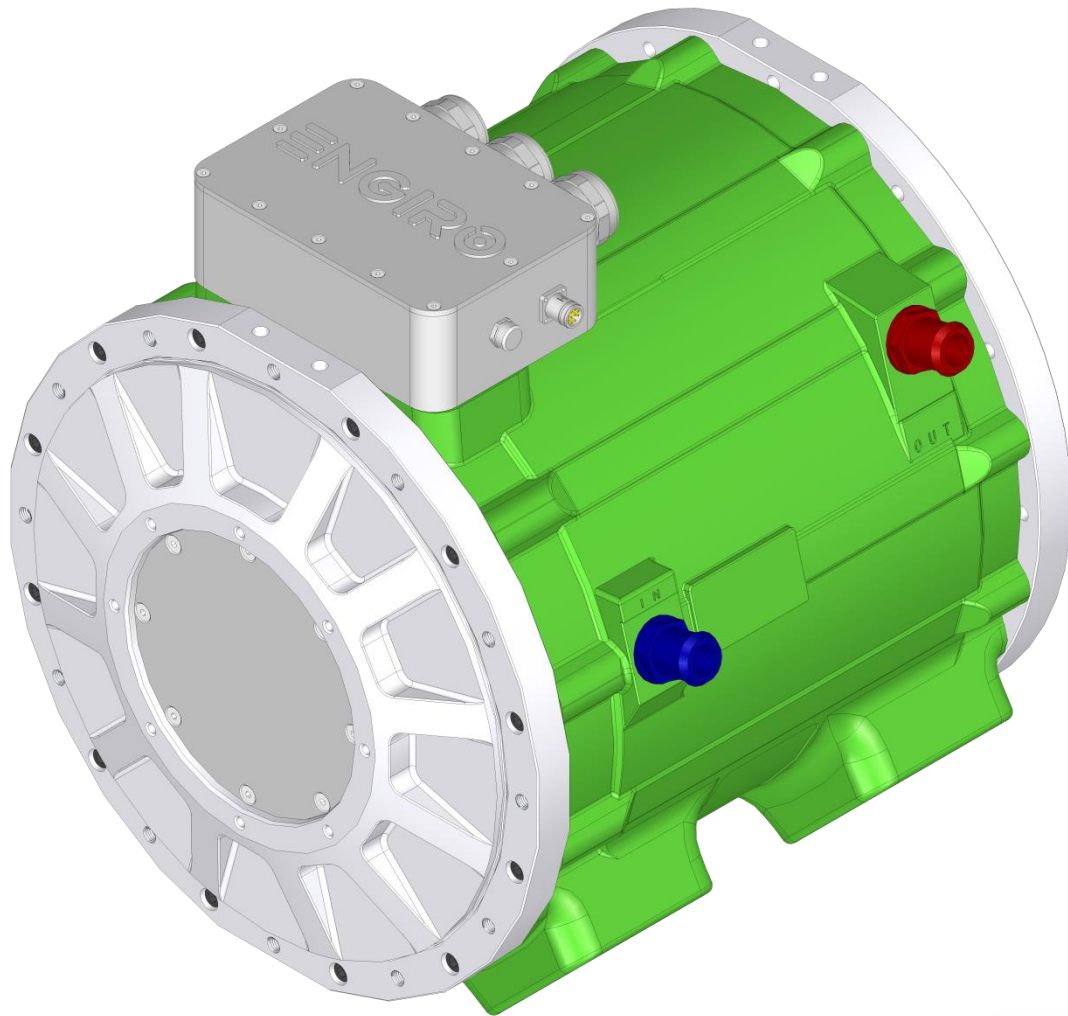


370W-29014-ABC

water-cooled motor / generator with 339 kW continuous power



KEY FEATURES

- permanent magnet synchronous machine
- very robust design
- recommended for trucks and buses up to 18 tons
- designed for battery voltages from 550 to 750V
- very high efficiency over a wide speed range
- high maximum speed due to reluctance torque
- delivery with controller possible
- optional with tachometer sensor

Section	Page
Technical Data Machine	3
Technical Drawings Machine	4
Characteristics Machine	5
Technical Data Inverter Set	6

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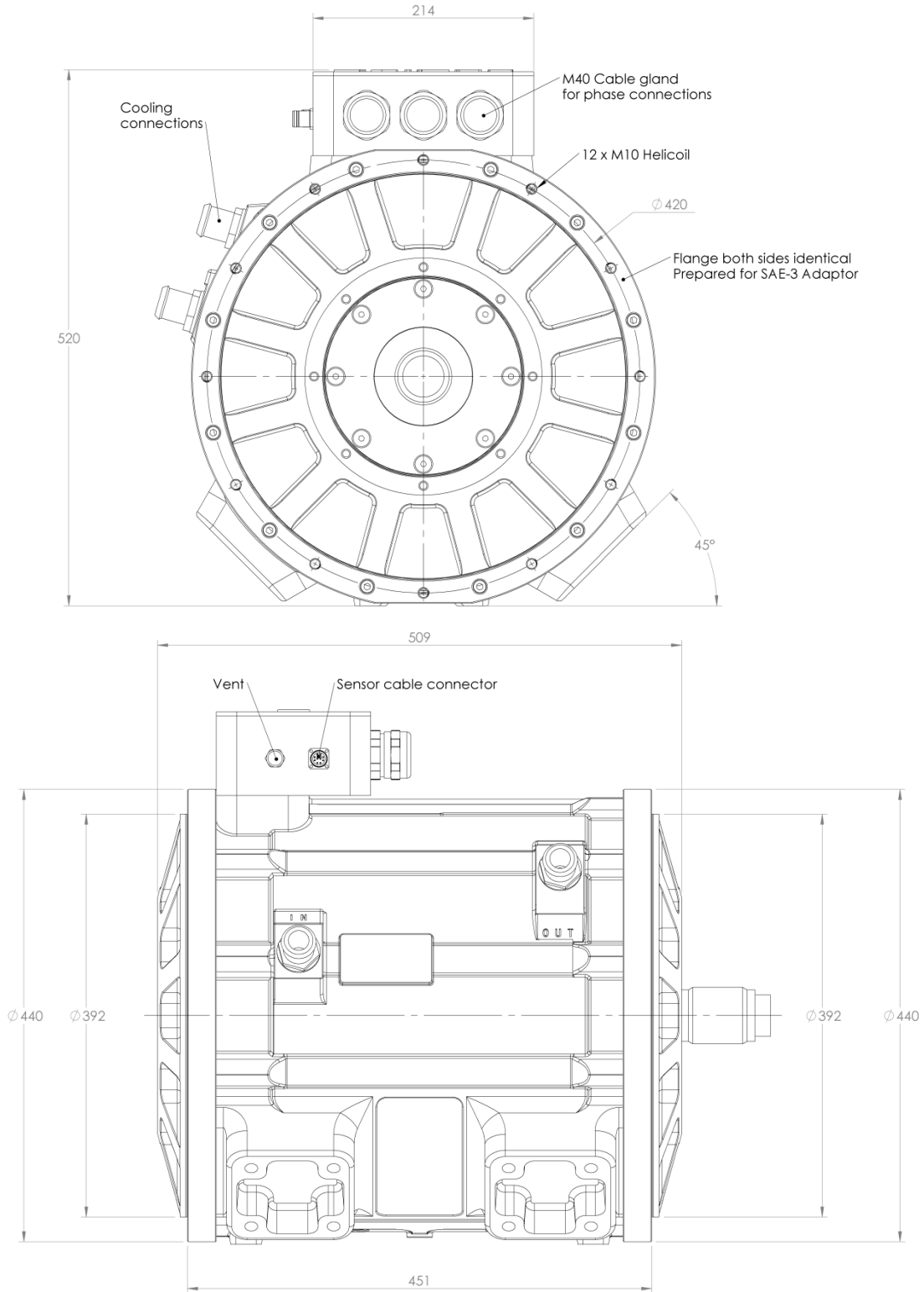
Nominal Operation (S1, cooling as specified below)				
Torque	T_{nom}		2000	Nm
Power	P_{nom}		339	kW
Speed	n_{nom}		1620	rpm
Phase rms-current	I_{nom}		460	A
Battery voltage (DC)	U_{nom}		700	V
Electric frequency	$f_{el,nom}$		162	Hz
Power factor	$\cos(\varphi)$		0.82	
Maximal Values (S2, 10s, cooling as specified below)				
Torque	T_{max}		3900	Nm
Power	P_{max}		560	kW
Phase rms-current	I_{max}		1150	A
Battery voltage (DC)	U_{max}		750	V
Speed	n_{max}		3000	rpm
Electric frequency	$f_{el,max}$		300	Hz
Electrical Data				
Number of phases			3	
Number of pole pairs			6	
Maximal efficiency			>96	%
T/I constant ($I < I_{nom}$)			4.35	Nm/A _{rms}
U/n constant (AC)		rms: 234.7	peak: 331.9	V/(1000rpm)
K_e constant (AC)		rms: 0.373	peak: 0.528	V/(rad*s ⁻¹)
Additional Data				
Weight (w/o cables)			295	kg
Rotor moment of inertia			1,07	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, 30 l/min, ≤ 45°C, ≤ 0.5 bar	
Temperature monitoring			1 x PT 1000	
Type approval			CE, EN 60034	
Customs tariff number			8501 5381	
Connectors				
Power terminals			3 x M40 cable gland	
Signal connectors			M16, 10 Pin	
Cooling connectors			2 x 1" / 25 mm	

¹⁾ other range on request

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Available Type Variants

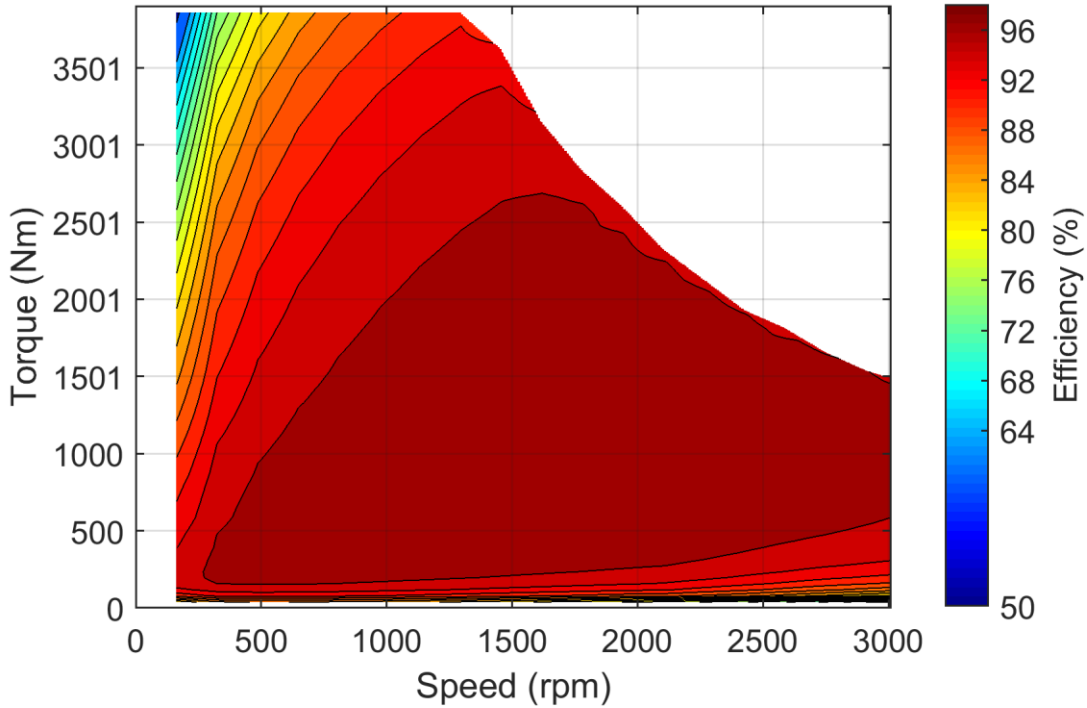
type number	A: flange	B: shaft	C: position sensor
370W-29014-	S: standard	S: cylindrical shaft with keyway	R: resolver
			N: none



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Simulated Efficiency of Motor Application

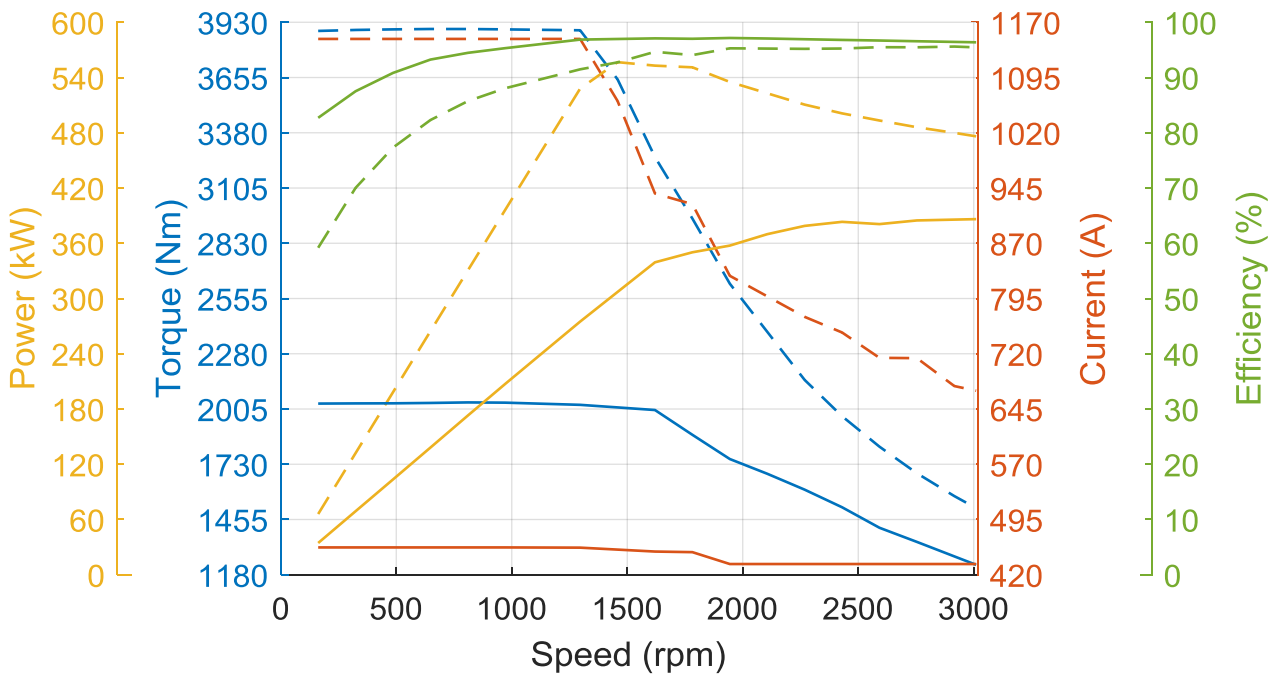
(electric machine only; $U_{nom} = 700\text{ V}$; machine at 100 °C ;)



Simulated Characteristic Motor Parameters

$U_{nom} = 700\text{ V}$

solid lines: continuous; dashed lines: maximum;
(jitter is caused by numerical inaccuracies in the simulation software)

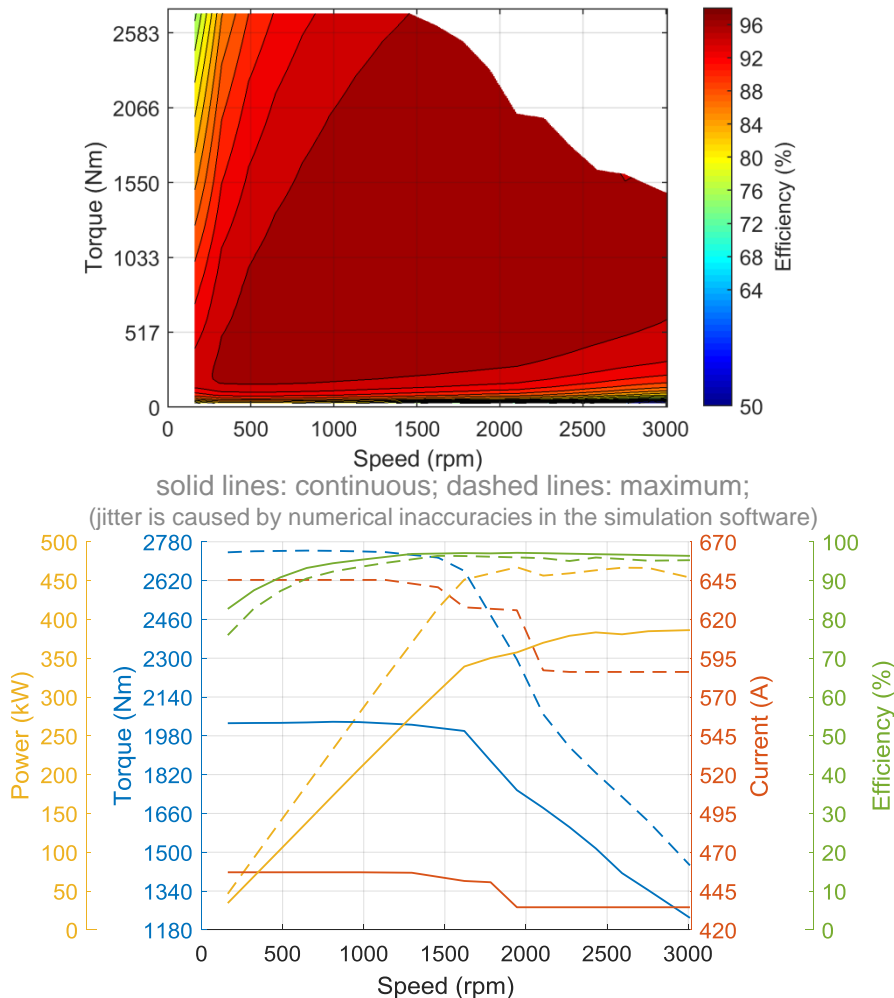


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Nominal Operation Drive Set (S1)			
Torque	T_{nom}	2000	Nm
Power	P_{nom}	339	kW
Speed	n_{nom}	1620	rpm
Phase rms-current	I_{nom}	460	A
Battery voltage	U_{nom}	700	V
Electric frequency	$f_{el,nom}$	162	Hz
Power factor	$\cos(\varphi)$	0.82	
Maximal Values Drive Set (S2, 1-10s)			
Torque	T_{max}	2744	Nm
Power	P_{max}	467	kW
Phase rms-current	I_{max}	650	A
Battery voltage	U_{max}	700	V
Speed	n_{max}	3000	rpm
Electric frequency	$f_{el,max}$	300	Hz

Simulated Efficiency and Motor Characteristic of Motor Application

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



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