

PRODUCT INFORMATION PACKET

Model No: E3TN3002313B30D41100

Catalog No: E3TN3002313B30D41100

Made in Italy TCN Series, General Purpose Low Voltage IEC motor, Increased Safety, 132,00 kW,
3 phase, 2983 RPM, D400/Y690V 50Hz, 315MB Frame B3, 2 Poles, IC411



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Nameplate Specifications

Output HP	175 Hp	Output KW	132.0 kW
Frequency	50 Hz	Voltage	400/690 V
Current	223.7 A	Speed	2983 rpm
Service Factor	1	Phase	3
Efficiency	95.5 %	Power Factor	0.89
Duty	S1	Insulation Class	F
Frame	315MB	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6316
UL	No	CSA	No
CE	Yes	IP Code	IP55
Number of Speeds	1		

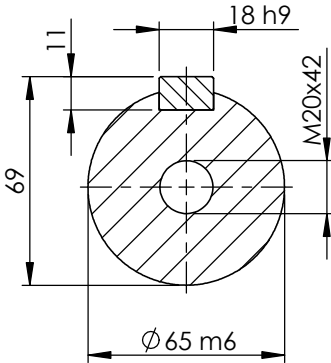
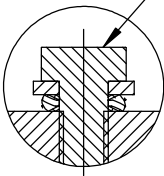
Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B3	Motor Orientation	Horizontal
Drive End Bearing	C3	Opp Drive End Bearing	C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	1176.00 mm	Frame Length	729.00 mm
Shaft Diameter	65.000 mm	Shaft Extension	140 mm
Assembly/Box Mounting	Top		
Connection Drawing	SC-01-T-1v-1a	Outline Drawing	B3A04T8315001A01

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EARTH TERMINAL
SUITABLE FOR CABLE
SECTION 10-70MM2

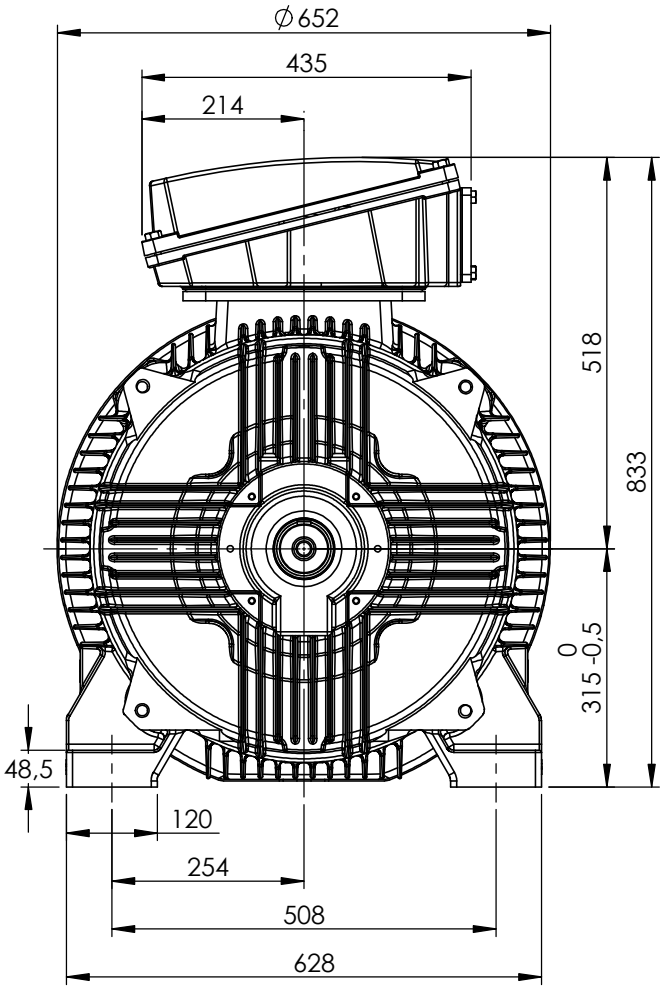
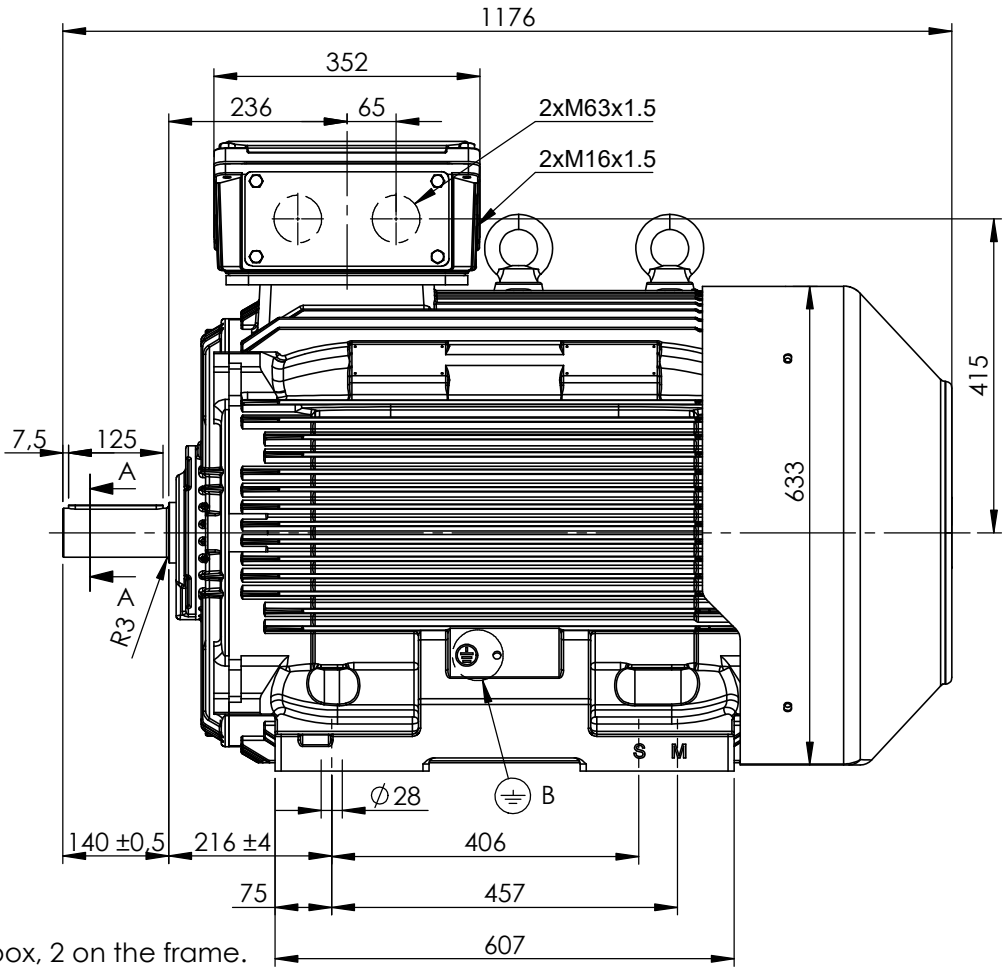
DETAIL B



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		REVISION BY		DATE		TOLERANCES (EXCEPT AS NOTED)		DRAWN BY		REGALTM cemp DESCRIPTION Motor 315 2P TC (S/M) B3					
1		TN		13/05/2022		TOLERANCES: ±2		TN							
ECO		APPROVED BY		DATE		* TOLERANCES: ±0.8		DATE							
		LP		16/05/2022		DIMENSIONS ARE IN mm		01/12/2021							
ECO DESCRIPTION						ACCORDING TO IEC 60072		APPROVED BY							
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								DATE		02/12/2021					
						SERIAL NUMBER		REFERENCE							
								FIRST ANGLE PROJECTION				SIZE		DRAWING NUMBER	
								A4		B3A04T8315001A01		1 OF 2			

Schema di collegamento - *Connection diagram*
Schemas de branchement - *Schaltplan*
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	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	-
Ordine cliente / Customer order : -	
Item : -	

Conferma ordine / Acknowledgment : N° -	
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 315MB2
3	Numero di serie / Serial Number		
4	Forma costruttiva / Shape		B3
5	Certificato / Certificate	TÜV IT	20 ATEX 103X
6			
Dati nominali / Rated data			
7	Poli / Pole	n°	2
8	Potenza nominale / Rated power	kW	132,00
9	Corrente nominale / Rated current	A	223,67
10	Velocità nominale / Full Load speed	1/min	2983
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	2983
19	Corr. / Curr.	A	223,67
20	Rend / Eff	%	95,5
21	cos φ	-	0,89
Performances all'avviamento / Starting performances			
22	Ia/In - LRC/FLC	%	710
23	Cosphi a rotore bloccato / LR power factor		0,26
	Tempo a rotore bloccato / LRWT		
24	100% Un (A caldo / Warm)	sec	3
25	(A freddo / Cold)	sec	27
26	80% Un (A caldo / Warm)	sec	4
27	(A freddo / Cold)	sec	42
	Tempo di avviamento ammissibile / ART		
28	100% Un	sec	24
29	80% Un	sec	37
Curva di coppia / Speed-torque values			
30	Coppia nominale / Rated Torque	Nm	422,59
31	Ca/Cn - LRT/FLT	%	180
32	Cmax/Cn - BDT/FLT	%	315
33			
34			
35			
Varie / Other			
36			
37			
38			
39			

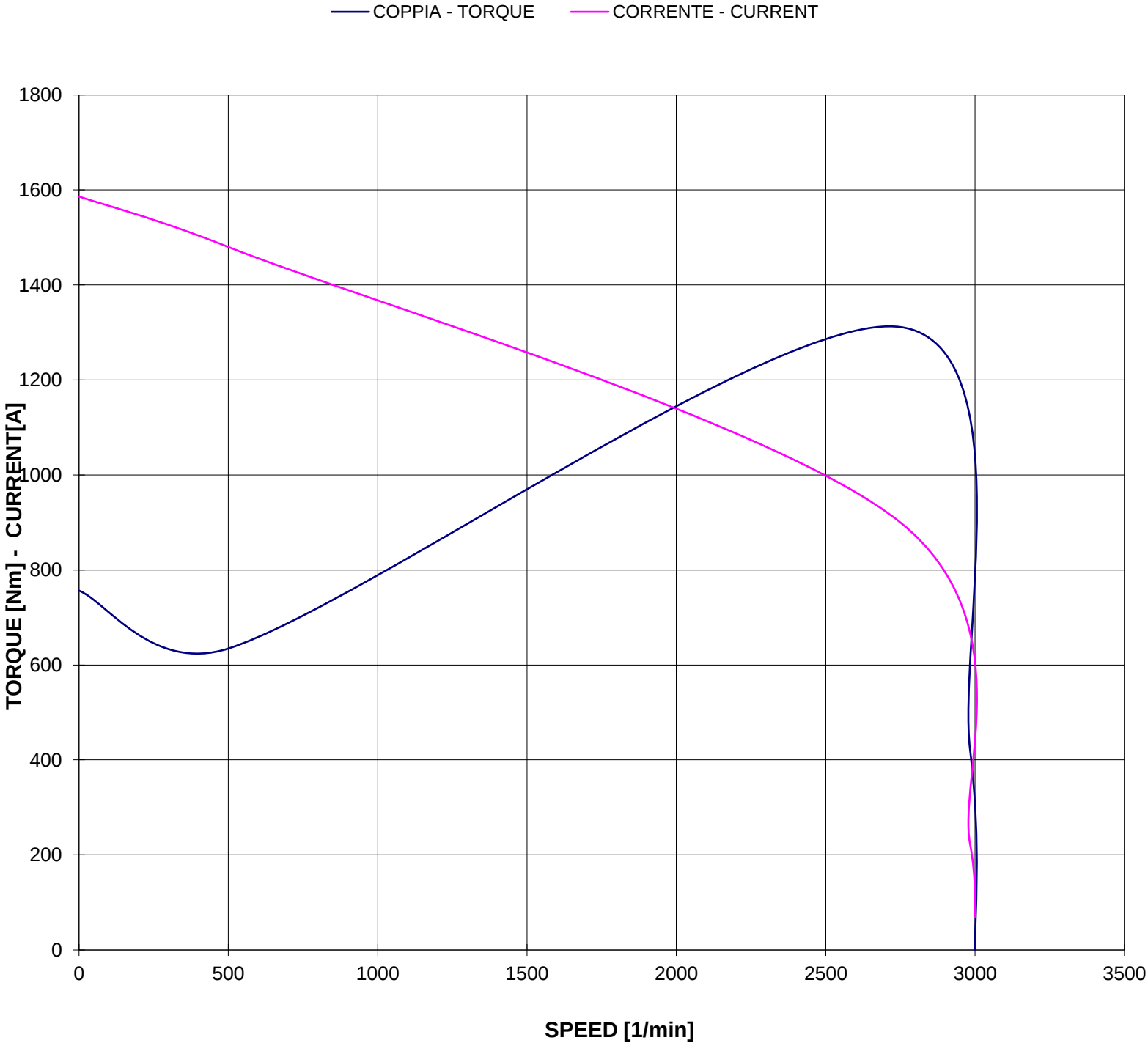
Servizio / Duty		
40	Servizio / Duty type	S1
41	Intermittenza / Cyclic duration factor	-
42	Avviamenti-ora / Starting-hour	-
43	Tempo ciclo / Time	-
Cuscinetti / Bearings		
44	Cuscinetto ant / DE bearing	6316 C3
45	Cuscinetto post / NDE bearing	6316 C3
46	Carico radiale max / Max radial load in X1	5601
47	Carico assiale max / Max axial load	3679
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent
49	Intervallo lubrificazione / Lubrication	1000
50	Quantità grasso / Quantity grease	38
Caratteristiche meccaniche / mechanical specification		
51	Massa / Mass	1007
52	Momento d'inerzia / Moment of inertia	2,3779
53	Rumore a vuoto / Noise at no load (1 m)	84
54	Vibrazioni / Vibration level	A
55	Limite norma / Vibration limit	2,80
56		
57		
Dati entrata cavi - verniciatura / Cable entry and painting		
63	Entrata cavi / Cable entry	2xM63+1xM16
64	Ciclo verniciatura / Painting cycle	STD
65	Colore finale / Final colour	5010
66		
67		
68		
69		
70		
71		
Ausiliari - Auxiliaries		
72	Sonde termiche / Temperature detector	PTC
73	Sonde termiche / Temperature detector	-
74	Scaldiglie / Heaters	-
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	TCN 315MB2	
Potenza nominale / Rated power	132,00	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	223,67	A
Velocità / Speed	2983	rpm
Coppia / Torque	422,59	Nm



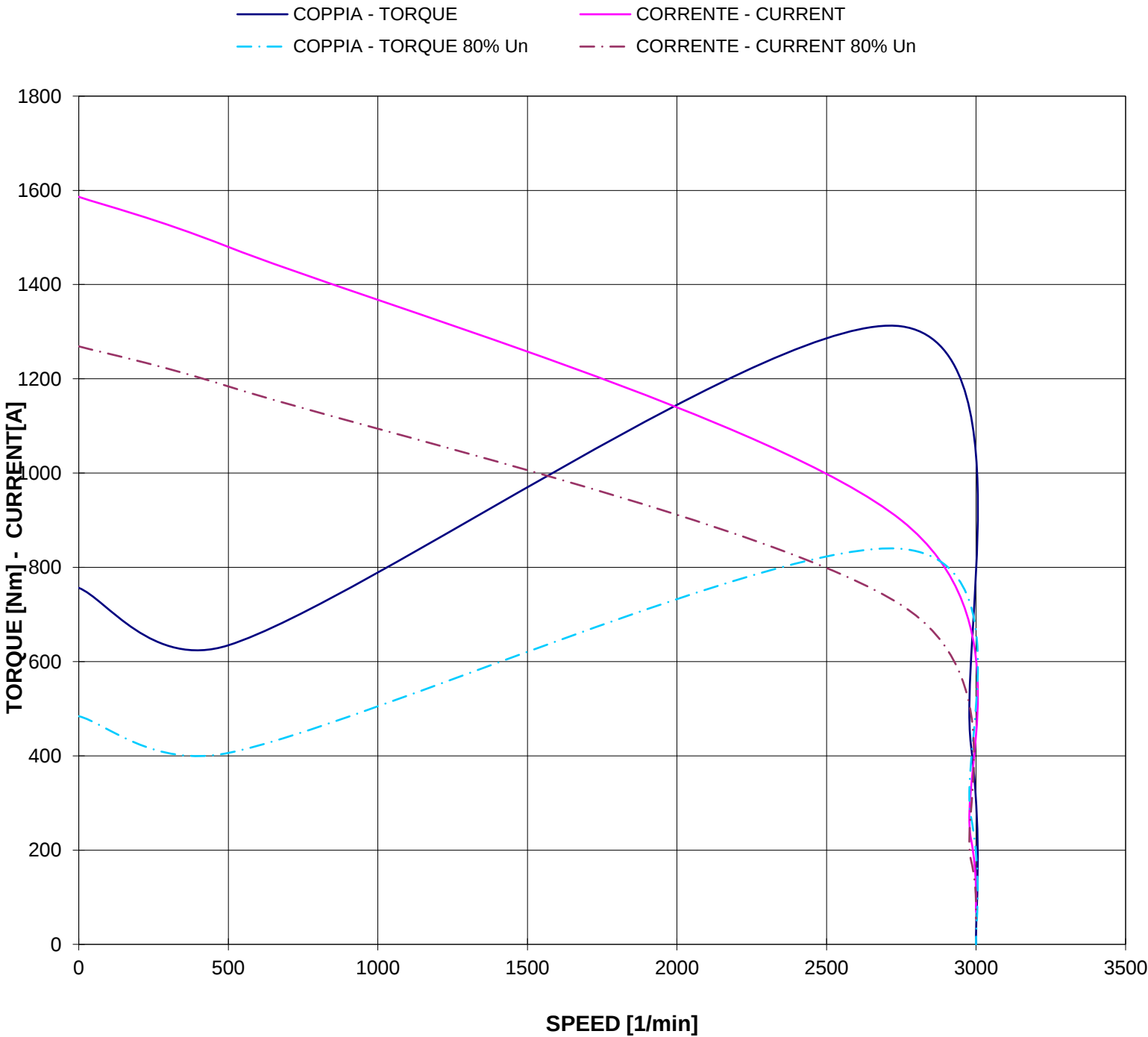


CURVA COPPIA/CORRENTE-GIRI (Tensione ridotta)
TORQUE/CURRENT-SPEED DIAGRAM (Reduced voltage)

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

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

Motore / Motor	TCN 315MB2	
Potenza nominale / Rated power	132,00	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	223,67	A
Velocità / Speed	2983	rpm
Coppia / Torque	422,59	Nm



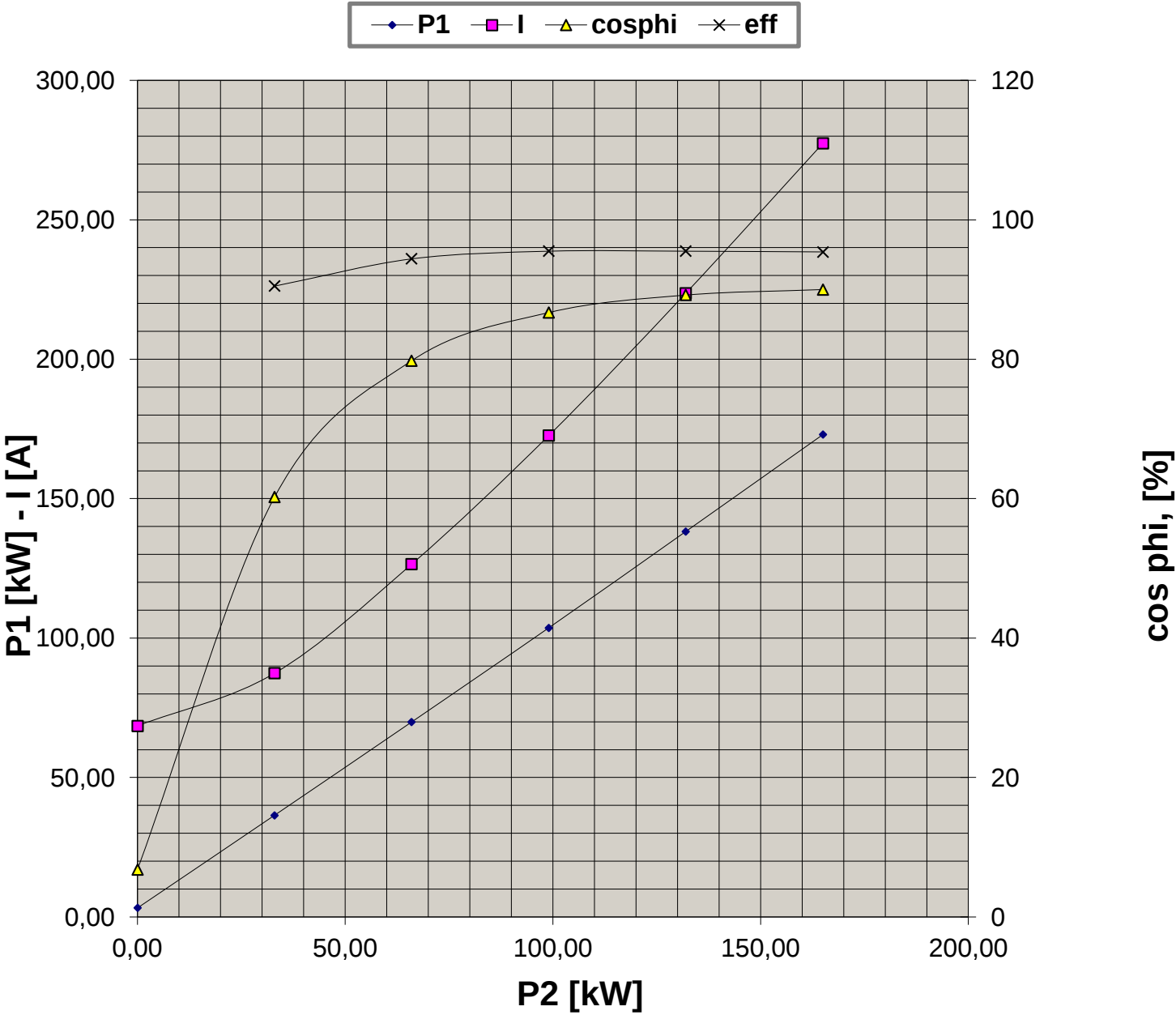


CURVE CARATTERISTICHE
PERFORMANCE CURVES

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

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

Motore / Motor	TCN 315MB2	
Potenza nominale / Rated power	132,00	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	223,67	A
Velocità / Speed	2983	rpm
Coppia / Torque	422,59	Nm



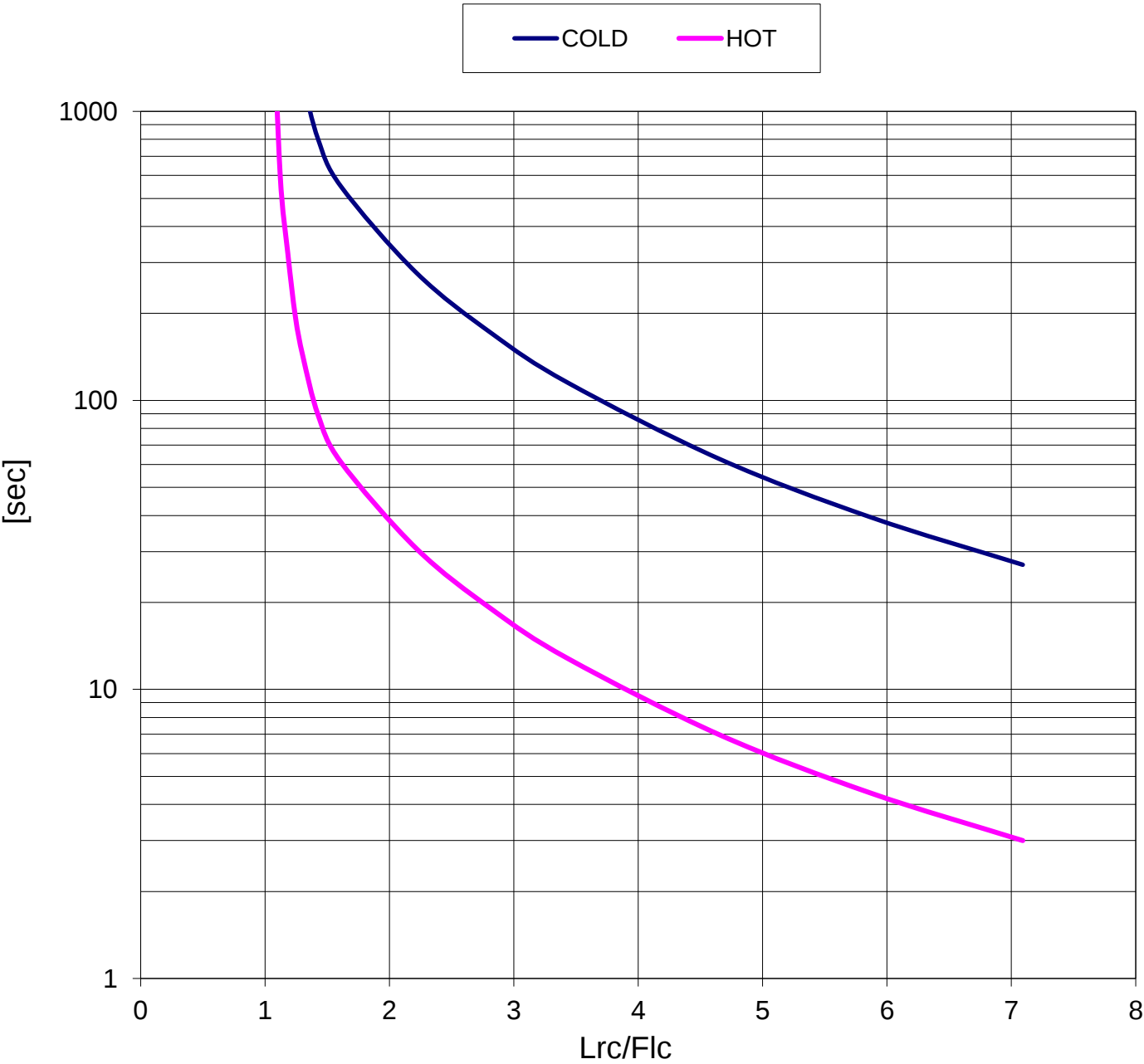


CURVA LIMITE CORRENTE TEMPO
THERMAL WITHSTAND CURVE

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

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

Motore / Motor	TCN 315MB2	
Potenza nominale / Rated power	132,00	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	223,67	A
Velocità / Speed	2983	rpm
Coppia / Torque	422,59	Nm





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

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

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

Motore / Motor	TCN 315MB2	
Potenza nominale / Rated power	132,00	kW
Poli / Pole	2	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	223,67	A
Velocità / Speed	2983	rpm
Coppia / Torque	422,59	Nm

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

