

CUTTING EDGE SERVING

FOOD DISPLAY TECHNOLOGY IS EVER DEVELOPING IN SEVERAL DIFFERENT EQUIPMENT AREAS. THEREFORE WE INVESTIGATE THE MAIN CATEGORIES AND THE LATEST ADVANCES IN EACH.

HEATED DISPLAYS



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Heated displays are most often deployed in grab and go or café-style premises, as well as for buffets, and it is the latter that has piqued the interest of Scottish manufacturer Moffat's research and development team. The firm recently launched a range of drop-in units designed to be, literally, dropped in to foodservice counters, breakfast bars and buffets.

Featuring a range of models, each unit comprises all the working parts of a foodservice counter. They are supplied ready to be inserted into any new or existing counter, whether shop-fitted or custom-built, including those made of stainless steel, granite, marble, ceramic tiles or Corian.

In terms of technology, the drop-ins feature the Sahara multi-fan system. This should save energy by blowing re-circulated air through heating or chilling elements, rather than the conventional method of drawing air through the heat exchanger or heating elements first.

The heated grab and go display drop-in within the range also features a 'Free Flow AirFlow' system, which should maintain

pre-heated (and pre-chilled) food at regulated temperatures, without deterioration or drying out. The invisible air curtain flows past the front of the food products and should reduce the chance of the cold or warm air escaping, and maximise the efficiency of the unit. Meanwhile, the 'Free Flow' system circulates the

air inside the cabinet, maintaining consistent temperature.

Williams Refrigeration has also joined the heated display crowd with the introduction of its first heated model, the Scarlet Multideck, to its established Gem range of grab and go merchandisers. The Scarlet Multideck has four individually-controlled temperature zones, with three titled shelves and an interior base, making it possible to keep different foods at their ideal hot held temperatures.

The merchandiser should maintain reliable, consistent and safe temperature with its infra-red quartz halogen lamps. This system provides instant and consistent heat, maintaining the holding temperature of 65°C - 70°C for hot foods such as pasties, sausage rolls, soups and pies.

Full-length LED lighting is intended to make the food products look attractive, along with a polished foodsafe stainless steel interior and the optional enhancement of panoramic glass ends, which are designed to improve product visibility. The unit has a slimline profile of 635mm, and an operating noise level of 35db. It is available in a range of colours, and widths of 710, 960 and 1,250mm. Plus double wheel castors should make it easy to move into position.

Trak Systems' latest innovation straddles the heated and chilled spheres. Its Hot and Cold Display Unit was developed with technology in mind and is said to deliver an energy efficient display unit which can cater for both hot and cold food.

According to Trak, the unit is built using quality materials and with specialist light engineers, plus it has an optimised reflector and infrared lamp which should reduce the energy



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A bain-marie unit from Moffat's Drop Ins range.

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Williams' new heated Scarlet Multideck has a slimline profile of 635mm.

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by up to 50%, yet still give out a powerful heat source. The unit also utilises hydrocarbon refrigerant R290 which should be a future-proof gas.

The manufacturer's head of business development Anthony Pettit

commented: "The controller has a communications port, so either now or in the future, we can offer the customer additional services such as remote monitoring and diagnostics, it's just a matter of connecting the

hot or cold unit to the device. HACCP is an area we are interested in and all data, going back 12 months can be stored via our cloud computing platform to help client understand busy service periods."

REFRIGERATED DISPLAYS

Refrigerated display cabinets can run the gamut from showcasing drinks to salads to gelato. And it is the ice cream sector that Carpigiani concentrates on.

UK sales director Scott Duncan detailed: "Refrigerated displays for gelato and ice cream are designed to be a stunning visual showcase to entice customers to buy the delicious flavours within. A gelato display must work hard in today's environment to ensure that product is kept fresh and ready to serve whilst ensuring that the latest energy efficiency techniques are employed. Two key areas for development in gelato refrigerated counters are around energy efficiency and also ease of use/accessibility."

The firm is the exclusive UK supplier of Italian display equipment manufacturer IFI's complete range of display cases and countering systems. One stand-out piece is the Tonda, said to be the world's only rotating gelato display cabinet.

The hermetic closures, enhanced insulation and intelligent defrosting of the Tonda are said to help operators save up to 15% compared to other appliances on the market. With the 'storage' function of the Tonda, the whole unit turns into a giant pozzetti at the end of the day as the hermetic closures should mean that the gelato can remain in the Tonda overnight and don't have to be removed and placed into a separate freezer.

Plus the electronic or hand-controlled pedal rotates the unit to bring the flavours to the operator in approximately 4.5 seconds. This should allow the user to remain in a more vertical position (reducing time spent bending over a counter) therefore maintaining a more

balanced posture.

Over at Victor Manufacturing, it recently unveiled a collection of refrigerated and heated display units as part of its Evolution range.

Commercial manager Peter Brewin detailed: "Aimed at the food-to-go market, the new refrigerated unit has been developed on the back of our 25 years' experience. Continual development of refrigeration and airflow engineering allows us to develop and improve on existing designs to create better, more efficient models."

This latest model within the Evolution collection focuses on the overall aesthetics of the unit, with energy efficient LED lighting, integrated night blinds and flexible display areas.

The heated unit, meanwhile, utilises a fan-assisted hot air method to create an envelope of heat between each of the display shelves. The temperature of each shelf can be set independently by the operator to suit the product on display, using controls concealed in the front of the unit.

Both models are designed to be compact, each with a footprint of 600mm x 750mm. And Victor believes that another advantage is that both units' designs complement one another.

These new displays are manufactured in the UK, with a claimed delivery lead time of 2 weeks, and come complete with a 2-year warranty.

Elsewhere, bespoke counter manufacturer Proline actively tries to promote the use of water-cooled hydrocarbon refrigeration systems over traditional air-cooled compressors for its chilled displays



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as the latter tend to release a lot of unwanted heat into the atmosphere.

According to estimating manager Paul Curran: "Water-cooled units are designed to be much more energy efficient and generate less heat, which in turn means a cooler environment. They also have a greater lifespan and are much quieter when in use compared to air-cooled units."

Chilled water systems include both supply and return piping in a closed circuit, which means they are sealed from the atmosphere and should not require extensive chemical treatment to control contamination or corrosion.

Curran continued: "In places such as garden centres, for example, the environment is warm which means the additional heat that comes from air-cooled units only adds to the humidity; this can be avoided by using water-cooled chillers.

"The full range of Proline chilled displays are not affected by the use of water-cooled compressors and can still offer the full range from chilled wells, delis, patisseries and multi-tiers.

"Proline are one of a few companies in the industry that can offer this type of technology, this helps to keep us at

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The IFI Tonda that Carpigiani supplies is said to be the world's only rotating gelato display cabinet.



4 *Proline promotes the use of water-cooled hydrocarbon refrigeration systems over traditional air-cooled compressors for its chilled displays.*

the forefront of counter and chilled display design.”

At Fri-Jado, it has undertaken a 10-year research and development programme, which resulted in the launch of its patent pending OmniCold refrigeration technology for its range of chilled Custom Counters.

OmniCold works by blanketing the product on display from all sides. A low velocity air flow of approximately 120m³/h/m circulates above and below the food. Director of national accounts Gary Thacker said: “This feature is designed to combine the benefits of forced air flow (typically more energy efficient and temperature stable) with static air flow (typically less product dehydration) cooling systems.”

Refrigerated air circulated across the product deck chills product from below, whilst slots in the deck

allow air to escape to the top. This should prevent the top air flow from collapsing and enable higher stacking heights, even at minimal air speeds.

An air outlet grille creates an air flow which reduces turbulence and therefore mitigates the infiltration of ambient air. This should mean less energy is required to refrigerate the air, from 0 degrees to -3 degrees at 3M0 conditions. Thacker added: “Compared with static cooling, the air flow greatly enhances the energy transfer capabilities from the coil, allowing smaller fin distances and higher evaporating temperatures, of up to -4 degrees, for a significant improvement in energy efficiency.”

Fri-Jado’s chilled counters also incorporate features such as efficient LED lighting, DC fans, triple pane insulated side glass and a fully

insulated shell with no thermal bridges.

Elsewhere, the ISA brand that Taylor UK supplies has just launched the Metro range of refrigerated display cabinets. The refrigeration system uses R290 natural refrigerant and efficient watertight compressors with electronic fans.

Taylor UK marketing manager David Rees believes: “These technologies give greater energy efficiency, with savings up to 10% compared to R404 versions, and lower vibrations and noise levels (up to 30% less compared to previous models).”

ISA only uses foam insulation which has been expanded with CO₂, which is eco-friendly and is said to have good insulating properties.

The Metro is available in multiple configurations including chilled self-service (+1/+7°C) and assisted service (+1/+5°C) versions. In addition ISA offers a specialist chocolate display model, which includes a built-in relative humidity control. The Metro is also available in heated versions.

Rees detailed: “The ISA Metro has the largest visible display area relative to its footprint compared to other standalone chilled display cabinets.

“It features special insulated display glass keeps the cold in and the heat out (or vice versa, in the case of the heated models). The insulating glass means you can control even the most challenging climatic conditions, eliminating problems caused by condensation. The self-service versions are available with optional glass side panels to aid with efficient temperature retention.”

BUFFET DISPLAY EQUIPMENT

5 *Signature FSE’s Venta modular buffet system.*

6 *BGL Rieber’s K-Pot chafing dishes are now available with lids.*

Buffet displays have to be simple for diners to use, attractive for front of house utilisation and maintain food at appropriate temperatures. With those requirements in mind, FEM

expanded its range of buffet warmers with the introduction of Vollrath’s larger Mirage Induction Buffet Warmer. The design is now available

in a 1/1 GN capacity, for both drop-in and countertop models.

Said to be an energy efficient appliance that offers a low wattage warming solution for keeping a buffet at temperature, the induction buffet warmer was designed to be stylish, with a robust black ceramic glass top is combined with touch screen

controls. Safety features include over-heat protection, empty-pan shut-off and small-article detection.

The new Induction Warmer offers four power levels: low, medium, high and chafers preheat. It measures 584mm wide x 406mm long. Up to three units can be connected together and run off a single 13A plug.

Vollrath believes that induction has huge potential and is developing a range of products that use the technology in innovative ways. For example, in terms of buffets, the company has developed an induction Soup Kettle within the Mirage range that can be used for products such as chilli con carne as well as soups. It is said to heat food faster and more precisely than conventional kettles, claimed to eliminate overheating and result in better quality food and less waste.

Focusing particularly on aesthetics, Signature FSE's Venta modular buffet system brand has developed new LED panels for lighting its front and side blinds with translucent fabric. The panels can produce both white and coloured light and are operated by remote control. The panels are all individually powered by a 230V power cable.

Signature FSE MD Paula Sherlock commented: "This new product is a great way to personalise the buffet presentation while adding a stylish touch during an event."

She further detailed: "One of the key features of the Venta buffet system is that its food holding tables use field induction instead of point induction unlike other brands, meaning that each induction zone can accept multiple dishes, therefore optimising the buffet display."

The 'Dynamic Power Control' detects the quality of the inductive layer within the display dish and adjusts its power accordingly which should also mean that there's no need for a trivet or sensor on the buffet surface, simplifying the logistics of a buffet service. Dishes are said to be easily replenished during service, which should make it easier operationally and the use of different sizes and capacities of dishes should make for a visually appealing buffet set up.

Elsewhere, BGL Rieber's K-Pot chafing dish is now available with buffet lids. The series is available in ambient, chilled, food warming and cooking modes. It can be used 'bare' as a display surface, with the new style buffet lids and with multi-layer Thermoplate pans, which are claimed to be attractive and durable.

MD Gareth Newton believes the features that make K-Pots stand out are "smooth electronic control, energy-saving ceramic stove top and an intelligent control mode providing accurate, controllable heat".

"Additionally, the use of Thermoplate pans is recommended because their multi-layer construction ensures even transfer of heat with no hot spots, which has always been the problem with traditional chafers."



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He concluded: "K-Pot provides chef with controllable heat. It costs more than a traditional chafers, but it saves in the long term and will pay for itself several times over. Users save (comparing the costs of the fuel gel for traditional chafers and the power consumption for K-Pot) around 90% in costs per hour. Plus, there is much less cleaning effort, no fire risk and, most importantly, much more presentable, evenly heated and cooked food."

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