

# Hiacc<sup>®</sup>

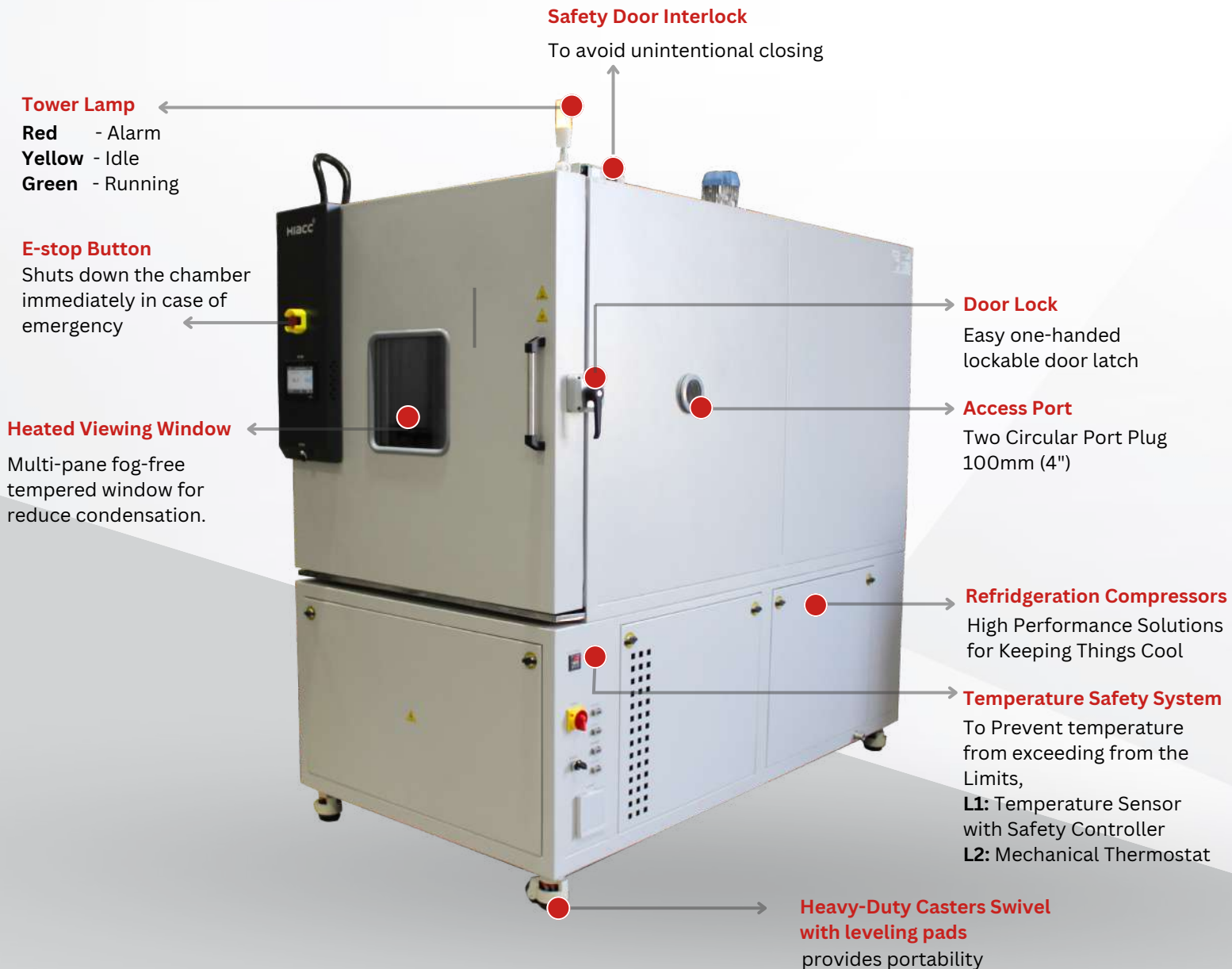
## Environmental Stress Screening Chamber

Product Catalogue



# Simulate the Stresses, Uncover Weaknesses Environmental Stress Screening made Easy

HIACC offers Reach-in Environmental Stress Screening(ESS) chambers, providing the flexibility to select the size and performance that best suits your test applications. These chambers allow for temperature cycling rates ranging from 5°C to 20°C per minute, offering versatility in accommodating a range of testing requirements.



## Test Space Capacity



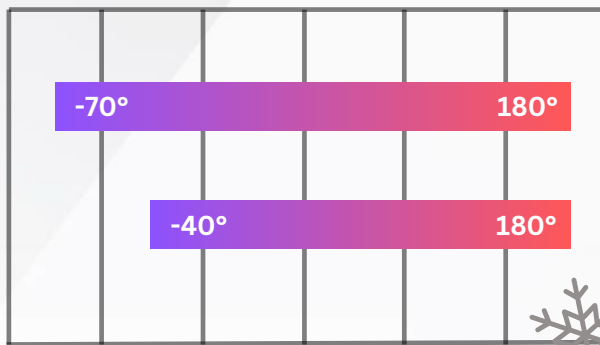
Experience the timeless elegance of our chambers, boasting the signature HIACC stainless steel test space complemented by a sturdy structure. With the control console conveniently located on the door, the unit's footprint is further optimized for compactness. Plus, the user-friendly door latch ensures simplicity and security like never before.

**The Klima Series Available in Different Test Space Sizes:**  
120, 225, 340, 450, 600, 1000, 1500 (\*All in Liters)

(\* Upon customer request, customized sizes are also available.

## Temperature Range

(°C)    -60°    -20°    0°    80°    160°    200°



**Cascade**  
(All -70C Model)

-70°

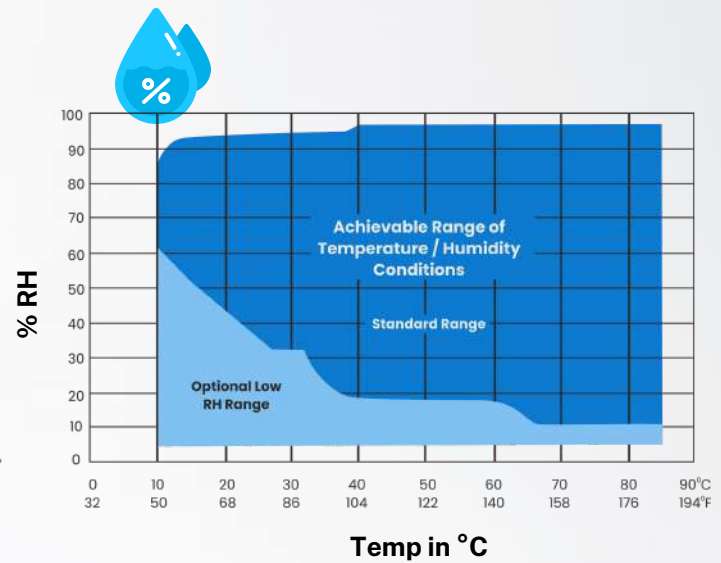
180°

**Single**  
(All -40C Model)

-40°

180°

## Humidity Performance



Choose from a wide range of KLIMA ESS series models, featuring over 8 options with 5°C/min ramp rates and 6 options with up to 25°C/min ramp rates, tailored to suit your testing requirements. Achieve environmental stress screening with ultimate low temperatures of either -40°C or -70°C, while models with humidity control (C) offer expanded testing capabilities. Engineered to meet international environmental test standards such as IEC, ASTM, and MilStd, the KLIMA Series ensures reliable and accurate testing performance.

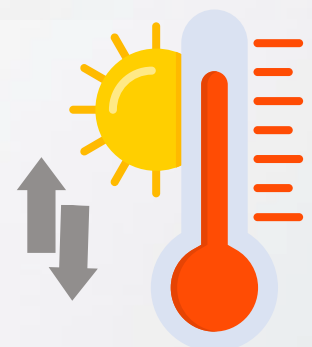
## Full-Range Humidity Specifications

Humidity Range	10% to 98% RH
Temperature Range	10°C to 85°C
Humidity Control	<±3% RH

## Temperature Change Rate up to 25°C/min

KLIMA ESS series has more than fifteen different models to allow you to choose the size and performance best suited for your test applications. Temperature cycling rates from 5 to 25°C/min. are available. Two different refrigeration types are available: -40°C or -70°C. The all Models comes with control humidity, for expanded testing options beyond temperature cycling. KLIMA ESS Series chambers are capable of meeting the performance requirements of IEC, Mil Std, ASTM, SAE and other international environmental test performance standards.

(\* Upon customer request, Custom Temperature change rates also available



## Options

(Special accessories on customer request)

- ✓ Additional Port Holes 50MM, 100MM, 125MM& 150MM
- ✓ Floor loading capacity (customizable)
- ✓ Air Dryer for Low RH Applications
- ✓ Heavy duty Customized Shelves
- ✓ Water-Cooled Refrigeration Systems
- ✓ Remote Refrigeration/ Condensing Unit
- ✓ Booster Cooling through LN2 up to -150 Deg C



## Safety

### Enhanced Electrical Safety

- ✓ Incoming power supply EMF (Electromagnetic interference filter) protection for reduces electromagnetic field radiation.
- ✓ Dedicated MPCB protection for various components, including Refrigeration Compressors, Air Heater, Circulation Fan Motor, Movement Basket Motor Assembly and Condenser Motor.
- ✓ Dedicated MCB protection for HMI, PLC, Test space Lamp, and the Control Circuit to ensure system stability
- ✓ Three Phase Preventer for under voltage and over voltage protection from the main input power.

### Comprehensive Temperature Control

Dual safety mechanisms - Mechanical Thermostats and adjustable electronic safety controllers - prevent thermal deviations and protect your samples.

- ✓ **Level 1** - High and Low temperature adjustable electronic safety controllers
- ✓ **Level 2** - High and Low temperature mechanical thermostats

### Advanced Refrigeration Safeguard

- ✓ High and Low Refrigeration safety pressure Protection for safeguards the refrigeration system.



## Control

### Precise Climate Regulation

precisely controls temperature, humidity, and other environmental factors to match your desired test conditions.

### Data Logging and Reporting

Track essential data throughout your tests and generate comprehensive reports for analysis.

### Easy Set-Up and Operation

An intuitive user interface allows for simple programming and monitoring of test parameters.



# Technical Specifications

Temperature change rate: 5K/min

		KLIMA - 120/-40C/5K	KLIMA - -120/-70C/5K	KLIMA - 340/-40C/5K	KLIMA - -340/-70C/5K	KLIMA - 450/-40C/5K	KLIMA - -450/-70C/5K	KLIMA - 1500/-40C/5K	KLIMA - -1500/-70C/5K
<b>TEST SPACE DIMENSIONS</b>									
Test space volume	Ltr.	120L		340L		448L		1500L	
Width	mm	500		700		700		1000	
Depth	mm	400		600		800		1500	
Height	mm	600		800		800		1000	
<b>PERFORMANCE DATA FOR TEMPERATURE TESTS</b>									
Maximum temperature	°C	180							
Minimum temperature discontinuous	°C	-40	-70	-40	-70	-40	-70	-40	-70
Rate of temperature change, cooling (*)	°C/min	5							
Rate of temperature change, heating (*)	°C/min	5							
Temperature deviation, in time	°C	±0,5... ±1		±0,5... ±1		±0,5... ±1		±0,5 ... ±1	
Heat compensation, max. at +20 °C	W	850	1000	900	1100	900	1100	1000	1200
<b>PERFORMANCE DATA FOR CLIMATE TESTS</b>									
Maximum temperature	°C	85							
Minimum temperature	°C	10							
Humidity range	%RH	10...98							
Humidity deviation, in time	%RH	±1...±3							
Temperature deviation, in time	%RH	±0,1 ... ±0,3							
Test Standard Compliance		IEC-60068, IEC-60749, IEC-61747, MIL-STD, ISO16750, ASTM, SAE, BIS & 50 other standards							
<b>TEST SPACE LOADING CAPACITY</b>									
Load, max.	kg	80		100		100		100	
Load per Shelf (Tray)	kg	20		25		25		30	
Possible number of insert grids	piece	4		6		6		7	
<b>POWER/CONNECTION DATA</b>									
Voltage rating	V	3/N/PE AC 415V±10% 50Hz other voltages and frequencies optional							
Sound pressure level	dB(A)	72	74	72	74	73	74	73	74
Total weight	kg	450	500	540	600	600	680	900	1000
Refrigerant System	type	R404A	R404A	R404A	R404A	R404A	R404A	R404A	R404A
			R23		R23		R23		R23

(\*) The performance data refer to an operating room (ambient) temperature of +26 °C, 415 V/50 Hz nominal voltage, without test specimen and without accessories.

(\*) Sound Pressure Level: Using a calibrated instrument, the weighted sound pressure level was measured in free-field environments at a height of 1 meters from the floor and a distance of 1 meter from the equipment surface.

# Technical Specifications

Temperature change rate: 10K/min , 15K/min, 25K/min

		KLIMA -225/-40C	KLIMA -225/-70C	KLIMA -600/-40C	KLIMA -600/-70C	KLIMA -1000/-40C	KLIMA -1000/-70C
<b>TEST SPACE DIMENSIONS</b>							
Test space volume	Ltr.	225L		612L		1000L	
Width	mm	600		800		1000	
Depth	mm	500		850		1000	
Height	mm	750		900		1000	
<b>PERFORMANCE DATA FOR TEMPERATURE TESTS</b>							
Maximum temperature	°C	180					
Minimum temperature discontinuous	°C	-40	-70	-40	-70	-40	-70
Rate of temperature change, cooling (*)	°C/min	10,15,25					
Rate of temperature change, heating (*)	°C/min	10,15,25					
Temperature deviation, in time	°C	±0,5 ... ±1		±0,5... ±1		±0,5 ... ±1	
Heat compensation, max. at +20 °C	W	850	1000	1000	1200	1000	1200
<b>PERFORMANCE DATA FOR CLIMATE TESTS</b>							
Maximum temperature	°C	85					
Minimum temperature	°C	10					
Humidity range	%RH	10...98					
Humidity deviation, in time	%RH	±1...±3					
Temperature deviation, in time	%RH	±0,1 ... ±0,3					
Test Standard Compliance		IEC-60068, IEC-60749, IEC-61747, MIL-STD, ISO16750, ASTM, SAE, BIS & 50 other standards					
<b>TEST SPACE LOADING CAPACITY</b>							
Load, max.	kg	100		100		100	
Load per Shelf (Tray)	kg	20		30		30	
Possible number of insert grids	piece	5		7		7	
<b>POWER/CONNECTION DATA</b>							
Voltage rating	V	3/N/PE AC 415V±10% 50Hz other voltages and frequencies optional					
Sound pressure level	dB(A)	72	74	73	74	73	74
Total weight	kg	490	540	720	780	820	900
Refrigerant System	type	R404A	R404A	R404A	R404A	R404A	R404A
			R23		R23		R23

(\*) The performance data refer to an operating room (ambient) temperature of +26 °C , 415 V/50 Hz nominal voltage, without test specimen and without accessories.

(\*) Sound Pressure Level: Using a calibrated instrument, the weighted sound pressure level was measured in free-field environments at a height of 1 meters from the floor and a distance of 1 meter from the equipment surface.

# Advanced Energy Saving

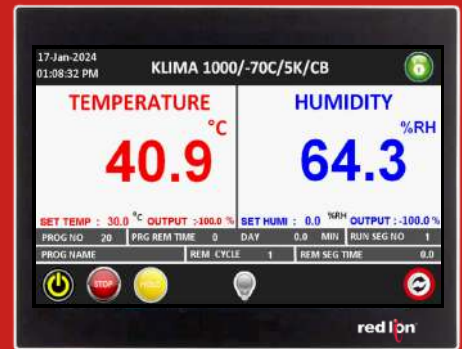
The KLIMA features a solenoid valve for advanced cooling control, which modifies proportionately depending on demand to save energy and improve temperature stability. A smart forward-looking algorithm improves and smoothest temperature ramping. It also improves test accuracy and energy efficiency. Combined with further advancements in refrigeration and heater performance, these superior features are unique to HIACC and make the most energy efficient HIACC KLIMA chambers to ever.



# Touchscreen Controller

HIACC's flagship touchscreen controller provides ease for doing complex testing. It is equipped with USB access and Ethernet, with a range of flexibility. Following are some of the features of the controller with 10" color touchscreen, makes chamber operation and data collection easy and reliable. Quick navigation buttons provide shortcuts to user-selected screens. With this Controller, receive:

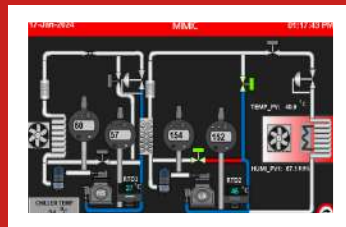
- Multi-level, password-based security system to protect data
- Test data that can be downloaded to .CSV formats
- The MIMIC to detect excessive refrigeration pressures and temperatures and notify users when problems occur
- Remotely Connect Chamber
- Graphical trend view of actual/set temperature values
- Easy to Program 40 Profiles up to 50setps each, with battery backup and real time clock.



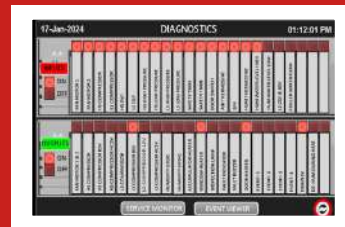
Chamber Home



Chamber Menu



Process Mimic



Chamber Diagnostics



Alarm Status



# How Our Support Works

Call Our Support  
Hotline Number +91 98848 88149

E-Mail Us  
support@hiaccengineering.com

Register on Website  
www.hiaccengineering.com



We Raise a Ticket for Your Issue in Less than 24 hrs. You'll Receive an E-mail Confirming Receipt of the Issue Raised.



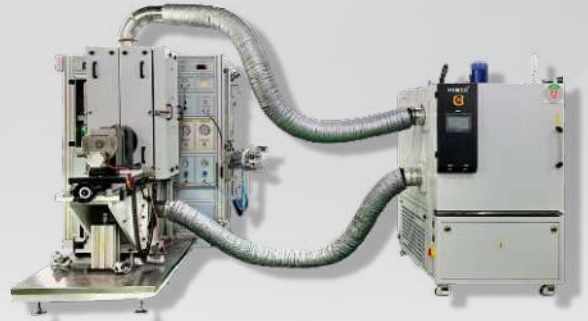
Our Support Engineers Will Respond, Usually Resolving Your Issue Remotely



if not. A Visit to Your Premises Will Be Arranged (Based on Your Service Plan)



**Integrated Temperature Chamber with Force Calibration System**



**Remote Cooling / Heating Customized Temperature System for Automotive Testing**



**Environmental Chamber with Ultra-Low Humidity Control**



**Custom Size Environmental Chamber with Vibration Integration (AGREE)**



**Walk in/ Drive in Chamber (Customizable)**



**Customized Thermal Shock System**



## Related Products

Expand your testing horizons with our diverse range of complementary equipment, ensuring comprehensive, accurate, and reliable testing outcomes. your ultimate destination for environmental testing solutions, we provide cutting-edge products to elevate your testing capabilities to new heights.



**Climatic Test Chamber**



**Temperature Test Chamber**



**Bench Top / Table Top Test Chamber**



**Thermal Shock Test Chamber**



**Altitude Test Chamber**



**HALT/HASS**



# Hiacc<sup>®</sup>

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