



ELECTRIC POWERTRAIN SOLUTIONS

**SMAC SERIE**  
**MOTOR CURVE**  
**3-PHASE SYNCHRONOUS MOTOR**

MDS	51J20015735XS0802P0		
Rev.	00		
Date	18/01/2023		
Page	1	di	2

<b>Motor Rated Power</b>			<b>30000W</b>
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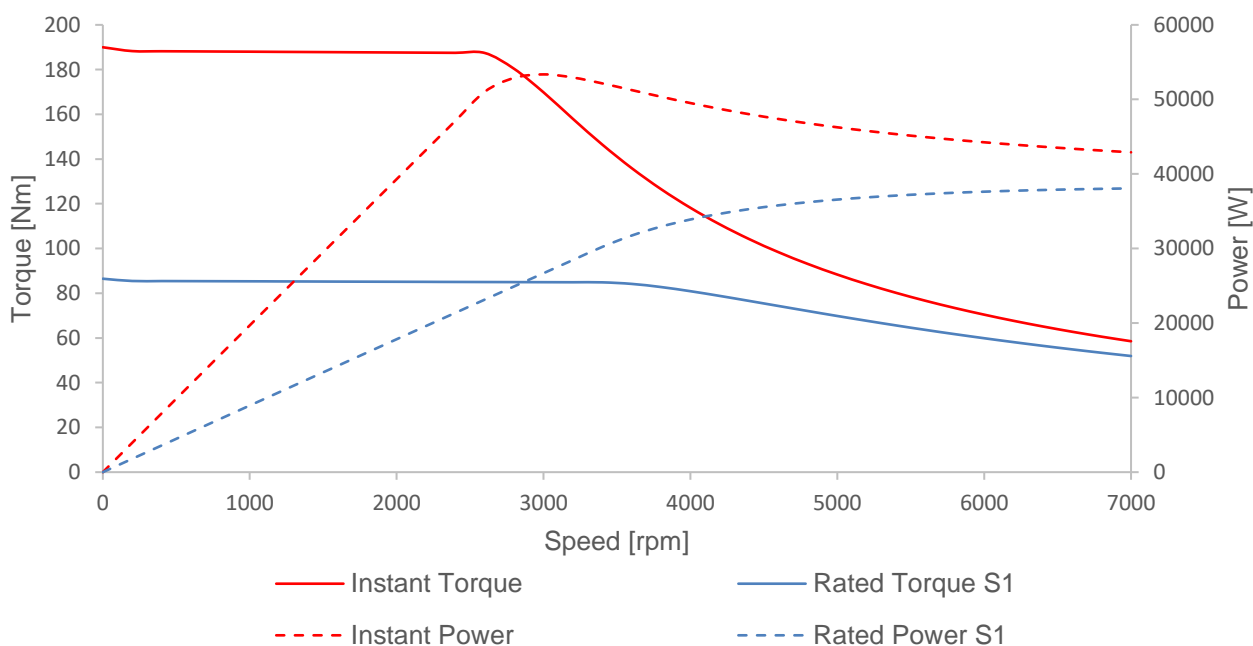
<b>Inverter Power Supply</b>			<b>800Vdc</b>
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Description	Symbol	Unit	
Duty	-	-	S1
Nominal Speed	$n_n$	rpm	3500
Frequency (N° poles)	$f (2p)$	Hz	233.3 (8)
Costant Voltage	$K_e$	Vrms/Krpm	120.0
Instant Torque	$T_i$	Nm	190.0
Instant Current	$i_i$	Arms	124.0
Rated Torque S1	$T_r$	Nm	85.0
Rated Current S1	$I_r$	Arms	45.0

Short Circuit Current	$I_{sc}$	Arms	52.0
Rotor Inertia	$J_r$	kg x m <sup>2</sup>	0.023
Ambient Temperature	$\theta_a$	°C	-15 ÷ +40
Protection Degree	IP		IP 54 up to IP67
Insulation Class	-	-	F
Thermal protection	-	-	PTY 84-130 Alternative to KTY 84-130
Cooling system			Liquid

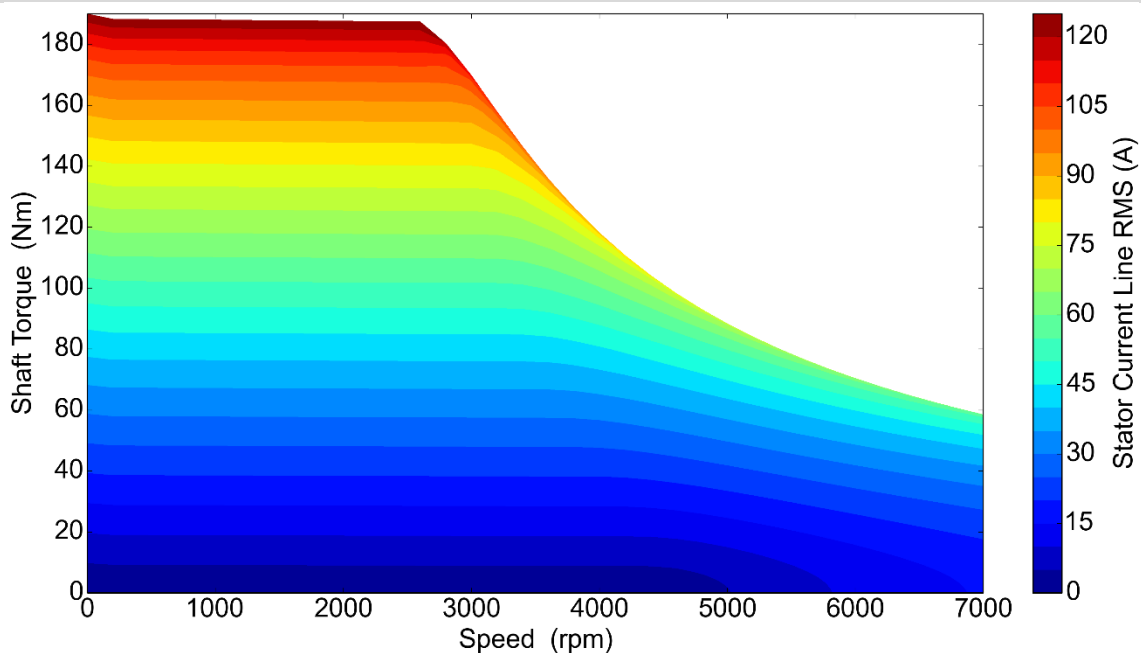
Speed-Torque & Speed Power Motor Curves (\*)

**SMAC 200-157**



PRELIMINARY - Simulated Data

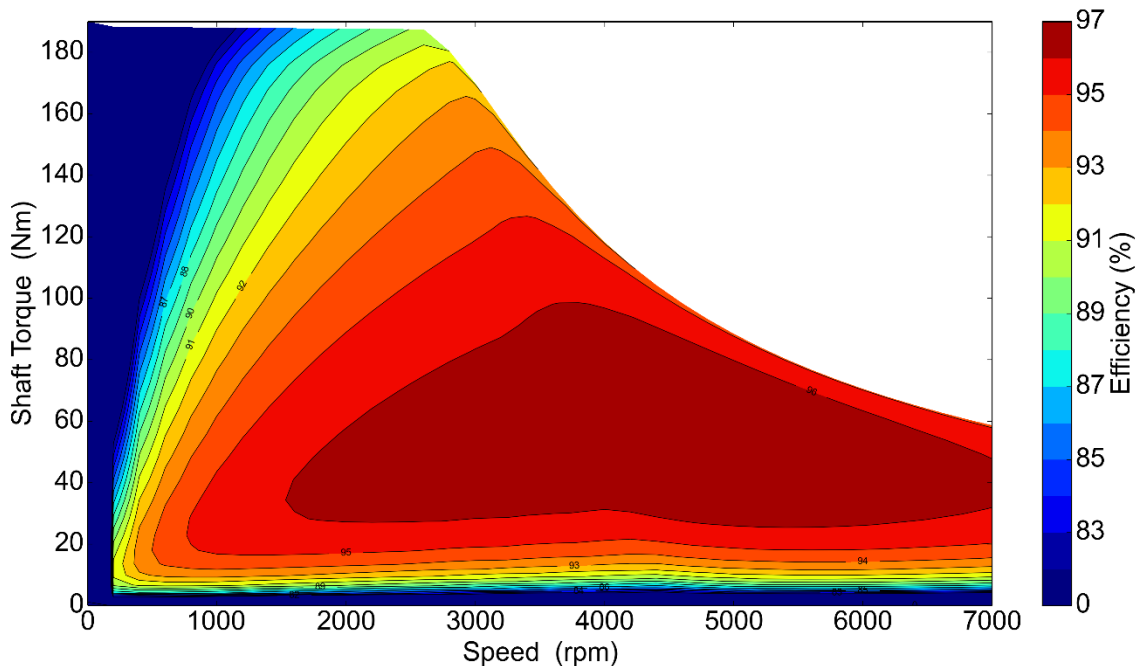
Current Map [Arms]



\* MTPA – MTPV Field Weakening strategy control & Optimized Advance Angle  
(Ref. Simulation temperature 20.0°C)

Simulation Only

Efficiency Map % (\*)



PRELIMINARY - Simulated Data