

Chillnado - The Convective Cooler

A novel forced convection cooler technology rapidly chills beverages and maintains cold storage quality comparable to premium brands for extended periods.

Coolers are a widely used technology to keep drinks, food, or anything else cold for a certain period of time. They are popular at tailgates, the beach, and many other activities. Current cooler technology is made to just keep the drinks or food at certain temperature for some amount of time. The amount of time varies with the quality of the cooler. YETI has unmatched insulation, making it a very popular but very expensive cooler. A problem with today's cooler technology is it is only meant to keep the drinks or food cool. They are not made it cool them down. There is a need for a cooler than not only keeps drinks and food cool, but one that can also cool them down.

Researchers at Purdue University have developed a new cooler technology they call ChillNado. The goal of ChillNado is to rapidly increase the speed at which is cools off drinks. The ChillNado will operate off forced convection. The ChillNado will be able to rapidly cool drinks and be able to store them at the same level quality that a YETI cooler would. The ChillNado will be able to keep ice formed for 24 hours. The cooler also has a user friendly interface that allows customers to interact with it. This cooler could change how people store their drinks and food.

Advantages:

- Rapidly cools drink
- Keep cooled temperature
- Maintains ice for 24 hours

Potential Applications:

- Coolers
- Temperature control
- Medical industry

Technology ID

2018-PAGE-68163

Category

Agriculture, Nutrition, &
AgTech/Food Safety &
Traceability
Materials Science &
Nanotechnology/Thermal
Management Materials &
Solutions

Authors

Scott Lancaster
Mitchell LoVerde
Kyle Ma
Christopher Mead
David Page

Further information

Parag Vasekar
psvasekar@prf.org

View online



-Food/beverage industry

-Hotel industry

-Sports industry

-Camping

TRL: 7

Intellectual Property:

Provisional-Patent, 2018-04-27, United States | Utility Patent, 2019-04-26,
United States

Keywords: Rapid cooling cooler, Forced convection technology, High-performance cooler, Insulated cooler, 24-hour ice retention, Beverage chiller, Portable refrigeration, Temperature control cooler, Food and drink cooling, ChillNado