

# Combustion Development and Mapping



Valued Quality. Delivered.



Intertek Transportation Technologies based in Milton Keynes UK has more than 30 years' experience in dynamometer based performance, emissions and EMS mapping. This covers both Diesel and gasoline engines using industry standard instrumentation, analysis, data acquisition and post processing tools.

Intertek's 28 cell laboratory is trusted by many of the world's vehicle manufacturers to deliver quality data and test hours with minimum down-time. Recent major investments mean our laboratory facility now offers some of the best commercially available development test cells in the world.

The newest test cells are specified to handle engines of up to 1000 kW whilst providing high precision fuel, air and fluid conditioning systems for unrivalled consistency and highly repeatable testing. Intertek stocks more than 60 dynamometers with capacities from 50 to 1000 kW including transient A/C machines to suit specific customer needs. Test efficiency is maximised by provision of 24/7 automated mapping techniques using AVL CAMEO software.

Intertek Transportation Technologies now offering some of the world's best commercially available development test cells

- 28 test cells and 65 engine dynamometer options
- Power capacity from 50 kW to 1000 kW
- All tests fully monitored 24/7



Intertek's lab is a 24/7 operation meaning engine maintenance, hardware changes, instrumentation calibration and servicing can be performed outside of the normal working day, maximising cell availability for customer work.

Customer engineers can be accommodated on-site in five separate customer offices with capacity from 2 to 6 persons.

All of our development test cells can be used for European type approval certification testing (to ECE Regulation 85), so unnecessary engine movements can be avoided between development and certification.

To accompany this vast experience of powertrain development, we offer prototype manufacturing capability of parts and ancillaries and our laboratory facilities offer full instrumentation capabilities to support dynamometer based testing here on-site, or for vehicle based testing outside of our facilities.

All of our test facilities are fully accredited to ISO 9001 and recognised by the UK Vehicle Certification Agency for engine power certification (ECE Regulation 85).

### Key features

- 28 test cells with 65 dynamometer options
- Power capacity from 50 to 1000 kW
- A/C transient dynos with Kistler 2 kN Torque Flange ( $\pm 1$  Nm accuracy)
- Fuel Flow: Sierra CP fuel conditioning and combined Coriolis and gravimetric metering system. Precision temperature and pressure conditioning. Dynamic and steady-state precision fuel metering.
- CAHU charge air precision temperature & humidity control
- Combustion Indicating: AVL Indimodul and AVL 365 Optical Encoder
- Horiba exhaust gas analysers with heated lines to all development cells
- FTIR gaseous speciation available on all development test cells
- Fast response AFR meter & Wideband Lambda sensors
- Combustion Fast FID analyser
- AVL CPC particle counter
- Sierra CP BG3 & Soot Trak transient particle counter
- AVL Micro Soot Sensor (MSS)
- Smoke meter: AVL 415SE
- AVL CAMEO test bed automation software
- ETAS / Inca v 7 with ASAP link to CP Cadet 14 system; 1024 channels
- Coolant temp control: proven to  $< \pm 1^\circ\text{C}$
- Oil temp control: proven to  $< \pm 1^\circ\text{C}$
- Intercooler outlet temp control:  $10^\circ\text{C}$  to  $90^\circ\text{C}$  with chilled fluid control circuit.
- Micro Epsilon turbo speed measurement
- $25^\circ\text{C}$ ,  $5^\circ\text{C}$  and  $-30^\circ\text{C}$  Fluid circuits to all cells
- Extensive fuel farm with 9 separate fuel lines into each cell
- Oil analysis service available from Intertek Laboratory
- Fuel analysis service available from Intertek Laboratory
- Customer drive-cycles or bespoke tests available
- Photographic studio to support post-test analysis
- All tests fully monitored 24/7



### Intertek

8 Tanners Drive  
Blakelands  
Milton Keynes  
MK14 5BN, UK

T: +44 1908 513000

[www.intertek.com](http://www.intertek.com)

For more information please visit [www.intertek.com/automotive](http://www.intertek.com/automotive) or contact Darren Carter, Business Development Manager at [darren.carter@intertek.com](mailto:darren.carter@intertek.com), or call +44 1908 513000.

To find an office or laboratory in a particular country, please visit [www.intertek.com/contact](http://www.intertek.com/contact).