

PRODUCT INFORMATION PACKET

Model No: E3TI3006163B30D41100

Catalog No: E3TI3006163B30D41100

Made in Italy TCI Series, General Purpose Low Voltage IEC motor, Safe Area, 7,50 kW, 3 phase,
976 RPM, D400/Y690V 50Hz, 160M Frame B3, 6 Poles, IC411



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Nameplate Specifications

Output HP	10 Hp	Output KW	7.5 kW
Frequency	50 Hz	Voltage	400/690 V
Current	14.9 A	Speed	976 rpm
Service Factor	1	Phase	3
Efficiency	89.1 %	Power Factor	0.82
Duty	S1	Insulation Class	F
Frame	160M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6209
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	1	Efficiency Class	IE3

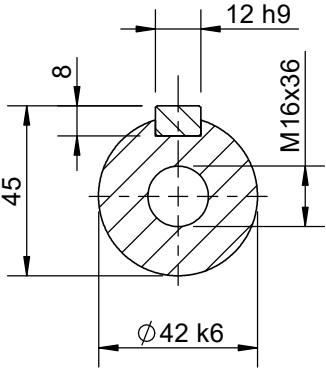
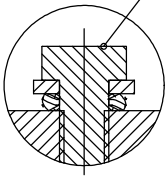
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	6	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	622.00 mm	Frame Length	254.00 mm
Shaft Diameter	42.000 mm	Shaft Extension	110 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B3A04T8165001A01

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Earth Terminal
suitable for cable
section 2.5-35mm²

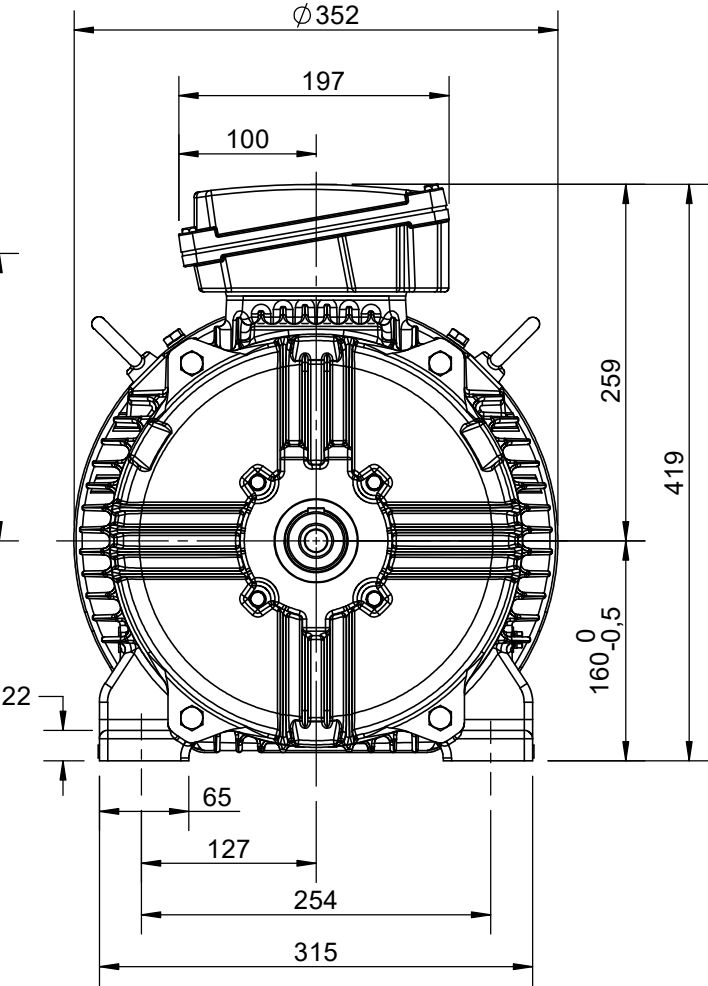
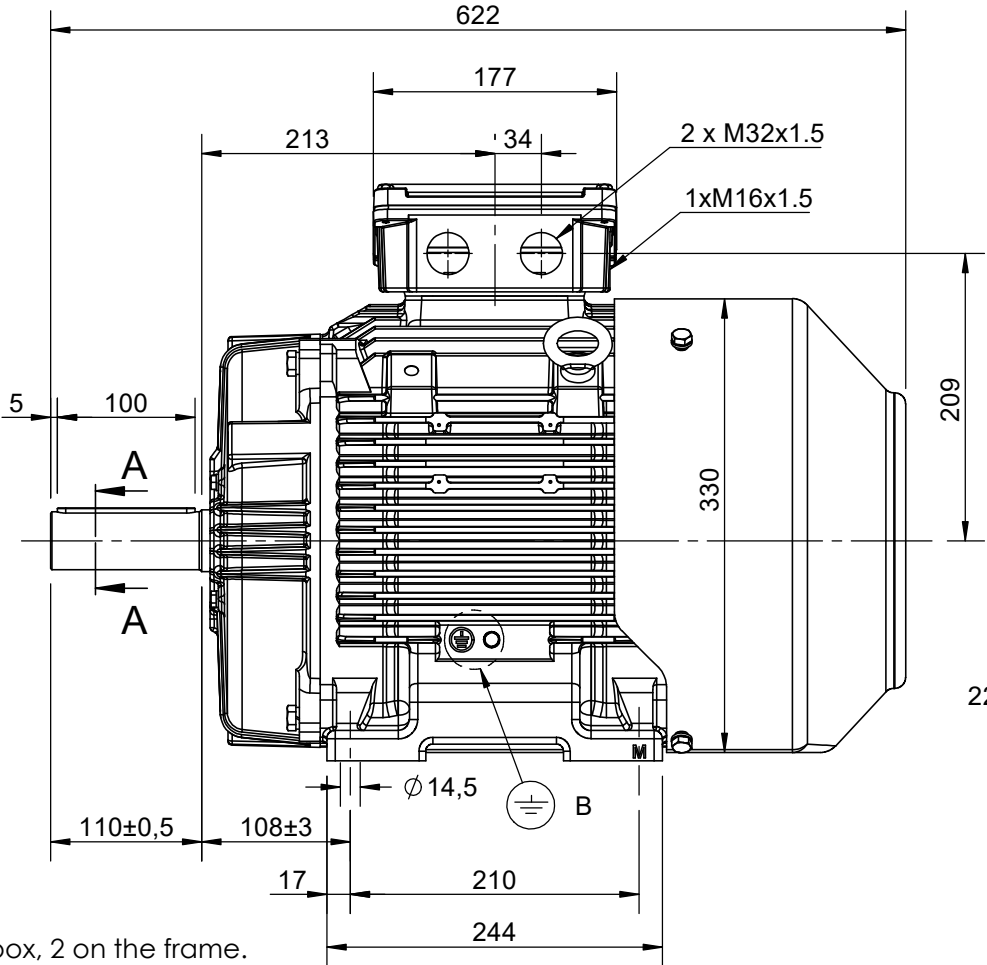
DETAIL B



SECTION A-A
SCALE 1:2



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



CUSTOMER REFERENCE AND ADDITIONAL INFORMATION:

MOTOR TYPE AND DESCRIPTION:

DRAWING REVISION	REVISION BY	DATE	TOLERANCES (EXCEPT AS NOTED) TOLERANCES: ±2	DRAWN BY	TN	 			
ECO	APPROVED BY	DATE		DATE	9/11/2021				
ECO DESCRIPTION				DIMENSIONS ARE IN mm ACCORDING TO IEC 60072	APPROVED BY	LP	DESCRIPTION Motor 160 TC (S) B3		
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			SERIAL NUMBER		REFERENCE	SIZE			DRAWING NUMBER
				FIRST ANGLE PROJECTION		A4	B3A04T8165001A01	1 OF 2	

Motor 160 TC (S) B3

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	
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	-
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		-
2	Motore tipo / Motor type		TCI 160M6
3	Numero di serie / Serial Number		
4	Forma costruttiva / Shape		B3
5			
6			
Dati nominali / Rated data			
7	Poli / Pole	n°	6
8	Potenza nominale / Rated power	kW	7,50
9	Corrente nominale / Rated current	A	14,9
10	Velocità nominale / Full Load speed	1/min	976
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	976
19	Corr. / Curr.	A	14,9
20	Rend / Eff	%	89,1
21	cos φ	-	0,82
Performances all'avviamento / Starting performances			
22	Ia/In - LRC/FLC	%	565
23	Cosphi a rotore bloccato / LR power factor		0,45
	Tempo a rotore bloccato / LRWT		
24	100% Un (A caldo / Warm)	sec	9
25	(A freddo / Cold)	sec	20
26	80% Un (A caldo / Warm)	sec	14
27	(A freddo / Cold)	sec	32
	Tempo di avviamento ammissibile / ART		
28	100% Un	sec	18
29	80% Un	sec	28
Curva di coppia / Speed-torque values			
30	Coppia nominale / Rated Torque	Nm	73,39
31	Ca/Cn - LRT/FLT	%	180
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	- 6309 ZZ C3
45	Cuscinetto post / NDE bearing	- 6209 ZZ C3
46	Carico radiale max / Max radial load in X1	N 2711
47	Carico assiale max / Max axial load	N 2087
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 140
52	Momento d'inerzia / Moment of inertia	kgm2 0,1374
53	Rumore a vuoto / Noise at no load (1 m)	Lp dB(A) 67
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 2xM32+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	-
77		

Documento preliminare - Preliminary data sheet

Prepared by : MP

Tolleranze secondo - Tolerances according IEC 60034-1

Rev. 0

Data / Date

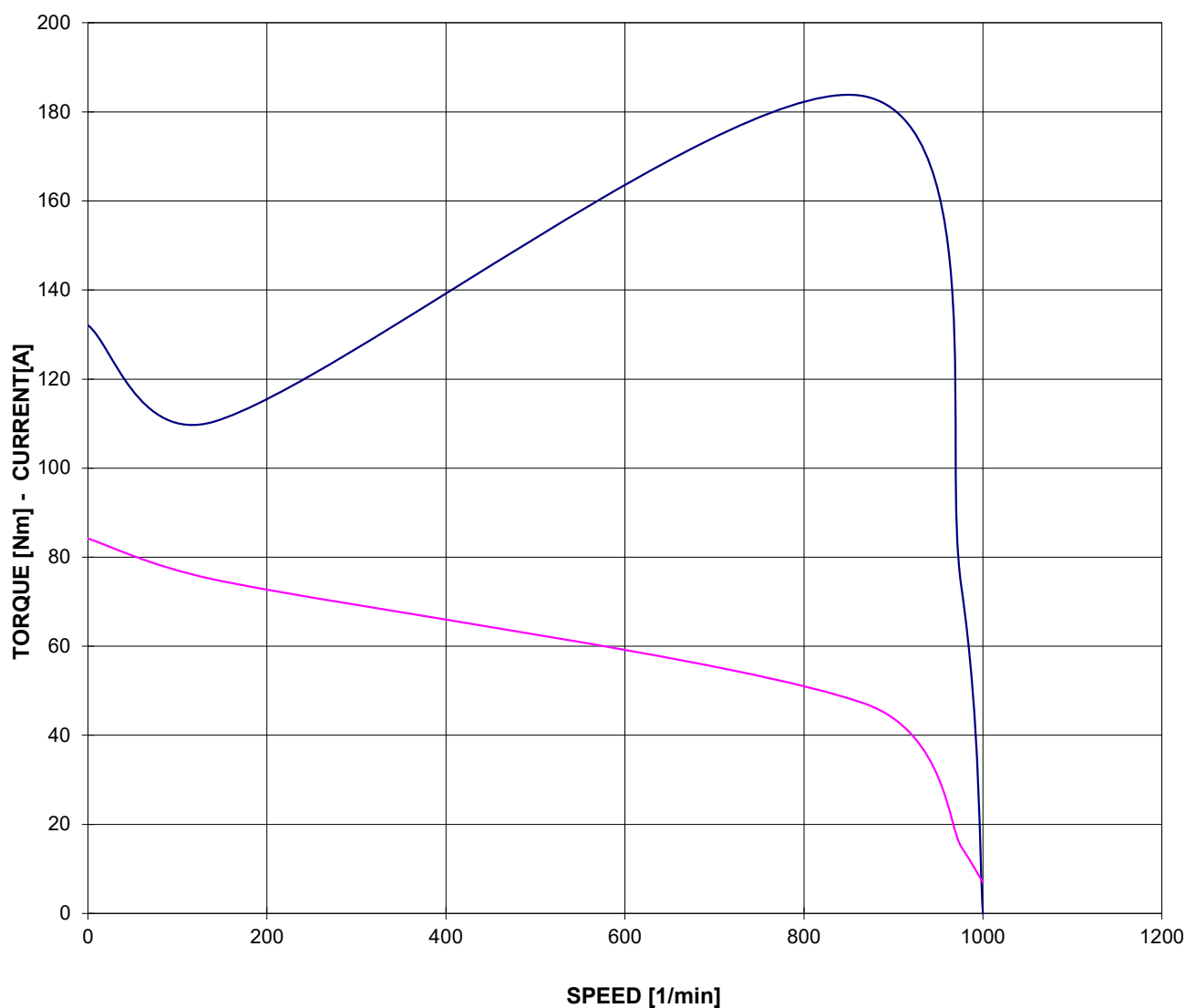
1 March 2021

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 160M6	
Potenza nominale / Rated power	7,50	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14,90	A
Velocità / Speed	976	rpm
Coppia / Torque	73,39	Nm

— COPPIA - TORQUE — CORRENTE - CURRENT



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

Data / Date 01-mar-21

CURVA COPPIA/CORRENTE-GIRI (Tensione ridotta)

TORQUE/CURRENT-SPEED DIAGRAM (Reduced voltage)

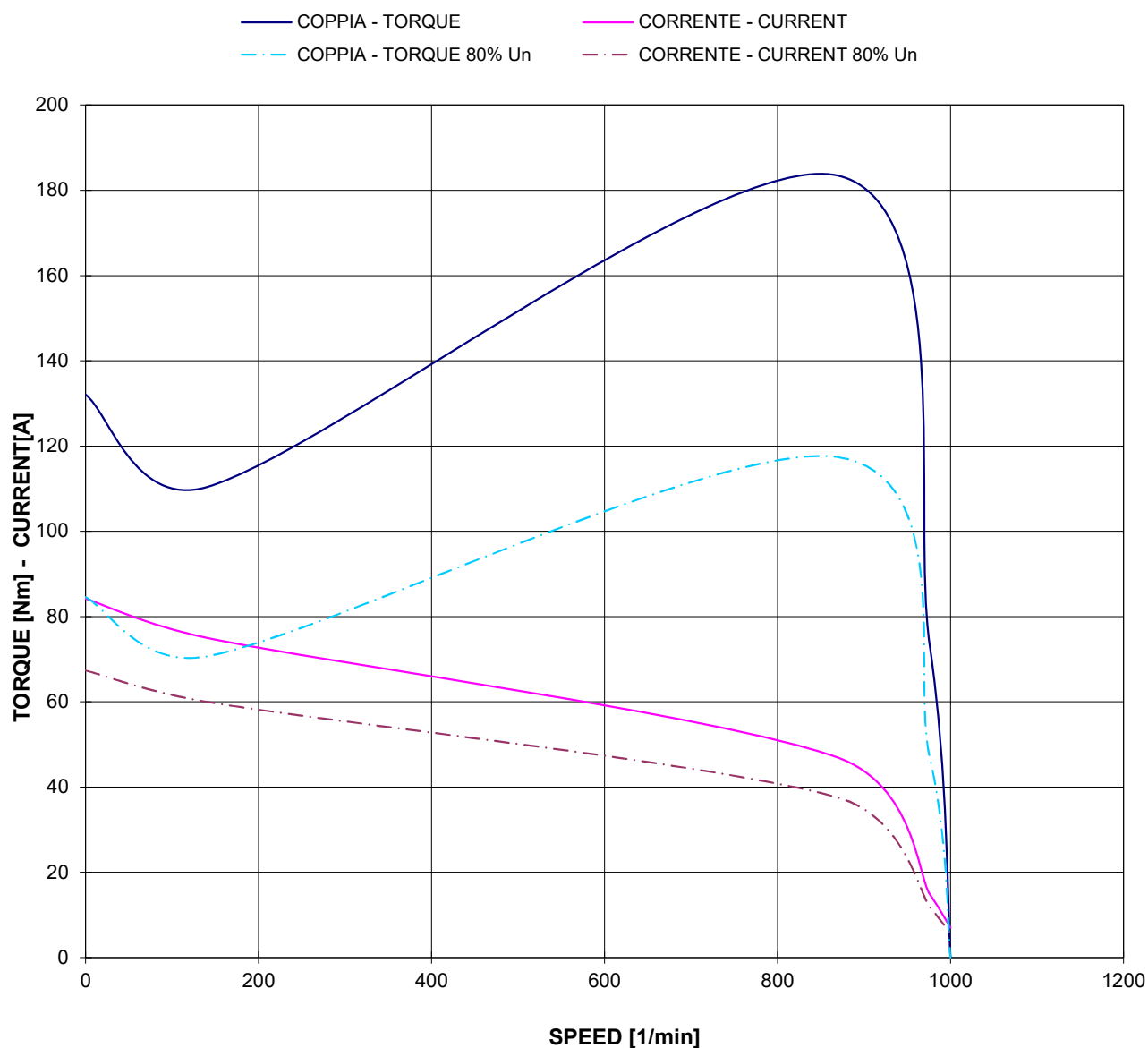
Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -

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

Motore / Motor

TCI 160M6

Potenza nominale / Rated power	7,50	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14,90	A
Velocità / Speed	976	rpm
Coppia / Torque	73,39	Nm



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

Data / Date 01-mar-21

CURVE CARATTERISTICHE PERFORMANCE CURVES

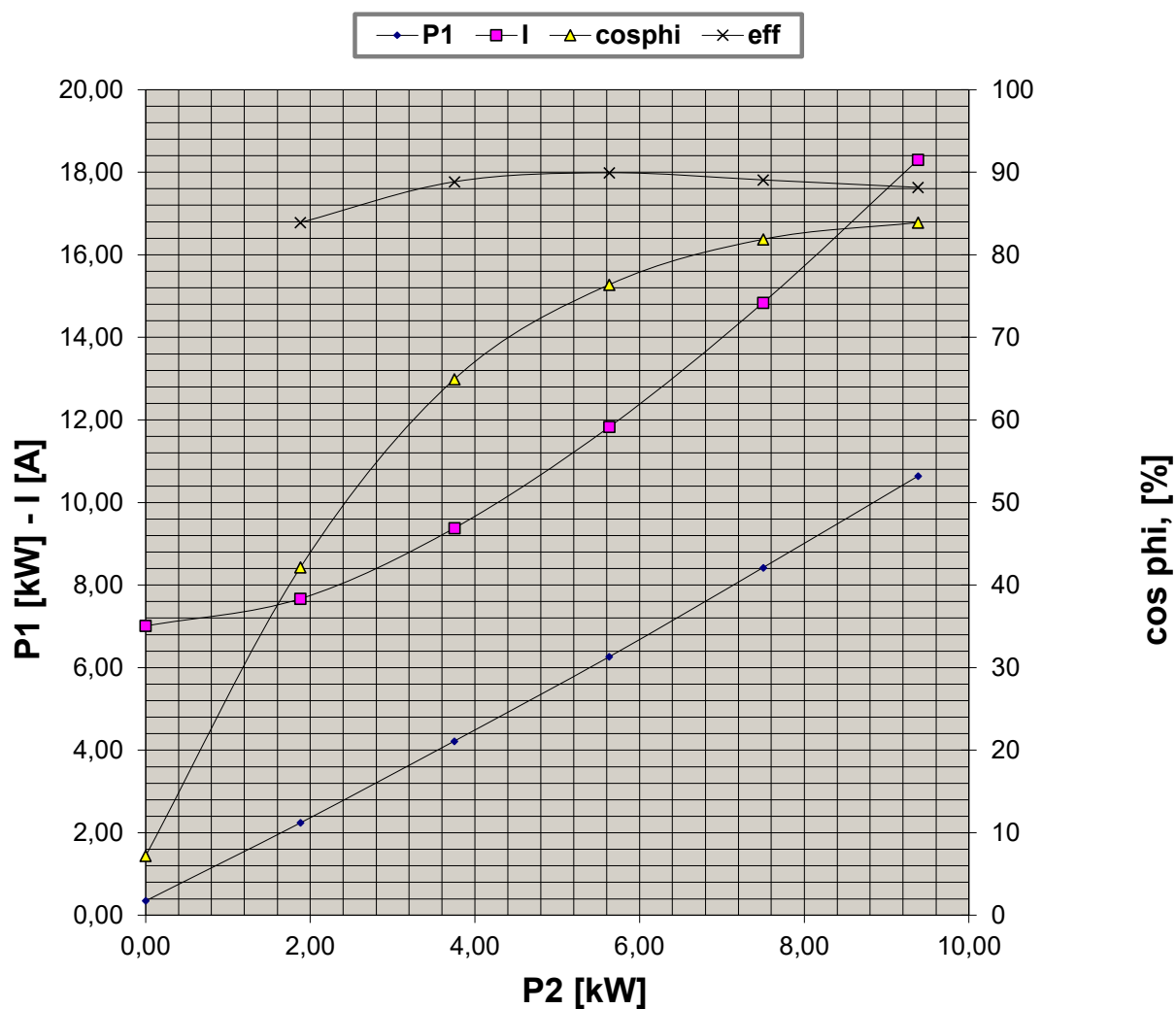
Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -

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

Motore / Motor

TCI 160M6

Potenza nominale / Rated power	7,50	kW
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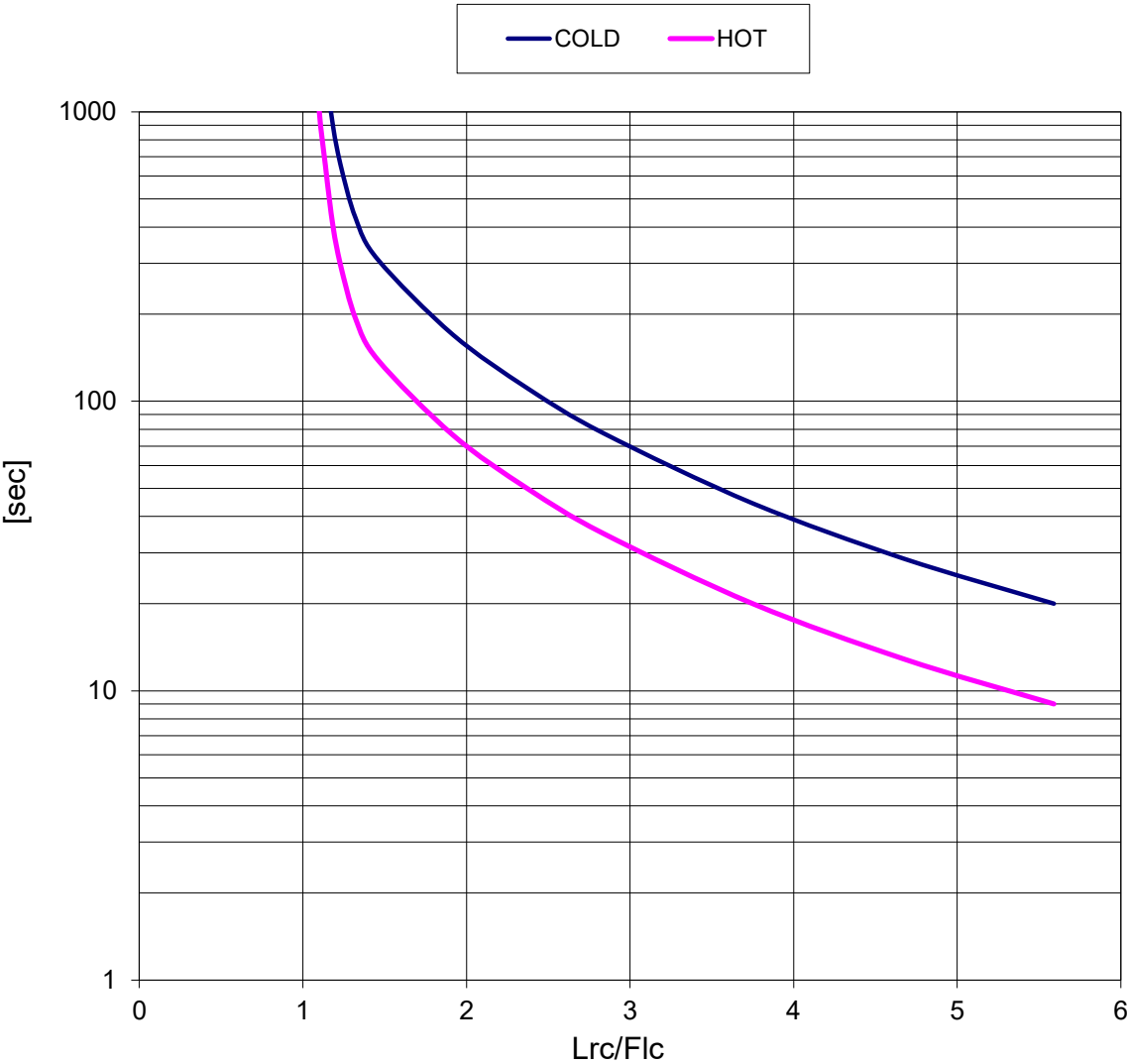


CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

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

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

Motore / Motor	TCI 160M6	
Potenza nominale / Rated power	7,50	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14,90	A
Velocità / Speed	976	rpm
Coppia / Torque	73,39	Nm



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

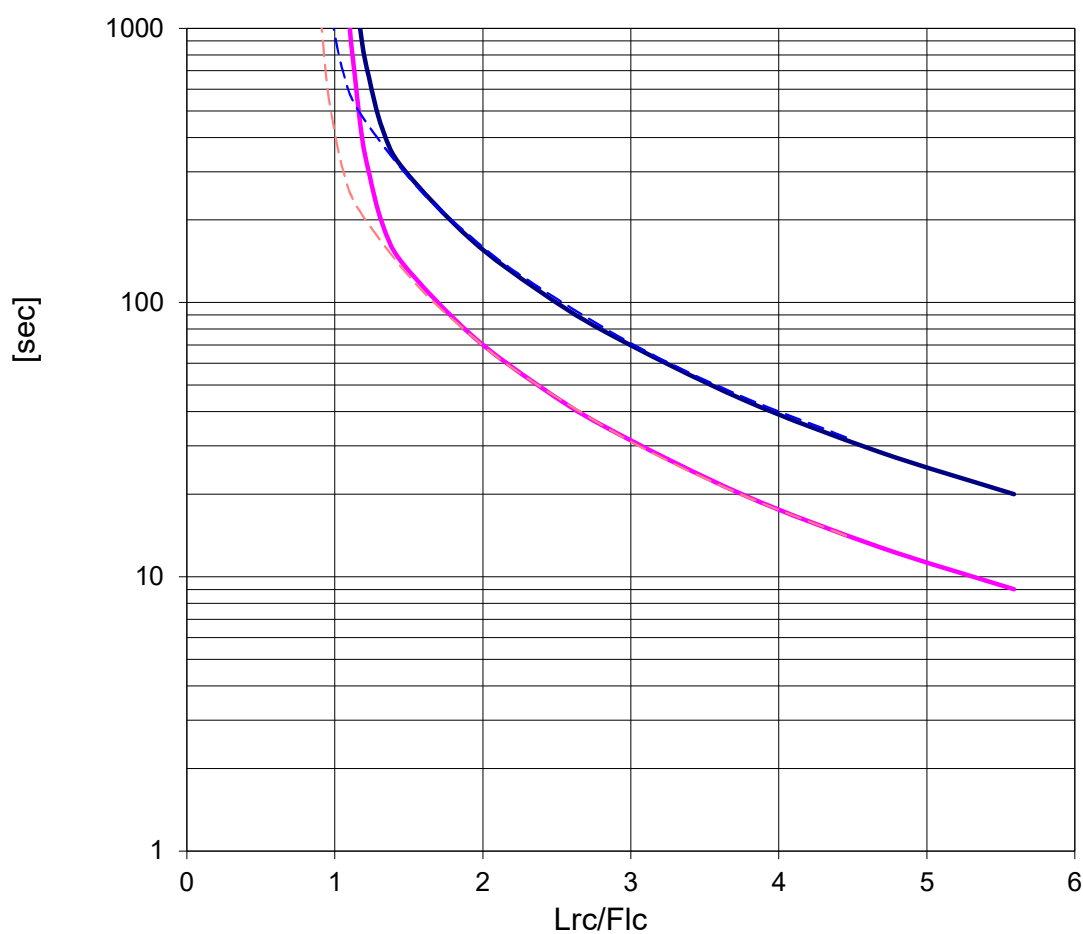
Cliente / Customer -
 Ordine cliente / Customer order -
 Impianto / Plant -
ITEM -

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

Motore / Motor**TCI 160M6**

Potenza nominale / Rated power	7,50	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	14,90	A
Velocità / Speed	976	rpm
Coppia / Torque	73,39	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 01-mar-21