

159AH-06008-ABC

air-cooled motor / generator with 13 kW continuous power



KEY FEATURES

- permanent magnet synchronous machine
- Air-cooled
- convincing cost-benefit ratio
- delivery with controller possible

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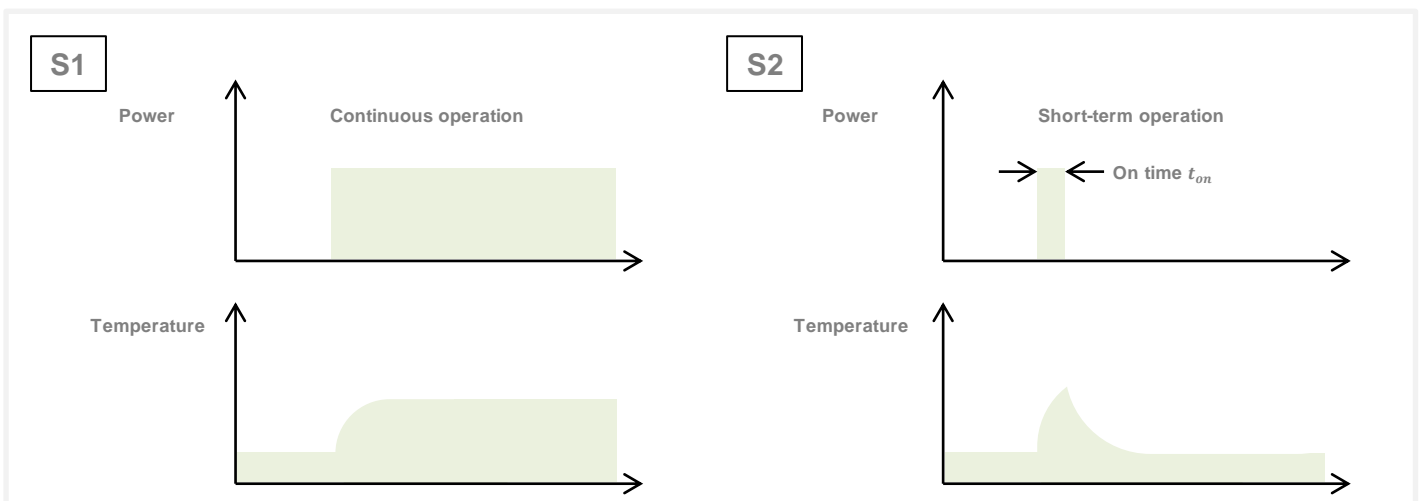
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Characteristic Operating Points (cooling as specified on next page)

		S1 ¹⁾	S2	
Feasible operating time	T_{peak}	continuous	60 sec	
Torque	T	22	74	Nm
Power	P	13	29	kW
Phase rms-current (AC)	I_{rms}	322 ^{2,3)}	1236 ³⁾	A
Battery voltage (DC)	U_{DC}	48	48	V
Speed	n	5750	4000	rpm
Electric frequency	f_{el}	479	333	Hz
Efficiency	η_{tot}	96	88	%
Power factor	$\cos(\varphi)$	0.93	0.59	

Maximum Operating Range

		Max	
Torque	T_{max}	74 @4000 rpm	Nm
Power	P_{max}	29 @4000 rpm	kW
Phase rms-current (AC)	$I_{rms,max}$	1236 ⁴⁾	A
Speed	n_{max}	8000	rpm
Battery voltage (DC)	U_{max}	200	V
Electric frequency	$f_{el,max}$	666	Hz



- 1) Only valid for an ambient Temperature ≤ 20 °C and air flow rate ≥ 6 m/s
- 2) Nominal current strongly dependent on cooling as specified below.
- 3) The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.
- 4) Peak rating for max. 60 seconds on time

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Electrical Data			
Number of phases			3
Number of pole pairs			5
Maximal efficiency			96 %
T/I constant (I<I _{nom})			0.08 Nm/A _{rms}
U/n constant (AC) @20°C motor temp.	rms:	4.8	peak: 8.9 V/(1000rpm)
Ke constant (AC) @20°C motor temp.	rms:	0.09	peak: 0.017 V/(rad*s ⁻¹)
Additional Data			
Weight (w/o cables)			16 kg
Rotor moment of inertia			0.0063 kg*m ²
Allowed range of ambient temperature			-20 ... +85 ¹⁾ °C
Maximal motor temperature			140 °C
Cooling	Cooling medium		air
	Air flow rate		6 m/s
	Cooling air temperature		20 °C
Temperature monitoring			1 x KTY84-130
Ports			
Power terminals			3 x 50 mm ² cables with M8 cable lugs
Length power cables			50 cm
Signal connectors			Deutsch DTM04-08PA

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Certifications		
Type approval	CE, EN 60034	
Environmental	Prepared for ISO 9227	
Protection grade	ISO 20653 IP6K9K ²⁾	
Vibrations	Prepared for ISO 16750-3	
Customs tariff number	8501 5230	

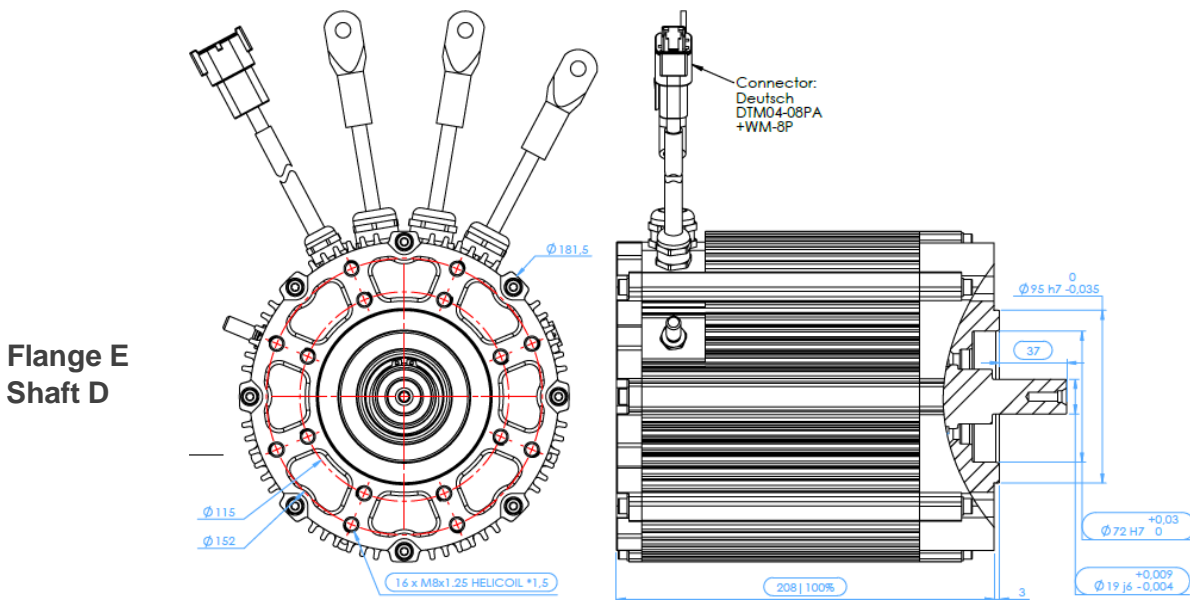
- 1) Available upon request.
- 2) Please note that the IP6K9K rating is only valid if the machine is installed with suitable cable glands and an appropriate sealed interface at the drive side of the motor (flange and/or shaft). Please contact ENGIRO for further questions.

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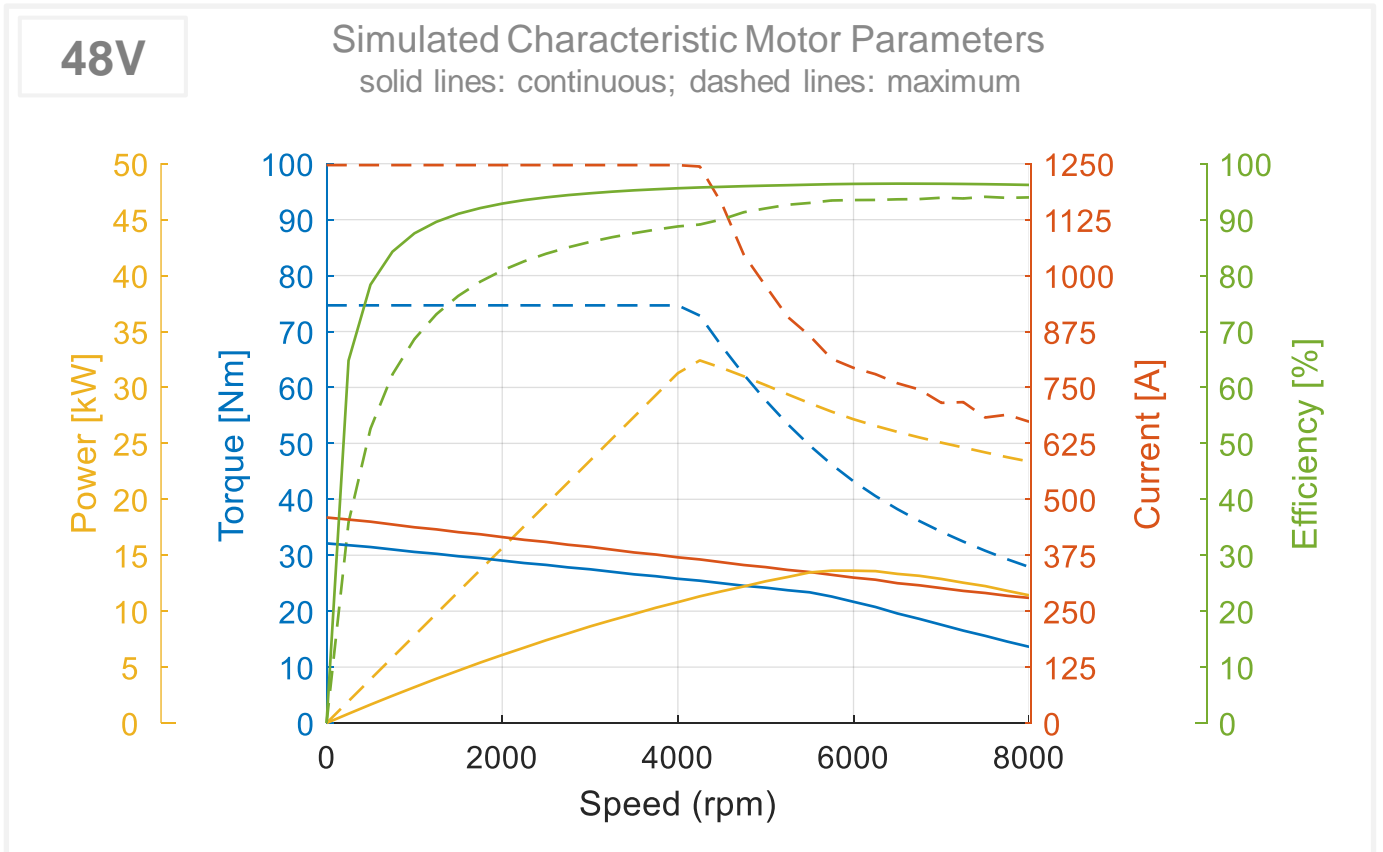
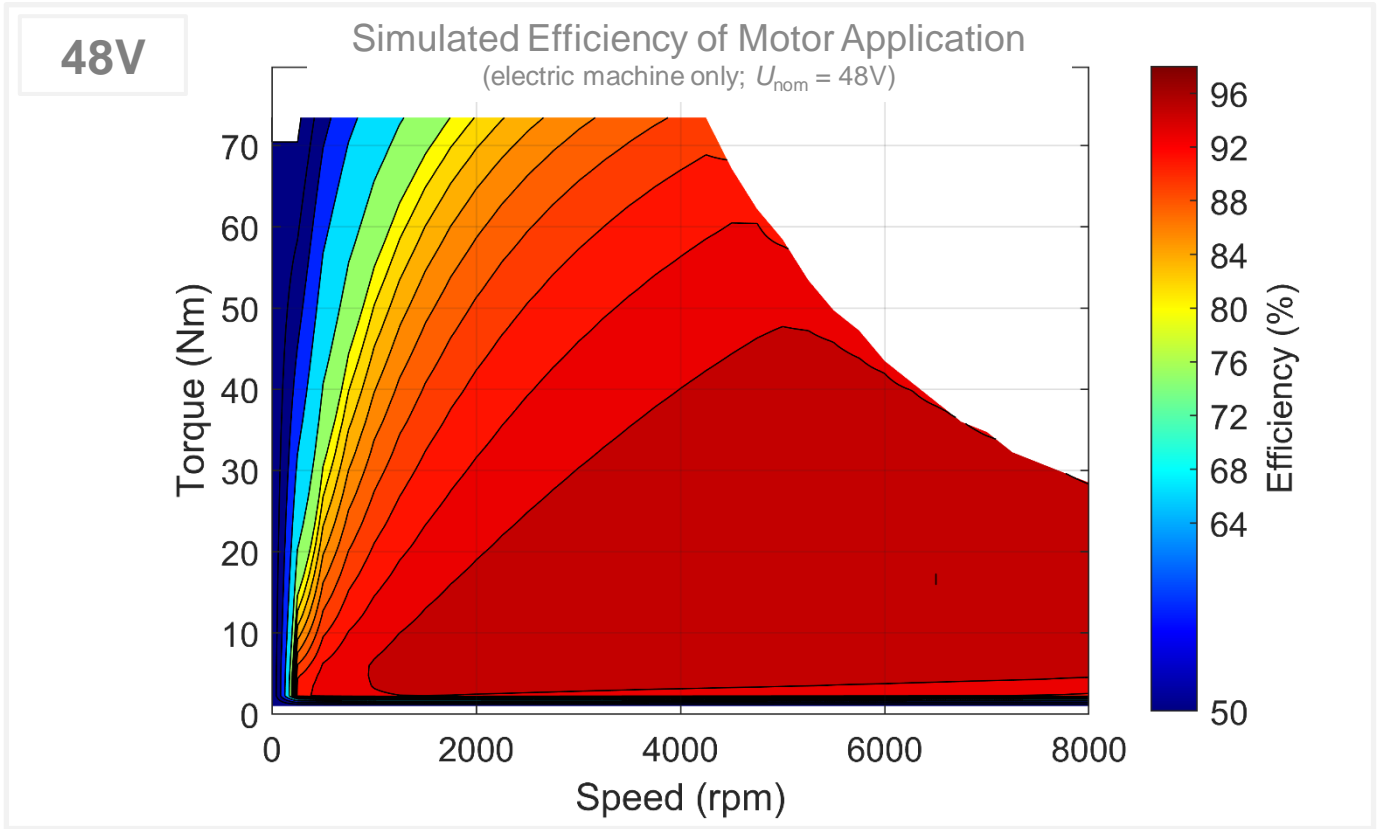
Shaft and Flange Combinations for 159AH-06008-ABC		Flange (A)
		E (IEC B14 90 round 95mm centering)
Shaft (B)	D (9T ANSI internal spline)	● (≈ 16 kg)
Position Sensor (C)		E: sin/cos encoder

Other individual combinations are also possible on request.

Technical Drawings



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