Automotive Engineering 3. Research Vehicles



Opel Ampera

Vehicle with Range Extender for the Examination of drive concepts

- Maximum power: 111 kW / 150 hp
- Max. Torque: 370 Nm
- Vmax: 161 km / h
- 0-100 km / h: <10 sec
- Empty weight: 1732 kg
- Electric drive: 54 kW generator
- 16 kWh battery
- 40-80 km range



Range Extender:

4 cylinder Otto engine, 1398 cm³ 63 kW/86 hp at 4800 rpm >400 km range

Mitsubishi i-MiEV

- · Vehicle with electric drive
- Investigation of drive concepts
- Investigation of HMI

Power:	49 kW/67 PS	Capacity:	16 kWh
0-100 km/h:	15,9 s	Range:	150 km
Vmax.:	130 km/h	Empty weight	: 1110 kg



Land Rover Range Rover Evoque

- Vehicle with dynamic tire pressure control, semi-active suspension and decoupled braking system with continuous wheel-slip control
- Examination of driving dynamics

Power:	110 kW/150 PS
Inertia:	380nm
Vmax.:	182 km/h
Empty weight:	2275 kg
Tire size:	235/55 R19





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Audi A5 Sportback

- Man-machine interaction (e.g., pedal feel characteristics)
- Brake-by-Wire

Model series B8

- Otto engine, displacement: 1984 cm³
- Power: 155 kW / 210 PS
- Max. Inertia: 350 Nm
- Acceleration: 0-100 km/h: 6,4-7,9 s
- Empty wieght: 1590 kg
- Vmax: 241 km/h



Audi e-tron 55 quattro S-Line

Research

- Demonstrator for innovative propulsion technologies
- Development and validation of integrated chassis control systems for fully electric Sport Utility Vehicles (SUVs)
- Automated Driving



Tire Measurement Trailer

- Developed by division of automotive engineering
- Analysis of the adhesion behavior of tires on dry and wet roads
- Electro-servo-hydraulic brake system for the realization of brake slip
- Measurement and control of the braking system using LabVIEW Realtime (Real-Time System CompactRIO)
- · Highly dynamic force and torque recording
- · Defined adjustment of wheel position variables
- · Great variation of wheel loads
- Highly dynamic tire inflation pressure system







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