



World-class Climatic Test Chambers and Environmental Test Equipment

www.cvmsclimatic.com

CVMS Climatic

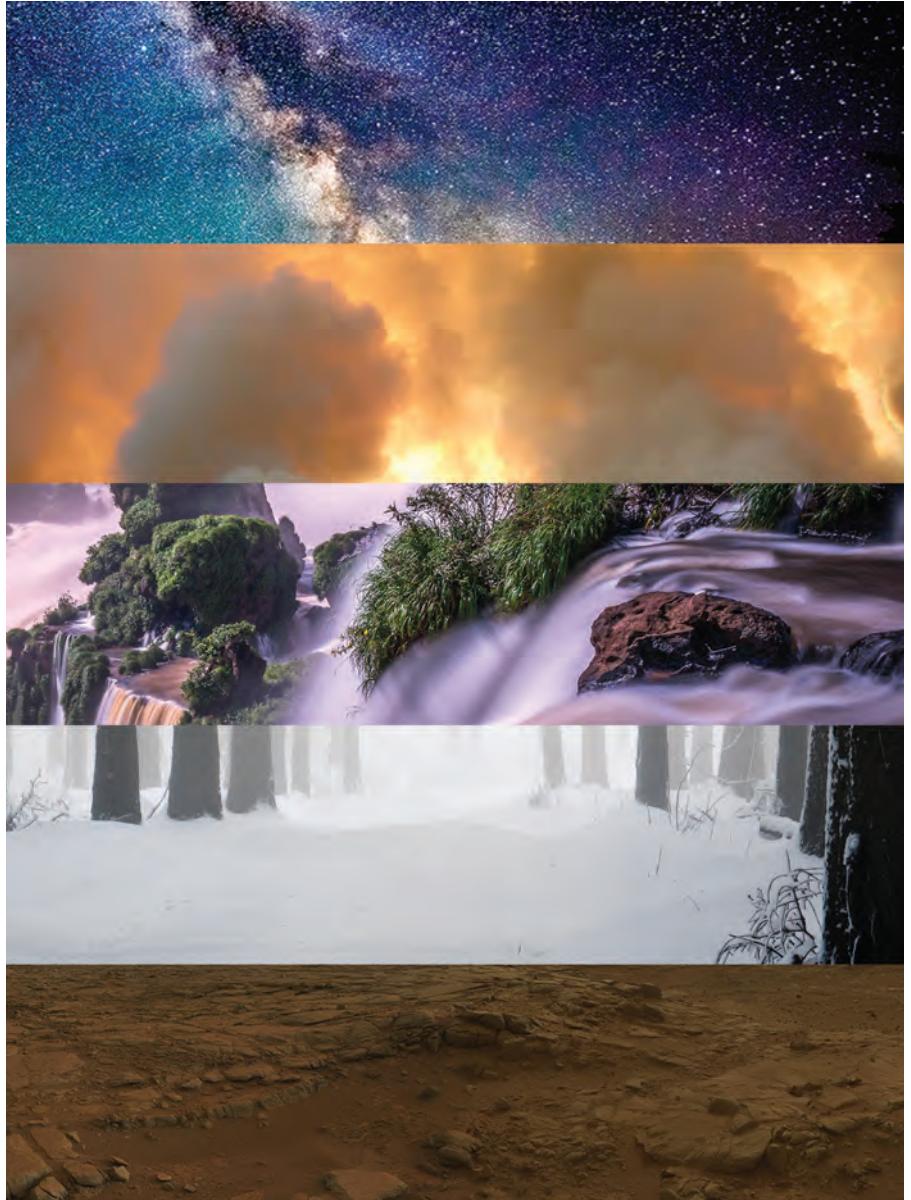
About Us

CVMS °Climatic is at the forefront of the design, build and supply of Environmental Test Equipment from its standard Climatic Test Chambers to large-scale Walk-in or Drive-in Environmental Test Facilities. As well as controlling temperature and humidity in the test space, we also offer a wide range of products that simulate other environmental effects such as Low Pressure (Altitude), Solar Radiation, Rainfall, Sand, Dust, Pollution and Corrosive atmospheres.

World-Class Climatic Test Chambers and Environmental Test Equipment

We are able to offer our expertise in the field of combined testing where more than one environmental effect is required such as vibration and temperature cycling.

Whether your need is for a simple bench-top test chamber or a complicated facility to test your products, try putting us to the test to see if we can meet your expectations with our world-class and cost-effective Environmental Test Systems.



Climate +

Following a comprehensive design review CVMS °Climatic has relaunched the Climate+ series with a completely new look. With a wide range of temperature performances and ramp rates, these chambers will provide solutions for test applications across all industries. Manufactured from high quality materials and components procured from world class manufacturers, reliability is built in. The climate control series feature a colour touch-screen programmable controller for easy operation and close control of temperature and humidity.

Specifications

- Internal volume: 7 chamber sizes from 100 to 1000 litres
- Temperature ranges: -20°C, -40°C, -70°C ... +180°C
- Heating rates: up to 5°C / min
- Cooling rates: up to 5°C / min
- Temperature fluctuation: $\pm 0.5^\circ\text{C}$
- Temperature uniformity: $\pm 2.0^\circ\text{C}$
- Humidity range: 10%RH ... 98%RH
- Humidity fluctuation: $\pm 2\%RH$

Standard Features

- Colour touch screen controller
- SD Card data storage
- RS232 or RS485 communications
- Viewing window
- Internal illumination
- 50mm or 100mm \varnothing porthole
- Remote control software

Options

- Ethernet connection
- Password controller lock
- Water-cooled refrigeration
- Air dryer for low temperature and humidity applications



Bench Top

Our bench top chambers offer an extremely cost-effective range of test possibilities in a portable format; ideally suited for labs and test rooms where space is at a premium. The chambers are manufactured from high quality materials and components procured from world class manufacturers so that performance and reliability is built in. The bench top series feature a colour touch-screen programmable controller for easy operation and close control of temperature and humidity.

Specifications

- Internal volume: 36 or 64 litres
- Temperature ranges: -20°C, -40°C, -70°C ... +180°C
- Heating rates: up to 3°C / min
- Cooling rates: up to 3°C / min
- Temperature fluctuation: $\pm 0.5^\circ\text{C}$
- Temperature uniformity: $\pm 1.5^\circ\text{C}$
- Humidity range: 30%RH ... 98%RH
- Humidity fluctuation: $\pm 2.5\%RH$

Standard Features

- Colour touch screen controller
- RS232 communications
- Viewing window
- 50mm \varnothing porthole

Options

- Trolley / test stand
- Password controller lock



Ovens

CVMS °Climatic offer a comprehensive range of general-purpose Industrial and Laboratory Ovens which are widely used to test materials, devices or components for their tolerances of heat. The applications cover all industries, including Aerospace, Automotive, Electronics, Chemicals, Medical, Packaging and Food. The standard range covers temperatures up to +300°C and are available in sizes from small benchtop to 1000 litres. We can also offer bespoke products such as 'walk-in' chambers, vacuum drying ovens and high-temperature furnaces as well as accessories including shelves and special racking systems.

Examples and features:

- Incubators (including cooled incubators)
- Standard ovens up to +300°
- PID temperature controllers
- Over-temperature alarms
- Applications include Ageing, Burn-in, Temperature Testing
- Large-capacity including 'walk-in' facilities

Combined systems for materials testing:
high temperature with vibration



Altitude

CVMS °Climatic produce bespoke altitude chambers designed to customers' exact requirements. We can offer a wide range of chamber sizes and performances designed for altitude and low pressure applications across all industries. These chambers are manufactured from high quality materials and components procured from world class manufacturers and feature a colour touch-screen programmable controller for easy operation and close control of the environmental parameters specified.

Specifications

- Internal volume: up to 1000 litres
- Temperature range: -70°C ... +180°C
- Heating rate: up to 5°C / min
- Cooling rate: up to 5°C / min
- Temperature fluctuation:
±0.5°C (at ambient pressure)
- Temperature uniformity:
±2.0°C (at ambient pressure)
- Humidity range: 20%RH ... 98%RH
- Humidity fluctuation: ±2%RH
(at ambient pressure)
- Pressure range: 101kPa ... 0.5kPa

Standard Features

- Colour touch screen controller
- SD Card data storage
- RS232 communications
- Viewing window

Options

- Ethernet connection
- Password controller lock





Air Treatment Unit

There will be times when a standard chamber or even a walk-in test room will not accommodate a particular test item effectively. Our Air Treatment Unit (ATU) will condition the air before it is applied to the test piece via insulated hoses or ducting. A simple insulated enclosure is built around the unit being tested and any mechanical rigs or electronic test equipment can be kept safely outside the temperature controlled zone. The ATU provides a range of temperature performances and ramp rates that will suit the majority of test applications across all industries. Manufactured from high quality materials and components procured from world class manufacturers, reliability is built in.

Specifications

- External dimensions: D1880 x H1980 x W1250 mm (approx)
- 1m³ well-insulated enclosure with 2m insulated ducting:
- Test load 100kg steel (no heat)
- Temperature range: -60°C ... +120°C
- Heating rate: 3°C / min
- Cooling rate: 3°C / min
- Temperature fluctuation: ±0.5°C
- Temperature uniformity: ±2.0°C

Standard Features

- Colour touch screen controller
- SD card data storage
- RS232 or RS485 communications
- Remote control software

Options

- Ethernet connection
- Password controller lock

*Bespoke models available for larger or smaller test enclosures, different test loads and temperature ranges



Walk-in

The size of your test item is not a limiting factor with CVMS °Climatic. We can produce test rooms that will fit a whole vehicle, aircraft part, space satellites or huge racks of smaller items that have to be tested or conditioned in bulk. Using only high quality materials and components procured from world class manufacturers means that performance and reliability is a feature of all our test room projects. The bespoke nature of these chambers means that we can construct a test facility to our customers' precise requirements combining many different environmental effects. A colour touch-screen programmable controller will provide easy operation and close control of all the environmental parameters

Specifications

- Internal volume: typically from 8m³ upwards as required
- Temperature range: typically from -70°C ... +150°C or as required
- Humidity range: typically 10%RH ... 95%RH or as required

Combined Environments

- Solar radiation
- Rainfall
- Low Pressure
- Vibration



Thermal Shock

CVMS °Climatic produces a 2-zone and a 3-zone thermal shock chamber. The conventional 2-zone comprises a hot and a cold chamber with the test item moving between the two by way of a mechanical lift. The 3-zone has the test item in a central 'ambient' chamber with the hot and cold air generated and stored in adjacent chambers. At the appropriate time the hot (or cold) air is directed into the ambient zone sequentially according to the programme thus providing the thermal shock.

2 Zone Specifications

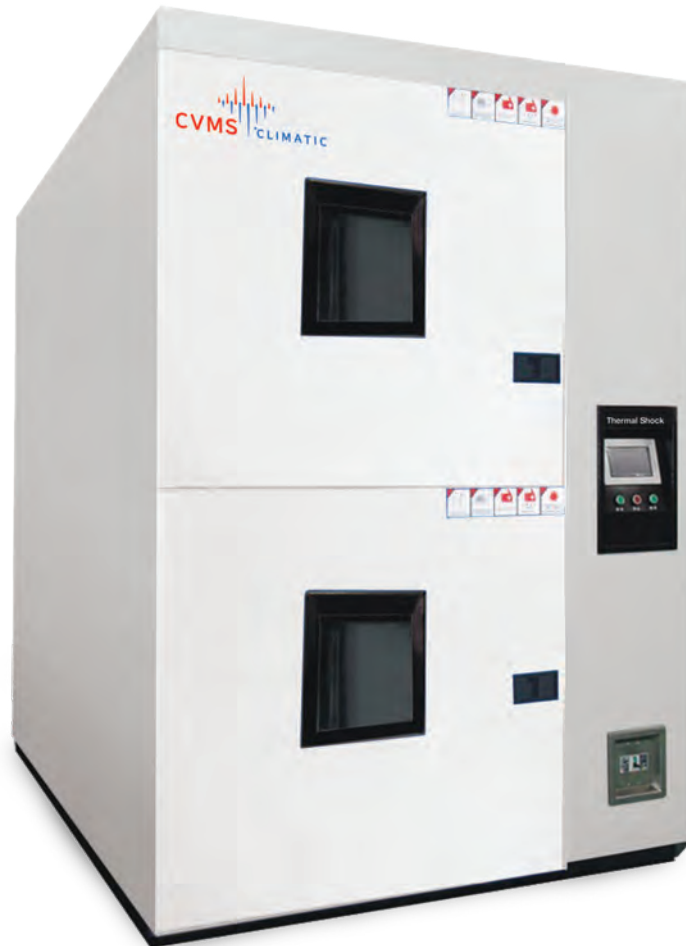
- Internal volume: 4 chamber sizes up to 1000 litres
- Thermal shock range: -70°C ... $+180^{\circ}\text{C}$
- Conversion time: $\leq 5\text{sec}$
- Recovery time: $\leq 5\text{min}$

3 Zone Specifications

- Internal volume: 5 chamber sizes up to 250 litres
- Thermal shock range: -65°C ... $+180^{\circ}\text{C}$
- Pre-heat range: $+70^{\circ}\text{C}$... $+200^{\circ}\text{C}$
- Pre-cool range: -10°C ... -75°C
- Recovery time: 5min

Standard Features

- Colour touch screen controller
- RS232 communications





Vacuum Ovens

Vacuum ovens are used for a variety of applications across many industries and research establishments. They are often used for drying processes particularly for small, delicate or absorbent parts or materials. Drying in a low-pressure atmosphere not only speeds up the process but also reduces the risk of oxidation.

Specifications

- Chamber volumes up to 1000 litres
- Temperature range:
Ambient +10° ... 200°C
- Temp. Fluctuation: $\pm 2.0^{\circ}\text{C}$ (at 200°C)
- Heating time (to max): Approx. 80 min.
- Operation pressure range: 101 ... 0.1 kPa
- Digital PID controller
- Timer 0 ... 99 minutes



UV Light

CVMS °Climatic produces 4 standard sizes of UV light test cabinets. They have been designed to imitate the ageing effects of sunlight, rainwater and dew; using UVA and UVB light tubes to simulate the radiation of sunlight and condensed water and spray to imitate dew and rainfall. These tests can uncover in days or a few weeks the effect of outside exposure (such as fading, colour change, fracturing, brittleness etc...) that can take several months or years. The results and subsequent investigations and further tests can improve material durability and help to select the correct materials or material combinations for the application.

Specifications

- Internal volume: 2 standard chamber sizes of 130 and 260 litres
- UV wavelength: 313nm, 340nm
- Temperature range: +10°C ... +70°C
- Humidity range: ≥95%RH



Salt & Fog

CVMS °Climatic produces 6 standard sizes of salt fog test cabinets. They have been designed to accelerate the effects of corrosion on sample materials and devices. The results and subsequent investigations and further tests can improve the resistance of materials and devices to corrosion improving product robustness, reliability and ongoing safety.

Specifications

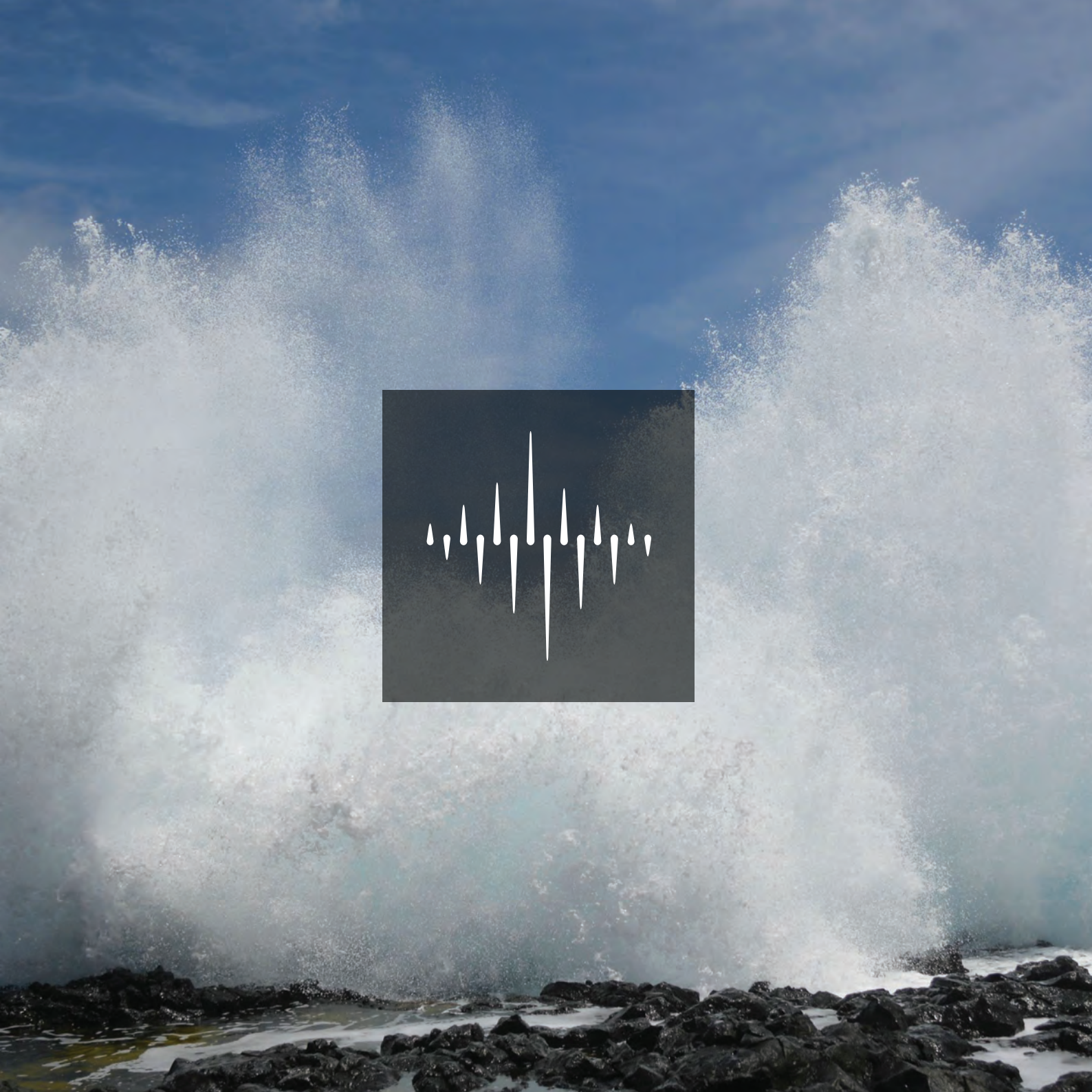
- Internal volume: 5 standard chamber sizes from 100 to 1000 litres
- Salt Fog settlement: 1 ... 2ml/80 (cm²h)
- Temperature range: +35°C ... +55°C
- Temperature uniformity / Fluctuation rate: ≤2°C / ≤0.5°C

Options

- Damp heat 85%RH ... 95%RH
- Bespoke chambers according to customers' requirements
- CASS Testing

Bespoke chambers according to customers' requirements





Sand & Dust

CVMS °Climatic produces 4 standard sizes of sand & dust test chambers. They have been designed to investigate the effects of dust ingress into products and devices and establishing the quality of seals. Typical test items include automotive parts, household appliances, low-voltage electrical apparatus etc. The equipment can also be used to establish the abrasive effect of sand and dust on materials and products, the results of which and subsequent investigations and further tests can help to improve product robustness, durability, reliability and ongoing safety.

Specifications

- Internal volume: 4 standard chamber sizes from 500 to 2600 litres
- Dust test standards: IP1 to IP6
- Dust tests according to the majority of International standards and norms

Standard Features

- Stainless steel chamber interior
- Large viewing window in door with manual wiper
- Metal screen mesh
dimensions: 50µm, 75µm
- All plastic centrifugal fan
- Vacuum system: pressure gauge, air filter, pressure regulation and connection tube.
- Touch-screen controller

Options

- Vacuum pump



Rain

CVMS °Climatic produces 4 standard sizes of rain test chamber. They have been designed to test performance of many items and products such as storage and transportation containers, electrical items, electrical cabinets, lighting systems, telecoms devices, automotive components etc that are subject to outdoor environments.

Specifications

- Internal volume: 4 standard chamber sizes from 530 to 2600 litres

Standard Features

- Stainless steel chamber interior
- Large viewing window in door
- Interior illumination
- Variable water amount, area of coverage, droplet size and angle
- Test table rotation
- Relevant standards: IEC60529, GB2423.38, GB4208.93, GB7000.1

Bespoke chambers made to customers' precise requirements (including walk-in facilities)



ENVIRONMENTAL CHAMBER

Combined Temperature - Vibration

CVMS °Climatic has the skill and experience to be able to offer a complete range of combined testing equipment. We can supply a Temperature (or Temperature-Humidity) Test Chamber to interface with any Make, Model or Brand of industrial shaker system world-wide.

We can match a chamber with a customer's existing shaker system or provide a turn-key package of environmental chamber and vibration system to meet a customer's test specification.



Bespoke Products

The size and shape of your test item or the complexity of your test is not a limiting factor with CVMS Climatic. We can build a test chamber or construct an environmental simulation or process to your precise requirements; a few examples are mentioned below:

Walk-in / Drive-in Chambers

- Volume typically from 8m³ to large 'Drive-in' facilities
- Temperature ranges from -70°C ... +150°C or as required
- Humidity range from 10%RH to 98%RH
- Heating and cooling rates to suit applications
- Colour Touch-Screen Programmable Controller
- Combined environments: Solar radiation; Rainfall; Low pressure; Vibration



Drive-in Test Chamber

Automotive Airbag Test systems

- Flip door chamber
- Drive-in chamber

SAFE Heating Systems

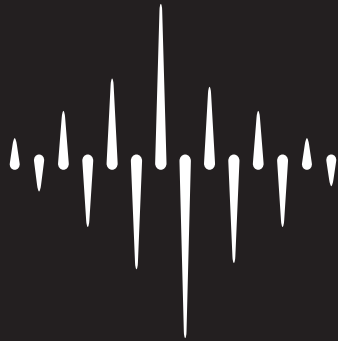
- for ATEX requirements

Combined environments with vibration and mechanical testers

- Complete environmental test systems that will provide environments such as vibration with temperature and humidity control
- Air Treatment Units (ATU) to provide temperature control or cycling for test items in mechanical test rigs, tensile testers etc



Airbag Test Chamber



cvmsclimatic.com info@cvmsclimatic.com +44 (0)7436 803650 +44 (0)1525 385500
CVMS Climatic UK, 10 Leighton Industrial Park, Billington Road, Leighton Buzzard, LU7 4AJ