

Stability & Bio Storage



**Walk-in controlled
environment rooms for
stability storage**

Walk-in Stability Storage Cabinets

Source BioScience Stability Storage Rooms provide a large volume controlled environment at a cost effective price.

Modular construction ensures that all panels will pass through a standard doorway so installation and any future re-location is straightforward. Both the insulating foam and the refrigerant are CFC free.

Operating conditions

Source BioScience stability storage walk-in stability rooms are designed to work at a wide range of temperatures from 25°C to 40°C and humidity levels from 20% to 90%RH as standard.



Specifications

Room Shell

The rooms are constructed from self supporting pre-fabricated panels, which lock together by a "camlock" system. The panels comprise of two steel skins that are injected with a high pressure, CFC free, polyurethane foam, thus creating an insulated "sandwich" panel. The external face of the panels is finished in white 9002 (RAL) epoxy coating and the internal skin is finished in 316 stainless steel. This provides a surface that will withstand the specified temperature and humidified environments, will not rust over time and is easy to clean.

Room dimensions can be altered in size increments of 300mm with regard to height, width and depth.

Doors

The doors are manufactured from the same materials that are used on the wall and ceiling panels. The standard size door opening is 620mm wide and 2010mm high, although larger dimensions are available. Doors can be either left hand or right hand hinge, dependent upon customer specification.

The doors are fitted with a key operated lock on the outside handle of the room.

In the event of a person being accidentally locked inside, an internal push button device can be operated to allow the person to over-ride the door lock and exit the room.

Room Floor

The floor panels are 80mm or 100mm thick, which have been injected with CFC polyurethane foam.

Shelving System

Our rooms incorporate a bespoke shelving system that is designed to fit around our floor mounted ducting system.

The entire shelving system is manufactured from grade 304 stainless steel. Shelving uprights are securely fastened in place, providing a strong and stable racking design. Perforated shelving is supported on clips which sit in holes machined into the uprights on a 25mm pitch. The height of each shelf can be adjusted by placing the

support rods in the required position of the holes on the uprights. The shelves are perforated to allow air to pass through them and onto the stored product.

Lights

Stability storage rooms are fitted with a fluorescent light(s) within the corridor of the room which are activated by an on/off switch on the face of the main control tower. A neon light on the switch indicates that the light inside the room is turned on.

In the event of mains power failure to the room, the light fitting closest to the door is activated via a battery back up providing approximately one third of the units normal light output. This is sufficient to allow a person within the room to exit safely.

Indirect Refrigeration

Our standard "ICH - type" stability storage rooms use an indirect refrigeration system to help control the internal temperature of the room. An external chiller uses a direct refrigeration system to cool a tank of water to a specific temperature directly related to the operating set point of the room.

This cooled water is then pumped to a cooling coil that is located in a stainless steel plenum at the rear of the room and works together with the heaters to provide accurate temperature control. The temperature of the coolant is monitored by a sensor and controller that switches on the fridge to maintain the required water temperature.

Ducting System

We control the environment of our stability storage room by use of a ducting system.

This is manufactured from grade 304 stainless steel. The ducting system comprises of a vertical plenum located at the rear of the room within the corridor. Air is attracted at high level through this plenum by the fan(s).

That air is then passed down over the cooling coils and over the heaters to floor mounted horizontal ducts where it passes into the room through adjustable vents. The floor mounted

ducts are situated beneath our shelving system.

Condensate Pump

The condensate pump is located in the base of the main control tower at the front of the room. It collects any condensate that has dripped off the coiling coils within the room and also any "reject" water that has been drained from the humidity generator. As the water in the pump reaches a float switch, the pump is activated and the water is sent to drain.

Humidity Generator

Our stability storage rooms are fitted with a humidity generator to provide a controlled level of humidity inside the room.

The generator is comprised of a stainless steel tank containing approximately ¾ litre of laboratory grade II water. At the base of the generator are two ultrasonic transducers that operate at the resonant frequency of water. When the room requires humidity, the transducers are energised by the humidity control circuit causing the water just below the surface to break into tiny droplets forming a 'cloud' above the surface of the water. An air supply is taken from the room via flexible tubing and passed over the surface of the water, collecting the 'cloud' of water on the way. This "humidified" air is then returned to the room thereby raising the level of humidity inside.

Temperature Alarm

Each stability storage room is fitted with a temperature alarm circuit consisting of an independent controller and sensor. The controller is programmed with the high and low alarm points for the room.

In the event of a temperature alarm, the controller will activate both audible and visual alarm indicators on the main control tower and will activate a set of volt free contacts located within the control tower which can be linked to a BMS. Once any fault has been cleared, the circuit will re-set automatically. The audible alarms may be muted.

Humidity Alarm

Totally independent alarm system from the temperature alarm but operates in exactly the same way.

Panic Alarm

Our stability storage rooms are fitted with a panic alarm circuit that is activated by one or more

push buttons inside the room.

If an operator were to get into difficulty inside the room, they could press the button which would activate an extremely loud warning siren and flashing alarm beacon outside the room to attract the attention of people in the area. In addition, a further set of volt free contacts will be activated which can be linked to BMS.

Warranty

All rooms carry a full 12 month parts warranty. After this period, we offer a preventative maintenance contract or emergency call out assistance.



Validation

Source BioScience also offers a comprehensive validation package - both on newly installed equipment and existing environmental rooms, chambers and associated equipment such as data loggers etc. All reference standards are regularly calibrated by UKAS accredited laboratories and are traceable to national standards. **Our service comprises four main areas:**

Installation Qualification (IQ): consisting of electrical safety inspection and testing, mechanical inspection and component checklists.

Operational Qualification (OQ): consisting of a single-point calibration, recording of all controller settings and programming, functional testing of environmental chambers.

Calibration Qualification (CQ): is the calibration of the data logger and probe set to be used for performance qualification.

Performance Qualification (PQ): consists of multiple-point performance mapping of the environmental chambers.



Accuracy

Temperature validatable to $\pm 1^{\circ}\text{C}$
Humidity validatable to $\pm 3\% \text{RH}$

Alarms

Independent alarms for out of specification temperature & humidity. Volt free contacts for remote alarm notification. Internal panic alarm.

Design

Custom turnkey solutions to your requirements and room layouts.

Construction

Stainless steel interior panel surface & shelving
Epoxy coated metal exterior
Anti-slip polyester floors

Lighting

Internal occupancy lighting
Emergency lighting

Data Logging

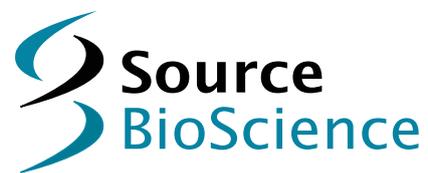
Standard strip chart recorder
21 CFR part 11 compliant data logger (multi-channel)

Installation & Validation

Pre-fabricated panels for quicker setup
IQ/OQ/PQ/CQ provided upon request

Care & Assurance

Long term maintenance contracts designed to specific client requirements



Healthcare

LifeSciences

Stability & Bio Storage

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