

Walk-In Test Chambers

Welded Construction



The Russells Technical Products W-Series is your solution for your most demanding temperature, humidity, and/or altitude testing requirements. Available in small walk-in or drive-in designs, the W-Series offers maximum flexibility in both chamber size and performance.

Moisture buildup can be destructive to products, especially electronics, causing corrosion and oxidation. The welded and dye-checked one-piece construction of the W-Series chambers allows for rapid thermal change rates, ultra-low temperature cooling, high humidity levels, and prolonged soaks at extreme temperatures and humidity.

Russells' welded construction W-Series temperature and humidity test chambers afford maximum durability and performance for your most demanding simulation test requirements.

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

- » Temperature
- » Humidity
- » Altitude
- » Temperature and altitude (temperature controllable to 65,000 ft or 20,000m)
- » RTCA DO-160 icing and various other combined environmental tests

Russells W-Series chambers are available in sizes ranging from small walk-in applications to custom drive-in projects. A Russells application engineer will assist you in selecting the chamber configuration, size, and capabilities best suited to meeting your testing needs.



TYPICAL CHAMBER PERFORMANCE:

- » **Temperature Range:**
-73°C to +180°C (-100°F to +356°F)*
- » **Humidity Range:**
5% to 95% RH within the bounds of a +85°C (+185°F) max dry bulb and a +4°C (+40°F) min dewpoint*
- » **Altitude Range:**
Consult factory

*extended ranges available



STANDARD FEATURES:

- » Temperature range for single stage refrigeration: -32°C/-25°F to 180°C/356°F
- » Temperature range for cascade refrigeration: -73°C/-100°F to 180°C/356°F
- » Humidity Range:
5% to 95% RH within the bounds of a 185°F/85°C max. dry bulb and a 40°F/4°C min. dewpoint
- » Brushed 304 series stainless steel liner, hermetically welded and dye checked
- » Welded steel frame
- » Durable blue enamel finishes (custom colors available)
- » Capable of handling extreme temperature and humidity
- » Full opening chamber door with dual gaskets (many door configurations available)
- » Fiberglass insulation, .25k factor
- » Removable access panels to serviceable components

REFRIGERATION:

- » Low or zero ozone depletion refrigerants
- » Energy-saving refrigeration bypass capacity control
- » Low stage desuperheater
- » Oil pressure switches
- » Compressor suction and discharge pressure switches
- » Air or Water cooled condenser
- » Vapor tank and condenser ASME certified
- » Compressor overload protection
- » High-stage compressor crankcase heater
- » Multiple compressor options
- » Low-stage oil separator
- » All piping joints silfos or silver soldered
- » Stainless steel compressor condensate pans

ELECTRICAL:

- » All wiring meets NEC/NFPA standards
- » 120v control circuit transformer
- » Fully enclosed electrical panel

- » All circuits fused or circuit breaker protected
- » Full system function switches with 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
- » 3rd party NRTL/CSA marking available

OPTIONAL ACCESSORIES:

- » russellsOne touch screen altitude, temperature, and humidity programmer controller
- » Elevated temperature heat aging (200°C/392°F)
- » Ultra low temperature cryogenic test (-180°C/-292°F)
- » Vacuum systems for MIL-STD-810 and RTCA DO-160 rapid decompression testing
- » Through wall access ports
- » Viewing windows
- » Refrigeration sound deadening package
- » Remote refrigeration systems
- » LN2 boost cooling
- » Humidity water treatment systems
- » Dry air purge system
- » Desiccant dehumidifier
- » Personnel entrance airlock
- » Entry ramp
- » Running time meter
- » Electrical disconnect switch
- » Product safeguard redundant over/under temperature limit
- » Circular or electronic chart recorders
- » Computer communications, networking, data logging software
- » Remote control panel
- » Can be equipped with battery testing safety features according to EUCAR hazard safety levels

Reliable. Trustworthy. Performance.