



ELECTRIC POWERTRAIN SOLUTIONS

**SMAC SERIE**  
**TECHNICAL DATA SHEET**  
**3-PHASE SYNCHRONOUS MOTOR**

Code	51J20010519ET0804P0		
Rev.	00		
Date	30/03/2021		
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<b>Motor Rated Power</b>			<b>12000W</b>	
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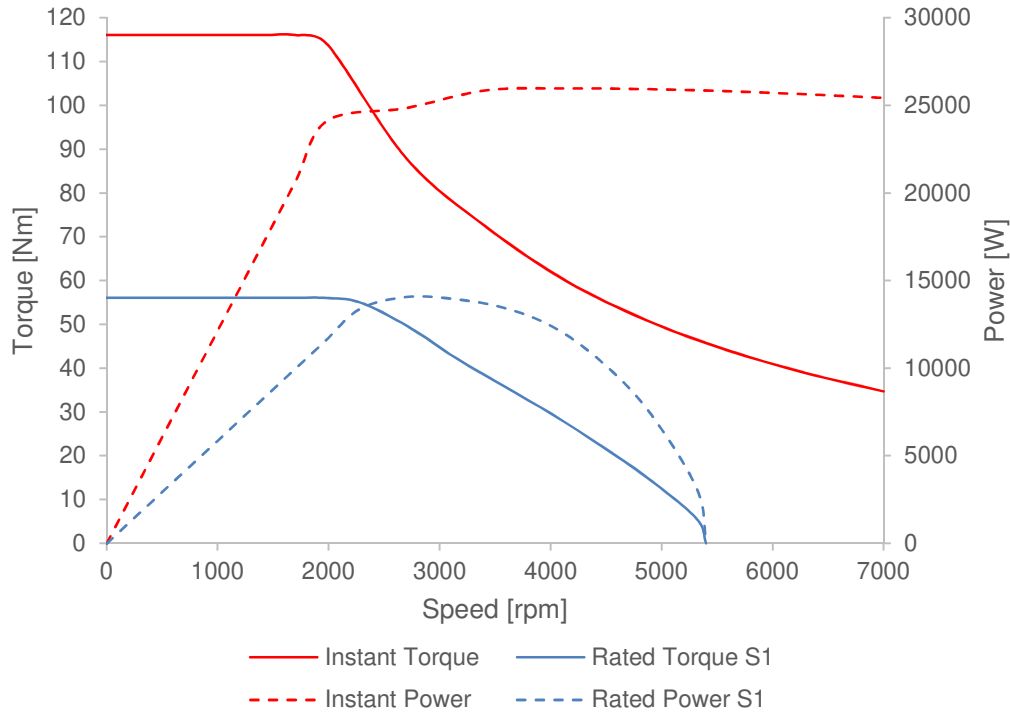
<b>Inverter Power Supply</b>			<b>48Vdc</b>	
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<b>Description</b>	<b>Symbol</b>	<b>Unit</b>		
Duty	-	-	S1	
Nominal Speed	$n_n$	rpm	2000	
Frequency (N° poles)	$f (2p)$	Hz	133.3 (8)	
Costant Voltage	$K_e$	Vrms/Krpm	13.0	
Costant Torque	$K_t$	Nm/Arms	0.21	
Instant Torque	$T_i$	Nm	116.0	
Instant Current	$I_i$	Arms	730.0	
Rated Torque S1.	$T_r$	Nm	56.0	
Rated Current S1	$I_r$	Arms	250.0	
Rotor Inertia	$J_r$	kg x m <sup>2</sup>	0.018	
Ambient Temperature	$\theta_a$	°C	-15 ÷ +40	
Protection Degree	IP		IP67	
Insulation Class	-	-	F	
Thermal protection	-	-	PTY 84-130	
Cooling system			Liquid	

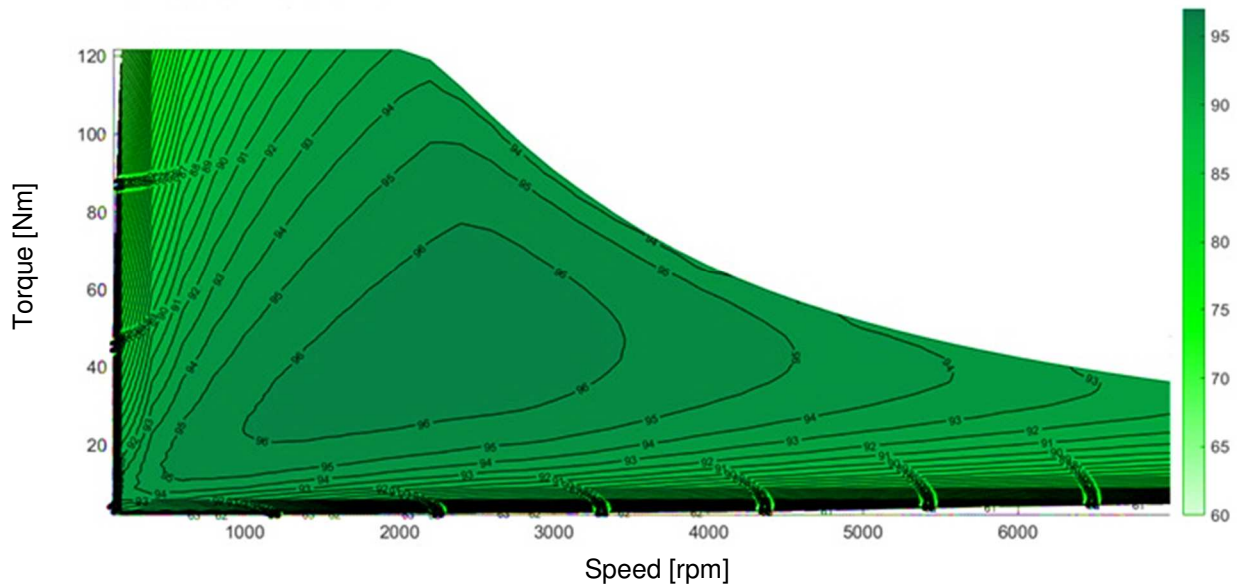
**PRELIMINARY**

Speed-Torque & Speed Power Motor Curves (\*)

SMAC 200-105



Efficiency Map % (\*)



\* MTPA Field Weakening strategy control & Optimized Advance Angle