

PRODUCT INFORMATION PACKET

Model No: E3TI3004285B35D41100

Catalog No: E3TI3004285B35D41100

Made in Italy TCI Series, General Purpose Low Voltage IEC motor, Safe Area, 90,00 kW, 3 phase,
1489 RPM, D400/Y690V 50Hz, 280MA Frame B35, 4 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	154.7 A	Speed	1489 rpm
Service Factor	1	Phase	3
Efficiency	95.2 %	Power Factor	0.88
Duty	S1	Insulation Class	F
Frame	280MA	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

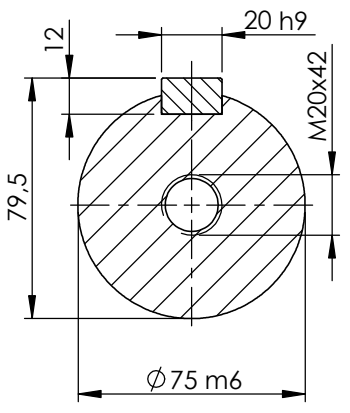
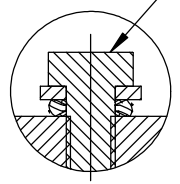
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	4	Rotation	Bi-Directional
Mounting	B35	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1111.00 mm	Frame Length	600.00 mm
Shaft Diameter	75.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B3A04T8280011D01

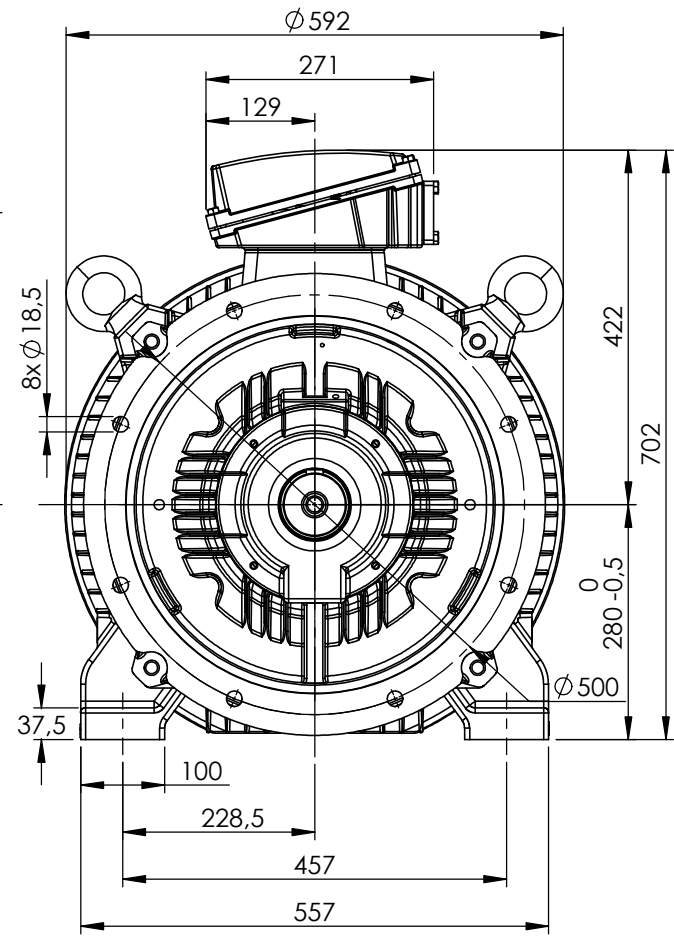
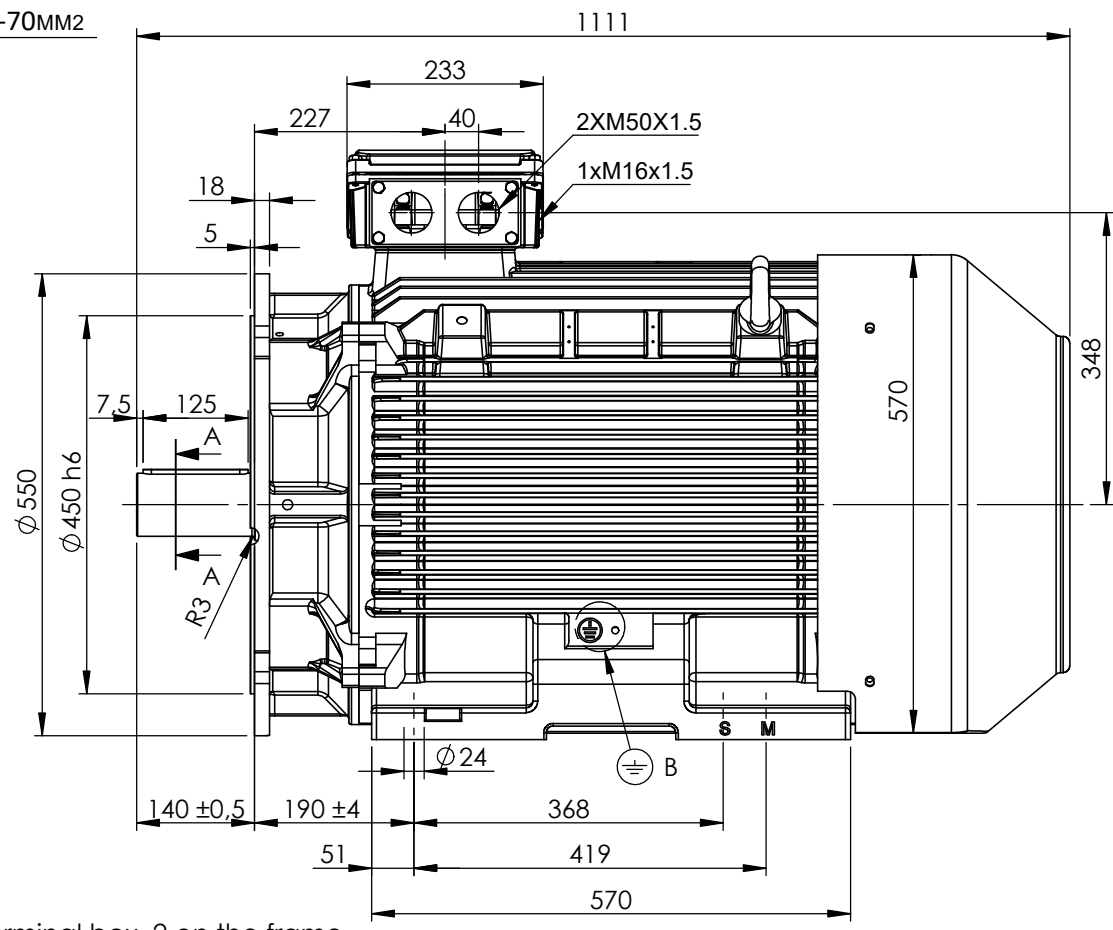
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EARTH TERMINAL
SUITABLE FOR CABLE
SECTION 10-70MM²

DETAIL B



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 10/05/2022
ECO	APPROVED BY LP	DATE 11/05/2022

TOLERANCES (EXCEPT AS NOTED)
TOLERANCES: ±2
* TOLERANCES: ±0.8
DIMENSIONS ARE IN mm
ACCORDING TO IEC 60072

DRAWN BY TN
DATE 30/11/2021
APPROVED BY LP
DATE 01/12/2021
REFERENCE



DESCRIPTION Motor 280 4-6P TC (L) B35

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SERIAL NUMBER

FIRST ANGLE PROJECTION

SIZE
A4

DRAWING NUMBER B3A04T8280011D01	SHEET 1 OF 2
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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**



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	
R4 - R5 - R6 (II sensore - <i>sensor</i>)	3	Termistore PT100 3 fili - <i>Thermistor PT 100 with 3 wires</i>
R7 - R8 - R9 (III sensore - <i>sensor</i>)	3	
R11 - R12 - R13 (anteriore - <i>DE</i>)	3	
R21 - R22 - R23 (posteriore - <i>NDE</i>)	3	Termistore PT100 su cuscinetto - <i>Thermistor PT 100 on bearing</i>
TB1 - TB2 (allarme- <i>warning</i>)	2	Protettore bimetallico normalmente chiuso -
TB3 - TB4 (intervento- <i>switch off</i>)	2	<i>Normally closed bi-metallic switch (**)</i>
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 -
TM3 - TM4 (intervento- <i>switch off</i>)	2	<i>Normally open bi-metallic switch (**)</i>
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 280MA4
3	Numero di serie / Serial Number		
4	Forma costruttiva / Shape		B35
5			
6			
Dati nominali / Rated data			
7	Poli / Pole	n°	4
8	Potenza nominale / Rated power	kW	90,00
9	Corrente nominale / Rated current	A	156,85
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
18	Giri / Speed	1/min	1489
19	Corr. / Curr.	A	156,85
20	Rend / Eff	%	95,2
21	cos φ	-	0,87
Performances all'avviamento / Starting performances			
22	Ia/In - LRC/FLC	%	600
23	Cosphi a rotore bloccato / LR power factor		0,38
	Tempo a rotore bloccato / LRWT		
24	100% Un (A caldo / Warm)	sec	7
25	(A freddo / Cold)	sec	18
26	80% Un (A caldo / Warm)	sec	10
27	(A freddo / Cold)	sec	28
	Tempo di avviamento ammissibile / ART		
28	100% Un	sec	16
29	80% Un	sec	24
Curva di coppia / Speed-torque values			
30	Coppia nominale / Rated Torque	Nm	577,23
31	Ca/Cn - LRT/FLT	%	205
32	Cmax/Cn - BDT/FLT	%	240
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	783
52	Momento d'inerzia / Moment of inertia	kgm2	4,5070
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			
58			
59			
60			
61			
62			
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			

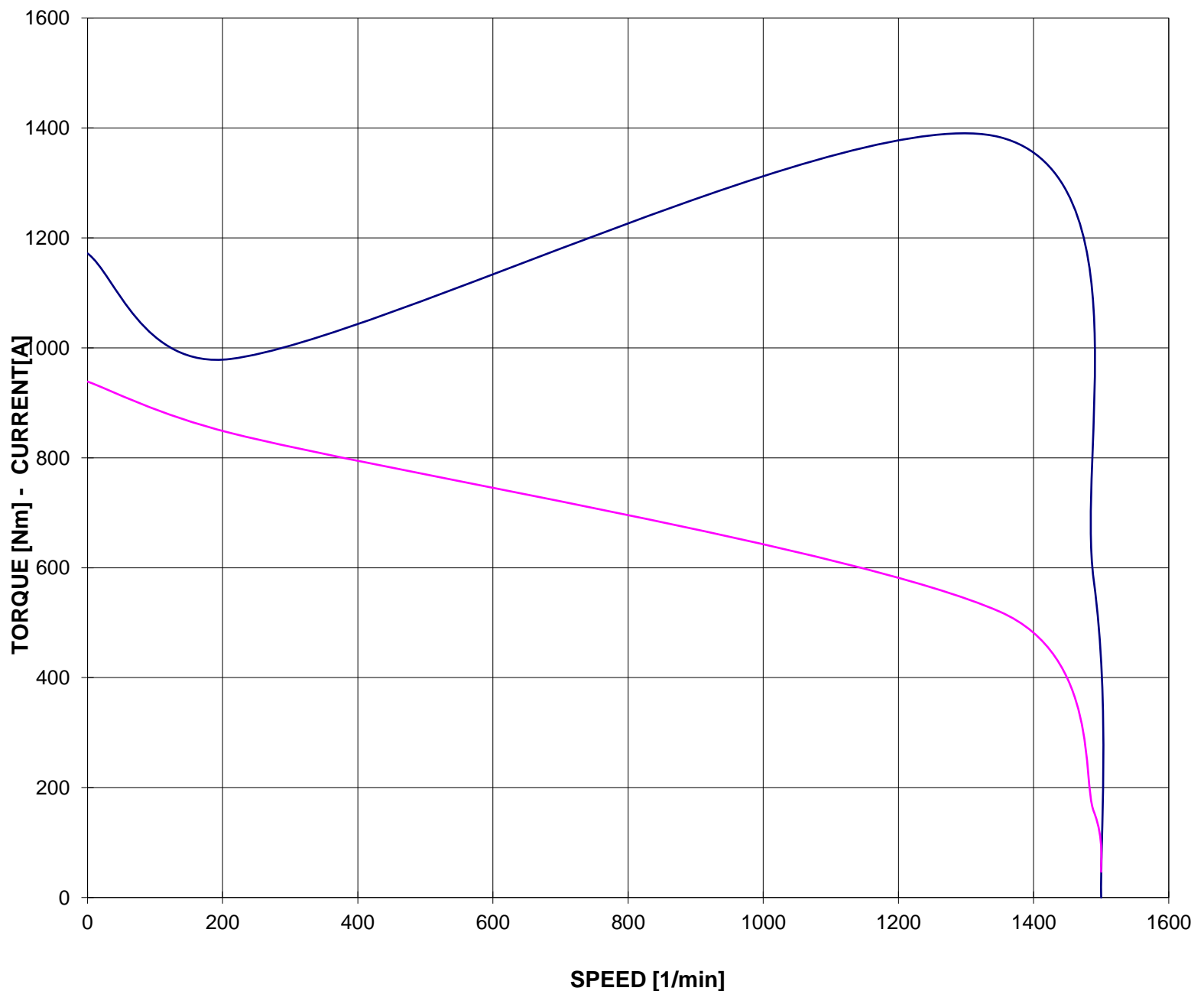
Documento preliminare - Preliminary data sheet

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

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

Motore / Motor **TCI 280MA4**
 Potenza nominale / Rated power 90,00 kW
 Poli / Pole 4
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
 Corrente / Rated current 156,85 A
 Velocità / Speed 1489 rpm
 Coppia / Torque 577,23 Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



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

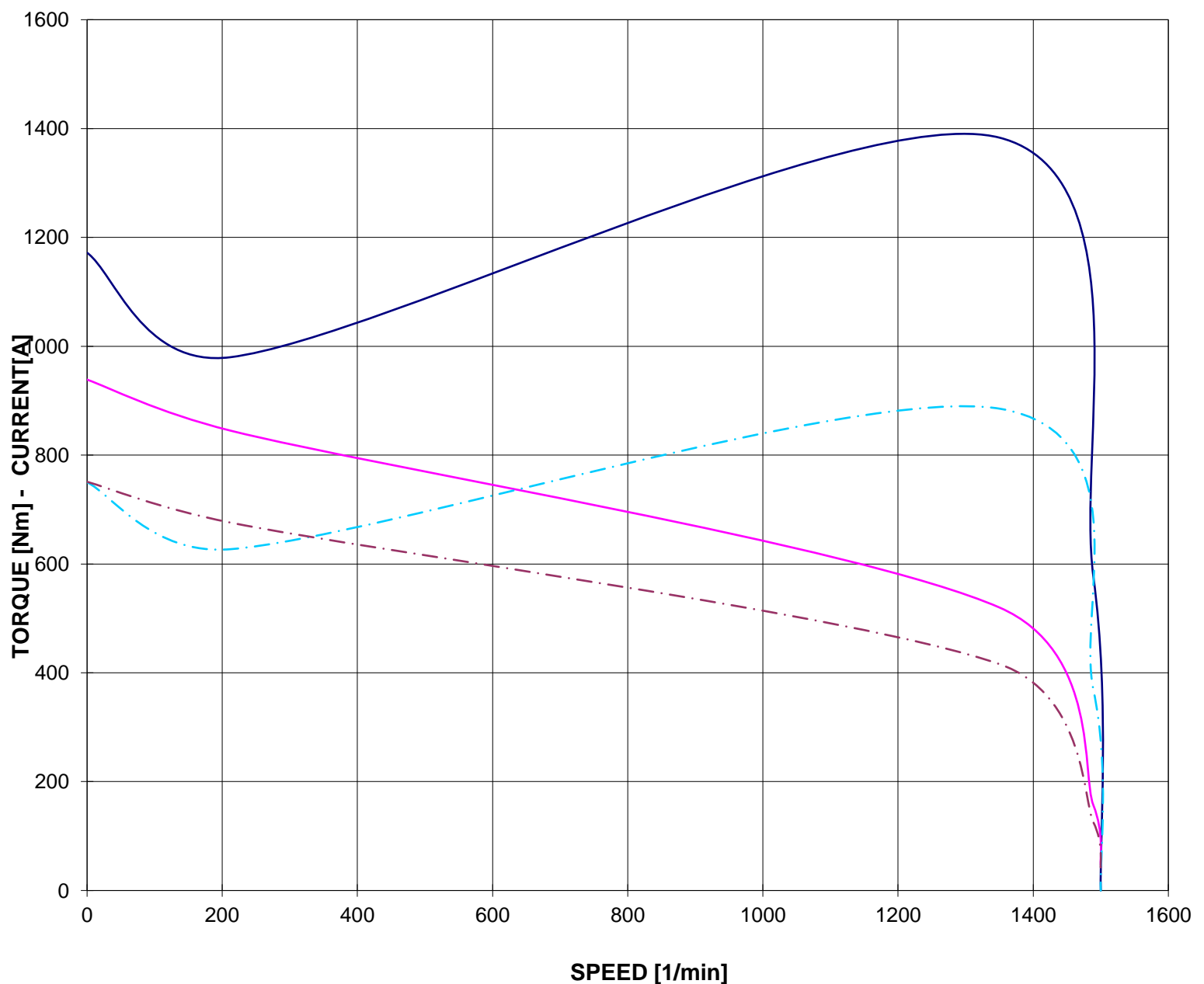
Data / Date 24-feb-22

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 280MA4**
Potenza nominale / Rated power 90,00 kW
Poli / Pole 4
Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
Corrente / Rated current 156,85 A
Velocità / Speed 1489 rpm
Coppia / Torque 577,23 Nm

— COPPIA - TORQUE — CORRENTE - CURRENT
- - - COPPIA - TORQUE 80% Un - - - CORRENTE - CURRENT 80% Un



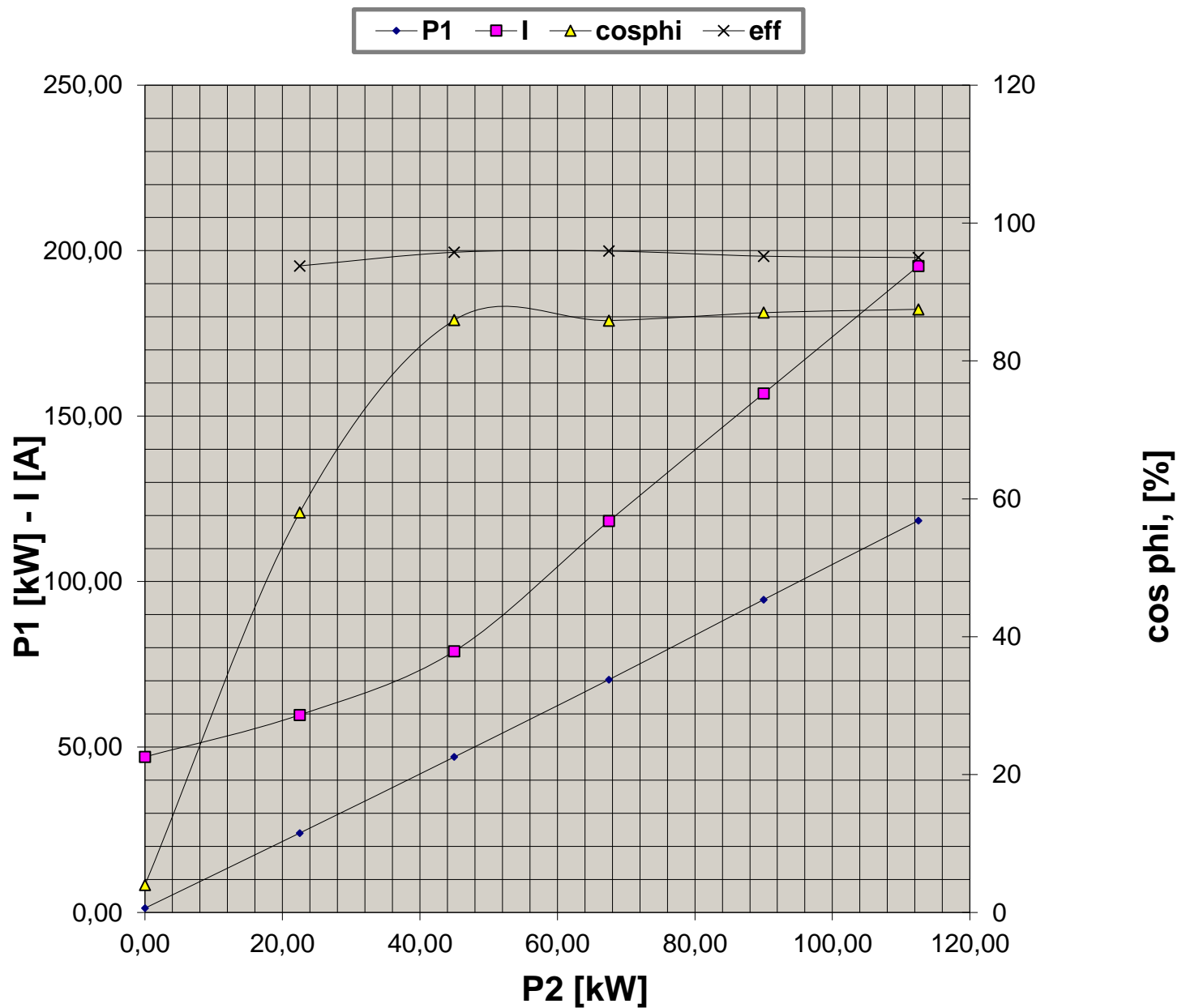
Valori calcolati - Data obtained by calculation method
Documento preliminare - Preliminary document

Data / Date 24-feb-22

**CURVE CARATTERISTICHE
PERFORMANCE CURVES**

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

Motore / Motor **TCI 280MA4**
 Potenza nominale / Rated power 90,00 kW
 Poli / Pole 4
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
 Corrente / Rated current 156,85 A
 Velocità / Speed 1489 rpm
 Coppia / Torque 577,23 Nm



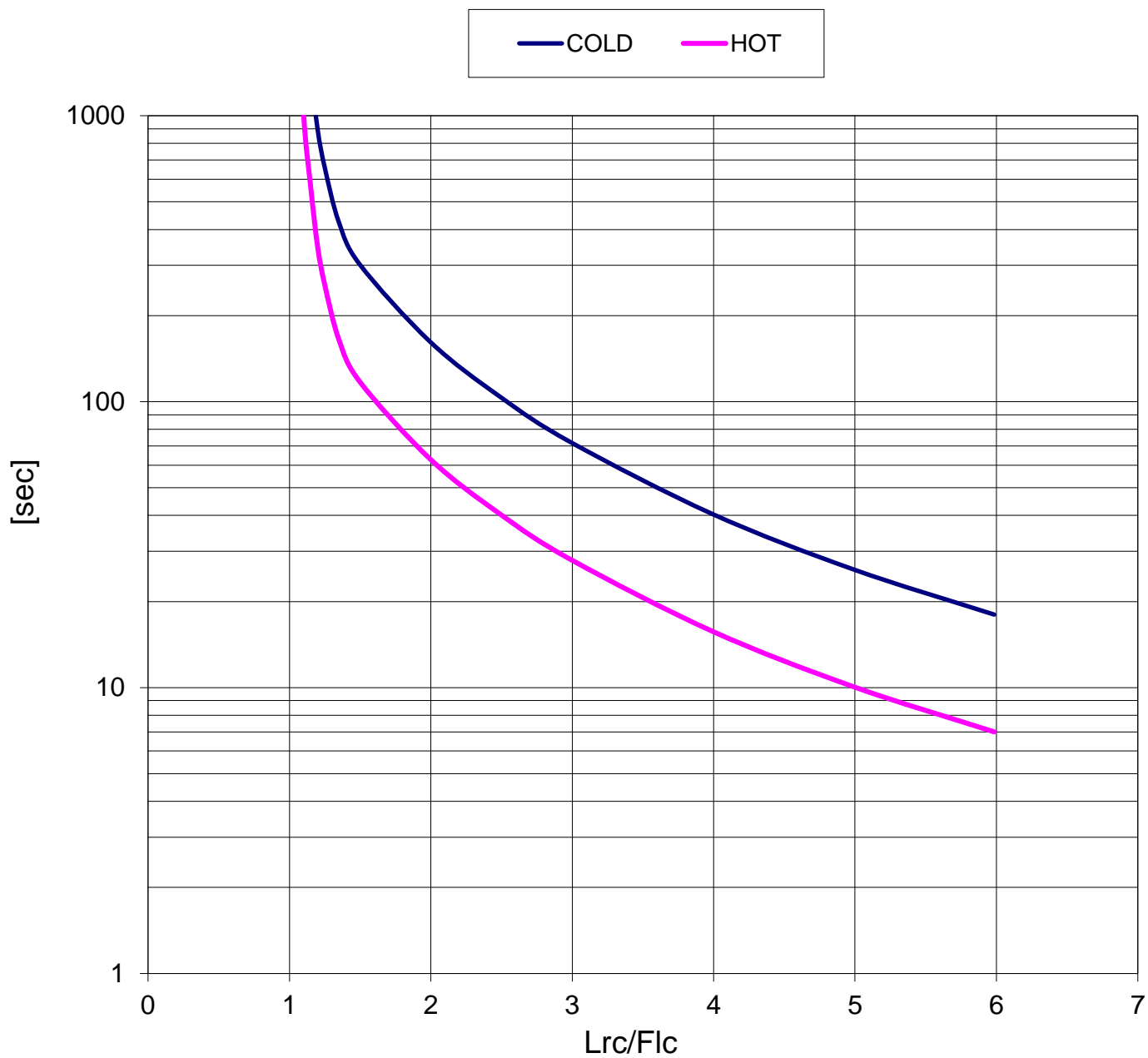
Valori calcolati - Data obtained by calculation method
 Documento preliminare - Preliminary document

Data / Date 24-feb-22

**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 280MA4**
 Potenza nominale / Rated power 90,00 kW
 Poli / Pole 4
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz
 Corrente / Rated current 156,85 A
 Velocità / Speed 1489 rpm
 Coppia / Torque 577,23 Nm



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

Data / Date 24-feb-22

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 280MA4	
Potenza nominale / Rated power	90,00	kW
Poli / Pole	4	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	156,85	A
Velocità / Speed	1489	rpm
Coppia / Torque	577,23	Nm

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

