
# Heratherm refrigerated incubators

## Energy efficient, precise temperature control, reliable temperature environment

thermo scientific

# 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 help reach the precise temperatures needed to perform your applications and are available in benchtop, and spacious floor models.

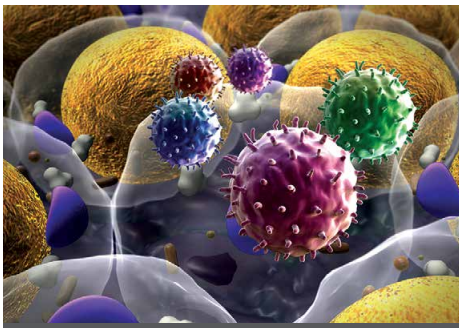
Heratherm refrigerated incubators are ideal for applications where results demand precision, including the development process of new products, quality control in the food, beverage and cosmetics industries, water testing, cell culture and microbiological analysis, or any applications with controlled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

Microbiology, fungi, and yeast studies

Cell culture

Shelf life testing

Waste water samples testing

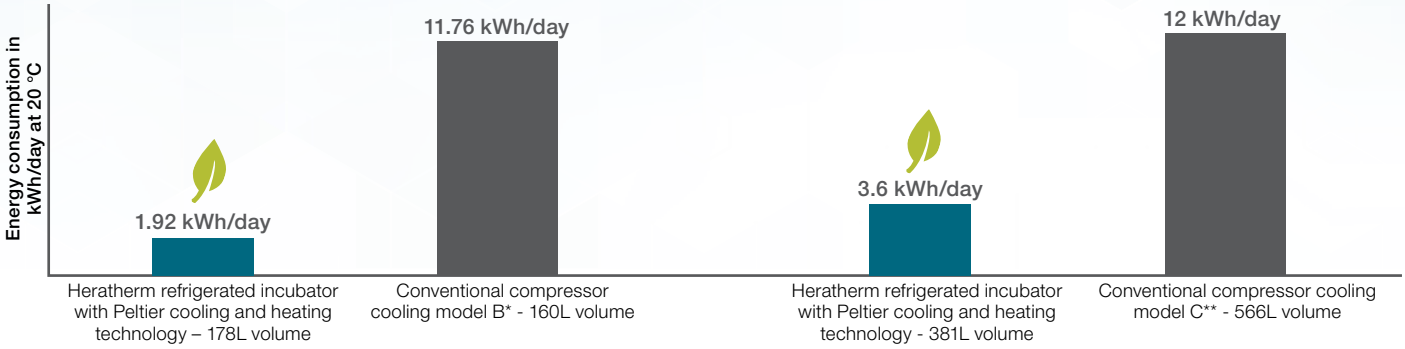


Vaccine, reagents, antibody storage

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 can provide 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 help 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 helps optimize 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.

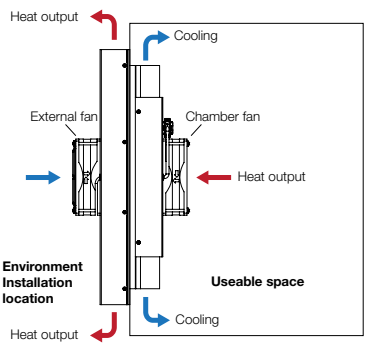
*Based on testing with compressor unit BK6160. **Based on testing with compressor unit Precision 815*

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 help ensure optimal adaptations based on set and actual temperatures:

- Cooling and heating modes, as well as on/off cycles will be set to help 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



# 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 ±0.3°C (at +25°C), and stability as tight as ±0.1°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 help achieve optimal temperature performance

**Based on comparison with BK6160/Precision815

# A complete package to help 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 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<br>Benchtop Model | IMP400<br>Floor Model |
|---|---|---|---|
| Chamber volume | L/cu ft | 178/6.3 | 381/13.5 |
| Temperature range | °C | +5 to +70 | |
| Temperature deviation over time<br>(Measured in mid of work space)*** | ± °C | at 20 ≤ ±0.1<br>at 37 ≤ ±0.1 | |
| Spatial temperature deviation<br>(Measured with 27 sensors)*** | ± °C | at 20 ≤ ±0.2<br>at 37 ≤ ±0.5 | 20 ≤ ±0.3<br>37 ≤ ±0.7 |
| Internal dimensions<br>W x H x D | mm/in | 464 x 708 x 543/<br>18.3 x 27.9 x 21.4 | 544 x 1335 x 524/<br>21.4 x 52.6 x 20.6 |
| External dimensions<br>W x H x D | mm/in | 640 x 920* x 738*/<br>25.2 x 36.2* x 29.1* | 778 x 1545** x 770**/<br>30.6 x 60.8** x 30.3** |
| Footprint | $m^2/ft^2$ | 0.47/5.1 | 0.56/6.0 |
| Number of shelves:<br>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)<br>• N. America customers will receive Nema 5-15 plug with 120V 60Hz configuration<br>• 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 | |

IMP400
Floor Model

IMP180
Benchtop 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

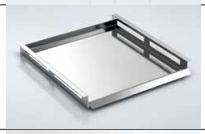
### Factory installed options:

| Description | IMP180 | IMP400 |
|---|---|---|
| Door hinge left | 51900993 | 51901213 |
| Door handle with key lock | 51901461 | 51901461 |
| 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 | Cat. No. | Additional information | |
|---|---|---|---|
| Additional perforated stainless steel shelf for IMP180 | 50127777 | Includes 2 shelf supports, 439 x 505 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 at **thermofisher.com/refrigeratedincubators**