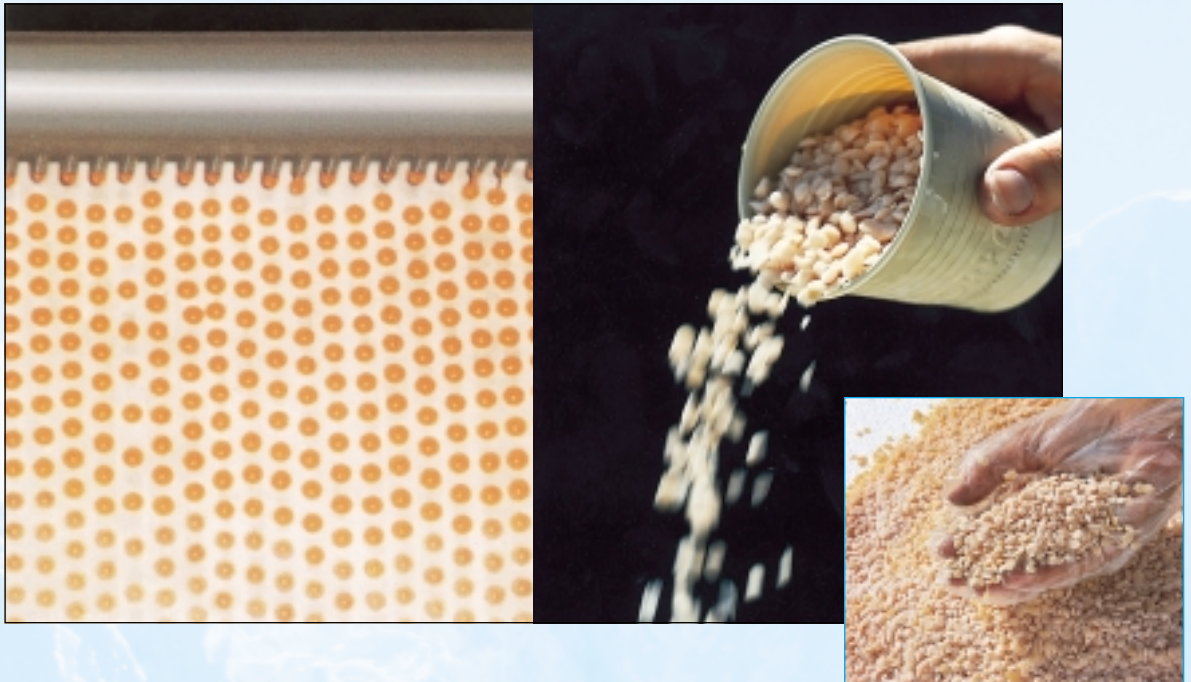


FROM A LIQUID TO FROZEN PELLETS: A CRYOGENIC APPROACH



ADAPTABLE

The CRYO-STREAM™ liquid droplet freezer offers a completely new process for freezing liquids and slurries, producing free flowing individually frozen pellets.

The CRYO-STREAM process is highly adaptable being able to freeze a wide range of liquids of different viscosities, into consistently shaped pellets or in a range of other shapes such as flakes or strands.

HIGH QUALITY PRODUCT

By freezing the liquids without direct contact with the liquid nitrogen, the CRYO-STREAM avoids exfoliation of the product, thereby producing high bulk density pellets with reduced packaged volume and lower transport costs. The liquid is almost instantaneously frozen, and therefore the ice crystal size is kept to a minimum, reducing cell, protein or other damage within the product.

With food related products, the temperature falls quickly and safely through the micro-biological danger zone.

WELL ENGINEERED EQUIPMENT

The CRYO-STREAM liquid droplet freezer is manufactured from stainless steel and finely engineered to exacting standards.

There are three main components :

- The controllable droplet dispenser which determines the shape and volume of the final frozen pellet.
- A variable speed rotating drum
- The liquid nitrogen control system.

The surface of the rotating drum is maintained at an extremely low temperature by the application of liquid and gaseous nitrogen.

Liquid nitrogen at -196°C is an extremely efficient and powerful refrigerant medium. It is an inert non toxic, odourless, colourless gas which is a natural component of air.

The liquid product to be frozen is applied in metered amounts to the surface of the drum. Freezing takes place so rapidly the liquid has no time to coalesce, producing individually frozen pellets. Once the freezing process is complete, the product is automatically and readily released from the drum and easily collected.

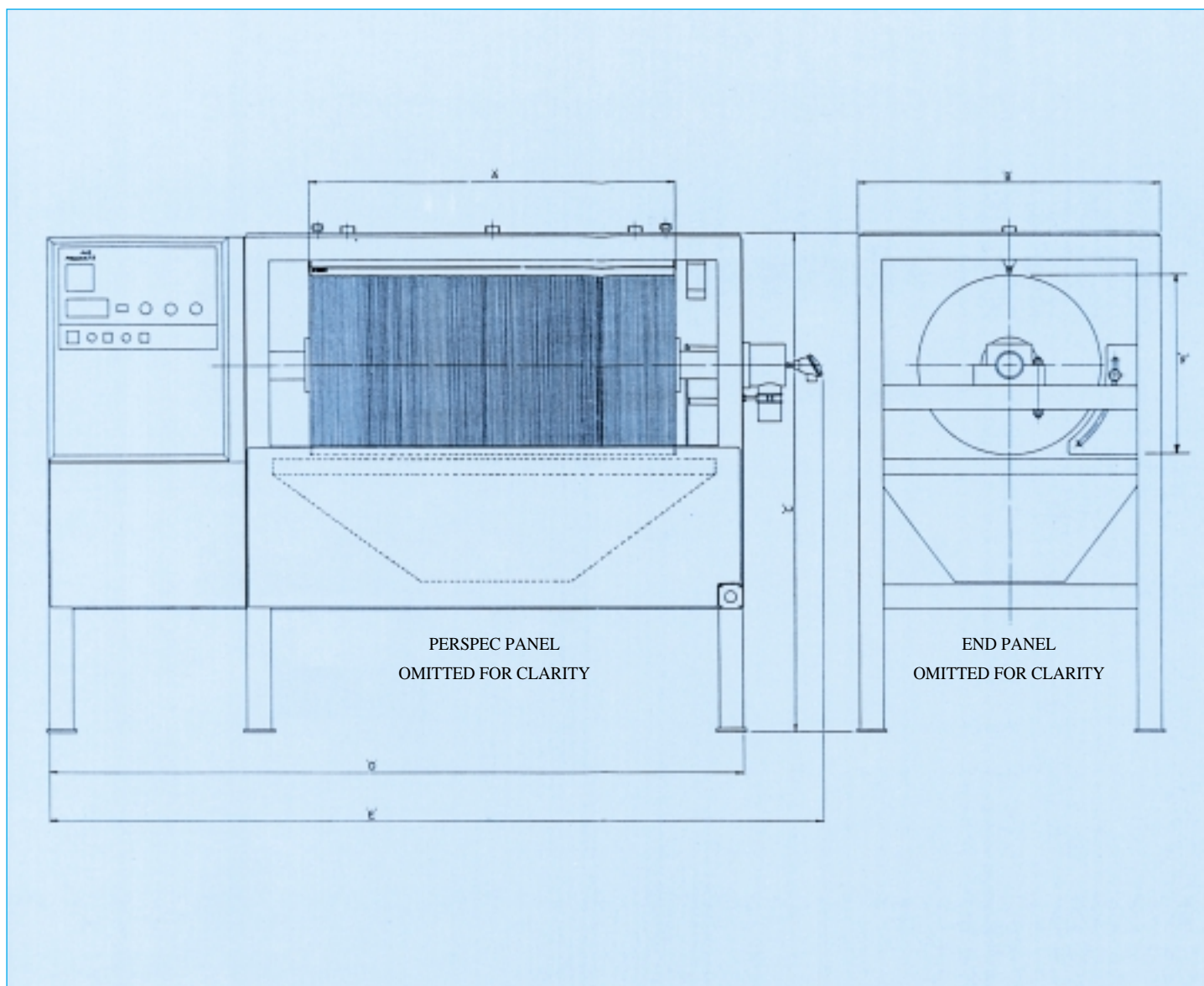
MAXIMUM CONTROL MINIMUM EFFECT

Drumspeed, drum temperature and product flow can all be finely controlled, thereby regulating product size and optimising operating efficiency. In addition to the three standard CRYO-STREAM units, Air Products' cryogenics specialists may be able to adapt the system to meet your particular requirements.

Air Products' CRYO-STREAM liquid droplet freezer offers an efficient, versatile system to produce the high quality product you demand.

YOUR LOCAL, INTERNATIONAL, GASES COMPANY

Air Products PLC is part of the international group of Air Products and Chemicals, Inc. The company supplies industrial gases, cryogenic process equipment, engineering services, chemicals and construction services to world wide markets.



Dimensions (mm)	A	B	C	D	E	F
	1200	1010	1850	2300	2565	600
	800	1210	1950	1900	2165	800
	600	1010	1850	1700	1965	600

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