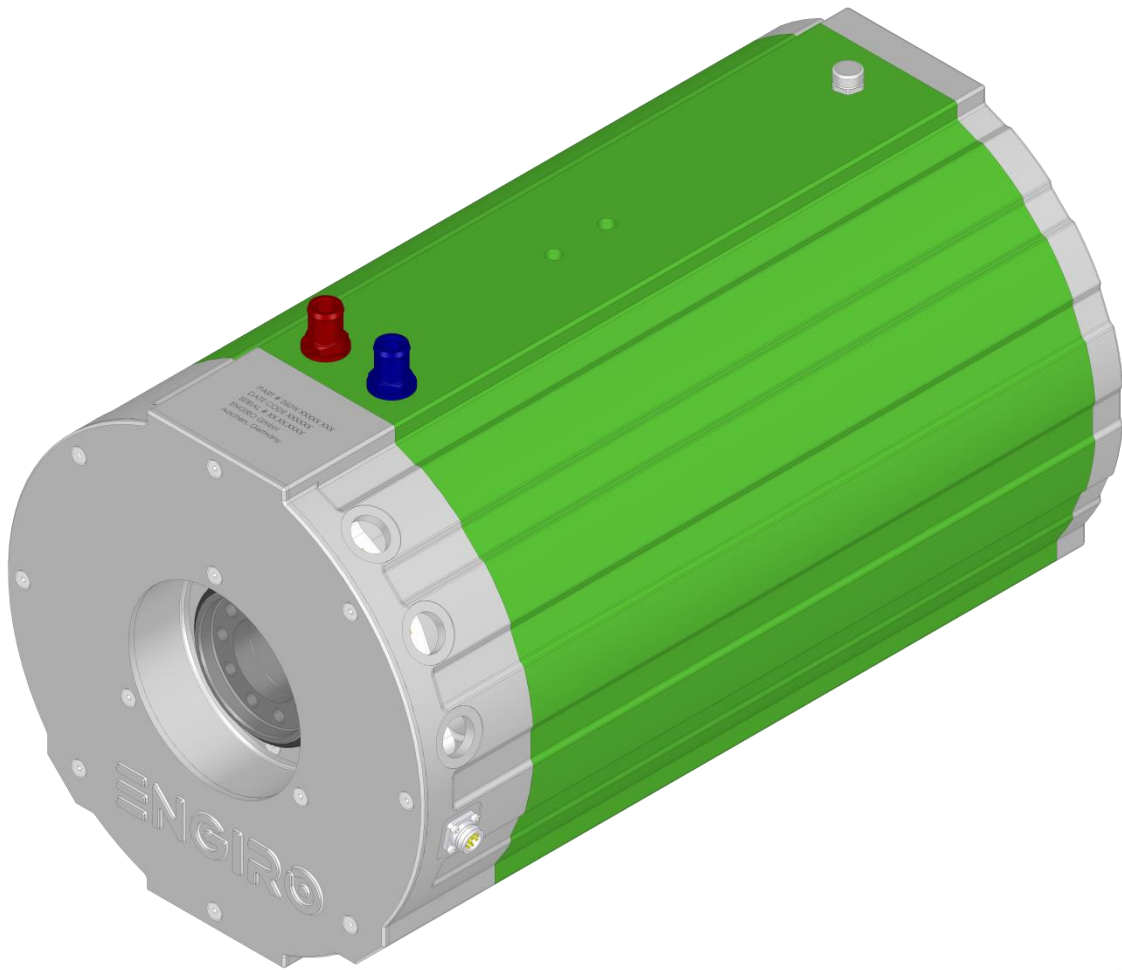


260W-28008-ABC-P

water-cooled motor / generator with 215 kW continuous power



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

Section	Page
Operating Range	3
Additional Data	4
Available Type Variants / Technical Drawings	5
Performance Plots	6

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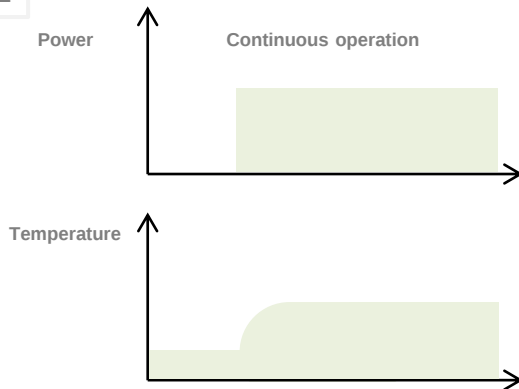
Characteristic Operating Points ¹⁾

		S1	S2	
Feasible operation time	t_{on}	continuous	60 sec	
Torque	T	458	1287	Nm
Power	P	215	540	kW
Speed	n	4500	4000	rpm
Phase rms-current (AC)	I_{rms}	300	900	A
Battery current (DC)	I_{nom}	316	803	A
Battery voltage (DC)	U_{nom}	700	700	V
Electric frequency	f_{el}	375	333	Hz
Efficiency	η_{tot}	96	96	%
Power factor	$\cos(\varphi)$	0.91	0.72	
Cooling		specified on page 4		

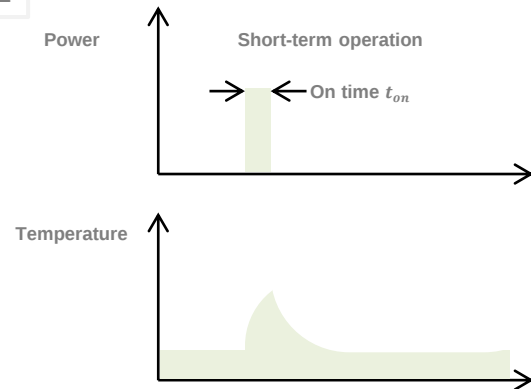
Maximum Operating Range

Torque	T_{max}	1287 @ 4000 rpm ²⁾	Nm
Power	P_{max}	585 @ 4750 rpm	kW
Speed	n_{max}	6000	rpm
Phase rms-current (AC)	$I_{rms,max}$	900 ^{3,4)}	A
Battery current (DC)	I_{max}	861 ^{3,4)}	A
Battery voltage (DC)	U_{max}	850	V
Electric frequency	f_{el}	500	Hz

S1



S2



- 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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Electrical Data					
Number of phases		3			
Number of pole pairs		5			
Maximal efficiency		97			%
T/I constant (I<Inom)		1.51			Nm/A _{rms}
U/n constant (AC) at temperature 30°C		rms:	97.9	peak:	144.5 V/(1000rpm)
Ke constant (AC) at temperature 30°C		rms:	0.234	peak:	0.345 V/(rad*s ⁻¹)
Additional Data					
Rotor moment of inertia		0.189			kg*m²
Allowed range of ambient temperature		-20 ... +85			°C
Maximal motor temperature		134			°C
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	< 1 ¹⁾			bar
	Maximum inlet pressure	2			bar
	Cooling channel volume	2.32			l
Connectors					
Power terminals		3 x M32 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) Theoretical assumption

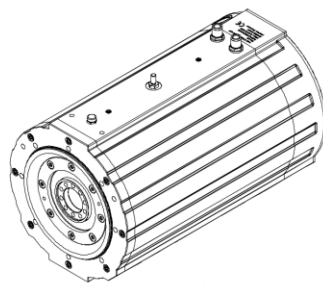
2) Please note that the IP6K9K rating is only valid if the machine is installed with suitable cable glands and an appropriate sealed interface at the drive side of the motor (flange and/or shaft). Please contact ENGIRO for further questions. / Only applies to SFR Variant /

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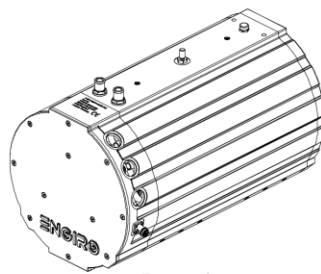
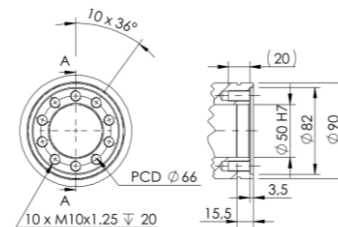
Shaft and Flange Combinations for 260W-28008-ABC-P		Flange (A)
		S (Standard)
Shaft (B)	F (Hollow shaft with screws)	● (≈ 149 kg)
Position Sensor (C)		R: Resolver

Other individual combinations are also possible on request.

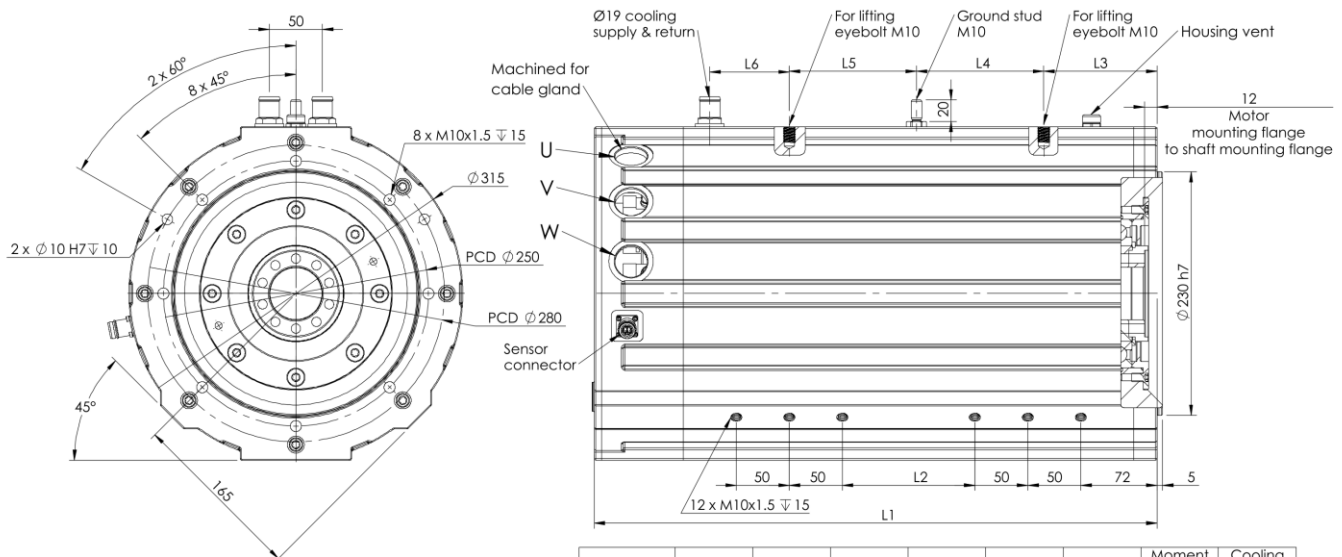
Technical Drawings



Front view

Rear view
S Flange

Shaft end

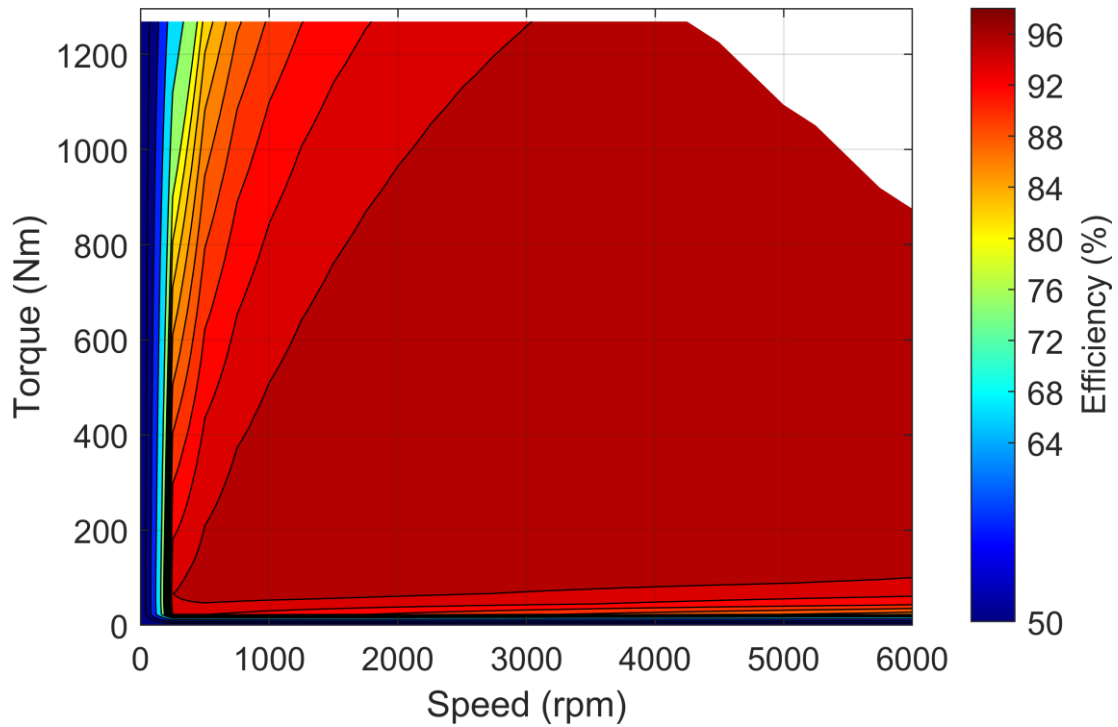


Model	L1	L2	L3	L4	L5	L6	Moment of Inertia [kg.m²]	Cooling channel volume [L]
260W_200xx	453	45	87	115	65	155	0,1327	1,91
260W_250xx	503	95	97	115	115	65	0,1677	2,17
260W_280xx	531	125	107	120	120	75	0,1892	2,32

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Simulated Efficiency of Motor Application

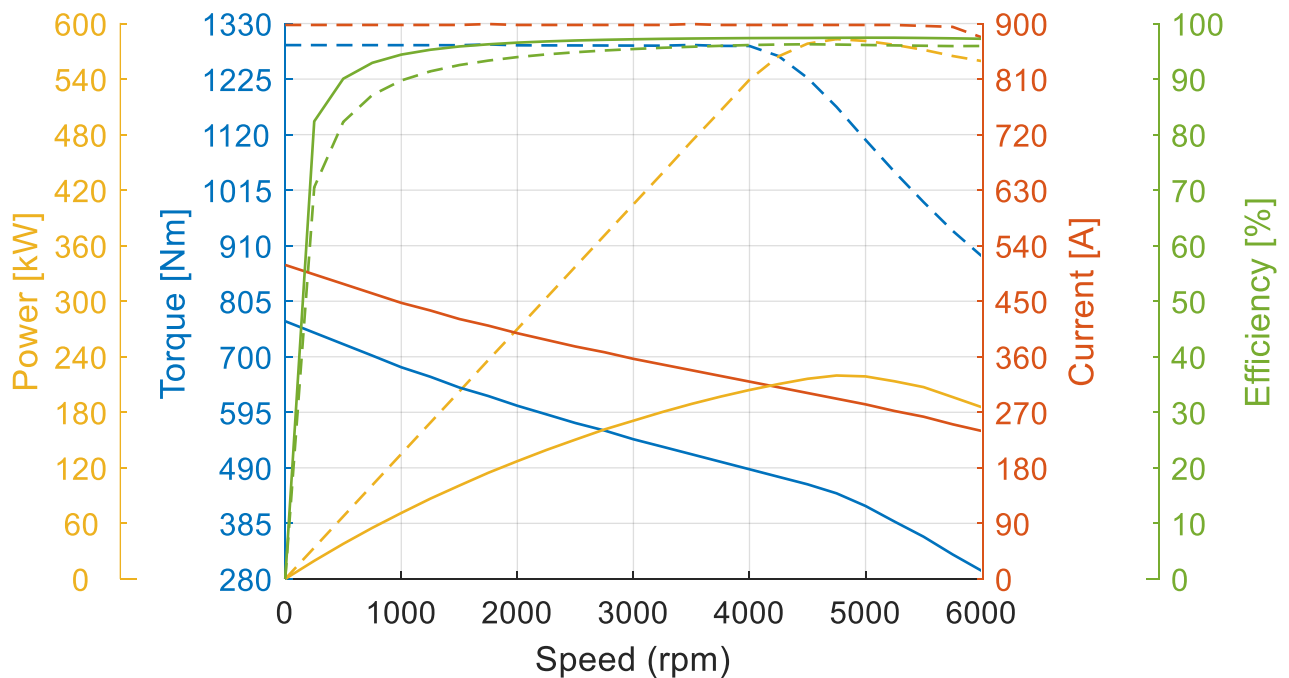
(electric machine only; $U_{nom} = 700 \text{ V}$)



Simulated Characteristic Motor Parameters

$U_{nom} = 700 \text{ V}$

solid lines: continuous; dashed lines: maximum;



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