

High Power Climatic Test Cells: G-CELL

The test cells aim to provide testing solutions to wide variety of climatic and load testing needs. Equipped with the most innovative equipment, the climatic test cells can considerably support vehicle development and new powertrain validation.

A CONTROLLED ENVIRONMENT FOR REPEATABLE TESTS

UP TO 18.5m (L) x 3.2m (W) x 4.5m (H)

ALL ENERGIES COMPLIANT: ICE, HVO, EV, H2

HUB-DYNO: No slippage, no tire shredding

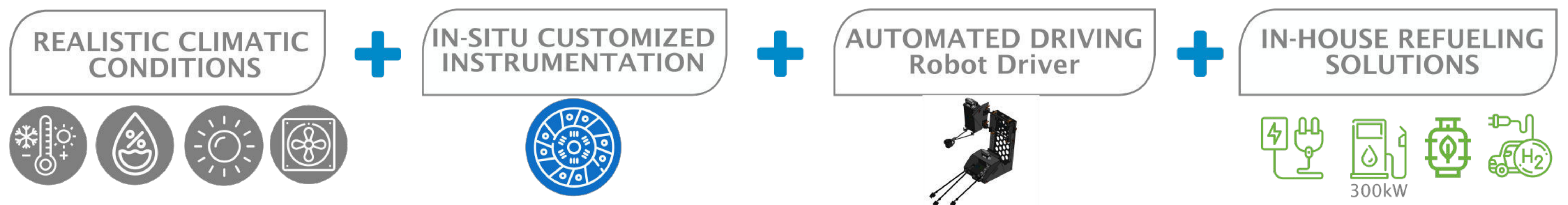
600kW continuous - 1MW PEAK

-46°C | +63°C CLIMATIC CONDITIONS

POLLUTANT EMISSIONS MEASUREMENT



▶ MAIN FEATURES



TESTS

Get repeatable and high precision measurement datas

- Engine Mapping
- Performance
- Energy Management
- Pollutant Emissions
- ISC, (e)SORT, STAGE 5
- Cabin Comfort / Climatic
- CUNA, STANAG
- NVH



CELL TECHNICAL SPECIFICATIONS



Test cell dimensions	> 154m ² - 22m (Length) x 7m (Width) x 6m (Height) <i>Possibility to host several vehicles in the same chamber</i>	
Cell Door dimensions	> 3.8 (W) x 5m (H)	
Maximum vehicle weight	> 20T per axle	
Mechanical power	> 600 kW continuous - 1MW peak (<500s)	
CONFIGURATION	Maximum Torque	Maximum Speed
	<i>(by wheel)</i>	<i>(22.5" wheel for HD/16"wheel for VL)</i>
Heavy Duty single axe 4WD	- Continuous: 20.000N.m Peak (<60s): 50.000 N.m	- Continuous: 560 rpm [110km/h] Peak (<60s): 670 rpm [130km/h]
Heavy Duty tandem 6 WD-8WD	- Continuous: 2 x 10.000 N.m Peak (<60s): 2x 40.000N.m	- Continuous: 560 rpm [110km/h] Peak (<60s): 670 rpm [130km/h]
Off road 4 DW	- Continuous: 80.000 N.m Peak (<60s): 200.000 N.m	- Continuous: 140 rpm Peak (<60s): 170 rpm
Light vehicle 4WD	- Continuous: 3.500 N.m Peak (<60s): 5.000 N.m	- Continuous: 2300 rpm [270 km/h] Peak (<60s): 2700 rpm [320km/h]
Thermal power	> 800 kW at 20°C <=> 300kW at -30°C	
Temperature range	> -46°C to +63°C (soaking +60°C)	
Humidity	> Controlled up to 88% of humidity	
Solar Simulation	> Up to 1.200 W/m ² (Frontal / Top / Lateral)	
Aeraulic system	> 360 000m ³ /h available airflow	
Permanent Air Motion	> From 0.3 to 1.5 m/s on full test cell cross section	
Wind Speed	> <i>Contact us for specifications</i>	
Test cell mode	> 2 to 8 WD (with Front/Rear and Right/Left synchronous or independent control)	
Control mode	> Road Load, constant torque or speed, manual control	
Inertia simulation	> Up to 40T	



Visit our test cell:

FUEL & GAS ANALYSES

Fuel Measurement Systems	> AVL KMA Mobile (High accuracy dynamic mass flow meter)
Combustion Analysis	> AVL Indimicro 4 channels
Gas Analysis	> Raw gas analysis + IntakeAir mass flow meter
EGR	> CO ₂
Pre/Post catalyst sampling	> AVL AMA i60 / Microsoot sensor AVL 483 / Horiba Mexa One QLNx
PEMS	> Particle counter AVL 489 - Opacimeter AVL 439 > AVL M.O.V.E GAS - HC + particles counter

