

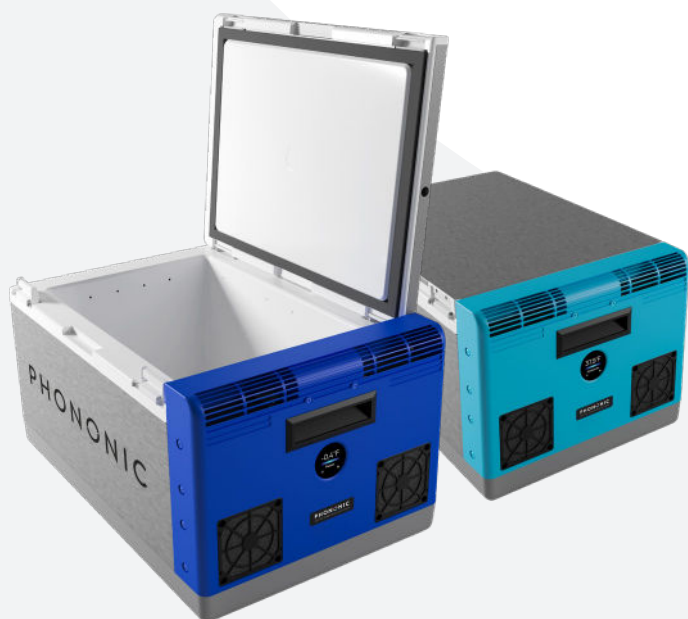
## Data Sheet

# ACS™ Totes

### Sustainable, scalable technology for frozen and chilled orders

Phononic's patented solid-state cooling technology is fundamentally changing the reality of cold-chain in grocery. Unlike legacy compressor-based systems that use CFCs, hydrocarbons, and other toxic refrigerants, Phononic's technology uses only CO<sub>2</sub> and water to produce the same cooling power more reliably and with less energy.

For grocery omnichannel order fulfillment, these actively-cooled refrigerated and freezer totes offer unparalleled scalability, flexibility and ROI for a fully sustainable, end-to-end solution. For example, picking individual orders directly into temperature controlled totes saves space, labor and time as compared to existing processes and consistently decreases picking error.



## Benefits

- **Scalable** – Add totes only as your order volume demands.
- **Lightweight & Portable** – Easily moved throughout store for all stages of order fulfillment.
- **Efficient** – Streamlined picking, staging and delivery means fewer touches, less need for additional labor, and the potential for additional order capacity.
- **Speed to Market** – Totes are seamless to integrate into existing picking and order fulfillment processes.
- **Enhanced Customer Satisfaction** – Ensure order freshness with constant temperature visibility, plus decrease order error and time to curb.
- **Sustainable** – Replaces mechanical refrigeration and eliminates dry ice and gel packs for delivery.

## Features

- Lightweight and portable.
- Equipped with state-of-the-art IoT connectivity and monitoring.
- LCD display to show tote status and temperature.
- Ergonomic design to support manual picking and packing operations.
- Flexible lid design that opens from either long side and can be removed completely.
- Tote dock with smart contact module to enable safe and simple power connection.
- Modular solution to allow on-demand cooling for power savings.
- FDA food grade rated material for interior container.

## Applications

- Order picking, staging and storage for curbside pickup and delivery.
- Chilled and frozen storage in fulfillment centers.
- Transport and delivery of grocery and other refrigerated & frozen products.

## Superior Cold Chain Fulfillment

Even when not on power, Phononic's totes are able to keep products chilled and frozen for extended periods of time, ensuring cold chain custody is maintained throughout the grocery distribution, pickup and delivery process.



| Requirement   | Freezer                                       | Refrigerator                                  |
|---|---|---|
| Weight  | 21 lbs.                                       | 21 lbs.                                       |
| External Dimensions [LxWxH]   | 600 x 400 x 320 mm / 23.62 x 18.75 x 12.60 in | 600 x 400 x 320 mm / 23.62 x 18.75 x 12.60 in |
| Internal Height   | 233 mm / 9.17 in                              | 272 mm / 10.70 in                             |
| Internal Dimensions [LxW], at bottom of tub                                     | 435 x 310 mm / 17.13 x 12.2 in                | 435 x 292 mm / 17.13 x 11.5 in                |
| Internal Volume   | 32 L / 8.5 gal                                | 35 L / 9.25 gal                               |
| Key Internal Capacities   | 12" pizzas lay flat                           | Orange juice & milk can stand upright         |
| Pull down time to set point temperature of 24°C [75.2°F], 55% Relative Humidity | 80 minutes [average, empty]                   | 45 minutes [average, empty]                   |
| Input Voltage   | 48V DC  | 48V DC  |
| Temperature Setpoint [Default]  | -0.4 F  | 37.9 F  |
| Temperature Stability   | <0.9 F  | <0.9 F  |
| Steady-State Power, 24°C [75.2°F] Ambient                                       | 140W  | 40W   |

US and Canada [Product Safety]: UL 60335-1, UL 60335-2-89; US and Canada [Emissions]: Part 15 Subpart B, ICES-001; US and Canada [Wireless]: Part 15 Subpart C, ISED RSS-247

### Freezer Tote

**Interior Dimensions** [at bottom of tub]

L: 435 mm / 17.13 in  
W: 310 mm / 12.2 in  
H: 233 mm / 9.17 in

**Exterior Dimensions**

L: 600 mm / 23.62 in  
W: 400 mm / 18.75 in  
H: 320 mm / 12.60 in

**Total Volume**

32 liters / 8.5 gal



### Refrigerator Tote

**Interior Dimensions** [at bottom of tub]

L: 435 mm / 17.13 in  
W: 292 mm / 11.5 in  
H: 272 mm / 10.7 in

**Exterior Dimensions**

L: 600 mm / 23.62 in  
W: 400 mm / 18.75 in  
H: 320 mm / 12.60 in

**Total Volume**

35 liters / 9.25 gal

