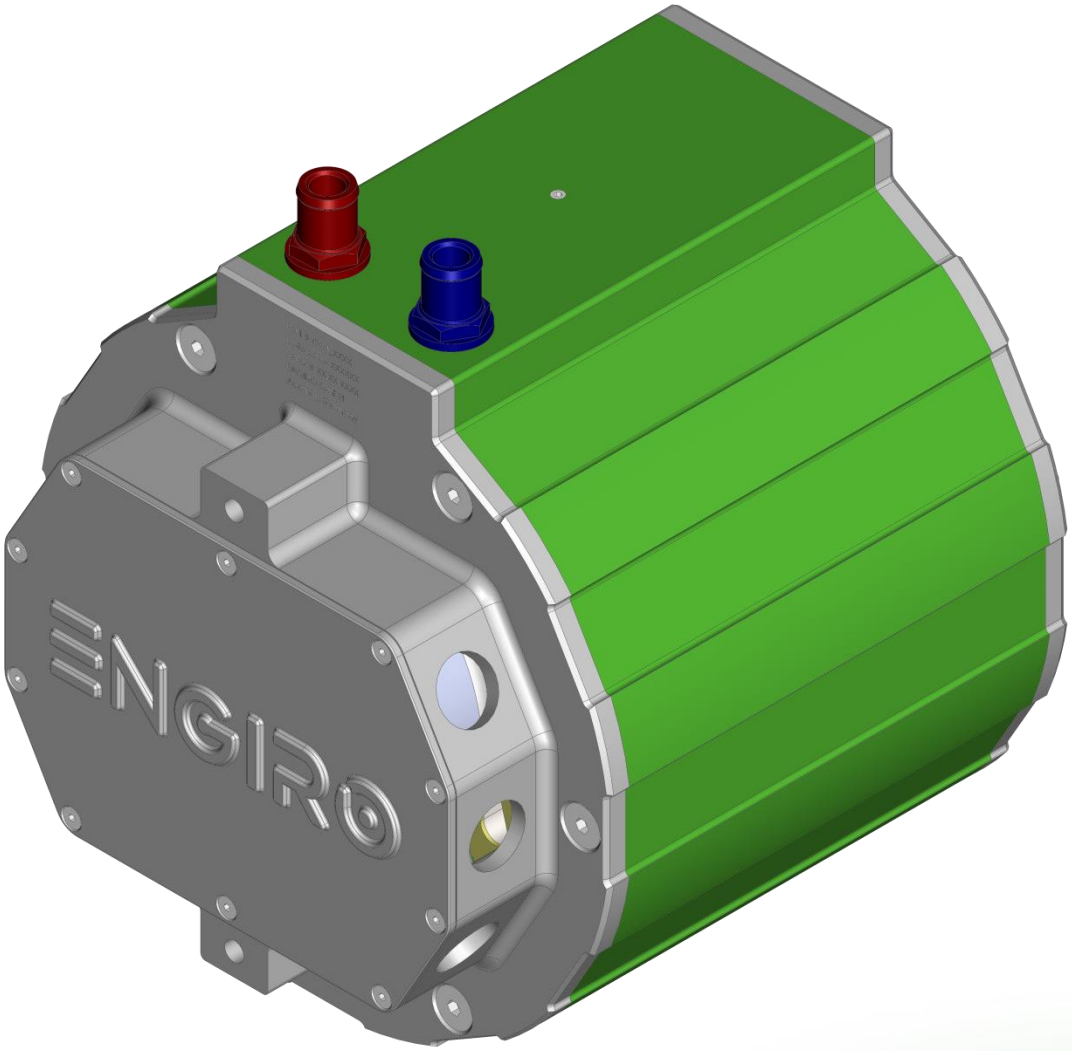
205W-08026-ABC

water-cooled motor / generator with up to 63 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 300V to 850V
- delivery with controller possible
- various mechanical interfaces available

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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}	70	Nm
Power	P_{nom}	52	kW
Speed	n_{nom}	7000	rpm
Phase rms-current	I_{nom}	156[1,2)]	A
Battery voltage(DC)	U_{nom}	400	V
Electric frequency	$f_{el,nom}$	466	Hz
Power factor	cos(φ)	0.74	

Maximal Values (S2, 10s, cooling as specified below)			
Torque	T_{max}	188	Nm
Power	P_{max}	100	kW
Phase rms-current	I_{max}	481[2)]	A
Battery voltage(DC)	U_{max}	850	V
Speed	n_{max}	8000	rpm
Electric frequency	$f_{el,\ max}$	533	Hz

Electrical Data					
Number of phases				3	
Number of pole pairs				4	
Maximal efficiency				96	%
T/*I* constant (I<I_{nom})				0.46	Nm/A_{rms}
U/*n* constant (AC) at a temperature of 30°C	rms:	31.7	peak:	53.4	V/(1000rpm)
K_e constant (AC) at a temperature of 30°C	rms:	0.076	peak:	0.129	$V/(rad*s^{-1})$

Additional Data	
Weight (w/o cables)	see page 4
Rotor moment of inertia	0.0123 kg*m²
Protection category	IP6K9K[3)]
Maximal motor temperature	140 °C
Allowed ambient temperature	-20 … 45[4)] °C
Cooling (medium, flow rate, inlet temperature, pressure)	water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar
Temperature monitoring	1 x KTY84-130
Type approval	CE, EN 60034
Customs tariff number	8501 5290

Connectors	
Power terminals	3 x M25 cable gland
Signal connectors	M16, 10 Pin
Cooling connectors	2 x ¾" / 19 mm

[1)] Nominal current strongly dependent on cooling as specified below.
[2)] The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.
[3)] 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.
[4)] other range on request

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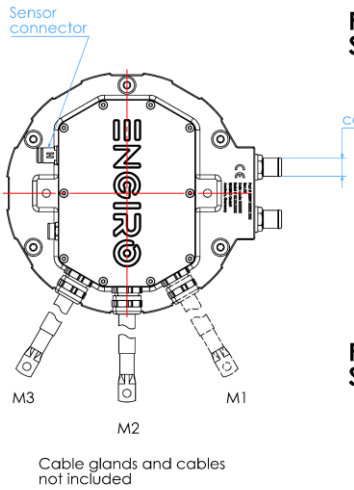
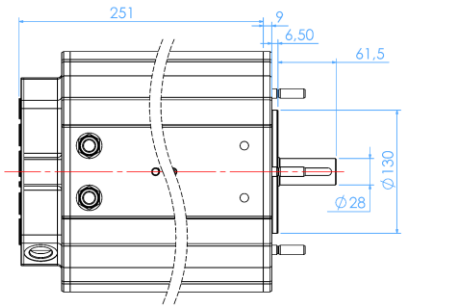
Technical Drawings

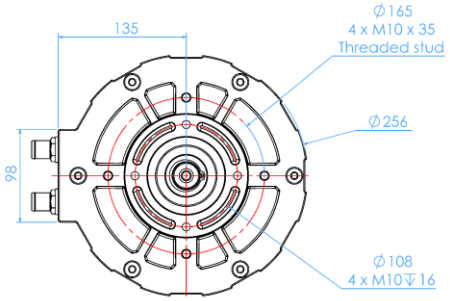
Available Type Variants			
type number	A: flange	B: shaft	C: position sensor
205W-08026-	S: standard	S: cylindrical shaft with keyway Ø28mm	R: resolver (gain 0.5)
		H: hollow shaft with internal splines ANSI B 92.1	F: resolver (gain 0.29)

Approximate machine weight		
flange	shaft	kg
S	S	35
S	H	34

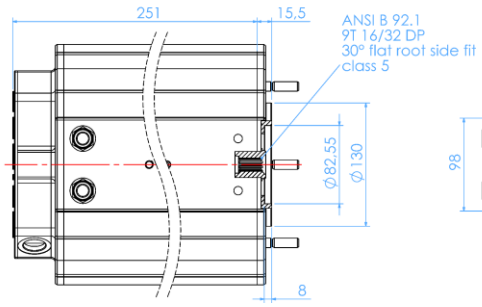


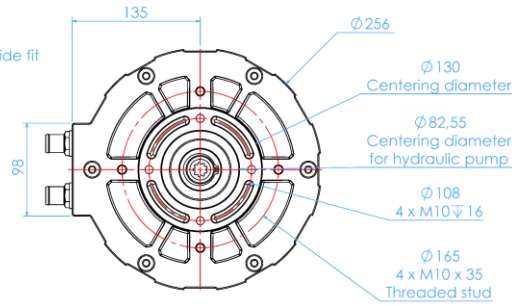
Flange S Shaft S





Flange S Shaft H





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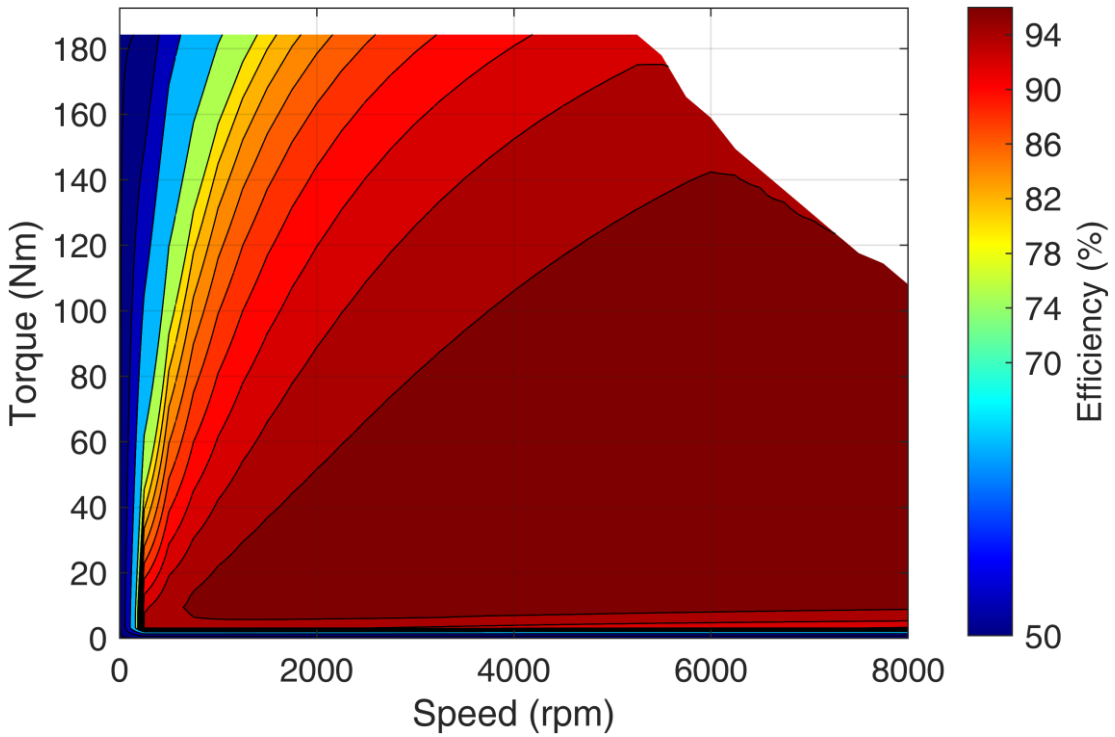
Simulated Efficiency of Motor Application

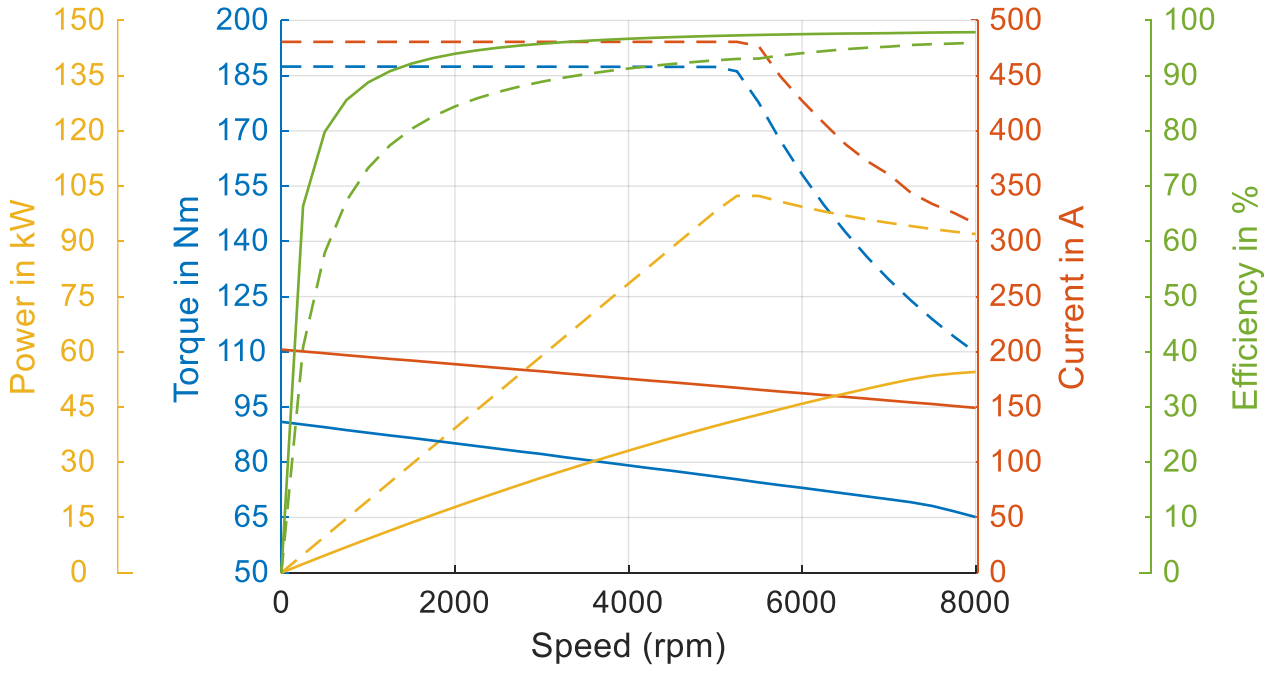
(electric machine only; U_{nom} = 400 V; machine at 140 °C;)



Simulated Characteristic Motor Parameters

U_{nom} = 400 V

solid lines: continuous; dashed lines: maximum;



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