

HEINZMANN HYPERION Hybrid Drive

1. CUSTOMER INFORMATION

Customer:	Status:	
Contact person:	Customer-ID:	
Email:	Fax:	Phone:
Version:	Project:	Date:
Address:		

2. GENERAL FUNCTIONS

			<i>Remark</i>
Hybrid type			Mild-, Full-Hybrid
E-motor starts diesel engine	yes	no	
Maintain present starter (starting ability)	yes	no	Maintain geared ring for 12/24 V starter
Ambient temperature		°C	
Load profile available	yes	no	Separate document

3. MECHANICAL - GENERAL

			<i>Remark</i>
E-motor directly coupled to crank shaft/flywheel	yes	no	Mild-Hybrid only
Bearing of e-motor			No bearing (approval of the diesel manufacturer necessary)/double/single

4. TECHNICAL DATA DIESEL ENGINE

		<i>Remark</i>
Diesel engine brand		
Diesel engine type/Model-No.		
Diesel engine rated power		kW
Diesel engine nominal speed		rpm
Diesel engine max. speed		rpm

Max. rotor inertia			kg • m ²
Min. rotor inertia			kg • m ² If e-motor replaces the fly wheel, what is the min. inertia the diesel engine requires
SAE-housing size			SAE-housing size (e.g. SAE3, SAE4)
Required starting torque at crank shaft			Nm If e-motor shall start the diesel engine
Digitally governed engine (ECU)	yes	no	
Diesel ECU brand			
Diesel ECU type/Model-No			
Communication ECU via SAE J1939	yes	no	Actual diesel torque from diesel ECU is essential

5. TECHNICAL DATA E-MOTOR/INVERTER

			<i>Remark</i>
Type of e-motor			Radial flux
Max. diameter motor housing		mm	
Max. additional length because of the e-motor		mm	What additional length of the drivetrain is acceptable?
Stall torque e-motor		Nm	See „required starting torque at crank shaft“
Rated power e-motor		kW	
Peak power e-motor		kW	
Rated speed e-motor		1/min	
Max. speed e-motor		1/min	
Duty cycle of peak power		%	
Intermediate circuit voltage		VDC	Present system: 350..400 VDC
E-Motor: Liquid cooling (water, oil)	yes	no	
E-Motor: Cooling liquid temperature		°C	Above 70 °C: Power derating
Inverter: Liquid cooling (water, oil)	yes	no	
Inverter: Cooling liquid temperature		°C	Should be below 70 °C (separate cooling)
Max. stator outer diameter		mm	
Min. rotor inner diameter		mm	
Max. length of stator – rotor package		mm	

6. TIMETABLE / UNITS

Planned units for prototype pcs.

Planned units for series per year pcs.

Participation of development and tooling costs

Milestones

7. SCOPE OF DELIVERY

Remark

E-Motor	yes	no	
Inverter	yes	no	
Diesel engine controller	yes	no	
Hybrid controller	yes	no	
DC/DC converter	yes	no	Optional. 12/24 V battery / alternator can remain
Battery (400 V)	yes	no	
Assistance choosing battery	yes	no	

8. NOTES