

PRODUCT INFORMATION PACKET

Model No: E3TN3004283B50D41100

Catalog No: E3TN3004283B50D41100

Made in Italy TCN Series, General Purpose Low Voltage IEC motor, Increased Safety, 75,00 kW,
3 phase, 1489 RPM, D400/Y690V 50Hz, 280S Frame B5, 4 Poles, IC411



Regal and CEMP are trademarks of Regal Rexnord Corporation or one of its affiliated companies.

©2022 Regal Rexnord Corporation, All Rights Reserved. MC017097E

Nameplate Specifications

Output HP	100 Hp	Output KW	75.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	130.4 A	Speed	1489 rpm
Service Factor	1	Phase	3
Efficiency	95 %	Power Factor	0.87
Duty	S1	Insulation Class	F
Frame	280S	Enclosure	Totally Enclosed Fan Cooled
Ambient Temperature	40 °C	Drive End Bearing Size	6317
Opp Drive End Bearing Size	6317	UL	No
CSA	No	CE	Yes
IP Code	IP55	Number of Speeds	1

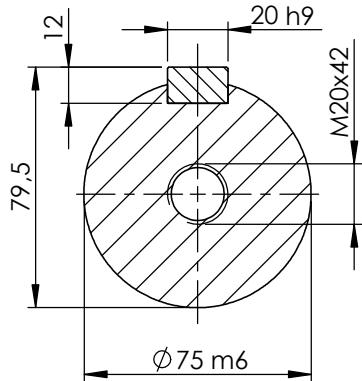
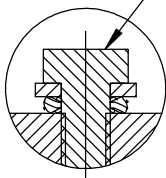
Technical Specifications

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	1060.00 mm	Frame Length	549.00 mm
Shaft Diameter	75.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B5A04T8285011B01

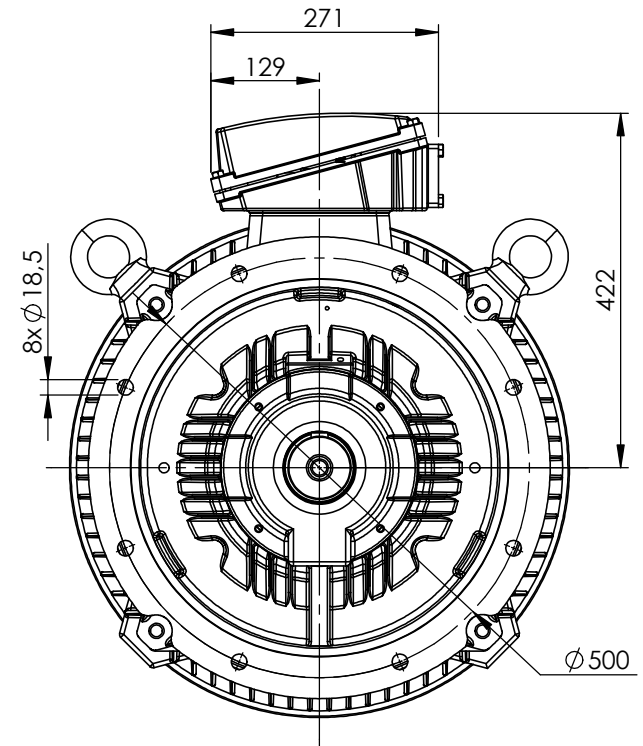
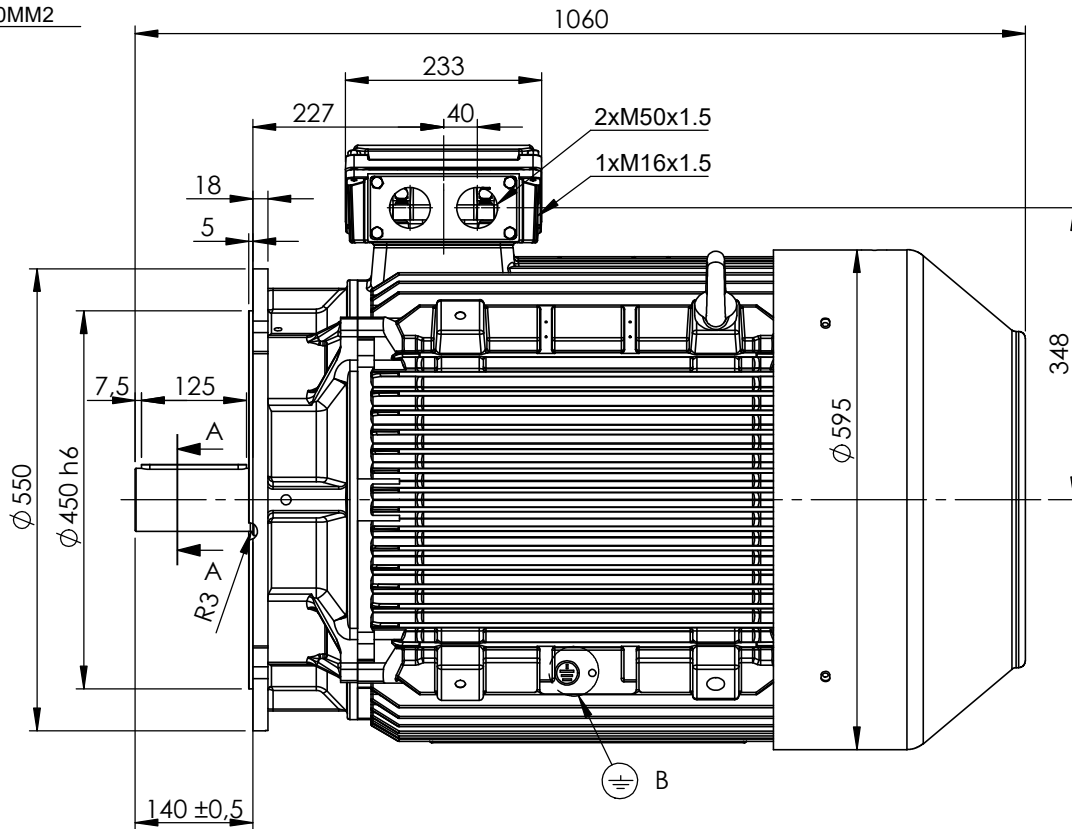
This is an uncontrolled document once printed or downloaded and is subject to change without notice. Date Created:12/02/2022

DETAIL B

EARTH TERMINAL
SUITABLE FOR CABLE
SECTION 10-70MM²



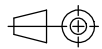
SECTION A-A
SCALE 1 : 2.5



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

CUSTOMER REFERENCE AND ADDITIONAL INFORMATION:

MOTOR TYPE AND DESCRIPTION:

DRAWING REVISION 1	REVISION BY TN	DATE 12/05/2022	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 13/05/2022		DATE 26/11/2021					
ECO DESCRIPTION				APPROVED BY LP					
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.			DATE 29/11/2021	DESCRIPTION Motor 280 4-6P TC (S) B5					
			SERIAL NUMBER						REFERENCE
			FIRST ANGLE PROJECTION						

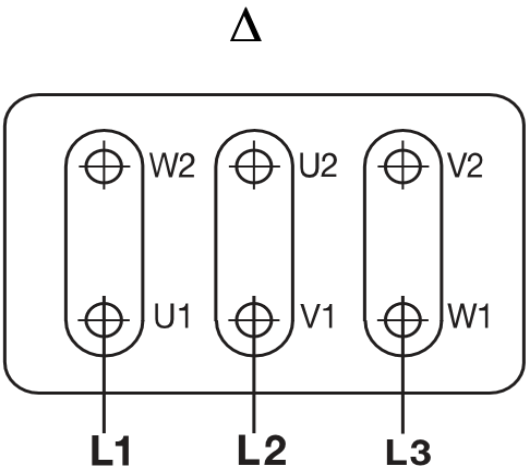
Schema di collegamento - *Connection diagram*
Schemas de branchement - *Schaltplän*
Esquemas de conexión



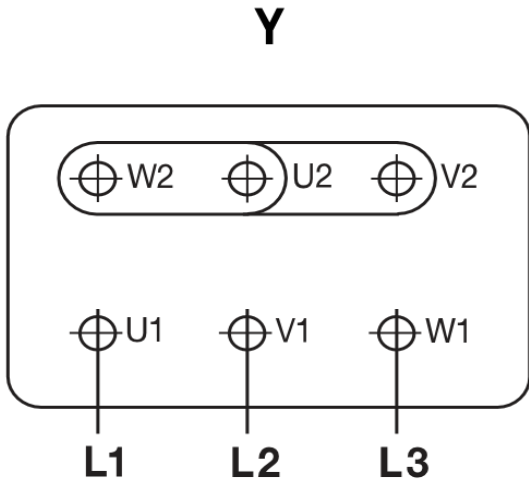
DTE 01/01/2004
SC - 01 - T - 1v.doc

**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</i> (IEC60034-8)		
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	
TB8 - TB9 (intervento- <i>switch off</i>)	2	Protettore bimetallico del freno normalmente chiuso - <i>NC brake bi-metallic switch</i> (**)
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 280S4
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		75,00
9	Corrente nominale / Rated current			A		130,99
10	Velocità nominale / Full Load speed			1/min		1489
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	1489	1493	1495	
19	Corr. / Curr.	A	130,99	100,05	66,84	
20	Rend / Eff	%	95,0	95,8	95,6	
21	cos φ	-	0,87	0,85	0,85	
Performances all'avviamento / Starting performances						
22	Ia/In - LRC/FLC			%		625
23	Cosphi a rotore bloccato / LR power factor					0,41
	Tempo a rotore bloccato / LRWT					
24	100% Un (A caldo / Warm)			sec		5
25	(A freddo / Cold)			sec		14
26	80% Un (A caldo / Warm)			sec		8
27	(A freddo / Cold)			sec		22
	Tempo di avviamento ammissibile / ART					
28	100% Un			sec		12
29	80% Un			sec		19
Curva di coppia / Speed-torque values						
30	Coppia nominale / Rated Torque			Nm		481,03
31	Ca/Cn - LRT/FLT			%		210
32	Cmax/Cn - BDT/FLT			%		250
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	-	6317 C3
45	Cuscinetto post / NDE bearing	-	6317 C3
46	Carico radiale max / Max radial load in X1	N	5525
47	Carico assiale max / Max axial load	N	3755
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent	
49	Intervallo lubrificazione / Lubrication	h	4000
50	Quantità grasso / Quantity grease	gr	38
Caratteristiche meccaniche / mechanical specification			
51	Massa / Mass	kg	722
52	Momento d'inerzia / Moment of inertia	kgm2	2,3240
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A)	75
54	Vibrazioni / Vibration level	IEC 34-14	A
55	Limite norma / Vibration limit	mm/sec	2,20
56			
57			
Dati entrata cavi - verniciatura / Cable entry and painting			
63	Entrata cavi / Cable entry	IEC 60423	2xM50+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 280S4

Potenza nominale / Rated power

75,00

kW

Poli / Pole

4

Tensione - Frequenza / Voltage - Frequency

400 - 50

V - Hz

Corrente / Rated current

130,99

A

Velocità / Speed

1489

rpm

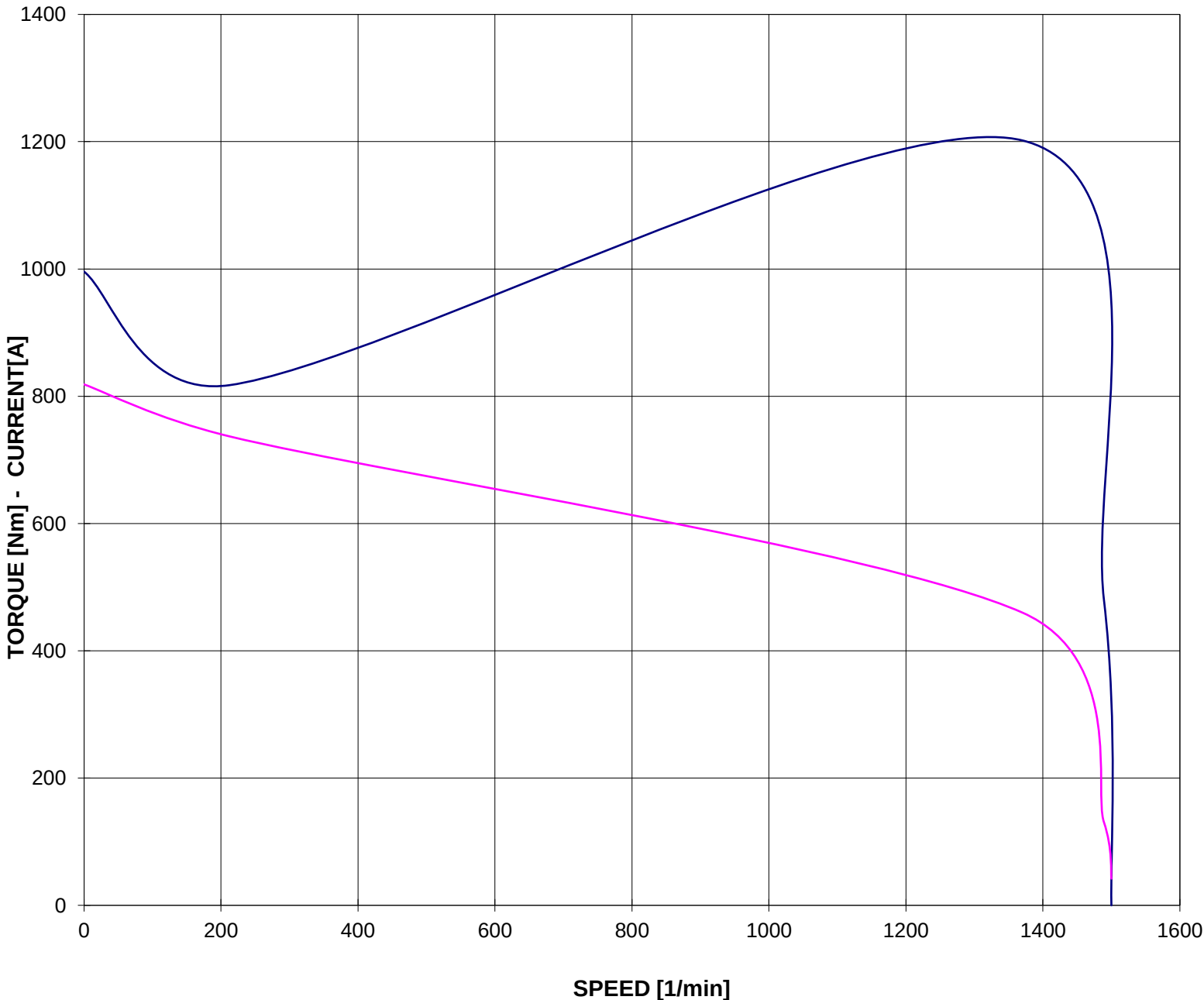
Coppia / Torque

481,03

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 280S4

Potenza nominale / Rated power

75,00

kW

Poli / Pole

4

Tensione - Frequenza / Voltage - Frequency

400 - 50

V - Hz

Corrente / Rated current

130,99

A

Velocità / Speed

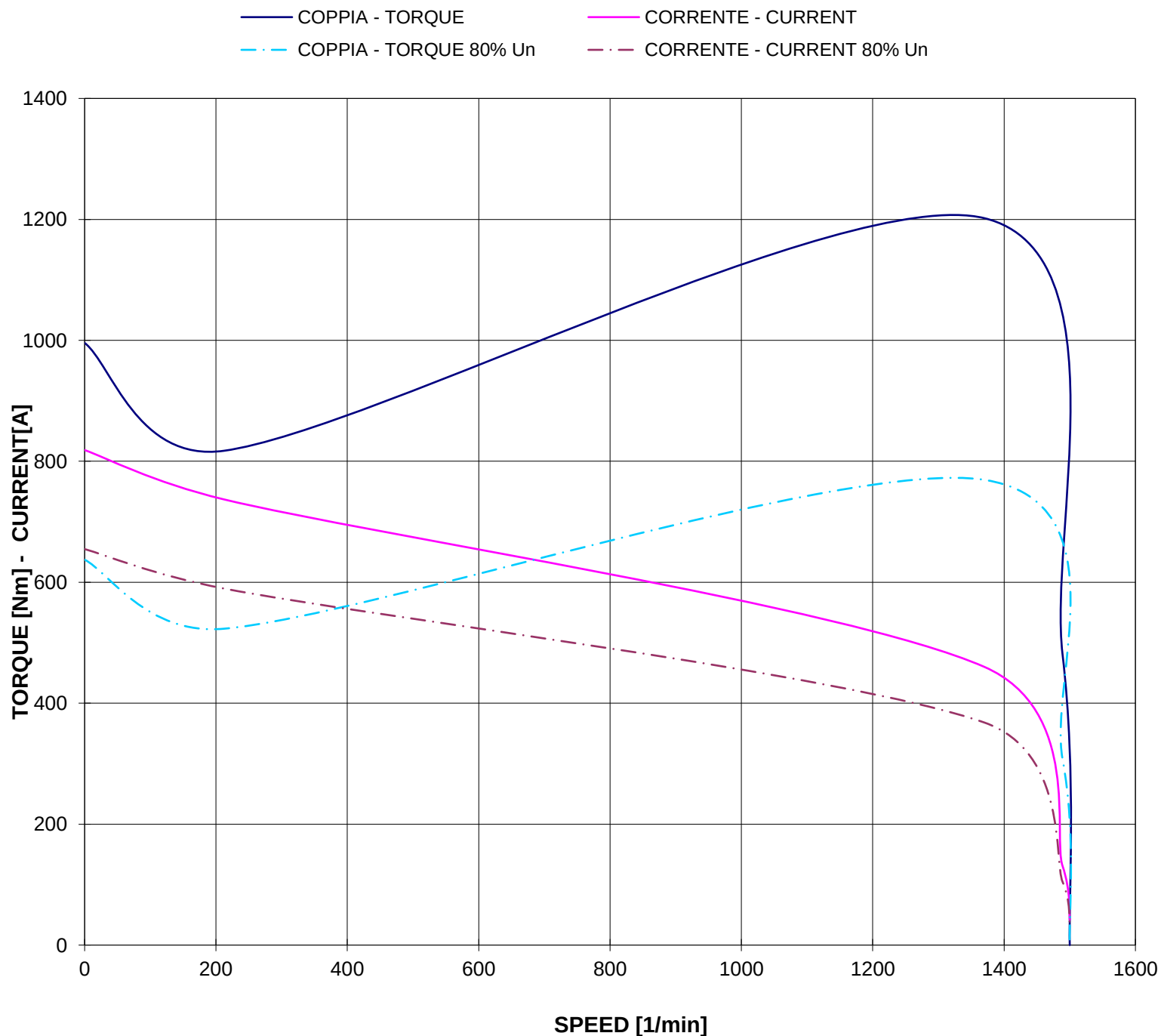
1489

rpm

Coppia / Torque

481,03

Nm

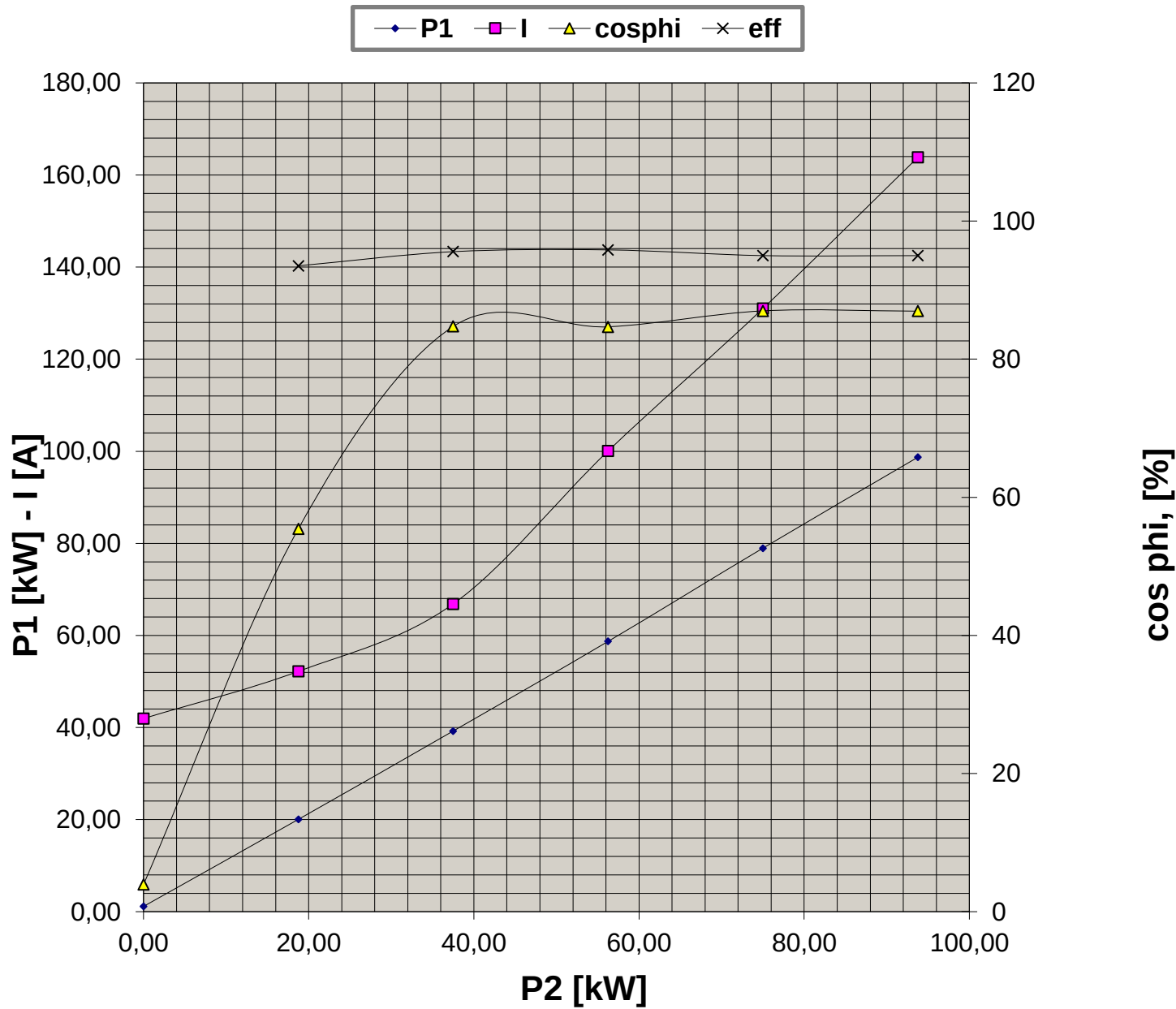

 Valori calcolati - Data obtained by calculation method
 Documento preliminare - Preliminary document

Data / Date 29-giu-22

CURVE CARATTERISTICHE
PERFORMANCE CURVES

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

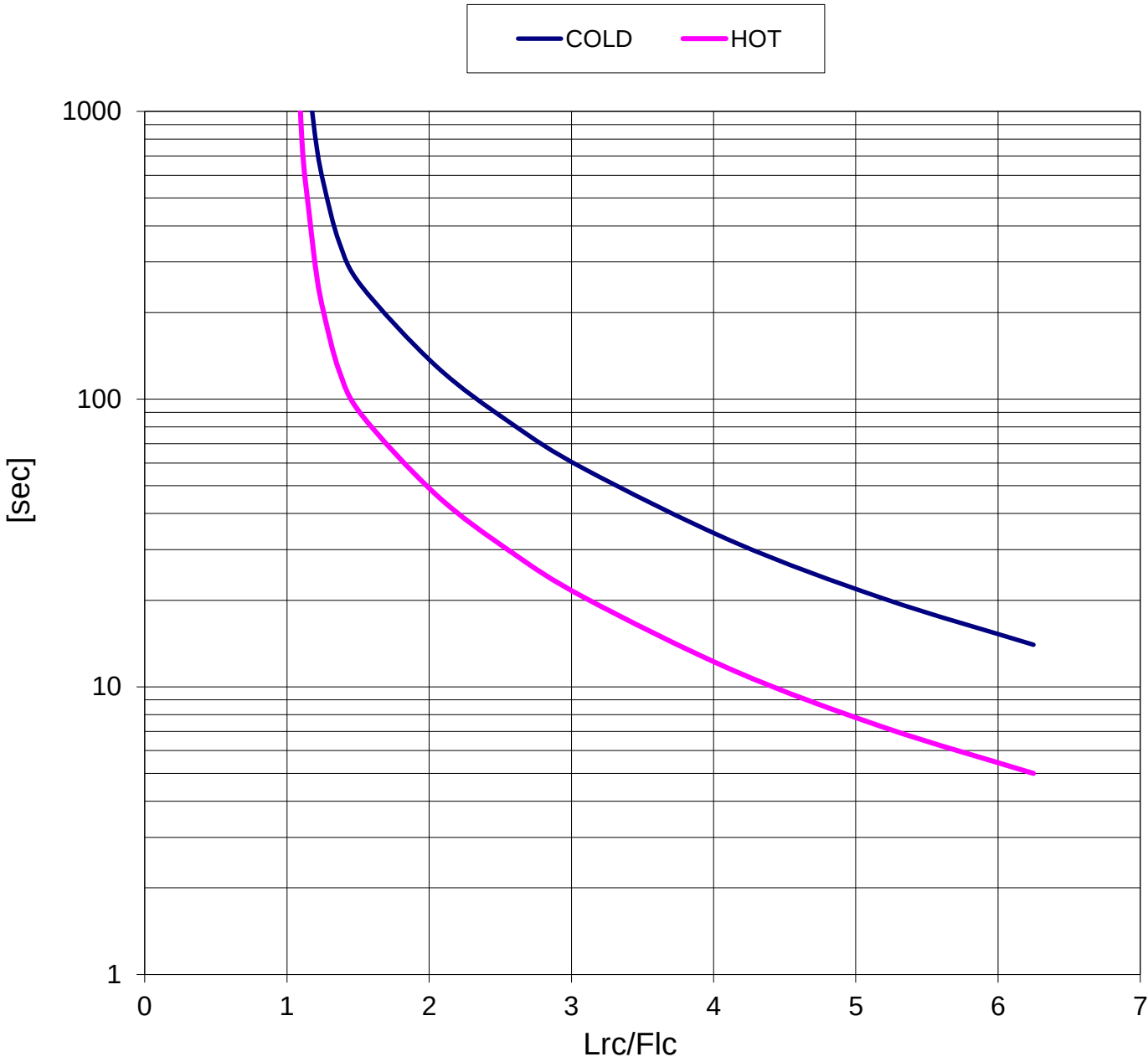
Motore / Motor	TCN 280S4	
Potenza nominale / Rated power	75,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	130,99	A
Velocità / Speed	1489	rpm
Coppia / Torque	481,03	Nm



CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

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

Motore / Motor	TCN 280S4	
Potenza nominale / Rated power	75,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	130,99	A
Velocità / Speed	1489	rpm
Coppia / Torque	481,03	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)

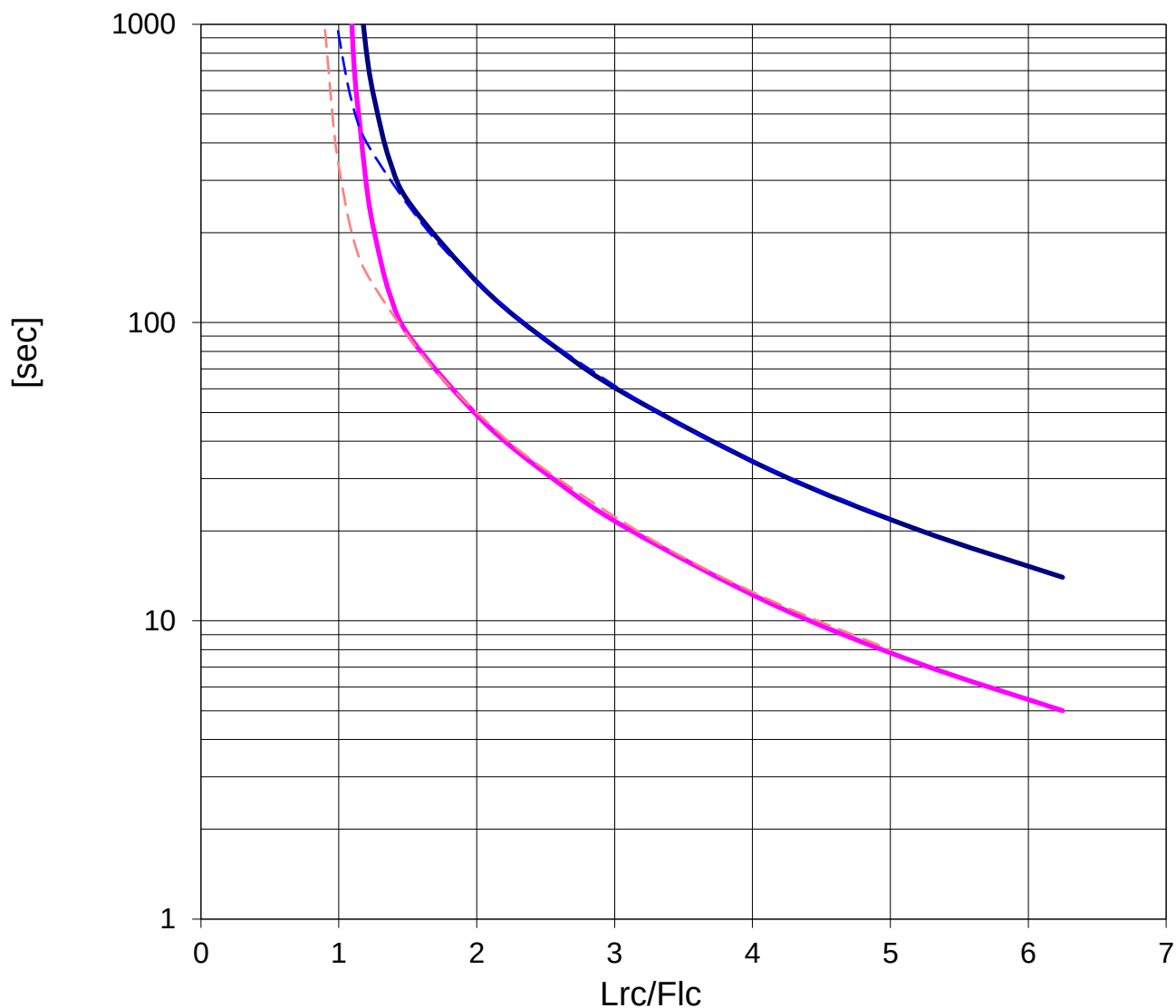
Ciente / Customer -
Impianto / Plant -
ITEM -
Numero d'offerta / Offer Number -

Motore / Motor

TCN 280S4

Potenza nominale / Rated power	75,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	130,99	A
Velocità / Speed	1489	rpm
Coppia / Torque	481,03	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 29-giu-22