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ESPEC

Platinous temperature and humidity chambers

Top Quality Design

With an Easy-to-use

Touch-Screen

Programmer

Platinous chambers are innovative, built with the busy user in mind.

If you have ever used an environmental chamber before, you'll be quick to appreciate the unique design and friendly features of the ESPEC Platinous series chambers. First time users will enjoy the ease of use, low maintenance requirements, and high reliability of these chambers. The Platinous series has been improved over the last thirty years to meet the expectations and test requirements of our many varied customers.

In ESPEC Platinous series chambers, you'll find advanced design solutions that ensure quality: proportional refrigeration, custom-molded thermal breaks, stainless steel exteriors, fully-heated windows, and our new full-color touch screen controller. In addition to being much more functional, they have a sleek, contemporary appearance that adds a professional touch to your testing operation.

Within the Platinous series, you can select from a variety of sizes, ranges, and options to meet your specific testing requirements. If you need a chamber that's larger or smaller, or otherwise different, please let us know; we probably can provide a ready-made solution for you.



The black resin thermal breaks around the door and doorframe are unique features found only on ESPEC chambers



Constructed to assure long life and thermal integrity

An ESPEC Platinous series chamber won't fall victim to the temperature and humidity conditions it creates. We start with corrosion-resistant stainless steel construction on the exterior, as well as the interior.

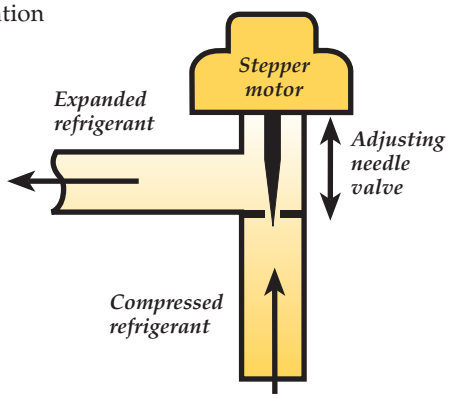
The inside and outside are separated by special resin "thermal breaks" and multiple gaskets that keep extreme hot or cold from creeping through the chamber door. We use similar thermal breaks at the cable ports, too; unlike simpler designs that use metal-to-metal flanges at these locations.

Faster, more efficient humidity generation

Our humidity generation system uses a heated water bath right in the chamber (behind the plenum wall), using less water at lower temperatures. It responds faster to changes—and is much easier to maintain than traditional steam generators.

An innovative, more efficient refrigeration system

ESPEC is the first U.S. chamber company to include an electronic expansion valve to vary the cooling according to demand, providing improved energy efficiency and better control response than other systems that use simple on/off techniques. Our refrigeration systems are robust, with less than a 0.5% warranty replacement rate on our compressors. The dehumidification cooling coil is non-freezing, ensuring long-term humidity tests can be completed successfully.



The expansion valve adjusts the flow of refrigerant based on cooling demand.

Platinous features

- Clear-view window with integrated light
- Cable access port in the left wall
- Adjustable shelf with slide-out rails
- Top quality casters with leveling feet
- Wheel-type blowers and low-restriction grilles for fast, uniform airflow
- Three levels of overheat protection
- Safety relay protects powered samples
- Lockable disconnect breaker saves installation cost
- Hinged service panels for easy access



The new SCP-220 programmer brings a high-end user interface to everyone...without a premium price.



Our free Windows software gives your computer full access to SCP-220 functions through an optional RS-232 interface. We also offer LabVIEW drivers compatible with our GP-IB (IEEE-488) or E-bus interface.

Remarkably simple to use and understand

Imagine walking up to your new chamber and immediately being able to get your test running. It was revolutionary when computers became easy to use—now ESPEC does the same for environmental testing. The SCP-220 makes it a breeze to set up, run, and monitor your chamber, even for the infrequent user.

Our active-matrix LCD display is easy to check at a glance. The touch-screen prompts are logical and navigation is easy. When data entry is required, a numeric or alphanumeric keypad is displayed. With 150 help screens (including maintenance instructions), you may rarely need to refer to your manual.

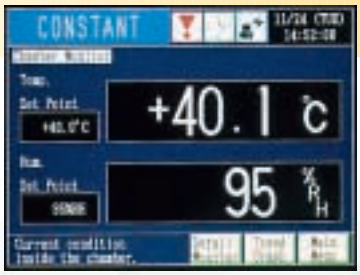
The SCP-220 comes preprogrammed with 10 standard tests, but you can add 20 more. For easy recall, you can store each program with a 16 character name. Even complex programs with pauses and loops are easy to set. The display automatically draws your test profile as you enter it, reducing the chance of programming errors.

Even more features set the SCP-220 controller apart. Alarm screens indicate the type of problem and provide troubleshooting help. The timer mode allows you to preset the start-up of the chamber for a particular test. And by using the controller set-up screens, you can make the SCP-220 function and operate to meet your specific needs.

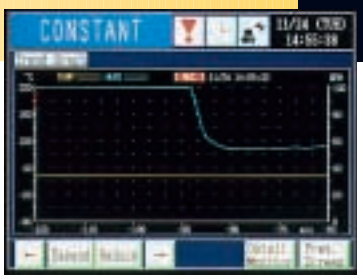
SCP-220 Programmer/Controller

Display	Color TFT (Active Matrix), 6.5 inch diagonal
Control Method	PID (Proportional, Integral, Derivative)
Communications	E-Bus (ESPEC Network), GP-IB, or RS-232 optional
Operating Modes (as indicated in upper left of the display)	STOP chamber off, programmer on PGM: RUN running selected test profile CONSTANT running at set value continually
Program Capacity	• 20 programs, 99 steps per program • 10 pre-programmed tests stored in ROM • Linking between programs possible
Programming Capabilities	• Copy programs, even from ROM • Copy, edit, insert, and delete steps • Two nested loops to repeat steps 99 times • Selectable end-of-test modes • Create pause steps within programs • Soak control delays timer until setpoint is reached
Additional Functions	• Alarm report lists last 100 alarms and time occurred • Time signal relay control (with naming capability) • High and low limit alarm functions • Audible alarm with on-screen explanation • Selectable restart modes after power failure • Calendar timer for automatic start and stop • Keylock protection and configuration lock-out • Service guide and help screens • Adjustable trend graph display with up to 15 day history





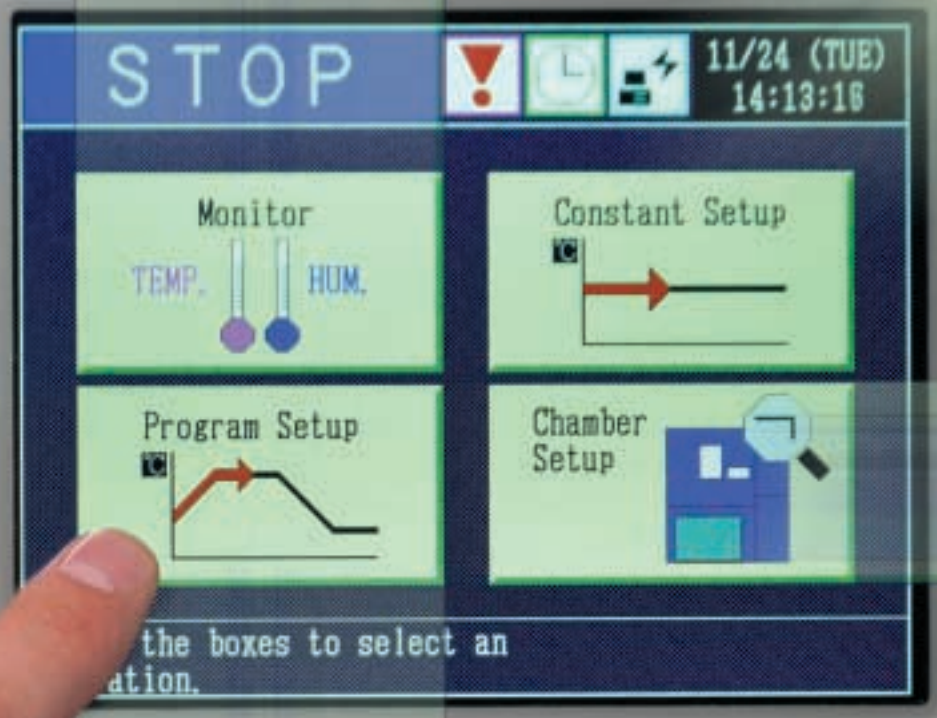
Main monitor screen displays current temperature and humidity



Trend graph screen could eliminate the need for a chart recorder



One brief screen allows quick set-up of a constant condition test

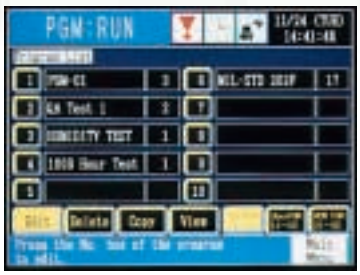




A clear list is provided for available controller functions and settings



The configuration screen allows easy access to universal settings such as "recovery setup" for power failures

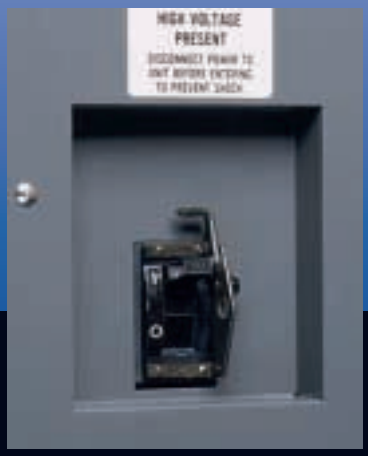


Select one of your programs, or modify a preprogrammed one



Pressing a step number brings up a screen to change the values for that step

Platinous series capabilities and specifications.



Lock-out/tag-out main power breaker is included for quick set-up

ESU Series: Cold Temperature Chambers

ESU	ESU-2CA	ESU-3CA	ESU-4CA
Performance			
Temperature Range:	-35 to 150°C (-31 to 302°F)		
Temperature Constancy:	±0.3°C (up to 100°C) ±0.5°C (101 to 150°C)		±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)
Temperature Uniformity:	±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)		±1.0°C (up to 100°C) ±1.5°C (101 to 150°C)
Heating Rate*:	4.2°C/m.	3°C/m.	5.2°C/m.
Cooling Rate*:	1.7°C/m.	1.1°C/m.	0.9°C/m.
Airflow:	400 CFM		800 CFM
Dimensions			
Workspace Volume:	225 L (8 cu. ft.)	408 L (14 cu. ft.)	900 L (32 cu. ft.)
Workspace Dimensions (WxDxH):	50 x 60 x 75 cm (19.7" x 23.6" x 29.5")	60 x 80 x 85 cm (23.6" x 31.5" x 33.5")	100 x 90 x 100 cm (39.4″ x 35.5″ x 39.4″)
Exterior Dimensions (WxDxH):	95 x 122 x 193 cm (37" x 48" x 76")	104 x 143 x 204 cm (41" x 56" x 80")	146 x 152 x 219 cm (57" x 60" x 86")
Site Requirements			
Electrical Supply:	208V 3Ø 60Hz or 230V 3Ø 60Hz		
Disconnect Breaker:	40 Amps	40 Amps	50 Amps
Condensate Drain:	1/2" hose connection (gravity drain)		

ESL Series: Cold Temperature and Humidity Chambers

ESL	ESL-2CA	ESL-3CA	ESL-4CA
Performance			
Temperature Range:	-35 to 150°C (-31 to 302°F)		
Temperature Constancy:	±0.3°C (up to 100°C) ±0.5°C (101 to 150°C)		±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)
Temperature Uniformity:	±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)		±1.0°C (up to 100°C) ±1.5°C (101 to 150°C)
Heating Rate*:	4.2°C/m.	3°C/m.	5.2°C/m.
Cooling Rate*:	1.7°C/m.	1.1°C/m.	0.9°C/m.
Humidity Range:	10 to 98% RH (see chart)		
Humidity Constancy:	±2.5%		±3%
Humidity Uniformity:	±3%		±5%
Airflow:	400 CFM		800 CFM
Dimensions			
Workspace Volume:	225 L (8 cu. ft.)	408 L (14 cu. ft.)	900 L (32 cu. ft.)
Workspace Dimensions (WxDxH):	50 x 60 x 75 cm (19.7" x 23.6" x 29.5")	60 x 80 x 85 cm (23.6" x 31.5" x 33.5")	100 x 90 x 100 cm (39.4″ x 35.5″ x 39.4″)
Exterior Dimensions (WxDxH):	95 x 122 x 193 cm (37" x 48" x 76")	104 x 143 x 204 cm (41" x 56" x 80")	146 x 152 x 219 cm (57" x 60" x 86")
Site Requirements			
Electrical Supply:	208V 3Ø 60Hz or 230V 3Ø 60Hz		
Disconnect Breaker:	40 Amps	40 Amps	50 Amps
Humidity Water:	3/8" hose connection 0.1 to 6 MΩ resistivity (de-ionized water recommended)		
Condensate Drain:	1/2" hose connection (gravity drain)		

*Rates are between -20 and 85°C with an empty chamber in a 23°C ambient room.

See web site for latest specifications and additional details: www.espec.com/digest/platinous.htm

ESZ Series: Ultra-Cold Temperature Chambers

ESZ	ESZ-2CA	ESZ-3CA	ESZ-4CA
Performance			
Temperature Range:	-70 to 150°C (-94 to 302°F)		
Temperature Constancy:	±0.3°C (up to 100°C) ±0.5°C (101 to 150°C)		±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)
Temperature Uniformity:	±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)		±1.0°C (up to 100°C) ±1.5°C (101 to 150°C)
Heating Rate†:	5.5°C/m.	4.1°C/m.	6.6°C/m.
Cooling Rate†:	4.1°C/m.	2.7°C/m.	1.7°C/m.
Airflow:	400 CFM		800 CFM
Dimensions			
Workspace Volume:	225 L (8 cu. ft.)	408 L (14 cu. ft.)	900 L (32 cu. ft.)
Workspace Dimensions (WxDxH):	50 x 60 x 75 cm (19.7" x 23.6" x 29.5")	60 x 80 x 85 cm (23.6" x 31.5" x 33.5")	100 x 90 x 100 cm (39.4" x 35.5" x 39.4")
Exterior Dimensions (WxDxH):	95 x 122 x 193 cm (37" x 48" x 76")	104 x 143 x 204 cm (41" x 56" x 80")	146 x 152 x 219 cm (57" x 60" x 86")
Site Requirements			
Electrical Supply:	208V 3Ø 60Hz or 230V 3Ø 60Hz		
Disconnect Breaker:	50 Amps	50 Amps	60 Amps
Condensate Drain:	1/2" hose connection (gravity drain)		

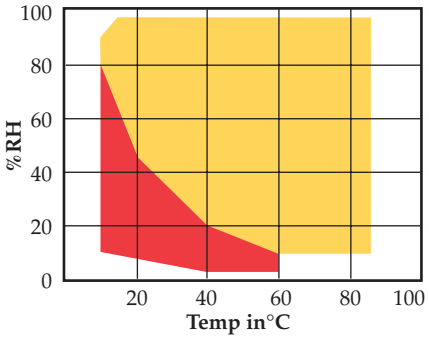
Standard Accessories

- Viewing window (7"x10", 17"x9.5" on 32 cu. ft. models)
- One wire shelf with rails
- Cable port, 4" diameter, with two flexible plugs
- Heavy duty casters with leveling feet
- Specimen power safety interlock relay
- External alarm relay
- Eight event relays for customer use
- Lock-out breaker
- Consumables kit
- Set of manuals

ESX Series: Ultra-Cold Temperature and Humidity Chambers

ESX	ESX-2CA	ESX-3CA	ESX-4CA
Performance			
Temperature Range:	-70 to 150°C (-94 to 302°F)		
Temperature Constancy:	±0.3°C (up to 100°C) ±0.5°C (101 to 150°C)		±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)
Temperature Uniformity:	±0.5°C (up to 100°C) ±0.7°C (101 to 150°C)		±1.0°C (up to 100°C) ±1.5°C (101 to 150°C)
Heating Rate†:	5.5°C/m.	4.1°C/m.	6.6°C/m.
Cooling Rate†:	4.1°C/m.	2.7°C/m.	1.7°C/m.
Humidity Range:	10 to 98% RH (see chart)		
Humidity Constancy:	±2.5%		±3%
Humidity Uniformity:	±3%		±5%
Airflow:	400 CFM		800 CFM
Dimensions			
Workspace Volume:	225 L (8 cu. ft.)	408 L (14 cu. ft.)	900 L (32 cu. ft.)
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Exterior Dimensions (WxDxH):	95 x 122 x 193 cm (37" x 48" x 76")	104 x 143 x 204 cm (41" x 56" x 80")	146 x 152 x 219 cm (57" x 60" x 86")
Site Requirements			
Electrical Supply:	208V 3Ø 60Hz or 230V 3Ø 60Hz		
Disconnect Breaker:	50 Amps	50 Amps	60 Amps
Humidity Water:	3/8" hose connection 0.1 to 6 MΩ resistivity (de-ionized water recommended)		
Condensate Drain:	1/2" hose connection (gravity drain)		

Humidity Range for ESL, ESX Models



Note: Extended high temperature (180°C) and low humidity options (shown in red) are available

†Rates are between -40 and 125°C with an empty chamber in a 23°C ambient room.



Strip chart recorder



Flexible plugs for cable ports



Inner glass door

Instrumentation Options

Strip Chart Recorder	100mm wide, installed underneath the controller
Circular Chart Recorder	12" diameter thermal paper recorder, installed on right side
Paperless Recorder	Allows output to a floppy disk for download to a computer
Computer Interface	IEEE-488 with LabVIEW drivers or RS-232 with software package
Overcool Protector	Independent low temperature protection (overheat is standard)
Emergency Stop	Red mushroom button shuts down chamber
Product Monitor	Additional thermocouple for measuring product temperature. Can be connected to a recorder or independent display unit.

Cabinet Options

Cable Port	2", 4", or 6" round ports for running cables into the chamber (custom sizes available)
Inner Glass Door	Allows full-view of workspace when outer insulated door is opened. Two glove ports enable you to reach-in and manipulate the test samples. The 32 cu. ft. models have bi-parting glass doors and four glove ports. The standard window is deleted.
Additional Shelf	One shelf with slide rails is included with every system, adjustable in 2" increments. Get additional shelves for increased loading (up to 35 lb. each).

Operational Options

De-ionizing Water Filter	Adds a filter to the humidity circuit, allowing use of clean tap water (ESL, ESX only)
Water Tank System	For customers without piped water supply. Holds 5 gallons (20L) (ESL, ESX only)
Liquid Nitrogen Injection	Used to boost the cooling rate of the chamber.
Low Humidity System	Reduces lowest humidity attainable to 5%, using compressed air (ESL, ESX only)
Water Cooling	Requires 3 GPM water supply at 24°C (75°F) to cool refrigeration instead of standard air cooling, which rejects heat to the room.
Extended Temperature	Increases the highest attainable temperature to 180°C. The window is deleted.
Dry Air Purge	Dries compressed air and purges the workspace, reducing the dewpoint to protect moisture sensitive samples and enhance low-humidity tests.

Contact ESPEC for information or a quotation on our Platinous chambers at **877-GO-ESPEC (877-463-7732)**, or see our website for additional details: **www.espec.com/digest/platinous.htm**.

ESPEC
4141 Central Parkway
Hudsonville, MI 49426
TEL 616-896-6100 • **FAX** 616-896-6150

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