

## Key Features

(updated 29/10/2010)

1. Adjustable cross section ( width x height )
  - o Maxi 4.50 x 4.00 metres (for industrial vehicle)
  - o Mini 3.50 x 2.50 metres (for passenger vehicle)

Tunnel entrance dimension: 3.50 x 3.75 metres

2. Max air speed.  
3 meter diameter and 450 kW fan
  - o With 7.20 m<sup>2</sup> nozzle (I.V.) 2.40 x 3.00 metres = 100 km/h
  - o With 3.50 m<sup>2</sup> nozzle (P.V.) 2.00 x 1.75 metres = 170 km/h
  - o With 2.29 m<sup>2</sup> nozzle (P.V.) 1.50 x 1.52 metres = 230 km/h

3. Climatic data (depending of test conditions)
  - o Temperature : - 35 °C to + 55 °C
  - o Solar simulation : 0 à 1200 W/m<sup>2</sup> (512 x 250W IR bulbs)
  - o Relative humidity : 10 to 98 % from -25 to +55 °C

Slope down speed from +20 °C to -18 °C, with an air speed of 40 km/h, engine stopped : 1h00

Slope up speed from -18 °C to +45 °C, with an air speed of 90 km/h : 1h30.

4. Chassis Dynamometer suitable for front, rear and four wheel drive vehicles
  - o Roll diameter : 1.60 meter
  - o Lane width min / max : 0.80 / 2.55 meters
  - o Wheelbase min / max : 2.035 / 7.000 meters
  - o Max load per axle / total : 6500 / 18000 kg
  - o Inertia range (4x2) : 500 - 6000 kg
  - o Inertia range (4x4) : 1000 - 12000 kg
  - o Max speed : 250 km/h
  - o Max power : 250 kW from 75 to 250 km/h (on 1 or 2 axes)
  - o Max tractive force : 12000 N from 0 to 75 km/h

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### 5. Measurement means

- The data acquisition system
  - Modular, embeddable in vehicle
  - Up to 300 temperature and tension channels
  - Able to pick up data from CAN high / low speed and OBD
- Physical data measurable
  - Temperature (coolant, air, oil, A/C refrigerant)  
TC K or PT100
  - Liquids flow rate (range 500, 1000, 3000, 12000 l/h).
  - No corrosive fluids pressure (range 2.5, 6, 30 bars)
  - Revolution speed (engine, fan, etc...)
  - Electrical data (voltage, current...)

The real time data supervision is available on charts and tables support for each measured parameter.  
Each channel alarm or warning is also available.

### 6. Airflow test bench

- Fluid : ethylene-glycol mixture at 50% in volume
- Capacity : 800 litres
- Max. temperature of use : 110 °C
- Max. flow rate : 9 000 L/H
- Total power : (195 KW)

