

Environmental Test Chambers

HPCF-448 Series Environmental Chambers (Temperature & Humidity Test Chambers)

Features:

- Zero-cross DF-PID type temperature and humidity control
- Mechanical single-stage compression freezing system (Dual freezing system for -70 °C type)
- Air cooling full-sealing rotary freezer
- Constant pressure expansion valve and automatic expansion valve
- Multi-stage plate fin coil refrigerator
- Nichrome wire strip warming heater
- Seeds (plug type) humidifying heater
- Independent overheat protector, independent leakage detection and breaker, reverse-phase protection
- HP-IIC programmable temperature & humidity controller with color touch panel
- HP-IIC operation mode/pattern: fixed-value operation, timer (Time-On/Time-Off), elapsed timer, weekly timer, calendar time operation, programmed operation (32 steps/34 patterns/Max. 1088 steps)
- HP-IIC TFT color LCD display/input (setting, trend graph, operation selectable, error), touch-key input, CF card input (program pattern)
- HP-IIC temperature & humidity electronic sensor (temperature: Pt 100 Ω , humidity: high polymer electrostatic humidity sensor)
- HP-IIC standard functions: CF card interface, self-diagnosis function (Max. 31), PC integrated control system (Ethernet 10BASE-T)
- Observation window
- Chamber lamp (60W)
- Cable hole with 50 mm internal diameter
- Feed-water pump
- Shelf plates (2)
- Shelf rack holders (2)
- Drip tray
- Operation manuals



Options:

- Caster
- Self rack

Large-load shelf rack holder
 Angle frame
 Recorder
 Rotating lamp
 Left-open door
 Internal door
 Different voltage type
 Dry and wet bulb type
 Water-cooling freezer

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Model	HPCF-448-20, HPCF-448-40, HPCF-448-70
Voltage	AC200V-3 ϕ (50/60Hz, fluctuations +/-10%)
Maximum Current	30A (448-20) 30A (448-40) 36A (448-70)
Operating Ambient Temperature	5 to 35 °C
Temperature Range	-20 to +150 °C (448-20) -40 to +150 °C (448-40) -70 to +150 °C (448-70)
Temperature Fluctuation Range	+/-3.0 °C (+/-0.5 °C at 100.1 to 150 °C)
Temperature Distribution	+/-3.0 °C (+/-0.75 °C at 100.1 to 150 °C)
Humidity Range	20 to 98% RH
Humidity Fluctuation Range	+/-2.5% RH
Humidity Distribution	+/-2.0% RH
Temperature Warm-up Time (at 23 °C)	-20 °C to +150 °C Less than Approx. 55 min. (448-20) -40 °C to +150 °C Less than Approx. 55 min. (448-40) -70 °C to +150 °C Less than Approx. 75 min. (448-70)
Temperature Cool Down Time (at 23 °C)	+20 °C to -20 °C Less than Approx. 50 min. (448-20) +20 °C to -40 °C Less than Approx. 60 min. (448-40) +20 °C to -70 °C Less than Approx. 90 min. (448-70)
External Material	Stainless steel plate (SUS430HL) hair-line finish
Chamber Material	Stainless steel (SUS304BA) mirror finish
Insulation Material	Glass wool

Freezer Capacity	1.5 kW (448-20) 1.5 kW (448-40) 1.5 kW X 2 (448-70)
Warmer Capacity	4.5 kW
Humidifier Capacity	3.5 kW
Agitation Fan in the Chamber	Sirocco fan 60W X 2
Tank Water Quality	Demineralized water less than 10 µS/cm
Content Volume	448 L
Inside Dimensions	800W x 700D x 800H mm (448-20) 800W x 700D x 800H mm (448-40) 800W x 700D x 800H mm (448-70)
Outside Dimensions	1320W x 1240D x 1680H mm (448-20) 1320W x 1240D x 1680H mm (448-40) 1320W x 1440D x 1680H mm (448-70)
Weight	345 kg (448-20) 345 kg (448-40) 645 kg (448-70)

Factory Sales and Technical Support Center

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