

# PRODUCT INFORMATION PACKET

Model No: E3TI3006315B30D41100

Catalog No: E3TI3006315B30D41100

Made in Italy TCI Series, General Purpose Low Voltage IEC motor, Safe Area, 110,00 kW, 3 phase,  
990 RPM, D400/Y690V 50Hz, 315LA Frame B3, 6 Poles, IC411



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### Nameplate Specifications

Output HP	<b>150 Hp</b>	Output KW	<b>110.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>400/690 V</b>
Current	<b>202.9 A</b>	Speed	<b>990 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>95.3 %</b>	Power Factor	<b>0.82</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>315LA</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6319</b>	Opp Drive End Bearing Size	<b>6319</b>
UL	<b>No</b>	CSA	<b>No</b>
CE	<b>Yes</b>	IP Code	<b>IP55</b>
Number of Speeds	<b>1</b>	Efficiency Class	<b>IE3</b>

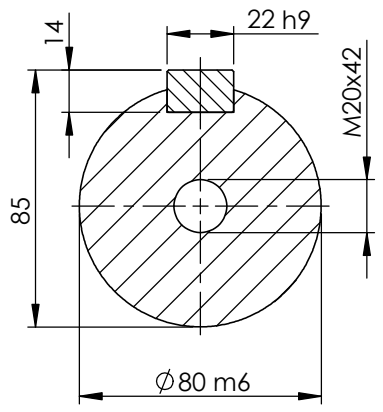
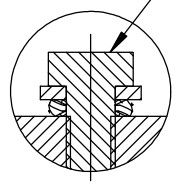
### Technical Specifications

Electrical Type	<b>Squirrel Cage</b>	Starting Method	<b>Direct On Line</b>
Poles	<b>6</b>	Rotation	<b>Bi-Directional</b>
Mounting	<b>B3</b>	Motor Orientation	<b>Horizontal</b>
Drive End Bearing	<b>C3</b>	Opp Drive End Bearing	<b>C3</b>
Frame Material	<b>Cast Iron</b>	Shaft Type	<b>Keyed</b>
Overall Length	<b>1317.00 mm</b>	Frame Length	<b>840.00 mm</b>
Shaft Diameter	<b>80.000 mm</b>	Shaft Extension	<b>170 mm</b>
Assembly/Box Mounting	<b>Top</b>		
Outline Drawing	<b>B3A04T8315011A01</b>	Connection Drawing	<b>SC-01-T-1v-1a</b>

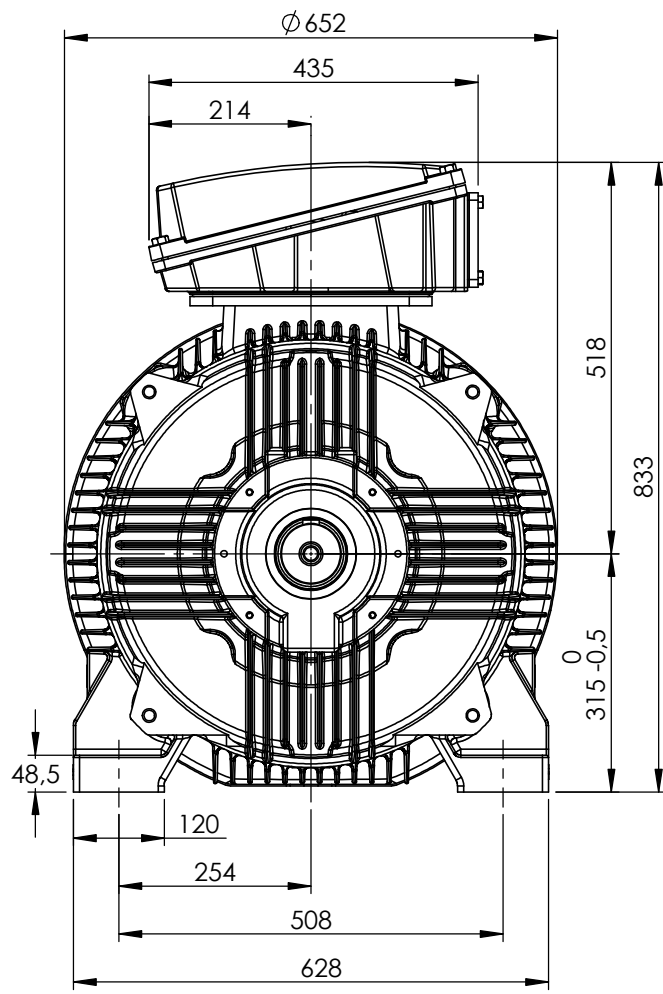
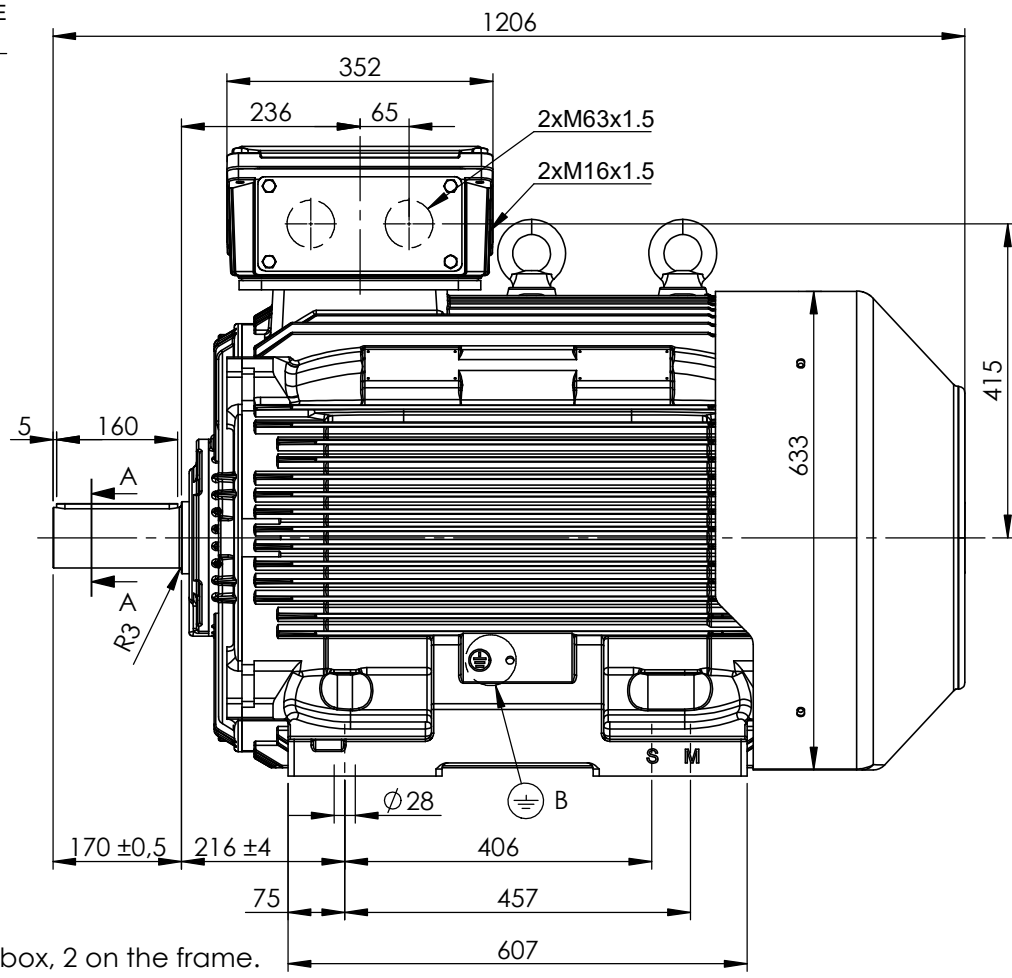
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EARTH TERMINAL  
SUITABLE FOR CABLE  
SECTION 10-70MM<sup>2</sup>

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 13/05/2022
ECO	APPROVED BY LP	DATE 16/05/2022

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

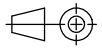
DRAWN BY TN
DATE 01/12/2021
APPROVED BY LP
DATE 02/12/2021
REFERENCE



DESCRIPTION  
**Motor 315 4-6P TC (S/M) B3**

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SERIAL NUMBER

FIRST ANGLE  
PROJECTION 

SIZE  
**A4**

DRAWING NUMBER  
**B3A04T8315011A01**

SHEET  
1 OF 2

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

<b>Marcatura Morsetti Ausiliari - <i>Additional terminals marking (IEC60034-8)</i></b>		
<b>Marcatura <i>Marking</i></b>	<b>No. morsetti <i>terminals</i></b>	<b>Morsetto ausiliare per: <i>Additional terminal for:</i></b>
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		-
2	Motore tipo / Motor type		TCI 315LA6
3	Numero di serie / Serial Number		
4	Forma costruttiva / Shape		B3
5			
6			
<b>Dati nominali / Rated data</b>			
7	Poli / Pole	n°	6
8	Potenza nominale / Rated power	kW	110,00
9	Corrente nominale / Rated current	A	202,90
10	Velocità nominale / Full Load speed	1/min	990
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
<b>Performances elettriche / Electrical performances</b>			
	Carico / Load	4/4	3/4
		2/4	
18	Giri / Speed	1/min	990
			993
			995
19	Corr. / Curr.	A	202,90
			155,50
			117,28
20	Rend / Eff	%	95,3
			95,6
			95,2
21	cos φ	-	0,82
			0,80
			0,71
<b>Performances all'avviamento / Starting performances</b>			
22	Ia/In - LRC/FLC	%	640
23	Cosφi a rotore bloccato / LR power factor		0,34
	Tempo a rotore bloccato / LRWT		
24	100% Un (A caldo / Warm)	sec	-
25	(A freddo / Cold)	sec	-
26	80% Un (A caldo / Warm)	sec	-
27	(A freddo / Cold)	sec	-
	Tempo di avviamento ammissibile / ART		
28	100% Un	sec	-
29	80% Un	sec	-
<b>Curva di coppia / Speed-torque values</b>			
30	Coppia nominale / Rated Torque	Nm	1061,10
31	Ca/Cn - LRT/FLT	%	200
32	Cmax/Cn - BDT/FLT	%	250
33			
34			
35			
<b>Varie / Other</b>			
36			
37			
38			
39			

<b>Servizio / Duty</b>		
40	Servizio / Duty type	S1
41	Intermittenza / Cyclic duration factor	-
42	Avviamenti-ora / Starting-hour	-
43	Tempo ciclo / Time	-
<b>Cuscinetti / Bearings</b>		
44	Cuscinetto ant / DE bearing	6319 C3
45	Cuscinetto post / NDE bearing	6319 C3
46	Carico radiale max / Max radial load in X1	7286
47	Carico assiale max / Max axial load	5048
48	Tipo grasso / Grease type	LGHP2 SKF or equivalent
49	Intervallo lubrificazione / Lubrication	5000
50	Quantità grasso / Quantity grease	45
<b>Caratteristiche meccaniche / mechanical specification</b>		
51	Massa / Mass	973
52	Momento d'inerzia / Moment of inertia	4,5367
53	Rumore a vuoto / Noise at no load (1 m)	70
54	Vibrazioni / Vibration level	A
55	Limite norma / Vibration limit	2,80
56		
57		
58		
59		
60		
61		
62		
<b>Dati entrata cavi - verniciatura / Cable entry and painting</b>		
63	Entrata cavi / Cable entry	2xM63+1xM16
64	Ciclo verniciatura / Painting cycle	STD
65	Colore finale / Final colour	RAL 5010
66		
67		
68		
69		
70		
71		
<b>Ausiliari - Auxiliaries</b>		
72	Sonde termiche / Temperature detector	PTC
73	Sonde termiche / Temperature detector	-
74	Scaldiglie / Heaters	-
75	Preparation for SPM sensor	-
76	Pressacavi / Cable glands	-
77		

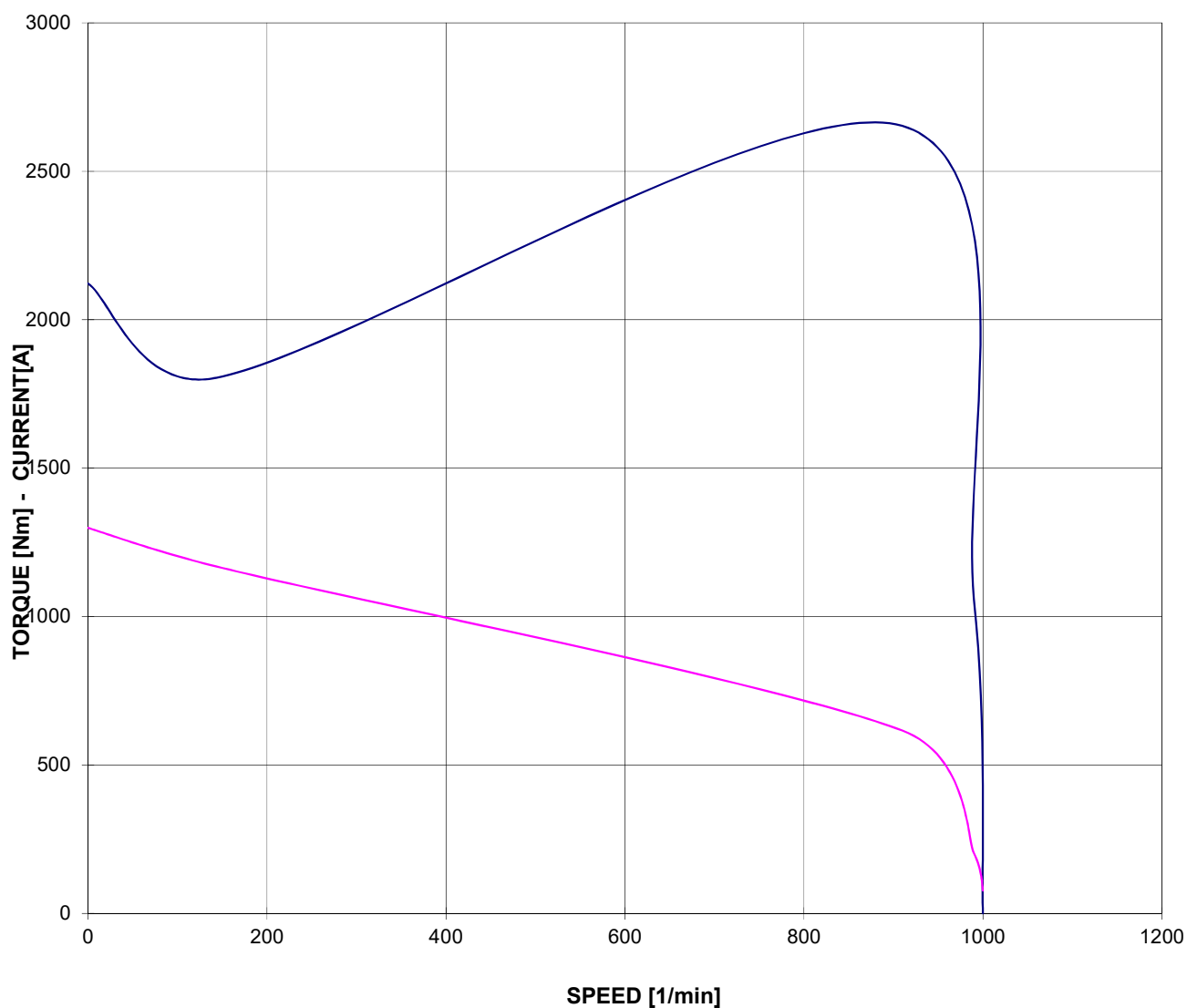
## Documento preliminare - Preliminary data sheet

### 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 -

<b>Motore / Motor</b>	<b>TCI 315LA6</b>	
Potenza nominale / Rated power	110,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	202,90	A
Velocità / Speed	990	rpm
Coppia / Torque	1061,10	Nm

— COPPIA - TORQUE    — CORRENTE - CURRENT



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

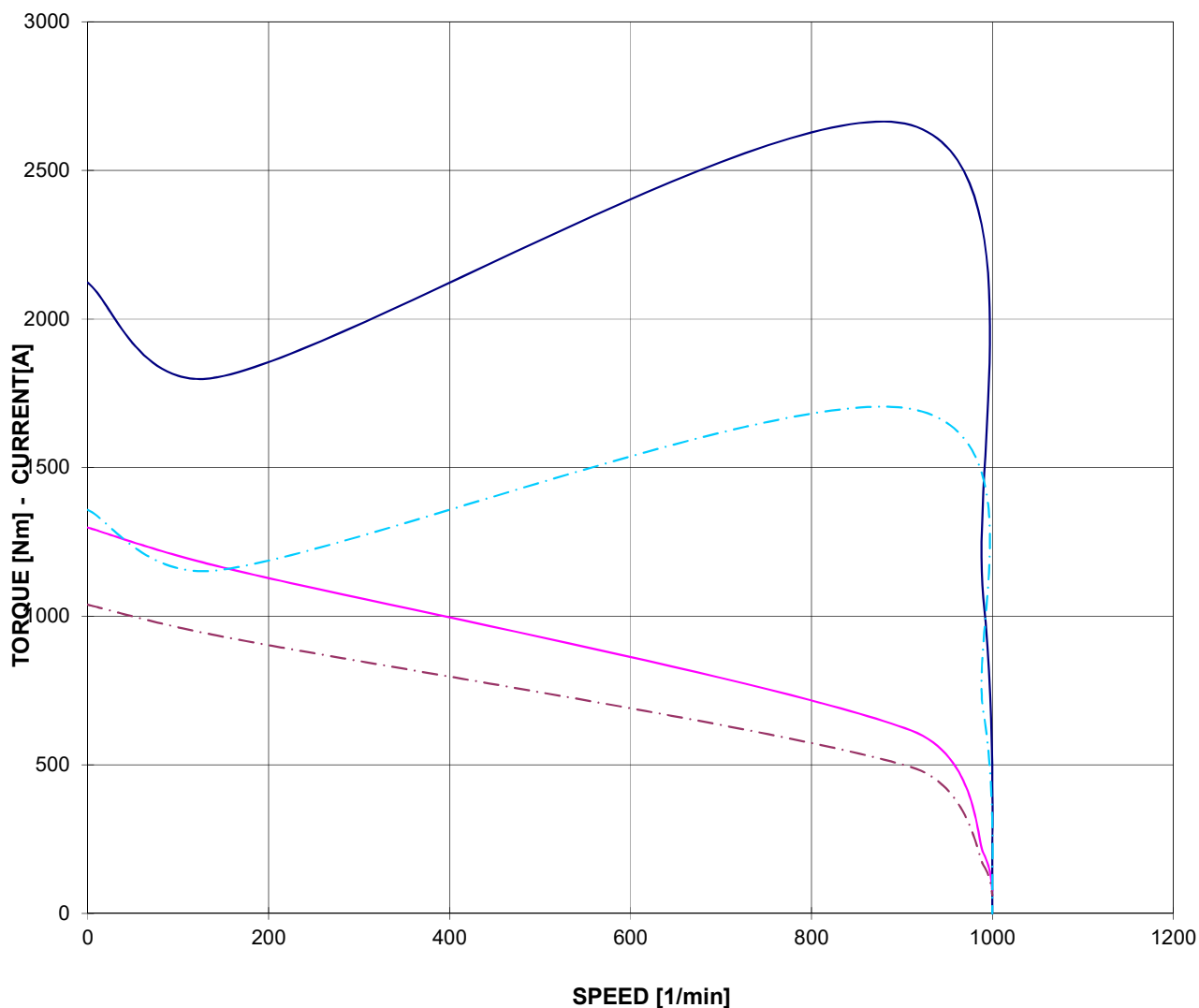
Data / Date 01-feb-21

### 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 -

<b>Motore / Motor</b>	<b>TCI 315LA6</b>	
Potenza nominale / Rated power	110,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	202,90	A
Velocità / Speed	990	rpm
Coppia / Torque	1061,10	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 01-feb-21



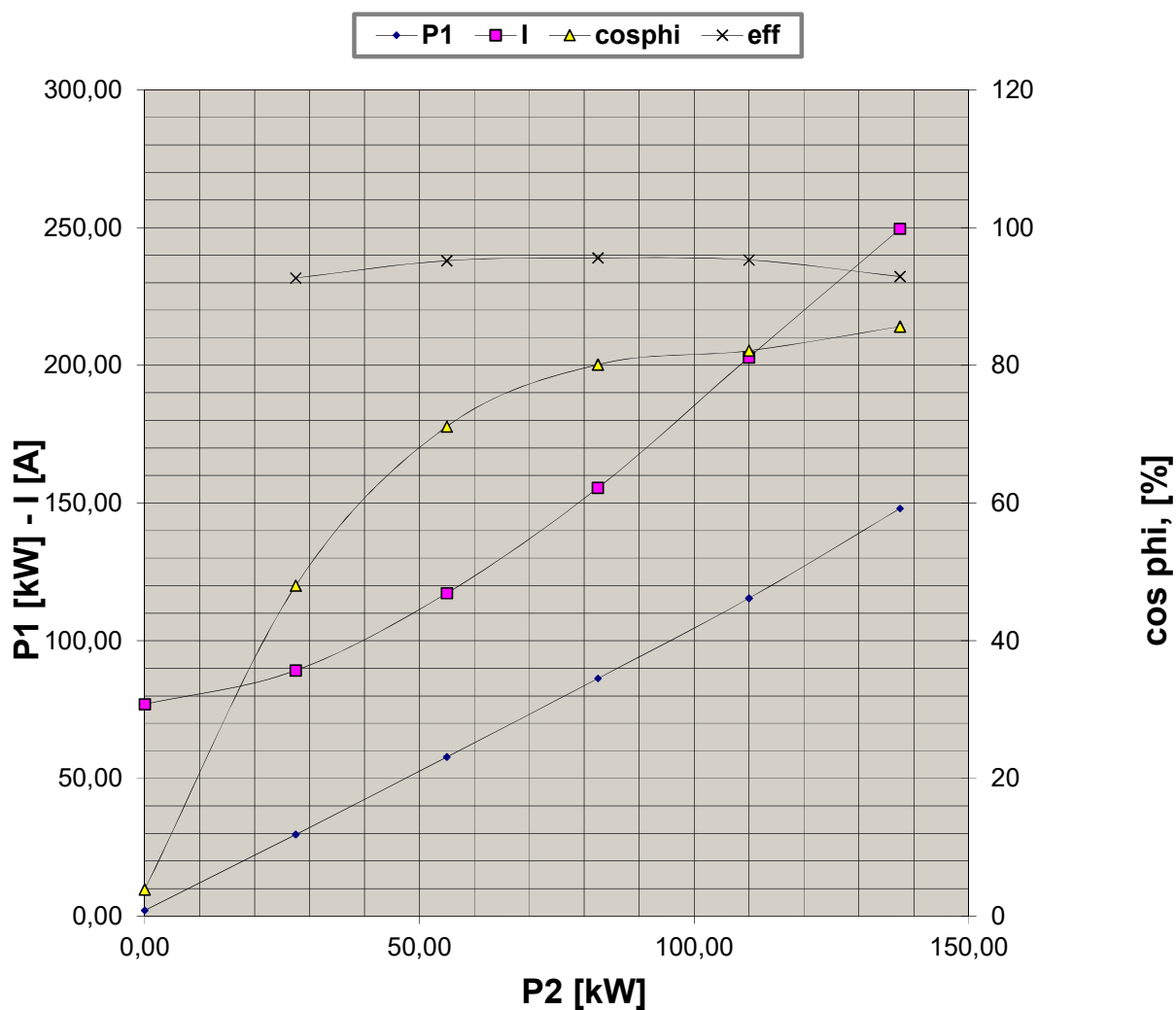


Flameproof  
Motors

### CURVE CARATTERISTICHE PERFORMANCE CURVES

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

**Motore / Motor** **TCI 315LA6**  
 Potenza nominale / Rated power 110,00 kW  
 Poli / Pole 6  
 Tensione - Frequenza / Voltage - Frequency 400 - 50 V - Hz  
 Corrente / Rated current 202,90 A  
 Velocità / Speed 990 rpm  
 Coppia / Torque 1061,10 Nm



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

Data / Date 01-feb-21

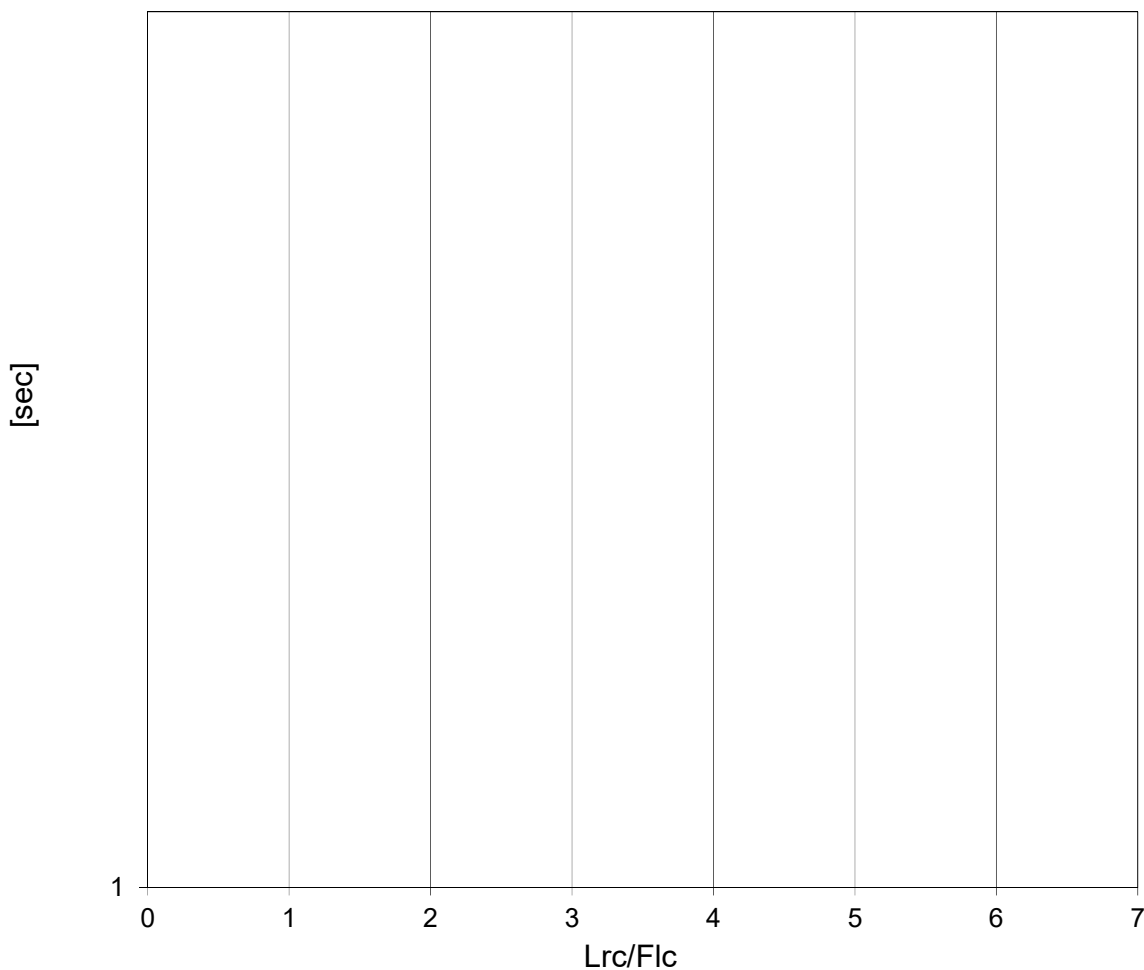


Flameproof  
Motors

**CURVA LIMITE CORRENTE TEMPO**  
**THERMAL WITHSTAND CURVE**

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

<b>Motore / Motor</b>	<b>TCI 315LA6</b>	
Potenza nominale / Rated power	110,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	202,90	A
Velocità / Speed	990	rpm
Coppia / Torque	1061,10	Nm



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

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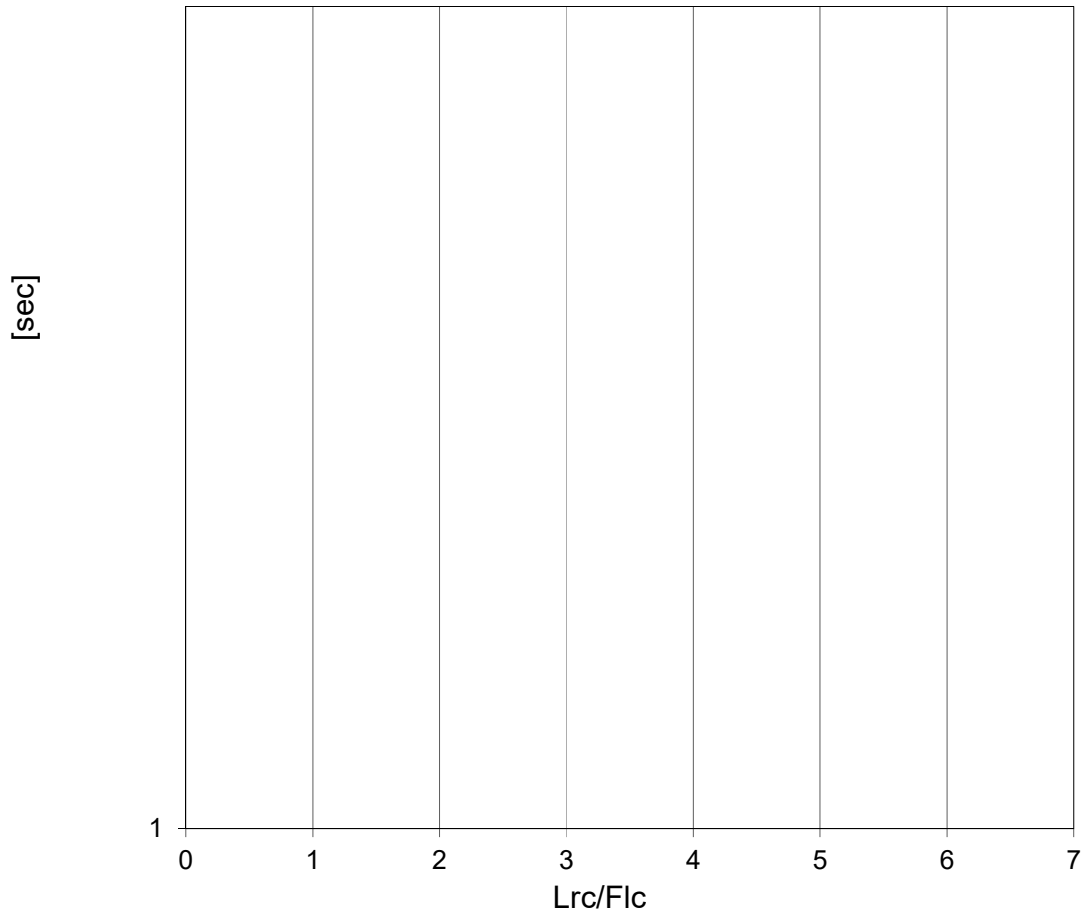
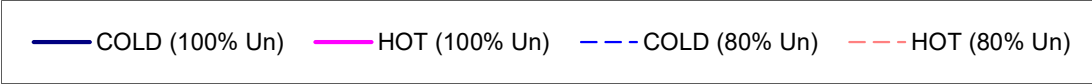


Flameproof  
Motors

**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 -

<b>Motore / Motor</b>	<b>TCI 315LA6</b>	
Potenza nominale / Rated power	110,00	kW
Poli / Pole	6	
Tensione - Frequenza / Voltage - Frequency	400 - 50	V - Hz
Corrente / Rated current	202,90	A
Velocità / Speed	990	rpm
Coppia / Torque	1061,10	Nm



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

Data / Date 01-feb-21