

Bosch Engineering

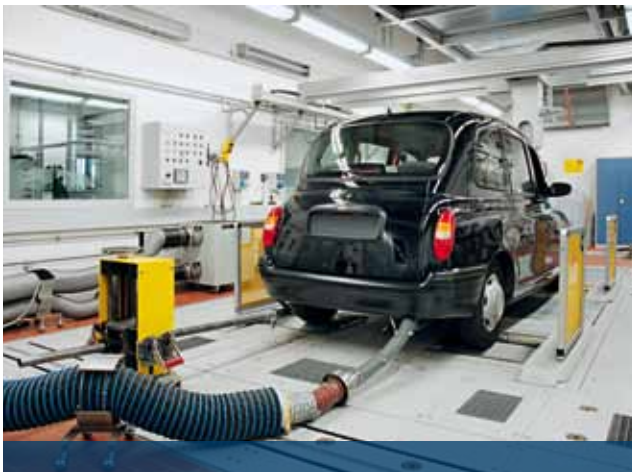
Applications Test Center

Exhaust-Gas Emissions Test Benches



BOSCH

Invented for life



Technical Equipment

Roller set

- ▶ 48" single-roller test bench – 4-wheel roller
- ▶ Power 150 kW

Exhaust-gas measurement system

- ▶ CVS tunnel, capacity 1.5 to 15.6 m³/min
- ▶ Bag measurements for diesel and petrol engines
- ▶ N₂O measurement system

Exhaust-gas measurement system for untreated exhaust-gas

- ▶ Three untreated exhaust-gas analysis systems
- ▶ Ammonia measurement in untreated exhaust-gas

Particle measurement system

- ▶ Gravimetric determination of particle mass
- ▶ Determination of number of particles
- ▶ Soot measurement with micro soot sensor
- ▶ Smoke density measurement with opacimeter

Exhaust-Gas Emissions Test Bench

On the exhaust-gas emissions rollers, tests can be carried out in accordance with all worldwide legal requirements for gasoline and diesel engines at temperatures of -7°C to $+30^{\circ}\text{C}$.

Scope of Application

The most important applications include exhaust-gas emission testing in accordance with EU, CARB, EPA and Japanese legislation. Additional applications are the vehicle-specific adaptation of the OBD functions, the analysis of the ageing characteristics of components, and the measurement of carbon footprints. The determination of energy consumption and the range of electric vehicles in statutory and client-specific driving cycles complete the scope of application.





Climate conditioning

- ▶ Temperature range: -7°C to $+30^{\circ}\text{C}$
- ▶ Relative humidity 30% to 70%

Vehicle conditioning

- ▶ Two conditioning halls for temperatures of $+20^{\circ}\text{C}$ to $+28^{\circ}\text{C}$
- ▶ Eight climatic cabinets for temperatures of -7°C to $+30^{\circ}\text{C}$

Driving cycles

- ▶ Statutory emissions cycles (e. g. MNEFZ, FTP75)
- ▶ Client-specific cycles, e. g. for determining the consumption and range of hybrid vehicles

Additional measurement systems

- ▶ Exhaust-gas emission volume measurement device with PTFM flow meter
- ▶ Determination of electrical power for hybrid and electric vehicles

Our services

- ▶ Organization of the testing procedure
- ▶ Professional vehicle preparation
- ▶ Secure assembly halls for prototypes with access control
- ▶ Individual preparation and evaluation of the measurement results.

Legally Restricted Pollutants

The measurement system complies with all the requirements of EU6 and US legislation. This also includes the measurement of particle numbers as well as the determination of the N_2O mass in the exhaust-gas emissions cycle.

Development

In order to optimize the exhaust-gas emissions and diagnostics, three systems are available for the analysis of untreated exhaust-gas. These measure the soot content in untreated or diluted exhaust-gas and also measure the smoke density. This enables your future emissions designs, e. g. with SCR and NSC catalytic converters, to be perfectly analyzed, developed and calibrated.

Quality

by carrying out regular calibration and maintenance, we ensure the highest level of measurement accuracy and quality.

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