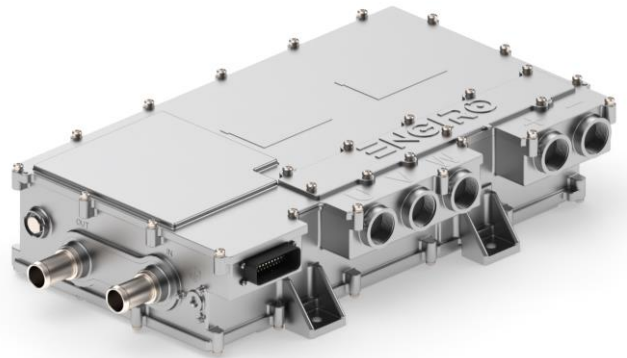
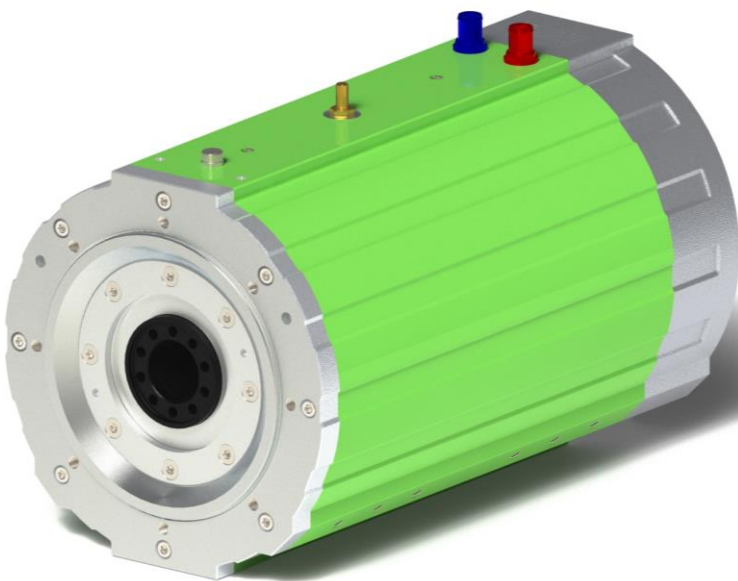


260W-15014-ABC-P

water-cooled motor / generator with 190 kW continuous power



Article-No.: 2151

Article-Name: ENGIRO Traction Inverter 800V / 900A

KEY FEATURES

- permanent magnet synchronous machine
- water-cooled
- high peak power for motor applications
- convincing cost-benefit ratio
- recommended voltage range from 500V to 850V
- delivery with controller possible

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Performance Plots	7
Additional Characteristics	8

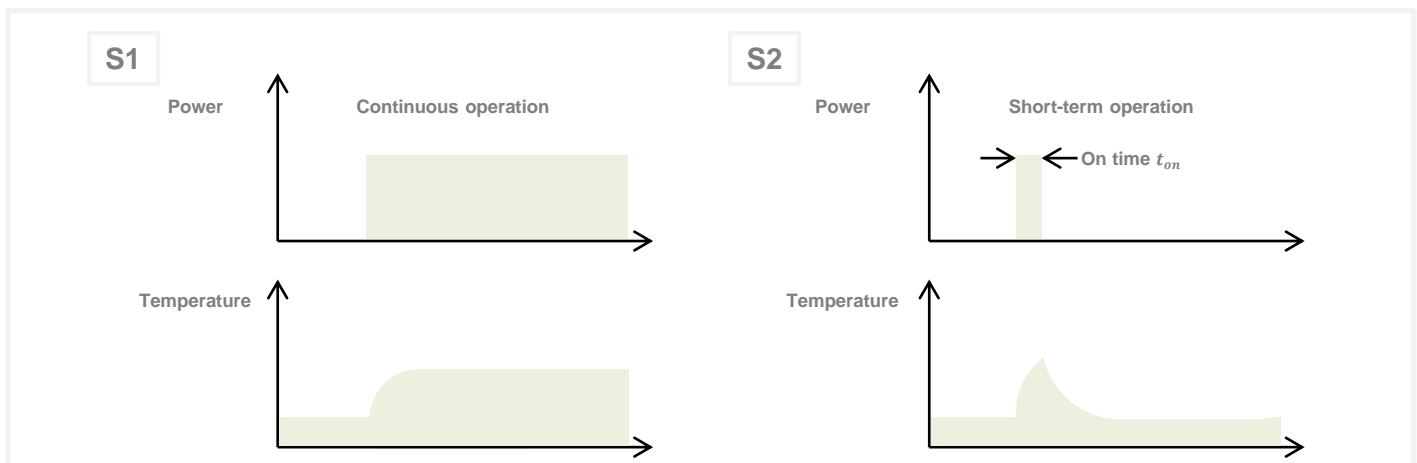
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Characteristic Operating Points ¹⁾

		S1	S2	S2	
Feasible operation time	t_{on}	continuous	30 min	30 sec	
Torque	T	365	365	804	Nm
Power	P	190	190	360	kW
Speed	n	5000	5000	4250	rpm
Phase rms-current (AC)	I_{rms}	262	262	702	A
Battery current (DC)	I_{nom}	225	225	545	A
Battery voltage (DC)	U_{nom}	750	750	750	V
Electric frequency	f_{el}	416	416	354	Hz
Efficiency	η_{tot}	95	95	88	%
Power factor	$\cos(\varphi)$	0.88	0.88	0.62	
Cooling		specified on page 5			

Maximum Operating Range

Torque	T_{max}	804 @ 4250 rpm ²⁾			Nm
Power	P_{max}	372 @ 4500 rpm			kW
Speed	n_{max}	6000			rpm
Phase rms-current (AC)	$I_{rms,max}$	702 ^{3) 4)}			A
Battery current (DC)	I_{max}	557 ^{3) 4)}			A
Battery voltage (DC)	U_{max}	850			V
Electric frequency	f_{el}	500			Hz

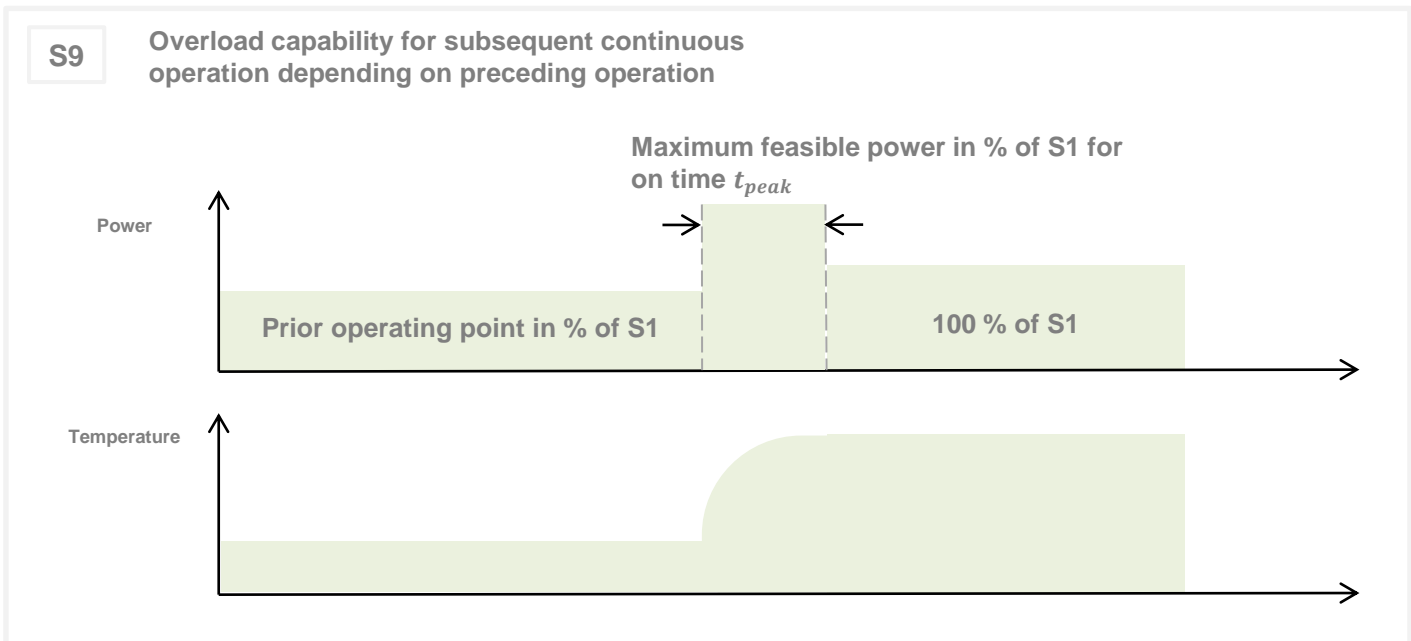


- 1) Defined Range only valid for a power factor of 1 at DC input
- 2) Torque rating is dependent on rotor temperature
- 3) The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.
- 4) Peak rating for max. 60 seconds on time

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S9 Operating Points
Maximum Feasible Power in % of S1

$U_{nom} = 750\text{ V}$		Prior operating point in % of S1				
		0 %	25 %	50 %	75 %	100 %
On time t_{peak}	30 s	230%	220%	200%	160%	100%
	180 s	170%	160%	150%	130%	100%
	420 s	130%	120%	120%	110%	100%



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Electrical Data			
Number of phases			3
Number of pole pairs			5
Maximal efficiency			95 %
T/I constant (I<I _{nom})			1.36 Nm/A _{rms}
U/n constant (AC) at temperature 30°C	rms:	89.1	peak: 130.6 V/(1000rpm)
Ke constant (AC) at temperature 30°C	rms:	0.213	peak: 0.312 V/(rad*s ⁻¹)
Additional Data			
Rotor moment of inertia			0.1006 kg*m ²
Allowed range of ambient temperature			-20 ... +85 °C
Maximal motor temperature			operating point dependent ¹⁾
Temperature monitoring			1 x KTY84-130
Cooling	Advised medium (OAT Coolants)	water/glycol - 50/50 ▪ TL 774-D/F ▪ VIN 878389 ▪ MAN 324 SNF ▪ MTL 5048	
	Flow rate		20 l/min
	Inlet temperature		45 °C
	Pressure drop		0.44 bar
	Maximum inlet pressure		2 bar
	Cooling channel volume		1.64 l
Connectors			
Power terminals			3 x M25 cable gland
Signal connectors			M16, Hummel 10 Pin connector
Cooling connectors			2 x ¾" / 19 mm
Certifications			
Type approval			CE, EN 60034
Environmental			Prepared for ISO 9227
Protection grade			IP6K9K ²⁾
Vibrations			Prepared for ISO 16750-3
Customs tariff number			8501 5381

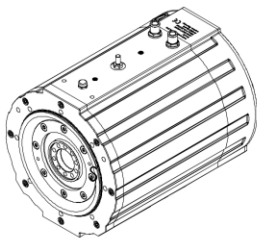
- 1) Please contact ENGIRO for the parametrization of third-party inverters
- 2) Please note that the IP6K9K rating is only valid if the machine is installed with suitable cable glands and an appropriate sealed interface at the drive side of the motor (flange and/or shaft). Please contact ENGIRO for further questions. / Only applies to SFR Variant /

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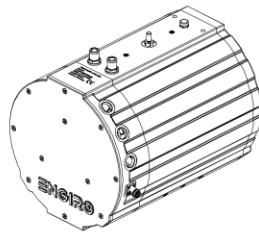
Shaft and Flange Combinations for 260W-15014-ABC-P		Flange (A)
		S (Standard)
Shaft (B)	F (Hollow shaft with screws)	 (≈ 96,8 kg)
Position Sensor (C)		R: Resolver

Other individual combinations are also possible on request.

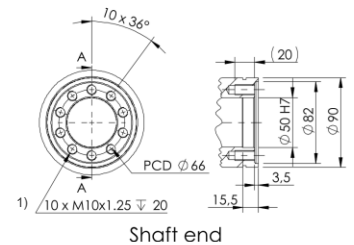
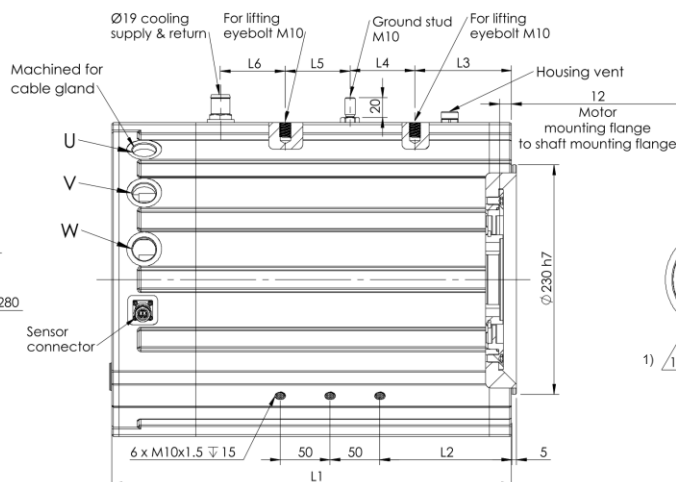
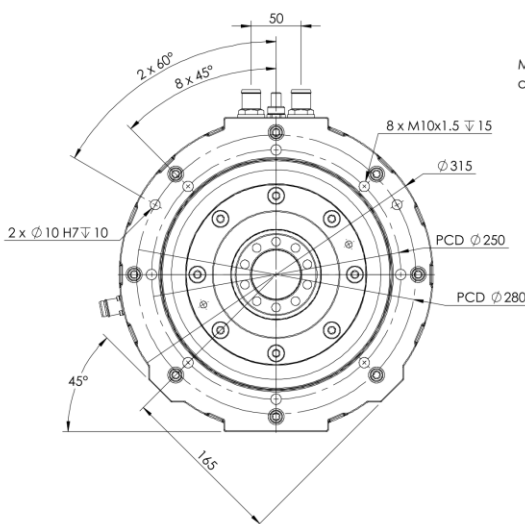
Technical Drawings



Front view



Rear view
S Flange



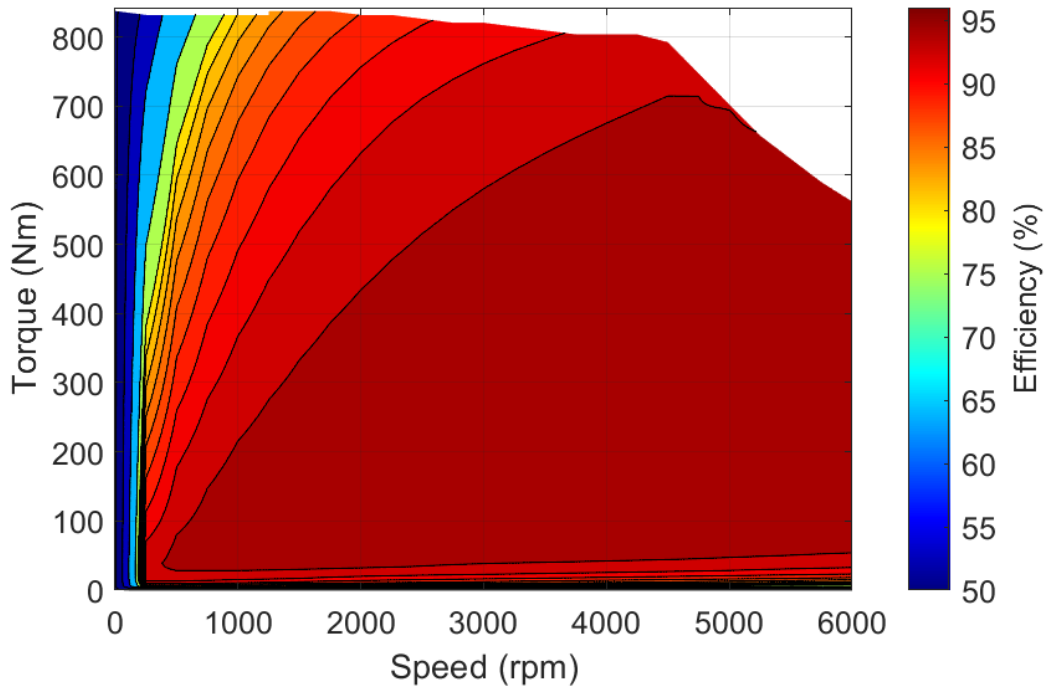
Model	L1	L2	L3	L4	L5	L6	Moment of Inertia [kg.m ²]	Cooling channel volume [L]
260W_080xx	331	97	92	40	30	60	0,0671	1,28
260W_100xx	351	107	97	45	35	65	0,0899	1,38
260W_130xx	381	112	107	55	35	75	0,0944	1,53
260W_150xx	401	132	97	65	65	65	0,1006	1,64

1) Depending on the operating points and load conditions, measures can be required to increase the coefficient of friction in the flange connection. Please contact ENGIRO for further questions.

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Simulated Efficiency of Motor Application

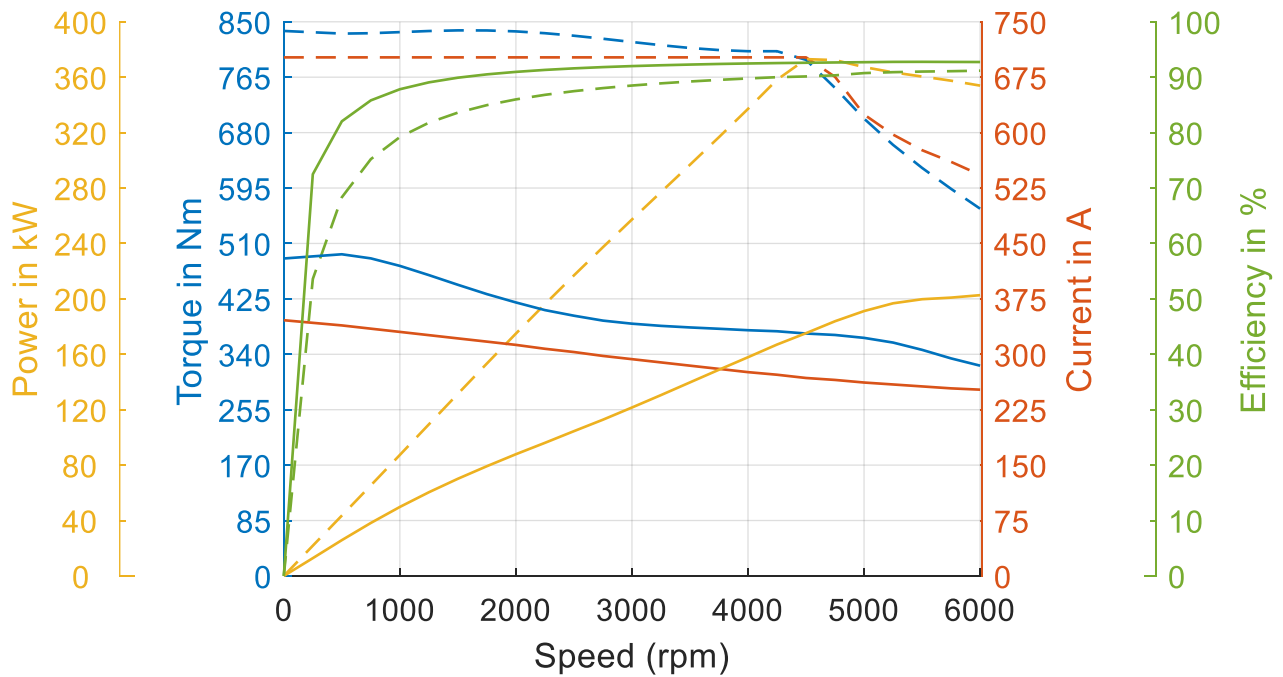
(electric machine only; $U_{nom} = 750\text{ V}$)



Simulated Characteristic Motor Parameters

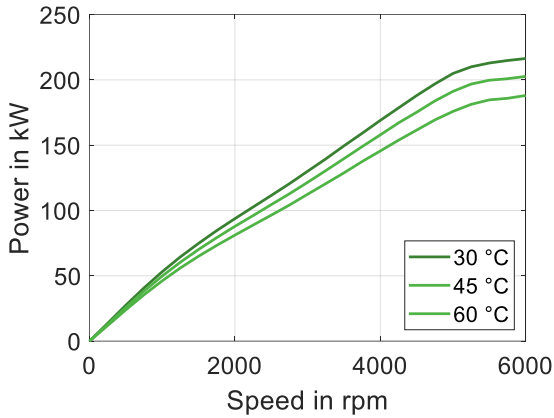
$U_{nom} = 750\text{ V}$

solid lines: continuous; dashed lines: maximum;

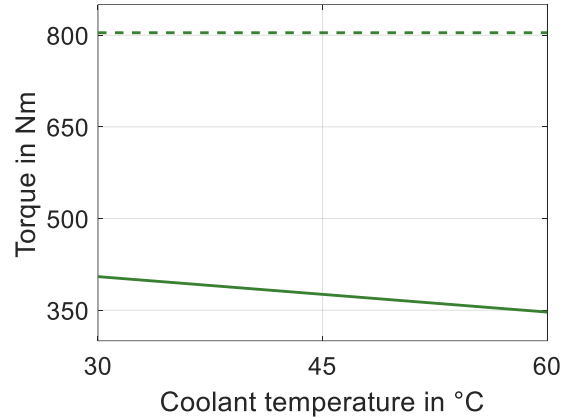


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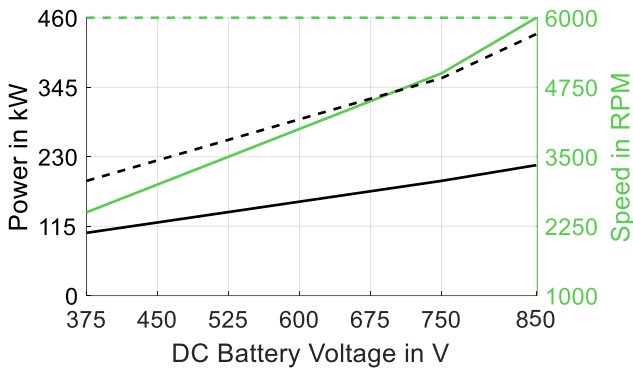
Simulated nominal power at different coolant temperatures - $U_{nom} = 750\text{ V}$



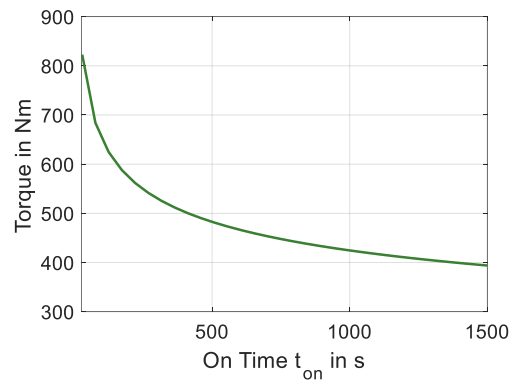
Available torque at different coolant temperatures¹⁾



Simulated power and speed over battery voltage¹⁾



Torque over feasible maximum on time, S2 operation cycles (45°C coolant temperature)



1) solid lines: continuous; dashed lines: maximum;

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