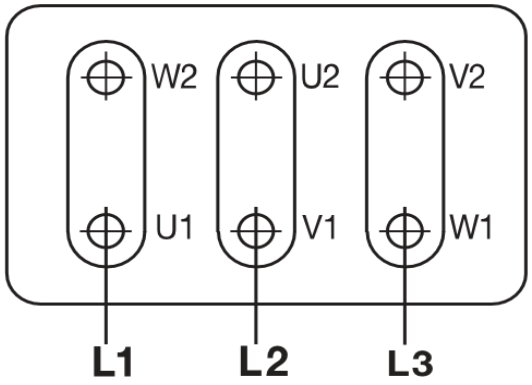
cemp
Flameproof Motors

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

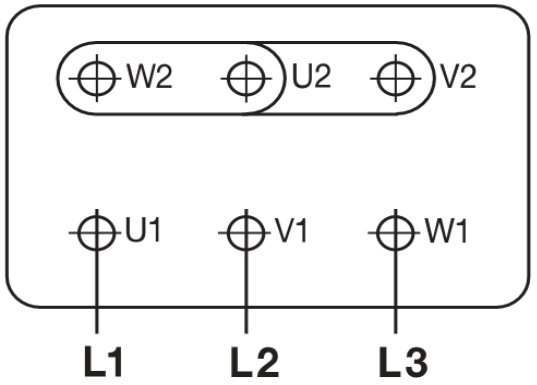
Collegamento - *Connection* - Connexion - *Schaltung* - Conexiòn

Δ



Collegamento - *Connection* - Connexion - *Schaltung* - Conexiòn

Y



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 - *Additional terminals marking* (IEC60034-8)

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

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

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

Regal Rexnord

cemp® Flameproof Motors

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	Ex ec IIB T3 Gc	IP55
Type of protection		Scatola morsetti / Terminal box	Ex ec IIB Gc	IP55

Tem. Amb. Min. / Min Amb.Temp.	-20 °C	Tem. Amb. Max. / Max Amb. Temp.	40 °C
Umidità relativa / Relative humidity	90%	Altitudine / Altitude	< 1000 mslm / masl
Tensione nominale / Rated Voltage	400 V +/- 10%	Frequenza / Frequency	50 Hz +/- 3%

DATI FUNZIONALI E COSTRUTTIVI - PERFORMANCE AND CONSTRUCTION DATA

1	Quantità / Quantity		01
2	Motore tipo / Motor type		TCN 225MA4
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°	4
8	Potenza nominale / Rated power	kW	45,00
9	Corrente nominale / Rated current	A	80,18
10	Velocità nominale / Full Load speed	1/min	1484
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	2/4	
18	Giri / Speed	1/min	1484	1487	1492	
19	Corr. / Curr.	A	80,18	63,06	42,17	
20	Rend / Eff	%	94,2	94,4	94,1	
21	cos φ	-	0,86	0,82	0,82	

	Performances all'avviamento / Starting performances			
22	Ia/In - LRC/FLC		%	755
23	Cosphi a rotore bloccato / LR power factor			0,38
	Tempo a rotore bloccato / LRWT			
24	100% Un	(A caldo / Warm)	sec	11
25		(A freddo / Cold)	sec	32
26	80% Un	(A caldo / Warm)	sec	17
27		(A freddo / Cold)	sec	51
	Tempo di avviamento ammissibile / ART			
28	100% Un		sec	28
29	80% Un		sec	44
	Curva di coppia / Speed-torque values			
30	Coppia nominale / Rated Torque		Nm	289,59
31	Ca/Cn - LRT/FLT		%	240
32	Cmax/Cn - BDT/FLT		%	290
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	-	6313 C3
45	Cuscinetto post / NDE bearing	-	6213 C3
46	Carico radiale max / Max radial load in X1	N	3973
47	Carico assiale max / Max axial load	N	2836
48	Tipo grasso / Grease type		LGHP2 SKF or equivalent
49	Intervallo lubrificazione / Lubrication	h	8000
50	Quantità grasso / Quantity grease	gr	24
	Caratteristiche meccaniche / mechanical specification		
51	Massa / Mass	kg	389
52	Momento d'inerzia / Moment of inertia	kgm2	0,7446
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	2,20
56			
57			
58			
59			
60			
61			
62			
	Dati entrata cavi - verniciatura / Cable entry and painting		
63	Entrata cavi / Cable entry	IEC 60423	2xM40+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			

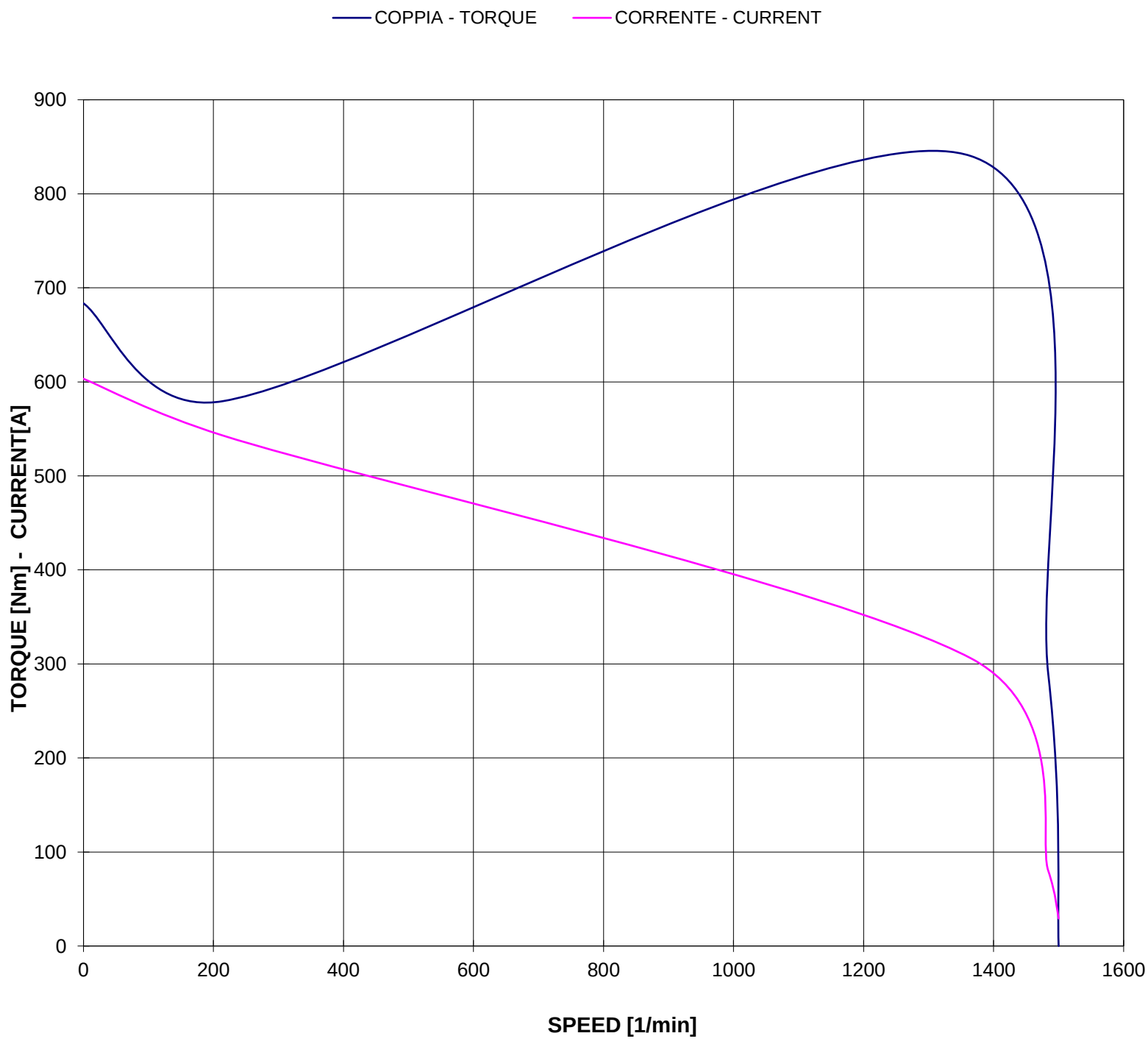
Documento preliminare - Preliminary data sheet

Prepared by : GC Tolleranze secondo - Tolerances according IEC 60034-1 Rev. 0 Data / Date 2 May 2022

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

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

Motore / Motor	**TCN 225MA4**	
Potenza nominale / Rated power	45,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	80,18	A
Velocità / Speed	1484	rpm
Coppia / Torque	289,59	Nm



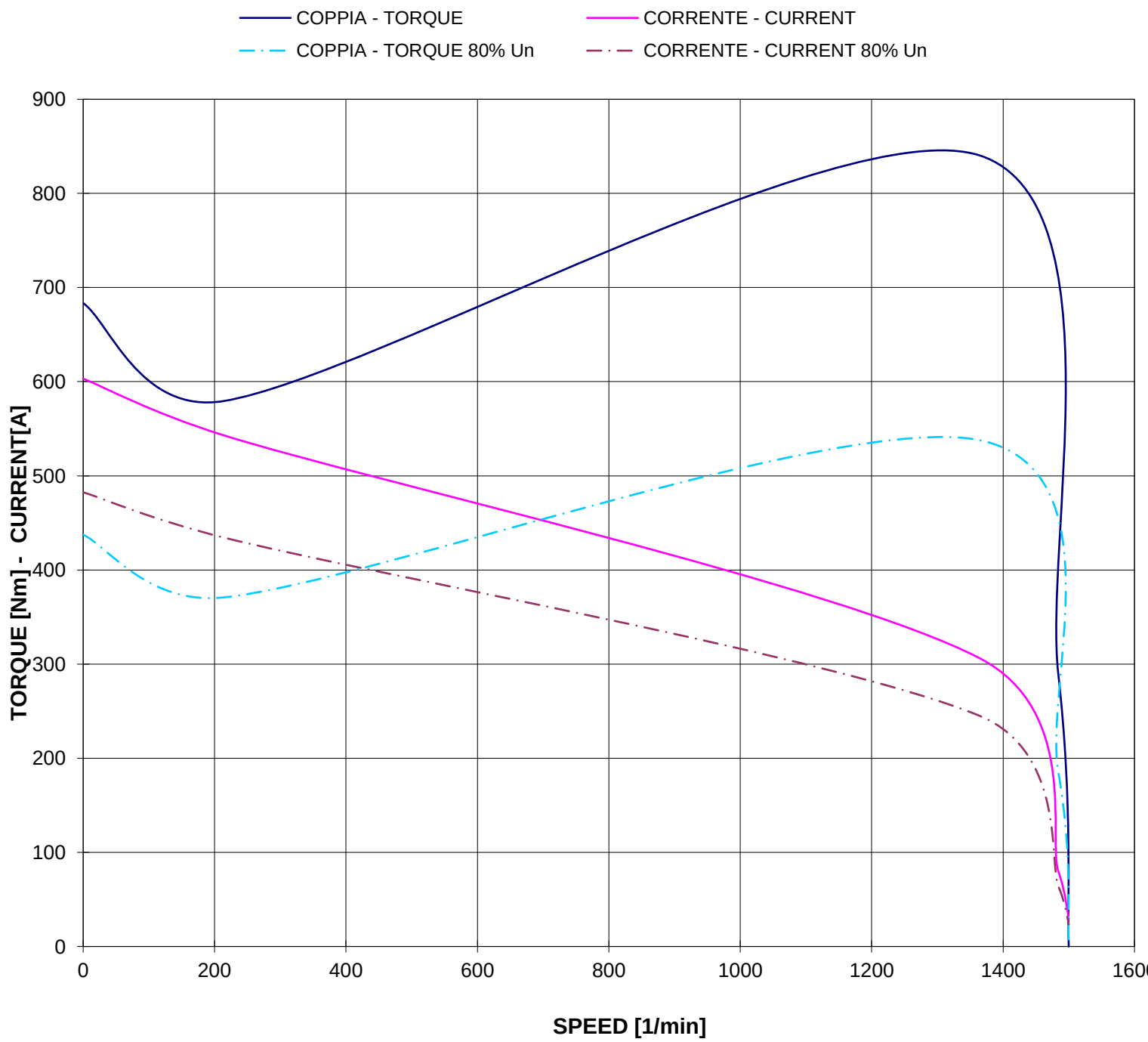
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

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 225MA4**	
Potenza nominale / Rated power	45,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	80,18	A
Velocità / Speed	1484	rpm
Coppia / Torque	289,59	Nm



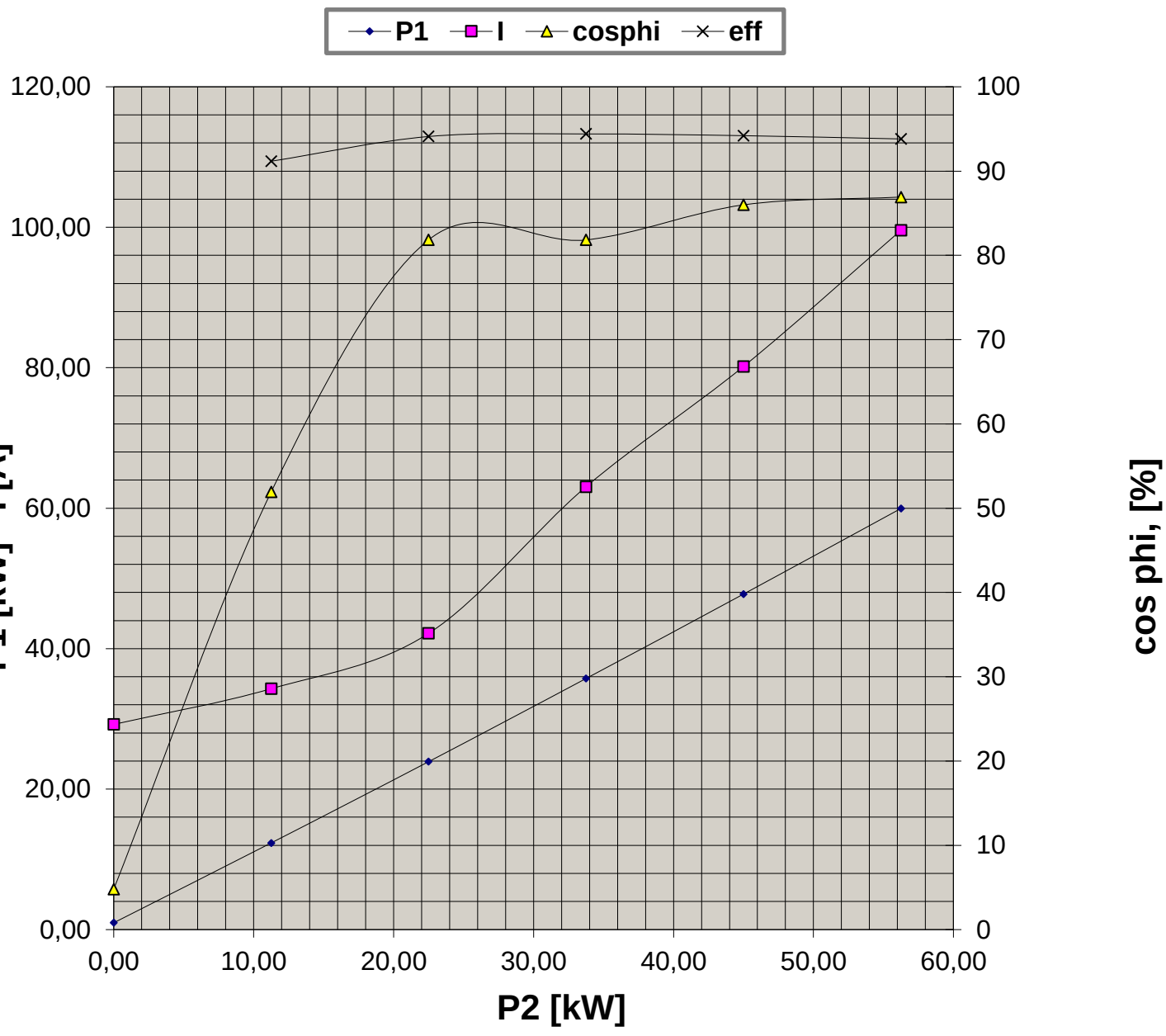
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 29-giu-22

CURVE CARATTERISTICHE
PERFORMANCE CURVES

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

Motore / Motor	**TCN 225MA4**	
Potenza nominale / Rated power	45,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	80,18	A
Velocità / Speed	1484	rpm
Coppia / Torque	289,59	Nm



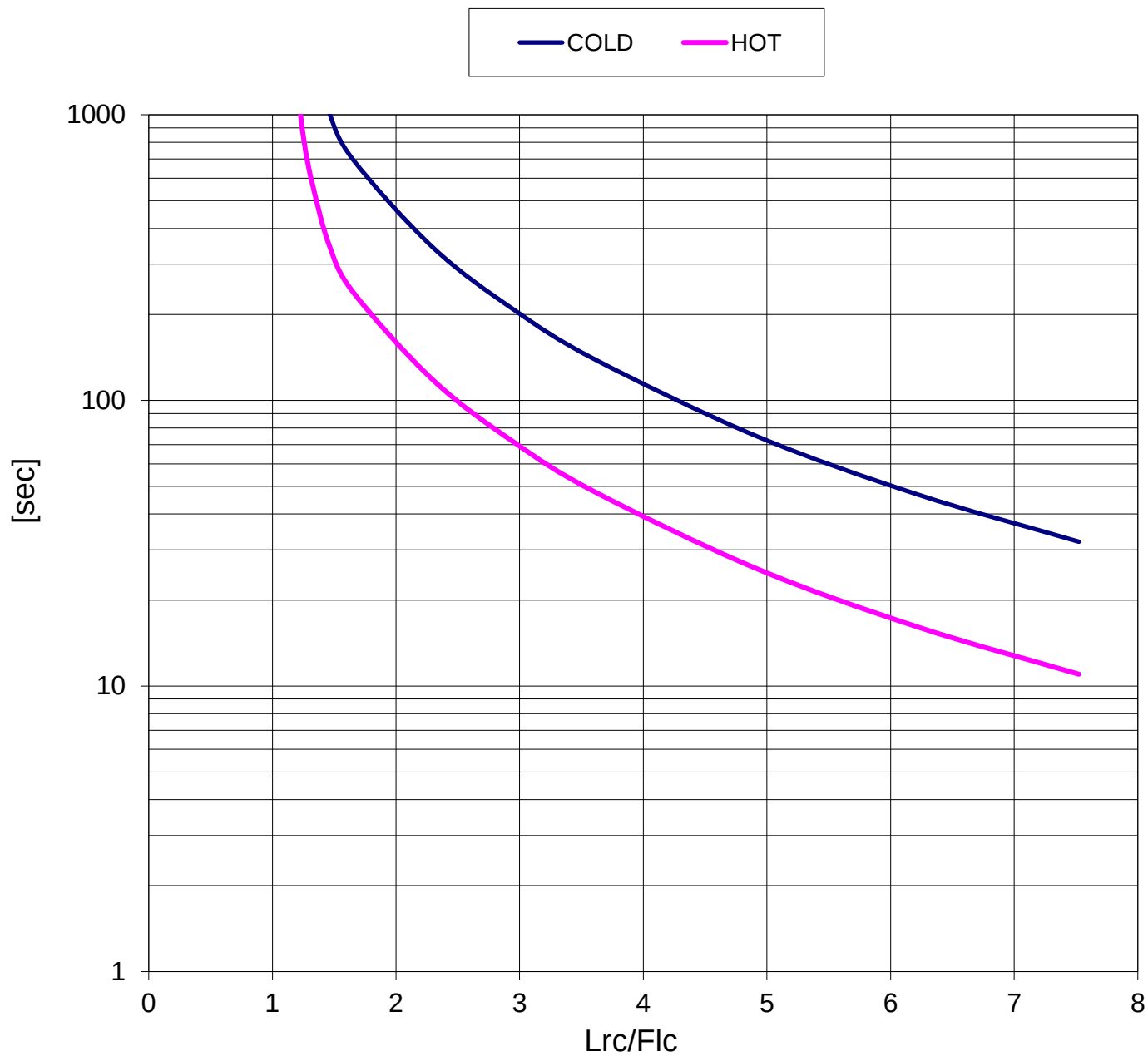
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

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 225MA4**	
Potenza nominale / Rated power	45,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	80,18	A
Velocità / Speed	1484	rpm
Coppia / Torque	289,59	Nm



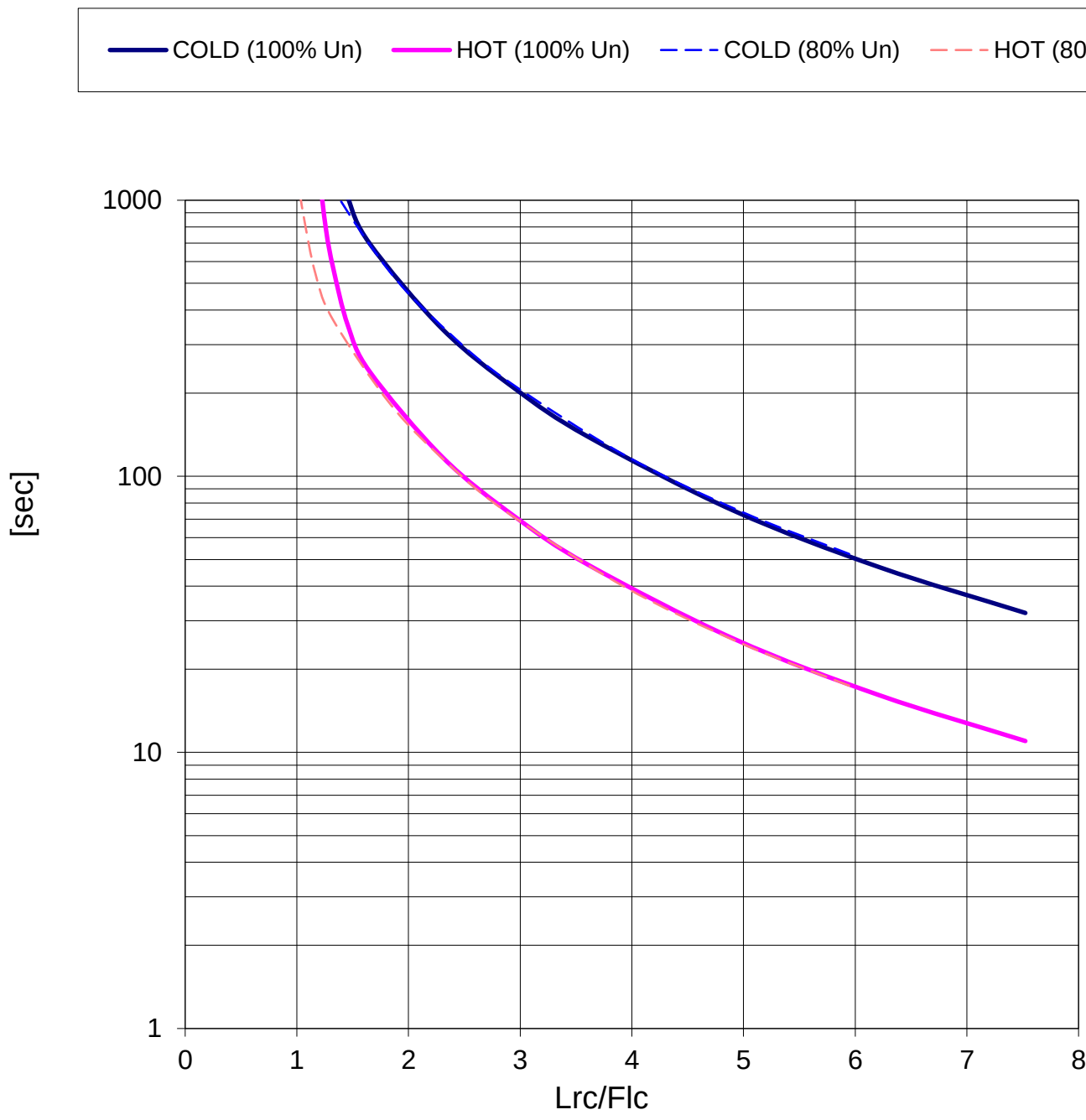
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

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 225MA4**	
Potenza nominale / Rated power	45,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	80,18	A
Velocità / Speed	1484	rpm
Coppia / Torque	289,59	Nm



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