Blast Chillers / Freezers

ChillRapid

T3 E5 E10 T14 T14-2 E28 E20 T20 T30 T40 T50

Tecnomac®

COMCATER

Technology and functionality

Blast chilling and blast freezing are the best natural systems to extend the shelf life of food.
This is why Tecnomac, utilising its great experience in refrigeration, created the Tecnomac range of
blast chillers / blast freezers.

These machines are designed to improve the quality and organisation of the work in restaurants, cafes
bakeries, nursing homes, hospitals, corrective services, production kitchens and ice cream shops.

Great power, versatility and reliability are the most evident features of the Tecnomac blast chillers / blast
freezers. Thousands of operators all over the world are already successfully using Tecnomac blast
chillers / blast freezers, thus improving their work, leaving more time for creativity and creating many
ways to SAVE money.

## Blast Chilling / Blast Freezing

Blast Chilling

+95°C → +3°C

All food cooked and left to cool slowly, to be
served later on, loses its finest qualities. The main
reason is the extremely high bacterial growth that
takes place while the food is at a temperature of
between +65°C and +10°C. The Tecnomac blast
chiller makes it possible to lower the temperature
at the core of the foods that have just been
cooked, down to +3°C in less than 90 minutes,
reducing bacterial proliferation and dehydration
of the food. The final result is the preservation
of the quality, colour and fragrance of the food,
extending its shelf life. All this enables the chef
to work with better organisation and more calmly,
leaving more time for creativity.

+90°C
+20°C
+3°C

Without Tecnomac blast chiller
Bacteria risk

With Tecnomac blast chiller
Food Safety

+3°C
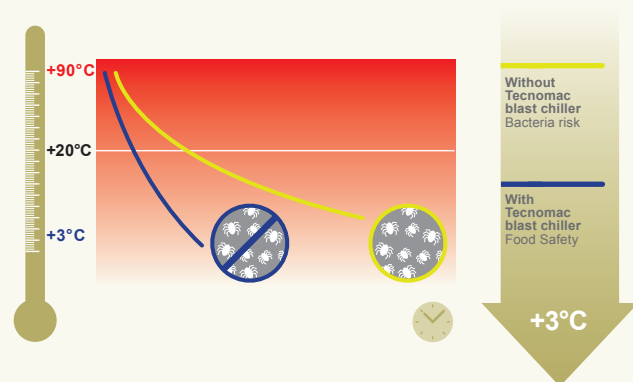
Blast Freezing

+95°C → -18°C

We all know what frozen food is, but perhaps we
don't all know that the foods taste, colour, odour,
texture and safety are maintained only if the
freezing is done quickly (blast freezing). During
the process of freezing, all the water molecules
turn into crystals. The faster and more efficient
the freezing, the smaller the crystals. It is only
with micro-crystallisation of the water that food
molecules are not destroyed. Thanks to an air
temperature of -40°C, the Tecnomac blast freezer
lowers the temperature at the core of the food
to -18°C in under 240 minutes, a sufficient time
to obtain micro-crystallisation, keeping all the
qualities of the food whole. After defrosting, there
will be no loss of liquid, firmness or flavour.

+90°C
0°C
-18°C

Without Tecnomac blast freezer
Macro-crystals

With Tecnomac blast freezer
Micro-crystals

-18°C
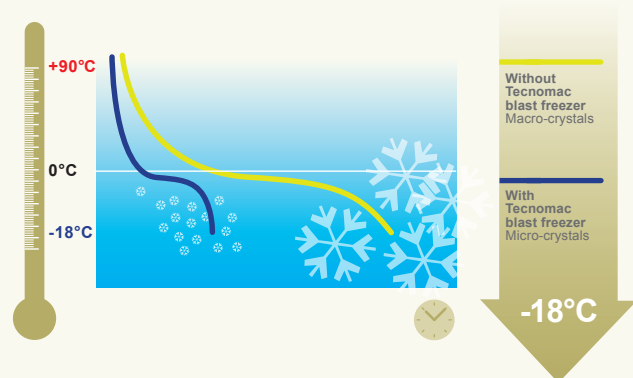
Applications

Bakery

With a Tecnomac blast chiller, it is possible to decrease or eliminate work during the night as well as overtime and labour. It is also possible to increase your product range. For this reason, the Tecnomac blast chiller is becoming an important tool in modern bakeries. Apart from the chilling of raw, pre-cooked and cooked products, the power and the quality of Tecnomac blast chillers allows the freezing of pre-leavened (ready for the oven) products such as special bread, pizza and focaccia.

Blast freezer → **Storage cabinet** → **Retarder prover** → **Baking oven**
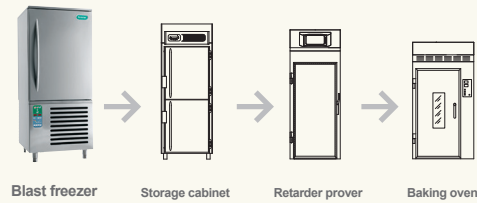
Patisserie's

The use of the Tecnomac blast chiller allows you to create special decorations and speed up the production process.

A modern patisserie cannot avoid taking advantage of blast freezing techniques. Not only blast freezing at -18°C, but also blast chilling at +3°C, enables you to work more efficiently, reduce preparation times, diminish storage space and increase food quality and safety - all thanks to the excellent performance of Tecnomac blast chillers / blast freezers. Chilling cycles are quick but gentle and guarantee perfect results for almost every patisserie product, raw or cooked, finished or semi-finished. For preservation of frozen or chilled pastry we suggest the use of our special TecnoControl holding cabinets with active humidity control.

Baking oven → **Blast Chiller / Blast Freezer** → **Storage cabinet**

Catering / Restaurants / Cafes

Tecnomac blast chillers are indispensable tools for chefs. They give restauranteurs the opportunity of planning and organising their activities in advance, offering customers a full and varied menu, fast and efficient service, while maintaining the fragrance, freshness and integrity of the food. The main advantage, besides the increased food safety (HACCP), is the re-organisation of the kitchen by eliminating work peaks and the useless everyday repetition of making the same preparations daily. Creating a more efficient and effective working environment all leading to SAVINGS.

Combi-steamer → **Blast Chiller / Blast Freezer** → **Storage cabinet** → **Combi-steamer**
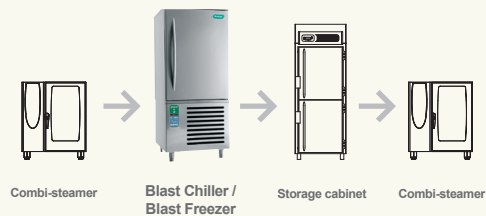
Ice cream

The creaminess of ice cream mainly depends on the presence of micro air bubbles and micro ice crystals. In order to maintain these special features, ice cream must be blast frozen as soon as it leaves the churn. This operation, besides contributing to the formation of micro ice crystals, permits the formation of a thin surface barrier that prevents both product flattening and air emission. The outcome is a creamy, soft ice cream, ready to be served or stored. Tecnomac blast freezers have a special blast freezing function for ice cream.

Whisker → **Blast Freezer** → **Storage cabinet**

Advantages

Greater Profits

TIME SAVINGS UP TO 30%
Thanks to the longer shelf life of blast chilled food and the way Tecnomac maintains the high quality of your food, it is possible to better plan your production and increase normal quantities of items in advance, eliminating the need to produce items as regularly.

SAVINGS ON PURCHASES
Thanks to the longer shelf life of blast chilled / blast frozen foods and keeping the original qualities unchanged, it is possible to purchase seasonal ingredients when they are less expensive, readily available and of better quality.

WASTE REDUCTION
Blast chilling / blast freezing increases the shelf life of foods, leaving a longer time to use the foods prepared in advance and a high reduction of the waste of raw materials and finished items.

LESS DEHYDRATION
Blast chilling in Tecnomac immediately after finishing cooking stops the moisture in food from evaporating, thereby preventing dehydration. This also secures the fragrance and flavour.

LESS WEIGHT LOSS
After cooking, food releases moisture by evaporation. Blast chilling immediately after cooking stops evaporation, thereby reducing the loss of water and therefore weight. If the product is sold by weight, revenue can be increased by up to 7%. Even if you do not sell on weight, it is what looks value for money and therefore still a saving.
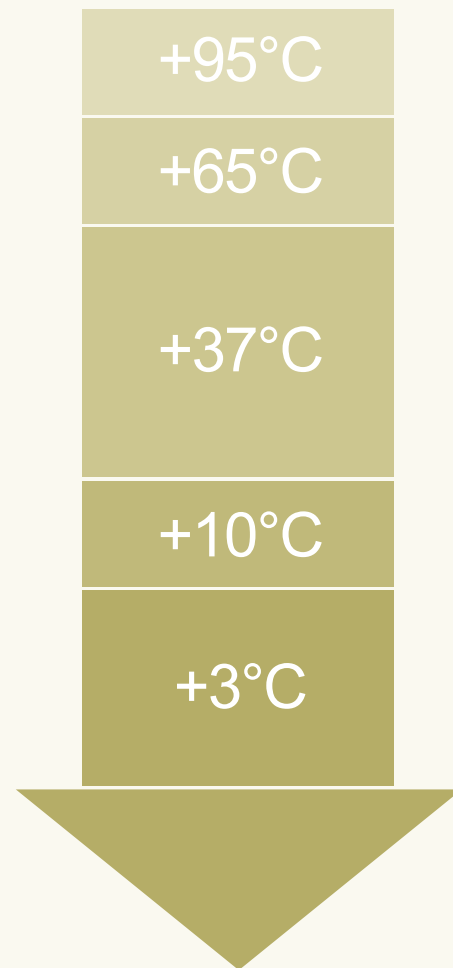
WIDER MENU
The longer shelf life of blast chilled and blast frozen foods and partly prepared items, makes it possible to increase the number of courses offered without complicating production or increasing staff.

Quality Improvement

Reduction in bacterial growth

Bacterial proliferation is very high when food is at a temperature of between +65°C and +10°C. Around +37°C the number of bacteria doubles every 20 minutes. The Tecnomac blast chiller / blast freezer makes it possible to "cross" the range of hazardous temperatures quickly, taking the core of the food to either +3°C in less than 90 minutes or -18°C in less then 240 minutes. This reduces the quantity of bacteria in food after cooking to a minimum and improves the quality, taste, colour, odour, texture and safety of your food.

NOTE: All chill and freeze times quoted are based on using a 65mm deep GN pan filled to a height of 50mm. The chilling or freezing time will be affected by the density, water, fat and sugar content of the product.

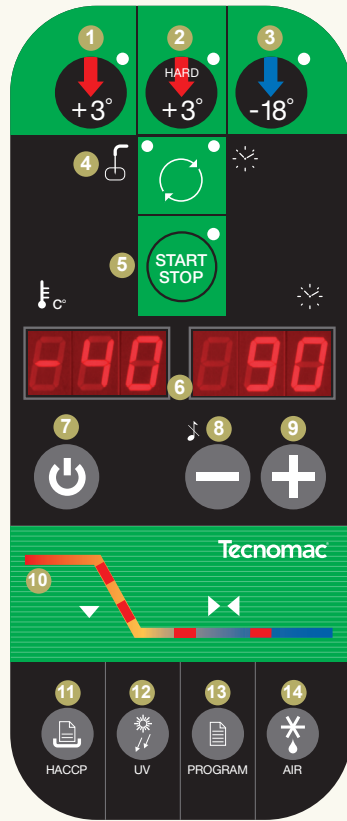|		
+95°C	NO PROLIFERATION	+95°C
+65°C	START OF PROLIFERATION	+65°C
+37°C	MAXIMUM PROLIFERATION (Bacteria doubles every 20 minutes)	+37°C
+10°C		+10°C
+3°C	EXTREMELY LOW PROLIFERATION	+3°C

Compliance with HACCP standards

The Tecnomac blast chiller / blast freezer considerably improves food safety, ensuring full compliance with HACCP standards.

Control Panel

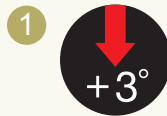Simple and intuitive to use, enables easy viewing and programming of various functions.

Working cycles

1

+3°

SOFT BLAST CHILLING

Suitable for delicate or thin food such as rice, vegetables, fried food.

Core Temperature

Air

95°C
3°C
0°C
-20°C

90 min

2

HARD +3°
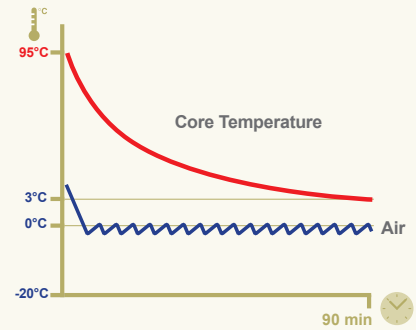
HARD BLAST CHILLING

Very effective for dense, greasy and large-sized food.

Core Temperature

Air

95°C
20°C
3°C
0°C
-20°C

90 min

3

-18°

BLAST FREEZING

Suitable for all types of food.

Core Temperature

Air

95°C
20°C
3°C
0°C
-18°C
-40°C

90 min

4 Cycle control with core probe or timer

5 Start/stop key

6 Temperature & time display

7 On/off key

8 Key for decreasing menu values

9 Key for increasing menu values

10 Status display (blast chilling-preserving)

11 Integrated printer (option)

12 Sterilising UV-C lamp (option)

13 99 programs key

14 Hot gas defrosting key

Special features

- HACCP alarms memory
- Ice cream blast freezing function
- Automatic core probe insertion check
- NEW HACCP internal data storage card to work with a standard USB pen drive (pen drive not included)
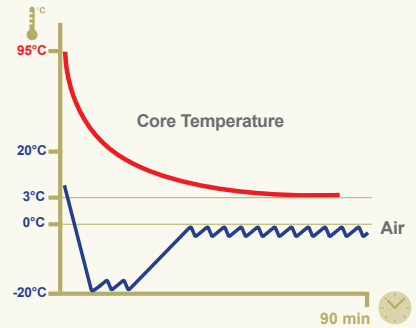 Not available on T3 (option)
- Software for PC connection (option)

Technical Solutions

Lamp UV-C (option)
Sterilises the blast chilling chamber after cleaning the machine. Useful also for sterilising working tools.

Extractable condensor filter
(only for reach-in units, except T3)
It allows quick and easy cleaning of the condensor, guaranteeing high efficiency, low power consumption and cheaper maintenance.

Core probe
Automatically controls the length of the blast chilling cycle; conic shaped, it is easily removed after the blast freezing cycle, without heating it.

HACCP memory
Standard on all machines, it permits saving all the HACCP alarms automatically.

HACCP internal data storage card
To work with a standard USB pen drive (pen drive not included)

Dual suitability trays / rack
Easily removed for cleaning, it is designed to facilitate the chilling air flow, increasing the machine efficiency. Suitable for both GN 1/1 and 600 x 400 mm trays.
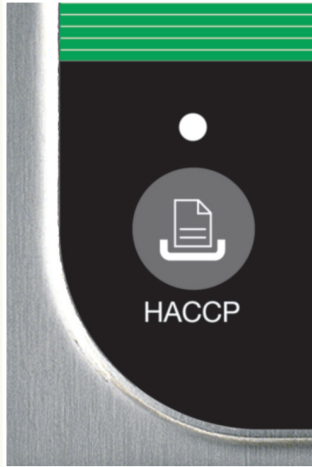
Evaporator
Easy to inspect, indirect air flow and painted to avoid corrosion. Fast and efficient hot gas defrost.

Special structure for bakery trays (option)
Extremely versatile, thanks to the 10 mm adjustable pitch between guides. Suitable for 600 x 400 mm trays.

Printer (option)
The date, temperatures and times during all the blast chilling and preservation cycles are printed out.

The Range

T3

Capacity
3 trays GN 2/3 (354 x 325 mm) or
2 x 5 lt ice cream bins

Trays pitch
70 mm

External dimensions (mm)
600 (w) x 600 (d) x 400 mm (h)

Yield*
+95°C to +3°C (7 kg) │ +95°C to -18°C (5 kg)

Voltage
240V / 1N / 50 Hz 6amp

Average absorption
600W

Integrated condensing unit

Left hinged door

Options
• Core probe

Note
• Not available with HACCP memory,
  UV-C lamp or printer

E5

Capacity
5 trays 600 x 400 mm or
5 trays GN 1/1 or
6 x 5 lt ice cream bins

Trays pitch
68 mm

External dimensions (mm)
800 (w) x 700 (d) x 960 (h) legs or 875 (h) rollers
or 902 (h) castors

Yield*
E5-14
+95°C to 3°C (14 kg) │ +95°C to -18°C (8 kg)
E5-20
+95°C to +3°C (20 kg) │+95°C to -18°C (12 kg)

Voltage
E5-14 ... 240V / 1N / 50 Hz 4.5amp
E5-20 ... 240V / 1N / 50 Hz 6.5amp

Average absorption
E5-14 ... 950W │ E5-20 ... 1350W

Integrated condensing unit

Reversible door

Options
• Sterilising UV lamp
• Incorporated printer
• Castors
• Structure with variable pitch 10 mm
• Water cooled condensor
• Locating pins to suit Rational SCC61
• HACCP memory included on E5-20 only.
  Optional on E5-14
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

E10

Capacity
10 trays 600 x 400 mm or
10 trays GN 1/1 or
15 x 5 lt ice cream bins

Trays pitch
68 mm

External dimensions (mm)
800 (w) x 700 (d) x 1486 (h)

Yield*
+95°C to +3°C (35 kg) │ +95°C to -18°C (25 kg)

Voltage
Single phase ... 240V / 1N / 50 Hz 12.5amp or
Three phase ... 415V / 3N / 50 Hz 6.5amp

Average absorption
E10 1 phase ... 2920W │ E10 3 phase ... 2850W

Integrated condensing unit

Reversible door

Options
• Sterilising UV lamp
• Incorporated printer
• Castors
• Structure with variable pitch 10 mm
• Water cooled condensor
• Remote condensing unit
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

T14

Capacity
14 trays 600 x 400 mm or
14 trays GN 1/1 or
18 x 5 lt ice cream bins

Trays pitch
68 mm

External dimensions (mm)
800 (w) x 800 (d) x 1876 (h)

Yield*
T14 / 40
+95°C to +3°C (40 kg) │ +95°C to -18°C (30 kg)
T14 / 65
+95°C to +3°C (65 kg) │+95°C to -18°C (50 kg)

Voltage
T14 / 40 ... 415V / 3N / 50 Hz 10amp
T14 / 65 ... 415V / 3N / 50 Hz 12amp

Average absorption
T14 / 40 ... 3000W │ T14 / 65 ... 3500W

Integrated condensing unit

Reversible door

Options
• Sterilising UV lamp
• Incorporated printer
• Castors
• Structure with variable pitch 10 mm
• Water cooled condensor
• Remote condensing unit
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

T14-2

Capacity
14 trays 600 x 400 mm or
14 trays GN 2/1 or 28 trays GN 1/1 or
36 x 5 lt ice cream bins

Trays pitch
68 mm

External Dimensions (mm)
800 (w) x 1100 (d) x 1876 (h)

Yield*
+95°C to +3°C (70 kg) │ +95°C to -18°C (55 kg)

Voltage
415V / 3N / 50 Hz 12amp

Average absorption
3500W

Integrated condensing unit

Reversible door

Options
• Sterilising UV lamp
• Incorporated printer
• Castors
• Water cooled condensor
• Remote condensing unit
• Structure with variable pitch 15 mm (GN 2/1)
• Version for Convotherm 10.20 and Rational 102
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

E28

Capacity
14 trays 800 x 600 mm or
14 trays GN 2/1 or 28 trays GN 1/1 or
36 x 5 lt ice cream bins

Trays pitch
68 mm

External Dimensions (mm)
800 (w) x 1170 (d) x 1856 - 1911 (h)
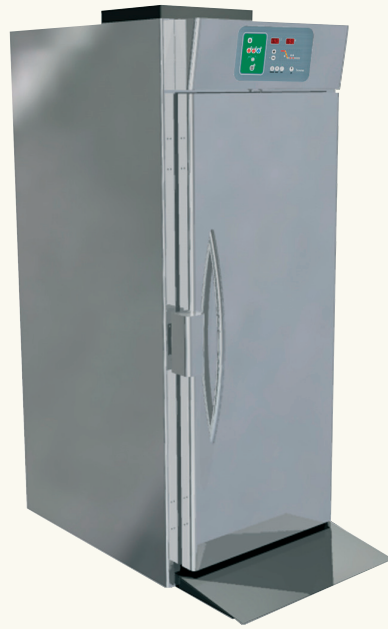
Yield*
+95°C to +3°C (70 kg) │ +95°C to -18°C (55 kg)

Voltage
415V / 3N / 50 Hz 12amp

Average absorption
3500W

Integrated condensing unit

Reversible door

Options
• Sterilising UV lamp
• Incorporated printer
• Castors
• Water cooled condensor
• Remote condensing unit
• Structure with variable pitch 15 mm
• Version for Convotherm 10.20 and Rational 102
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

E20

Capacity
1 trolley 800 x 600 mm or
1 trolley GN 2/1 or
1 x Rational SCC201 trolley

Internal useful dimensions (mm)
870 (w) x 680 (d) x 1850 (h)

External Dimensions (mm)
890 (w) x 1250 (d) x 2410 (h)

Yield*
+95°C to +3°C (80 kg) │ +95°C to -18°C (65 kg)

Voltage
415V / 3N / 50 Hz 12amp

Average absorption
3880W

Integrated condensing unit

Reversible door

Options
• Sterilising UV lamp
• Incorporated printer
• Water cooled condensor
• Remote condensing unit
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

T20-CA

Capacity
1 trolley 600 x 400 mm or 1 trolley GN 1/1

Internal useful dimensions (mm)
650 (w) x 550 (d) x 1800 (h)

External dimensions (mm)
900 (w) x 1190 (d) x 2180 (h)

Yield*
T20-CA / 80
+95°C to +3°C (80 kg) │ +95°C to -18°C (65 kg)
T20-CA / 110
+95°C to +3°C (110 kg) │ +95°C to -18°C (95 kg)

Voltage
415V / 3N / 50 Hz 12amp

Average absorption
T20-CA / 80 ... 3900W │ **T20-CA / 110** ... 4710W

Remote condensing unit dimensions *
1102 (w) x 571 (h) x 700 (d) mm

Right hinged door (left on request)

Options
• Sterilising UV lamp
• Incorporated printer
• Water cooled condensor
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

Note
• Insulated floor h 60 mm with external ramp or
  sunken floor option available -
  must be perfectly level floor

T20-R / T20-C+

Capacity
T20-R
1 trolley for Rational SCC201 combi-steamer
T20-C+
1 trolley for Convotherm 20.10
combi-steamer (Plus 3)

External dimensions (mm)
1040 (w) x 1020 (d) x 2275 (h)

Yield*
T20-R / 80 │ **T20-C+ / 80**
+95°C to +3°C (80 kg) │ +95°C to -18°C (65 kg)
T20-R / 110 │ **T20-C+ / 110**
+95°C to +3°C (110 kg) │ +95°C to -18°C (95 kg)

Voltage
415V / 3N / 50 Hz 12amp

Average absorption
T20-R / 80 │ **T20-C+ / 80** ... 3900W
T20-R / 110 │ **T20-C+ / 110** ... 4710W

Remote condensing unit dimensions *
1102 (w) x 700 (d) x 571 (h) mm

Right hinged door

Options
• Sterilising UV lamp
• Incorporated printer
• Water cooled condensor
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

Note for all remote models ...
• Remote condensing unit included in price to suit remote run up to 25 metres
• Positioning, assembly, installation pipework and connector cable, refrigerant gas and connections by refrigeration mechanic and electrician are not included
• Trolley not supplied in trolley capable machines

The Range

T30

Capacity
1 trolley 800 x 600 mm or
1 trolley GN 2/1 or 1 x Rational SCC202 trolley

Internal useful dimensions (mm)
870 (w) x 930 (d) x 2000 (h)

External dimensions (mm)
1370 (w) x 1210 (d) x 2274 (h)

Yield*
T30 / 110
+95°C to +3°C (110 kg) │ +95°C to -18°C (95 kg)
T30 / 140
+95°C to +3°C (140 kg) │ +95°C to -18°C (125 kg)

Voltage
T30 / 110 ... 415V / 3N / 50 Hz 12amp
T30 / 140 ... 415V / 3N / 50Hz 18amp

Average absorption
T30 / 110 ... 4000W │ T30 / 140 ... 5900W

Remote condensing unit dimensions (mm) **
1470 (w) x 960 (d) x 830 (h)

Right hinged door

The machine is delivered disassembled

Options
• Sterilising UV lamp
• Incorporated printer
• Pass through
• Special floor and integrated ramp H22 mm
• Water cooled condensor
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

Note
• Insulated floor h 70 mm with external ramp or
  sunken floor option available -
  must be perfectly level floor

T40

Capacity
1 trolley 1000 x 800 mm or
1 trolley GN 2/1 or 2 x Rational SCC201 trolleys

Internal useful dimensions (mm)
930 (w) x 1080 (d) x 2000 (h)

External dimensions (mm)
1550 (w) x 1370 (d) x 2270 (h)

Yield*
T40 / 150
+95°C to +3°C (150 kg) │ +95°C to -18°C (135 kg)
T40 / 200
+95°C to +3°C (200 kg) │ +95°C to -18°C (175 kg)

Voltage blast chiller
240V / 10 amp single phase
Voltage condensing unit
415V / 3N / 50 Hz 17amp & 21amp

Average absorption
T40 / 150 ... 5300W │ T40 / 200 ... 7200W

Remote condensing unit dimensions (mm) **
960 (w) x 1560 (d) x 830 (h)

Right hinged door

The machine is delivered disassembled

Options
• Sterilising UV lamp
• Incorporated printer
• Pass through
• Special floor and integrated ramp H22 mm
• Water cooled condensor
• Additional door (pass-through)
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

Note
• Insulated floor h 70 mm with external ramp or
  sunken floor option available -
  must be perfectly level floor

T50

Capacity
2 trolleys 800 x 600 mm or
2 trolleys GN 2/1 or 2 x Rational SCC202 trolleys

Internal useful dimensions (mm)
930 (w) x 1450 (d) x 2000 (h)

External dimensions (mm)
1780 (w) x 1790 (d) x 2330 (h)

Yield*
T50 / 270
+95°C to +3°C (270 kg) │+95°C to -18°C (250 kg)
T50 / 400
+95°C to +3°C (390 kg) │+95°C to -18°C (360 kg)

Voltage blast chiller
240V / 16 amp single phase
Voltage condensing unit
415V / 3N / 50 Hz 31amp & 44amp

Average absorption
T50 / 270 ... 9700W │ T50 / 400 ... 15000W

Remote condensing unit dimensions (mm) **
1170 (w) x 2180 (d) x 1220 (h)

**Right hinged door**

The machine is delivered disassembled

Options
• Sterilising UV lamp
• Incorporated printer
• Water cooled condensor
• Additional door (pass-through)
• NEW HACCP internal data storage card with
  gate to insert standard USB pen drive
  (pen drive not included)

Note
• Insulated floor h 100 mm with external ramp or
  sunken floor option available -
  must be perfectly level floor

• T40-R / 150 and T40-R / 200 also available
  (compatible with Rational SCC202 trolley)
• Larger tunnel machines also available
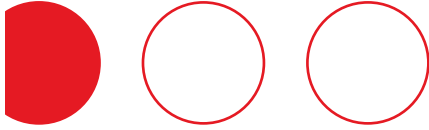
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