



Meeting the demands of modern-day meal distribution



Meals - Central Production Unit.

- La Gourmande - is a privately operated food central production unit
- owned by the Dutch Hospital Group Isala
- Operational since September 2007
- Sited on an industrial estate at Zwolle south west Holland
- Operated on a commercial basis



Facts & Figures

- Total kitchen floor surface 1100m².
- Offices, cafeteria, changing facilities, technical area total 288m².
- Current output 1550 meals per day.
- Total staff: 31 [only 6 full time employees].
- Maximum output 2500 meals a day.
- Combination of plated and bulk-food chilled meals [50/50 split].



Facts & Figures

- Delivering to 2 hospitals, 3 nursing homes, 1 rehabilitation centre and 3 cafeterias.
- Investment based upon long term customer contracts.
- Food production based on home cooking (20%) and bought-in (80%).
- High flexibility in choice of food, delivery and logistics.
- Sustainability based investment centred around new technologies.



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- One double bay used for loading and un-loading.
- Time scheduled deliveries.
- Internal logistics are good.
- Separate zones for arrivals and departures.



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- Internally having clear routing and good use of day light.
- Automated doors.
- Low damage risks because of preventive precautions.
- Easy cleaning operations.
- Non-slip floors.
- Sufficient storage for chilled, frozen, and ambient products.



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- Food quality and price strategy is based around the maximum use of convenience bought-in products.
- Cooking capacity consists of only; 2 combi-ovens, 2 boiling pans and 1 range.
- 1 roll-in blast chiller.
- Cooking area only 25m².



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- Chilled trolley storage is used [unchilled storage is possible].
- 60 Vitalis Carbo-Fresh trolleys for plated meal distribution.
- 20 Navis Carbo-Fresh trolleys for bulk-food distribution.
- Trolley storage sited between the wash-up area and plating area.



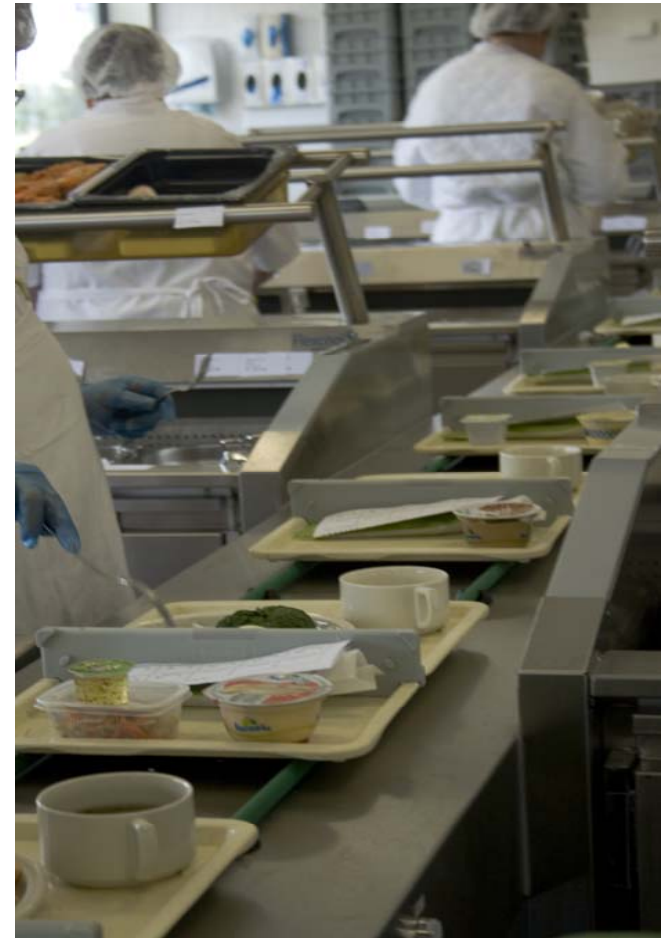
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- Inside the Vitalis trolley includes Carbo-Fresh cassette and thermo-conduction heating shelves.
- Available in 7 capacities.
- All trolleys can be used in random order.
- Trolley identification and destination are determined during plating and loading.

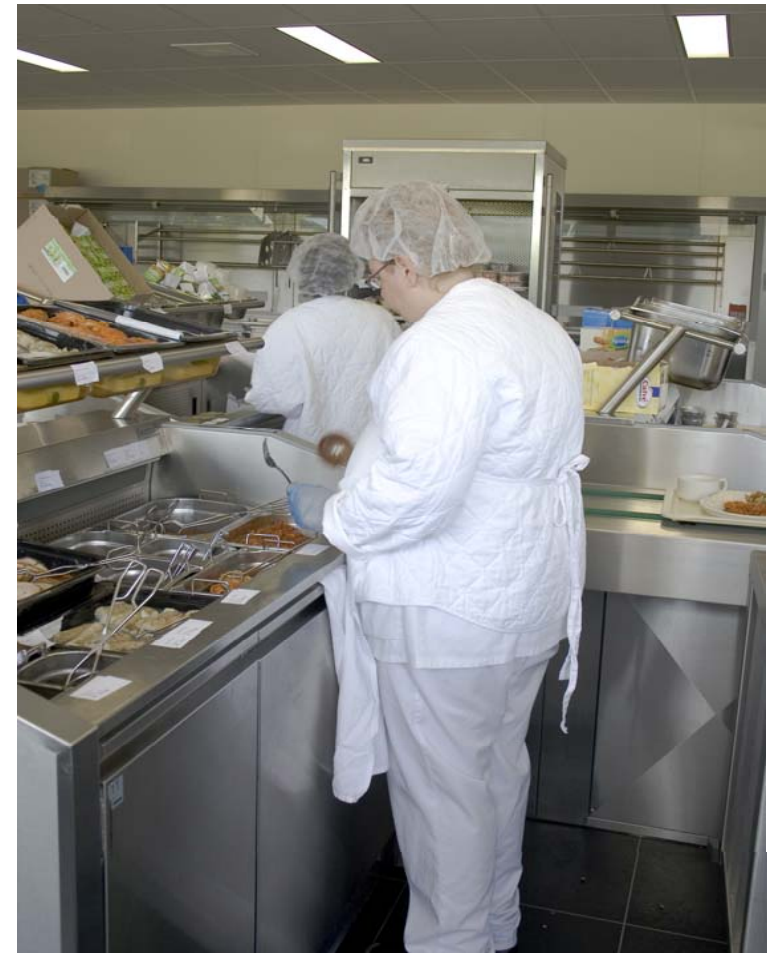


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- Cold plating of 800 trays.
- Use of refrigerated plating stations to keep the food at 3°C during plating.
- Plating room at 15°C for comfortable working circumstances.
- Sanitransfer cord conveyor for ease of use and cleaning.



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- Navis Carbo-Fresh trolleys for refrigerated bulk-food transportation.
- Double skinned, insulated stainless steel construction.
- Trolleys capable of offering up to 20 hours refrigeration from one charge.
- Isecom HACCP monitoring system available.

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- Trolley destination and identification during loading by programmable tags.
- Once the tag is attached the incorporated chip transfers data to the trolley's control panel.
- One trolley is used in central kitchen for testing food quality and regeneration cycles.



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- Carbo-Fresh injection station including control panel, time controlled injection gun, exhaust system and CO2 security.
- One push easy to use buttons with preset timers.
- Injection gun with ergonomic, weightless spring connection.
- No special requirements needed for staff or working environment.



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- Carbo-Fresh injection station 25 meters from the storage tank.
- Stainless steel, double skinned insulated vacuum tank.
- Tank volume and security are controlled by Air Liquide with modem connection 24 hours a day.
- Tank capacity can vary from 5 to 30 tons capacity.

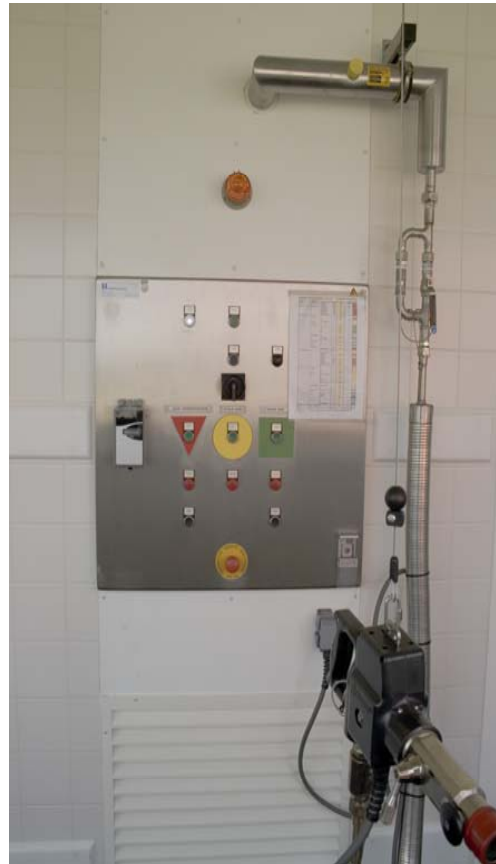
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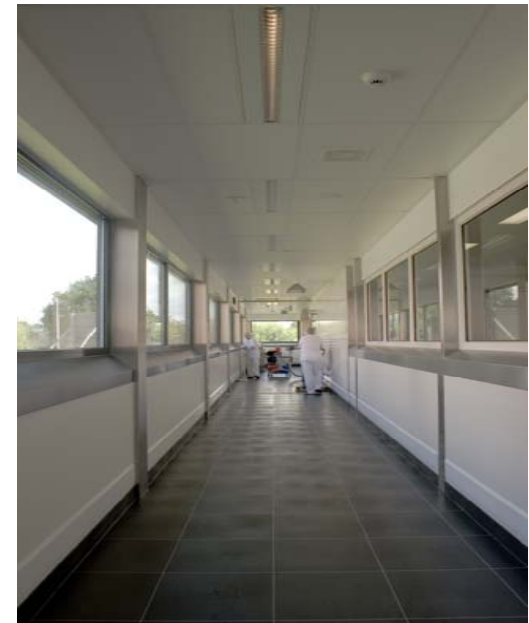
- Injection gun connection with safety valve.
- Automated injection in 20 to 60 seconds depending on the type of trolley being used and the duration of refrigeration required.
- Injection gun with spring connection giving lightweight, ergonomic and comfortable operation.
- Extraction of carbon-dioxide residue by ventilated extraction shaft.

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- One push button for full CO2 injection.
- Injection gun with continuous defrost.
- Injection time preset.
- CO2 monitoring and security system.
- Emergency stop.
- Trolley registration with Isecom system on the spot (time, destination and temperature).



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- Apart from the Isecom system a visual check immediately identifies cold production within the trolley [frost condensation on the injection nozzle is evident].
- After CO₂ injection trolleys are transferred to the loading zone.

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Loading and unloading zone for up to 30 trolleys [transport capacity approximately 30 trolleys per lorry].

Average time between loading the refrigerated food and serving hot food is between 4 and 5 hours.

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- Lorry arrives and takes position at the loading zone.
- The lorry is ambient and NOT refrigerated [huge cost savings].
- Easy and comfortable loading of the trolleys [3 abreast with maximum 10 in a row].
- Average time between loading and unloading at site is 45 minutes.

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- Lorry returns with empty/used meal trolleys.
- Removal of transport security bars takes place.
- Unloading of the trolleys to the cleansing zone.

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- Bulk-food re-generation in Serelis trolleys at ward level and Energis static ovens at the nursing homes and rehabilitation centre. Crockery, stainless steel pans, disposable foils and plastics are all used in service.

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- Return of the used trolleys to the “unclean” zone adjacent to the wash-up area.
- Isecom system transmits a “wake-up call” to the trolleys modem and identification takes place.
- The alerted modus is activated and all data is transferred.



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- Trolleys arrive in wash-up/cleaning area where another transmitter collects all data from the trolleys [in random order] and transfers the data automatically to the nearby office. A computer records and saves all the data. Any malfunctions, misuse or temperature problems being reported and highlighted on screen, including identification of trolleys and destinations.

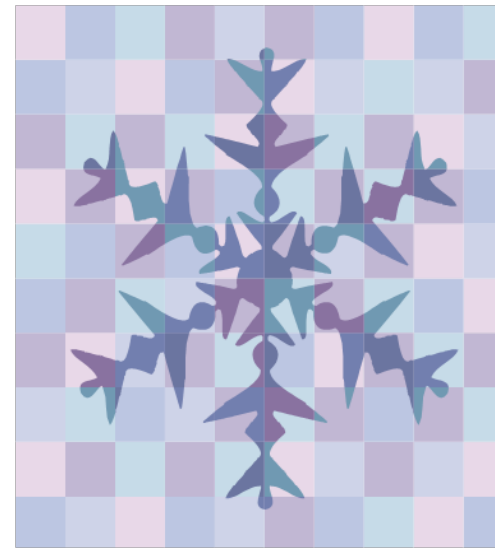
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- Iseco trolleys can be cleaned with pressure-jet to a maximum 8 bar pressure.
- Cleaning by automatic trolley-wash installations is also possible.

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Environmental & Sustainable facts



- Re-cycled CO₂ used as cold agent. NO electricity for compressors [trolleys or lorries]. No CFC's. No maintenance or repairs. No energy required to operate compressors or to diffuse heat at ward level [extraction].
- $\pm 0\%$ greenhouse effect. Low carbon footprint.
- Less difficulty with cleaning because bacteriostatic value of CO₂ is zero.

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Environmental & Sustainable facts.



- Floor surface made of non-slip rubber using tiles made from revolutionary re-cycled car tyres [low risk non-slip].
- Segregated underground waste storage (paper, plastics, glass, waste food and chemicals). No refrigeration for waste products needed and no odours.

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