

QUICK FROST

Chiller



>> WHEN GOOD FOOD HYGIENE OFFERS MANY ADVANTAGES

QUICK FROST chills temperature of justcooked products to below 8°C so quick that it avoids the bacteria proliferation, which develops between +65° and 8°C.

This is the **QUICK FROST** basic hygienic function, which together with many other practical advantages, makes **QUICK FROST** necessary in all large kitchens. First of all, it enables production times to be separated from distribution ones.

In this way work can be organized with maximum efficiency, by exploiting equipment to the utmost and by saving labour.

Also, **QUICK FROST** solves production problems by enabling foodstuffs to be stored, thus reducing

losses and wastage.

Last but not least, the cold-food portioning grants a higher degree of hygiene, less wastage and a better presentation of dishes. The advantage of having improved food hygiene, nutritional and operational benefits, makes **QUICK FROST** a most important item of kitchen equipment to answer the caterer's needs for quality, efficiency and savings.

Kilma

LA SCIENZA DELLE GRANDI CUCINE

QUICK FROST

Chiller

>> THE FEATURES

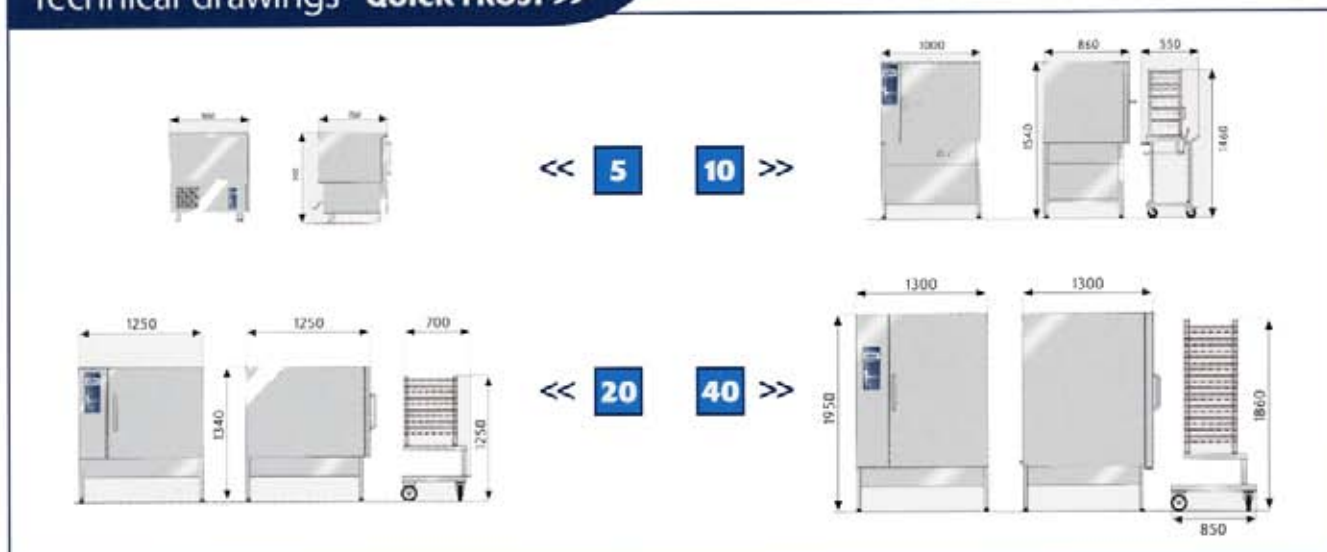
>> STRUCTURAL

- » Double-wall 18/10 stainless steel construction, entirely insulated by means of expanded polyurethane, CFC-free.
- » Bearing frame finished 18/10 stainless steel with adjustable feet.
- » Cooling chamber of bright 18/10 stainless steel; bottom so moulded as to allow condensation draining.
- » Double-wall 18/10 stainless steel door, with handle.
- » Compressor and evaporator built inside an inspectable housing.
- » Forced air-ventilation system equipped with two powerful 18/10 stainless steel electric fans (QF 10-20-40).

>> FUNCTIONAL

- » Core temperature probe linked to a digital electronic display on the control panel.
- » Control panel complete with: electronic temperature regulator, start/stop selector, on light, reached temperature warning light, compressor-jam light. Control panel QF 5 completely electronic.
- » Double speed of product cooling (soft and hard) with checking system of air temperature (QF 10-20-40).
- » Application of CFC-free refrigerant gas (R134A- R404A).
- » Safety device to prevent the refrigeration plant from exceeding the normal operating values when the product temperature is higher than +100°C.

Technical drawings QUICK FROST >>



Technical data

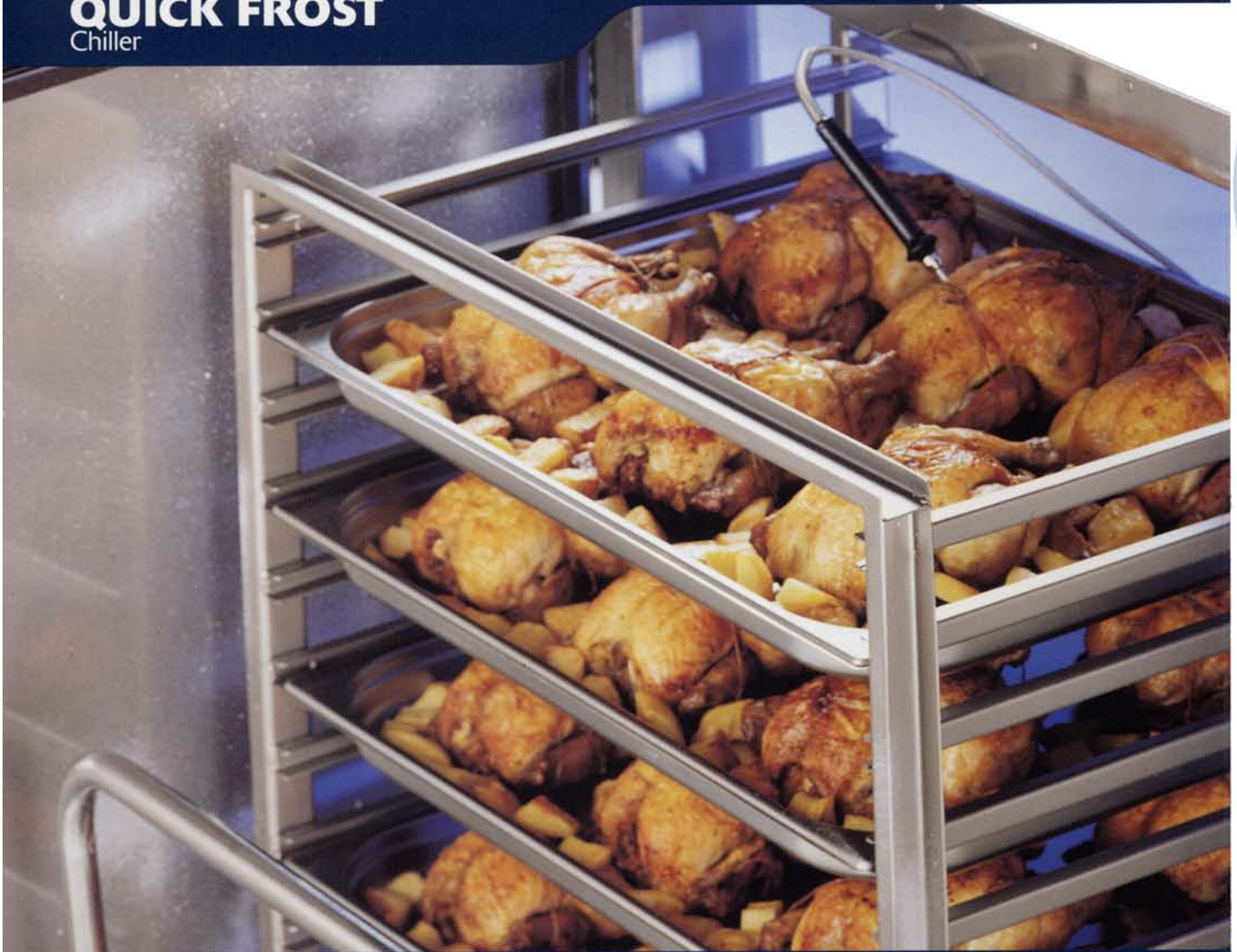
>> model	QF/5	QF/10	QF/20	QF/40
Pan capacity	5 GN 1/1	10 GN 1/1	20 GN 1/1	40 GN 1/1
Power connection V	230.1.50+N+E	400.3.50+N+E	230or400.3.50+N+E	230or400 50 Hz. 3ph+N+E
Installed power kW	1	2	4	9,5
Compressor power frig/h	1.200	2.600	15.000	19.200
Condensation battery cooling	air	air	water or air	water
Cold water connection ø	-	-	1/2"	1"
Water drain ø	-	-	1"	1"
Refrigerant	R 134A or R 404 A	R 404 A	R 404 A	R 404 A
Weight of the machine Kg	110	200	285	485
Noise level dB _A	63	63	65	65



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>> THE MODELS

QUICK FROST >> **5** **10** **20** **40**

>> THE ACCESSORIES

TROLLEY FOR QUICK FROST10: with wheel-mounted grid-rack, equipped with quick hooking device to the chiller, two fix wheels and two castors with brake.

- Made of 18/10 stainless steel
- Loading capacity: 10 pans GN 1/1
- Dimensions: 550 x 600 x 1460 mm

TROLLEY FOR QUICK FROST 20: with fix grid rack that fits the cooling chamber, equipped with removable handle, with two fix wheels and two castors with brake.

- Made of 18/10 stainless steel
- Loading capacity: 20 pans GN 1/1 or 10 pans GN 2/1
- Dimensions: 700 x 890 x 1250 mm

TROLLEY FOR QUICK FROST 40: with fix grid rack that fits the cooling chamber, equipped with removable handle, with two fix wheels and two castors with brake.

- Made of 18/10 stainless steel
- Loading capacity: 40 pans GN 1/1 or 20 pans GN 2/1
- Dimensions: 850 x 750 x 1860 mm

Stainless steel or Teflon covered **PANS**, gastronorm GN 1/1 (530x325 mm) or GN 2/1 (530x650 mm), available in the heights of 20-40-65 mm.

Stainless steel or Chromium-plated **GRIDS**, gastronorm GN 1/1 (530x325 mm) or GN 2/1 (530x650 mm).

Stainless steel full size or perforated **CONTAINERS**, gastronorm GN 1/1 (530x325 mm) or GN 2/1 (530x650 mm), available in the heights of 20-40-65-100-200 mm.

PRINTER for the recording of the chilling process. It shows the number of operations, the date, the time and the temperature of product.



QUICK FROST >> 40



SAFETY OF OPERATION GUARANTEED THROUGH HACCP CONTROL SYSTEM

Upon request, **QUICK FROST** may be equipped to run Nilma's "Creative Control Machine Point" software. This software is capable of recording not only the temperature /time function, but also the ingredients, quantity and procedures to execute any recipe. Data collected are recorded in special files in the Chef's computer.



Example of interchangeability between Konvectio Steam 10-20-40 and Quick Frost 10-20-40.



THE TROLLEY IS PRACTICAL AND EASY TO HANDLE

Thanks to this exclusive trolley which can be directly inserted in the chilling chamber, with the **QUICK-FROST** the job in the kitchen really becomes more rational. Nilma, designed this trolley considering the need to chill the foodstuffs after cooking. For this reason the trolley perfectly fits the Konvectio-Steam and any further transfer of pans can be avoided.



QUICK FROST >> 5



QUICK FROST >> 10



QUICK FROST >> 20

>> A PERFECT AND EXTENDED TIME PRESERVATION OF COOKED FOOD

Rapid cooling is fundamental to limit the microbes developing in compliance with regulations in force. The maximum development of bacteria takes place in the temperature range from +65°C to +8°C. Therefore, it is clear that cooked foods need to be reduced to a safe temperature of +8°C as quickly as possible, particularly if they are not to be eaten at once. The table below gives a significant illustration of how, within a standard production process, the contamination of foods varies according to its temperature. The contamination of all samples cooled at ambient temperature, in terms of aerobic micro-organisms per

gramme, is some tens of times higher than the one present in the beginning.

Even if they are stored at +2°C, after twelve hours, the contamination further increases (this contamination is more evident in the solid samples).

On the contrary, samples chilled with **QUICK FROST** show that the initial quality of bacteria is either unchanged or even slightly less. Besides, after a twelve hour storage at +2°C, they show no increase in the contamination at all. These data show how **QUICK FROST**, with rapid chilling, reduces the initial contamination of foods and prolongs the period during which the micro-organisms present are dormant, thus increasing the storage-time of cooked products.

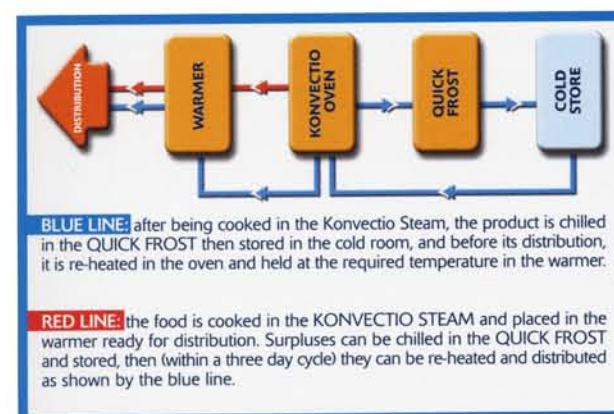
CONDITIONS AND RESULTS OF TESTS ON RAPID COOLING

Type of foodstuff (cooling conditions)	Weight sample (g)	Temp. at centre of product(°C)		Cooling time in min.	Aerobic micro-org.			Pathogenic micro-org
		Start exp.	End exp.		Start exp.	End exp.	After 12hrs	
BOILED BEEF								
(ambient.tem)	1300	+76	+35	75	<50	3X10 ²	103	nil
(chiller)	1350	+76	+8	52	<50	<50	<50	nil
STUFFED ROAST TURKEY								
(ambient.tem)	600	+73	+34	70	2x10 ²	3x10 ³	2x10 ⁴	nil
(chiller)	650	+73	+8	50	2x10 ²	10 ²	10 ²	nil
RICE SOUP								
(ambient.tem)	1150	+82	+30	45	<50	5x10 ²	9x10 ²	nil
(chiller)	1200	+82	+5	34	<50	<50	<50	nil
BECHAMEL SAUCE								
(ambient.tem)	580	+74	+29	35	50	3x10 ²	5x10 ²	nil
(chiller)	600	+74	+2	20	50	<50	<50	nil

It is important to note that the results for slow cooling at ambient temperature were obtained under optimum ambient conditions such as to make the positive results obtained with the chiller look less impressive.

>> NEW OPERATING SOLUTIONS

The quick temperature chilling of just-cooked products not only grants maximum hygienic safety, but also allows production operations to be separated from distribution ones. This is a proper way to optimise work and costs. Also it allows the storage of pre-cooked food products, solving in this way production problems, and allows kitchen operators to exploit processing and cooking equipment to the full, with the possibility to carry out more production cycles during the day. Finally, **QUICK FROST** makes it possible to optimise the production cycle on cold-line. In fact, Nilma has designed the chiller so that its trolley fits the one of the ovens Konvectio and Konvectio-Steam, on a modular system line.



>> QUALITY FULL RESPECT



To ensure a perfect hygiene, which is the basic quality characteristic of foodstuffs, **QUICK-FROST** can be equipped, on demand, with a time-programmed printer, with the function of recording the data of product chilling process. With this system, Nilma offers a concrete solution to the new problems raised by ISO 9000

certificate and by HACCP standards. In addition to that, to maintain the organoleptic qualities of pre-cooked foodstuffs, by complying with health and hygiene regulations, the temperature reduction has to be regulated in such a way that the maximum speed of product cooling is not exceeded. For this reason **QUICK FROST** is equipped with a core temperature probe, which shows the core product temperature on the display outside the machine. It takes from 40 to 60 minutes to the temperature to go from +65°C to +8°C for 60/80 kg of product. This system respects the particular qualities of processed foods time by time and, preserving their features, avoids creation of frozen patches which could alter them.

