



# Climatic Wind Tunnel (CWT One)

Our advanced CWT One facility enables customers to test their products under a wide range of simulated, repeatable environmental conditions including extreme cold, snow, solar loading and humidity.

The facility features a 4 wheel drive dynamometer and is utilised by a number of international vehicle manufacturers looking to develop their products for all world markets. By reducing the need for seasonal in-territory testing, the facility allows customers to compress their development lead times, helping them to deliver products to market far quicker than their competitors.

## Testing capability

- Climatic emissions
- Cabin comfort
- Powertrain cooling

## Environmental conditions simulated

- -40°C to +55°C
- Full solar spectrum simulation
- Humidity control
- 2 or 4 wheel drive chassis dynamometer
- Hot road simulation
- Snow generation
- Tailpipe exhaust emissions

## Maximum vehicle dimensions:

### Vehicle wheelbase:

### Gross vehicle weight:

### Air speeds:

### Air temperature:

### Humidity range:

### Chassis dynamometer:

### Solar simulation:

### Data acquisition:

### Hot-road simulation:

### Minimum speed:

### Soak room temp range:

### Dimensions:

### Circuit type:

### Fan type:

### Airflow nozzle:

### Cooling systems:

### Emissions:

Width: 2.7m, Height: 3m, Length: 6.2m

Maximum: 5m, Minimum: 2m

8000kg

Primary = 150km/h Secondary = 200km/h

Max/min = +55°C/-40°C

5% to 95% Relative Humidity

Twin-axle (150kW DC per axle), 1.6m dia. rollers (FWD/RWD/4WD)

Full spectrum Range: 0.6 to 1.4kW/m<sup>2</sup>

Target area: 6m x 2m

The system meets SC03 emissions standards

Ipetronik CAN system 160 channels, 20Hz to 5KHz depending on channel type

Underbody heating up to 30°C above chamber temperature

0km/h (idle/city bypass system operating)

-40°C to +55°C

12.0m x 6.7m

Vertical return, fully enclosed support building

Axial flow, 2.6m diameter 400kW

Primary = 4.0m<sup>2</sup>; Secondary = 2.5m<sup>2</sup>

765kW capacity Twin rotary-screw compressors, with heat exchangers

Gasoline, LPG, CNG and gasoline hybrids.

All world legislative test cycles and custom drive cycles. Analysis of dilute emissions (HC, CH<sub>4</sub>, NO<sub>x</sub>, CO & CO<sub>2</sub>). European Type VI cold (-7°C) HC and CO test. US Federal cold (-7°C) CO test. US Federal Supplemental test: US06 and SC03. Hot and cold emissions development testing.