

## ◆ Rapid Thermal Shock

### High performance testing in a compact vertical design

Our chambers are engineered for the demands of electronics testing with maximum throughput, pinpoint analysis, cost effective design, quality construction, versatility and a sleek professional appearance. Ideal for a variety of applications including accelerated life testing, climatic operating/storage testing, burn-in or temperature cycling.

Despatch's vertical design and one piece construction conserves valuable floor space without sacrificing ease of operation. Product is moved from cold to hot zone chambers by a pneumatically operated elevator. For safety the fan, elevator and conditioning systems shut off automatically when the door is opened. Uniform horizontal airflow insures proper heat transfer, excellent thermal gradient and the rapid temperature recovery rates critical for maximum throughput and proper test performance. All of Despatch's systems are equipped with high-efficiency, water-cooled mechanical refrigeration and perform to MIL STD 883G and JESD22.



#### KEY FEATURES

- ◆ **Precision Adjustable Overtemperature** - Adjustable high-limit controller in hot zones for test load protection.
- ◆ **Guaranteed Part Temp Recovery/Soak** - Worst case part temperature is monitored to ensure desired temperature is reached prior to continuation of test.
- ◆ **GN2 Purge in Cold Zone** - Minimizes condensation and frost build-up in cold chamber.
- ◆ **Temperature Chart Recorder** - 24-hour recording of product temperature in each compartment.
- ◆ **Transfer Jam Alarm** - Energizes a beeping audible alarm and display when elevator jam interrupts a test.
- ◆ **Semi-Automatic Defrost System** - Sensing system, audible alarm and control panel display alerts operator that defrost on the cold zone is required.
- ◆ **Automatic Defrost System** - Preset the number of cycles before defrosting. The chamber will automatically recondition once defrost is complete.
- ◆ **Microprocessor Control** - User friendly touch screen controls make operation easy. Set points, number of cycles, part temperature recovery/soak and dwell times can be easily adjusted from the touch screen.

## ADDITIONAL FEATURES

- ◆ RS 232 Interface
- ◆ Factory set over-temperature thermostat
- ◆ Interlocked chamber doors for added safety
- ◆ Mechanical elevator lock
- ◆ Compact vertical transfer design
- ◆ Nichrome wire heaters in hot zones
- ◆ Heaters shielded to prevent direct radiation into test area
- ◆ Semi-hermetic refrigeration compressors
- ◆ Multiple, adjustable shelves in each specimen compartment
- ◆ Under-temperature protection low limit controller
- ◆ Overload protection and pressure limit switches on refrigeration compressors
- ◆ Stainless steel, TIG welded chamber liners
- ◆ Thermal breaks between inner liners and outer skin
- ◆ Sealed insulation areas
- ◆ Non-settling fiberglass insulation
- ◆ All electrical circuits separately fused and in compliance with NEC and NEMA codes for system protection and serviceability

## OPTIONS

- ◆ **Thermal Energy Storage System (TESS™)** - Optimizes system performance, maximizes energy utilization, minimizes thermal gradients, eliminates temperature overshoot.
- ◆ **Noise Reduction Package** - Sound insulation on interior equipment section walls, baffled air vents and on equipment section forced air ventilation system.
- ◆ **Hot Zone GN<sub>2</sub> Purge** - Timed purging of hot zone after product transfer.
- ◆ **LN<sub>2</sub> Boost or Back-Up** - Works with mechanical refrigeration system to achieve faster cooling rates during peak demands.

RAPID THERMAL SHOCK		RTS 7102	RTS 7107	RTS 7168	RTS 7110
SPECIFICATIONS					
Exterior Dimensions (width x depth x height)		80 x 60 x 92 in 203 x 152 x 234 cm	78 x 62 x 94 in 198 x 157.5 x 239 cm	88 x 70 x 112 in 223.5 x 178 x 284.5 cm	101 x 73 x 112 in 256.5 x 185 x 284.5 cm
Test Load <sup>1</sup> (kg)		60 lbs (28 kg)	70 lbs (32 kg)	124 lbs (56 kg)	200 lbs (90 kg)
Zone Dimensions (width x depth x height)		15 x 15 x 15 in 38 x 38 x 38 cm	25 x 15 x 15 in 63.5 x 38 x 38 cm	25 x 25 x 23 in 63.5 x 63.5 x 58 cm	30 x 25 x 23 in 76 x 63.5 x 58 cm
Zone Volume (L)		2 cu ft (55 L)	3.3 cu ft (92 L)	8.3 cu ft (234 L)	10 cu ft (283 L)
Total Test Volume <sup>2</sup>		4 cu ft (110 L)	6.6 cu ft (184 L)	16.6 cu ft (468 L)	20 cu ft (566 L)
Temperature Range		Cold Zone Hot Zone			
		-70°C to +120°C +75°C to +205°C	-70°C to +120°C +75°C to +205°C	-70°C to +120°C +75°C to +205°C	-70°C to +120°C +75°C to +205°C
Cold Zone Refrigeration <sup>3</sup> (hp)		7.5 x 7.5	10 x 10	15 x 15	30 x 30
Hot Zone Heat <sup>4</sup> (kW)		12	12	21	36
Condensing Water at 29°C (85°F) Inlet Water		13 GPM (49 L/min)	22 GPM (83 L/min)	28 GPM (106 L/min)	75 GPM (284 L/min)
Approximate Weight		3300 lbs (1497 kg)	3300 lbs (1497 kg)	6000 lbs (2722 kg)	7300 lbs (3311 kg)

### Notes:

- 1 Re-rate by 0.83 for 50 Hz operation
- 2 Single compartment models available on request
- 3 Models with LN<sub>2</sub> cooling available
- 4 Rated at nameplate voltage

## SERVICE AND TECHNICAL SUPPORT

**service parts:** 1-800-473-7373  
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