

Powertrain Test Facilities

Visteon European Test Operations



Visteon European Test Operations offer a broad range of testing services and solutions to meet your testing requirements. Test facilities include sophisticated Powertrain test cells, AEMCLRP accredited EMC laboratories, audio acoustic development facilities, extensive climatic test facilities and unique laser airflow measurement capability. Test facilities are located in Basildon, England and Kerpen, Germany.

The Powertrain team are experienced in a broad range of engine and Powertrain system testing including both long term advanced development projects and short turnaround baseline testing of most types of powertrain systems.

Engine Dynamometers

- Engine Cell 1: Borghi & Saveri 200kW Eddy Current Dyno.
- Engine Cell 2: Schenck High Dynamic 220kW AC Motor
- Direct sampling Horiba Exhaust Emission Analysers
- Real Time Combustion Analysis using A & D Powertrain CAS
- Dynamic Fuel Mass Flow (kg/hr)

Chassis Dynamometer

- 150kW 200kph 2-wheel dynamometer
- Stähle AP500 robot driver
- Direct sampling Horiba Exhaust Emission Analysers
- Real Time Combustion Analysis using A & D Powertrain CAS
- Dynamic Fuel Mass Flow (kg/hr)

Motorcycle Dynamometer

- 200kW Static, 450kW dynamic, 320kph motorcycle dynamometer
- Direct sampling Horiba Exhaust Emission Analysers
- Real Time Combustion Analysis using A & D Powertrain CAS
- High speed tracking fans

Services

- Test development, test planning, implementation and data analysis.
- Engine/Chassis dynamometer test operation.
- Engine/vehicle preparation & instrumentation.
- Fabrication of test rigs, wiring looms, pneumatic test systems.
- Vehicle modification, servicing and repair including fuel tank removal and refitting.
- Component level climatic temperature testing.
- Airflow, leak, pressure/vacuum testing.

Visteon Corporation European Test Operations

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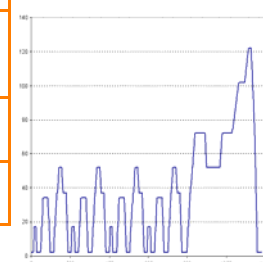
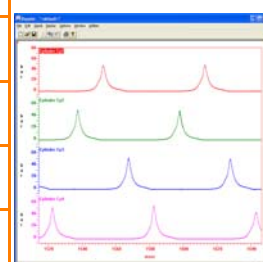


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Chassis Dynamometer	
Dynamometer	MRW Chassis Dynamometer
	Maximum Inertia 2438 kg/m ² Minimum Inertia 500 kg/m ²
	Maximum Motor Power 150 kW/2334 r/min.
	Front or rear wheel drive capacity
	Passenger car up to light commercial vehicles
	Maximum Speed at Rollers 200km/h
	Vehicle Speed Tracking Fan (simulated speed 0 - 120 km/h)
Test Cell Equipment	
Control	MRW dyno control system
Acquisition	A&D Powertrain Redline ADAPT 120 channel acquisition of analogue, digital, temperature and pressure signals up to 1000Hz
Robot Driver	Stähle AP500 robot driver (three pedal and gear shift operation)
Emission	Direct pre and post cat sampling Horiba Exhaust Emission Analyzers (THC, NOx, O2, Inlet and Exhaust CO2, CO and EGR)
Fast Emission	Cambustion fast NOx and THC measurement (4ms)
Combustion	A&D CAS Combustion Analyser: 8 high-speed (880kHz) and 8 low-speed (11kHz) analogue input channels
Fuel	Siemens Coriolis Fuel Mass Flow (kg\hr)
Smoke	Smoke Opacity measurement using AVL or Celesco equipment



Visteon Dynamometer Capabilities

Visteon's Dynamometers offer a comprehensive portfolio of innovative test capabilities. Together with highly skilled staff and efficient processes, flexible support is provided to customer in their development programmes and advanced technology projects. Visteon ensures independent and confidential operation through access controlled security areas.

Test capabilities

- Automated running using robot driver
- Emission drive cycles
- Transient testing
- Mapping
- ECU calibration
- Cold start

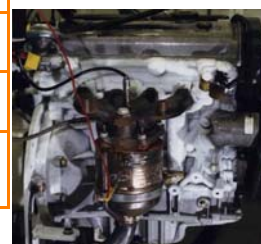
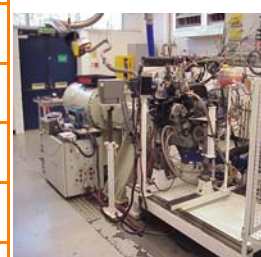


Powertrain Test Facilities

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Engine Dynamometers	
Dyno Cell 1	Eddy current dynamometer type Borghi & Saveri FE 260-S
Dyno Cell 2	Schenck Dynas 220kW up to 4,600 rpm, nMax 9,000 rpm, Tmax 450Nm
	Electronic throttle control
	Pallet Mounted engines for preparation outside of cell
	Configured for direct connection to engine flywheel
Test Cell Equipment	
Control	A&D Powertrain Redline ADAPT Host system
Acquisition	120 channel acquisition of analogue, digital, temperature and pressure signals at rates of up to 1000Hz
Emission	Direct sampling Horiba Exhaust Emission Analysers (THC, NOx, O ₂ , Inlet and Exhaust CO ₂ , CO and EGR)
Fast Emission	Combustion fast NOx and THC measurement (4ms)
Combustion	A&D CAS Combustion Analyser: 8 high-speed (880kHz) and 8 low-speed (11kHz) analogue input channels
Fuel	Siemens Coriolis Fuel Mass Flow (kg\hr)
Smoke	Smoke Opacity measurement using AVL or Celesco equipment
Conditioning	FEV AirCon for control of combustion air temp, pressure and humidity, Oil and Coolant conditioning systems.

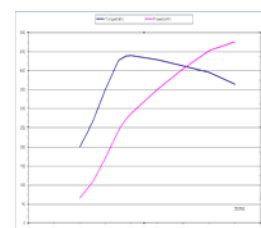


Visteon Dynamometer Capabilities

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Test capabilities

- Automated running
- Power curves
- Transient testing
- Mapping
- ECU calibration
- Cold start
- Exhaust emission measurement

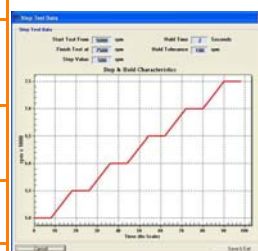


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Motorcycle Dynamometer	
Make	Dyna Pro S68-LC Chassis Dynamometer with Eddy-Brake
Maximum Power	200kW Static, 450kW dynamic,
Maximum Speed	200mph motorcycle dynamometer
Inertia	Total System Inertia 7.2kg/m ²
Throttle	Electronic throttle control
Test Cell Equipment	
Control	Dyna Run V3 Advanced Windows Software
Acquisition	A&D Redline ADAPT 120 channel acquisition of analogue, digital, temperature and pressure signals at rates of up to 1000Hz
Emission	Direct sampling Horiba Exhaust Emission Analysers (THC, NOx, O ₂ , Inlet and Exhaust CO ₂ , CO and EGR)
Fast Emission	Cambustion fast NOx and THC measurement (4ms)
Combustion	A&D CAS Combustion Analyser: 8 high-speed (880kHz) and 8 low-speed (11kHz) analogue input channels
Fuel	Siemens Coriolis Fuel Mass Flow (kg\hr)
Smoke	Smoke Opacity measurement using AVL or Celesco equipment



Visteon Dynamometer Capabilities

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Test capabilities

- Dynamic and steady state power curves
- Transient testing
- Mapping
- ECU calibration
- Cold start
- Exhaust emission measurement



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