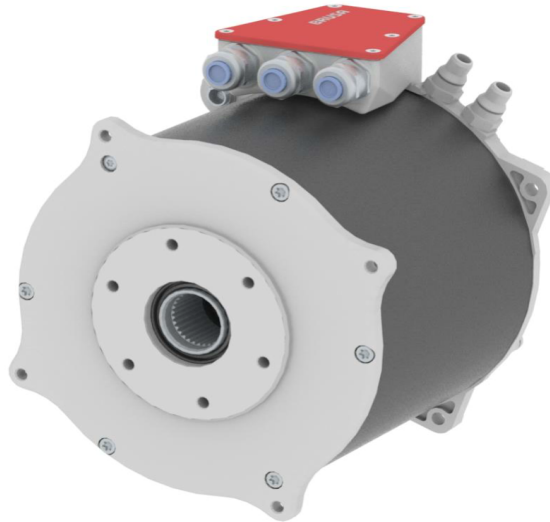


HSM1-10.18.22 - Hybrid Synchronous Motor

Optimal performance from zero speed



Optimum safety

- Intrinsically safe (induced voltage at max. speed and passive inverter < 500 V_{DC})
- Low short circuit torque
- Integrated overload protection against overheating

Technical highlights

- High power density
- Minimal torque ripple
- Minimal drag losses
- Dynamic torque control through high PWM frequency
- Constant power and high efficiency over a very wide speed range
- Continuous power up to 135 kW (according to ECE R85 standard)
- Optimally matched to the motor inverters available

Specifications HSM1-10.18.22

Performance data at 400 V_{DC}

	Value	Unit
Nominal speed	4'600	rpm
Continuous torque (ECE R85) at 25 °C	270	Nm
Max. torque at max. inverter current	440	Nm
Continuous power (ECE R85) at 25 °C	135	kW
Continuous power (S1) at 25 °C	128	kW
Max. power	210	kW
Max. speed	10'800	rpm

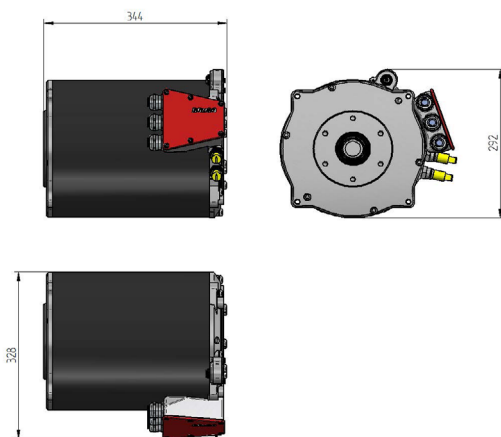
Basic electrical data

Compatible inverter	DMC544	
Recommended input voltage of device (min. / max.)	300 - 450	V
Maximum inverter current	600	A _{eff}
Typ. efficiency	96	%
Number of pole pairs	5	
Recommended cable diameter phase U, V, W and GND	70	mm ²

Mechanical data / Cooling system

Weight	73.1	kg
Moment of inertia (rotor)	0.11	kgm ²
IP-protection	IP67	
Coolant flow rate	8	L/min
Pressure drop at 8 L/min, coolant temperature = 25 °C	254	mbar
min. / max. coolant temperature at inlet	-20 / +65	°C

Dimensions [mm]



Performance curve

