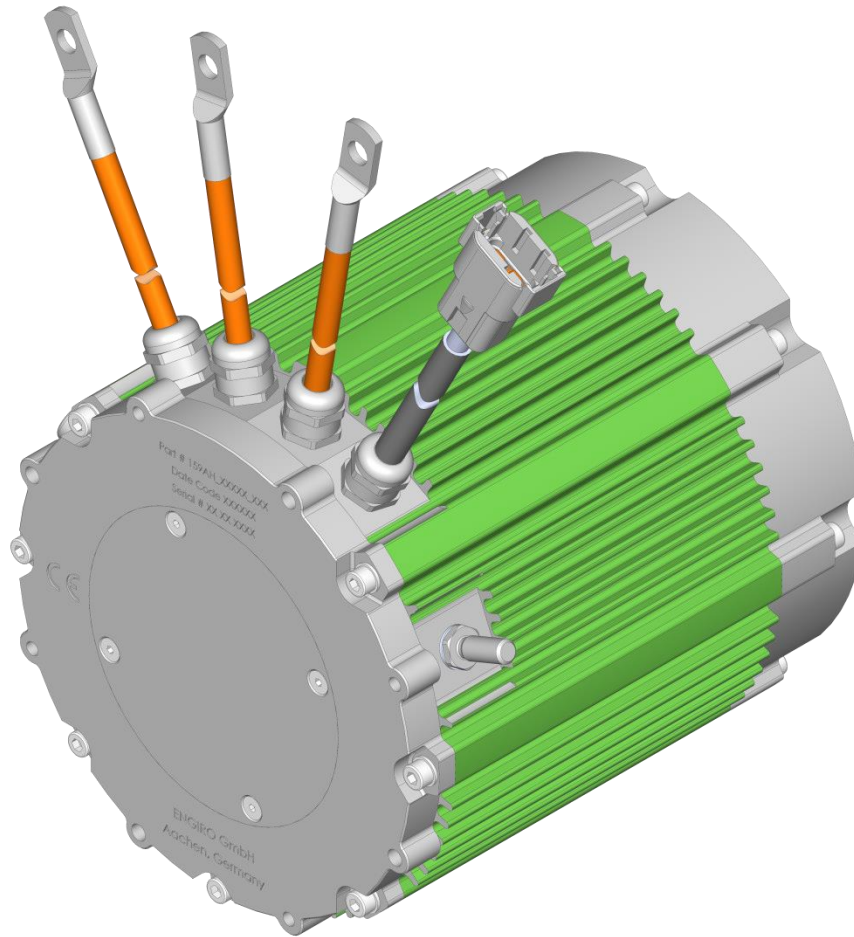


159AH-06020-ABC

air-cooled motor / generator with 9.6 kW continuous power



KEY FEATURES

- permanent magnet synchronous machine
- air-cooled
- convincing cost-benefit ratio
- delivery with controller possible

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Nominal Operation (S1, cooling as specified below)				
Torque	T_{nom}		20	Nm
Power	P_{nom}		9.6	kW
Speed	n_{nom}		4600	rpm
Phase rms-current	I_{nom}		113 ^{1,2)}	A
Battery voltage (DC)	U_{nom}		96	V
Electric frequency	$f_{el,nom}$		384	Hz
Power factor	$\cos(\varphi)$		0.76	
Maximal Values (S2, 10s, cooling as specified below)				
Torque	T_{max}		74	Nm
Power	P_{max}		26	kW
Phase rms-current	I_{max}		500 ²⁾	A
Battery voltage (DC)	U_{max}		200	V
Speed	n_{max}		8000	rpm
Electric frequency	$f_{el,max}$		667	Hz
Electrical Data				
Number of phases			3	
Number of pole pairs			5	
Maximal efficiency			95	%
T/I constant ($I < I_{nom}$)			0.20	Nm/ A_{rms}
U/n constant (AC)		rms: 11.3	peak: 17.5	V/(1000rpm)
K_e constant (AC)		rms: 0.022	peak: 0.033	V/(rad*s ⁻¹)
Additional Data				
Weight (w/o cables)			see page 4	
Protection category			IP6K9K ³⁾	
Maximal motor temperature			140	°C
Allowed ambient temperature			-20 ... 45 ⁴⁾	°C
Cooling (medium, flow rate, inlet temperature, pressure)			air, >12 m/s, ≤ 25°C	
Temperature monitoring			1 x KTY84-130	
Type approval			CE, EN 60034	
Customs tariff number			8501 5230	
Connectors				
Power terminals			3 x AWG 4 (21 mm ²) cables with M8 cable lugs	
Signal connectors			Deutsch DTM04-08PA 8 pins	

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

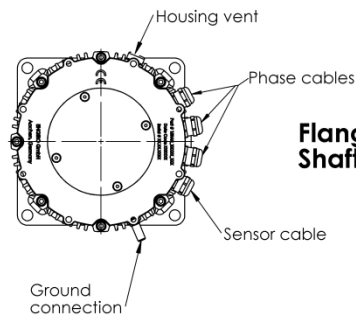
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Available Type Variants

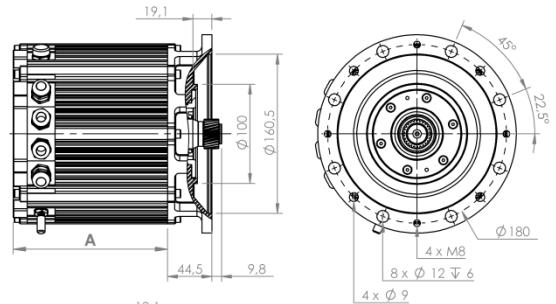
type number	A: flange	B: shaft	C: position sensor
159AH-06020-	B: gearbox Allweier PGR 1500	C: shaft with external splines	R: resolver
	C: standard squared 80mm centering	D: cylindrical shaft with keyway $\varnothing 19\text{mm}$	E: sin/cos encoder
	D: IEC B14 90 squared 95mm centering	E: prolonged shaft with external splines	
	E: IEC B14 90 round 95mm centering		

Dimension „A“ = 155.5 mm

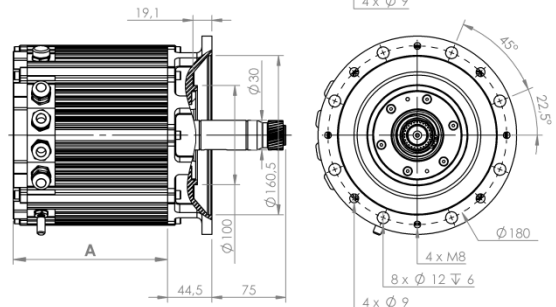
Approximate machine weight		
flange	shaft	Kg
B	C	14,7
B	E	15
C	D	14,9
D	D	14,9
E	D	14,9



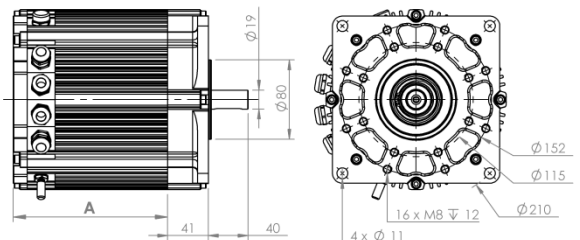
Flange B
Shaft C



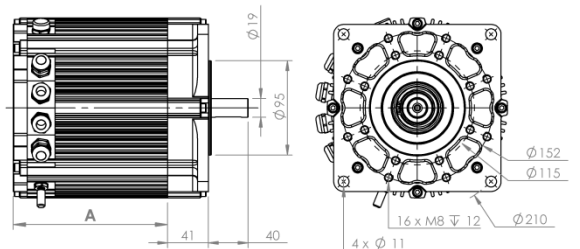
Flange B
Shaft E



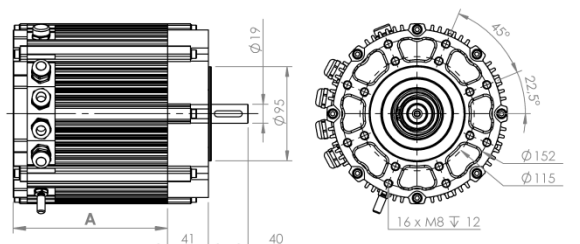
Flange C
Shaft D



Flange D
Shaft D



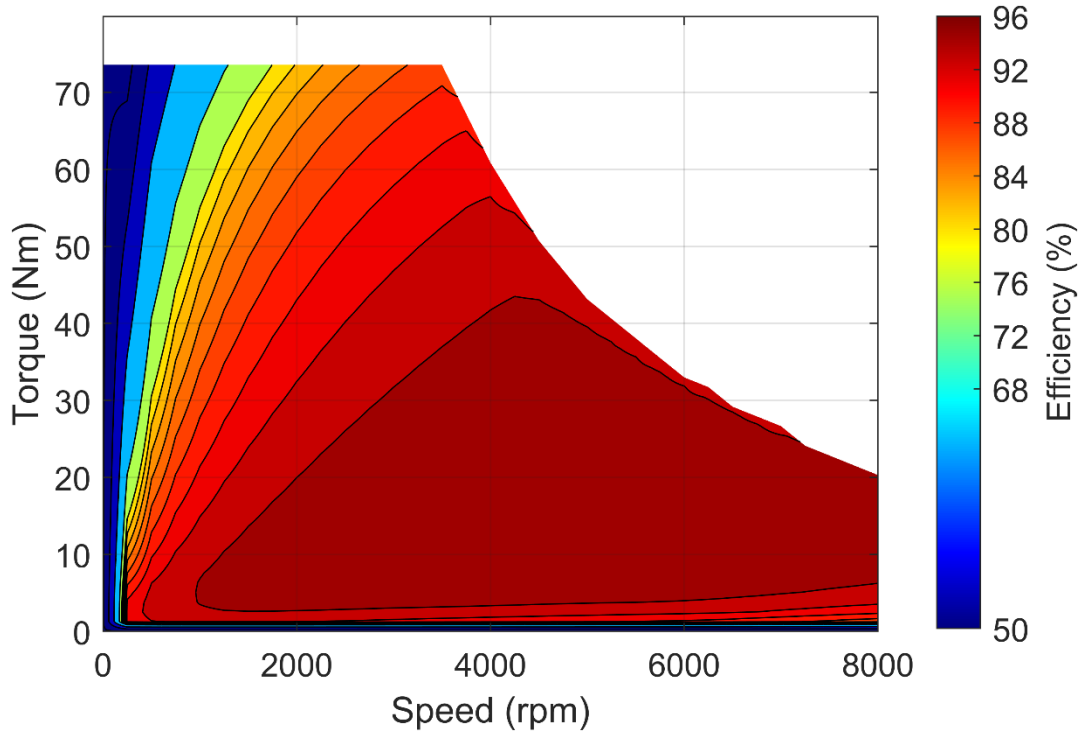
Flange E
Shaft D



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Simulated Efficiency of Motor Application

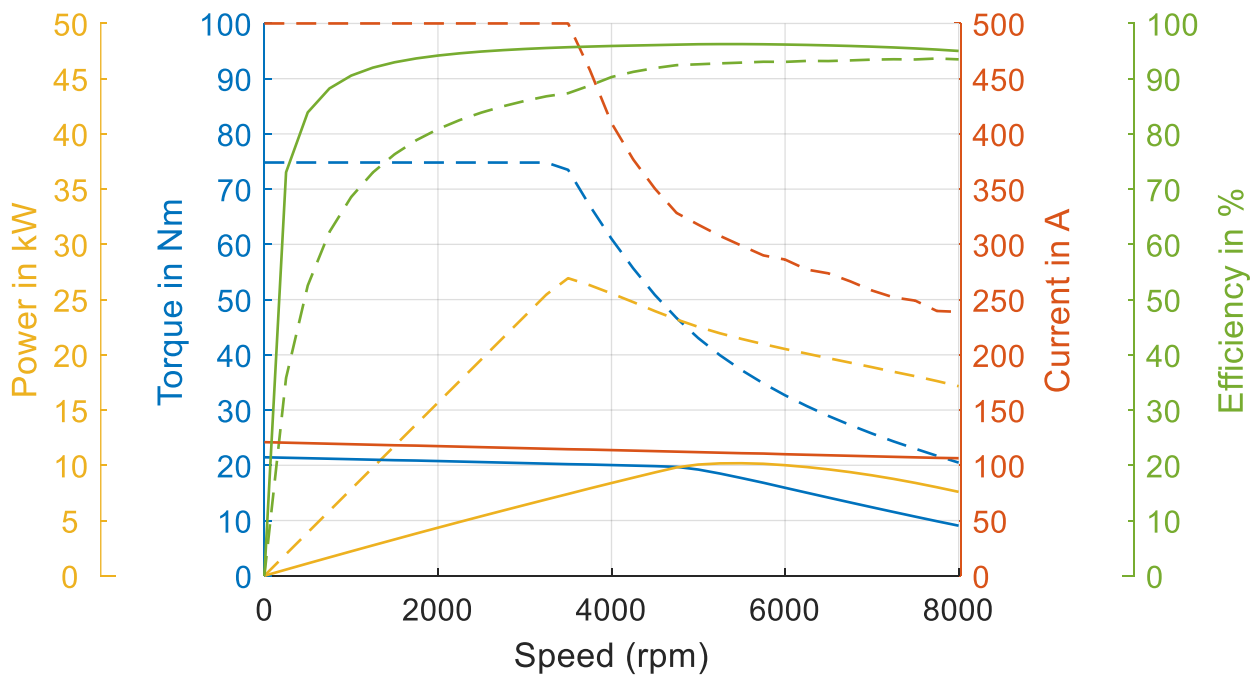
(electric machine only; $U_{nom} = 96\text{ V}$; machine at 140 °C ;)



Simulated Characteristic Motor Parameters

$U_{nom} = 96\text{ V}$

solid lines: continuous; dashed lines: maximum;



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