

Cryogenic Freezing and Chilling

BOX CHILLER and COMBO CHILLER

The BOX CHILLER and the COMBO CHILLER from Airgas, an Air Liquide company, offer a revolutionary solution for instant chilling of perishable food products directly within their packing boxes. This innovative system streamlines your processing by efficiently delivering precise amounts of CO₂, ensuring rapid temperature reduction and maintaining product quality. It's ideal for first processing plants that require increased productivity, excellent sanitary design, ease of operation and maintenance, with minimal capital investment and installation costs.

Features

- **Hygienic Design:** Constructed with materials promoting improved hygiene during chilling, including stainless steel food contact areas.
- **Automated Product Flow:**
 - Box Chiller:** Features a continuous inline conveyor with through-beam trigger and PLC control for uninterrupted CO₂ snowing, preventing box pile-ups.
 - Combo Chiller:** Accommodates 2000lb combos. Product enters via a custom hopper designed for seamless integration with customer conveying systems.
- **Precise & Variable CO₂ Application:**
 - Box Chiller:** Delivers precise CO₂ snow via snow horns, adjustable via HMI or nozzle changes (0.5–2 lbs/box). Snow is dispensed into bagged and boxed products for temperature maintenance.
 - Combo Chiller:** Applies an adjustable layer of snow with each product layer (50–100 lbs), with the CO₂ injection system custom-designed for specific throughput and heat loads.
- **Integrated Exhaust System:** CO₂ vapors are efficiently exhausted out the bottom via a customized system, electrically interlocked with the CO₂ supply.

- **Intuitive Control & Monitoring:**

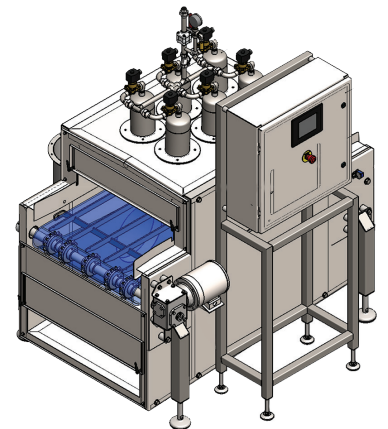
Box Chiller: Adjustable conveyor speed (~15 boxes/minute).

Combo Chiller: Monitors product weight via customer-provided in-floor scales, indicating when bins are full and cycles complete.

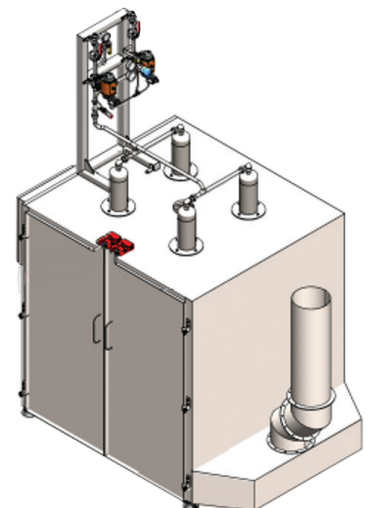
Benefits

- Simple to operate with a touchscreen HMI control panel and centralized exhaust system
- Replaces the need for dry ice pellets, thereby reducing ergonomic challenges associated with scooping/shoveling dry ice
- Faster, more efficient sanitation process and easier to inspect
- Compact design requires minimal floor space
- Easy installation
- Low maintenance costs
- Simple to operate and delivers excellent performance, cryogen efficiency and productivity throughput

BOX CHILLER



COMBO CHILLER



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BOX CHILLER and COMBO CHILLER are part of the Airgas freezing and chilling offer, specifically designed for processors who need to achieve a competitive freezing or chilling cost for their food products. Our solution includes premium food-grade gases, state-of-the-art application equipment, and technical support services along with a customized cryogen consumption optimization program.

BOX CHILLER	Inches	Centimeters
Overall length	63"	160.02
Overall width	66"	167.64
Overall height	70" ± 6"	177.8 ± 15.24
Ceiling clearance	9.25"	23.5
Conveyor belt infeed height	28.75" ± 3"	73 ± 15.24
Usable conveyor belt width	21"	53.34
Freeze zone length	36"	91.44
Maximum product height	9.25"	23.5
Shipping crate length	TBD	TBD
Shipping crate width	TBD	TBD
Shipping crate height	TBD	TBD
COMBO CHILLER – Barn Door	Inches	Centimeters
Overall length	72"	182.88
Overall width	72"	182.88
Overall height	108"	274.32
Interior length (inside guide rail to inside door)	48.5"	123.19
Interior width (measured inside box guide rails)	44.75"	113.67
Interior Height (floor to bottom of door header)	64.25"	165.2
COMBO CHILLER – Guillotine Door	Inches	Centimeters
Overall length	74"	187.96
Overall width	80.5"	204.47
Overall height	145"	368.3
Interior length (inside guide rail to inside door)	48.5"	123.19
Interior width (measured inside box guide rails)	44.75"	113.67
Interior Height (floor to bottom of door)	60.25"	153.04

Applications

- Due to its size, it fits in well with small and medium processors and is ideal for use in these sectors:
- Poultry
- Beef
- Pork
- Seafood
- Bakery

Materials of Construction

- Stainless steel food contact areas
- More information available upon request

Available Options

- Custom sizes available for specific needs
- Different electrical voltages and frequencies
- USDA-certified dairy, meat and poultry model
- Custom cryogen consumption optimization program
- Ongoing service and maintenance
- Spare parts packages available
- **For COMBO CHILLER:**
Barn style door (opens outwardly)
or Guillotine door (raises up)

Fill Your Potential.™

Contact us:

800.282.1524 | askAES@airgas.com

Airgas.com

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