thermo scientific

HERATHERM REFRIGERATED INCUBATORS

Energy efficient and precise temperature control

SmartNotes

Why are Peltier incubators with cooling and heating technology the ideal incubator for labs aiming to be environmentally focused compared to conventional compressor units?

Compressor-based technology is the standard mechanism used in conventional refrigerated incubators for cooling, complemented by electric heating elements for heating, as a result, both technologies consume significant amounts of energy to ensure stable conditions in the chamber.

Compressor-based refrigerated incubator units:

- Utilize harmful refrigerants such as chlorofluorocarbon or hydrofluorocarbons
- Can cause sample disruption due to the compressor pump starting and stopping; creating unwanted chamber vibrations
- Require energy and time-consuming defrosting processes

Conversely, Peltier modules in refrigerated incubators can adjust from cooling to heating as needed, and operate at low energy consumption, especially at temperatures around ambient.

In addition, Peltier technology cooling and heating modules:

- Cool and heat thermoelectrically, requiring no hazardous refrigerants or environmentally harsh substances and operate on low energy consumption
- Enable temperature uniformity and stability with minimal vibration disruption; the only movement in the unit is the fan to ensure even temperature distribution
- Do not develop ice in a refrigerated incubator, since temperatures stay above 0°C at all times, and defrosting processes are unnecessary

ThermoFisher SCIENTIFIC

thermo scientific

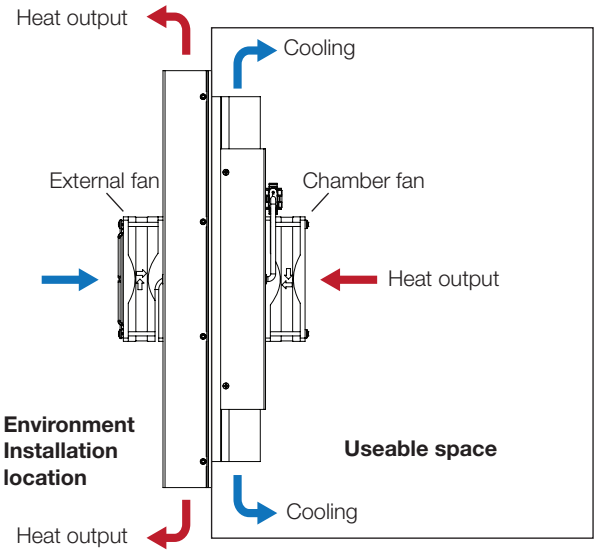
Find advancement and energy savings in incubation with Heratherm refrigerated incubators – using Peltier technology

Heratherm refrigerated incubators use Peltier modules which cool and heat thermoelectrically - requiring no refrigerants or other hazardous substances - allowing for up to 84% energy savings compared to a compressor unit*.

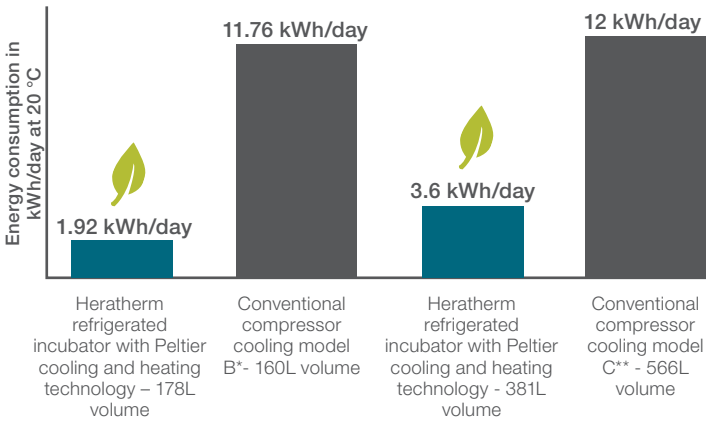
Heratherm refrigerated incubators have an intelligent and automatic control of the Peltier module. To ensure optimal, automatic adaptations based on set and actual temperatures the unit can:

- Switch to cooling or heating mode, based on set temperature and ambient temperature
- Increase the external fan speed automatically – faster for cooling and heating; slower to maintain stable temperatures

Functional principle of Peltier module in cooling mode



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



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

Conclusion

For applications that demand precision and for labs searching for sustainability offerings, Heratherm refrigerated incubators offer an untapped potential in incubation by providing users with a unit free of hazardous refrigerants and free of the burdens brought by compressor-based units.

Thermo Scientific™ Heratherm™ refrigerated incubators are the incubator of choice for energy conscious labs looking to obtain precision in an environmentally friendly way.

Find out more at **thermofisher.com/refrigeratedincubators**

Australia +61 39757 4300
Austria +43 1 801 40 0
Belgium +32 53 73 42 41
China +800 810 5118 or +400 650 5118
France +33 2 2803 2180
Germany national toll free 0800 1 536 376
Germany international +49 6184 90 6000
India toll free 1800 22 8374
India +91 22 6716 2200
Italy +39 02 95059 552
Japan +81 3 5826 1616
Netherlands +31 76 579 55 55
New Zealand +64 9 980 6700
Nordic/Baltic/CIS countries +358 10 329 2200
Russia +7 812 703 42 15
Spain/Portugal +34 93 223 09 18
Switzerland +41 44 454 12 12
UK/Ireland +44 870 609 9203
USA/Canada +1 866 984 3766
Other Asian countries +852 3107 7600
Countries not listed +49 6184 90 6000

ThermoFisher SCIENTIFIC

SNHERATHERMRI 1016