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NELSON JAMESON INC.

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Thermo Scientific Heratherm Refrigerated Incubators

Energy efficient, precise temperature control,
reliable temperature environment

Offering a refined approach to incubation

Thermo Scientific™ Heratherm™ refrigerated incubators can help you reach an untapped potential in achieving temperature precision and efficiency – offering a complete package for your refrigerated incubation needs. As with the entire Heratherm family, our equipment is always designed with your samples in mind.

With a temperature range of +5°C to +70°C , Heratherm refrigerated incubators are equipped with Peltier technology to reach the precise temperatures needed to perform your applications and are available in benchtop, and spacious floor models.

Heratherm refrigerated incubators are ideal for applications where results demand precision, including the development process of new products, quality control in the food, beverage and cosmetics industries, water testing, cell culture and microbiological analysis, or any applications with controlled temperature as a process step such as:



Microbiology, fungi, and yeast studies



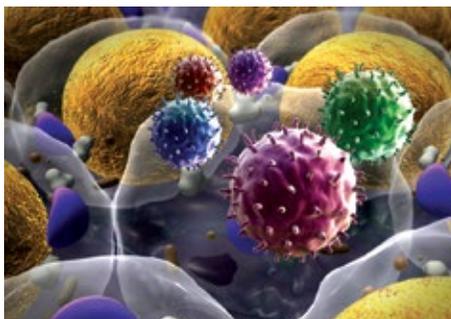
Cell culture



Shelf life testing



Waste water samples testing



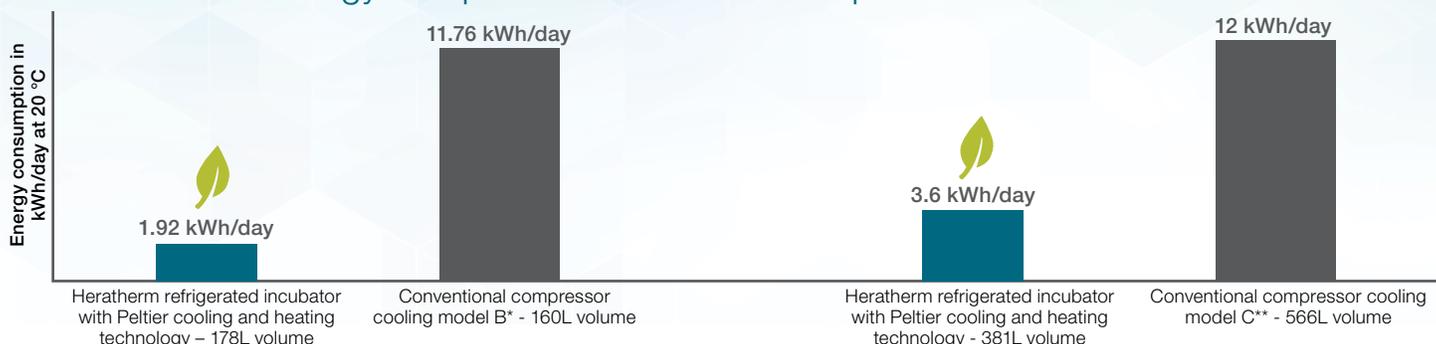
Vaccine, reagents, antibody storage



Crystallization

A refrigerated incubator designed with your samples – and the environment – in mind

Experience up to 84% energy savings when using Heratherm refrigerated incubators with Peltier technology compared to traditional compressor units



Challenge: Many refrigerated incubators utilize conventional **compressor technology**, often in combination with electrical heating elements, for cooling and heating the units. This technology provides some inconveniences to the user.

Compressor technology utilizes **hazardous refrigerants** that often require specific documentation and safety measures; making disposal a challenge. **Energy consumption** is often increased and at undesirable rates.

Defrosting can be cumbersome and adds to the energy consumption of the unit.

Conventional compressor units also endure increased **vibration**, which can disrupt experiments and can negatively impact the growth of samples. Compressors are often bulky – contributing to a **large unwanted footprint** in your lab's precious space.

Solution: Heratherm refrigerated incubators utilize **Peltier technology** to maintain sample integrity for incubation at temperatures ranging from +5°C to +70°C.

Heratherm refrigerated incubators contain **no hazardous refrigerants or substances**.

Peltier technology requires **low energy consumption**, specifically in the temperature range of +15°C to +25°C. Heratherm refrigerated incubators allow up to 84% energy savings compared to a compressor unit*. In addition, the unit **never requires cumbersome defrosting**.

Peltier technology enables temperature uniformity and stability with **minimal vibration** disruption; with the only moving part in the unit being the fan to optimize temperature distribution.

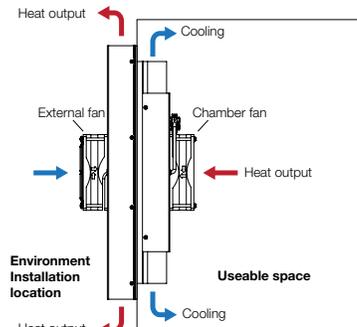
The compact Peltier modules used in Heratherm refrigerated incubators enable the units to be smaller, allowing for the **additional space** needed in your lab.

Heratherm refrigerated incubators use Peltier modules which cool and heat thermoelectrically - **requiring no refrigerants or other hazardous substances**.

Heratherm refrigerated incubators have an intelligent and automatic control of the Peltier module, to ensure optimal adaptations based on set and actual temperatures:

- Cooling and heating modes, as well as on/off cycles will be set to ensure precise temperature control
- The external fan speed will adapt automatically – fast running for cool down/heat up; slow running for keeping temperatures stable

Functional principle of Peltier module in cooling mode



*Based on testing with compressor unit BK6160. **Based on testing with compressor unit Precision 815

Advancement in incubation – products built for the precision and reliability you need

Heratherm refrigerated incubators with Peltier technology are available in two sizes: a benchtop model (178L/6.3 cuft), and a floor model with casters (381L/13.5 cuft)



Features include:

- Temperature range +5°C to +70°C
- Outstanding temperature uniformity and stability to keep the samples in a safe environment - uniformity as good as $\pm 0.3^{\circ}\text{C}$ (at +25°C), and stability as tight as $\pm 0.1^{\circ}\text{C}$
- Energy consumption as low as 80Wh/h (benchtop model) 150Wh/h (floor model) at +20°C - compressor cooled units consume up to 6 times this amount**
- CFC free/HFC free polyurethane insulation foam for outstanding temperature performance and condensation prevention
- Heated door with intelligent energy control to ensure reduced condensation – even at low temperatures
- Sophisticated timer function with weekly/daily or real time mode
- Intuitive programmability function for defined temperature ramping, soak/cool and dwell: store up to 10 programs with 10 temperature steps, loop program, and select mode at end of cycle
- Adjustable over-temperature shut-off for protocols that require setting of over temperature for protection – (class 2 according to norm DIN12880)
- Fan speed adapts automatically to achieve optimal temperature performance

**Based on comparison with BK6160/Precision815

A complete package to take your applications to the next level

Refinement in incubation paired with intuitive features

Heratherm refrigerated incubators feature an intuitive user interface:

- Easy-to-use microprocessor control
- Set temperature in 0.1°C increments
- Select Celsius or Fahrenheit
- PID control with automated fault analysis at start-up to ensure correct control at all times
- Easy push-button calibration
- Large and clear vacuum fluorescent display for easy viewing



Space-saving design and efficient use of the chamber

- Flexible shelf system for optimal loading, easy to remove for cleaning, with non-tip protection
- Small footprint to use limited lab space efficiently
- Benchtop model with leveling feet, floor model with lockable casters for easy relocation
- Table-top unit stackable without need for tools or stacking devices



Optimized structure designed for safety and ease-of-use

- Safe viewing of samples through internal glass door with limited impact on temperature
- Safe containment with automatic over temperature alarm
- Standard access port for data monitoring (large diameter of 42 mm/1.65 in.)
- RS232 interface for data logging
- Sophisticated safety system with double sensors. In event of technical failure: No power cut-out with fatal consequence for samples, but maintenance of selected temperature
- Stainless steel interior (1.4301/ASTM 304) and rounded corners for easy cleaning



Specification Information



Model		IMP180 Benchtop Model	IMP400 Floor Model
Chamber volume	L/cu ft	178/6.3	381/13.5
Temperature range	°C	+5 to +70	
Temperature deviation over time (Measured in mid of work space) ^{***}	± °C	at 20 ≤ ±0.1 at 37 ≤ ±0.1	
Spatial temperature deviation (Measured with 27 sensors) ^{***}	± °C	at 20 ≤ ±0.2 at 37 ≤ ±0.5	20 ≤ ±0.3 37 ≤ ±0.7
Internal dimensions W x H x D	mm/in	464 x 708 x 543/ 18.3 x 27.9 x 21.4	544 x 1335 x 524/ 21.4 x 52.6 x 20.6
External dimensions W x H x D	mm/in	640 x 920* x 738*/ 25.2 x 36.2* x 29.1*	778 x 1545** x 770**/ 30.6 x 60.8** x 30.3**
Footprint	m ² /ft ²	0.47/5.1	0.56/6.0
Number of shelves: supplied/maximum	units	2/9	2/17
Number of shelf positions	positions	19	39
Shelf size (W x D)	mm/in	439 x 505/17.28 x 19.88	528 x 498/20.79 x 21.06
Loading capacity per shelf ^{**}	kg/lbs	25/55	30/66
Loading capacity of unit ^{**}	kg/lbs	75/165	75/165
Weight of unit	kg/lbs	84/185	167/368
Shipping weight	kg/lbs	97/214	216/476
Peltier modules	units	1	2
Energy consumption at 20°C	Wh/h	80	150
Access port diameter	mm/in	42/1.65	
Interior material		Stainless steel 1.4301/304	
Housing materials		Coated sheet metal	

* Depth of handle/display not included in depth (65 mm/2.6 in.); adjustable feet not included in height (35 mm/1.4 in.) – required distance to rear wall: 130 mm/5.1 in.

** Depth of handle/display not included in depth (65 mm/2.6 in.); casters not included in height (180 mm/7.1 in.) – required distance to rear wall: 150mm/5.9in.

*** All figures in this table are typical average values for series devices, based on factory standard following norm DIN12880. Please contact us for certification information or IQ/OQ documents.

Ordering Information

Heratherm refrigerated incubator models:

Description	IMP180	IMP400
Base model* (100-230V, 50/60HZ)		
<ul style="list-style-type: none"> N. America customers will receive Nema 5-15 plug with 120V 60Hz configuration All other customers will receive CEE7/7 plug with 230V 50Hz configuration 	51031562	51031565
Customers ordering from the countries listed below should include one of the additional numbers to ensure receipt of the correct electrical configuration for the unit		
Australia - AS 3112, 230V 50Hz		51900449
China - GB 2099, 220V 50Hz		51900900
Denmark - SB 107, 230V 50Hz		51900481
Italy - CEI 23-50, 230V 50Hz		51900306
Japan - NEMA 5-15, 100V 60Hz		51900312
Switzerland - SEV 1011, 230V 50Hz		51900300
South/Central America - NEMA 5-15, 120V 60Hz		51900307
United Kingdom - BS1363/A, 230V 50Hz		51900303



IMP180
Benchtop Model

IMP400
Floor Model

Heratherm refrigerated incubator models with internal electrical outlet:

(The units below include the base model with one internal electrical outlet)

Description	IMP180	IMP400
Unit with electrical outlet US - 120V, 60Hz (Nema 5-15 plug and interior outlet)	51031563	51031566
Unit with electrical outlet EU - 230V, 50/60Hz (CEE 7/4 plug and interior outlet)	51031564	51031567
Unit with electrical outlet UK - 230V, 50/60Hz (BS 1363 plug and interior outlet)	51031564 + 51900303	51031567 + 51900303



Internal electric outlet

Factory installed options:

Description	IMP180	IMP400
Door hinge left	51900993	51901213
Stainless steel exterior	51900992	51901212
Heratherm access port center of left side, small*	51900996	51900996
Heratherm access port center of left side, large**	51900997	51900997
Heratherm access port center of right side, small*	51900998	51900998
Heratherm access port center of right side, large**	51900999	51900999
Heratherm access port center of top, small*	51901000	51901000
Heratherm access port center of top, large**	51901001	51901001

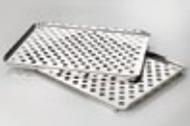
* Diameter: 22 mm/0.87 in.

** Diameter: 52 mm/2.05 in.



Access ports on the top and side of the unit

Customer Installed Accessories

Description	Order No.	Additional Information	
Additional perforated stainless steel shelf for IMP180	50127777	Includes 2 shelf supports, 439 x 551 mm	
Additional perforated stainless steel shelf for IMP400	50135241	Includes 2 shelf supports, 528 x 498 mm	
Wire mesh shelf for IMP180	50127766	Includes 2 shelf supports, 448 x 511 mm	
Wire mesh shelf for IMP400	50135243	Includes 2 shelf supports, 528 x 503 mm	
Petri dish holder (90 mm) IMP180	50128819	Shelf with holders for Petri dishes; ø 90mm; stainless steel; for all 180 l incubators; incl. 2 shelf supports; 16 stacks; 77 mm height	
Petri dish holder (50 mm) for IMP180	50128815	Shelf with holders for Petri dishes; ø 50mm; stainless steel; for all 180 l incubators; incl. 2 shelf supports; 36 stacks; 77 mm height	
Drip tray for IMP180	50128792	Includes 2 shelf supports, 405 x 500 x 20 mm drip space	
Stacking kit for IMP180	50126667	Required for stacking with ovens - to stack two 180 L models or 60 L/100 L on 180 L	
Support stand with casters for IMP180	50127743	Height including casters: 187mm	
Viton® gasket for IMP180	50130659	Gasket made of silicone-free Viton material for special applications	
Viton gasket for IMP400	50135869	Gasket made of silicone-free Viton material for special applications	
Vent gasket for 180L Heratherm models	50134908	For reduced condensation in applications with higher humidity	
Vent gasket for 400L Heratherm models	50152305	For reduced condensation in applications with higher humidity	

Learn more about our complete Heratherm microbiological incubator portfolio and accessories



Heratherm Microbiological Incubators	Compact Incubator		General Protocol Incubators		Advanced Protocol Incubators	
	Table Top	Table Top	Table Top	Large Capacity	Table Top	Table Top
Temperature range	17 - 40 °C		Ambient +5 °C - 75 °C		Ambient +5 °C - 105 °C	
Convection technology	Mechanical		Gravity		Dual	
Fan speed adjustable	-		-		6 speeds	
Rounded corners	✓		✓		✓	
Microprocessor control	✓		✓		✓	
Automatic overtemperature alarm	-		✓		✓	
Access port	-		✓		✓	
Stackable	-		✓		✓	
Stainless steel interior	-		AISI 430		AISI 304	
RS232 interface	-		✓		✓	
Internal glass door	-		✓		✓	
Easy calibration routine	-		✓		✓	
Timer: weekly/daily/real time	-		-		✓	
Dry alarm contact for connection of alarm device	-		-		✓	
Interior socket	-		-		✓ US version (The interior socket is only available for the US 120V units)	
Optional stainless steel exterior	-		-		✓ EU version (The SS exterior is only available for the 230V units)	
Certified decontamination cycle	-		-		✓	
Automatic undertemperature alarm	-		-		✓	
Door alarm	-		-		✓	
Lockable door	-		-		✓	
Connection for optional sample temperature sensor	-		-		✓	

Find out more at thermofisher.com/refrigeratedincubators

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