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Why use Blast Chiller or Freezer ?

Food safety is of utmost importance in all food industries. Time and temperature relationship are critical to the growth and spread of contamination. Bacteria multiplies very fast between +8°C and +68°C (Danger Zone). The faster cooked foods chills and passes through this danger zone, the less chance there will be of bacteria growth. As a bacterium can split into 2 in every 20 minutes and multiply almost 69 million within 12 hours.

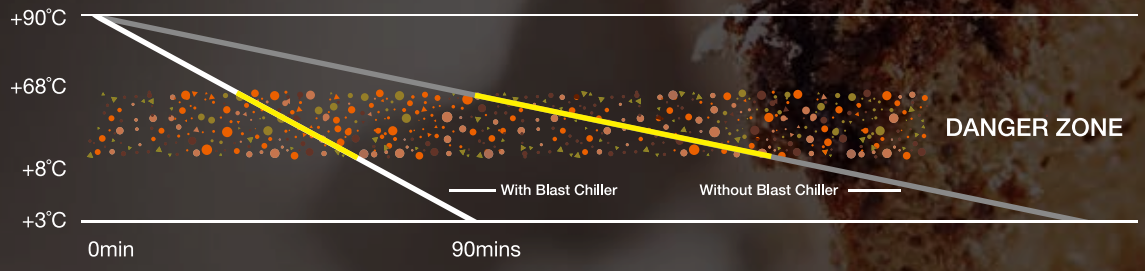
Standard storage fridges and cold rooms are designed for holding previously chilled foods, but not for chilling hot foods. To put hot food in a fridges or cold rooms already holding chilled foods is extremely dangerous, because of the rise of the fridge's temperature lifting the temperature of previously chilled foods and risking by bacterial contamination of all products in the fridge.

Blast Chilling

+90˚C → +3˚C in 90 minutes

The only way to rapidly chill cooked foods safely is by using blast chillers. The principal feature of blast chillers is that they are capable of rapidly reducing the temperature of hot foods (+90°C) to a low, safe temperature (+3°C) in 90 minutes. This eliminates the risk of bacterial proliferation from slow cooling, and retains the foods' quality, nutritional value, flavour, appearance and also extends its shelf life.

Blast Chilling +90˚C → +3˚C in 90 minutes



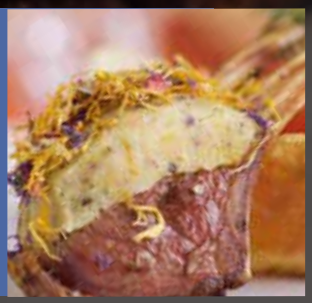
Williams Blast Chillers offer options of Soft Blast Chilling and Hard Blast Chilling for different types of foods.

SOFT BLAST CHILLING

Soft Blast Chilling is to gently chill delicate and light products from +90°C to +3°C in 90 minutes with the air temperature remaining above 0°C. Examples include fish, fruits, vegetables, cream, desserts and fried foods. It ensures the texture, flavour, aroma, appearance and nutritional value are preserved.

HARD BLAST CHILLING

Hard Blast Chilling is to chill dense and large products with higher fat contents such as meat joints, meat based sauces, mashed potato and lasagne. The air temperature drops below freezing point during the cycle ensuring the products reach the required +3°C within 90 minutes without the risk of freezing or damaging the foods.



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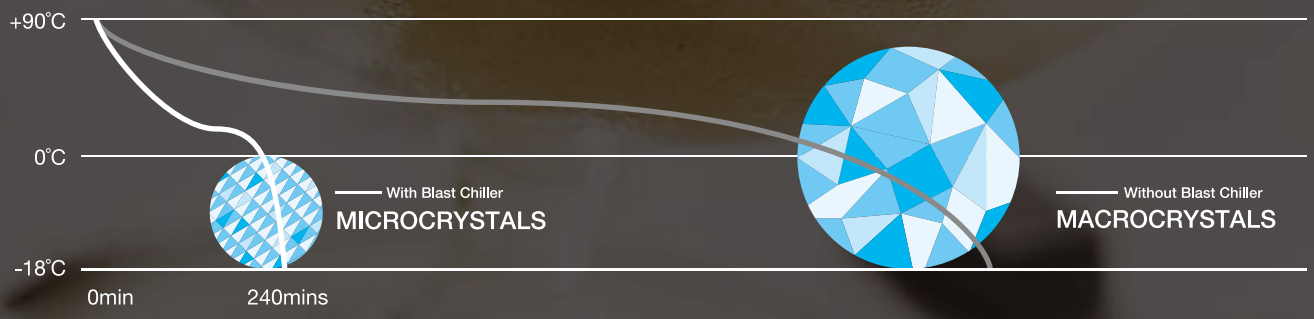
Blast Freezing

+90˚C ➞ -18˚C in 240 minutes

By using a blast freezer, the temperature of the foods can be rapidly reduced from +90°C to -18°C within the guideline time of 240 minutes. The blast freezing cycle transforms the liquid present in the foods into microcrystals (tiny crystals) which do not damage the tissue structure of the product and ensures the food does not lose its consistency and integrity. This enables you to store the foods ready for thaw, regeneration and service for up to several months. Blast freezing can also be applied for raw materials and semi manufactured products.

Blast Freezing +90˚C ➞ -18˚C in 240 minutes



The Benefits

All of the benefits can make the operation more efficient while offering customers greater choice and better quality. It allows the caterers to cope with large numbers of customers and at short notice. This will result in increased turnover and profitability.

1 Effective Time Management

Using the blast chiller, it is easy to prepare large quantities of foods in advance for later. Chefs no longer repeat the cooking process every day and it also helps the efficient use of other cooking equipment.

2 Enhanced Quality of Foods

Blast chilling immediately preserves the moisture level of goods and prevents bacterial growth. Blast freezing prevents the food molecules from being damaged by macro-crystallization. The moisture, firmness and flavour can be maintained after defrosting.

3 Effective Resource Management

Labour and equipment can be used more efficiently while ingredients can be brought in larger quantities, providing economies of scale.

4 Reduced Food Wastage

Food can be chilled safely with a longer shelf life. Portions can be made precisely and foods can then be regenerated as required.

5 Wider Menu

Using a blast chiller allows the chefs to prepare a greater selection of dishes, offering customers more choices while still maintaining the quality.

6 Prevents Food Weight Loss

The natural evaporation of moisture from cooked food would lead to weight loss. Using a blast chiller after the cooking process would stop evaporation and thus help to stop the loss of water and the foods weight.

7 Increased Profitability

If the meal turnover is limited by the number of meals you are able to cook and serve within your existing kitchen, using a blast chiller is a fast way to increase the business' capacity without necessarily expanding the kitchen or employing extra kitchen staff.

Why Williams?

Williams Easy Blast 1-2-3 Controller

The unique Williams Easy Blast 1-2-3 controller has been designed to make our equipment easy to operate with a clear and easy to read digital display and just 3 simple steps to initiate a blast chill or blast freeze cycle.

1 3 Simple Steps to start ...

(1) Select Soft Chill, Hard Chill or Freeze cycle (for blast chiller freezer model)

(2) Select time cycle (90 minutes for chill, 240 minutes for freeze) or food temperature probe controlled cycle

(3) Press to start cycle

2 Time Display

Displays the time elapsed during cycle, offering more flexibility, enabling the cycle to be stopped for half loads or delicate products

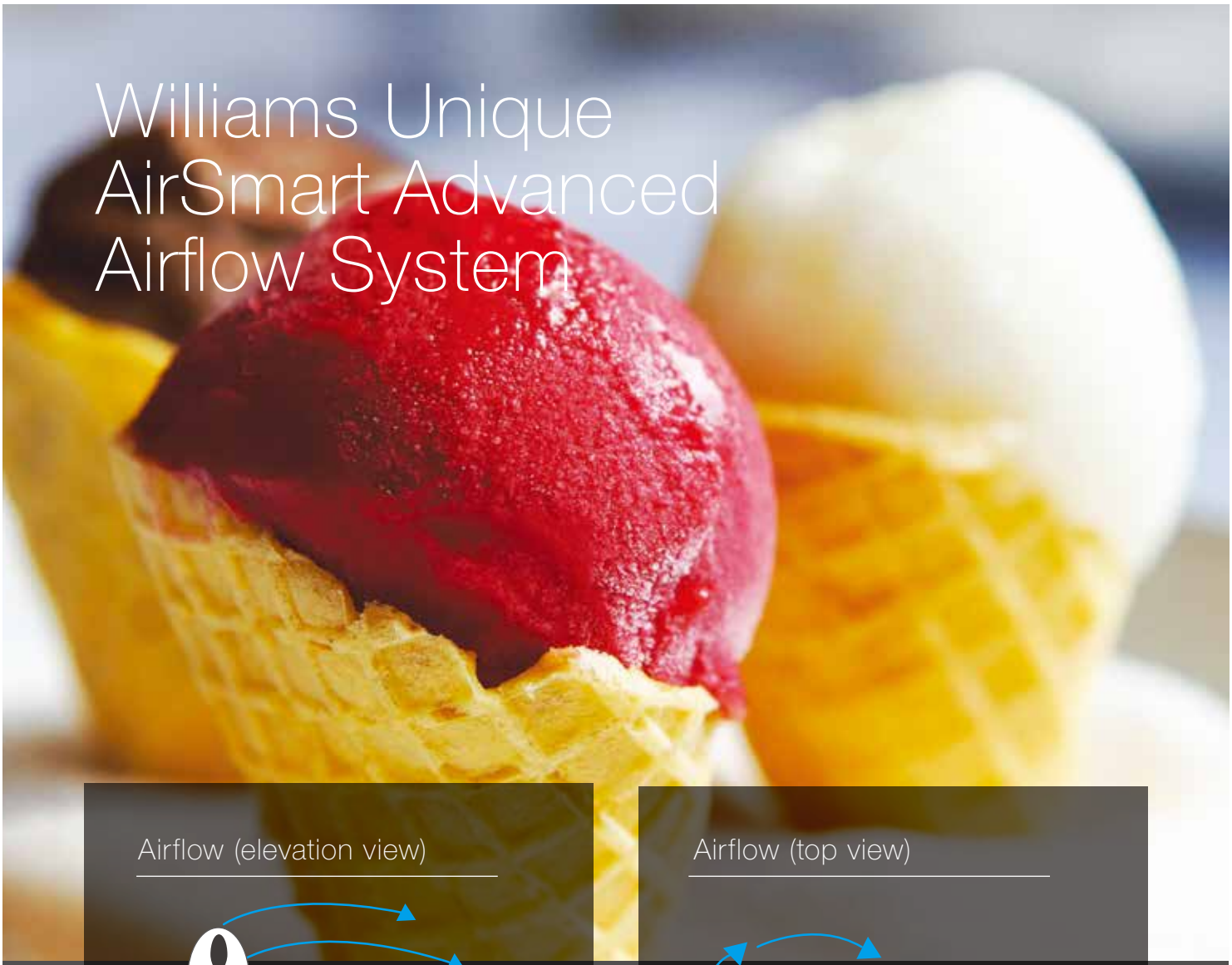
3 Temperature Display

Shows the food probe/ air temperature

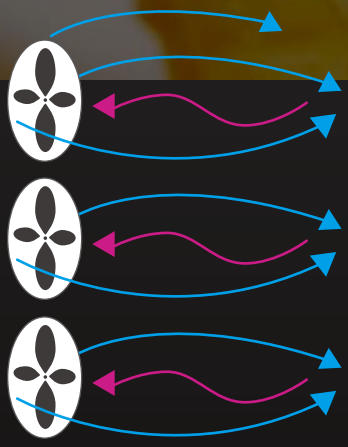
Williams Easy Blast Controller offers many users and engineering benefits:

- Simple to repeat last programme
- Equipment can be customised locally by commissioning the control panel parameters to suit different product type or site requirements—for enhancing user flexibility
- Controller diagnostics enable quick fault finding for easy servicing and maintenance
- Audible alarm at the end of each cycle and when error occurs

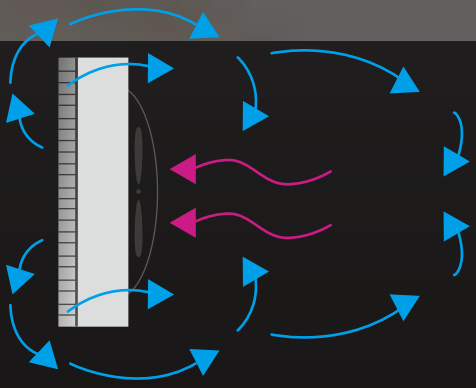
Williams Unique AirSmart Advanced Airflow System



Airflow (elevation view)



Airflow (top view)



- Powerful, energy efficient fans and the equalised air pressure chamber design ensures that the air flows evenly over all products
- Guaranteed uniform rapid chilling prevents the risk of dehydrating or skinning of the products
- Ensures the food products stay in perfect condition by preserving their flavour, texture, aroma, appearance and nutritional value
- If using a blast chiller or freezer and a full load is not required, reducing the food thickness and distributing over more pans/ shelves can speed up chilling times

Features

Built-in Thermal Printer (Roll-in type only)

Standard on modular roll-in products, easy to print out blast cycle record for HACCP requirement. The high quality thermal IP65 rated printer with a protective cover, features longer lasting print quality and clear recording of all blast chill/ freeze and storage information with space for user to show specific product detail. The printer is designed to store up to 7-days worth of data, thus the data can be safely stored even if the printer paper runs out.

Core Food Temperature Probes

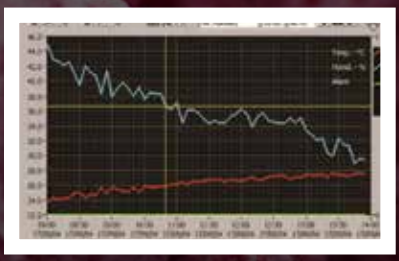
The precise food probes make it easy to monitor core temperature and ensures perfect temperature control every time.

High Velocity Fans

Large diameter energy efficient, high velocity fans offer advanced airflow for uniform chilling and freezing across all products thus preventing cell damage and dehydration, ensuring excellent product quality every time.

Easy Access Evaporator

Designed to make servicing and maintenance simple with easy access to fan for inspection, repair or replacement.



HACCP Control Software

The optional dedicated software is designed for temperature monitoring, blast cycle data storage and printing and alarm management.

Others:

- Full 304 grade stainless steel construction for assured food safety and hygiene
- Automatic defrost at the end of each cycle and every six hours in storage mode ensuring efficient and effective performance
- All models automatically switch to storage mode at the end of each blast chill cycle offering additional storage capacity
- Range of models to suit all types of requirements and environments

POD System (optional)

The Williams unique POD system offers an excellent energy efficient solution should the Roll-in type Blast Chillers, Chiller Freezers and Freezers be used for supplementary or overnight storage and reduces the wear and tear on the Blast Chiller system, extending its life.

Benefits:

- Designed to give maximum storage with no wasted refrigerated space – lower running costs
- Serviced from outside cabinet – door can remain closed during service and repairs
- Defrost heaters outside cabinet – minimal temperature increase on defrost
- Available with pre-installed condensing unit – reducing on site costs
- Low-level systems available where height is restricted – flexibility ensured

Thawing

Along with blast chilling, the thawing of frozen products can often be a food safety issue unless the correct equipment is used. While thawing the products in a warm kitchen for several hours or overnight, water molecules will concentrate and wet the surface of products. The warm temperature plus the high humidity will accelerate the growth of bacteria.

Using a standard refrigerator to thaw frozen products is also not effective. As the cool temperature keeps constant and without forced air circulation inside the cabinet, the temperature difference between the frozen products and the cabinet inside is not effective enough to bring the heat into the core of products.

In addition, cooking thawed food is quicker and safer than from frozen as it can eliminate the risk of cold spots once cooking has finished, making the cook-chill process more effective and energy efficient.

Please refer to the Overnight Thaw series to know more about our products.

Reach-in Key Features

Space saving and compact design for effective blast chilling

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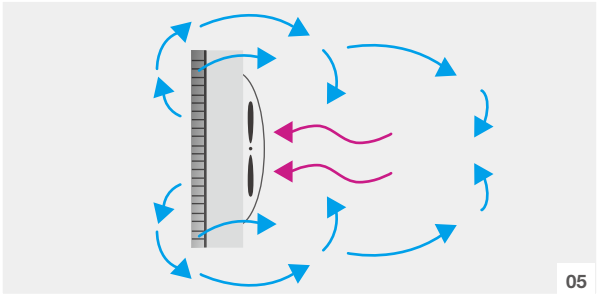
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01. Choice of models to accommodate 10 to 50 kg 1/1 GN containers with compact footprints

02. Easy to use, 1-2-3 state of the art control panel - 3 simple steps to initiate blast cycle

03. Clear LED display for the time and temperature

04. Choice of hard chill, soft chill, blast freeze and core food temperature probe controlled cycles with audible alarm indicating end of cycle

05. Unique advanced airflow design for even chilling of product load throughout cabinet

06. One core food temperature probe for simple operation, accurate measurement and control

07. Easy to access refrigeration system for servicing and maintenance

08. Automatic defrost at the end of every blast cycle and every 6 hours in storage mode ensuring efficient and effective performance

09. Automatically switches to storage mode at the end of each cycle before transferring to appropriate storage cabinet, maximising the efficient working practices

10. Fitted with heavy duty, non-marking swivel and braked castors for easy positioning

11. Excellent thermal efficiency, high density polyurethane insulation with Zero ODP (Ozone Depletion Potential) and Low GWP (Global Warming Potential)

12. Anti-condensation door mullion heaters
13. Removable anti-tilt trayslides to prevent tipping
14. Self-closing doors minimise cool air loss and reduce energy consumption
15. Over 90° door opening allows easy loading
16. Hygienic one-piece dished base with radiused corners avoids potential dirt traps
17. Removable balloon type magnetic door gasket with air release points provides an excellent seal to prevent heat ingress, easy replacement and avoiding dirt traps
18. Imported, durable and energy-efficient compressor
19. Condenser and evaporator with Cataphoresis plated coils provides high corrosion resistance properties
20. Accurate helium leak detection system ensures the quality of the entire refrigeration system
21. Automatically vaporises defrost water, drainage is not required *
22. Designed and engineered to operate up to 43°C ambient
23. Environmental-friendly CFC-free refrigerant (R404a)
24. HACCP compliant


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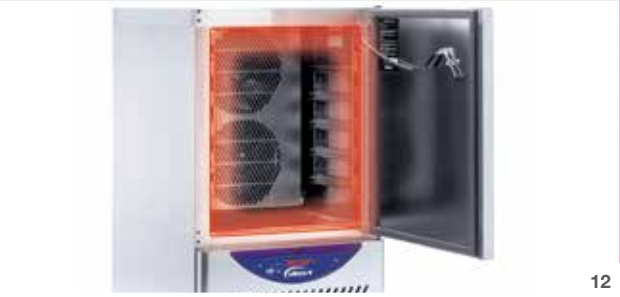
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* Available for WBC/F10 - 40 only

Reach-in

Specification

- Accommodates 1/1 GN size
- Foodsafe 304 grade stainless steel exterior and interior
- Galvanized steel exterior back and base
- Blast Chiller blast chill from +90°C to +3°C in 90 minutes
- Blast Chiller Freezer blast freeze from +90°C to –18°C in 240 minutes
- Fitted with 19ømm drainage for defrost water #

* Applicable to WBC/F10 - 40 only
# Applicable to WBC/F50 only

Options

1. 304 grade stainless steel exterior back / base
2. Cylindrical lock
3. Left-hand-side door hinge
4. Accommodate 400 x 600mm size (add 70mm to width and 75mm to Depth)
5. 220V / 60HZ / 1PH *
6. 380V / 60HZ / 3PH #

Product List

WBC/F10

WBC/F20

WBC/F30

WBC/F40

WBC/F50

Reach-in Technical Data

Model	WBC/F10	WBC/F20	WBC/F30	WBC/F40	WBC/F50
Temp Range (°C)					
Blast Chill	+90 to +3 in 90 mins				
Blast Freeze	+90 to -18 in 240 mins				
External Dimension (mm)					
Width	707				
Depth	804				
Height	885	1290	1735		1905
Internal Dimension (mm)					
Width	587				
Depth	350				
Height	380	700	1020		1195
Thickness of 304 grade stainless steel (mm)					
Exterior	0.7				
Interior	0.6				
Door	0.7				
Opening Depth (mm)	1470				
Capacity (kg)	10	20	30	40	50
Evaporator Fans	1	2		3	
Power Supply	220V / 50HZ / 1PH				380V / 50HZ / 3PH
	13 amp plug		16 amp direct connection		
Power Input - Running (amps) *	3.8	5	9.9		5.8
Rating Power (watts) *	836	1100	2178		3817
Compressor (HP)	9/16	1-1/8	1-3/4		2
Heat Rejection (watts) (Evaporating at -10°C in 32°C ambient)	1286	2221	3482		3804
Refrigerant	R404a				
Standard fittings					
Trayslides (pair)	3	6	10		13

* 20% increase for 60HZ power supply

Note: WBC/F50 is fitted with 19ømm drainage for defrost water