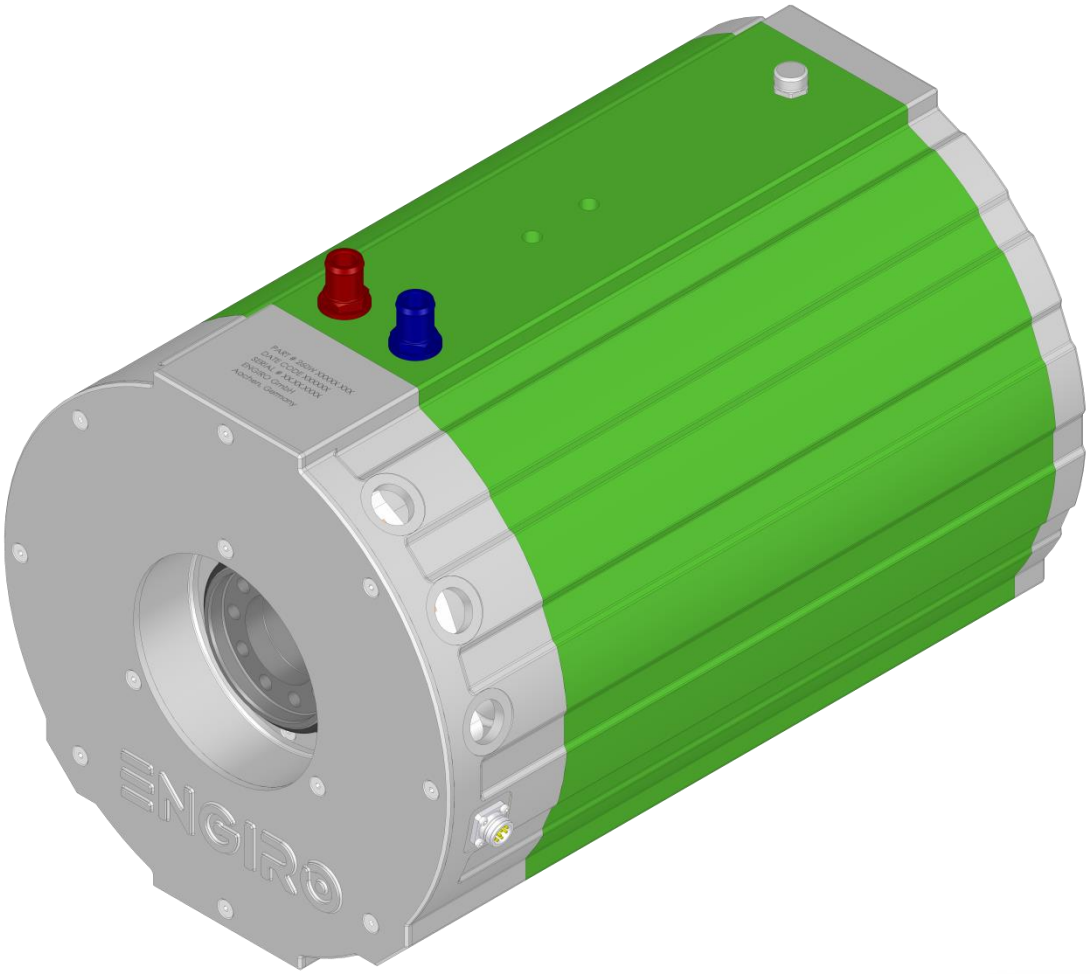
260W-20020-ABC

water-cooled motor / generator with 130 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 750V
- delivery with controller possible
- Double shaft end with screw flange

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Table of Content

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Technical Data Machine

ENGIRO
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Nominal Operation (S1, cooling as specified below)						
Torque	T_{nom}				551	Nm
Power	P_{nom}				130	kW
Speed	n_{nom}				2260	rpm
Phase rms-current	I_{nom}				197	A
Battery voltage (DC)	U_{nom}				700	V
Electric frequency	$f_{el,nom}$				188	Hz
Power factor	cos(φ)				0.73	
Maximal Values (S2, 10s, cooling as specified below)						
Torque	T_{max}				1098	Nm
Power	P_{max}				253	kW
Phase rms-current	I_{max}				498	A
Battery voltage (DC)	U_{max}				750	V
Speed	n_{max}				4210	rpm
Electric frequency	$f_{el,\ max}$				351	Hz
Electrical Data						
Number of phases					3	
Number of pole pairs					5	
Maximal efficiency					>96	%
T/I constant (I<I_{nom})					2.8	Nm/A_{rms}
U/n constant (AC)		rms:	167.9	peak:	237.5	V/(1000rpm)
K_e constant (AC)		rms:	0.321	peak:	0.454	$V/(rad*s^{-1})$
Additional Data						
Weight (w/o cables)					117	kg
Rotor moment of inertia					0.131	$kg*m^2$
Protection category					IP65 / IP69k	
Maximal motor temperature					140	°C
Allowed ambient temperature					-20 … 45[1)]	°C
Cooling (medium, flow rate, inlet temperature, pressure)					water/glycol 50/50, 13 l/min, ≤ 45°C, ≤ 0.5 bar	
Temperature monitoring					1 x KTY84-130	
Type approval					CE, EN 60034	
Customs tariff number					8501 5381	
Connectors						
Power terminals					3 x M25 cable gland	
Signal connectors					M16, 10 Pin	
Cooling connectors					2 x ¾'' / 19 mm	

[1)] other range on request

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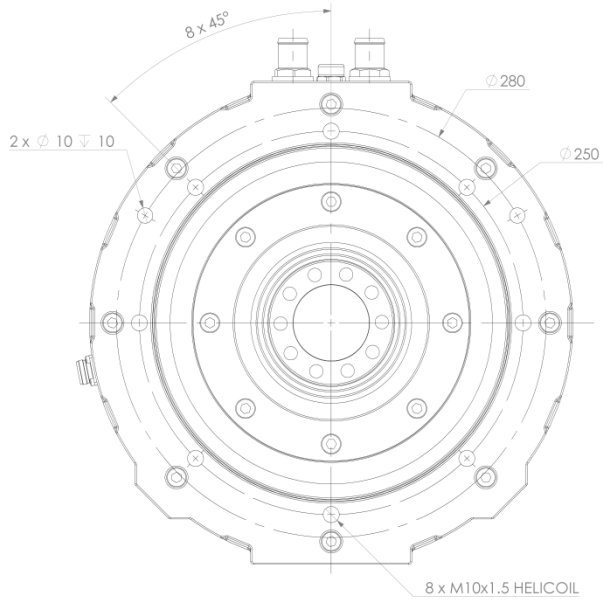
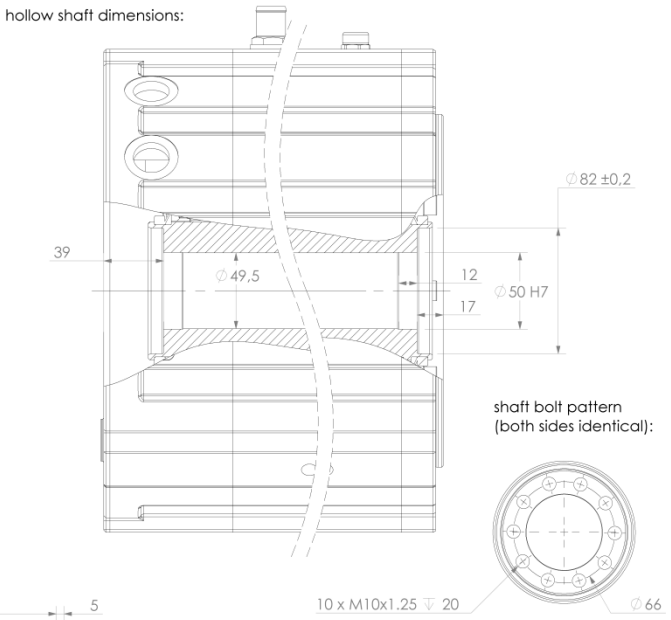
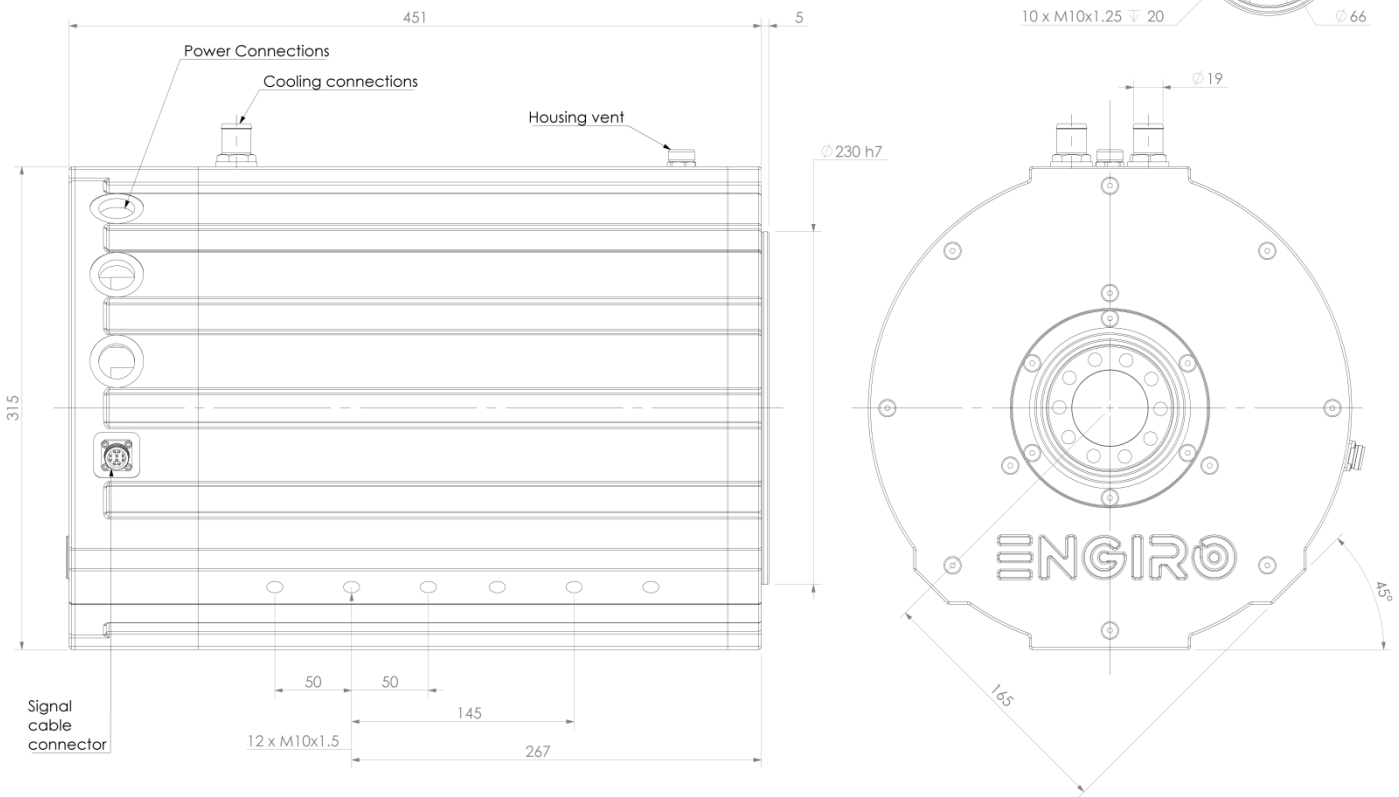
Technical Drawings

Available Type Variants			
type number	A: flange	B: shaft	C: position sensor
260W-20020-	S: standard	F: hollow shaft with two screw flanges	R: resolver
			N: none







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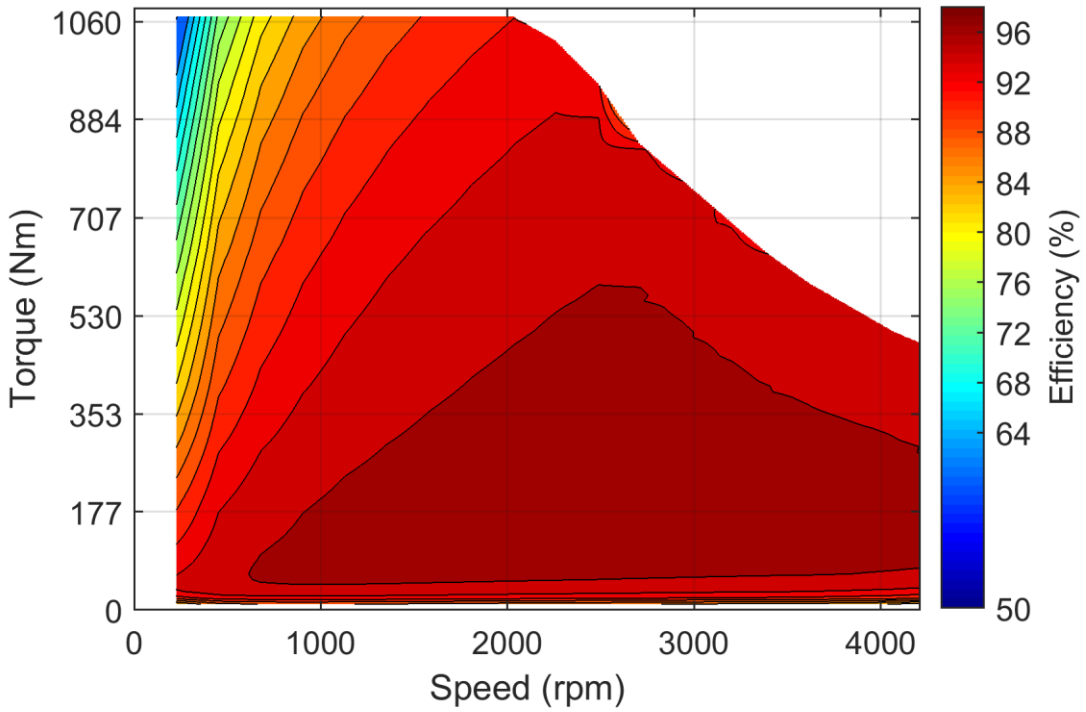
Characteristics Machine

Simulated Efficiency of Motor Application

(electric machine only; U_{nom} = 700 V; machine at 100 °C;)

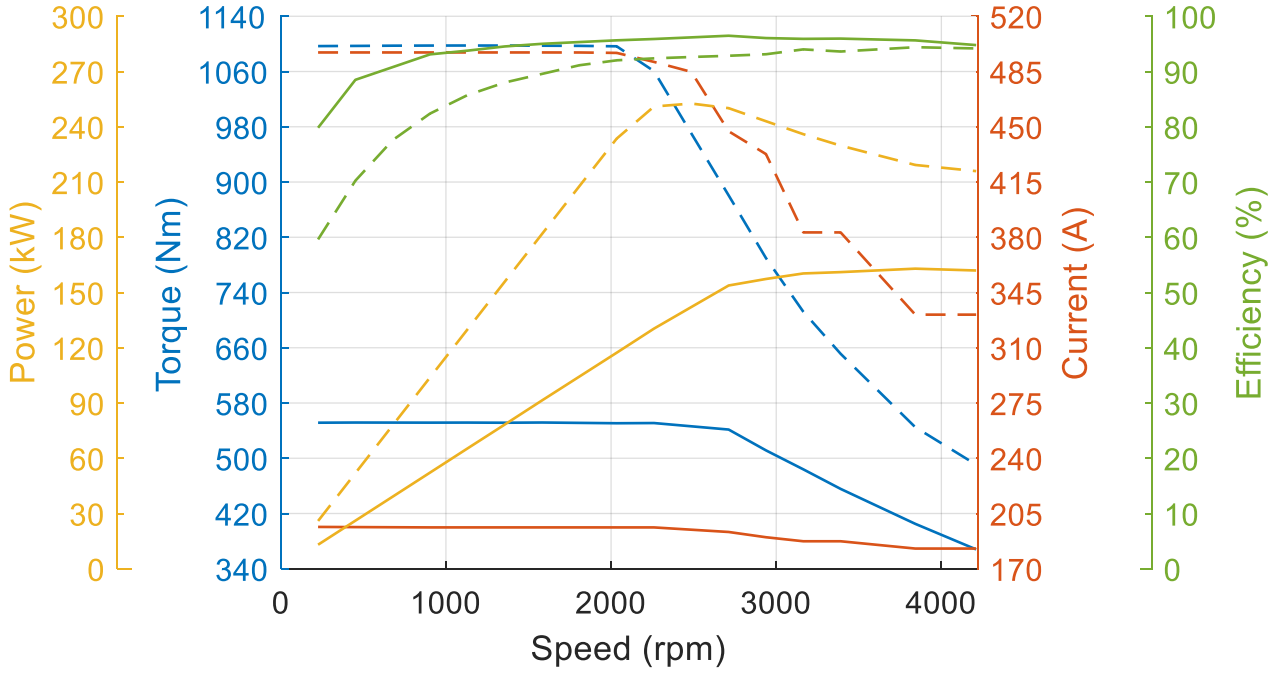


Simulated Characteristic Motor Parameters

U_{nom} = 700 V

solid lines: continuous; dashed lines: maximum;

(jitter is caused by numerical inaccuracies in the simulation software)



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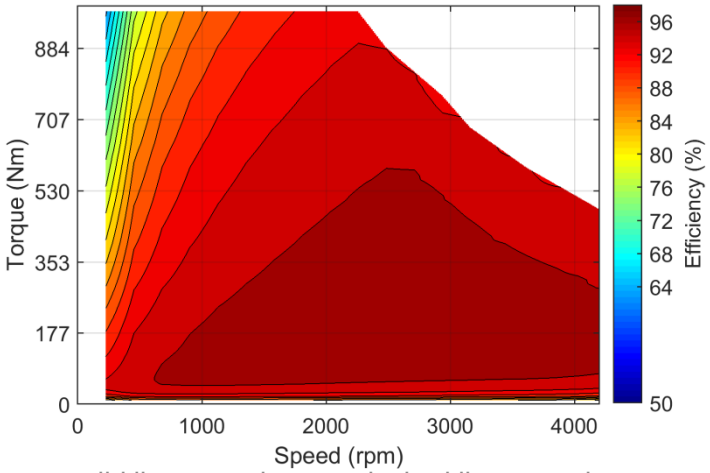
Technical Data Inverter Set

Nominal Operation Drive Set (S1)			
Torque	T_{nom}	551	Nm
Power	P_{nom}	130	kW
Speed	n_{nom}	2260	rpm
Phase rms-current	I_{nom}	197	A
Battery voltage	U_{nom}	700	V
Electric frequency	$f_{el,nom}$	188	Hz
Power factor	cos(φ)	0.73	
Maximal Values Drive Set (S2, 1-10s)			
Torque	T_{max}	1023	Nm
Power	P_{max}	244	kW
Phase rms-current	I_{max}	451	A
Battery voltage	U_{max}	700	V
Speed	n_{max}	4200	rpm
Electric frequency	$f_{el,\ max}$	350	Hz

Simulated Efficiency and Motor Characteristic of Motor Application

(electric machine only; U_{nom} = 700 V; machine at 100 °C;)



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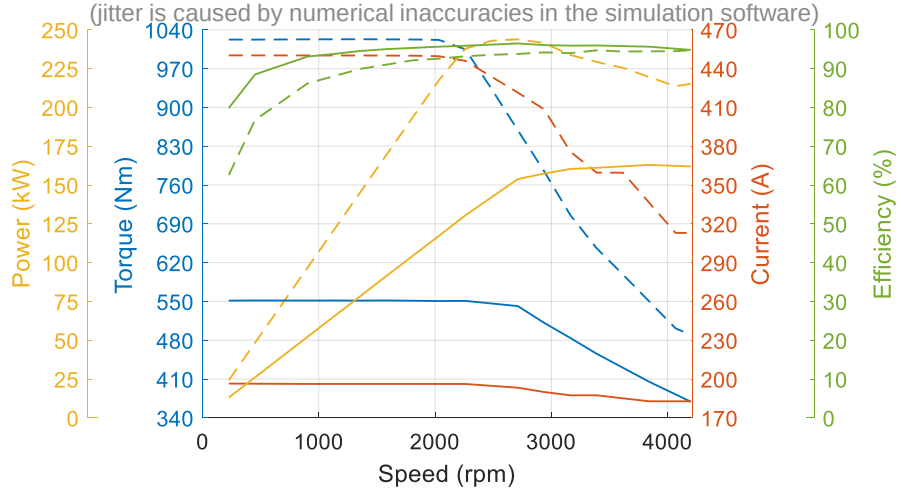

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