

# PRODUCT INFORMATION PACKET



Model No: 6RN90S02E30U243041

Catalog No: 6RN90S02E30U24 @3041

1.50 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 3000 rpm, D230/Y400V 50Hz,  
90S Frame B5, IC411



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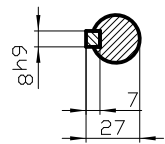
## Nameplate Specifications

Output HP	2 Hp	Output KW	1.5 kW
Frequency	50 Hz	Voltage	D230/Y400 V
Current	5.20 A	Speed	2910 rpm
Service Factor	1	Phase	3
Efficiency	84.5 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	90S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6205-2Z/C3WT (-40°C/+160°C)	Opp Drive End Bearing Size	6004-2Z/C3WT (-40°C/+160°C)
UL	No	CSA	Optional
CE	Yes	IP Code	IP55
Number of Speeds	1	Efficiency Class	IE3

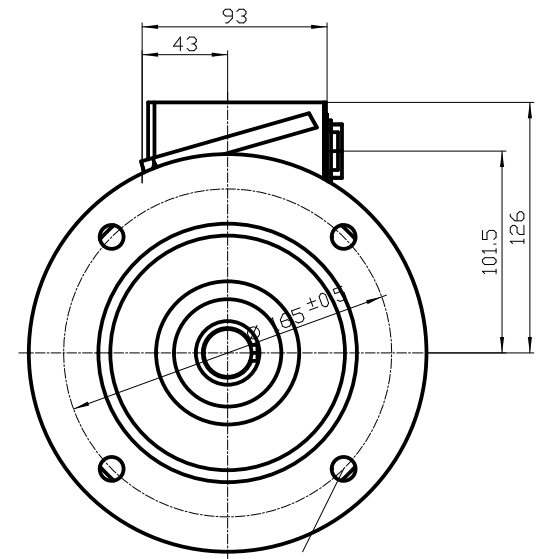
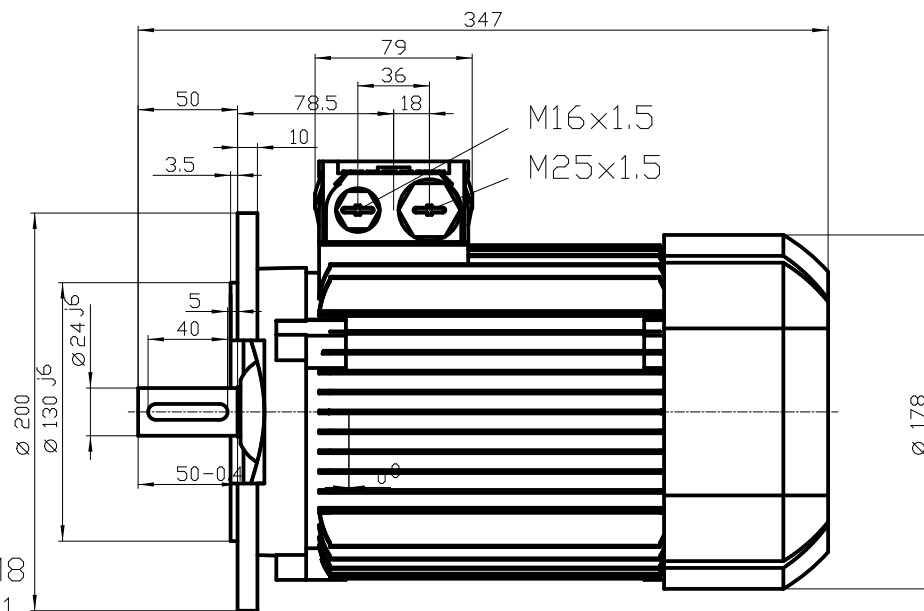
## Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Clockwise Shaft End
Mounting	B5	Motor Orientation	Any
Frame Material	Cast iron	Shaft Type	Keyed
Shaft Diameter	24 mm	Shaft Extension	50 mm
Outline Drawing	6RN90S02E30U243041		

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DIN 332-DR M8  
DIN 6885 Teil1



Unit	mm		
Date	30.04.13	6RN90S02E30 B5 / V1 (no canopy)	

## Datasheet

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**Model No.** 2-Pole cage motor 6RN 90S 1,5kW D230V 50Hz IM3041-FF165

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load FL 3/4FL 1/2FL	PF at __load FL 3/4FL 1/2FL	I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>K</sub> /T <sub>N</sub> [pu]
230	D	50	1,5	2	5,2	2910	4,9	IE3	85,2	0,86	8,10	2,70	4,20
400	Y				3								
265	D	60	1,75	2 1/3	5,15	3510	4,76	IE3	86,0	0,87	8,75	2,64	4,20
460	Y				2,95								

Motor type	6RN90S02E30
Enclosure	Totally Enclosed Fan Cooling
Frame Material	Aluminum
Frame size	90S
Duty	S1
Voltage	230 V
Frequency	50 Hz
Power output	1,5 kW
Insulation class	F
Ambient temperature	-20 till 40 °C
Temperature rise	temp.rise acc. B (80K)
Temperature rise winding	38 K
Temperature rise surface	10 K
Altitude above sea level	1000 mtr
Hazardous area classification	Safe area

Rotor type	Cage motor
Bearing type	6004-2Z/C3WT

Type of grease	Unirex N3
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Phase resistance at 20°C	4,0313 Ohm
Country of origin	CZ

Voltage/Freq	Locked rotor Torque [% nom]	Starting current [% nom]	Pull-up Torque [% nom]	Breakdown Torque [% nom]	No-load Current [A]
@ D 230V 50Hz	270%	809%	220%	420%	2,44 A
@ D 265V 60Hz	264%	871%	211%	420%	2,19 A

**NOTE**

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

Voltage, Frequency are as per IEC60034-1

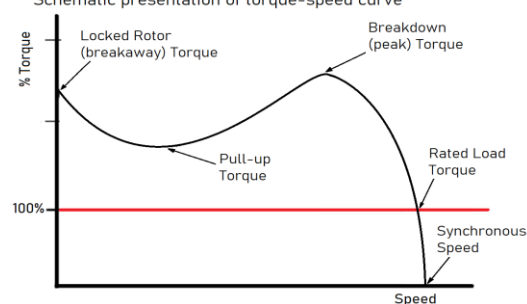
Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency	Europe	Global IEC
Standards	EN-IEC: 60034-30	IEC: 60034-30

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Degree of protection	IP55
Mounting type	IM3041-FF165
Cooling method	IC411
Motor weight - approx.	18 kg
Gross weight - approx.	19 kg
Motor inertia	0,0021 kgm <sup>2</sup>
Vibration level	according IEC60034-14
Direction of rotation	cw / ccw

Schematic presentation of torque-speed curve



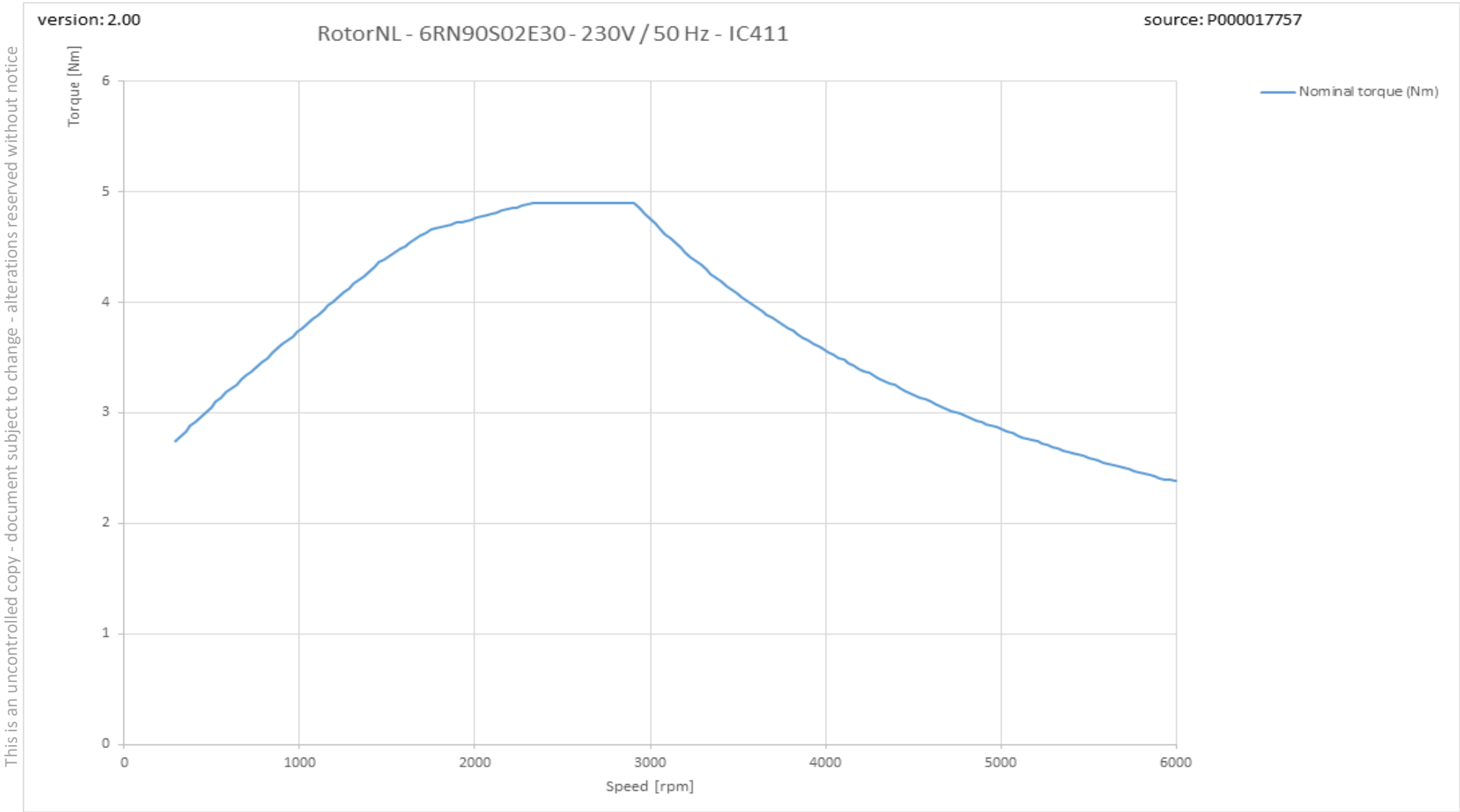
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6RN90S02E30 2-pole 1,50kW D/Y 230/400V 50Hz S1 IC411 IE3

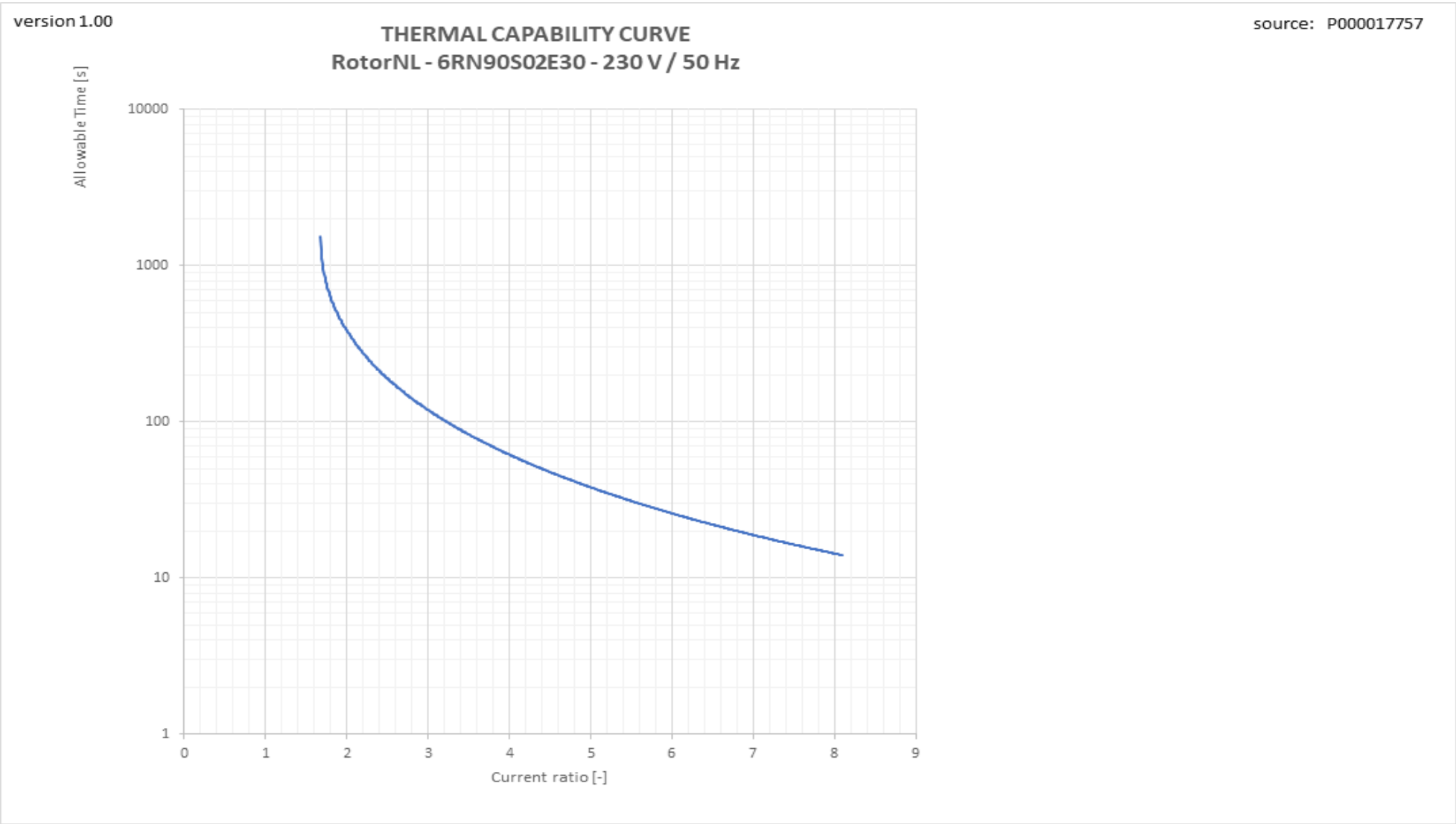


Torque versus Speed curve with variable frequency drive



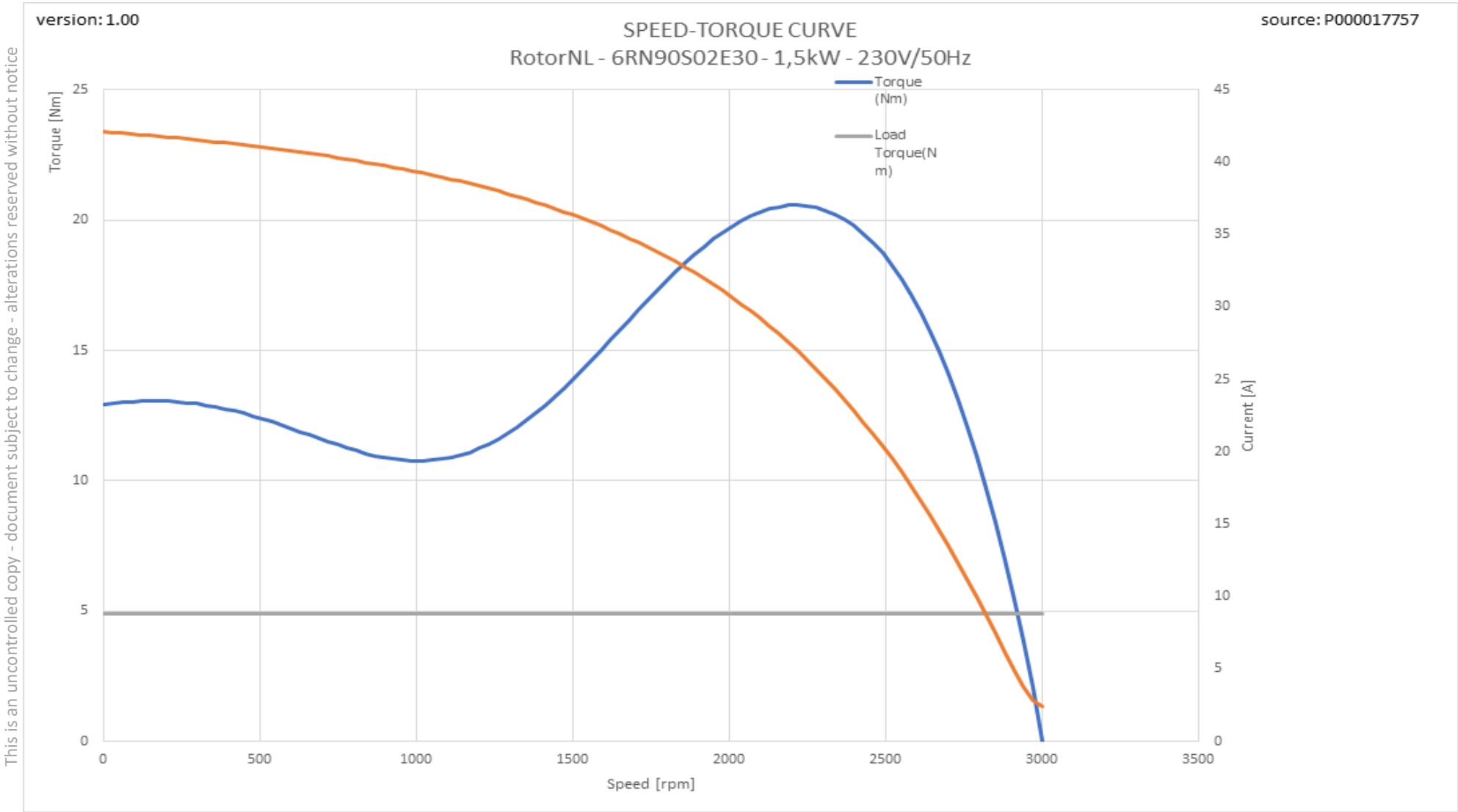
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Therm\_VSD graph



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Tn graph



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