

CRYOLINE® SC™ Super contact freezer



Introduction The CRYOLINE® SC™ cryogenic freezer is designed to process delicate, sticky and hard-to-handle products in an efficient and hygienic way. It uses a disposable plastic film which acts as the conveyor belt travelling through the freezing tunnel over cryogenically refrigerated plates. These plates operate at -196 °C, rapidly and effectively freezing the contact surface of the product, while the tunnel environment is cryogenically cooled by liquid nitrogen to reduce the entire product temperature.

The consolidated features of this freezer technology deliver products free from belt marks and wrinkles which can be easily handled for further processing. Due to the nature of the belt, soft, wet or sticky products can be managed without product deformation or adhesion – even liquids can be frozen with ease. As the belt is disposable, the freezer can be quickly and efficiently cleaned at the end of production, ready for the next day's use, and product changes do not require expensive delays.

Process overview The CRYOLINE® SC™ is a contact freezer which removes the heat from the product by contact with the cold plates. The gas generated by the vaporisation of the liquid nitrogen is then exhausted to the atmosphere. As the temperature of the exhaust is controlled, the amount of cold extracted from the nitrogen can be optimised according to the production demands. High-speed fans circulate the cold gas atmosphere inside the tunnel and help to freeze the upper surface of the product.

Typical products

- Small or diced product such as pizza topping
- Flat fish
- Marinated or wet products
- Viscous fluids
- Powdered products from hot processes i.e. gravy granules, chocolate powder
- Premium quality products where belt markings may be an issue

Features and benefits

- Handles soft, sticky or marinated products with ease, reducing handling and spoilage
- Leaves no belt marks due to the plastic film belt
- Does not deform products, giving better appearance and quality
- It is easy to clean, as all parts are accessible, reducing cleaning time and improving hygiene
- The gas control system makes optimum use of the liquid nitrogen, ensuring high efficiency
- High capacity in a small space, making optimum use of the available space
- Low capital investment required
- Easy to operate, very low possibility of operator errors
- Due to the single-use film, different products can be processed without cleaning steps

Standard features

- Heat transfer plates
- Drive motor with variable speed control
- Side mounted control panel with self-explanatory, easy-to-use controls, automatic gas-supply controller and temperature indicator
- CFC-free polyurethane insulation with inner and outer stainless steel facing
- Fully welded construction
- Liquid nitrogen system with spray manifold and separate plate cooling system
- Height adjustable legs
- Low film alarm

Technical data

The required freezer size depends on the throughput of products, their temperature and bulk density.

Series	CRYOLINE® SC™							SM
	Model	750-6	750-9	750-12	1250-6	1250-9	1250-12	
Number of modules			1	2		1	2	1
Capacity, nominal	kg/h	300	450	600	500	750	1,000	100
Length	m	8.44	11.44	14.44	8.44	11.44	14.44	4.49
Width	m	1.75	1.75	1.75	2.25	2.25	2.25	1.11
Height	m	1.62-1.82 (closed) 2.32-2.52 (open) all models						2
Net belt width	m	0.75	0.75	0.75	1.25	1.25	1.25	0.55
Product headroom	m	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Effective belt area	m ²	4.5	6.75	9.0	7.5	11.25	15.0	1.65
Retention time	min	1-30	1.5-45	2-60	1-30	1.5-45	2-60	1-30
Power demand*	kW	3.5	4.6	5.7	5.0	7.4	9.6	2.2
Weight	kg	2200	2950	3700	2600	3500	4400	890
Noise level	dB(A)	75	75	75	75	75	75	75

*Normal consumption with 380-460 V, 3 phase, 50 Hz supply

Optional extras

The CRYOLINE® SC™ cryogenic freezer comes in 2 standard widths of 750 mm and 1250 mm with the basic model having a useable length of 6 metres. It is modular, with the possibility of adding 3-metre tunnel sections to boost capacity, where required.

Treating food better

Our dedicated team of food experts are available to discuss your individual requirements.

Please contact us for further information on our range of products and services for the food industry.

BOC

Customer Service Centre, Priestley Road, Worsley, Manchester M28 2UT, United Kingdom

Tel +44 (0) 800 111 333 Fax +44 (0) 800 111 555 Web www.BOOnline.co.uk

BOC Ireland

PO Box 201, Bluebell, Dublin 12, Republic of Ireland

Tel +353 1890 355 255 Fax +353 (0)1 409 1805 Web www.BOOnline.ie