

Hiacc[®]

ENVIRONMENTAL & RELIABILITY TEST SYSTEMS

Products & Services





Environmental & Reliability Testing Solutions

Simulated natural and induced environmental test for evaluating the reliability of products have evolved over time. Extreme operating environment, improper packaging, handling, transportation and storage can result in extensive damage to a product or it's components. HIACC now offers a complete range of environmental and reliability test systems to conduct all types of environmental & mechanical testing.

Trusted by
100+ Customers



Climatic Test Chamber

Material properties changes with varying temperatures, for instance, gaskets and other synthetic rubbers parts in a pneumatic system are severely aggravated by temperature above 55 °C. Frost formation, fogging, material degradations and mechanical failures occur due to fluctuating temperature and relative humidity.






HIACC Climatic Chambers are ideal to conduct high & low temperature, high & low humidity and thermal cycling tests. The test chamber can be customised suiting to different test standards. It comes with a larger viewing window, ports for live specimen testing, visual alarm system, improved mobility and smaller footprint.



Technical Specification

Specifications	Klima -40T/C	Klima -70T/C
Temperature	Range - 40°C to +180°C	- 70°C to +180°C
Standard Volume Range	110 L, 225L, 450L, 580L, 1000L	110 L, 225L, 450L, 580L, 1000L
Temperature Range	-40°C to 180°C	-70°C to 180°C
Rate of Temperature Change (options)	1°C/Min to 3°C/Min, Upto 20°C/Min	1°C/Min to 3°C/Min, Upto 20°C/Min
Humidity Range	10%RH to 98%RH	10%RH to 98%RH
Customisability	Yes	Yes
Refrigeration System	Single	Cascade
Low GWP Refrigerant (option)	Yes	Yes

Optional Accessories

Water Chillers	Heavy Duty Specimen Shelf	Cable Port & Rubber Plug	Low GWP Refrigerant	Communication Ports & Cables
				
water chillers for water cooled condenser	For specimen weight above 40Kg heavy duty shelf must be used.	Cable ports available from 50mm, 100mm and 125mm	Alternate refrigerants for R404A, R23.	RS 485, RS 232

Benchtop Chamber

Compact thermal chambers are known as "Benchtop/Tabletop Chambers" which has smaller footprint area making it easily fit into small lab space and can be moved across effortlessly. The chamber simulates temperature and humidity(optional) and are available in the standard volume range of 36L.






HIACC tabletop chambers are compact & quiet yet adhere to multiple test standards & ideal for long term tests. Built with corrosion-resistant stainless steel, the test space can hold specimen up to 15kg. The refrigeration system uses eco-friendly low GWP refrigerant(optional) and meets all statutory standards.



Technical Specification

Specifications	Klima-BT	Klima-BT
Temperature	- 30°C to +120°C	- 60°C to +120°C
Standard Volume Range	36 L	36 L
Inner Dimension	400x300x300mm	400x300x300mm
Temperature Range	-30°C to 120°C	-60°C to 120°C
Rate of Temperature Change	1°C/Min	1°C/Min
Customisability	Yes	Yes
Refrigeration System	Single	Cascade
Low GWP Refrigerant (option)	Yes	Yes

Optional Accessories

Stand	Heavy Duty Specimen Shelf	Cable Port & Rubber Plug	Low GWP Refrigerant	Communication Ports & Cables
				
Durable bottom stand is available in multiple dimensions and has levelling casters for mobility.	For specimen weight above 15Kg heavy duty shelf must be used.	Cable ports available from 50mm, 100mm and 125mm	Alternate refrigerants for R404A, R23.	RS 485, RS 232

Walk-In and Customised Test Chamber



Walk-In/Drive-In test chambers simulates multiple environmental exposures on a whole vehicle or it's assemblies. Walk-In Chambers are designed and assembled using pre-fabricated modular panels or through welded floor construction. Appropriate construction type is selected based on the specimen type and test profile.

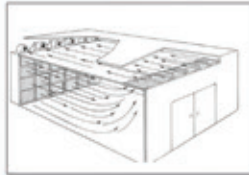
a) The welded floor construction is apt for heavy-duty testing with high ramp rate / humidity cycle and is ideal for high soak period testing.

b) While the modular panel is the most commonly used design as they can be assembled in a short period and provide floor loading up to 5 tonnes. The chamber is equipped with urethane insulations, moisture seals, dry & frost-free test space, lightings and touchscreen controller.



Features

Uniform Climate Simulation



Uniform temperature and humidity is maintained inside the test space through the efficient control system which ensures synchronous & optimised performance of heat exchangers, fan and humidity system.

Frost-Free Operation



The advanced refrigeration and de-humidification system ensures frost-free operations and achieves low humidity range.

Viewing Window



The automatic heating system is turned on to avoid fogging on the viewing window. This provides an uninterrupted view of the specimen under test.

Touch Screen Controller



The 7-inch touchscreen controller provides effortless test experience. The controller is equipped with USB access, ethernet, process mimic, alarm status and chamber diagnostics.

Energy Saving & Low GWP Refrigerant



Efficient refrigeration system with intelligent controller optimises the energy distribution as per test cycle resulting substantial decrease in power consumption. HIACC also helps customers achieve environment compliance by using low GWP refrigerants (on demand).

Laboratory and Industrial Ovens



Temperature Chambers or Ovens are extensively used for high - temperature tests as well as for drying, curing, heat treatment & softening applications.

Through convection heat transfer, a uniform temperature is maintained, and the controller plays a vital role in the programmed operation. The single moulded structure made with stainless steel is corrosion & rust-free. Convenient door design, ample test space and enhanced heating performance add more values to HIACC ovens.

Features

Excellent Heating Performance



Temperature uniformity, consistency, heating rate & recovery time are programmed precisely to provide best in class performance. At ambient temperature even if the ventilation damper is opened the chamber temperature remains constant.

Benchtop & Floor Base Design



Ovens are available in two designs which are benchtop and floor-based. Benchtop design comes with movable floor stand while floor-based ovens are mostly used for heavy-duty testing applications.

PID Controllers



Micro processor based PID controllers (with timer function) offer great flexibility in setting test profile and managing chamber operations.

Safety



Thermal fuse, door switch, leakage breaker, heater wiring breaker, Upper & lower temperature limit alarm, reverse prevention relay & overheat protector are provided for safety.

Technical Specification

Parameters	Celsius 100	Celsius 250	Celsius 400	Celsius- 600	Celsius 1000
Inner Dimensions (WxDxH)	500x400x500mm	600x600x700mm	700x700x800mm	800x800x900mm	1000x1000x1000mm
Chamber volume	100L	252L	392L	576L	1000L
Temperature Range	RT+10°C ~ 200°C 300°C (Optional)				
Temperature Accuracy	1°C	1°C	1°C	1°C	1°C
Stainless Steel Shelves	2Nos	2Nos	2Nos	2Nos	2Nos
Power Supply	230V 1PH 50Hz				
Viewing Window	300 x 300mm or 400 x 400mm (Optional)				
Port Hole with plug	Diameter 50mm and 125mm (Optional)				
Floor Stand	Movable on wheel with lockable system (Optional)				

Touchscreen Controller



- Remote monitoring and control
- Test program creation and management
- Easy to and fro data transfer from server and test chamber
- Web browser access
- Compatible with latest Android & iOS devices for web access
- Quick test data download
- The integrated system diagnostics with efficient fault analysis and fast troubleshooting
- Safety integrated



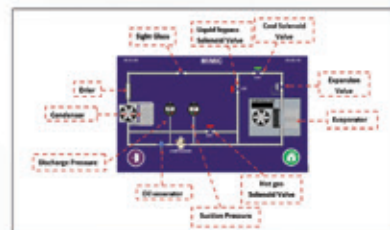
Access Through Browser

Config IP

Home Menu - Controller



Process Mimic



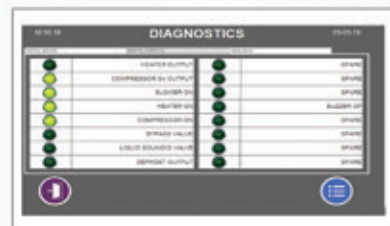
Alarm Status



Factory Settings



Chamber Diagnostics



Support & Service



Vibration Test Systems



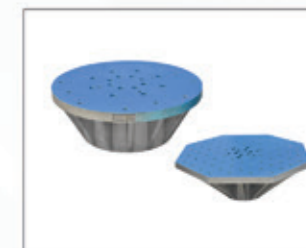
Electro-dynamic Vibration Test System (Air Cooled /Water Cooled Series)

Dongling is one of the largest and most innovative manufacturers of air cooled and water cooled vibration test systems. With Random sine force ratings from 1KN to 600KN and maximum payloads from 70Kg to 15,000Kg. Typical applications of dongling's vibration shaker include automotive component testing, electronic product testing, avionics testing and medical research etc. Dongling also provides turn-key solutions with environmental test chambers from HIACC for multi environment combined vibration tests.



Tri-Axis Electrodynamic Vibration Test System

Our range of vibration test equipment included the most advanced 3 axis electro-dynamic test system in the industry. This shaker system can more realistically simulate the dynamic environment of the real world by simultaneously exciting 3 different axis. Additional benefit of simultaneous 3 axis testing are shortened test time, improvements in complex test analysis and a reduction in under and over testing of product in single axis.



Head Expander

Our head expanders are designed to optimise performance on your vibration test system. Head expanders are made of Magnesium with various sizes from 300mm to 3500mm in Square or Round shape. Customised shapes and sizes are also available. All head expanders are passed finite element analysis.



Slip Table

Slip table can be integrated with Electro-Dynamic Vibration Shakers to achieve three-dimensional vibration test. The slip table can be classified as per integration type, split type and connection way. V-shaped guide rail slip table includes the horizontal table, V-shaped rail, connectors, granite slab, slip table base, and built-in oil source. Fuel supply pump is built-in with a compact structure and easy operation. Based on the slip table size, the number of V-shaped guide rail is different. This V-shaped guide rail has a high resistance to overturning moment.



Power amplifier

The smart and energy saving power amplifier from Dongling is composed of the logical unit, power unit and control unit has the intelligent manipulation, stability, flexible configuration, efficient, compact structure and easy maintenance. The amplifier can be retrofitted with any brand vibration shaker for better performance and reliability.



Vibration Controller

Vibration controller used high performance processor with low-noise analog technology, achieves high performance and high reliability. It comes with an all-in-one input interface and adapts to a variety of sensor input. The safety output protection circuit is present to protect the safety of the test piece and the test system. With excellent control performance and control accuracy, 3200 lines and lowest swept sine of 1Hz makes it an ideal controller. It also comes with a network communication interface and convenient remote monitoring.



Vertical Shock/Bump Tester

The hydraulic vertical shock test system converts high-pressure liquid energy into kinetic energy to create a reciprocating movement of the element through an electro-hydraulic servo valve. The energy conversion and amplification is used to simulate the vibration or shock encountered in the actual usage environment. The intent of the testing is to optimise the product structure to withstand the actual shock environment it is expected to encounter. Other Options Available: Vertical Shock/Bump Tester (Pneumatic), Horizontal Shock/Bump Tester (Hydraulic)

Service Portfolio & Support

- Refurbish your old test chamber and increase life span by more than 5 yrs.
- Reduce the lifetime cost by 50%
- Retrofit old HFC (R404a, R23) based refrigeration system to comply with low GWP refrigerant
- Upgrade to latest control technology at lowest cost
- Improve energy efficiency

Rental Range



Rental Services

Refurbishment
& Retrofitting Services



Support

Service Portfolio

?

Breakdown

Call our support
hotline number
+ 91 98848 88 149

E-Mail Us
support
@hiaccengineering.com

Register on Website
www.hiaccengineering.com

Multi-Brand Support

HIACC provide both scheduled & unscheduled maintenance for Non-HIACC test chambers.

- More than 150 OEM test chambers are serviced annually
- 200+ localised spare parts inventory
- Maintains response time of <24 hr for even OEM test chambers

CSZ CTS
Cincinnati Sub-Zero

ESPEC TESTEQUITY
THERMOCHAMBER memmert

weisstechnik HANSE
Environmental, Inc.

We raise a ticket for your issue in less than 24 hrs. You'll receive an e-mail confirming receipt of the issue raised.

Our support engineers will respond, usually resolving your issue remotely.

If not, a visit to your premises will be arranged (based on your service plan).



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