

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 (CPC 23 nm, 10 nm and 4 nm)



REQUIREMENTS

DIMENSIONS of the test-vehicle

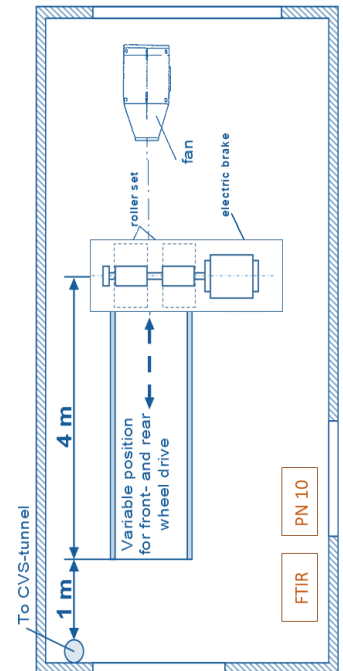
- **Height:** max. 2.6 m
- **Front-wheel drive:** max. wheelbase 4 m, rear overhang max. 1 m
- **Rear-wheel drive:** max. wheelbase 4.5 m, front overhang max. 1 m
(overhang can be bigger with shorter wheelbase, see figure)
- **Axle load** max. 2400 kg

SPECIFICATIONS of the operating system

- **Driving cycle**
- **Exhaust gas components:** Standard: CO, HC, CH₄, NO_x (NO/NO₂), CO₂, PM, PN;
On demand: PN 10nm, 4nm,
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)	€ 3.230,-	
WLTC single test	€ 300,-	
Coast down test	€ 1.650,-	
7 °C Test (if additional to WLTC)	€ 1.240,-	
Chassis dynamometer during emission tests	490,-	€/h incl. personal
Chassis dynamometer without emission tests	385,-	€/h incl. personal
Additional equipment optional, e.g. FTIR or PN10	85,-	€/h
Scientific staff	105,-	€/h
Mechanic	62,-	€/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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