




## Thermo Scientific Forma® -86°C Chest and Upright Freezers

Sample Storage Products You Can Trust



## We understand sample protection.

Researchers worldwide protect more than two billion samples inside Thermo Scientific cold storage equipment. With proven solutions including +4°C refrigerators to -196°C cryogenic freezers and Nalgene® and Nunc™ consumables, you're free to concentrate on your work without worrying about your valuable samples.

Thermo Scientific upright and chest freezers offer peace-of-mind in and out of the lab.

**8600 Series**  
Advanced Performance,  
Controls and Monitoring

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**900 Series**  
High Performance  
and Controls

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**700 Series**  
Simplified Performance  
and Controls

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## Thermo Scientific Forma -86°C Freezers

Our -86°C freezers are designed for everyday reliability and minimal maintenance so you can focus on your work.

### Proven performance for worry-free workdays.

Rugged cabinet construction and quieter operation, a carefully designed refrigeration system and controlled airflow, and a voltage compensator and back-up system result in freezers that provide peak performance day-after-day.

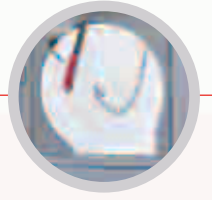
### Easy to use... by design!

Our chest and upright freezer design enhances usability with centralized information centers and intuitive controls.



# Everyday reliability for peace-of-mind.

Optional built-in chart recorder or digital datalogger can be installed at eye level on our 8600 and 900 Series Freezers for continuous monitoring.



Sturdy, solid, stainless steel shelving to support a full product load.

Easy-to-clean interior: 8600 and 900 Series freezers feature a stainless steel interior.

Four interior compartment doors in uprights and polystyrene sub-lid(s) in chests reduce cold air loss, improving temperature recovery after door closings. Five door option is available for uprights.



Convenient air filter location allows easy access for inspection and changing.



Ergonomically designed handle ensures that minimal effort is required during freezer openings and closings.



## **Racks and Accessories**

Ensure the easy retrieval of precious samples and minimize sample exposure to ambient conditions with our rack solutions. Your sales representative can suggest the optimal rack configuration for your storage needs.

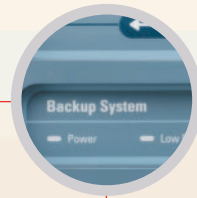


### Rugged Cabinet Construction for Everyday Use

Heavy gauge, cold-rolled steel cabinets have a powder coat paint finish for a uniform exterior surface that resists chipping and rust.

Maximum product protection is provided by approximately 5.0" (127mm) of foamed-in-place polyurethane insulation in the cabinet that:

- reduces the amount of power consumed
- allows the cabinet to reach and maintain the temperature setpoint



Optional CO<sub>2</sub> and LN<sub>2</sub> safety back-up systems are available to provide additional product protection in the event of a power or mechanical failure.



Storage pocket on 8600 Series uprights tilts forward, serving as a handy, centralized location for daily logs, IQ/OQ procedures, inventory control records, or the freezer's operating and maintenance manual.



### DOUBLE DOOR DESIGN

It's a unique design! Store frequently used specimens and samples in the top chamber, while long-term storage items remain undisturbed in the bottom.



NALGENE® and NUNC™ cryogenic storage give you everything you need to safely store precious specimens, organize freezer space and simplify sample retrieval.

NALGENE and NUNC combine to provide one-stop shopping for the widest variety and highest quality of externally and internally threaded cryovials, storage boxes, lab top coolers and "Mr. Frosty" controlled rate freezing containers.

For further information regarding these products - visit [www.nalgene.com](http://www.nalgene.com) or [www.nuncbrand.com](http://www.nuncbrand.com)



# Thermo Scientific Forma 8600 Series

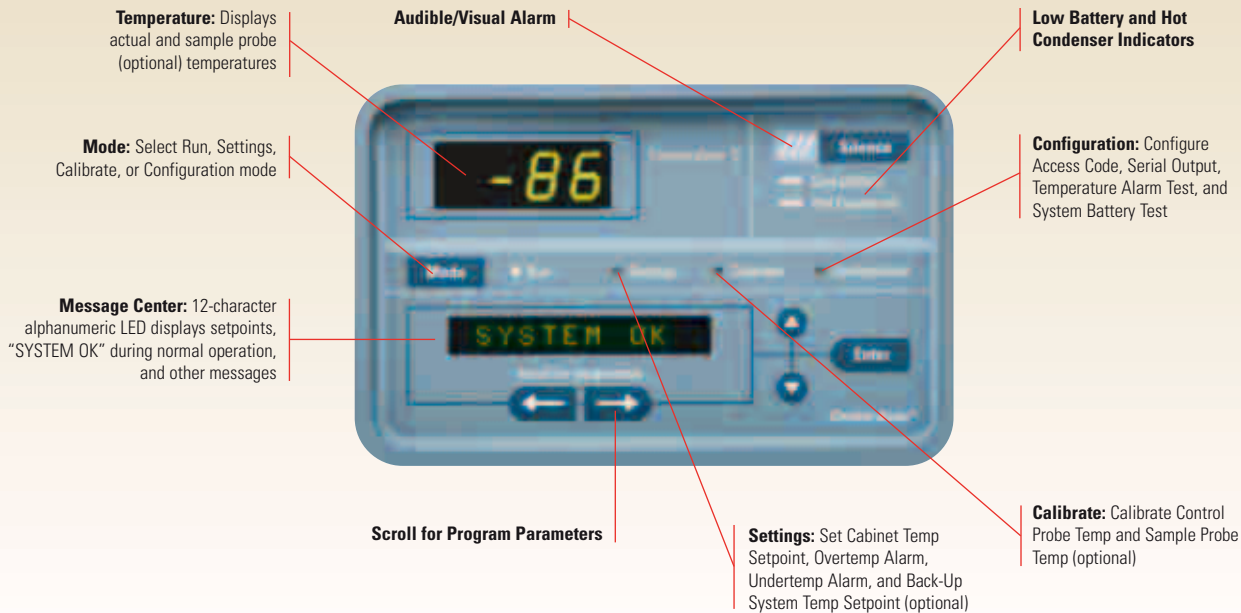
## Upright and Chest Freezers for Ultimate Convenience and Performance

Our 8600 Series freezers are designed for pharmaceutical, biotech, blood bank applications, and any other industry that requires validation.



### 8600 Series, Double Door Uprights

Temperature Range -50°C to -86°C						
Model No	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
8692	13.0 (368.1)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 19.3 (1308 x 584 x 490)	77.8 x 33.3 x 31.0 (1976 x 846 x 787)	712 (323)
8691		230V, 50/60 Hz	12/15 (P4)			
8693	17.3 (489.9)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 25.3 (1308 x 584 x 643)	77.8 x 33.3 x 37.0 (1976 x 846 x 940)	795 (360.6)
8694		230V, 50/60 Hz	12/15 (P4)			
8690	23.0 (651.3)	120V, 60 Hz	16/20 (P2)	51.5 x 30.6 x 25.3 (1308 x 777 x 643)	77.8 x 40.8 x 37.0 (1976 x 1036 x 940)	900 (408.2)
8695		230V, 50/60 Hz	12/15 (P4)			



## Additional Features:

RS-232 and 4-20 milliamp analog outputs are standard. RS-232 allows connection to a computer, recorder, or independent monitoring device. Output configurations other than the RS-232, 4-20 milliamp default are available (i.e., RS-485 or RS-232, and 0-1V, 4-20 milliamp, or 0-5V).

Optional sample probe in the top chamber of 8600 Series uprights measures sample temperature or top chamber temperature, assuring you of the sample temperature or uniformity between the top and bottom freezer.

### Enviro-Scan for Easy Setup, Programming and Monitoring

The centralized information center, which includes the Enviro-Scan Microprocessor Control/Monitoring System (shown above) and an optional chart recorder or datalogger, ensures that all controls and displays are easy to reach and read.

- Highly visible display, intuitive controls and simplified programming make it easy to set up, program, check, and monitor parameters and conditions.
- Personal access code ensures setpoint security.
- Numerous audible/visual alarms (e.g., power failure, high/low temp, door ajar, condenser hot, probe failure, etc.) offer peace-of-mind monitoring of your samples.

## 8600 Series, Single Door Uprights

Temperature Range -50°C to -86°C						
Model No	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
8603	13.0 (368.1)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 19.3 (1308 x 584 x 490)	77.8 x 33.3 x 31.0 (1976 x 846 x 787)	712 (323)
8602		230V, 50/60 Hz	12/15 (P4)			
8604	17.3 (489.9)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 25.3 (1308 x 584 x 643)	77.8 x 33.3 x 37.0 (1976 x 846 x 940)	795 (360.6)
8605		230V, 50/60 Hz	12/15 (P4)			
8656	23.0 (651.3)	120V, 60 Hz	16/20 (P2)	51.5 x 30.6 x 25.3 (1308 x 777 x 643)	77.8 x 40.8 x 37.0 (1976 x 1036 x 940)	900 (408.2)
8606		230V, 50/60 Hz	12/15 (P4)			
8607	28.0 (792.8)	230V, 50/60 Hz	12/15 (P4)	51.5 x 36.6 x 27.0 (1308 x 930 x 686)	77.8 x 46.8 x 37.0 (1976 x 1189 x 940)	980 (444.5)

## 8600 Series, Chests

Temperature Range -50°C to -86°C						
Model	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
8615	12.7 (359.6)	120V, 60 Hz	16/20 (P2)	28.0 x 42.5 x 18.5 (711 x 1080 x 470)	40.5 x 72.0 x 28.8 (1029 x 1829 x 732)	716 (324.8)
8621	20.0 (566.3)	120V, 60 Hz	16/20 (P2)	28.0 x 66.5 x 18.5 (711 x 1689 x 470)	40.5 x 96.0 x 28.8 (1029 x 2438 x 732)	833 (377.8)

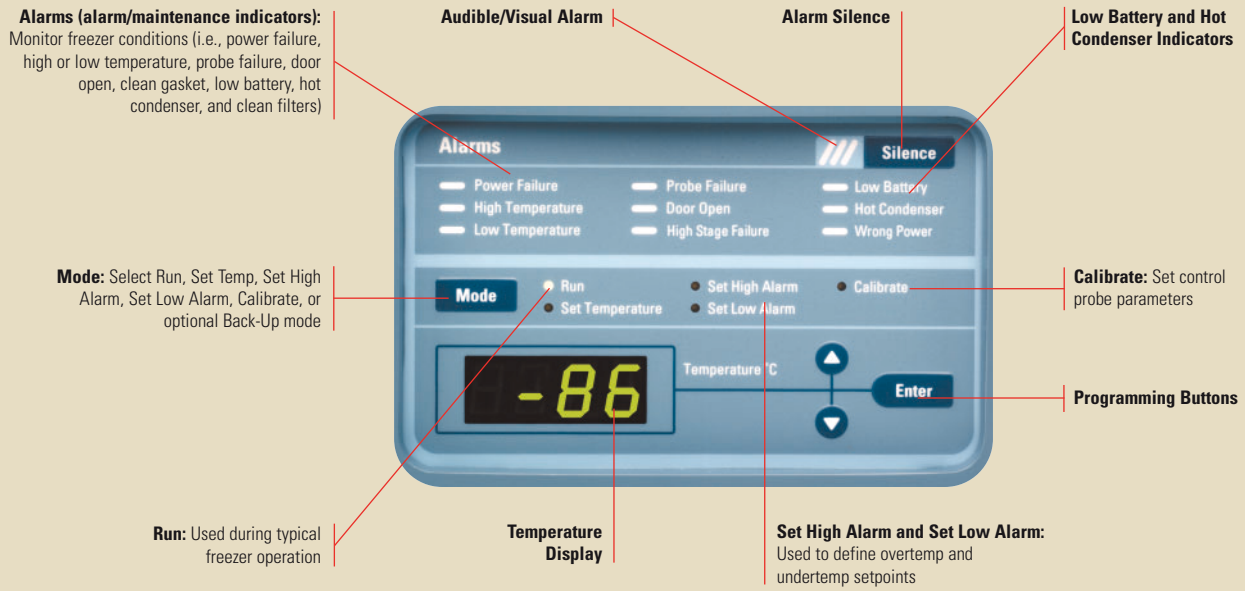
## Thermo Scientific Forma 900 Series

### Upright Freezers for Daily Dependability

Our 900 Series freezers are designed for universities, research facilities and industrial institutions where easily adjustable shelves, easy-to-access controls and convenient at-a-glance monitoring are preferred.

The centralized information center, which includes a microprocessor control and monitoring system and an optional chart recorder or datalogger, ensures that all controls and displays are easy-to-reach and read.





## 900 Series, Double Door Uprights

Temperature Range -50°C to -86°C						
Model No	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
992	13.0 (386.1)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 19.3 (1308 x 584 x 490)	77.8 x 33.3 x 31.0 (1976 x 846 x 787)	712 (323)
991		230V, 50/60 Hz	12/15 (P4)			
993	17.3 (489.9)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 25.3 (1308 x 584 x 643)	77.8 x 33.3 x 37.0 (1976 x 846 x 940)	795 (360.6)
994		230V, 50/60 Hz	12/15 (P4)			
990	23.0 (651.3)	115V, 50/60 Hz	16/20 (P2)	51.5 x 30.6 x 25.3 (1308 x 777 x 643)	77.8 x 40.8 x 37.0 (1976 x 1036 x 940)	900 (408.2)
995		230V, 50/60 Hz	12/15 (P4)			

## 900 Series, Single Door Uprights

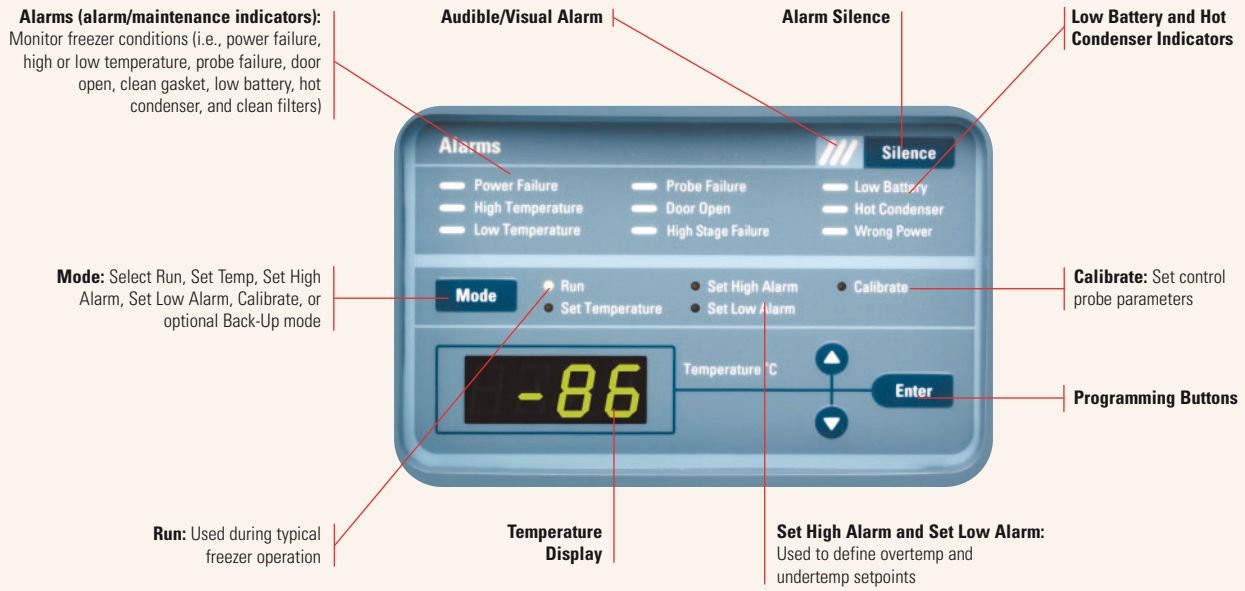
Temperature Range -50°C to -86°C						
Model No	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
903	13.0 (386.1)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 19.3 (1308 x 584 x 490)	77.8 x 33.3 x 31.0 (1976 x 846 x 787)	712 (323)
902		230V, 50/60 Hz	12/15 (P2)			
904	17.3 (489.9)	120V, 60 Hz	16/20 (P2)	51.5 x 23.0 x 25.3 (1308 x 584 x 643)	77.8 x 33.3 x 37.0 (1976 x 846 x 940)	795 (360.6)
905			12/15 (P2)			
906	23.0 (651.3)	230V, 50/60 Hz	12/15 (P4)	51.5 x 30.6 x 25.3 (1308 x 777 x 643)	77.8 x 40.8 x 37.0 (1976 x 1036 x 940)	900 (408.2)
956		120V, 60Hz	16/20 (P2)			
907	28.0 (792.8)	230V, 50/60 Hz	12/15 (P4)	51.5 x 36.6 x 27.0 (1308 x 930 x 686)	77.8 x 46.8 x 37.0 (1976 x 1189 x 940)	980 (444.5)

## Thermo Scientific Forma 700 Freezers

### Upright and Chest Freezers

Our 700 freezers are designed for clinical and academic institutions that require no-frills functionality. The information features simplified programmable controls, a temperature display and an optional chart recorder or datalogger for continuous monitoring.





700 series control shown here.  
8600 series controller featured on page 7

## 700 Series, Chests

Temperature Range -50°C to -86°C						
Model No	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
708	3.0 (84.9)	115V, 60 Hz	10.5/20 (P1)	16.5 x 18.5 x 18.5 (419 x 470 x 470)	43.8 x 28.5 x 28.8 (1113 x 724 x 732)	432 (196)
709	3.0 (84.9)	230V, 50/60 Hz	5.4/20 (P4)	16.5 x 18.5 x 18.5 (419 x 470 x 470)	43.8 x 28.5 x 28.8 (1113 x 724 x 732)	432 (196)
715	12.7 (359.6)	120V, 60 Hz	16/20 (P2)	28.0 x 42.5 x 18.5 (711 x 1080 x 470)	40.5 x 72.0 x 28.8 (1029 x 1829 x 732)	716 (324.8)
712	12.7 (359.6)	230V, 50/60 Hz	12/15 (P4)	28.0 x 42.5 x 18.5 (711 x 1080 x 470)	40.5 x 72.0 x 28.8 (1029 x 1829 x 732)	716 (324.8)
719	17.0 (481.4)	230V, 50/60 Hz	12/15 (P4)	28.0 x 58.8 x 18.5 (711 x 1494 x 470)	40.5 x 87.6 x 28.8 (1029 x 2225 x 732)	821 (372.4)
721	20.0 (566.3)	120V, 60 Hz	16/20 (P2)	28.0 x 66.5 x 18.5 (711 x 1689 x 470)	40.5 x 96.0 x 28.8 (1029 x 2438 x 732)	833 (377.8)
720	20.0 (566.3)	230V, 50/60 Hz	12/15 (P4)	28.0 x 66.5 x 18.5 (711 x 1689 x 470)	40.5 x 96.0 x 28.8 (1029 x 2438 x 732)	833 (377.8)

## Forma 700 Series

Temperature Range -50°C to -86°C						
Model No	Capacity Cu Ft (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D inches (mm)	Exterior Dimensions H x W x D inches (mm)	Shipping Weight lbs (kg)
702	13.0 (368.1)	230V, 50/60 Hz	12/20 (P4)	51.5 x 23.0 x 19.3 (1308 x 584 x 490)	77.8 x 33.3 x 31.0 (1976 x 846 x 787)	605 (274.4)
703	13.0 (368.1)	120V, 60 Hz	10.5/20 (P1)	51.5 x 23.0 x 19.3 (1308 x 584 x 490)	77.8 x 33.3 x 31.0 (1976 x 846 x 787)	605 (274.4)
704	17.3 (489.9)	120V, 60 Hz	10.5/20 (P1)	51.5 x 23.0 x 25.3 (1308 x 584 x 643)	77.8 x 33.3 x 37.0 (1976 x 846 x 940)	765 (360.6)
705	17.3 (489.9)	230V, 50/60 Hz	12/20 (P4)	51.5 x 23.0 x 25.3 (1308 x 584 x 643)	77.8 x 33.3 x 37.0 (1976 x 846 x 940)	765 (360.6)
706	23.0 (651.3)	230V, 50/60 Hz	12/20 (P4)	51.5 x 30.6 x 25.3 (1308 x 777 x 643)	77.8 x 40.8 x 37.0 (1976 x 1036 x 940)	408.2 (900)
756	23.0 (651.3)	120V, 60 Hz	10.5/20 (P1)	51.5 x 30.6 x 25.3 (1308 x 777 x 643)	77.8 x 40.8 x 37.0 (1976 x 1036 x 940)	408.2 (900)



## Achieve secure, efficient tracking of laboratory samples with Thermo Scientific 2D Barcoded storage tubes.

Unlike traditional storage tubes, a permanently bonded 2D barcode is laser-etched on the base of every tube for individual identification and traceability. Available in volumes from 0.3 ml to 12.0 ml, stringent quality control ensures flawless barcodes and all tubes are leak-tested to ensure the integrity of every sample. The microplate footprint tube racks, with a locking lid to secure samples, are stackable to provide space efficiencies for storage.

Complementary Thermo Scientific 2D barcode readers allow instant decoding of each barcode and sample entry into virtually any file or database application, permanently linking the tube contents to the unique 2D code.

For more information, please visit [www.thermo.com/matrix](http://www.thermo.com/matrix).

### ADDITIONAL FEATURES

Our fully-tested refrigeration system improves temperature control for more consistent temperature cycling and increases reserve BTUH capacity, resulting in a more stable temperature for safer product storage.

Triple-point silicone gasket and latch/handle on uprights and flexible gasket on chests ensure a snug seal that:

- Minimizes ambient temperature and humidity migration to the interior, reducing maintenance because less frost builds up on the inner doors and chest sub-lid(s)
- Provides an energy-efficient thermal barrier to keep cold air in and room temperature air out, contributing to safe product storage and reducing wear and tear on the compressors because they don't have to operate as often

Uprights include acoustical mufflers designed into the base and sound-absorbing foam that work together to reduce noise level, ensuring quiet operation for more comfortable working conditions.

Automatic Voltage Compensator for Longer Compressor Life

- Ensures that a more consistent electrical current flows to the freezer, reducing wear and tear on the compressor(s)
- Increases compressor life by maintaining reliability over a wide voltage range
- Prevents incorrect voltage from being applied to the freezer's fan(s) and compressors (e.g., ensures use of the correct electrical outlet) All freezers include a battery back-up system that provides power to the monitoring and alarm system in the event of a power failure.

Freezers include remote alarm contacts for connection to an in-house security system, optional remote alarm system or Sensaphone® Telephone Dialing System.

Heated vacuum relief port on uprights equalizes the pressure quickly, allowing easy re-entry after closing.

Key lock prevents unwanted access to your valuable samples.

For added security, an audible/visual alarm occurs if the door or lid is not closed properly.

### Line Cord Plug Reference

Models with this code	have this plug	require this receptacle	NEMA Reference	
			Plug	Receptacle
P1			5-15P	5-15R
P2			5-20P	5-20R
P3			5-30P	5-30R
P4			6-15P	6-15R
P5			6-20P	6-20R
P6			6-30P	6-30R
P7 European				
P8 British				



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[www.thermo.com/cold](http://www.thermo.com/cold)