

# PRODUCT INFORMATION PACKET

rotor nl<sup>®</sup>

Model No: 6RN280M04E32U241041

Catalog No: 6RN280M04E32U24@1041

90.00 kW General Purpose Low Voltage IEC Motor IE3, 3 phase, 1500 rpm, D230/Y400V 50Hz,  
280M Frame B3, IC411



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**Nameplate Specifications**

Output HP	120.00 Hp	Output KW	90.0 kW
Frequency	50 Hz	Voltage	D230/Y400 V
Current	273.00 A	Speed	1485 rpm
Service Factor	1	Phase	3
Efficiency	95.2 %	Power Factor	0.86
Duty	S1	Insulation Class	F
Frame	280M	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Ambient Temperature	40 °C
Drive End Bearing Size	6317/C3	Opp Drive End Bearing Size	6317/C3
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	4	Rotation	Clockwise Shaft End
Mounting	B3	Motor Orientation	Any
Frame Material	Cast iron	Shaft Type	Keyed
Shaft Diameter	75 mm	Shaft Extension	140 mm
Outline Drawing	6RN280M04E32_1041		

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Datasheet



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**Model No.** 4-Pole cage motor 6RN 280M 90kW D230V 50Hz IM1041

U (V)	Δ/Y Conn	f [Hz]	P [kW]	P [hp]	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]
									FL	3/4FL	1/2FL	FL	3/4FL	1/2FL			
230	D	50	90	120	273	1485	578	IE3	95,3	95,6	95,4	0,86	0,83	0,75	7,47	2,52	2,99
400	Y				158												

Motor type	<b>6RN280M04E32</b>
Enclosure	<b>Totally Enclosed Fan Cooling</b>
Frame Material	<b>Cast iron</b>
Frame size	<b>280M</b>
Duty	<b>S1</b>
Voltage	<b>230 V</b>
Frequency	<b>50 Hz</b>
Power output	<b>90 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>54 K</b>
Temperature rise surface	<b>33 K</b>
Altitude above sea level	<b>1000 mtr</b>
Hazardous area classification	<b>Safe area</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>0,0149 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 230V 50Hz	252%	743%	210%	299%	85,7 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.

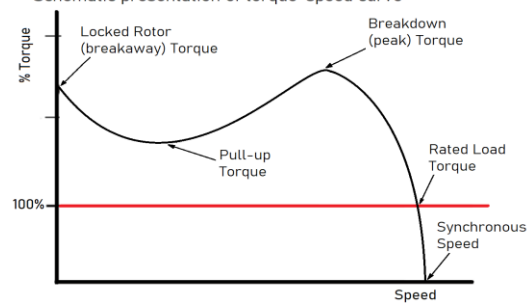
Efficiency	Europe	Global IEC
Standards	EN-IEC: 60034-30	IEC: 60034-30

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Degree of protection	<b>IP55</b>
Mounting type	<b>IM1041</b>
Cooling method	<b>IC411</b>
Motor weight - approx.	<b>670 kg</b>
Gross weight - approx.	<b>690 kg</b>
Motor inertia	<b>1,7000 kgm<sup>2</sup></b>
Vibration level	<b>according IEC60034-14</b>
Noise level (pressure) acc 60034-9	<b>65 dB(A)</b>

Direction of rotation **cw / ccw**

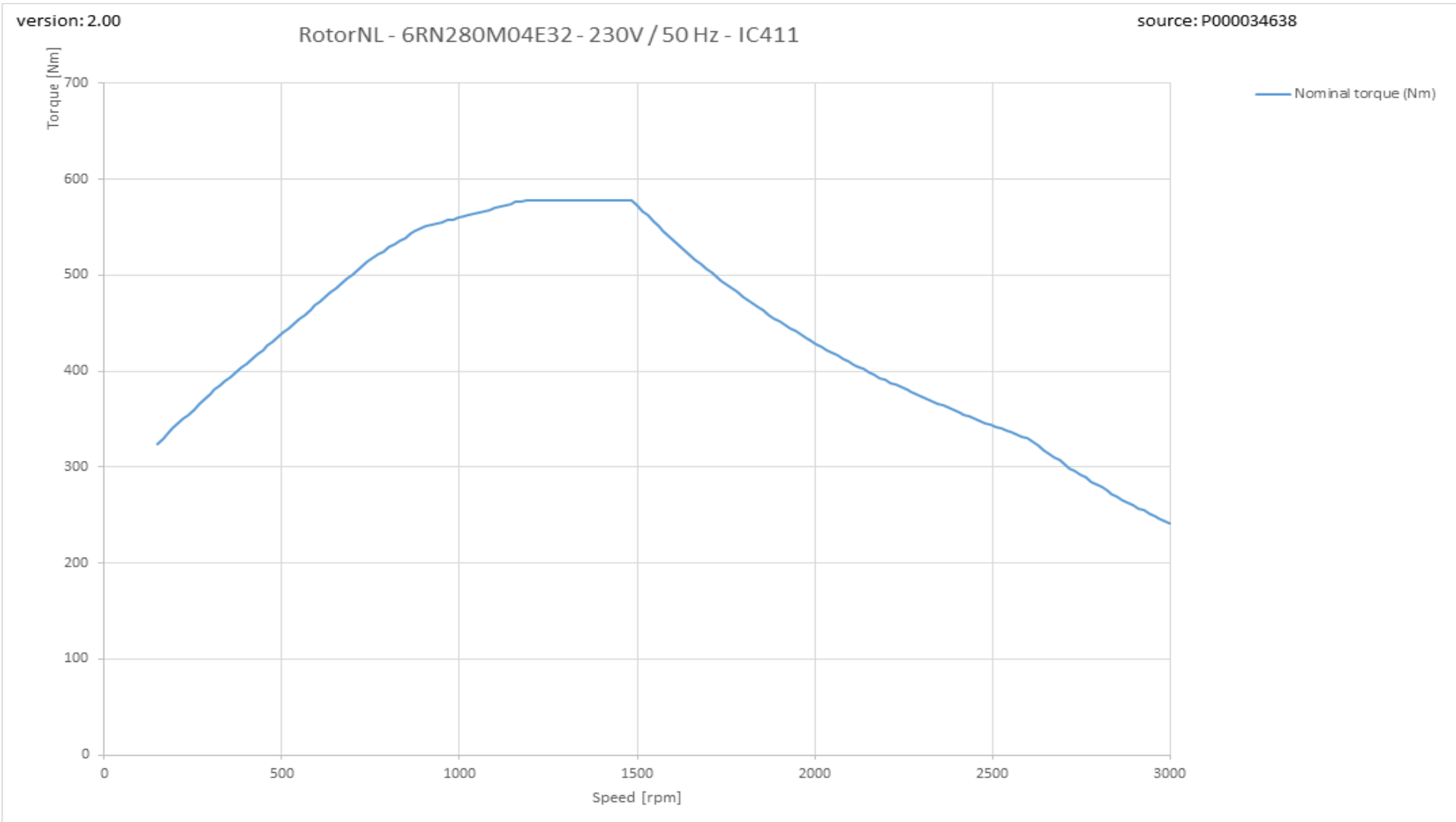
Schematic presentation of torque-speed curve



6RN280M04E32 4-pole 90,00kW D/Y 230/400V 50Hz S1 IC411 IE3

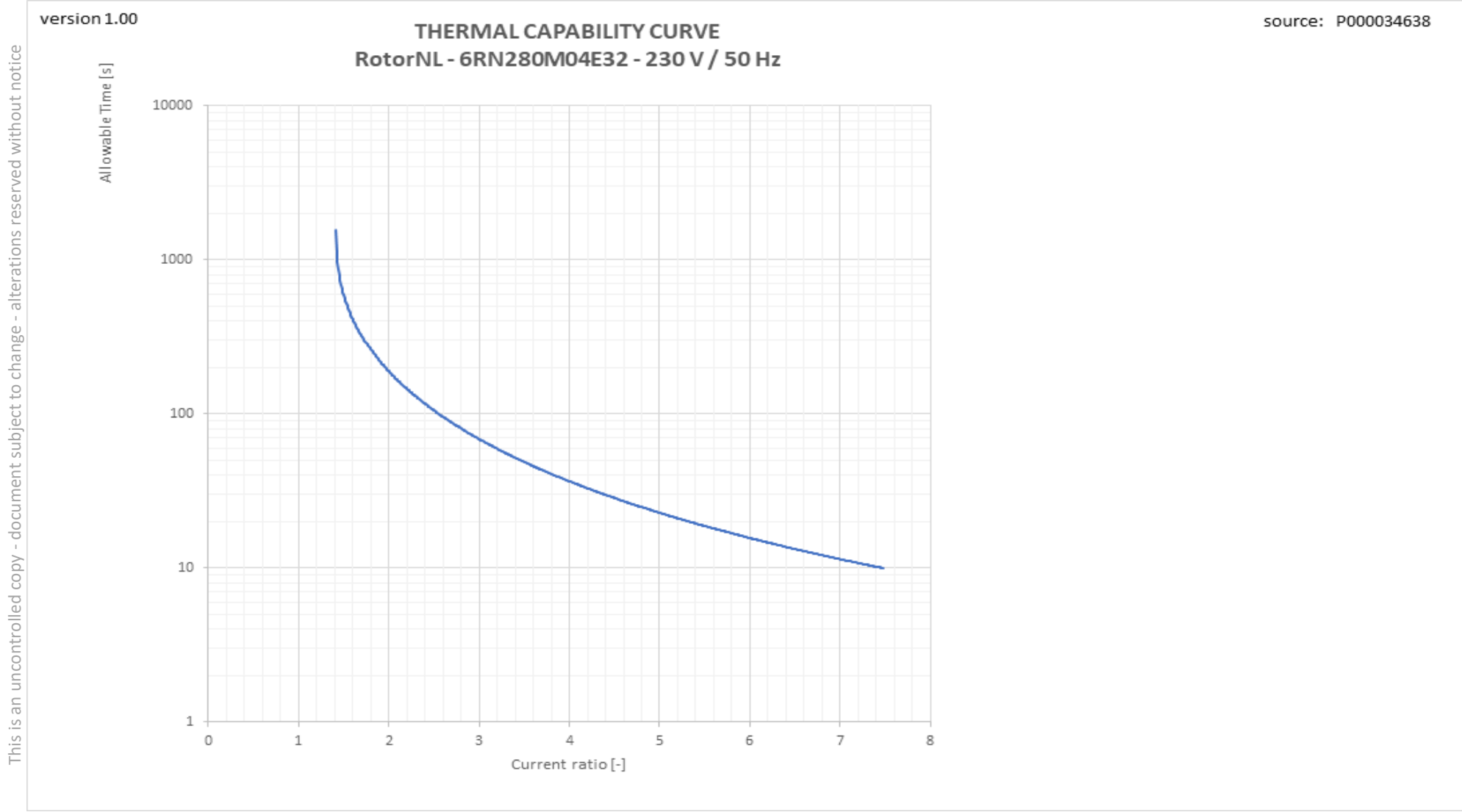


Torque versus Speed curve with variable frequency drive



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Therm\_VSD graph



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Tn graph

