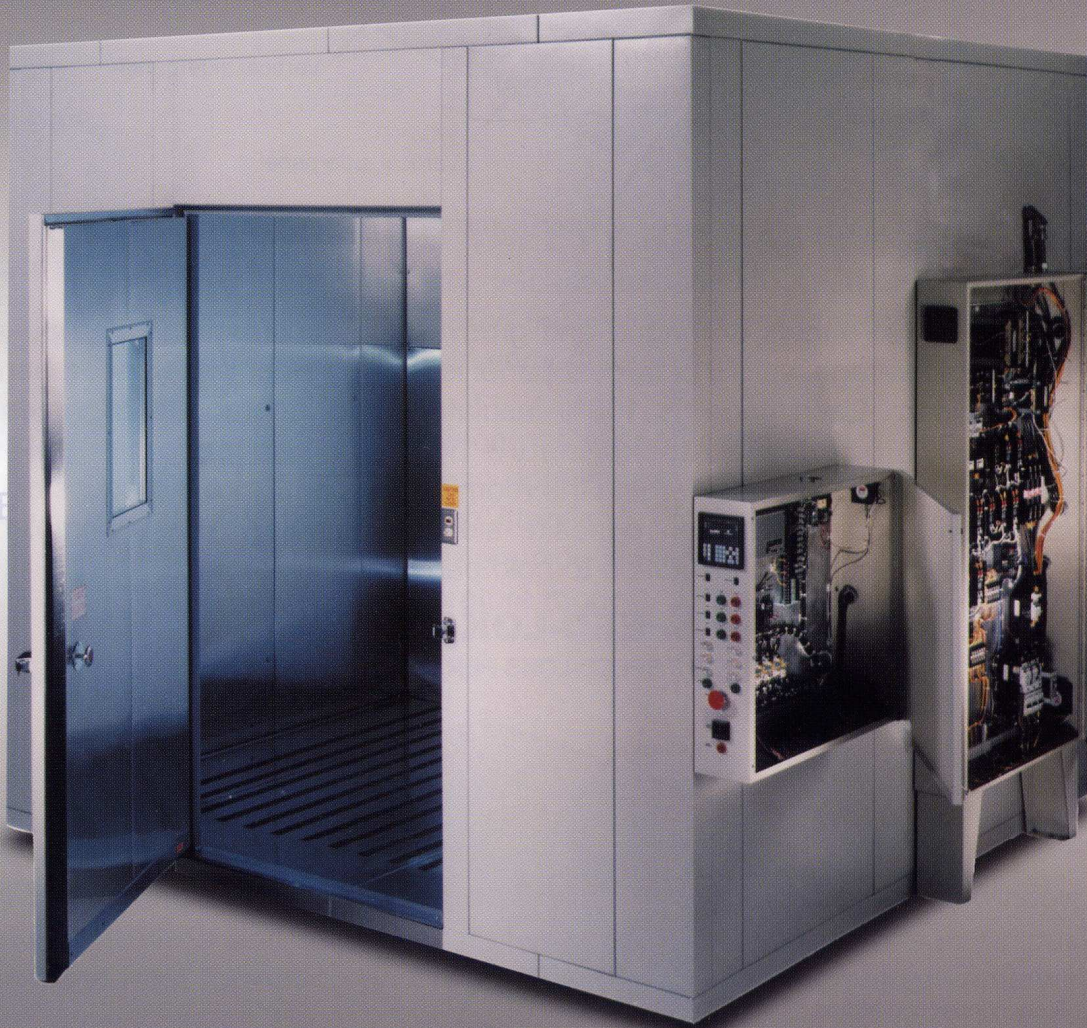


Walk-In Rooms

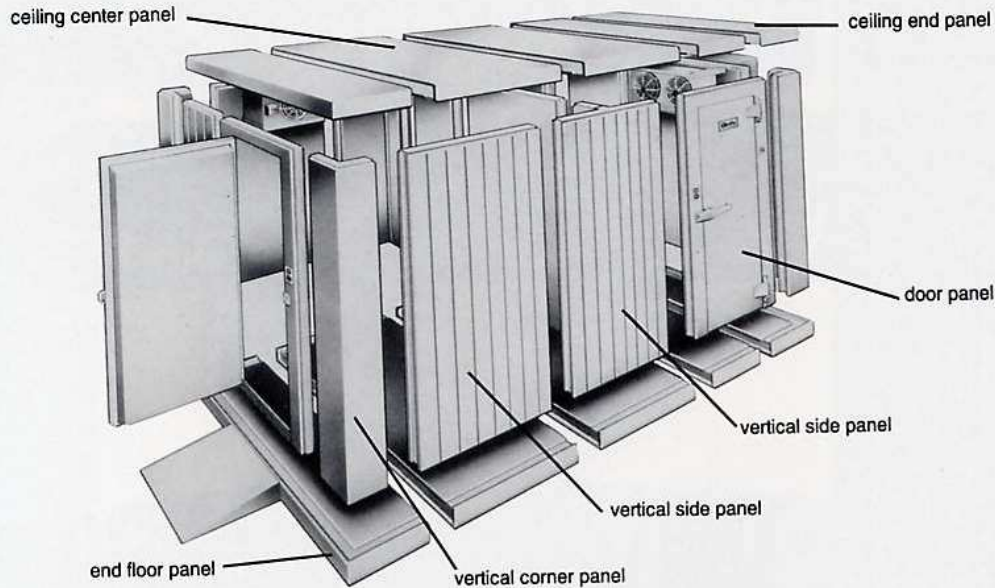


We are big in Walk-In Rooms..
Walk-In Rooms custom tailored to your product and production needs.
Temperature or Humidity for any product at any extreme.

Williamson Engineering
www.williamson-engineering.com
JohnW@williamson-engineering
781-910-3982

MODULAR

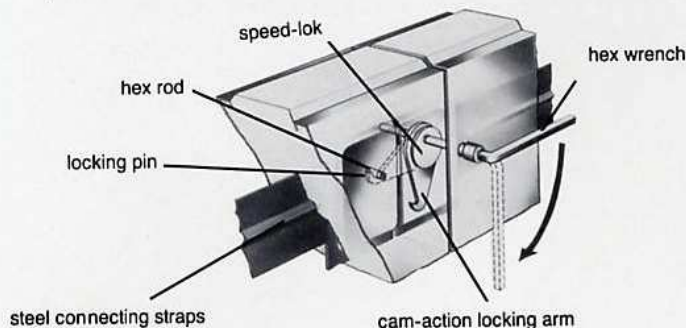
Room Construction



ROOM DESIGN: Prefabricated metal sectional panels of tongue and groove type construction. The panels are light weight for easy handling, average weight of largest panel is 84 lbs. Door panel, door, hardware, all in one piece, slightly heavier. Each panel is 100% insulated, and incorporate alignment pins to fit together accurately. Cam actuated locks insure tight fits and accommodates constant assembly/disassembly for relocating or enlarging the room. Each panel incorporates steel straps connecting locking arms with locking pins on opposite sides of panels. The assembled room has continuous steel perimeters within the insulation to hold panels tightly in place.

SPEED—LOKS

(MINIMUM OF 5 SPEED—LOKS PER WALL PANEL)



The insulation is 4" of Foamed-In-Place Urethane which is equivalent to 8 1/2" of fiberglass. This insulation has a U.L. 25 low flame spread rating. [Conforms to ASTM Test E-84-76.](#)

INTERIOR: Various interiors are available including stainless steel, aluminum, galvanized steel, and painted etched metal.

EXTERIOR: Various exteriors are available including stainless steel, aluminum, galvanized steel, and painted etched metal.

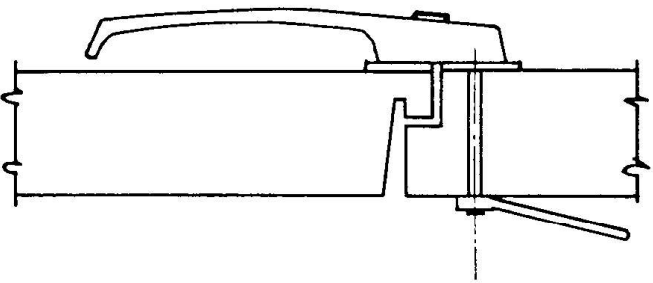
FLOOR INTERIOR: Various floor interiors are available including stainless steel, aluminum, galvanized steel, and painted etched metal.

FLOOR WEIGHT ACCOMMODATIONS: Various floor weight accommodations include 300 lbs. psf., 400 lbs. psf., 600 lbs. psf.

DOORS

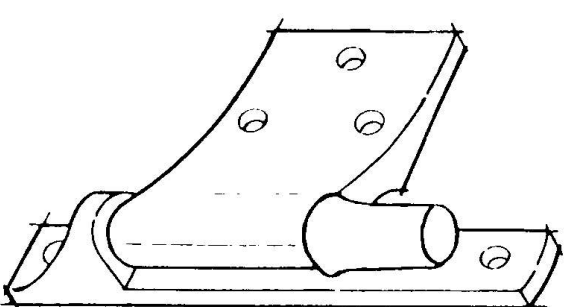
Doors are the same construction and finish as the room

All doors incorporate an internal safety release latch, personnel can gain immediate release if accidentally locked inside.



INSIDE SAFETY RELEASE: The door lock is connected to a safety release mounted inside the walk-in. Anyone locked in accidentally or otherwise, can simply turn this lever to gain immediate release.

The room incorporates self-closing hinges, spring pressure against the magnetic door gasket insures a tight seal. Easy opening is insured with standard "Floating Door". Latch is spring loaded. Heater wires are provided around the door to prevent condensation on low temperature models. Door can be left or right-hand hinged.



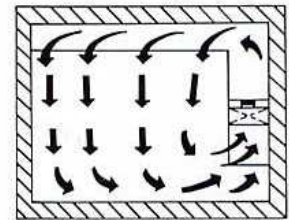
WINDOWS: Viewing windows are also available. The standard multipane window has a 14" wide by 23" high viewing area and a thermostatically controlled heater wire in it's casing to reduce condensation and frost formation on the window surface. Custom size windows are available.

LIGHTING: Incandescent or Fluorescent lighting is provided, it depends on the application. Generally it is recommended that incandescent be used on high temperature units operating above +110 de. f and low temperature units operating below 0 de. f. Fluorescent fixtures lose output and are hard starting at low temperatures. All fixtures are vapor proof and sealed.

CIRCULATION SYSTEMS

CIRCULATION SYSTEM: All rooms incorporate forced air circulation whether the system is ceiling mounted, side mounted, remote, or in our standard conditioning module. The air is recirculated utilizing external heavy duty motors of the finest quality with internal cooling fans, protectors and stainless steel shafts. Aluminum or stainless steel squirrel cage blowers circulate the air, all mixing is accomplished within a plenum external to the room working area. Various airflow patterns are offered to accommodate your product size and arrangement within the room. Horizontal, vertical or a combination of both can be offered for more even distribution of air and closer temperature control for rooms with modest live loads and airflow, and where noise is a consideration with people working within the room.

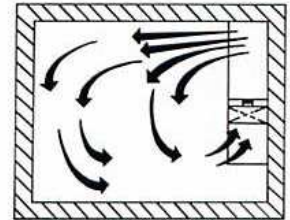
VERTICAL DISCHARGE



TYPICAL AIR FLOW PATTERNS

OPTIONAL STYLES AVAILABLE

HORIZONTAL DISCHARGE



HEATING: The heating system is all electric. The air is passed over fast response low watt density resistance heaters with ceramic cores. The combination of airflow, instrument response and these fast reacting heaters give very accurate and straight line control of temperatures. Stainless steel, completely sealed finned type heaters are incorporated in all humidity rooms. These heaters insure a long reliable life with no down time while giving very accurate air and humidity control. A separate instrument controls these heaters to provide the right amount of heat for the application.

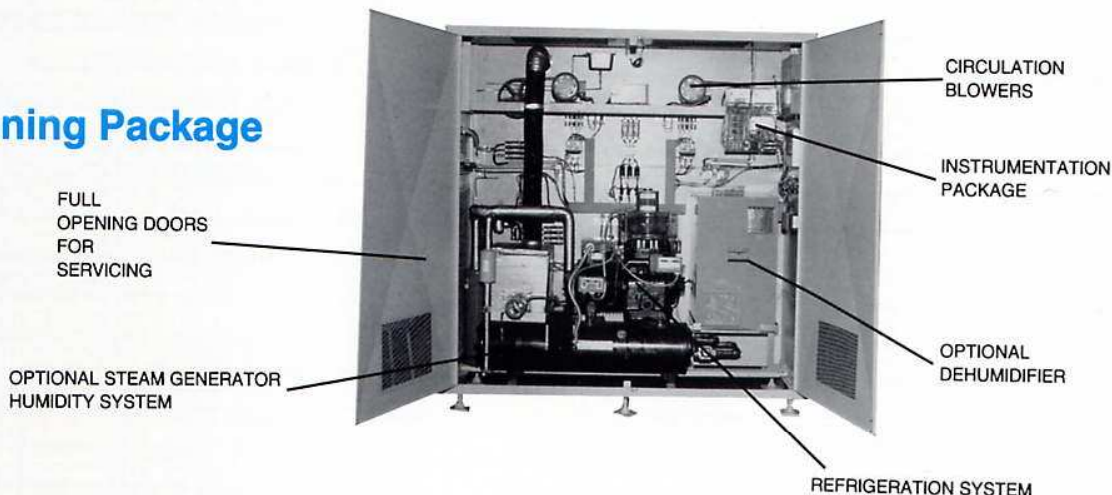
INSTRUMENTATION: Instrumentation on standard rooms are single channel microprocessor programmers or two channel microprocessor programmers, accuracy of $\pm .25^{\circ}\text{C}$ or better at the sensor. The sensors are fast acting 100 Ohm. platinum type. Various options are available. Events outputs for each step in programmer, RS-232 C, RS-422A, IEEE-488 interface, cassette input / output, circular chart recorders and strip chart recorders etc.

SAFETY: Standard is a redundant control circuit utilizing its own controller and failsafe contactor. When this unit activates it shuts off power to the heater circuit to prevent thermal runaway. The circulation blowers continue to run to distribute the heat within the room. This is important especially if there are products in the room generating heat. When the temperature subsides, the safety control closes again and power is again returned to the heaters. Other options available are High Temperature Safety with Complete shut Down of Room with Manual Reset and Visual Indication, Low Temperature Safety with Complete Shut Down of Room with Manual Reset and Visual Indication, Both High and Low Temperature Safety with Manual Reset on Both and Visual Indication, Audible Alarm, and Remote Station Alarms.

ELECTRICAL: Requirements: Standard power requirements include 208V 3PH 60HZ, 220/240V 3PH 60HZ, 460V 3PH 60HZ, 208/220V 1PH 60HZ. Other power requirements are available upon request.

REFRIGERATION SYSTEM: The correct refrigeration package is supplied to meet the load demands of the room. All systems are supplied with the highest quality components, compressors are Copeland semihermetic or equal, controls are Penn or equal. All piping, rating, etc., are in accordance with ASHRAE guidelines. The systems are completely assembled and tested at the factory. All components are labeled, identified, and located in easy accessible areas for maintenance. Complete piping diagrams, schematics, and charging data is provided. Systems that are available are Single Stage Mechanical and Two Stage Cascade, Air Cooled or Water Cooled Condenser.

Modular Conditioning Package



Remote Systems

CONDENSING UNITS
AVAILABLE AIRCOOLED OR WATERCOOLED



TEMPERATURE RANGE: Various ranges can be provided, including fast change rates with your product load. Ranges from -73°C (100°F) to $+177^{\circ}\text{C}$ (350°F) are available.

HUMIDITY RANGE: Standard ranges available are: 20% to 95% $\pm 5\%$ RH. 10% to 98% $\pm 2\%$ RH. Different ranges available including special dehumidity ranges to 5% RH.

HUMIDITY SYSTEM: Two Humidity systems are standard. The conditioned fine Mist System utilizes your plant water supply and a fine mist is sprayed over stainless steel sheath type heater to create steam. This steam is then carried by the circulation system throughout the room. This system is recommended when doing continuous testing with high live loads. All steam is created within a plenum outside the room area. Our Steam Generator System utilizes an external self-contained steam generator with all safety controls, water level controls, etc... to provide humidities to saturation within the room. This system is recommended for rooms being used for low and high humidity testing within the range of $+40$ de. F. to $+130$ de. F.

WHAT WE NEED TO KNOW FROM YOU...

WALK—IN ROOM WORK SHEET

1. Internal working area required? _____ H _____ W _____ D.
2. Maximum external dimension allowed? _____
A. Actual space available for room? _____
3. Where will room physically be located? _____
A. Is this area air conditioned? yes _____ no _____
B. Is your floor level? yes _____ no _____
C. Is your ceiling height sufficient? yes _____ no _____
D. Are your entry doors large enough for panels to pass through? yes _____ no _____
4. What power is available for room? _____
5. Is water available? yes _____ no _____
6. Is drain available? yes _____ no _____
7. What finish would you like the room? inside _____ outside _____
8. What size door is required? _____ window _____
9. What is the maximum size of your product? _____
10. What is the total weight of your product? _____
11. Will your product introduce any heat into the room? _____
If so, how much? _____
12. What is the temperature range you need? _____
13. Any humidity required? _____
What range? _____
14. What are pull-down and rise rates required? _____
Will load be on during transition periods? _____
15. Will people be working inside on a continuous basis? _____
If so, how many? _____
16. What type instrumentation desired? Manual _____
Programming _____ RS232 _____ IEEE-488 _____
17. Do you want air cooled or water cooled refrigeration? _____
If water cooled, will your system handle the water requirements? _____
If air cooled, remote condenser? _____
On your building roof? _____
How far away from room? _____
18. What airflow pattern you prefer? Horizontal _____ Vertical _____
19. What lighting you prefer? Incandescent _____ Fluorescent _____
20. Any electrical outlets in room? If so, what and how many? _____
21. Any access ports through walls? What size _____ How many _____
22. Is recording of parameters required? yes _____ no _____
23. Is installation required? yes _____ no _____
If yes, will union people have to be used? yes _____ no _____
If yes, what is union rate in your area? _____
24. Will any training of personnel be required? yes _____ no _____
If yes, how many and for how long? _____
25. Are shipping charges to be included in price? _____
26. What delivery date do you require? _____