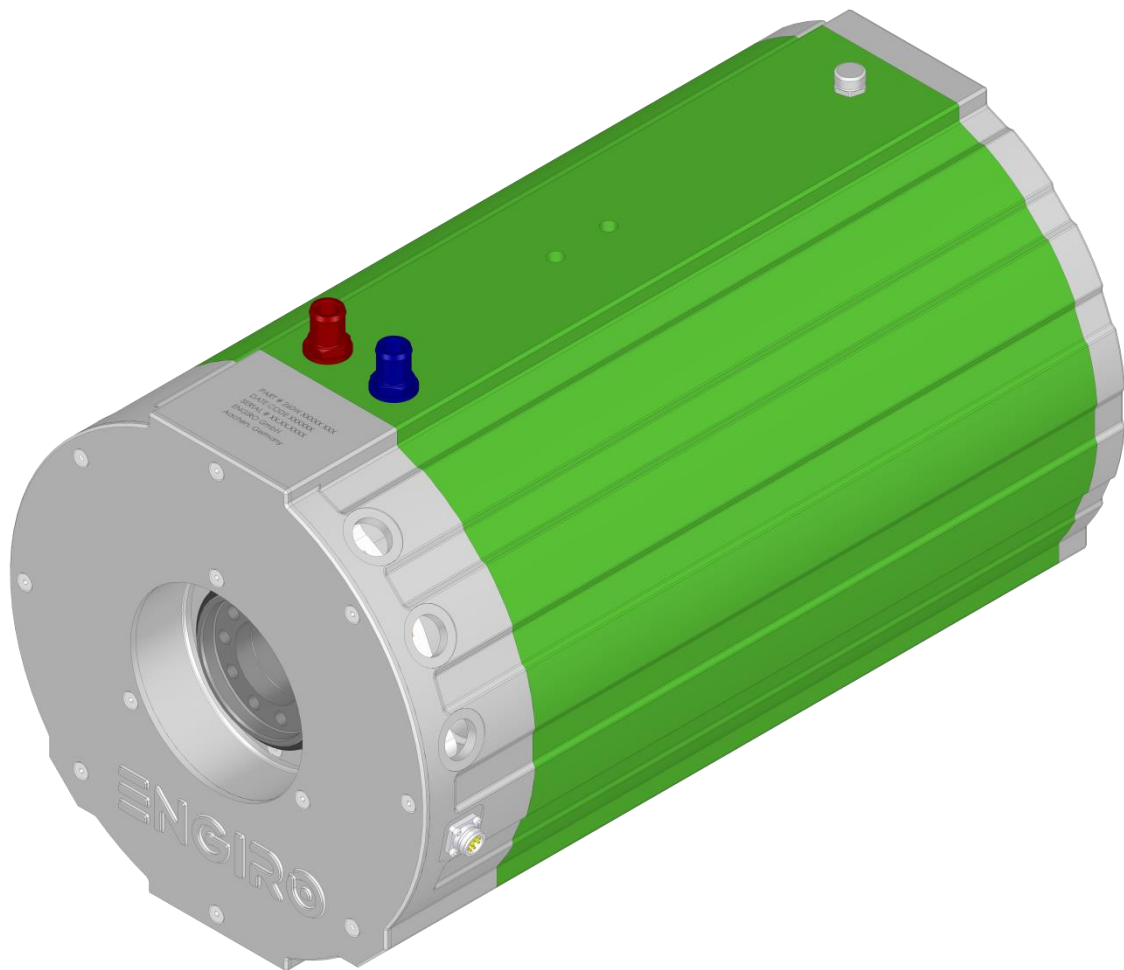


# 260W-28008-ABC-P

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

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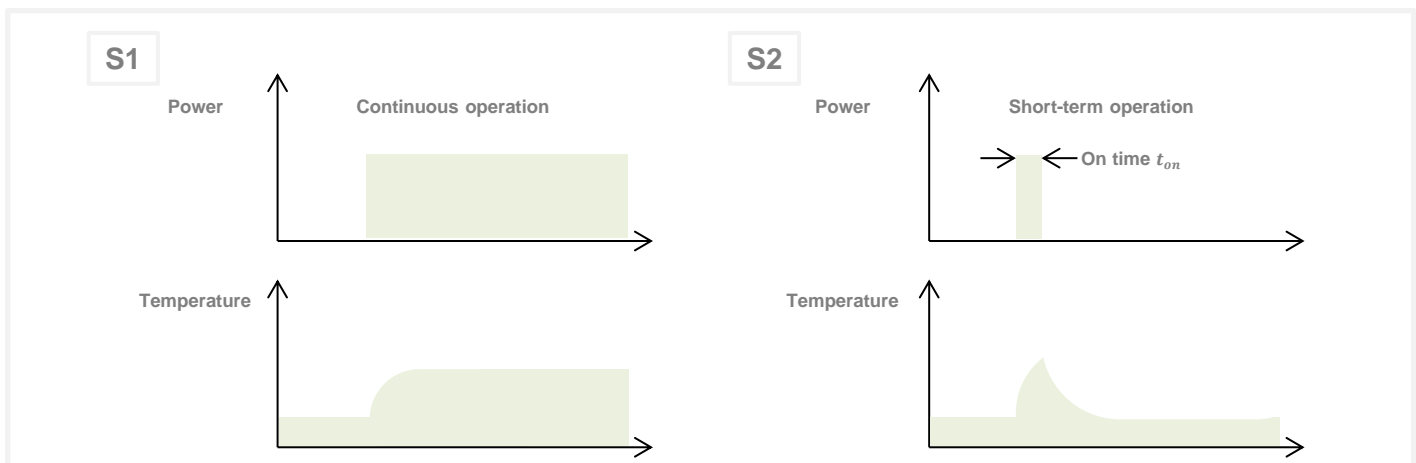
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**Characteristic Operating Points <sup>1)</sup>**

		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	$\eta_{tot}$	96	96	%
Power factor	$\cos(\varphi)$	0.91	0.72	
Cooling	specified on page 4			

**Maximum Operating Range**

Torque	$T_{max}$	1287 @ 4000 rpm <sup>2)</sup>		Nm
Power	$P_{max}$	585 @ 4750 rpm		kW
Speed	$n_{max}$	6000		rpm
Phase rms-current (AC)	$I_{rms,max}$	900 <sup>3,4)</sup>		A
Battery current (DC)	$I_{max}$	861 <sup>3,4)</sup>		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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Electrical Data				
Number of phases				3
Number of pole pairs				5
Maximal efficiency				97 %
T/I constant (I<I <sub>nom</sub> )				1.51 Nm/A <sub>rms</sub>
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 <sup>-1</sup> )

Additional Data				
Rotor moment of inertia				0.1892 kg*m <sup>2</sup>
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 <ul style="list-style-type: none"> <li>▪ TL 774-D/F</li> <li>▪ VIN 878389</li> <li>▪ MAN 324 SNF</li> <li>▪ MTL 5048</li> </ul>		
	Flow rate			20 l/min
	Inlet temperature			45 °C
	Pressure drop			< 1 <sup>1)</sup> 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 <sup>2)</sup>
Vibrations	Prepared for ISO 16750-3
Customs tariff number	8501 5381

1) Theoretical assumption

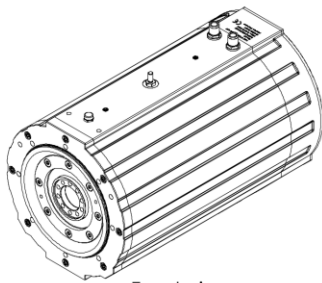
2) Please note that the IP6K9K rating is only valid if the machine is installed with suitable cable glands and an appropriate sealed interface at the drive side of the motor (flange and/or shaft). Please contact ENGIRO for further questions. / Only applies to SFR Variant /

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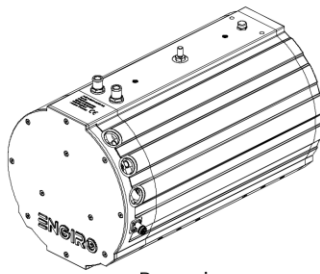
<b>Shaft and Flange Combinations for 260W-28008-ABC-P</b>		<b>Flange (A)</b>
		<b>S</b> (Standard)
<b>Shaft (B)</b>	<b>F</b> (Hollow shaft with screws)	 (≈ 149 kg)
<b>Position Sensor (C)</b>		<b>R: Resolver</b>

Other individual combinations are also possible on request.

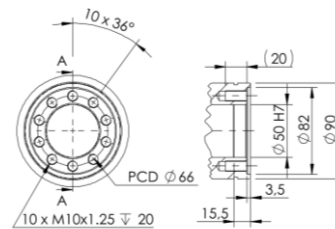
## Technical Drawings



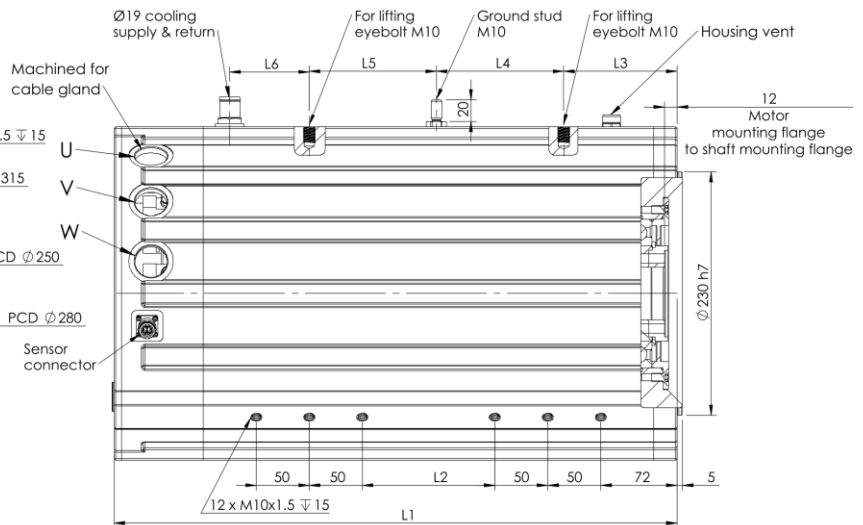
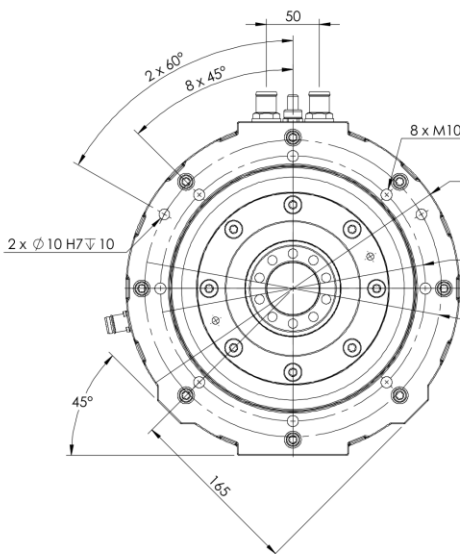
Front view



Rear view  
S Flange



Shaft end

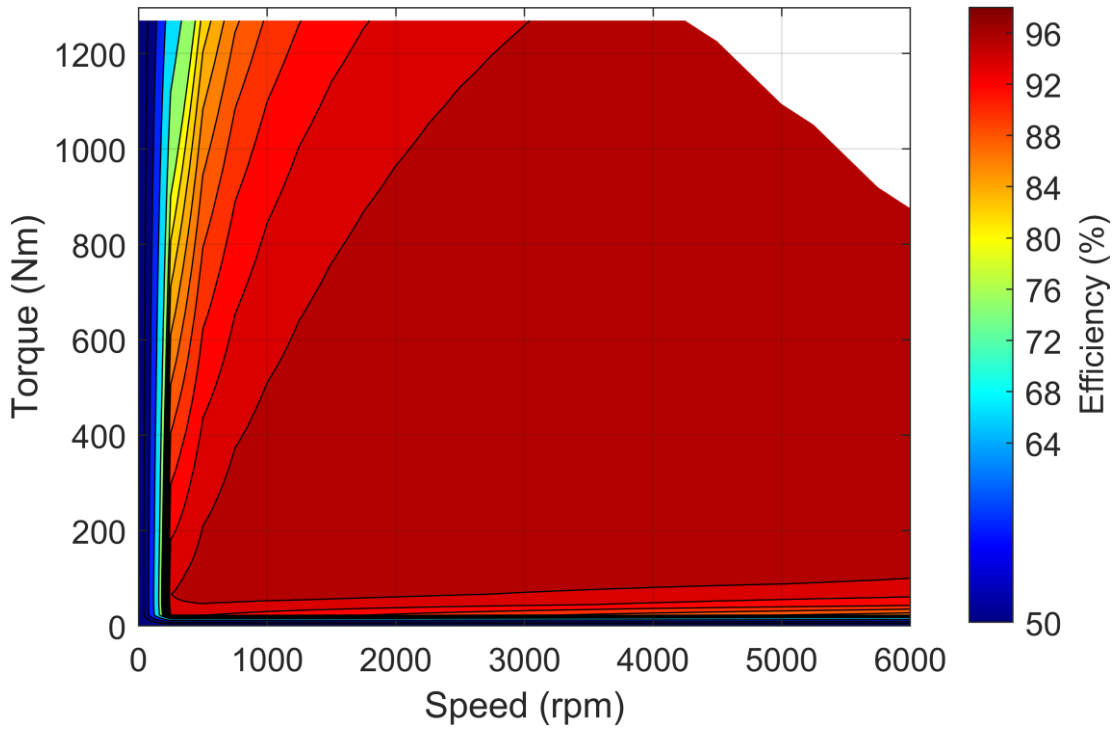


Model	L1	L2	L3	L4	L5	L6	Moment of Inertia [kg.m <sup>2</sup> ]	Cooling channel volume [L]
260W_200xx	453	45	87	115	65	155	0,1327	1,91
260W_250xx	503	95	97	115	115	65	0,1677	2,17
260W_280xx	531	125	107	120	120	75	0,1892	2,32

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Simulated Efficiency of Motor Application

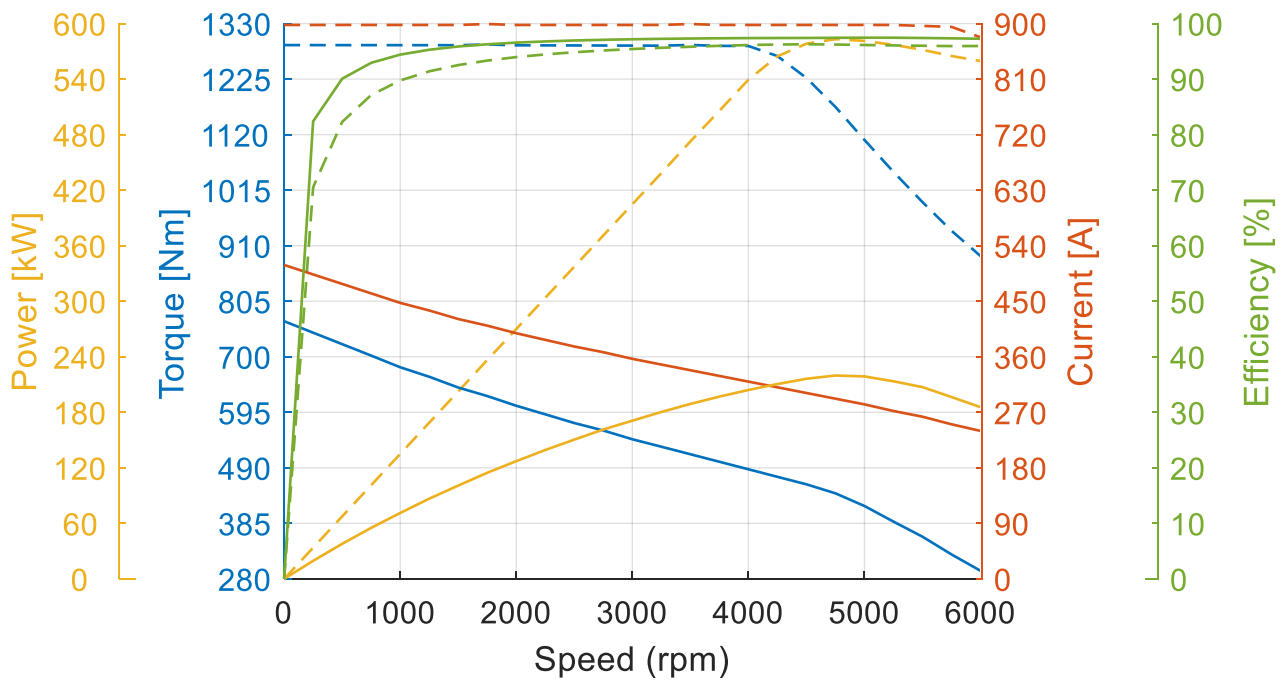
(electric machine only;  $U_{nom} = 700\text{ V}$ )



Simulated Characteristic Motor Parameters

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

solid lines: continuous; dashed lines: maximum;



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