

# PRODUCT INFORMATION PACKET

rotor nl®

Model No: 6RN280S06E30U463021

Catalog No: 6RN280S06E30U46@3021

45.00 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 1000 rpm, D400/Y690V 50Hz,  
280S Frame B5, IC411



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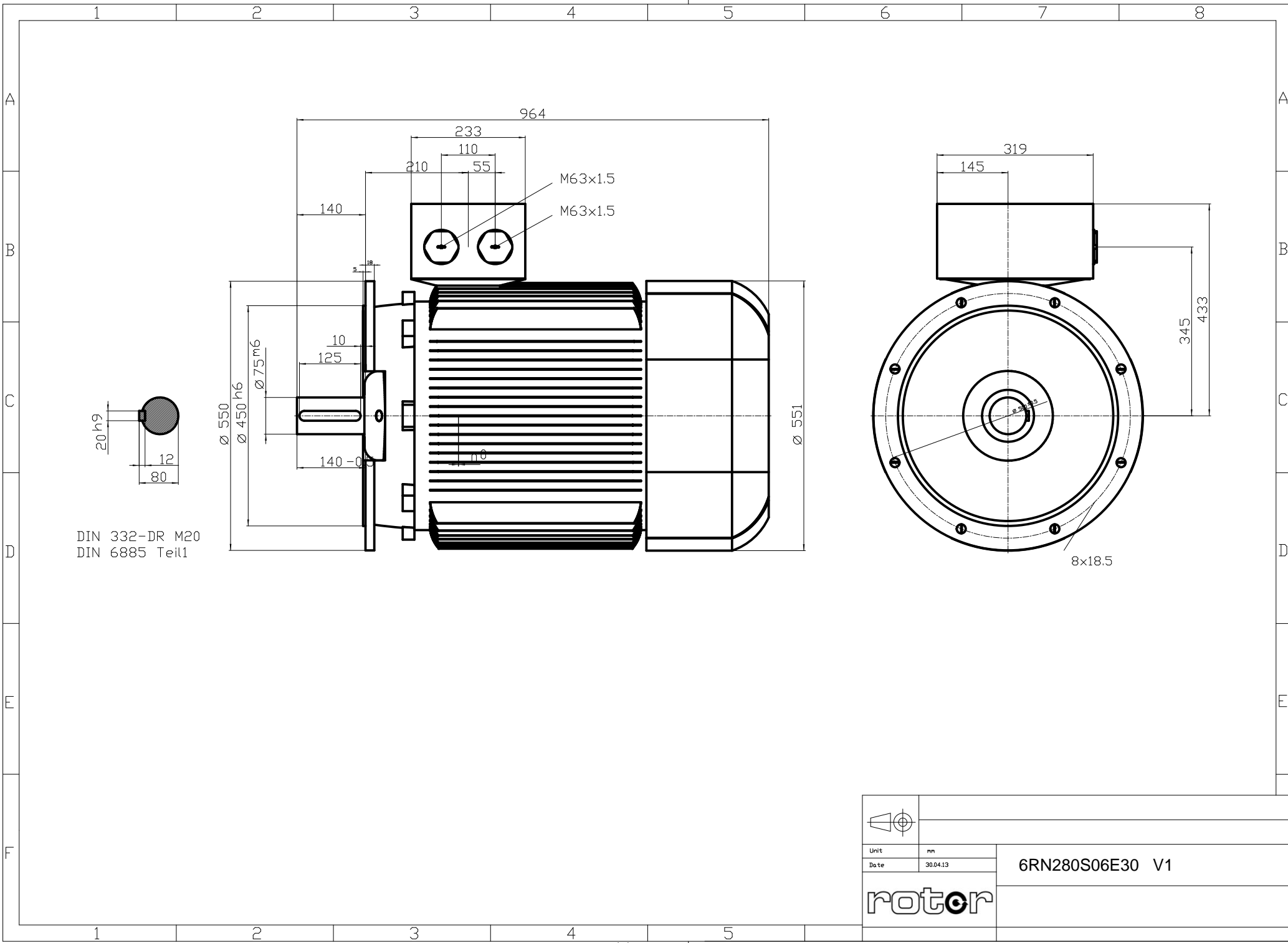
**Nameplate Specifications**

Output HP	<b>60 Hp</b>	Output KW	<b>45.0 kW</b>
Frequency	<b>50 Hz</b>	Voltage	<b>D400/Y690 V</b>
Current	<b>81.70 A</b>	Speed	<b>988 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>93.7 %</b>	Power Factor	<b>0.85</b>
Duty	<b>S1</b>	Insulation Class	<b>F</b>
Frame	<b>280S</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>6317/C3</b>	Opp Drive End Bearing Size	<b>6317/C3</b>
UL	<b>No</b>	CSA	<b>Optional</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>Clockwise Shaft End</b>
Mounting	<b>B5</b>	Motor Orientation	<b>Any</b>
Frame Material	<b>Cast iron</b>	Shaft Type	<b>Keyed</b>
Shaft Diameter	<b>75 mm</b>	Shaft Extension	<b>140 mm</b>
Outline Drawing	<b>6RN280S06E30U463021</b>		

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Date		30.04.13	
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Datasheet



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**Model No.** 6-Pole cage motor 6RN 280S 45kW D400V 50Hz IM3021-FF500

U (V)	Δ/Y Conn	f [Hz]	P		I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load			PF at __load			I <sub>A</sub> /I <sub>N</sub> [pu]	T <sub>A</sub> /T <sub>N</sub> [pu]	T <sub>R</sub> /T <sub>N</sub> [pu]
			[kW]	[hp]					FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
400	D	50	45	60,32	81,7	988	435	IE3	93,5	94,0	93,9	0,85	0,82	0,73	6,96	2,66	2,69
690	Y				47,2												
460	D	60	45	60,32	71,6	1190	361	IE3	94,3	94,5	93,9	0,84	0,80	0,70	8,25	3,04	3,02

Motor type	<b>6RN280S06E30</b>
Enclosure	<b>Totally Enclosed Fan Cooling</b>
Frame Material	<b>Cast iron</b>
Frame size	<b>280S</b>
Duty	<b>S1</b>
Voltage	<b>400 V</b>
Frequency	<b>50 Hz</b>
Power output	<b>45 kW</b>
Insulation class	<b>F</b>
Ambient temperature	<b>-20 till 40 °C</b>
Temperature rise	<b>temp.rise acc. B (80K)</b>
Temperature rise winding	<b>52 K</b>
Temperature rise surface	<b>31 K</b>
Altitude above sea level	<b>1000 mtr</b>
Hazardous area classification	<b>Safe area</b>

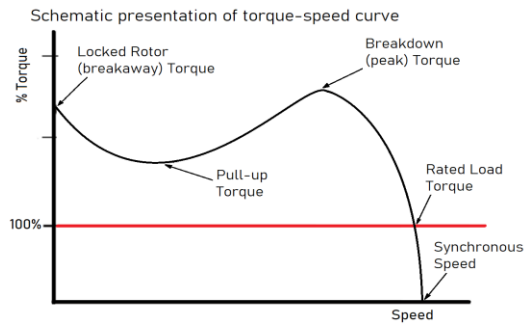
Degree of protection	<b>IP55</b>
Mounting type	<b>IM3021-FF500</b>
Cooling method	<b>IC411</b>
Motor weight - approx.	<b>510 kg</b>
Gross weight - approx.	<b>530 kg</b>
Motor inertia	<b>1,4000 kgm<sup>2</sup></b>
Vibration level	<b>according IEC60034-14</b>
Noise level (pressure) acc 60034-9	<b>58 dB(A)</b>

Rotor type	<b>Cage motor</b>
Bearing type	<b>6317/C3</b>
Lubrication method	<b>30gr/8000hrs</b>
Type of grease	<b>Unirex N3</b>
Phase resistance at 20°C	<b>0,1583 Ohm</b>
Country of origin	<b>CZ</b>

Voltage/Freq	Locked rotor Torque [nom] [%]	Starting current [% nom]	Pull-up Torque [% nom]	Breakdown Torque [% nom]	No-load Current [A]
@ D 400V 50Hz	266%	695%	210%	269%	27 A
@ D 460V 60Hz	304%	825%	230%	302%	26,3 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



V2.07

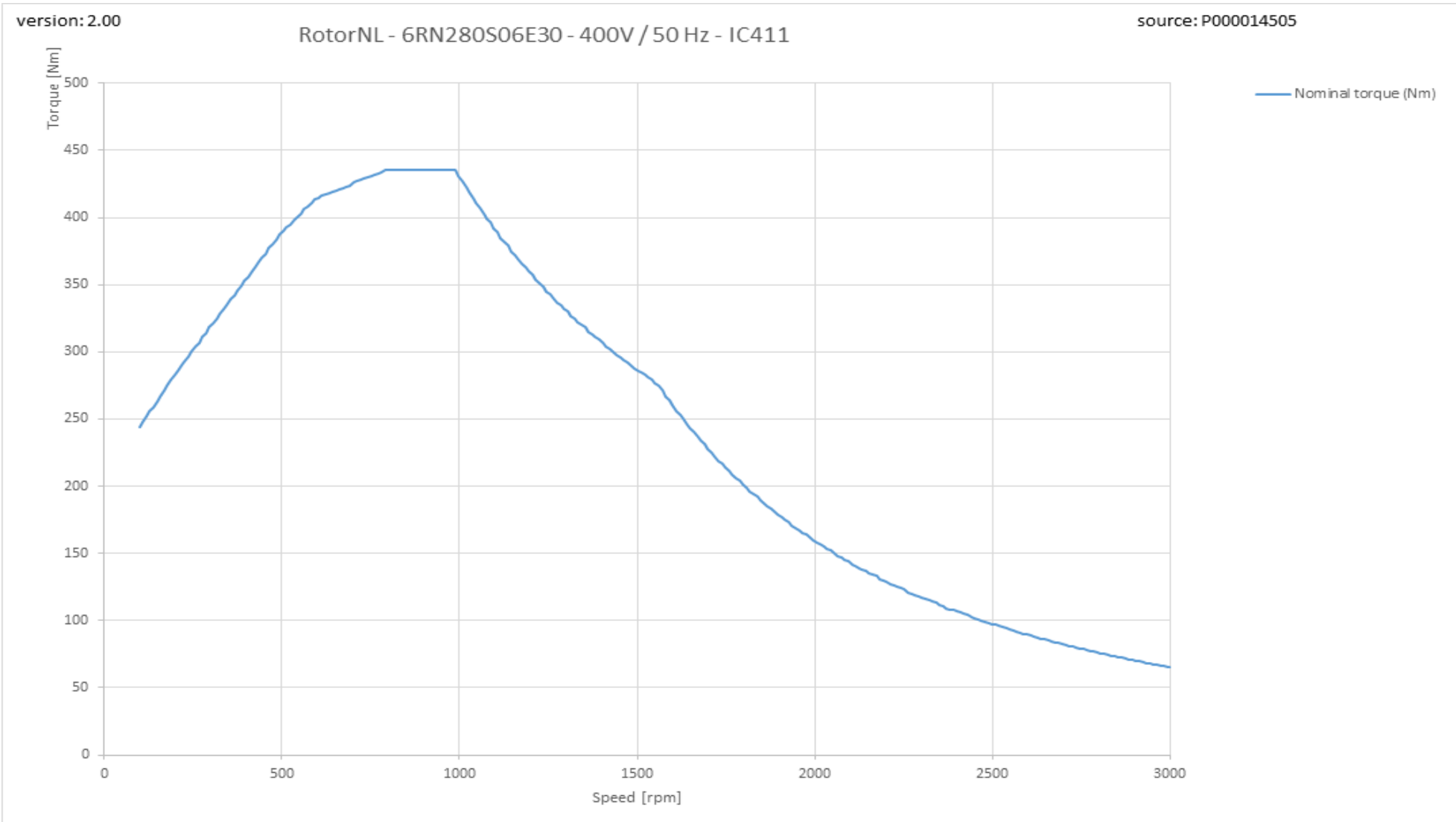
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6RN280S06E30 6-pole 45,00kW D/Y 400/690V 50Hz S1 IC411 IE3



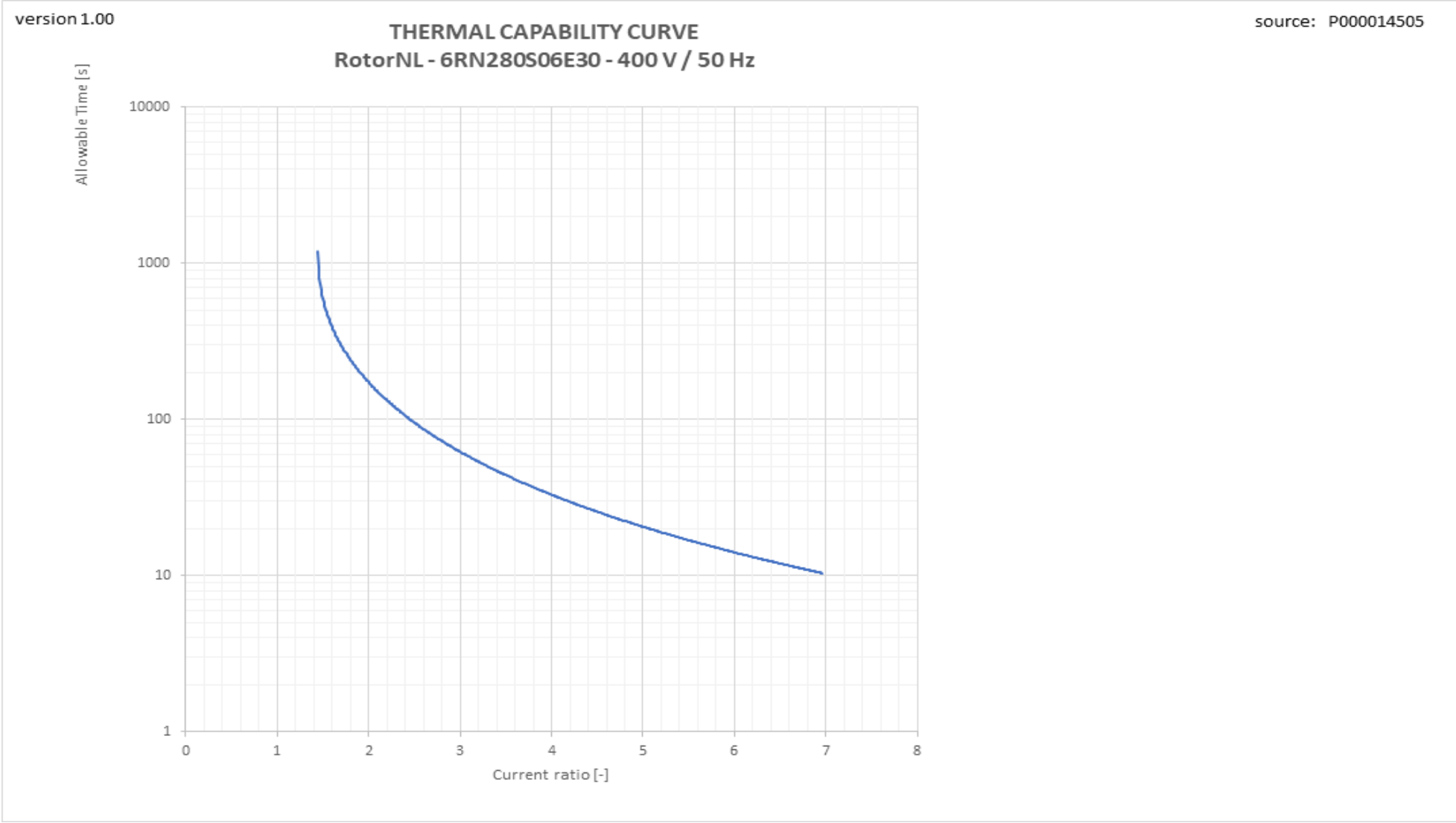
Torque versus Speed curve with variable frequency drive



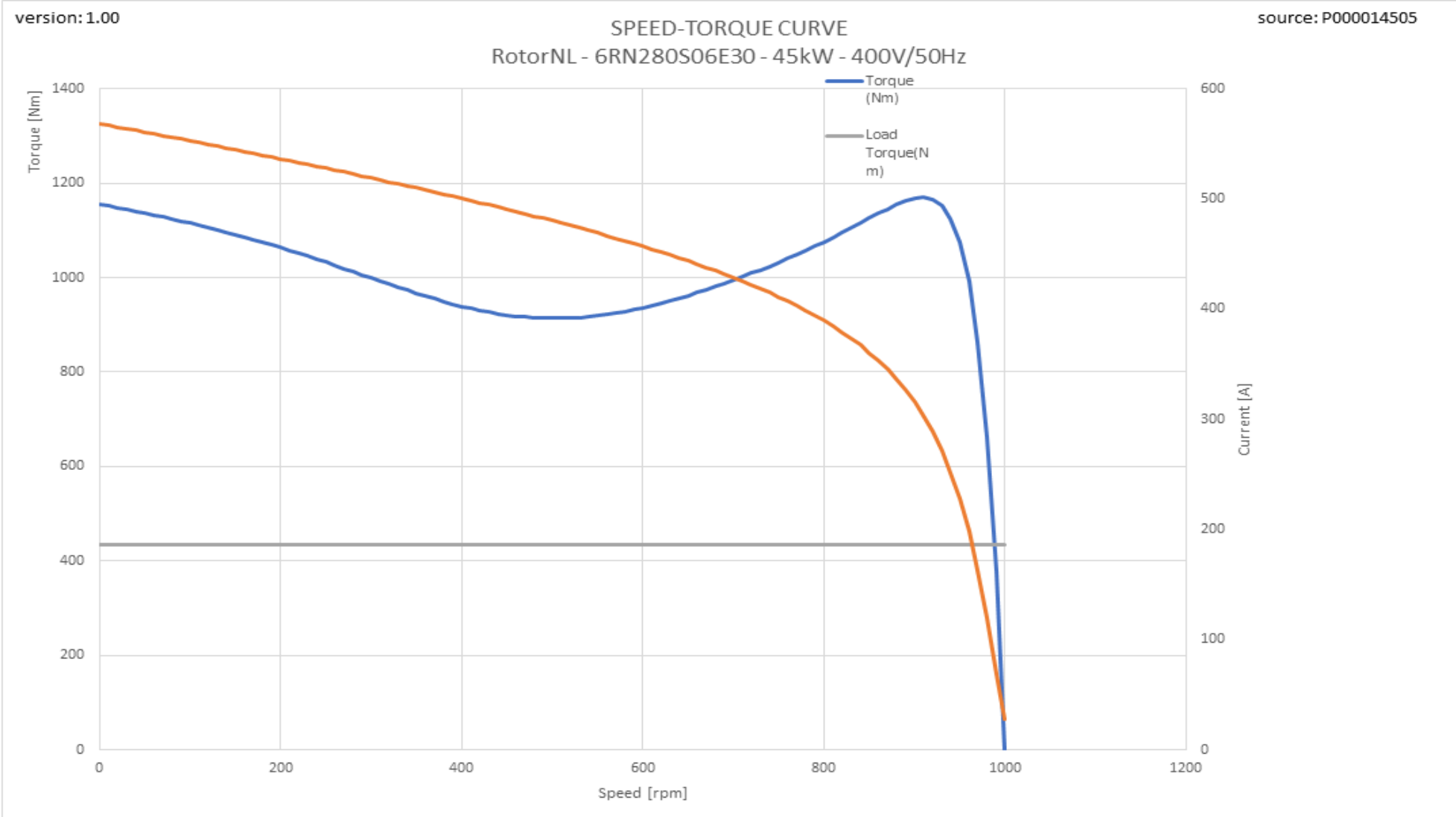
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Therm\_VSD graph

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Tn graph



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