

Modular Construction Walk-In Temperature/Humidity Chambers, WM-SERIES

Russells modular construction test chambers give the maximum flexibility in both chamber size and performance for your most demanding test requirements. Russells WM-Series chambers allow manufacturers to simulate how their products will perform in temperature and humidity conditions. These chambers can be manufactured as Dynamometer rooms also.



Russells WM-Series chambers can provide the following combination of controlled testing environments:

- Steady state temperature and temperature/humidity tests
- Moderate temp./humidity cycling tests ($<9^{\circ}\text{F}/5^{\circ}\text{C}/\text{min.}$)
- Moderate temperature heat aging ($<185^{\circ}\text{F}/85^{\circ}\text{C}$)

Chamber Features:

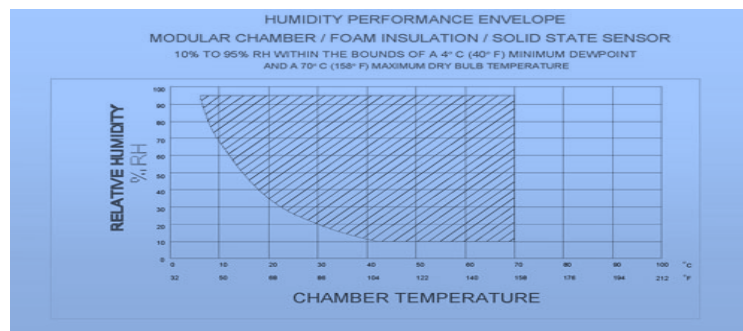
- Economical cost
- Ease of move in and install
- Engineered cooling modules
- Wide range of size and performance



Performance:

- Temperature range for single stage refrigeration: $-13^{\circ}\text{F}/25^{\circ}\text{C}$ to $185^{\circ}\text{F}/85^{\circ}\text{C}$
- Temperature range for cascade refrigeration: $-100^{\circ}\text{F}/-73^{\circ}\text{C}$ to $185^{\circ}\text{F}/85^{\circ}\text{C}$
- Humidity Range: 10% to 95% RH within the bounds of a $158^{\circ}\text{F}/70^{\circ}\text{C}$ max. dry bulb and a $40^{\circ}\text{F}/4^{\circ}\text{C}$ min. dewpoint.

Russells WM-Series chambers are available in any imaginable size. A Russells application engineer can assist you in selecting the chamber configuration and size that is most economical for your testing needs. Let Russells give you the competitive edge!



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Standard Features:

- Modular chamber construction with pre-fabricated wall panels produced with a urethane foam insulation core.
- Wall insulation, 13k factor.
- Available wall thickness: 4" (100mm) or 5" (125mm).
- Available wall panel finishes: galvanized steel, steel w/baked enamel, embossed aluminum, stainless steel.
- Floor loading to 600 lbs/ft² (2900 kg/m²) evenly distributed.
- Available door styles: bifold, full swing, horizontal sliding.
- Removable access panels for serviceability on ECM units.

Cooling:

- Low or zero ozone depletion refrigerants.
- Engineered cooling module. (rear plenum)
- Energy saving refrigeration bypass capacity control.
- Low stage desuperheater.
- Oil pressure switches.
- Compressor suction and discharge pressure switches.
- Water cooled condenser.
- Vapor tank and condenser ASME certified.
- Compressor overload protection.
- High stage compressor crankcase heater.
- Compressor head fans.
- Low stage oil separator.
- All piping joints silfos or silver soldered.
- Stainless steel compressor condensate pans.

Electrical:

- All wiring meets NEC standards.
- 120 volt control circuit transformer.
- Fully enclosed electrical panel.
- All circuits fused or circuit breaker protected.
- Full system function switches w/ system status pilot lights.
- Incandescent interior lighting.
- All wiring numbered or color coded.
- High Temperature limit safety.
- Master heating circuit contactor.
- Air circulator/heater interlock
- Balanced load on 3 phase power.

Optional Accessories:

- Through-wall access ports w/foam plugs.
- Viewing windows.
- Refrigeration gauges.
- Refrigeration sound deadening package.
- Remote refrigeration systems.
- LN2 boost cooling.
- Air cooled condenser.
- Humidity water demineralizer.
- Dry air purge system.
- Desiccant dehumidifier.
- Personnel entrance doors.
- Ante rooms.
- Entry ramp.
- Running timer meter.
- System message display.
- Electrical disconnect switch.
- Explosion proof electrical system.
- Floor load spreader plate or tracks.
- Floor screeds for attachment of "floorless" chamber to existing building floor.

Optional Instrumentation:

- Microprocessor temperature/humidity programmer controller.
- Solid state humidity sensor on humidity models.
- Product safeguard redundant over/under temperature limit.
- Circular or electronic chart recorders.
- Computer communications, networking, data-logging software.
- Free standing remote instrument console.