

CHASSIS DYNAMOMETER for Light Duty Vehicles

The test bed is operated in cooperation between the Graz University of Technology and FVT mbH.

BRAKING POWER

200 kW asynchronous motor
48" roll

TEMPERATURE

adjustable from -30 °C to +40 °C

MAXIMUM SPEED

200 km/h

VEHICLE MASS

maximum 3500 kg

ADJUSTABLE HUMIDITY

CVS – FLOW RATE

6, 10 or 20 m³/min

MODES OF OPERATION

The dynamometer can be run in stationary and transient operation. Both braking and towing operation is possible.

STATIONARY OPERATION

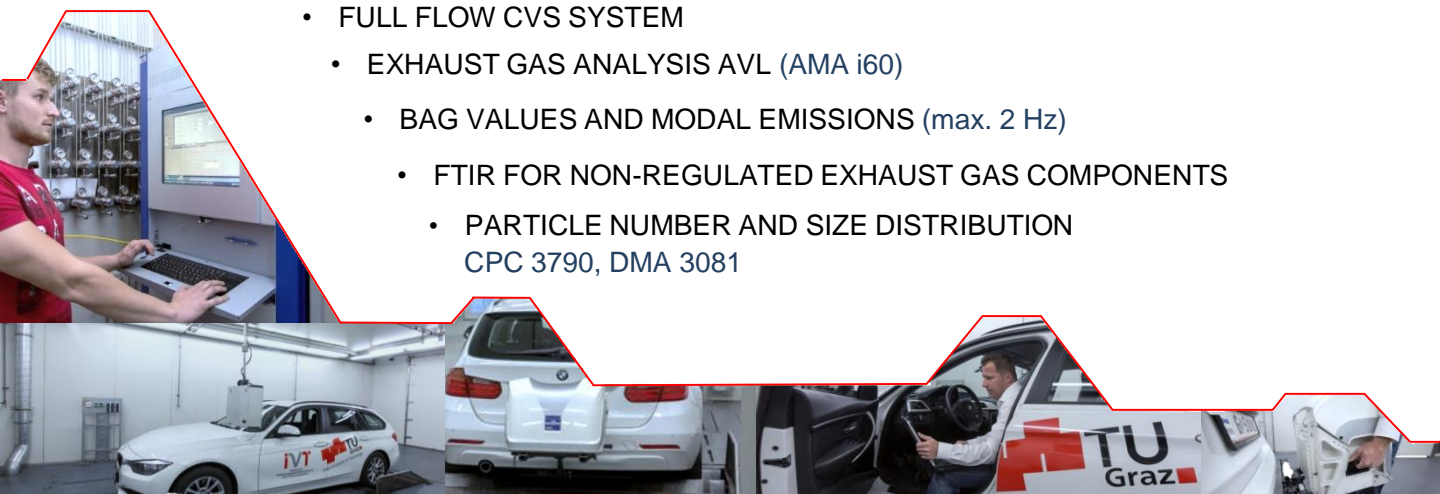
Constant traction or constant driving speed

TRANSIENT OPERATION

Simulation of driving resistance forces according to actual vehicle speed and acceleration based on settings for vehicle mass and load road parameters

EXHAUST GAS ANALYSIS

- FULL FLOW CVS SYSTEM
- EXHAUST GAS ANALYSIS AVL (AMA i60)
- BAG VALUES AND MODAL EMISSIONS (max. 2 Hz)
- FTIR FOR NON-REGULATED EXHAUST GAS COMPONENTS
- PARTICLE NUMBER AND SIZE DISTRIBUTION
CPC 3790, DMA 3081



REQUIREMENTS

DIMENSIONS of the test-vehicle

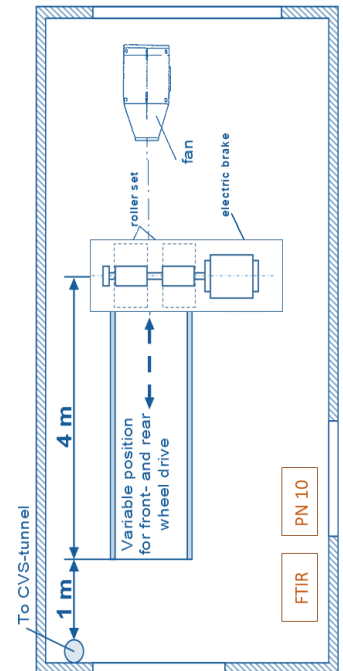
- **Height:** max. 2.6 m
- **Front-wheel drive:** max. wheelbase 4 m, rear overhang max. 1 m
- **Rear-wheel drive:** max. wheelbase 4.5 m, front overhang max. 1 m (overhang can be bigger with shorter wheelbase, see figure)

SPECIFICATIONS of the operating system

- **Driving cycle**
- **Exhaust gas components:** Standard: CO, HC, CH₄, NO_x, CO₂, PM, PN; On demand: PN 10nm, 4nm, size distribution, non regulated species with FTIR, temperatures ..

REQUIREMENTS on vehicle- and engine data

- **Car documents and technical data**
- **Vehicle descriptions:** Deactivation of ABS, instructions for relevant special equipment
- **Special measurements:** e.g. spare parts for catalyst exchange



COSTS exkl. VAT

Following costs are standardized. For more extensive projects discounts are possible.

Setup and calibration of the vehicle (1x before tests)	€ 2.900,-	
WLTC single test	€ 260,-	
Coast down test	€ 1.540,-	
7 °C Test (if additional to WLTC)	€ 1.080,-	
Chassis dynamometer during emission tests	425,-	€/h incl. personal
Chassis dynamometer without emission tests	315,-	€/h incl. personal
FTIR or PN10 measurement	75,-	€/h
Scientific staff	90,-	€/h
Mechanic	55,-	€/h

* Type approval test:
WLTC for preconditioning,
12 h cool-down to 23 °C,
WLTC emission measurement
(1x), plus elaboration of test report

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