



Top performance and maximum hygiene –
the freezer of the future.

CRYOLINE® XF Spiral Freezer.

Optimal support for your success.

Advanced technologies for demanding tasks.

CRYOLINE®XF key benefits at a glance.

- Improved hygienic design, freezer meets high food safety demands
- Easily accessible and easy to clean (tangible cost savings)
- Optional self-cleaning belt washer system, rotary spray nozzles
- CIP-ready (freezer designed for “clean-in-place” application)
- Broad array of active and passive safety features included
- Space-saving dimensions through innovative engineering
- Advanced cross-flow blower technology enhances performance
- Up to three times the heat transfer rate of standard spiral freezers
- Higher cryogenic efficiency
- Broad range of food products can be processed
- Less space and metal to cool down means less steady-state energy and cool-down losses
- Adaptive: easy to configure with standard bolt-on family freezer options: immersion, interlocking shallow-pan immersion and integrated infeed conveyor
- Effective lock-in of flavours and moisture
- Low cooking losses due to very fast freezing action
- Compatible with all CRYOLINE® equipment

BOC is your reliable partner.

BOC is fully aware of the demanding challenges that food manufacturers are facing today. Our response to these challenges is based on entering into partnerships with our clients. That way, we can synchronise our technical knowledge and share with you our passion for engineering in order to achieve the best possible solutions for our mutual success.

Working with BOC is easy and convenient. As your reliable partner, we listen carefully to your concerns, evaluate your requirements and closely cooperate with you to identify improvement potentials that enable us to develop market-driven, efficient and profitable technologies that help you stay competitive in a constantly changing, fast-paced market.

Would you like to know more about the CRYOLINE®XF spiral freezer and our broad range of other freezers and services for the frozen food industry? Simply get in contact with the nearest BOC outlet – our experts are available for consulting and will be happy to help you.

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High-velocity airflow: the two parallel blowers/fans are a powerful contribution to the outstanding performance and heat transfer rate of the CRYOLINE®XF.

Cost-efficient and easy to clean. The new, all-benefits-in-one high capacity spiral freezer.

Meeting tomorrow's challenges.

Hygiene, efficiency and safety are crucial factors for success in today's highly competitive frozen food industry. As one of the world's leading industrial gases and engineering companies, BOC, a Member of The Linde Group, has decades of experience in this sector. Always keeping up with the latest market developments, we're able to offer you a broad range of cutting-edge freezing equipment and corresponding services at very reasonable prices.

In terms of hygiene, efficiency, performance, and safety, BOC has now set a new benchmark for spiral freezers: the CRYOLINE®XF is a whole new generation of freezing equipment providing the highest customer confidence with one of the best heat transfer technologies available on the market. We are committed to assisting you in achieving your goal of producing safe, quality food products at the best overall value.

The CRYOLINE®XF is unbeatable for freezing a wide range of quality food products: from meat proteins to bakery products, and more. It is suitable for the most difficult high-temperature and moist products such as cooked poultry, seafood and prepared meals. CRYOLINE®XF spiral freezers also provide high capacity using minimum floor space. Advanced technology maximises the efficiency while reducing the overall machine size: it delivers two to three times the heat transfer rates of typical spiral freezers available on the market, eliminating energy waste and boosting cryogen efficient power-on-demand.

Safety features.

With the CRYOLINE®XF, you can fully concentrate on your core business instead of worrying about hygiene, cleaning costs or any additional health and safety in the workplace. The CRYOLINE®XF has a broad array of active and passive safety features that gives you peace of mind, with the safety lockout feature and confined spaces kept to a minimum, it helps you avoid potential hazards and risks.

Hygienic design.

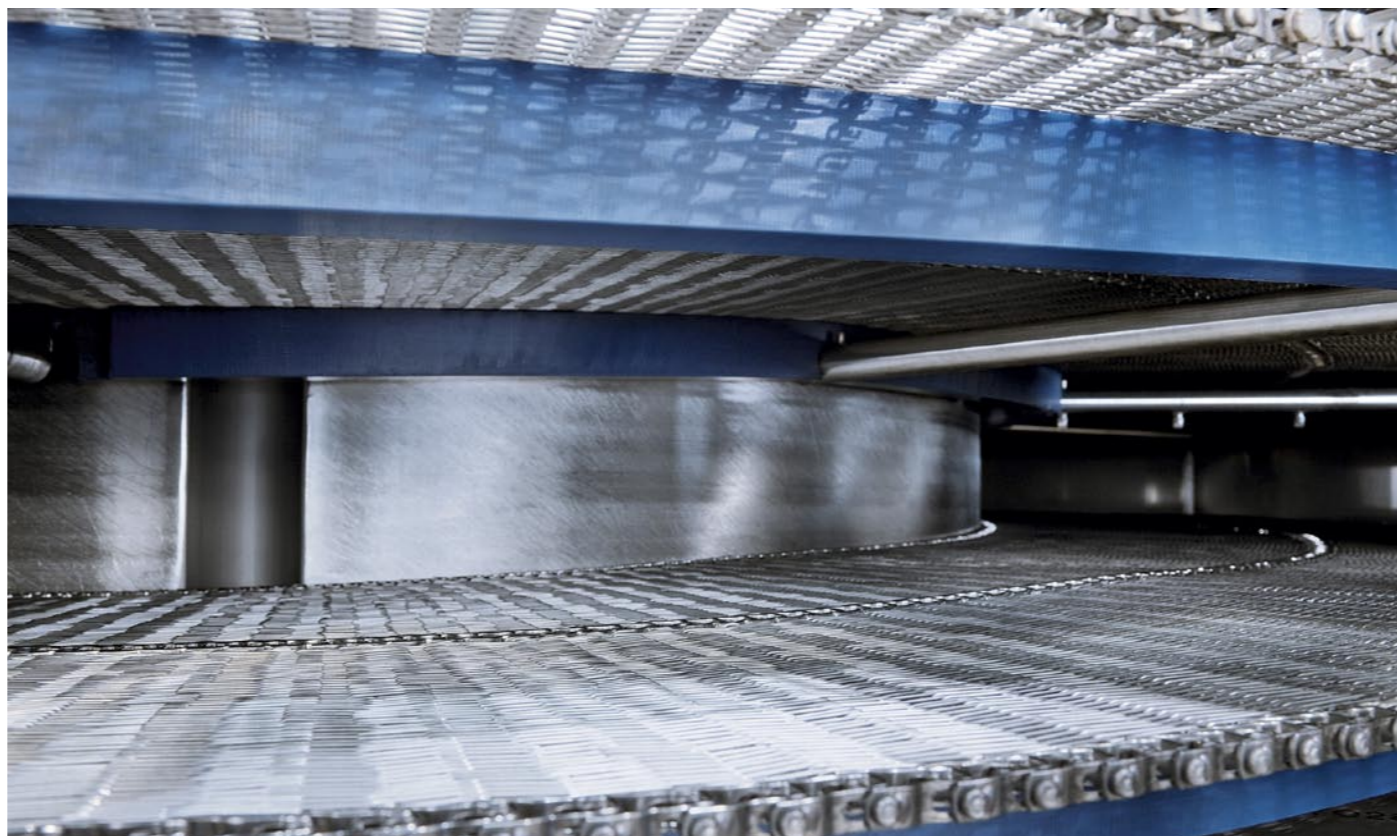
CRYOLINE®XF is designed to ensure food safety and sanitation simplicity. Made from laser-cut stainless steel, with sloped, solid surfaces, rounded corners and polished welds that simplify wash-down, it enables total accessibility to all internal parts and areas, saving time and money when cleaning the CRYOLINE®XF. Moreover, the freezer has an optional self-cleaning belt washer system. CIP ("clean-in-place") optional.

Through its sophisticated construction and hygienic design, the CRYOLINE®XF minimises food contamination risks by simplifying your daily cleaning activities and thus allows for a very high level of food safety.

Standards.

The design of the CRYOLINE®XF supports methods for verifying and certifying hygienic design principles and was designed using the following standards:

- NSF/USDA 3-A dairy standard
- BS 14159 standards
- EHEDG



Advanced technology for modern demands. Top freezing action meets maximum food safety.

Small dimensions.

With a footprint much smaller than that of standard comparable-production spiral freezers, the CRYOLINE®XF is an ideal freezing technology when you have limited floor space at your disposal. Its significantly reduced dimensions have been made possible by its powerful cross-flow technology and its innovative, streamlined design to eliminate dead space.

The CRYOLINE®XF not only saves valuable space in your production room, its reduced size also contributes to the freezer's superior cryogenic efficiency: since there is less space and less metal to cool down, there are also less steady-state energy losses.

High performance and efficiency.

In spite of its small dimensions, the CRYOLINE®XF spiral freezer is built for relatively large production capacities. The machine owes its high product yield to its advanced cross-flow blower technology, which effectively locks in product moisture by creating a high heat transfer rate: using very cold cryogenic gas as the coolant, this innovative technology creates a high-velocity cryogenic airflow, resulting in superior convective and evaporative heat transfer.

The CRYOLINE®XF delivers two to three times the heat transfer rate of commercial spiral freezer technology, making it up to three times as powerful. In terms of overall efficiency, an improvement of 5 to 10 % compared to standard spiral freezers can be expected.

Benefit from our technical expertise. Innovative product design to get your business ahead.

Cost savings.

Contamination of food processing equipment can cause unnecessary and high costs. The CRYOLINE®XF combines superior operational reliability with improved hygienic design, leading to tangible cost savings in terms of your day-to-day cleaning activities. By purchasing a hygienically

designed freezer like the CRYOLINE®XF, you can save between 25 and 50 % of these costs over the lifetime of the machine. Plus, thanks to its precision engineering and low-maintenance design, cleaning and labour time required are minimised and up time of the machine is maximised.

Technical data CRYOLINE®XF 700

Voltage	238-500 V, 50/60 Hz	
Liquid connection size	1"/25.4 mm NPT or VJ	
Vapour connection size	½"/12.7 mm NPT	
Exhaust system		
Number of connections	3 (1 in-feed (10"/250 mm), 1 out-feed (8"/200 mm) and 1 central (10"/250 mm))	
Belt washer connections		
Fitting size	1"/25.4 mm NPT	
Belt		
B48-12/16-16	Grid-style belt with mesh overlay	
B72-12/16-17	Standard option	
Usable belt width	28"/710 mm	
In-feed height (top of belt)	32"/810 mm (± 50 mm leg adjustment)	
Out-feed height (top of belt)	85"/2,160 mm (± 50 mm leg adjustment)	
Max. product height	4"/100 mm	
Freezer dimensions		
Height	10.5 ft/3,200 mm (± 50 mm leg adjustment)	
Freezer width	13.2 ft/4,024 mm closed, 16.8 ft/5,120 mm door open	
Overall length	21.2 ft freezer – 24.2 ft in/out-feeds –	6,460 mm freezer – 7,370 mm in/out-feeds –
	27.3 doors open	8,320 mm doors open
Freezer weight	Approximately 18,000 lb/8,200 kg	
Note:	All data subject to change.	