

Section 7 Specifications

**Specifications are based on nominal voltages of 115V or 230V in ambients of 22°C to 25°C.*

Temperature

Control	±0.1°C
Range*	+5C above ambient to +55C (models 3110, 3111) +5C above ambient to +50C (models 3120, 3121) +5C above ambient to +45C (models 3130, 3131, 3140, 3141)
Uniformity	±0.2°C @ +37°C
Sensor	Precision thermistor
Tracking Alarm	User programmable high/low

**Cooling coil option extends low end temperature range to 15°C*

Over Temperature Protection

Sensor	Precision thermistor
Controller	Independent circuit
Setability	0.1°C
Range	Temp set point +0.5°C to 60°C
Tracking Alarm	Not user programmable

CO₂/O₂

CO ₂ /O ₂ Control	Better than ±0.1%
CO ₂ Range	0-20%
O ₂ Range	1-21%
Inlet Pressure	15 PSIG (103.4 kPa), maximum
CO ₂ Sensor	T/C or IR
O ₂ Sensor	Fuel Cell
Readability	0.1%
Setability	0.1%
Tracking Alarm	User programmable, high/low

Humidity

RH	Ambient to 95% @ +37°C (98.6°F)
Humidity Pan	0.8 gal. (3 liters) standard
Tracking Alarm	User programmable, low only
Optional Display	1% increments

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Fittings	
Fill Port	3/8" barbed
Drain Port	3/8" barbed, quick-connect
Access Port	1 1/4" (3.18cm) removable neoprene plug
CO ₂ /N ₂ Inlets	1/4" hose barbed

Unit Heat Load (typical @ +37°C)

115V/230V	344 BTUH (100 Watt)
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HEPA Filter

Federal Standard 209E, Class 100 - maximum allowable number of particles 0.5 microns and larger per cubic foot of air *

full recovery within 5 minutes of door opening

Replacement Reminder	User programmable
Optional Filtration System	Volatile Organic Chemicals (VOC)

**follow manufacturer's recommendations for regular filter replacement*

Shelves

Dimensions	18.5" x 18.5" (47.0cm x 47.0cm)
Construction	Stainless steel, perforated, electropolished
Surface area	2.4 sq. ft. (0.22 sq. m) per shelf
Max. per Chamber	38.4 sq.ft. (3.6 sq. m)
Loading	35 lbs (16kg) slide in and out, 50 lbs (23kg) stationary
Standard #	4 (shipped with unit)
Maximum #	16

Construction

Water Jacket Volume	11.7 gal. (44.3 liters) typical 13.0 gal. (49.2 liters) maximum
Interior Volume	6.5 cu. ft. (184.1 liters)
Interior	Type 304, mirror finish, stainless steel
Exterior	18 gauge, cold rolled steel, powder coated
Outer Door Gasket	Four-sided, molded magnetic vinyl
Inner Door Gasket	Removable, cleanable, feather-edged, silicone

Electrical

115V Models	115VAC, 50/60 Hz, 1 PH, 3.6 FLA
230V Models	230VAC, 50/60 Hz, 1 PH, 2.0 FLA
Circuit Breaker/Power Switch	6 Amp/2 Pole
Convenience Receptacle	75 Watts max. (one per chamber)

Electrical (continued)

Remote Alarm Contacts	Power interruption, over temperature, deviation of temp., CO ₂ , O ₂ , and RH, customer connections through jack on back of unit. 30V, 1A max.
Optional Data Outputs	RS-485, 0-1V, 0-5V, 4-20mA

Dimensions

Interior	21.3" W x 26.8" H x 20.0" F-B, (54.1cm x 68.1cm x 50.8cm)
Exterior	26.3" W x 39.5" H x 25.0" F-B, (66.8cm x 100.3cm x 63.5cm)

Weight (per unit)

Net	265 lb. (120.2 kg) before filling water jacket
Net Operational	365 lb. (165.6 kg) after filling water jacket
Shipping	324 lb. (147.0 kg)

Certifications

Thermo Fisher Scientific declares that the applicable CE marked models meet the provisions of the following EC directives.

204/108/EC Electromagnetic Compatibility Directive

2006/95/EC Low Voltage Directive

2011/65/EU RoHS Directive

CE Declarations are available upon request from the factory.

Safety Specifications

Indoor Use Only

Altitude Up to 2000 meters

Temperature 5°C to 40°C

Humidity Maximum 80% RH for temperatures up to 31°C, decreasing linearly to 50% RH at 40°C, non-condensing

Mains Supply Fluctuations Not to exceed $\pm 10\%$ of the nominal voltage

Installation Category 2¹

Pollution Degree 2²

Class of Equipment 1

¹ Installation category (overvoltage category) defines the level of transient overvoltage which the instrument is designed to withstand safely. It depends on the nature of the electricity supply and its overvoltage protection means. For example, in CAT II which is the category used for instruments in installations supplied from a supply comparable to public mains such as hospital and research laboratories and most industrial laboratories, the expected transient overvoltage is 2500V for a 230V supply and 1500V for a 120V supply.

² Pollution Degree describes the amount of conductive pollution present in the operating environment. Pollution Degree 2 assumes that normally only non-conductive pollution such as dust occurs with the exception of occasional conductivity caused by condensation.