

Temperature/humidity performance chart

for stability and refrigerated incubator chambers

The chart in Figure 2 illustrates the maximum and minimum attainable humidity within the cabinet at a given set temperature under the following nominal conditions: refrigeration on, defrost off, no wet bulb recorder, no air exchange, set for 22.2°C (72°F) and 50% RH ambient. Optional heatless dryer is available for lower humidity levels.

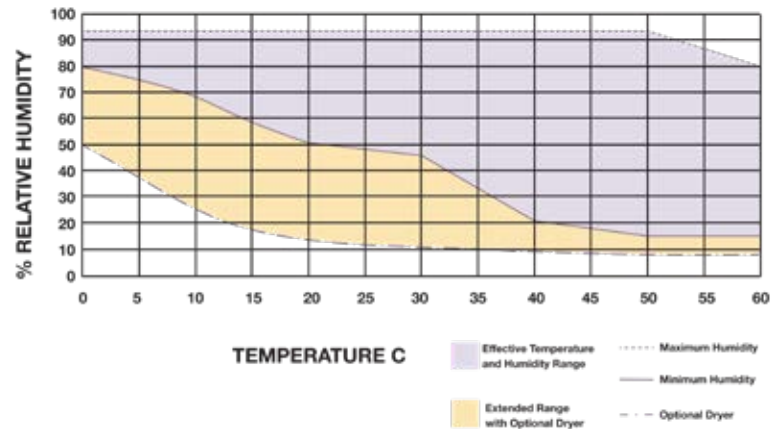


Figure 2. Illustrates the humidity range of the Thermo Scientific Environmental Chamber Models 3948 and 3907.



Specifications

	Thermo Scientific Stability Chamber Cat. No. 3948	Thermo Scientific Stability Chamber Cat. No. 3907
Physical properties	821 L Stability Chamber with heating / cooling / humidity control	311 L Stability Chamber with heating / cooling / humidity control
Temperature	0°C to 60°C (32°F to 140°F)	
Temperature range	0°C to 60°C (32°F to 140°F)	
Controller, sensor	Watlow Microprocessor - PID, with RTD sensor	
Display	Digital dual LED, 0.1°C steps readability & setability	
Programmability	Single setpoint, ramp & soak (to 40 steps)	
Temp. uniformity @ 20 to 37°C	≤ ±0.3 °C	
Temp. stability @ 20 to 37°C	≤ ±0.1 °C	
Temperature safety	Adjustable over- and under-temperature thermostat with analog reference dial, audible/visual alarm	
Compressor	1/4 HP, air-cooled	
Refrigerant	Non-CFC, R134A refrigerant; 0.382kg; GWP:1420; CO2e: 0.54t *	

* The devices 3907 & 3948 comply with EU-F-Gas Regulation No.517/2014 and contain fluorinated greenhouse gases in a hermetically sealed system.

Specifications, continued



Thermo Scientific Stability Chamber Cat. No. 3948		Thermo Scientific Stability Chamber Cat. No. 3907
Humidity		
Water consumption / specification	Max. 14 L per day / 3.7 gal per day; demineralised water, resistance: 0.5 - 1 MΩ cm	
Input water pressure	Gravity to 40 psi (2.76 bar)	
Relative humidity range	Above ambient to 95% @ 37°C (98.6°F) ±5.0% RH	
Controller, sensor	Watlow Microprocessor - PID, with capacitive sensor - thin film polymer	
Display	Digital dual LED, 1% RH steps readability & setability	
Programmability	Single setpoint, ramp & soak (to 40 steps)	
Humidity safety	Audible / visual alarm in case of deviation from setpoint	
Water connection*	Fill port: 1/8" female NPT, drain port: 3/8" FPT & 3/8" O.D. P-trap right rear, initial fill approx. 1L / 1qt.	
Electrical		
Voltage	230V, 50/60Hz, 15.0 Amps	
Plug	CEE 16 A, 6 h	
Power switch	2-Pole	
Dry contacts	Common, NO, NC	
Data output	4-20 milliamp, temperature and RH	
Data collection		
Access port	54mm / 2.1 in. Diameter; left side; with exterior and interior silicone stopper	
Chamber dimensions		
Exterior (W x H x D)	965 x 2248 x 813 mm / 38.00 x 88.50 x 32.00 in.	965 x 1308 x 813 mm / 38.00 x 51.50 x 32.00 in.
Interior (W x H x D)	787 x 1524 x 686 mm / 31.00 x 60.00 x 27.00 in.	787 x 609 x 686 mm / 31.00 x 24.00 x 27.00 in.
Net weight	347 kg / 765 lbs	261 kg / 575 lbs
Shipping weight	472 kg / 1040 lbs	325 kg / 715 lbs
Shelving		
Materials	Solid stainless steel, reinforced	
Number of shelves: standard / maximum	6 / 19	3 / 11
Shelf size (W x D)	778 x 656 mm / 30.62 x 25.81 in.	
Shelf surface area	0,5 m² / 5.4 ft²	
Load per shelf	15.9 kg / 35 lbs slide in/out; 22.7 kg / 50 lbs stationary; not to exceed 272 kg / 600 lbs (136 kg / 300 lbs) total per large (small) cabinet	
Compliance		
Certifications	CE	
Medical device	FDA registered - class 1	

* All models require a drain unless fitted with the optional Thermo Scientific Condensate Evaporator (Cat. No. 1900031). and a constant water source for controlled humidity.

NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please reference page 25 and/or contact us for certification information or IQ/OQ documents. For other voltage versions, please refer to the Forma Environmental Chamber models, available at thermofisher.com/chambers in relevant countries.





Specifications

Thermo Scientific Reach-In Incubator Chamber Cat. No. 3962

Physical properties

821 L Reach-In Incubated Chamber with heating only

Temperature

Temperature range	5°C above ambient to 60°C
Controller, sensor	Enviro-Scan - PID, with RTD sensor
Display	Digital dual LED, 0.1°C steps readability & setability
Temp. uniformity	≤ ±0.4 °C @ 30°C; ≤ ±0.3 °C @ 37°C; ≤ ±0.5 °C @ 45°C
Temp. stability @30 to 45°C	≤ ±0.1 °C

Electrical

Voltage	230V, 50/60Hz, 5.0 Amps
Plug	230V: CEE 7/7
Power switch	2-Pole
Interior convenience receptacle	230W max., for standard EU CEE7/7
Exterior convenience receptacle	75W max., for connection of available options, e.g. chart recorder
Alarm contacts	Temp. Deviation and power failure; Common, NO, NC; customer connections through RJ11 jack

Data collection

Access port	61mm / 2.4 in. diameter; one on each side; with exterior stopper
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Chamber dimensions

Exterior (W x H x D)	965 x 2032 x 833 mm / 38.00 x 80.00 x 33.00 in.
Interior (W x H x D)	787 x 1524 x 686 mm / 31.00 x 60.00 x 27.00 in.
Net weight	227 kg / 500 lbs
Shipping weight	300 kg / 660 lbs

Shelving

Materials	Solid stainless steel, reinforced
Number of shelves: standard / maximum	5 / 27
Shelf size (W x D)	778 x 656 mm / 30.62 x 25.81 in.
Shelf surface area	0,5 m ² / 5.4 ft ²
Load per shelf	13.6 kg / 30 lbs, fully inserted and stationary; not to exceed 136 kg / 300 lbs total per cabinet, unless shaker support is installed

Compliance

Certifications	CE
Medical device	FDA registered - class 1

NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please reference page 25 and/or contact us for certification information or IQ/OQ documents. For other voltage versions, please refer to Forma Environmental Chamber models, available at thermofisher.com/chambers in relevant countries.



Specifications



	Thermo Scientific Vertical Light Stability Chamber Cat. No. 3943	Thermo Scientific Vertical Light Stability Chamber Cat. No. 3906
Description		
Physical properties	821 L Stability Chamber with heating / cooling / humidity control / light option	311 L Stability Chamber with heating / cooling / humidity control / light option
Temperature Stated values are for applications without light - just temperature / temperature + humidity control		
Temperature range	0°C to 60°C (32°F to 140°F)	
Temp. uniformity @ 20 to 37°C	≤ ±0.3 °C	
Temp. stability @ 20 to 37°C	≤ ±0.1 °C	
<i>Please refer to changes in temperature values when using light (see next page, section "Performance with light")</i>		
Controller, sensor	Watlow Microprocessor - PID, with RTD sensor	
Display	Digital dual LED, 0.1°C steps readability & setability	
Programmability	Single setpoint, ramp & soak (to 40 steps)	
Temperature safety	Adjustable over- and under-temperature thermostat with analog reference dial, audible/visual alarm	
Compressor	1/4 HP, air-cooled	
Refrigerant	Non-CFC, R134A refrigerant; 0.382kg; GWP:1420; CO2e: 0.54t **	
Humidity Stated values are for applications without light - just temperature + humidity control		
Water consumption / specification	Max. 14 L per day / 3.7 gal per day; demineralised water, resistance: 0.5 - 1 MΩ cm	
Input water pressure	Gravity to 40 psi (2.76 bar)	
Relative humidity range (light off)	Above ambient to 95% @ 37°C (98.6°F) ±5.0% RH	
Controller, sensor	Watlow Microprocessor - PID, with capacitive sensor - thin film polymer	
Display	Digital dual LED, 1% steps readability & setability	
Programmability	Single setpoint, ramp & soak (to 40 steps)	
Humidity safety	Audible / visual alarm in case of deviation from setpoint	
Water connection*	Fill port: 1/8" female NPT, drain port: 3/8" FPT & 3/8" O.D. P-trap right rear, initial fill approx. 1L / 1qt.	
Electrical		
Voltage	400V, 50/60Hz, 15.0 Amps	
Plug	CEE 16 A, 6 h	
Power switch	2-Pole	
Dry contacts	Common, NO, NC	
Data output	4-20 milliamp, temperature and RH	
Data collection		
Access port	54mm / 2.3 in. diameter; left side; with exterior and interior silicone stopper	

* All models require a drain unless fitted with the optional Thermo Scientific Condensate Evaporator (Cat. No. 1900031) and a constant water source, unless humidity control is not activated.

** The devices 3943 & 3906 comply with EU-F-Gas Regulation No.517/2014 and contain fluorinated greenhouse gases in a hermetically sealed system.

Specifications, continued



	Thermo Scientific Vertical Light Stability Chamber Cat. No. 3943	Thermo Scientific Vertical Light Stability Chamber Cat. No. 3906
Chamber dimensions		
Exterior (W x H x D)	965 x 2248 x 813 mm / 38.00 x 88.50 x 32.00 in.	965 x 1308 x 813 mm / 38.00 x 51.50 x 32.00 in.
Interior (W x H x D)	787 x 1524 x 686 mm / 31.00 x 60.00 x 27.00 in.	787 x 609 x 686 mm / 31.00 x 24.00 x 27.00 in.
Net weight	347 kg / 765 lbs	261 kg / 575 lbs
Shipping weight	472 kg / 1040 lbs	325 kg / 715 lbs
Shelving		
Materials	Solid stainless steel, reinforced	
Number of Shelves: standard / maximum	3 / 16	2 / 9
Shelf size (W x D)	778 x 656 mm / 30.62 x 25.81 in.	
Shelf surface area	0,5 m ² / 5.4 ft ²	
Load per shelf	15.9 kg / 35 lbs slide in/out; 22.7 kg / 50 lbs stationary; not to exceed 272 kg / 600 lbs (136 kg / 300 lbs) total per large (small) cabinet	
Performance with light		
Set light and temperature (no humidity control)		
Max. number of light modules	3	2
Temperature range	25°C to 50°C (68°F to 122°F)	10°C to 50°C (50°F to 122°F)
Temp. uniformity @ 20 to 37°C	≤ ±3.0 °C	≤ ±2.5 °C
Temp. stability @20 to 37°C	≤ ±0.3 °C	≤ ±0.3 °C
Set light, temperature, humidity		
Max. number of light modules	2	
Relative humidity range	Above ambient to 75% @ 50°C (122°F)	
Humidity stability	≤ ±5% RH	
Temperature range	15°C to 50°C (59°F to 122°F)	10°C to 50°C (50°F to 122°F)
Temp. uniformity @ 20 to 40°C	≤ ±3.0 °C	
Temp. stability @30°C, 75% RH	≤ ±0.5 °C	
Compliance		
Certifications	CE	

NOTE: All figures in all tables are typical average values for series devices, based on factory standard following norm DIN12880. Please reference page 25 and/or contact us for certification information or IQ/OQ documents.

For other voltage versions, please refer to the Forma Environmental Chamber models, available at thermofisher.com/chambers in relevant countries.

Accessories

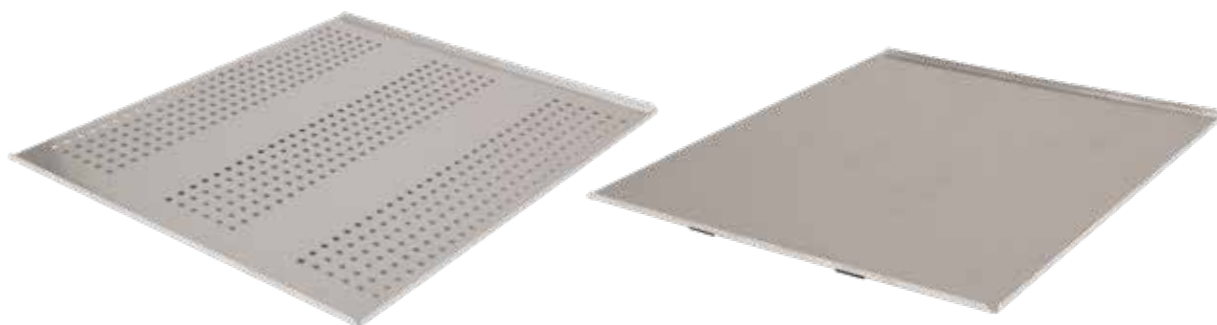
Ordering information for chamber accessories and options

All environmental chamber accessories are customer installed unless otherwise indicated.

Product	Description	Compatibility with chamber models	Cat. No.
Shelving – not for shakers			
Stainless steel shelf kit	Additional standard solid stainless steel shelf with channels. For shelf load please refer to chamber specification table	All models	224139
Perforated stainless steel shelf kit	Perforated shelf with channels. For shelf load please refer to chamber specification table. Same load as stainless steel shelf kit	All models	224155
Reinforced stainless steel shelf kit	Reinforced stainless steel shelf and channels; not for shakers 68 kg / 150 lbs load max. with shelf fully inserted and stationary; max amount of shelves per cabinet: 2 in 3962 (300 lbs), 3 in all other models (600 lbs)	All models	224161
Shaker support system – Rubber isolators replace casters for maximum stability, factory installed			
Two shelf shaker support system without interior outlet	Each shelf will hold 91 kg / 200 lbs. Must be ordered with duplex outlet (505099) for use with model 3940; replaces standard shelving	3948, 3962	1900005
Three shelf shaker support system with interior outlet	Each shelf will hold 91 kg / 200 lbs. Duplex outlet is included. Replaces standard shelving	3948	190761
Door options – factory installed			
Lexan™ inner doors kit*	Kit provides five separate inner doors for additional sample protection: 5 separate compartments with use of 5 shelves	3948, 3962	190239
Door lock assembly	Key door lock for safety and protection	All models	190514
Left-hand door swing kit	Chamber will be delivered with hinge on opposite side. Not available for solid door / solid door with inner glass door	3948	190597
Solid door large	Outer solid door for large models, heated for reduced condensation	3948, 3962	1900665
Solid door small	Outer solid door for small models, heated for reduced condensation	3907	1900666
Solid door with glass door large	Outer solid door for large models, heated for reduced condensation - with inner glass door for undisturbed observation of samples	3948, 3962	1900667
Solid door with glass door small	Outer solid door for small models, heated for reduced condensation - with inner glass door for undisturbed observation of samples	3907	1900668

* Lexan inner doors kit cannot be ordered in combination with inner glass door.

Thermo Scientific Perforated Stainless Steel Shelf (left) and Solid Stainless Steel Shelf (right).



Ordering information for chamber accessories and options, continued

All environmental chamber accessories are customer installed unless otherwise indicated.

Product	Description	Compatibility with chamber models	Cat. No.
Access ports – factory installed			
Port for reach-in refrigerated incubator and stability chambers	1.5 in. (3.8 cm) I.D. Installed on center right wall	3906, 3907, 3943, 3948	505101
Port with cover	2 in. (5.1 cm) nominal I.D., installed on center of right side	3906, 3907, 3943, 3948	193004
Port with cover	4 in. (10.2 cm) nominal I.D., installed on center of right side	3906, 3907, 3943, 3948	193005
Port for reach-in incubator chambers (heat only)	2.4 in. (6.1 cm) I.D., installed on right side below standard port	3962	190164
Reinforced floor options			
Reinforced floor with removable ramp	Accommodates a cell roller. Ramp extends 23.0 in. (58.4cm) in front of the chamber. Customer installed	3948, 3962	500182
Factory installed reinforced floor with removable ramp	Accommodates a cell roller. Ramp extends 23.0 in. (58.4cm) in front of the chamber. Factory installed	3948, 3962	190777
Reinforced floor only	Accommodates a cell roller, no ramp included. Customer installed	3948, 3962	194039
Convenience receptacles – factory installed			
230V Single	Includes separate line cord Located on upper rear wall	3907, 3948	505094
Chart recorders – factory installed			
Single pen 6-in. 7 day recorder	0°C to 60°C (32°F to 140°F)	3907, 3948	201144
Dual pen 6-in. 7 day recorder	0°C to 60°C (32°F to 140°F)	3907, 3948	201146
Single pen 6-in. 7 day recorder	0°C to 60°C (32°F to 140°F)	3962	201156
Chart recorders – customer installed			
Single pen 6-in. 7 day recorder	0°C to 60°C (32°F to 140°F)	3907, 3948	201145
Dual pen 6-in. 7 day recorder	0°C to 60°C (32°F to 140°F)	3907, 3948	201147

Ordering information for chamber accessories and options, continued

All environmental chamber accessories are customer installed unless otherwise indicated.

Product	Description	Compatibility with chamber models	Cat. No.
Replacement chart paper			
12-in. paper	100 per box	3907, 3948	197054
6-in. paper	50 per box For Single Pen 0°C to 60°C (32°F to 140°F)	3907, 3948, 3962	180006
6-in. paper	50 per box For Single Pen 10°C to 70°C (14°F to 58°F)	3907, 3948, 3962	197030
6-in. paper	50 per box For Single or Dual Pen 0°C to 100°C (32°F to 212°F)	3907, 3948, 3962	197075
Humidity system options			
Condensate evaporator	Evaporates condensate water in labs with no accessible drain. Includes separate line cord, 220V	3906, 3907, 3943, 3948	1900391
Heatless dryer kit for sub-ambient chamber relative humidity	Requires a minimum air supply of 90 psi capable of 10 cfm. It is recommended that the air supply be greater than the minimum required by the dryer. Factory installed.	3907, 3948	1900139
Carboy kit	Water reservoir for lab installations with no water connection. Carboy to be placed on top of unit, manual refill required.	3906, 3907, 3943, 3948	191596
Deionization cartridge assembly for chambers with humidity and no DI water source			
Cartridge assembly	Includes DI cartridge, wall bracket, pressure regulator and gauge, and 1/4 in. flexible tubing.	3906, 3907, 3943, 3948	01916800
Replacement cartridge	Replacement deionization cartridge	3906, 3907, 3943, 3948	58503600
Infrared CO₂ control packages – Factory installed			
Infrared CO ₂ control package	CO ₂ is controlled at user panel	3907, 3948	1900227



The Thermo Scientific Condensate Evaporator is recommended for labs with no accessible drain.

Ordering information for data outputs for the Thermo Scientific Reach-in Incubator Chamber (heat-only)

The below data outputs are factory installed and compatible only with the Thermo Scientific Reach-In Incubator Chamber (heat-only) model 3962.

Product	Description	Compatibility with chamber models	Cat. No.
RS-485 interface	Compatible with 1535 monitor/alarm only. Factory installed	3962	190523
4-20 milliamp	Factory installed	3962	190512
0-5V	Factory installed	3962	190543
0-1V	Factory installed	3962	190544

Ordering information for cell roller systems

All cell roll accessories are compatible with the Thermo Scientific Reach-In Incubator Chamber model 3962. All environmental chamber accessories are customer installed unless otherwise indicated.

Product	Description	Dimensions	Cat. No.
Three-tier roller base	15 positions 230V, 50Hz	W x H x D: 29.8 in. x 27.8 in. x 24.4in. (75.7 cm x 70.6 cm x 62.0 cm)	4868
Add-on tier	5 positions, up to 4 tiers can be added to one base. Customer installed	W x H x D: 29.8 in x 7.1 in. x 24.4 in. (75.7 cm x 18.0 cm x 62.0 cm)	186001
Reinforced floor with removable ramp	Factory installed	Ramp extends 23.0 in. (58.4 cm) in front of the chamber	190777
Reinforced floor with removable ramp	Customer installed	Ramp extends 23.0 in. (58.4 cm) in front of the chamber	500182
Rotation alarm system	Includes announcer jack. Customer installed		228082
Battery back-up	Provides 24 hours of power if a power failure occurs. Customer installed		228083
Glass bottles	4 per case	110 mm x 285 mm	475560