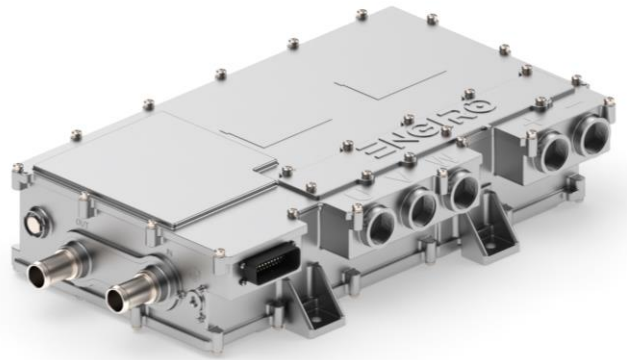
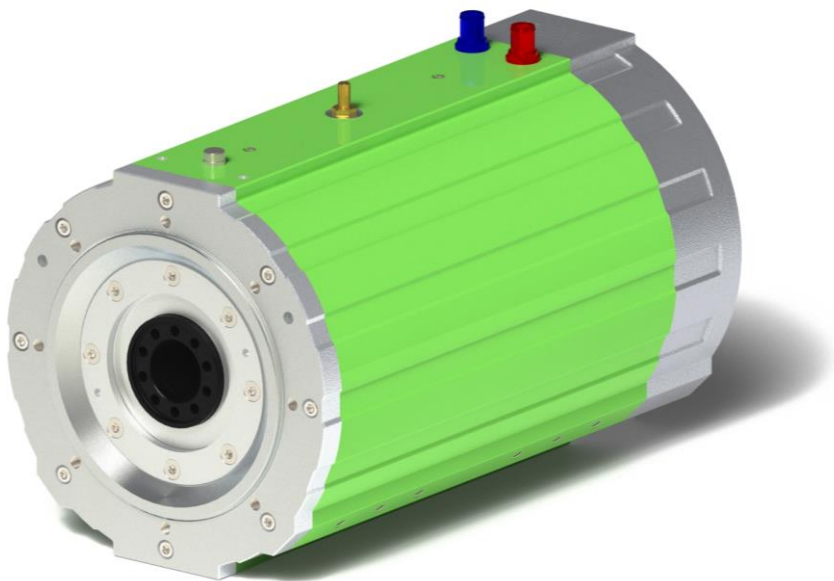


# 260W-25018-ABC

water-cooled motor / generator with 187 kW continuous power

This datasheet refers to part.no.: see page 2



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 300 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	9

**Note:**

On September 1<sup>st</sup>, 2024, we transferred our ERP systems to SAP. Due to this change, we are altering our **current part numbers**. 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
4822867	260W_25018_SFR	S1	F1	R
4844664	260W_25018_DFR	D1	F1	R

**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.

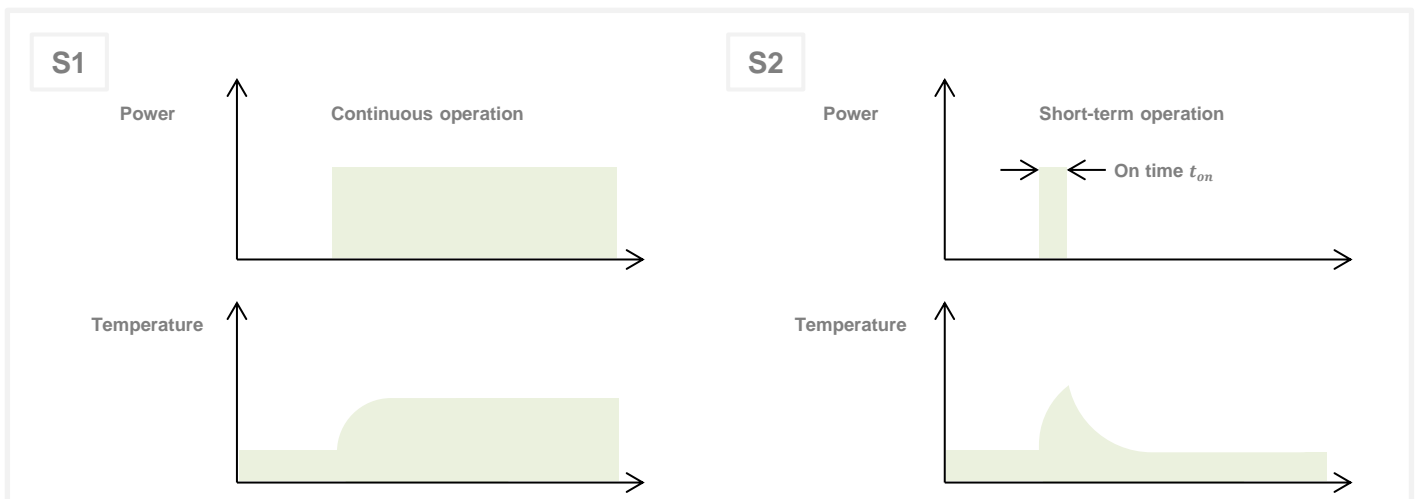
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**Characteristic Operating Points<sup>1)</sup>**

		S1	S2	S2	
Feasible operation time	$t_{on}$	continuous	30 min	30 sec	
Torque	$T$	746	780	1337	Nm
Power	$P$	187	196	295	kW
Speed	$n$	2400	2400	2110	rpm
Phase rms-current (AC)	$I_{rms}$	251	247	543	A
Battery current (DC)	$I_{DC}$	254	261	427	A
Battery voltage (DC)	$U_{DC}$	800	800	800	V
Electric frequency	$f_{el}$	200	200	176	Hz
Efficiency	$\eta_{tot}$	93	94	86	%
Power factor	$\cos(\varphi)$	0.83	0.83	0.83	
Cooling	specified on page 5				

**Maximum Operating Range**

Torque	$T_{max}$	1337 @ 2110 rpm <sup>2)</sup>			Nm
Power	$P_{max}$	320 @ 2250 rpm			kW
Speed	$n_{max}$	6000			rpm
Phase rms-current (AC)	$I_{rms,max}$	543 <sup>3) 4)</sup>			A
Battery current (DC)	$I_{DC,max}$	465 <sup>3) 4)</sup>			A
Battery voltage (DC)	$U_{max}$	850			V
Electric frequency	$f_{el}$	500			Hz

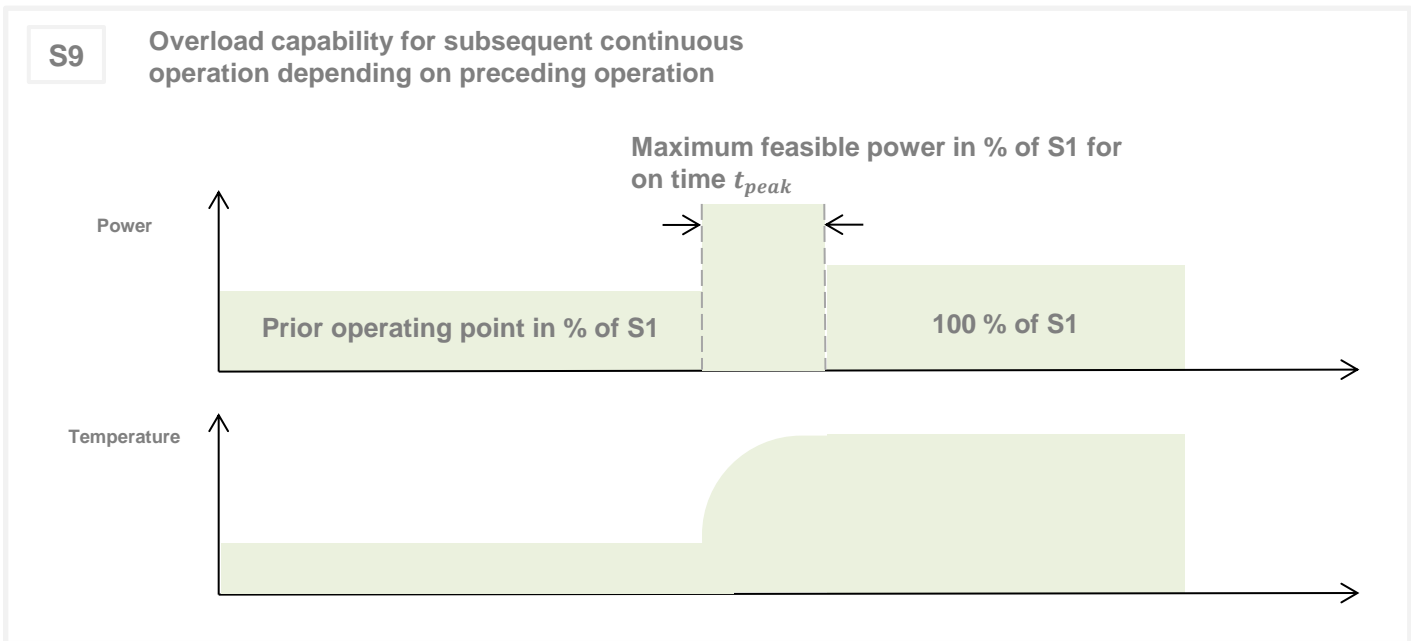


- 1) Defined Range only valid for a power factor of 1 at DC input
- 2) Torque rating is dependant on rotor temperature
- 3) The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.
- 4) Peak rating for max. 30 seconds on time

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**S9 Operating Points<sup>1)</sup>**  
**Maximum Feasible Power in % of S1**

U <sub>nom</sub> = 800 V		Prior operating point in % of S1				
		0 %	25 %	50 %	75 %	100 %
On time <i>t<sub>peak</sub></i>	30s	155%	150%	140%	120%	100%
	180s	115%	110%	110%	100%	100%
	420s	100%	100%	100%	100%	100%



1) Theoretical rounded assumption

Electrical Data			
Number of phases			3
Number of pole pairs			5
Maximal efficiency			95 %
T/I constant (I<I <sub>nom</sub> )			2.97 Nm/A <sub>rms</sub>
U/n constant (AC) at temperature 30 °C	rms:	192.3	peak: 284.3 V/(1000rpm)
Ke constant (AC) at temperature 30 °C	rms:	1.84	peak: 2.71 V/(rad*s <sup>-1</sup> )
Additional Data			
Rotor moment of inertia			0.1677 kg*m <sup>2</sup>
Allowed range of ambient temperature			-20 ... +85 °C
Maximal motor temperature			operating point dependent <sup>1)</sup> °C
Temperature monitoring			1 x KTY84-130
Cooling	Advised medium (OAT Coolants)	water/glycol - 50/50 ▪ TL 774-D/F ▪ VIN 878389 ▪ MAN 324 SNF ▪ MTL 5048	
	Flow rate		20 l/min
	Inlet temperature		45 °C
	Pressure drop		< 0.7 bar
	Maximum pressure		2 bar
	Cooling channel volume		2.17 l
Connectors			
Power terminals			3 x M25 cable gland
Signal connectors			Hummel 10 Pin connector, M16
Cooling connectors			inner Ø 12 mm, outer Ø 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

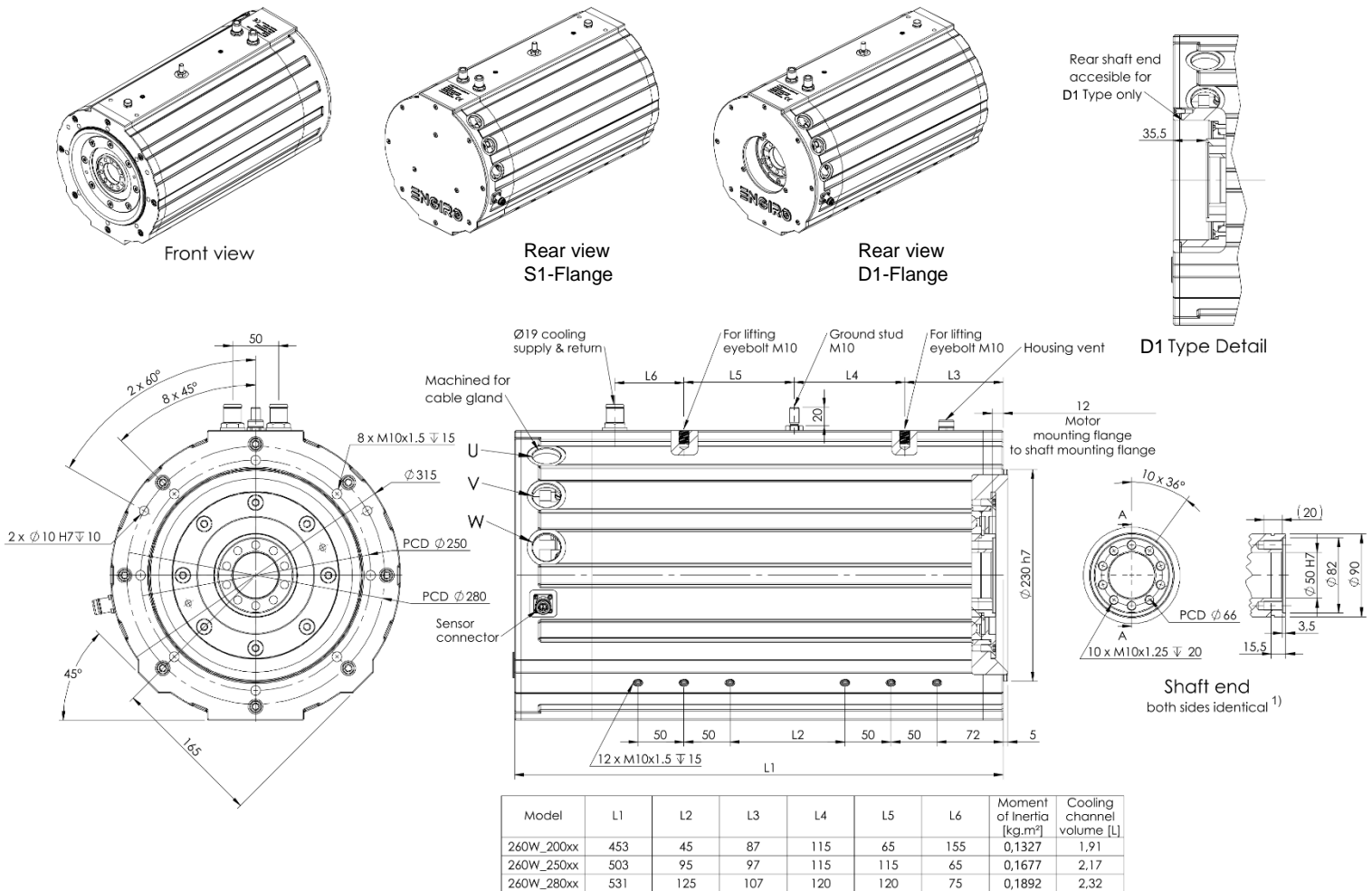
1) Please contact ENGIRO for the parametrization of third-party inverters

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 SFR Variant /

Shaft and Flange Combinations for 260W-25018-ABC		Flange (A)	
		S1 (Standard)	D1 (Double)
Shaft (B)	F1 (Hollow shaft with screws)	● (≈ 137 kg)	● (≈ 137 kg)
Position Sensor (C)		R: Resolver	

Other individual combinations are also possible on request.

### Technical Drawings



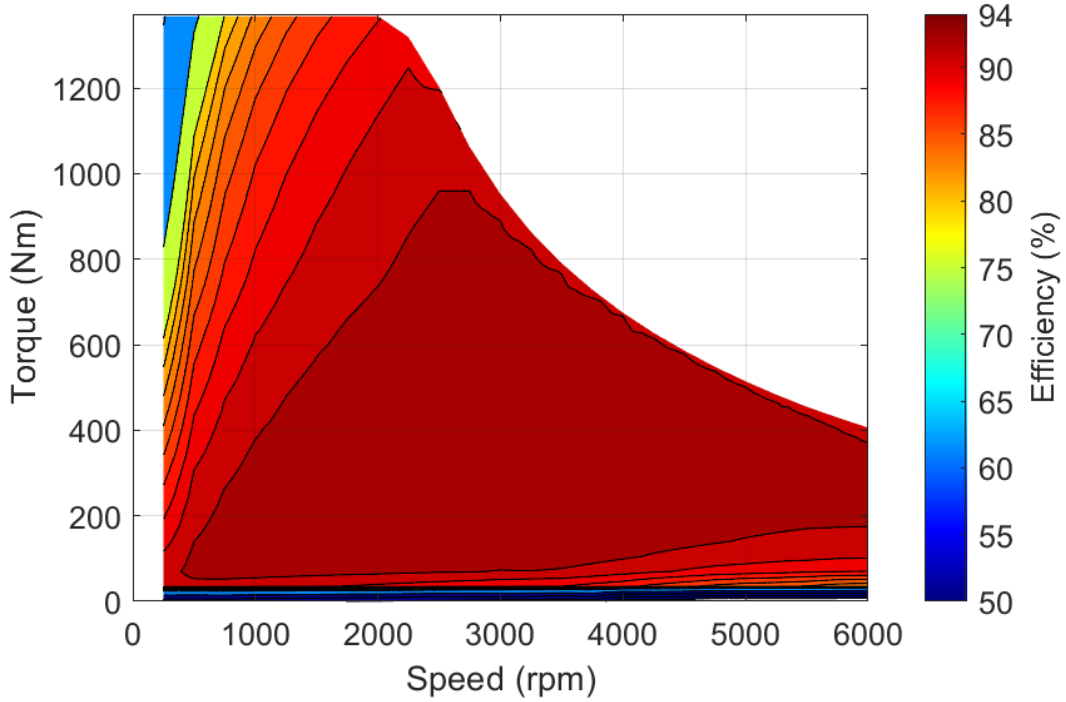
1) Applies to flange type D1 only

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**800 V**

Simulated Efficiency of Motor Application

(electric machine only;  $U_{nom} = 800\text{ V}$ ;  $T_{inlet} = 45\text{ °C}$ )

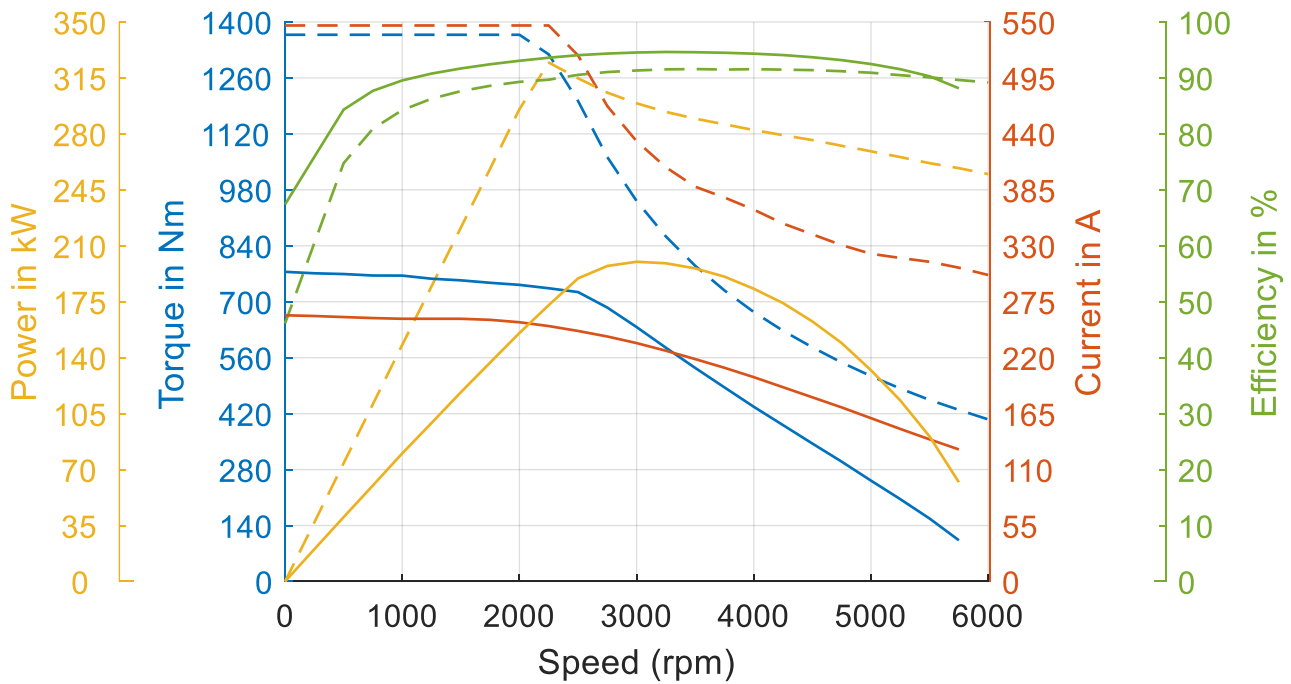


**800 V**

Simulated Characteristic Motor Parameters

$U_{nom} = 800\text{ V}$ ;  $T_{inlet} = 45\text{ °C}$

solid lines: S1 continuous; dashed lines: maximum



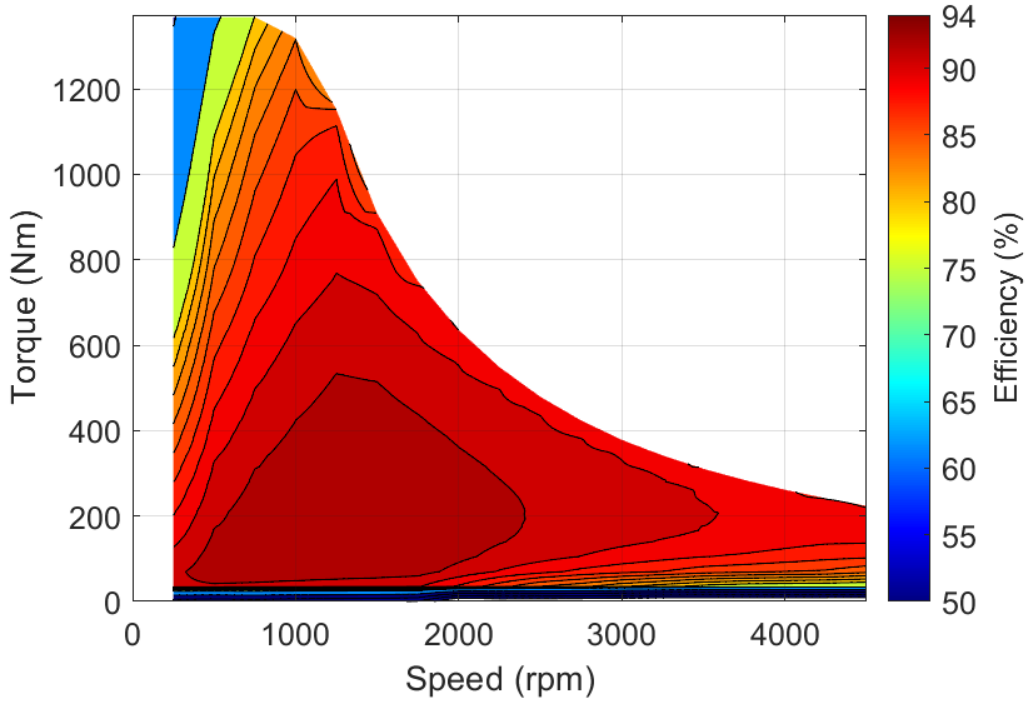
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**400 V**

Simulated Efficiency of Motor Application

(electric machine only;  $U_{nom} = 400\text{ V}$ ;  $T_{inlet} = 45\text{ °C}$ )

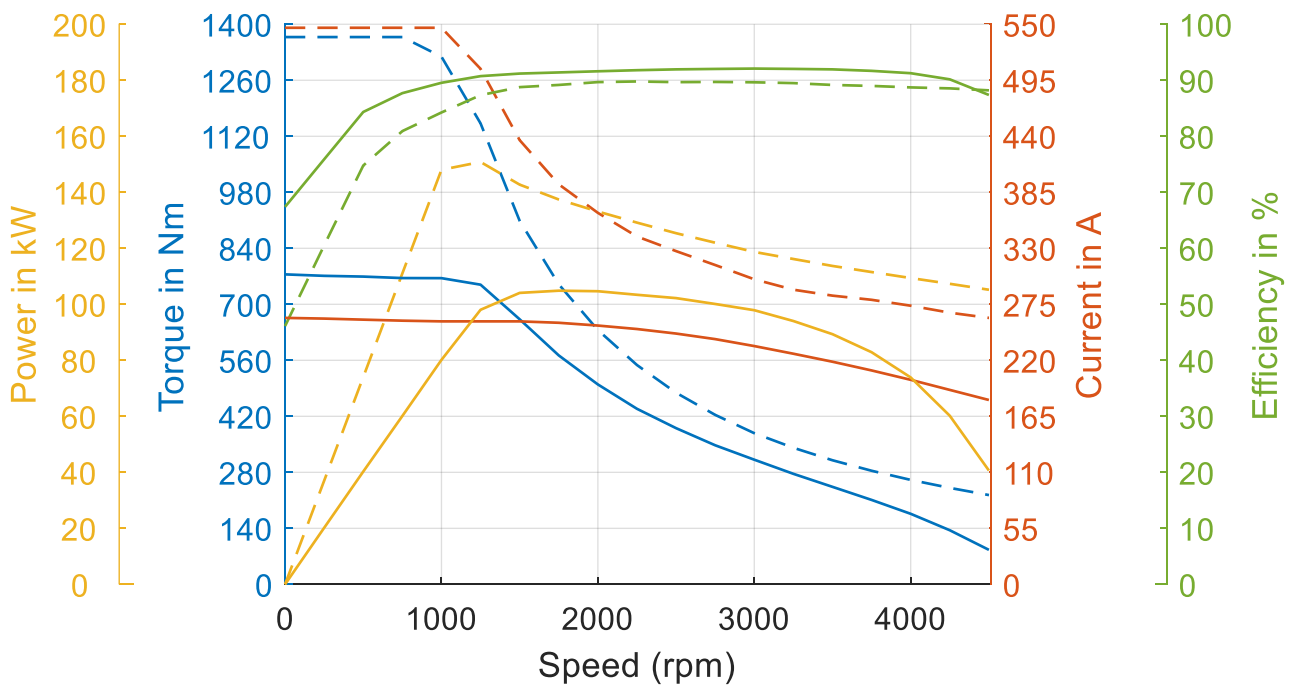


**400 V**

Simulated Characteristic Motor Parameters

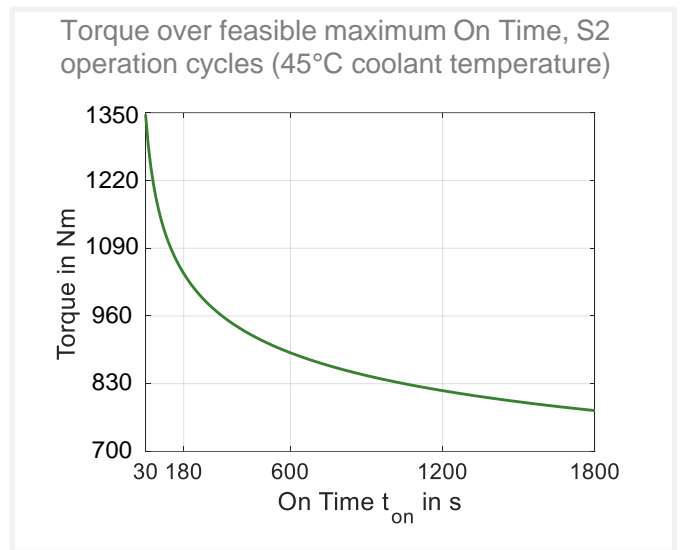
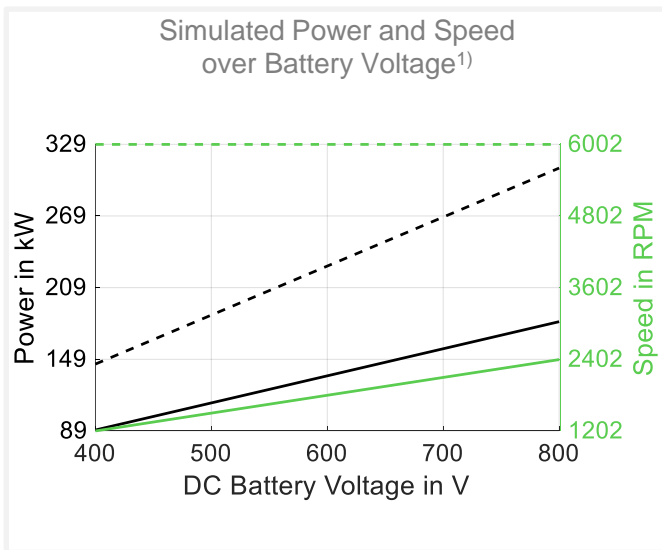
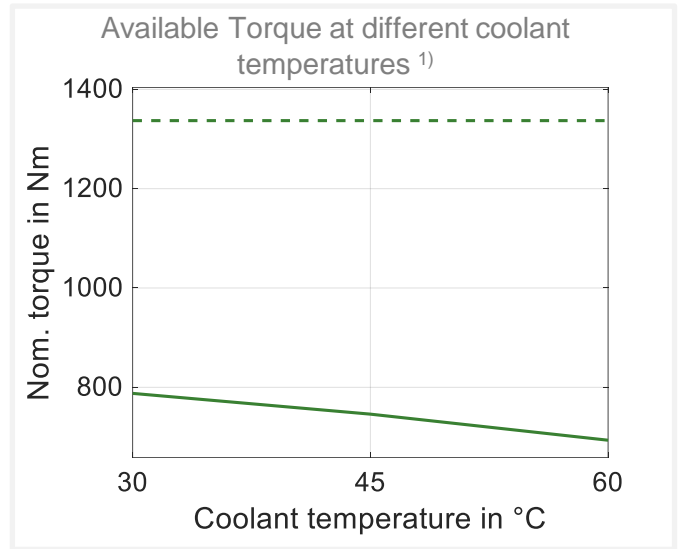
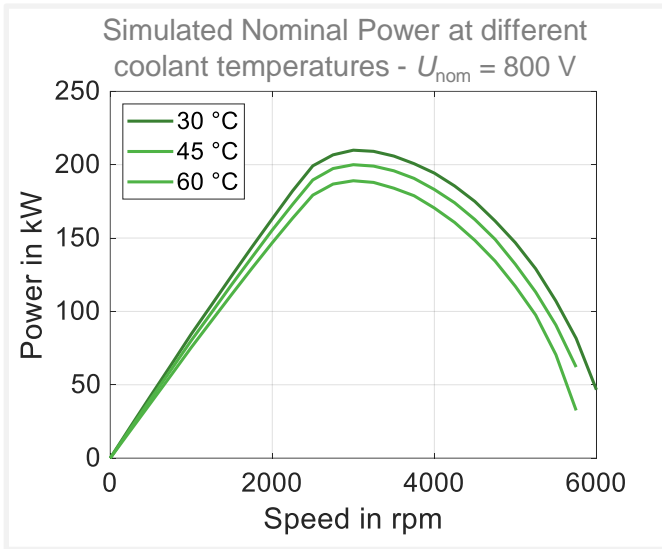
$U_{nom} = 400\text{ V}$ ;  $T_{inlet} = 45\text{ °C}$

solid lines: S1 continuous; dashed lines: maximum



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

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