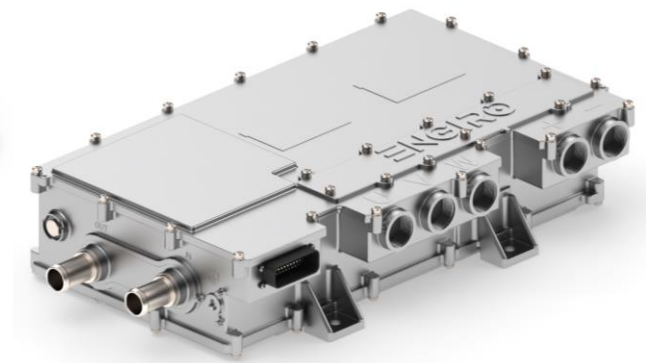
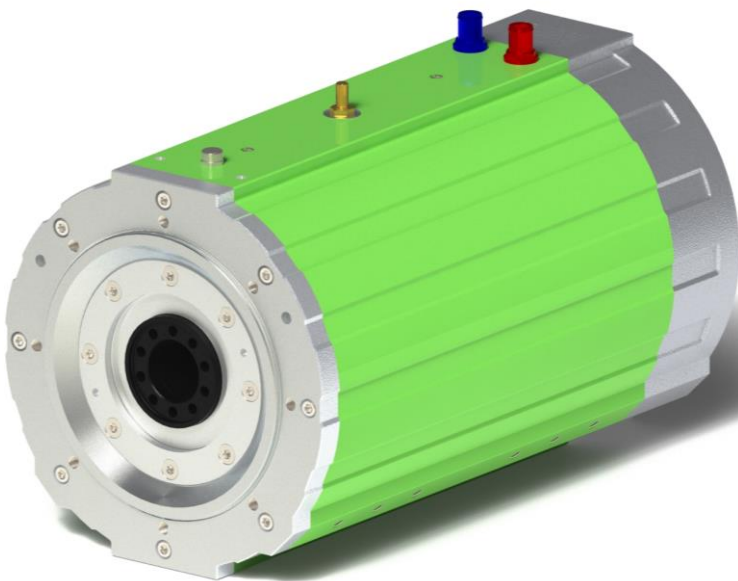


260W-15014-ABC-P

water-cooled motor / generator with 190 kW continuous power



Part no.: 4843401
Article Name: EN1_800V_900A_W

KEY FEATURES

- permanent magnet synchronous machine
- water-cooled
- high peak power for motor applications
- convincing cost-benefit ratio
- recommended voltage range from 350 V to 850 V
- delivery with controller possible

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Additional Data	5
Available Type Variants / Technical Drawings	6
Performance Plots	7
Additional Characteristics	8

Note:

On September 1st, 2024, we transferred our ERP systems to SAP. Due to this change, we are altering our current part numbers.

From now on, configurations regarding the rear interface of the motor (e.g., accessible rear shaft end, closed, ...) will be specified in a separate part of the motor naming. Therefore, all 260W **D1-flanges** will be renamed to **S1-flanges** with the according B-side specification.

To see how our article numbers and motor naming scheme has changed, please consider the conversion table below:

Article number conversion					
Part.no.	Old part.no.	Flange	Shaft	Position sensor	B-side interface
4843044	260W_15014_SFR_P	S1	F1	R	...S11

To be noted:

The information in this technical data sheet is based on our current knowledge and experience. Due to the wide range of possible influences during application, they do not exempt the processor and user from carrying out their own tests and trials. Although the suitability for a specific application can be estimated from our information, a legally binding assurance is by no means possible. Depending on the individual case, we recommend consultation with us. Any industrial property rights and applicable laws must be observed by the recipient of our products on his own responsibility.

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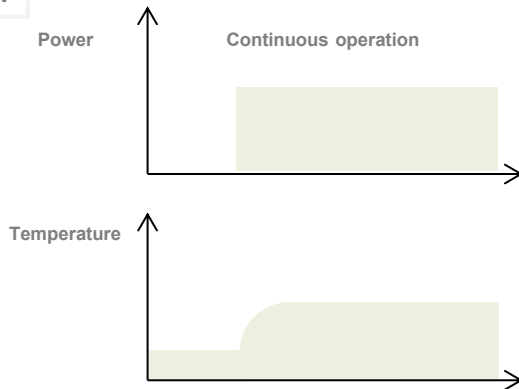
Characteristic Operating Points ¹⁾

		S1	S2	S2	
Feasible operation time	t_{on}	continuous	30 min	30 sec	
Torque	T	365	365	804	Nm
Power	P	190	190	360	kW
Speed	n	5000	5000	4250	rpm
Phase rms-current (AC)	I_{rms}	262	262	702	A
Battery current (DC)	I_{nom}	225	225	545	A
Battery voltage (DC)	U_{nom}	750	750	750	V
Electric frequency	f_{el}	416	416	354	Hz
Efficiency	η_{tot}	95	95	88	%
Power factor	$\cos(\varphi)$	0.88	0.88	0.62	
Cooling		specified on page 5			

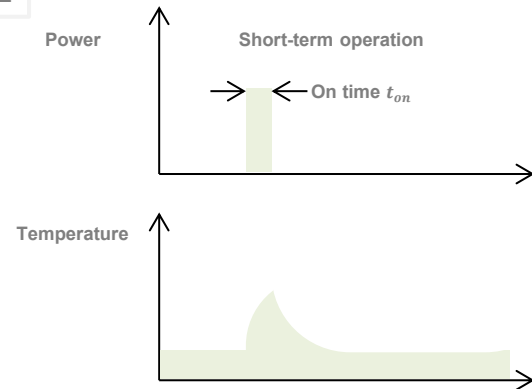
Maximum Operating Range

Torque	T_{max}	804 @ 4250 rpm ²⁾			Nm
Power	P_{max}	372 @ 4500 rpm			kW
Speed	n_{max}	6000			rpm
Phase rms-current (AC)	$I_{rms,max}$	702 ^{3) 4)}			A
Battery current (DC)	I_{max}	557 ^{3) 4)}			A
Battery voltage (DC)	U_{max}	850			V
Electric frequency	f_{el}	500			Hz

S1



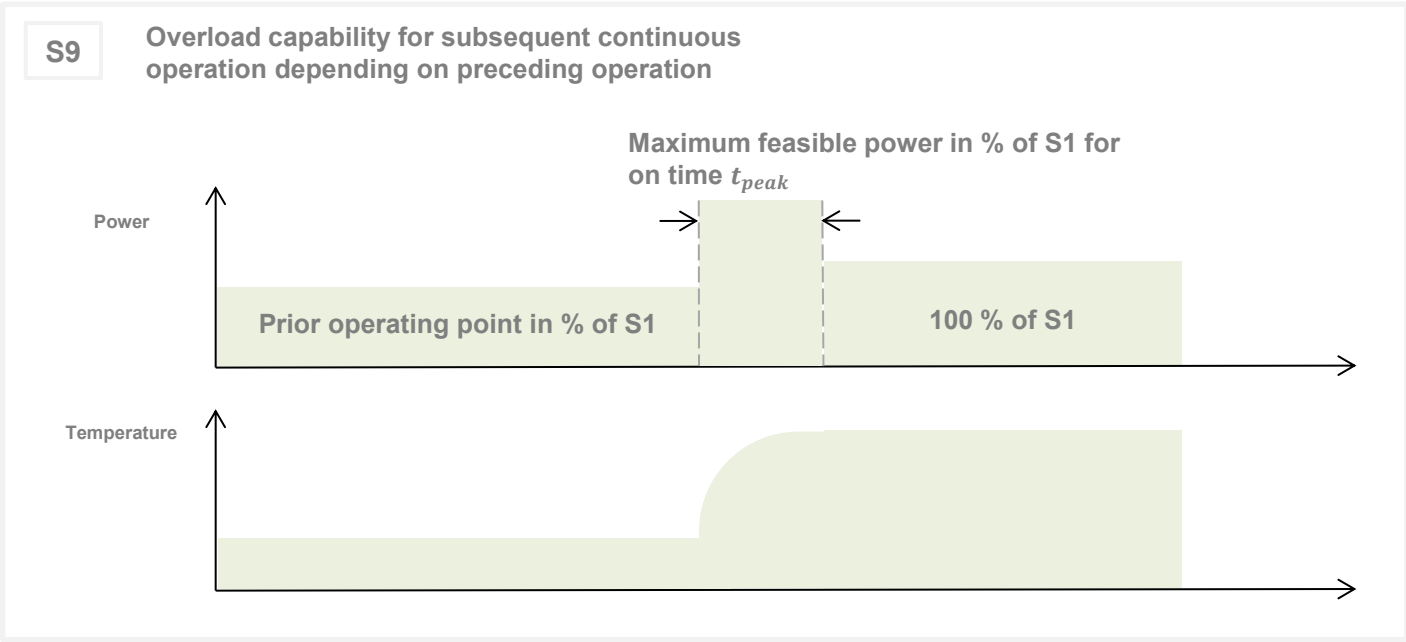
S2



- 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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S9 Operating Points						
Maximum Feasible Power in % of S1						
U _{nom} = 750 V		Prior operating point in % of S1				
		0 %	25 %	50 %	75 %	100 %
On time <i>t_{peak}</i>	30 s	230%	220%	200%	160%	100%
	180 s	170%	160%	150%	130%	100%
	420 s	130%	120%	120%	110%	100%



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Electrical Data						
Number of phases		3				
Number of pole pairs		5				
Maximal efficiency		95			%	
T/I constant (I<Inom)		1.36			Nm/A _{rms}	
U/n constant (AC) at temperature 30°C		rms:	89.1	peak:	130.6	V/(1000rpm)
Ke constant (AC) at temperature 30°C		rms:	0.213	peak:	0.312	V/(rad*s ⁻¹)
Additional Data						
Rotor moment of inertia		0.1006			kg*m ²	
Allowed range of ambient temperature		-20 ... +85			°C	
Maximal motor temperature		operating point dependent ¹⁾				
Temperature monitoring		1 x KTY84-130				
Cooling	Advised medium (OAT Coolants)	water/glycol - 50/50 <ul style="list-style-type: none">TL 774-D/FVIN 878389MAN 324 SNFMTL 5048				
	Flow rate	20			l/min	
	Inlet temperature	45			°C	
	Pressure drop	0.44			bar	
	Maximum inlet pressure	2			bar	
	Cooling channel volume	1.64			l	
Connectors						
Power terminals		3 x M25 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) Please contact ENGIRO for the parametrization of third-party inverters
- 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 variants with closed B-side /

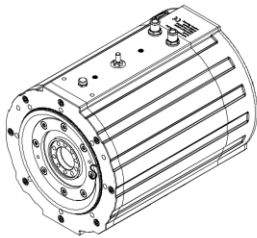
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Available Type Variants

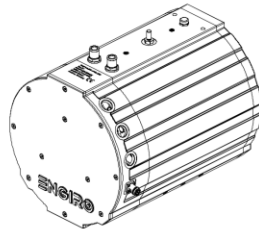
Flange	Shaft	Pos. sensor	B-side interface	Weight (kg)
S1 Flange with mounting threads (Ø230 mm centering, Ø250 PCD 8 x M10)	F1 Hollow shaft with screw flange (Ø90 and Ø50 mm centering, Ø66 mm PCD 10 x M10)	R Resolver	S11 Closed B-side	≈ 97 kg

Other individual combinations are also possible on request.

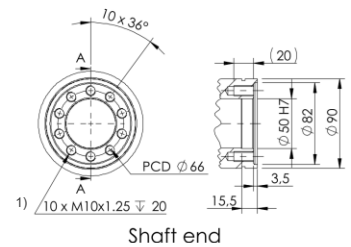
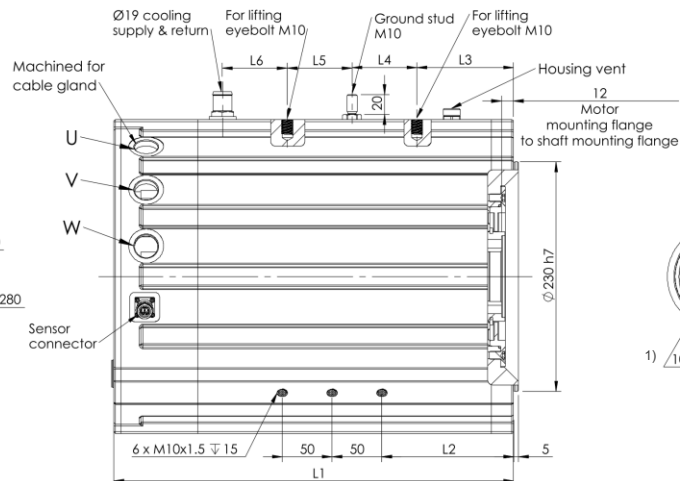
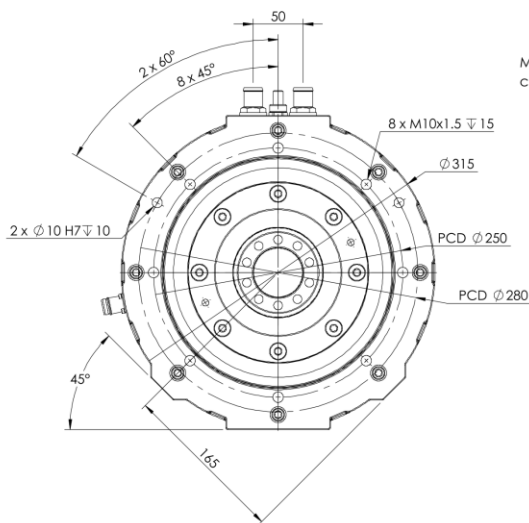
Technical Drawings



Front view



Rear view



Shaft end

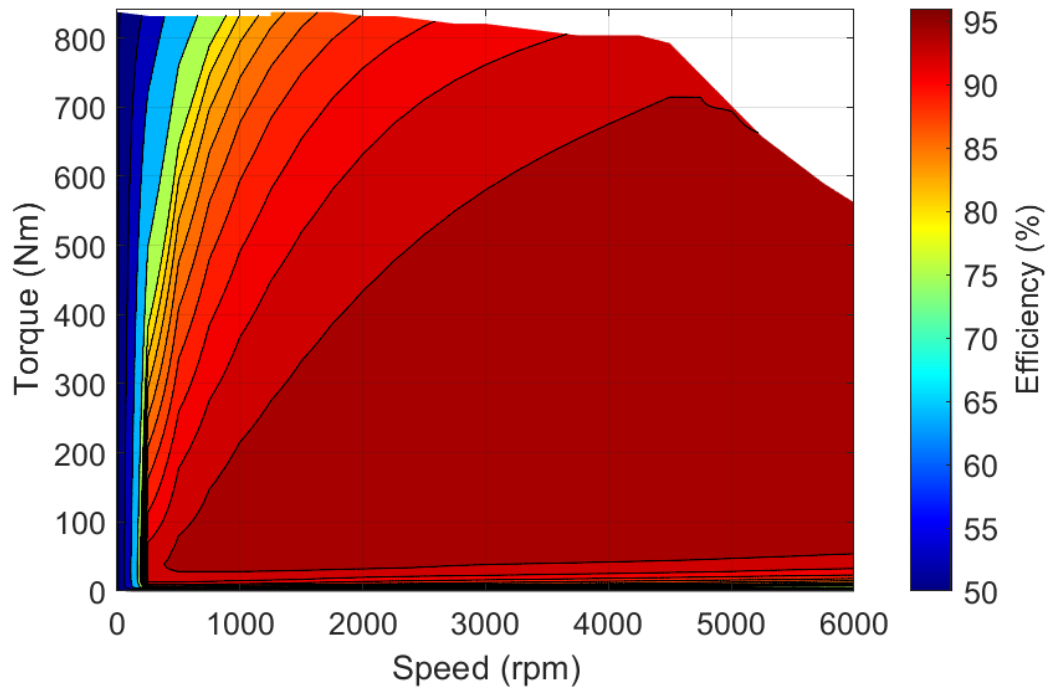
Model	L1	L2	L3	L4	L5	L6	Moment of Inertia [kg.m²]	Cooling channel volume [L]
260W_080xx	331	97	92	40	30	60	0,0671	1,28
260W_100xx	351	107	97	45	35	65	0,0899	1,38
260W_130xx	381	112	107	55	35	75	0,0944	1,53
260W_150xx	401	132	97	65	65	65	0,1006	1,64

1) Depending on the operating points and load conditions, measures can be required to increase the coefficient of friction in the flange connection. Please contact ENGIRO for further questions.

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Simulated Efficiency of Motor Application

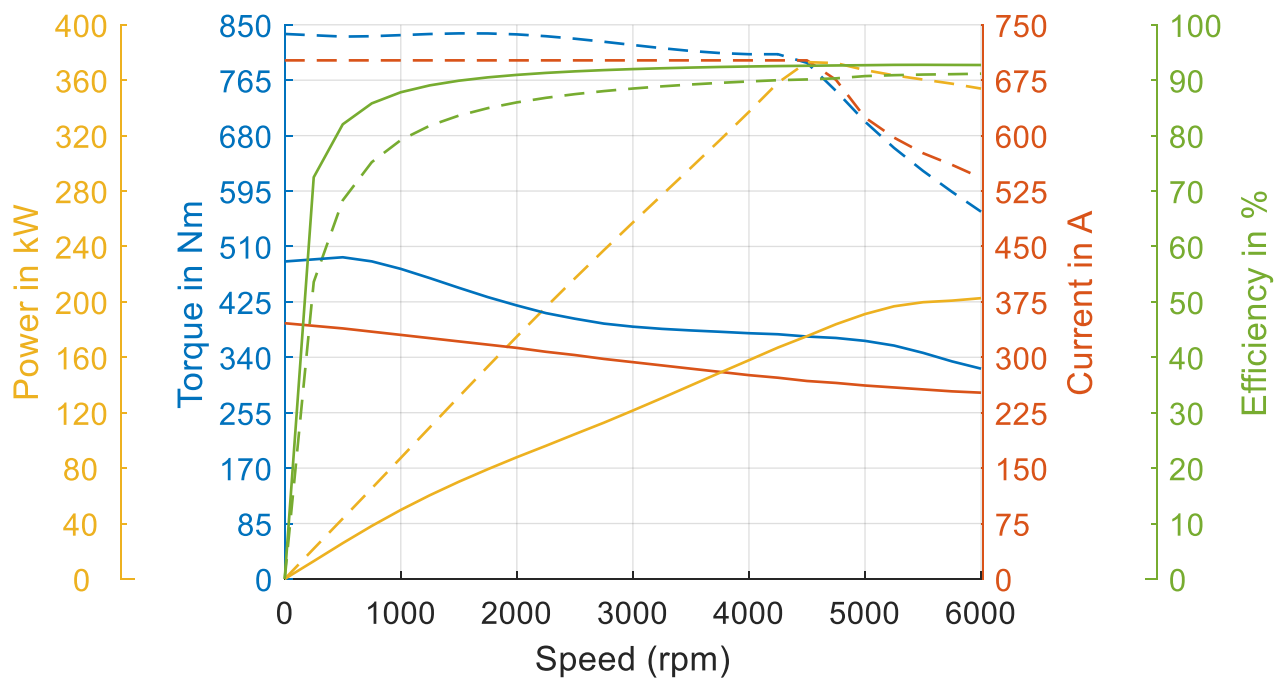
(electric machine only; $U_{\text{nom}} = 750 \text{ V}$)



Simulated Characteristic Motor Parameters

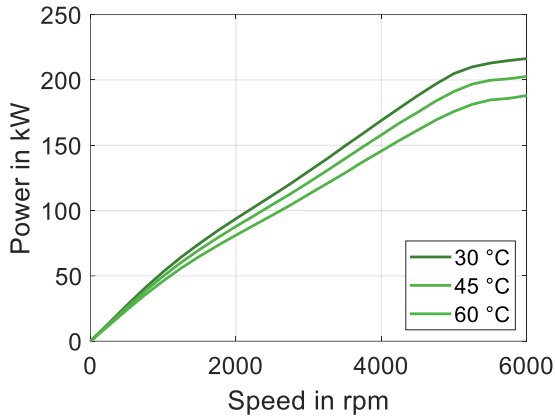
$U_{\text{nom}} = 750 \text{ V}$

solid lines: continuous; dashed lines: maximum;

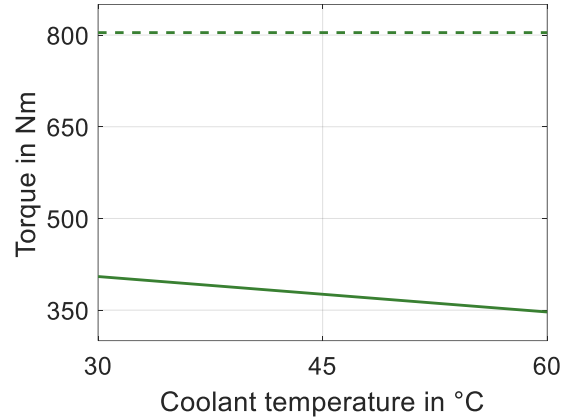


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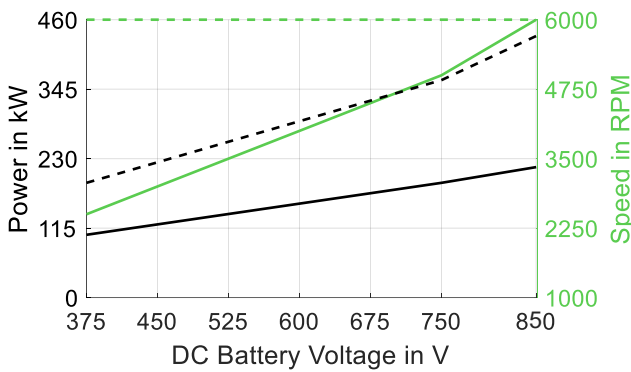
Simulated nominal power at different coolant temperatures - $U_{nom} = 750 \text{ V}$



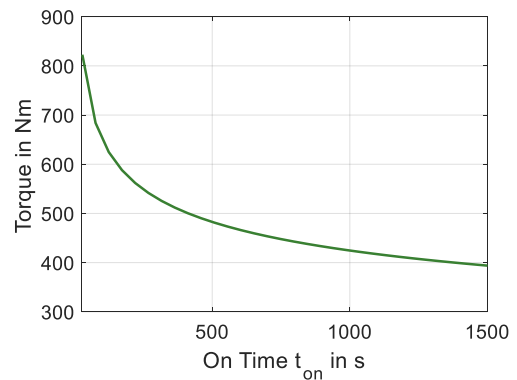
Available torque at different coolant temperatures¹⁾



Simulated power and speed over battery voltage¹⁾



Torque over feasible maximum on time, S2 operation cycles (45°C coolant temperature)



1) solid lines: continuous; dashed lines: maximum;

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