

## A HIGH PERFORMANCE AND FLEXIBLE FREEZING CONCEPT



### **FLEXIBLE PRODUCTION CAPACITIES**

CRYO-QUICK is a freezer with throughput capacities ranging from 100 kg per hour to 3000 kg per hour or more in a standard range of machines. It can and does handle virtually any type of food - fish, meat, poultry, vegetables, fruit, confectionery and bakery products.

The CRYO-QUICK freezer is basically a conveyor encased in an efficient insulated tunnel. Food is carried along the conveyor and under spray headers which are connected to a controlled liquid nitrogen supply.

### **BETTER FOOD TEXTURE AND TASTE**

Liquid nitrogen has a temperature of  $-196^{\circ}\text{C}$ . When vaporised in contact with the food it absorbs heat very fast. The ultra low temperature and high heat transfer rate leads to rapid freezing. This minimises large ice crystal formation and helps

preserve food texture. It also cuts drip loss and dehydration to almost nothing, leaving the product with a better colour, better texture and better taste. The expendable refrigerant gas is controlled and directed down the tunnel to efficiently precool the incoming food. The high velocity circulating fans create extremely rapid cooling of food in the gas sections of the freezer. This increases the amount of heat that the gas absorbs from the food and leads to highly efficient nitrogen use.

### **EASILY EXPANDED**

Whilst offering a low capital cost alternative to traditional methods of food freezing, one of the most important benefits of the CRYO-QUICK is its compatibility - the ease with which it can be fitted into existing production systems. It comes in a range of widths to accommodate most upstream and downstream processing equipment. The CRYO-QUICK can also be installed alone or

in conjunction with a CRYO-DIP immersion freezer to give premium IQF products. The freezer is built in modules so that it can be easily expanded.

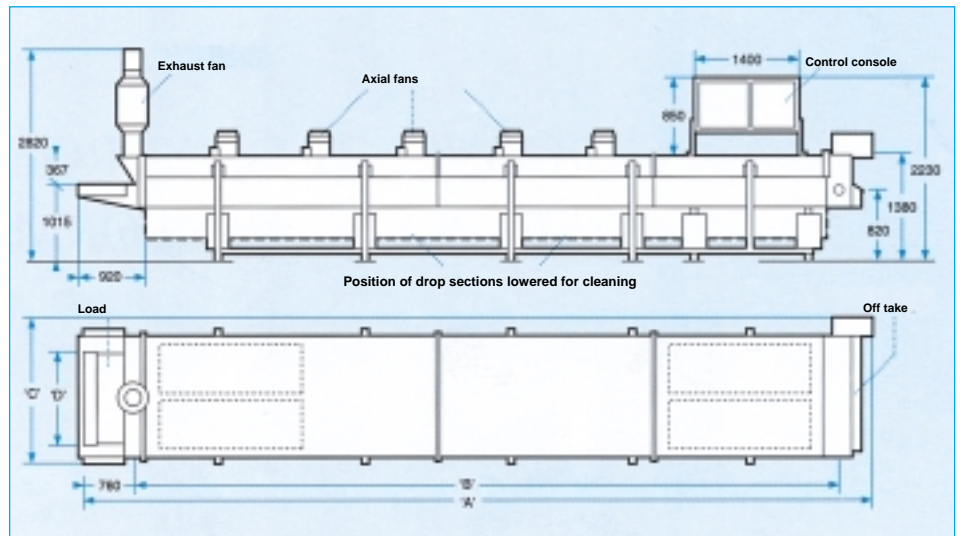
Raising production on the CRYO-QUICK can be attained by simply increasing the nitrogen flow and speeding up the conveyor. The nominal capacity can be increased by as much as 30%.

CRYO-QUICK fits naturally with flow-line production and with an automated control system it requires minimum attention. As the only major moving parts are the fans and the conveyor, maintenance is reduced to a minimum.

The pneumatically operated dropbottom provides easy access for cleaning. This total simplicity means minimum downtime, maximum flexibility and a perfect frozen product.

The drawing illustrates the QF freezer, which is available in three belt widths, 0.66 m, 0.915 m and 1.22 m. Virtually any length of freezer can be constructed using multiple modules. A typical freezer will always require a 0.92 m infeed section and a 0.46 m drive section, the rest of the length being made up of standard 4 m sections, with the possibility of further refinements by incorporating a standard 2 m section. Each machine has one exhaust fan (3.3 Kw) and on machines of 6 m or longer, one or two scroll fans (1.1 Kw) together with a drive motor (0.75 Kw). The panel can be positioned alternatively, as shown.

The table below lists details of standard QF freezers of lengths 6 m to 20 m. Details of longer machines are available on request.



MODEL NUMBER	OVERALL LENGTH 'A'	USABLE LENGTH 'B'	O'ALL WIDTH 'C'	USABLE WITDH 'D'	USABLE SURFACE AREA	MAX. PRODUCT HEIGHT	LOAD TABLE HEIGHT	PANEL LENGHT	LOAD TABLE AREA	AXIAL FAN MOTORS (0.75 W) No.	REQUIRED 3 PHASE ELECTRICAL SUPPLY Kw total	WEIGHT kg
	m	m	m	m	m	m	m	m	m <sup>2</sup>	No.	Kw total	kg
QF 660.6			1,415	0,66	4,1			1,4	0,45	3	6	2150
QF 915.6	7,42	6	1,675	0,915	5,7	0,125	1,015	1,4	0,62	5	9	2470
QF 1220.6			1,975	1,22	7,6			1,4	0,83	6	8	3000
QF 660.8			1,415	0,66	5,4			1,4	0,45	5	8	2700
QF 915.8	9,42	8	1,675	0,915	7,5	0,125	1,015	1,4	0,62	7	11	3100
QF 1220.8			1,975	1,22	10,0			1,4	0,83	10	12	3700
QF 660.10			1,415	0,66	6,76			1,4	0,45	6	11	3250
QF 915.10	11,42	10	1,675	0,915	9,37	0,125	1,015	1,4	0,62	8	13	3900
QF 1220.10			1,975	1,22	12,5			1,4	0,83	12	16	4600
QF 660.12			1,415	0,66	8,07			1,4	0,45	7	13	3900
QF 915.12	13,42	12	1,675	0,915	11,2	0,125	1,015	2,1	0,62	10	16	4450
QF 1220.12			1,975	1,22	14,9			2,1	0,83	14	18	5350
QF 660.14			1,415	0,66	9,39			1,4	0,45	9	14	4340
QF 915.14	15,42	14	1,675	0,915	13,00	0,125	1,015	2,1	0,62	12	18	5100
QF 1220.14			1,975	1,22	17,37			2,1	0,83	18	22	6000
QF 660.16			1,415	0,66	10,72			1,4	0,45	10	15	5100
QF 915.16	17,42	16	1,675	0,915	14,86	0,125	1,015	2,1	0,62	14	20	5800
QF 1220.16			1,975	1,22	19,81			2,1	0,83	20	24	6900
QF 660.18			1,415	0,66	12,0			2,1	0,45	12	17	5400
QF 915.18	19,42	18	1,675	0,915	16,69	0,125	1,015	2,1	0,62	16	22	6250
QF 1220.18			1,975	1,22	22,25			2,8	0,83	22	26	7650
QF 660.20			1,415	0,66	13,36			2,1	0,45	13	18	5800
QF 915.20	21,48	20	1,675	0,915	18,52	0,125	1,015	2,1	0,62	18	24	7200
QF 1220.20			1,975	1,22	24,7			2,8	0,83	24	28	8300

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