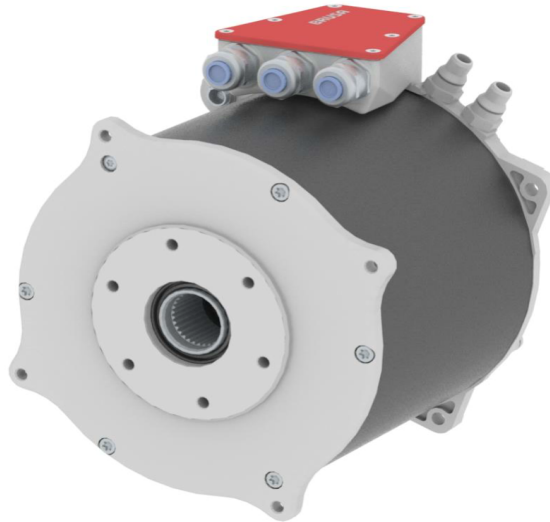


## HSM1-10.18.13 – Hybrid Synchronous Motor

Optimal performance from zero speed



### Optimum safety

- Intrinsically safe (inducted voltage at max. speed and passive inverter <math>< 500 V\_{DC}</math>)
- 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 93 kW (according to ECE R85 standard)
- Optimally matched to the motor inverters available

## Specifications HSM1-10.18.13

### Performance data at 400 V<sub>DC</sub>

	Value	Unit
Nominal speed	4'600	rpm
Max. torque at max. inverter current	380	Nm
Continuous power (according to ECE R85)	93	kW
Max. continuous torque (S1) at 25 °C	160	Nm
Max. continuous power (S1) at 25 °C	90	kW
Max. power	183	kW
Max. speed	12'000	rpm

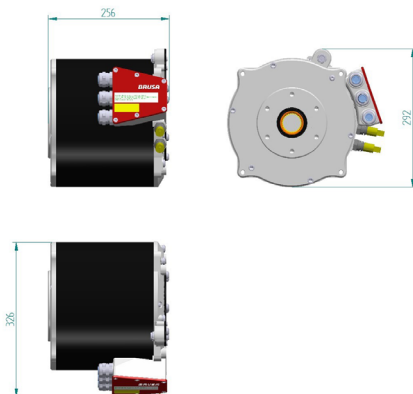
### Basic electrical data

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

### Mechanical data / Cooling system

Weight (dry)	49.7	kg
Moment of inertia (rotor)	0.065	kg·m <sup>2</sup>
IP-protection	IP67	
Coolant flow rate	8	L/min
Pressure drop at 8 L/min; coolant temperature = 25 °C	225	mbar
Min. / max. coolant temperature at inlet	-20 / +65	°C

### Dimensions [mm]



### Performance curve

