

V-ROAD

MOBILE RESEARCH LAB AND VEHICLE ENVIRONMENT REPRODUCTION

THE FLEXIBLE AND RELIABLE SOLUTION AT THE HEART OF YOUR POWERTRAIN TEST CAMPAIGNS.

Real technological revolution thanks to its mobility, the V-Road can move anywhere at any time to perform calibration and testing work:

Exhaust
measurement

Speed up
to 200 km/h

Altitude
tests

Climatic
(-30°C / +60°C)

AREAS OF DEVELOPMENT

ALTITUDE TESTS

- Actual weather conditions
- Different levels
- Reproducibility of climate / humidity

PARTIAL LOADS / FULL LOADS

- Measurement of engine losses (friction torque, engine pumping)
- Development and validation of hot and cold conditions in the vehicle (stability, noise, pollution, smoke, consumption...)
- Recalibration of torque structure

OBD AND ELECTRICAL DIAGNOSIS

- Calibration of diagnostic thresholds, readiness
- Validation of vehicle inter-systems

COLD START

- Development and validation of pre/post-heating strategy
- Development and validation of start-up and post-start-up (engine revving, stability, noise)

AIR LOOP

- Calibration regulating global and local loop (EGR, butterfly feeder, overboosting, calibration of altitude and climate correction)
- Calibration of petrol engine filling

POST-TREATMENT

- SCR calibration system
- Calibration of regeneration strategy and of the estimator of particle filter volume
- Calibration of catalyst heating strategies



SYNCRONISED SINGLE-ROLLER BENCHES FOR ALL TYPES OF VEHICLES AND ALL TYPES OF TESTS:

2 WD

V-ROAD 1

4 WD

V-ROAD 2

Wheelbase: 1800 mm-3100 mm

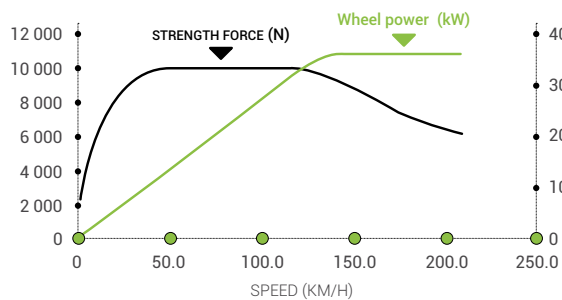
TECHNICAL SPECIFICATIONS

2WD : V-ROAD 1

4WD : V-ROAD 2

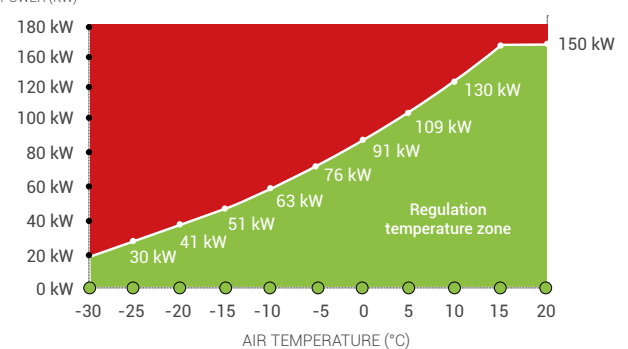
Roller size	24 inches	
Authorized mass	Up to 3 000 kg	
Braking power	200 kW from 90 km/h, up to 350 kW	
Force to the brake wheel	9 800 N from 50 km/h to 115 km/h	
Equivalent roller inertia	1230 kg	1450 kg
Drive power	75 Kw	
Force to the drive wheel	2 400 N	
Simulable inertia class	From 700 kg to 3 000 kg	From 950 kg to 3 150 kg
Vehicle speed	Up to 200 km/h	
Control mode	Road simulation: road law, inertia and slope	
	ISO speed regulation	
	ISO strength regulation	
Measurement accuracy of force to the wheel	±0.1% of full scale (±10 N)	
Accuracy of speed measurement	± 0,05 km/h	
Accuracy of force control	±0.4% of full scale (±40 N)	
RADIATOR VENTILATION		
Section	560 mm height x 800 mm width	
Area	0,448 m ²	
Speed	Subject to the roller speed up to 140 km/h	
CLIMATIC		
Air temperature	From -30°C to 60°C	
Control accuracy	± 2°C	
Cooling power	63 kW at -10°C and 190 kW at 20°C (test T°C)	
Humidity control	Dry air exchange and humidity control (above 10°C)	
OTHER SPECIFICATIONS		
Flow of exhaust gas up to 2,500 m ³ /h gas Driving guide giving the opportunity to implement all types of cycles Acquisition of chassis information and driving guide Acquisition of pressures, temperatures and tension instrumentation		
OTHER INSTRUMENTATION		
5 gas analysis bay (gross measurement) & Measurement of exhaust flow (pollutant mass flow) Particle measurement		

STRENGTH FORCE (N)



Roller dyno performances

ENGINE
WHEEL POWER (kW)



Engine power versus T°C

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