

Brochure

The New Standard of Care for Medical- Grade Refrigeration



Setting New Expectations for Medical-Grade Refrigeration

Phononic's line of compressor-free refrigerators for medical, pharmaceutical and laboratory applications harness the power of solid-state technology to deliver precise temperature control and consume 40% less energy than conventional medical-grade refrigerators. Our compressor-free design means more storage capacity, less noise and eliminates the moving parts most prone to fatigue and failure, improving reliability and longevity.



- Temperature uniformity**
Engineered to eliminate warm and cold spots with precise and uniform cooling throughout the chamber. You can now use the entire space to store your valuable products instead of stabilizing water bottles.

Unsurpassed sustainability
Our medical-grade, ENERGY STAR certified refrigerators harness the power of solid-state technology to deliver precise temperature control while consuming 40% less energy than compressor-based refrigerators.
- Near-silent, less than 35 dB**
With solid-state technology, our medical-grade refrigerators don't have a compressor. That means, they run nearly silent. So our refrigerators can be placed directly in patient rooms to improve workflow efficiency and patient satisfaction scores, and ultimately increase revenue.

24/7 Temperature
Phononic designed in digital data logging capabilities for temperature monitoring and alarm tracking. With data available from the embedded glycol and air temperature sensors, Phononic helps you meet CDC data logging guidelines.*
- More precise, up to 20x better temperature stability**
Compressor-based systems run on duty cycles, which means they fluctuate in temperature and are constantly powering on and off. Phononic's solid-state system fluctuates at just $\pm 0.5^{\circ}\text{C}$ and is always on to deliver uniform cooling for safe vaccine and breast milk storage.

Freeze protection
The largest danger to vaccine and insulin storage in a conventional refrigerator is inadvertent freezing, destroying active ingredients and posing a risk to patients. Solid-state refrigeration reduces the risk of freeze zones with precise temperature stability & uniformity.
- More storage space**
With no compressor to take up valuable storage space, Phononic refrigerators offer up to 40% more storage capacity than conventional compressor based refrigerators. All while still offering an ADA compliant undercounter solution.

More reliable, lowering costs by up to 30%
Compressor-based refrigerators are mechanical systems with complicated upkeep and maintenance. Our medical-grade Solid-State Heat Pump systems have no moving parts to fatigue and fail over time, which means they require little maintenance, last longer, and are quick and easy to install and deploy. Less maintenance and more uptime equals significantly lowered operating costs.
- CDC vaccine compliant**
Phononic refrigerators were designed to meet and exceed the recommendations of the Center for Disease Control (CDC) to keep vaccines safe, protecting patient health and preventing costly replacement.

*Select units



Pharmacy

Designed to meet and exceed the needs of the most demanding vaccine requirements, Phononic's solid-state refrigeration provides complete vaccine protection through temperature uniformity and continuous temperature monitoring with automated alarms.



Patient bedside

Solid-state refrigeration allows in-room storage with near-silent operation (<35 dBA) to improve staff work-flow efficiency and patient satisfaction.



Breast milk

The temperature stability of solid-state refrigeration meets levels recommended by the FDA and CDC for proper breast milk storage. The quiet operation lets you keep milk close to mother & baby, keeping them comfortable and happy.



Cleanroom

Phononic's solid-state, compressor-free refrigerators comply with both USP <797> and USP <800> standards. Implement a cold storage solution that is cleanroom ready at install with no special ventilation required.



Model numbers	Phononic Micro Benchtop Refrigerator [R] PLR004SSA-PH1	Phononic Compact Refrigerator PLR018SSA-PH0	Phononic General Performance Undercounter Refrigerator, Solid Door PLR055SSA-PG0	Phononic High Performance Undercounter Refrigerator, Solid Door PLR055SSA-PH0
	Phononic Micro Benchtop Freezer [F] PLF004SSA-PH1		Phononic General Performance Undercounter Refrigerator, Glass Door PLR055SSGA-PG0	Phononic High Performance Undercounter Refrigerator, Glass Door PLR055SSGA-PH0
Capacity	.4 cu. Ft./11L	1.8 cu. Ft./52L	5.5 cu. Ft./156L	5.5 cu. Ft./156L
Dimensions	19.7"W x 10.3"D x 10.3"H; 500mm W x 262mm D x 262mm H	20.5" W x 22.1" D x 23" H; 520mm W x 561mm D x 584mm H	23.6" W x 25.7"D x 32" H; 600mm W x 652mm D x 812mm H; ADA Compliant	23.6" W x 25.7"D x 32" H; 600mm W x 652mm D x 812mm H; ADA Compliant
Door	Solid	Solid	Glass or Solid, Reversible	Glass or Solid, Reversible
Noise level	<39 dBA	<35 dBA	<45 dBA	<35 dBA
Energy	1.3 kWh/day @ 24 °C [R]; 3.7 kWh/day @ 24 °C [F]	0.6 kWh/day @ 4 °C	< 2.4 kWh/day @ 4 °C	< 3.5 kWh/day @ 4 °C
Temperature setting range	4 °C [R] / -20 °C [F]	2- 8 °C	2- 8 °C	2- 8 °C
Temperature uniformity	3 °C	+/- 1 °C	+/- 2 °C	+/- 1 °C
Temperature stability	< 1 °C	< 0.5 °C	< 0.5 °C	< 0.5 °C
Refrigerant	R744 [CO ₂]	R744 [CO ₂]	R744 [CO ₂]	R744 [CO ₂]

Phononic is reimagining cooling and heating in ways never thought possible. Its breakthrough solid-state technology is transforming industries and creating new markets with innovative solutions that disrupt antiquated business models and incumbent technologies. Phononic is the critical element of innovation needed to radically change what it means to be efficient, effective and sustainable. The company has been named to the 2016, 2017 and 2019 CNBC Disruptor 50 lists, received the US EPA's 2017 Emerging Tech Award, R&D 100 Award and more.