

CRYOVAC®

Darfresh® Family of Vacuum Skin Packaging



THE DARFRESH® FAMILY STORY

Global awareness of food waste and its negative impact on the environment continues to grow and so has the importance of the role that packaging plays in preventing it. Now, more than ever, you need innovative and sustainable packaging solutions that help minimize food waste while improving the supply of food.

Sealed Air's Cryovac® Darfresh® vacuum skin packaging provides a multitude of benefits including aiding in the reduction of food waste by extending the shelf life of food products from processor to consumer. This innovative film creates packaging that completely surrounds the product, preserving its color, flavor and integrity.

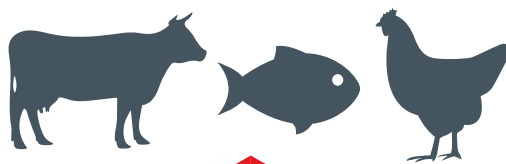
Its highly formable characteristics act as a second skin, creating a high-quality, premium look that offers today's consumer the product visibility they desire to verify the freshness themselves, while enhancing point-of-sale appeal at the retail case.

INNOVATION

Over the last few decades, almost every aspect of food production has changed over the last few decades. Sealed Air has been committed to helping you produce a safe, sustainable, and nutritious food chain. With innovative solutions like Cryovac Darfresh vacuum skin packaging, we are helping you stay at the forefront of a marketplace where driving sustainability across the distribution cycle has become an increasingly important objective.



Each year, consumers throw out an estimated 12.7 billion pounds of meat, poultry and fish valued at \$39.7 billion, or about 22 percent of their supply, according to the U.S. Department of Agriculture.¹



EVOLUTION

Today, food packaging continues to evolve, transitioning from a container meant to simply hold food to something that can play a more active role in food quality and safety, as well as sustainability. Our Darfresh vacuum skin packaging does just that. Over the years, we have expanded the Darfresh offering to meet the needs of various food sectors and industry segments: products like fresh red meat, poultry, seafood, cheese and smoked and processed meats as well as the ready meal category.



Consumers today are looking for a quality product that tastes great and stays fresh longer.

Source: 2017 Power of Meat Survey.²



Sealed Air Food Care CRYOVAC DARFRESH FAMILY OF VACUUM SKIN PACKAGING	BRAND				
	DARFRESH ON TRAY	SIMPLE STEPS	DARFRESH 10K OTR	TRAY / SKIN	DARFRESH OR TRAY SKIN WITH FLEX OR SEMI-RIGID
					
TOP WEB	Vacuum Skin Packaging Film (VT Films)	Simple Steps® Vacuum Skin Packaging Film (SS Films)	10KOTR Vacuum Skin Packaging Film (VF Film)	Vacuum Skin Packaging Film (V Films)	Vacuum Skin Packaging Film (V Films)
BOTTOM CARRIER	Rigid- Darfresh On Tray – different color options (clear, black, white, etc.)	Rigid - Simple Steps Bowls, Plates and Trays – different color and size options (clear, black, white, etc.)	Flexible Format and Semi Rigid - Seafood Trays (different color options (clear, black, white, etc.))	Case Ready and Easy Open Case Ready Tray – different color options (clear, black, white, etc.)	Flexible format and Semi-rigid
FOOD SECTORS	<ul style="list-style-type: none"> Fresh Red Meat (Beef, Pork, Lamb, Veal) Poultry Smoked & Processed Meats Seafood - Frozen Cheese 	<ul style="list-style-type: none"> Refrigerated Ready Meals Frozen Ready Meals Refrigerated value added proteins Frozen value added proteins 	<ul style="list-style-type: none"> Fresh Seafood 	<ul style="list-style-type: none"> Fresh Red Meat (Beef, Pork, Lamb, Veal) Poultry Smoked & Processed Meats Seafood - Frozen Cheese 	<ul style="list-style-type: none"> Fresh Red Meat (Beef, Pork, Lamb, Veal) Poultry Smoked & Processed Meats Seafood - Frozen Cheese
INDUSTRY SEGMENTS	<ul style="list-style-type: none"> Processors Retail Food Service 	<ul style="list-style-type: none"> Processors Retail Food Service 	<ul style="list-style-type: none"> Processors Retail Food Service 	<ul style="list-style-type: none"> Processors Retail Food Service 	<ul style="list-style-type: none"> Processors Retail Food Service
SUPERIOR OPTICS	WHAT'S IN IT FOR YOU? Striking 3D presentation: second-skin effect gives a high-quality, premium look for great point-of-sale appeal				
	✓	✓	✓	✓	✓
VERTICAL DISPLAY	WHAT'S IN IT FOR YOU? Improves Retail Merchandising including optimal case utilization				
	✓	✓	✓	✓	✓
CLEAR TRAY OPTION	WHAT'S IN IT FOR YOU? Offers transparency to consumers by allowing for 360° product visibility and building brand trust				
	✓		✓	✓	✓
SEALED-IN FRESHNESS	WHAT'S IN IT FOR YOU? Highly formable material provides a skin-tight, oxygen barrier to preserve freshness and flavor through the elimination of headspace				
	✓	✓	✓	✓	✓
REDUCES RISK OF CROSS-CONTAMINATION	WHAT'S IN IT FOR YOU? Exceptional seal integrity maintains vacuum loss and prevents leakers, by retaining purge within the pack to reduce the risk of cross contamination from processor to consumer				
	✓	✓	✓	✓	✓
100% FILM UTILIZATION	WHAT'S IN IT FOR YOU? Provides a sustainable message by eliminating film scrap and helping reduce food waste				
	✓				
CONSUMER FRIENDLY PACKAGING	WHAT'S IN IT FOR YOU? Provides consumers with a leak-proof, easy to open, freezer-ready package				
	✓	✓	✓	✓	✓
VARIETY OF TRAY COLORS	WHAT'S IN IT FOR YOU? Increases point-of-sale competitiveness by allowing for many tray colors				
	✓	✓	✓	✓	✓
VARIETY OF SHAPE CONFIGURATIONS AND SIZES	WHAT'S IN IT FOR YOU? Offers customization: serving options of a plate, tray, or our new bowl packaging				
		✓			
MICROWAVABLE	WHAT'S IN IT FOR YOU? Steam-assisted cooking technology improves product quality				
		✓			
FDA COMPLIANT	WHAT'S IN IT FOR YOU? Highly permeable film meets FDA oxygen permeability guidelines - helping you deliver safe, compliant seafood to your customers				
			✓		
REDUCES PREP-TIME	WHAT'S IN IT FOR YOU? Microwave packaging technology saves time in kitchen preparation while maintaining high standards for taste, food safety, gourmet presentation and consistency				
		✓			
IDEAL FOR FRESH OR FROZEN PRODUCTS	WHAT'S IN IT FOR YOU? Flexibility: innovative vacuum packaging serves both fresh or frozen products				
	✓	✓	✓	✓	✓
PROCESS/SYSTEM	Mondini Trave system - multiple models	Qualified vacuum packaging equipment	Qualified vacuum packaging equipment	Qualified vacuum packaging equipment	Ulma and other Qualified vacuum packaging equipment



BREADTH TODAY

The Darfresh Family features a range of films with a variety of gauges and permeability to address the specific needs of individual food sectors. Consider Simple Steps® for fresh or frozen microwavable ready meals and 10K OTR, the only FDA-approved film for fish and seafood on the market today.

Darfresh offers an extensive range of customized product merchandising options by combining these innovative, formable films with an assortment of Cryovac bottom carriers that include rigid, semi-rigid, and flexible trays as well as plates and bowls. Finished case ready packaging solutions include: Darfresh On Tray, Simple Steps, 10K OTR, Tray/Skin and a Darfresh with flexible or semi-rigid solution.





SUSTAINABLE PACKAGING THAT REDUCES FOOD WASTE

The Cryovac Darfresh family of vacuum skin packaging solutions provides a variety of sustainability benefits for processors, retailers, food service operators and consumers alike. For one pound of edible beef to reach the consumer, it takes more than 600 gallons of water, 1.8 pounds of grain, and 50 pounds of CO₂. When we discard food, these resources are essentially wasted. So we make it a top priority that the food you produce makes it to the consumer's table before it spoils with our Darfresh family of packaging.

The wide array of products that the Darfresh Family offers to **processors, retailers, food service operators and consumers** shows how Food Care helps its customers become **merchandising market leaders, attaining the packaging and branding standard other brands emulate.**



Industry Segment Benefits

RETAILER

Today, American shoppers are more concerned about food safety, quality, and waste than they have been in previous years. This presents you, the retailer, with an opportunity to address their concerns through innovative packaging solutions while also helping you achieve your operational goals and improve profitability. In addition, our Darfresh Family of products offers you significant cost savings by reducing markdowns, spoilage, waste and labor costs for repackaging.

In a study conducted by Progressive Grocer for Sealed Air, stated that **store profits would increase by 10% if shrink was minimized, larger chains** estimated an **increase of up to 14.5%**

PROCESSOR

Offering sustainable solutions is considered good business and as a food processor, you have the opportunity to influence responsible behavior throughout your value chain. Our Cryovac Darfresh family of vacuum skin packaging helps you not only reduce potential leakers, but also reduces the waste of packaging materials throughout your packaging process and its distribution cycle.

FOOD SERVICE

In a study conducted by L.E.K. Consulting, complying with food safety standards was cited as one of the biggest worries of food service operators. The extended shelf life offered by Darfresh packaging helps keep your food safe by avoiding spoilage, and the leak-proof packaging helps prevent cross-contamination. This results in your ability to offer fresher, safer options at affordable prices while realizing critical profit margins and meeting food safety standards.

CONSUMER

Consumers have been shown to worry more about food waste and food safety than they do about climate change, air pollution and water shortages, according to a recent survey. Because it keeps food fresh for longer, our packaging reduces spoilage, saving consumers money and enabling them to provide fresh, great-tasting meals for their families.

FOOD SAFETY

- Keeps product fresher longer- reducing spoilage
- Minimizes cross-contamination risks thanks to leak-proof packaging
- Protects against spoilage and contamination that often cause food safety issues in commercial kitchens (Food Service)

BRAND BUILDING

- Leak-proof, easy to open, freezer-ready packaging that is visually appealing, improving retail merchandising including optimal case utilization
- Ensures that proteins stay fresh longer, from prep and holding to delivery, so customers can enjoy the taste and texture of their meal
- Offers convenience to consumers with benefits such as reducing prep time in creating meals, eliminating the need to repackage the meat to be freezer ready, or our Simple steps solution that is microwavable
- Our Simple Steps solution also allows you to continually adapt your menu to include limited time offers (LTO's) and address dietary trends (Food Service)

SHELF LIFE EXTENSION

- Minimizes waste and saves money by extending shelf-life from days to weeks or longer with vacuum seal technology
- Preserves freshness while reducing spoilage



OPERATIONAL EFFICIENCY

- Streamlines the packaging process, making it faster and more efficient - saving you time, cost and materials (Processor)
- Uses less space in refrigerators and freezers, both in warehouse storage, during shipment and in retail storage and display cases, than Modified Atmosphere Packaging (MAP) and overwrap packaging, which leads to lower shipping, energy and handling costs. In a recent conversion of poultry packaging from MAP to Darfresh on Tray in Europe for example, the package volume was reduced by 40-46%. This reduction in volume also reduced the number of truckloads needed per year to deliver the same quantity by an average of 12% (Retailer)



¹Buzby JC, Wells HF, Hyman J. The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States. U.S. Department of Agriculture Economic Research Service. Economic Information Bulletin No. 121, February 2014. <http://www.ers.usda.gov/media/1282296/eib121.pdf>
²The 2017 Power of Meat report was commissioned jointly by the North American Meat Institute (NAMI) and the Food Marketing Institute (FMI) with sponsorship from Sealed Air Cryovac®. Surveys were administered, collected and analyzed by 210 Analytics. http://www.meatconference.com/sites/default/files/books/Power_of_meat_2017.pdf
³Picciola M, Wilson R, Steingoltz M. Will Growing Challenges Eat Away at Food Operators' Market Share? L.E.K. Executive Insights (2017) 19,27. https://www.lek.com/sites/default/files/1927_Food_Service_Operators_Study_Executive_Insights.pdf
⁴Nielsen. Consumers and Food Waste. Harris Poll survey on behalf of Sealed Air of 1,005 adults who do at least 25 percent of their households shopping between April 18 and April 25, 2014.