



CELEBRATING
BEST PRACTICE AND INNOVATION
IN COMMERCIAL KITCHENS



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**FOODSERVICE
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COOKING PLATFORMS



I N S I D E T R A C K



How will advanced cooking systems meet the challenges of the new normal?



Cooking systems that can take over the cooking process without being monitored are going to be invaluable as kitchens acclimatise to a new way of working, *writes Simon Lohse, managing director of Rational UK.*

What is the new normal commercial kitchen going to look like? And how can cooking systems help food service operators meet the new normal challenges? To keep to social distancing guidelines, there are likely to be fewer people in the kitchen. As demand picks up, how will they keep up with the workload?

Cooking systems that can take over the cooking process, without being monitored, are going to be very helpful – they will act as an extra pair of hands, allowing chefs to get on with other tasks.

For example, our new iVario Pro can even cook tricky dishes like rice pudding or porridge with no need for stirring or checking. When it's ready, it will let chef know by an audio alert.

In smaller kitchens we could see one person being nominated to work the hot equipment, to prevent cross-contamination. In larger kitchens, chefs will need to stick to their work station – and they'll have to have everything they need to hand.

In both cases, advanced, multifunctional cooking systems such as our new iCombi Pro combi steamer will help, as they make it easy to prepare a wide range of dishes, quickly. In fact, the iCombi Pro has a new intelligent feature, called iProduction Manager, which can organise the entire menu cooking production process intelligently and flexibly. It not only lets chef know which products can



be cooked together, but also the optimal order of foods to go into the oven. This will help kitchens maximise their productivity, even with fewer staff.

Part of the challenge for operators will be minimising the number of people who need to visit the kitchen. Advanced cooking systems will not only help operators future-proof the kitchen, they'll also help meet their environmental and sustainability aims*

Equipment that is connected to the internet will bring benefits here, because it can reduce the need for human interactions in the kitchen.

For example, with Connected Cooking HACCP data can be collected from the Rational cooking system without anyone even setting foot in the kitchen.

Similarly, there's no need for anyone to come in to update software or to change a cooking program, as it can be done remotely.

Ultimately we could see platforms like Rational's Connected Cooking being integrated into technology that links and controls the whole food service operation – front-of-house ordering, purchasing, stock control, and so on.

The programmability of advanced cooking systems such as the iCombi Pro and iVario Pro will help operators in terms of maximising flexibility to offer a wider menu choice, since they can quickly add new recipes.

The ability to adapt the menu is going to be increasingly important, so that operators can meet demand for trends like the move to more sustainable, plant-based dishes.

Advanced cooking systems will not only help operators future-proof the kitchen, they'll also help meet their environmental and sustainability aims, by lowering energy and water consumption and delivering a higher yield from raw ingredients.

They will not only change the way the commercial kitchens look, they'll also revolutionise the way they operate. In doing so, they will help ensure we meet the new normal challenges.

“THE PROGRAMMABILITY OF ADVANCED COOKING SYSTEMS WILL HELP OPERATORS IN TERMS OF MAXIMISING FLEXIBILITY TO OFFER A WIDER MENU CHOICE”

C A S E S T U D Y



Versatile cooking and instant payback is just what the doctor ordered for **RUH Bath's hospital kitchen**



With 2,000 meals a day to serve, Royal United Hospitals Bath NHS Foundation Trust has transformed the way its kitchen operates with the latest equipment.

The Royal United Hospitals Bath NHS Foundation Trust (RUH) serves around 2,000 meals a day to patients, staff and visitors.

The kitchens are very busy environments, with lots of bulk cooking based on locally sourced ingredients wherever possible.

"We're very keen to ensure our catering provides nutritional meals to help our patients get better quicker," says Philip Watson, head of facilities at the RUH.

"The challenges of hospital catering at the RUH Bath are to produce a large number of meals at the same time, serving them across a large site," he adds. "We need to do that with a good speed of service and in a very cost-effective manner. We also need to ensure the quality of cooking is high."

In order to achieve this, the hospital has invested in Rational appliances to increase the volume of food it produces in the time available.

The RUH's main kitchen has five Rational multifunctional cooking systems and five Rational combi steamers, while the smaller south kitchen, catering for visitors and staff, has one of each.

"I took my catering team to see a Live demonstration of the Rational multifunctional cooking system and they were blown away by its versatility," says Mr Watson.

"We presented it to our capital investment group, describing how the chef had made chocolate mousse in a very simple way, they almost immediately gave me the go ahead. The payback on the equipment was so good that they were keen to invest and the project was completed within two months of the original request being put in."

Before the RUH had the Rational multifunctional cooking systems, like many hospitals they used large boiling pans run by steam or electricity.



WE WERE TOLD TO EXPECT A 10% SAVING ON MEAT GOING INTO DISHES WITH THE MULTIFUNCTIONAL COOKING SYSTEMS, BUT IT'S BEEN 15% PLUS, FROM DAY ONE WITH AN IMPROVED QUALITY TO THE DISH





"Compared to the Rationals they were incredibly slow, they were very noisy, and we just did not have the control over them that we now have," says Lee Johnston, food production manager at the RUH.

"The multifunctional cooking systems are very versatile, much more efficient and have cut our cooking times dramatically. In one area of the main kitchen we replaced seven pieces of equipment with just five multifunctional cooking systems, creating more room to work in. Because of their reduced cooking times, we can use each multifunctional cooking system several times during a service."

A key benefit of the Rational cooking systems has been the savings the RUH has made. "We were told to expect a 10% saving on meat going into dishes with the multifunctional cooking systems, but it's been 15% plus, from day one with an improved quality to the dish," says Mr Johnston. The hospital was expecting payback on its equipment investment in two years, but now thinks it is more likely to be just 15 months.

"We're reducing the use of our fryers because the multifunctional cooking systems work wonderfully as deep fat fryers and they make savings in oil," said Mr Johnston. "They do a lot of the work for you, automatically lowering and raising the baskets."

The RUH also has a Rational oil cart. It filters the oil from the multifunctional cooking systems directly into the cart, enabling it to get a much longer life from the oil.

Combi ovens are a key part of the infrastructure and it steams and uses them as dry ovens, or a combination of the two. The overnight cooking function means it can load the combi with joints early in the evening and when the team come in the next morning they are cooked to perfection.

The kitchen brigade regularly use their multifunctional cooking systems and combi steamers in tandem. "We'll start the cooking process in the multifunctional cooking systems and finish in the combi," said Mr Johnston. "For cauliflower cheese, we use the combi to steam the cauliflower al dente, while we make the sauce in the multifunctional cooking systems. We pour the sauce over the cauliflower, then pop it into the combi to brown it off beautifully."

Both the multifunctional cooking system and the combi steamer use the same control panel, which has helped staff to quickly get familiar with the Rational technology.

"It's very simple to program the cooking processes for specific dishes, so that we can ensure consistency across our food products. The processes save time too. This means we can cook to a tighter timeline and, when it's time to serve, our customers enjoy a better, fresher meal."

The catering team at the RUH is proud of its record on sustainability. "We've won the Trust's team of the month and team of the year awards for our local food provision," revealed Mr Watson. "We've also been nominated for a NHS sustainability award. The Rational equipment has enabled us to go further, with a reduction in water of around 50% on our kitchen usage and a saving in energy consumption."

The RUH makes use of Rational's ConnectedCooking network solution, which allows the multifunctional cooking systems and combis to be monitored remotely, by managers, chefs and service personnel, via a PC, tablet or even on a smartphone.

"ConnectedCooking also enables us to create and share cooking processes," continued Mr Watson. "We have seasonal menus that change regularly. ConnectedCooking gives us the ability to change and update the automatic cooking processes on multiple appliances."

"As a hospital we use an Assured Safe catering system. With ConnectedCooking we are able to collect HACCP data from all our Rational appliances making everything much easier. This has reduced the amount of paper work we need to produce while giving us far better data for our HACCP process."

“THE PAYBACK ON THE EQUIPMENT WAS SO GOOD THAT THEY WERE KEEN TO INVEST AND THE PROJECT WAS COMPLETED WITHIN TWO MONTHS OF THE ORIGINAL REQUEST BEING PUT IN”

C H E C K L I S T



Choosing cooking applications to suit your kitchen operation



Specifying the right cooking applications will depend on your menu, output and space requirements - but what are the basic considerations you need to bear in mind?

Cooking equipment tends to be the heartbeat of a commercial kitchen operation so whether you run a handful of sites or hundreds, selecting the right applications is of added importance.

The structure of the menu and cuisine type will naturally have a major part to play in any decision-making, along with the type of operation, throughput requirements and availability of space. But what are the fundamental considerations you need to bear in mind before getting into the finer details of which brands or models will suit your business best?

The Foodservice Equipment Association, which represents more than 200 catering equipment manufacturers, has put together a series of best practice tips for selecting and using cooking suites and cooking products:

1. Ovens are amongst the biggest energy consuming appliances in the kitchen, so selecting ones with energy-saving features is critical.
2. As well as delivering even cooking across the oven chamber, fan-assisted ovens can cook quickly, saving energy.
3. When it comes to efficiency, the volume of product being produced is critical. Cooking small volumes on the gas top of a traditional range cooker is more efficient than using, say, a combi steamer. However, medium to large quantities cooked simultaneously in a combi steamer will save on running costs.
4. Appliances that use pressure cooking can significantly reduce cooking times, saving energy. They may also increase food yield.
5. Some modern appliances feature smart heating systems that only provide energy (heat) where it is needed.
6. Check how easy it is to clean the equipment. Automatic cleaning systems can save time, water and chemicals.
7. By replacing several appliances, multifunctional equipment can reduce the kitchen footprint and its overall energy consumption.

P R O F I L E



Rational: Revolutionising the way commercial kitchens work

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In 1976 Rational invented the combi oven, revolutionising the way commercial kitchens work and setting the standard for the industry. In order to meet its aim of creating the best equipment for cooking, Rational continuously improves its products, creating innovative solutions that have transformed the company into a global market and technology leader.

It can achieve this because Rational is a chef's company. Not only do its support programmes provide constant feedback on how the equipment is actually used, but of 2,200 staff worldwide, over 500 are chefs. With more than one million Rational cooking systems on the market there is an unrivalled pool of expertise to tap.

Rational's cooking systems deliver a commercial kitchen's complete thermal cooking solutions. They replace a large range of cooking appliances and replicate a huge range of cooking processes while saving space and reducing cooking times and energy consumption.

RATIONAL UK


ADDRESS: Unit 4, Titan Court, Laporte Way, Luton, Bedfordshire, LU4 8EF

TEL: 01582 480388 or 0800 389 2944

EMAIL: info@rational.co.uk

WEBSITE: www.rational-online.com

FACEBOOK: RATIONAL.GBR

TWITTER: @RATIONAL_AG

YOU TUBE: RATIONALAG

The iCombi Pro and iCombi Classic combi steamers and the iVario Pro are the latest generation of Rational cooking systems and contribute significant advances in productivity, efficiency and ease of use on their predecessors.

With the new iCombi Pro, Rational redesigned the combi steamer from the ground up, incorporating a range of innovations that deliver 50% higher productivity while reducing cooking times and energy consumption by 10% compared to its predecessor.

Similarly, the new iVario Pro refines the original VarioCookingCenter to deliver 20% additional searing capacity and maintenance-free pressure cooking that is up to 35% faster than cooking without pressure, while reducing connected load compared to the previous version.

The key to achieving this performance is Rational's advanced controls. Programmed via an intuitive touchscreen interface, both

systems contain databases of recipes and advanced sensors to monitor and adjust cooking times, as well as informing operators of any actions to be taken.

The iCombi Pro includes four intelligent assistants that control every aspect of operation. This makes it simple to cook different products at the same time, as well as managing when they are ready.

The iVario Pro includes iZoneControl, which lets users define different heat zones in the pans. The iVarioboost heating system uses ceramic heating elements and advanced energy management systems to give not just quick heating times – only 2.5 minutes to get up to searing temperature – but the power it needs to handle large quantities of product without missing a beat.

Rational's ConnectedCooking network management system enables operators to customise recipes and cleaning schedules as well as providing comprehensive operating data, including HACCP. It also allows service personnel and managers to monitor the operation of the cooking system, and will send an alert should anything be required.

This combination of technologies – the iCombi Pro, iVario Pro and ConnectedCooking – is what Rational calls iKitchen, because it delivers the total cooking solution for the modern commercial kitchen. Rational also applies an innovative approach to customer support and training. The company has a comprehensive range of support materials online, including video tutorials on topics such as operation, maintenance and recipe ideas.

Rational's training app allows staff to access this information whenever needed, making it great for beginners or top-up training.



VIDEO EXCLUSIVE



Rational UK managing director

Simon Lohse discusses how operators can measure return on investment from the latest generation of appliances.

Visit Foodservice Equipment Journal's YouTube channel to watch the full interview

iCombi Pro. iVario Pro.

All of a sudden, so much more is possible.

They cover 90% of all conventional cooking applications, yet require less space because of their broad spectrum of application, synergy and intelligent functions. Helping you to save energy, raw materials and time, and still produce more than ever before.



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REFRIGERATION



I N S I D E T R A C K

Which fridge is right for my kitchen?



Which fridge is right for my kitchen? This is a very subjective question and depends on a variety of factors, including where it will be located, the nature of the menu, the type of food involved and the anticipated level of usage. Here, Ewen Cairns, UK sales manager at Foster Refrigerator, provides all the advice you need to make your decision easier.



Commercial refrigeration is designed for higher use than standard, domestic fridges and freezers, therefore they are typically more robust and chock full of features to make them more reliable in demanding kitchens.

PRE-PURCHASE DECISIONS

Cost

Top tip: find out who your local dealer/service partner is – they may have a special offer on.

The old adage is you get what you pay for, but you can still get quality products if available capital is a limiting factor.

To make sure you get the best refrigeration, companies, such as Foster, offer a 0% interest-free credit scheme allowing you to spread the cost over 12 months. Basically, you can pay for your equipment while it works for you!

Kitchen Layout

Top tip: Consider your kitchen as a food preparation factory. In keeping with the requirements of HACCP and cross contamination, refrigeration equipment should be located to support food flow through the kitchen.

This could be back of house coldrooms feeding fresh ingredients into point of preparation counters for preparing food that may be loaded into adjacent ovens or frozen food into under broiler counters feeding top mounted grills. Introduce a blast chiller for post cooking to preserve the shelf life of food that may not be required immediately.

Consider working with your local dealer or kitchen consultant who will have a depth of experience in laying out your kitchen to maximise efficiency and minimise waste.

Climate class

Top tip – Check the spec and choose the right product for the right environment

As many chefs will tell you, kitchens can often reach extremely hot temperatures, which means your refrigeration will need to work harder to maintain safe storage temperatures.

If you delve into a product's specification, you will see a climate class associated with a product – this essentially recommends the environment suitable for a product.

Most professional storage refrigeration designed for use in kitchens is rated to either climate class 4 (up to 30°C ambient, and a relative humidity of 55%), or in the example of our class leading EcoPro G2 cabinets, the heavy duty climate class 5 for more demanding kitchens (40°C ambient with a relative humidity of 40%).

The key is to use the right product in the right environment, so choosing a CC4 product going into an air-conditioned location will more than likely be fine for the requirements placed upon the product. As food safety is at stake, we'd always recommend expert advice for finding the right product for your specific needs.

Does it fit?

Top tip - Check the dimensions and capacity, and don't forget the access to the kitchen!

Your manufacturer or dealer may be able to measure it for you. The Achilles heel for many heavy equipment purchases is that it actually fits in the space and can access the kitchen in the first place. This can incur additional costs and delay the process of getting your kitchen up and running again.

This is also the time to consider whether you want a straight replacement or want to optimise your kitchen – again it is best to speak to a refrigeration expert if you are considering rearranging your products or processes.

Some simple recommendations or changes, such as the correct orientation of hinging, can go a long way to simplifying your operation.

For counters consider equipment with drawers, as your staff could be using the counter constantly during the busy periods and small ergonomic improvements can make a big difference to your teams. For sandwich and pizza prep dedicated prep table can really improve the efficiency of your colleagues.



Delivery

Top tip - Check for providers offering free next day delivery to avoid a sting in the tail!

If your fridge breaks down, you need a replacement ASAP. How quickly do you need the refrigeration? Quite often break downs trigger a new purchase, making it a stressful situation, so when ordering check the delivery terms. Some manufacturers offer free next day delivery, presenting a saving of over £130 in many cases!

Total cost of ownership

Top tip - Look out for financial offers such as 0% interest free credit to help spread the cost of your initial outlay

Of course, the initial price is what most people consider, but its equally important to think about how much your refrigeration will cost over its lifetime.

A good quality product may have an initially high purchase price, but when factoring in energy consumption, reliability, spare parts availability, product support etc., it will often make far greater sense to invest more in the short term and save in the long run.

Financial help is available from selected manufacturers offering 0% interest free credit to help spread the cost of a purchase over 12 months, thereby helping with cash flow. Make sure to understand who is providing the credit – are they a trustworthy provider, and check there are no catches or hidden costs.

USAGE CONSIDERATIONS

Hygiene

Top tip - look for refrigeration with removable fittings and no visible dirt traps

Refrigeration with visible screw fittings can be harder to clean, as dirt can get trapped. Look out for products with radiused internal corners at their base for example – this is often where dirt can build up.

Refrigeration will tend to have shelving, which is supported by racking supports either side of the unit – if these are removable this will help with a regular and rigorous cleaning regime.

Another consideration is whether your refrigeration is on wheels, as this will make it easier to clean beneath and around the unit.



Look out for fridges made from a 304 stainless steel option – this is the gold standard in performance finishes, and its properties better protect from corrosion caused by oxidising acids, a common problem with regular cleaning regimes.

Read the instructions supplied with cleaning chemicals. They have been extensively developed and tested by the manufacturers and must be used in the recommended concentrations.

More importantly the cleaning chemicals should be washed off with clean water and dried. Leaving any cleaning chemical on the surface, particularly in a concentrated state, can result in corrosion.

Energy use

All professional refrigerated storage cabinets should be supplied with refrigeration units which is in scope of Ec oDesign (the label looks the same as any electrical items you've purchased for your home.

The more energy efficient a refrigeration unit is, the higher their grade will be, for example A+++ is the highest. Leading manufacturers have invested heavily in reducing energy consumption and as refrigeration is one of the few pieces of equipment likely to be running 24/7, your energy bills can quickly add up for an inefficient unit.

Reliability / hold temperature

Top tip – reliable and efficient refrigeration means your food is fresher for longer

Refrigeration graded under Ec oDesign is subject to a stringent test regarding its temperature control performance. For example, a storage refrigerator must keep food within the M1 temperature banding of -1 / +5°C with a punishing door opening regime to boot.

However, just because a fridge can pass a test, doesn't mean it will actually perform in the real world. Look out for innovative features such as low maintenance condensers – these help to prevent a condenser blocking up, which could ultimately lead to a fridge not performing as it does when new.

A condenser study conducted in Nov 2015 noted that a fridge with a traditional condenser suffered a 35.8% energy performance reduction compared to Foster's EcoPro G2 fridge fitted with a +stayclear condenser after 12 months in simulated conditions.

That's why you should always buy from a brand trusted by the professionals, so do your homework before making your final purchase. An unreliable fridge can result in spoiling and losing lots of food, ultimately meaning lost revenue or worse, the potential of food poisoning.

POST-PURCHASE

Warranty & Technical Support

Refrigeration should be sold with a warranty, and most reputable refrigeration manufacturers offer a no-quibble warranty.

Make sure that there are service and spares provisions to assist you if you have problems with your refrigeration. This is where you may want to consider where your manufacturer is located – buying British can have significant benefits when it comes to parts availability.

At Foster for example, we hold 98% of spares in stock which are available for immediate dispatch, and we can even provide advice on getting them fitted.

R E G U L A T I O N



Energy labelling explained and why it's vital for green-thinking operators



Manufacturers are looking at several other ways to reduce the amount of power their refrigeration needs, including greener refrigerants, thicker insulation and better airflow designs.

And their work is bearing fruit: in just 12 months after the Eco Design and Energy Labelling directives were introduced, in July 2016, there was a significant shift in energy efficiency in refrigeration in the food service market.

This saw the average energy index (EEI) for drop from 63% to 59% (the smaller the figure, the more energy efficient the 'average' model is), according to figures supplied by the Food service Equipment Association.

Currently only certain types of refrigeration fall under the directives – specifically, upright cabinets and counters (collectively known as Professional Refrigerated Storage Cabinets).

The energy label lets you compare the energy efficiency of different models – with A+++ being the most efficient. The energy tests and label grades are based around MEPS – Minimum Energy Performance Standard. Each model sold in the EU and the UK must meet at least a level G in terms of energy performance.

The latest legislation

A new Energy Labelling Directive comes into force in March 2021. It will cover 'commercial refrigeration' which includes, amongst other things, display units such as grab and go merchandisers. Again, the labels will make it easy for prospective buyers to compare the energy efficiency of different models.

Need to know: Climate Class

Anyone purchasing commercial refrigeration and wanting to compare energy labelling needs to understand what Climate Class means.

Commercial refrigeration is designed to operate in varying climates, in terms of the ambient temperatures and relative humidity (RH) conditions of the room or area where it is sited.

For example, a top-end kitchen cabinet may need to be able to cope with ambient temperatures of 40°C. On the other hand, a grab & go drinks cabinet in a coffee shop may never have to work in ambient temperatures above 25°C.

Manufacturers design their models to meet the needs of a specific Climate Class. When buying refrigeration, it's important to ensure it is designed to operate in the conditions at your site.

A Climate Class 3 fridge will struggle in Climate Class 4 conditions: it will use excess energy and may not hold temperature, compromising food safety and making the operator liable for the consequences.

Where will I find the Energy Label?

The label must be displayed if the product is being shown to a potential buyer, such as in a showroom or at an exhibition. The distributor or manufacturer is not responsible for fixing the label to the product at the customer’s premises – instead it is supplied loose, as it is with domestic products.

The FEA notes that equipment dealers are responsible for ensuring that any equipment covered by the Energy Labelling Directive has the label prominently displayed, either on the top or the front of the product.

If it’s not practical to see the label, for example, if the equipment is being sold online, then it must be marketed with the relevant information. Any advertising, promotional or technical support material covering the product should also include the energy efficiency class of the model.

Need to know: F-Gas

The European Fluorinated Gases Regulations will see the phasing out of ‘greenhouse’ F-gas refrigerants, which have been widely used in refrigeration equipment and have contributed to the climate crisis.

As of 1 January 2020, UK and EU legislation prevents refrigerants with a global warming potential greater than 2500 being used to service or refill refrigeration or freezer systems.

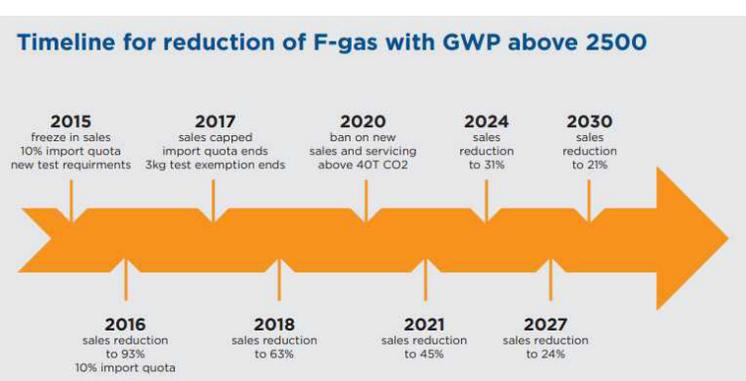
Operators buying new refrigeration should be looking for models using green refrigerant gases, with low Ozone Depletion Potential (ODP) and Global Warming Potential (GWP), according to the FEA.

Many manufacturers now use hydrocarbon refrigerants, which are very ‘green’ but are also flammable, which is why the amount of hydrocarbon gas allowed in an individual model is strictly limited.

Recently the IEC (International Electrotechnical Commission) voted to increase the allowable charge of hydrocarbon in commercial refrigeration.

As a result of the vote, manufacturers can now offer refrigeration models using A3 refrigerant charges of up to 500g (previously it was 150g). For A2L refrigerants the charge was increased to 1.2kg.

The change will allow manufacturers to develop more energy efficient products, particularly in ice machines and display units such as grab and go merchandisers. The improved efficiencies will also impact on the running costs of the models.



F-Gas Regulations: your responsibilities

The main focus of the F-Gas Regulations is to minimise emissions of F-gases from products and equipment, through containment, leak reduction and repair and recovery. When it comes to catering refrigeration, the responsibility for

complying with the regulation lies with the caterers, operators and users (as opposed to those selling or servicing it).

- Prevent leakage – have leaks repaired as soon as possible by certified personnel and keep service and maintenance records detailing quantity and type of F-gas used.
- Carry out a regular fixed schedule of inspections for leaks on equipment with a circuit charge of 3kg or more, following the standard leak-checking procedure laid down by the Commission. This includes an obligation that any repairs made must be checked within one month.
- Where systems have a charge of over 300kg they must in addition install fixed leakage detection systems.
- Ensure the proper recovery of F-gases by certified personnel, to ensure their recycling, reclamation or destruction.



BEST PRACTICE



Chilling food and staying on the right side of the law



Legislation today provides much clearer requirements in certain areas such as thawing and cooling of foods, with a requirement to keep chemical storage out of the kitchen.

Since 2006, food hygiene regulations state that all UK food and drink businesses must put in place a 'Food Safety Management System' (FSMS) based on HACCP principles.

This applies to all food businesses large and small including caterers, primary producers (such as farmers), manufacturers, distributors and retailers.

The key points in current legislation are those of ensuring segregation and cold-chain maintenance throughout the operation, together with the monitoring of temperatures when necessary.

The temperature-control limits are 8°C for chilling and 63°C for hot food, with Scottish difference. Cheeseboards and sweet trolleys are considered safe with a four-hour rule for placing food items out on display.

In terms of chilling, here are some top tips:

- Follow the manufacturer's guidelines on using all equipment, particularly in the case of refrigeration to ensure safe temperatures are maintained.
- Chilled food must be kept at 8°C or below. Commercial refrigeration for fridge applications is set at +1°C/+4°C. This creates a temperature gradient that ensures product core temperature remains below guideline recommendations.
- Domestic equipment is designed with lower cooling duty requirements, meaning it simply cannot cope with the regular door opening of a busy catering environment to ensure temperature maintenance.
- Purchase a decent probe thermometer and probe wipes. Larger businesses may be advised to invest in a temperature monitoring system.
- If you chill food down regularly, it may be advisable to purchase a blast chiller to ensure you do this safely. Some manufacturers offer blast chillers specially designed to meet the needs of smaller catering outlets.

This provides you with the means of chilling food down safely within the appropriate time frames without compromising on quality, taste or appearance.

- If you defrost lots of food in your business, you may wish to consider purchasing a special thaw cabinet, particularly if the food being thawed is high risk, such as poultry.

Some refrigeration equipment companies supply a cabinet specially designed for this purpose, which works by alternating between circulating gentle heat and refrigeration (via special air conducting and fans) ensuring a safe, even and speedy thaw.

P R O F I L E



Foster Refrigerator: One million fridges and counting

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As the largest commercial refrigeration manufacturer in the UK, we pride ourselves on both the products we supply and the levels of customer service we provide.

When it comes to commercial fridges and freezers, we are at the forefront of new technology, pioneering new standards in temperature control, hygiene, efficiency and appearance. We were the first company to produce professional storage refrigeration in the UK in 1968 and have led the way ever since. Foster has been designing and manufacturing its products in Britain for over 50 years and pride ourselves in providing outstanding products with market leading innovation, quality, reliability, energy-efficiency and customer service.

Foster is a multi-award-winning company, and proudly carries the Royal Warrant in the UK for Suppliers of Commercial Refrigeration by appointment of Her Majesty, The Queen. Our products can often be seen on Bake Off, The Professionals and MasterChef.

We have sold over 1 million fridges in 50 years, and safely stored enough food to fill 136 great Pyramids of Giza. Our fridges can be found in over 116 different countries and counting, and we have

FOSTER REFRIGERATOR



ADDRESS: Oldmedow Road, King's Lynn,
Norfolk, PE30 4JU

TEL: 01553 691122

EMAIL: sales@foster-uk.com

WEBSITE: www.fosterrefrigerator.com

INSTAGRAM: foster_gamko

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dedicated sales bases in Germany, the Netherlands, France and UAE.

Foster's EcoPro G2 refrigerator has been designed from the ground up to ensure that foodstuffs are stored at the optimal thermal conditions to ensure food stays fresher for longer, even in the busiest of kitchen environments, maximising the profitability of the chef's most precious resources: the raw ingredients that are subsequently transformed into culinary masterpieces.

Foster's award-winning +stayclear condenser has revolutionised the efficient operation of our refrigeration products.

The +stayclear condenser stays efficient for longer whilst extending the life of your fridge. Fitted at no extra cost, the +stayclear condenser unit will reduce

the amount of time you need to spend maintaining your fridge or freezer and save you money by reducing the chance of breakdown.

When you work with us, you're guaranteed quality and absolute reliability at highly competitive prices. No matter how large or small your scale of operation, you'll find there is a Foster for you.

With sister company Gamko, we are The Refrigeration Experts. Our products have a proven track record of being reliable, durable and market leading. We have a legacy of being the first, introducing commercial refrigeration, blast chilling and the modular bar.

Foster and Gamko have a combined experience of over 110 years. So, between our portfolio of award-winning products and our dedicated and experienced team, we are proud to be The Refrigeration Experts. Foster and Gamko are part of ITW's refrigeration platform within the food equipment group. ITW is a Fortune 250 manufacturer of a diversified range of value-adding industrial products and equipment, with companies including Hobart, Traulsen and Avery Berkel.



VIDEO EXCLUSIVE



Foster market and development director

Chris Playford outlines the most important factors to bear in mind when choosing refrigeration equipment that can go the full distance.

Visit Foodservice Equipment Journal's YouTube channel to watch the full interview

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The Refrigeration Experts

WAREWASHING



I N S I D E T R A C K



With quality warewashing systems, you don't just buy a product in a box



Operators should have no qualms expecting product development, training, customer service and support to all come as part of the package, writes ware washing equipment manufacturer Meiko.

When considering the purchase of a new glass or dishwasher in the hospitality sector, two key factors often come into play: price and quality.

Although warewashing is seen to be a crucial part of the business, all too often it can be seen as a necessary evil, so more emphasis is sometimes placed on price rather than quality.

But are times changing?

The Covid-19 pandemic has concentrated our minds on the core issues, not only of hygiene, but also the quality of the service we are receiving from our suppliers and manufacturers – who is looking after us in our hour of need?

Quality does not just come in a box

In the coming months, diners will look at a pub, restaurant, or hotel in a different way, asking themselves... "is this a safe place to eat?" When you have a quality product, as a manufacturer, you have a duty of care to already be looking at this for your customers, as part of the service.

In Meiko's case, we went to an outside independent specialist, to prove, without a doubt, that our machines kill the virus.

Meiko can provide customers with a certificate to say that our dish and glasswashers provide a high temperature wash and rinse sufficient to kill the coronavirus and food poisoning bacteria, providing the reassurance that is needed by diners at this time of great uncertainty.

Customers are realising, with quality you don't just buy a product in a box; you are buying into a service – in this case a dedicated warewashing service and support organisation.



Anticipating and addressing the important needs of the customer

With quality, you know you are also getting reliability, ergonomics, sustainability and efficiency.

A great product involves the manufacturer's investment in training and knowledge, its culture of care and support and the dedication of the staff.

For over 90 years, Meiko has had this at the forefront of what we do, to the extent that many of our awards come for service and development, including our latest award from 'Top-Hotel' magazine, a Silver Star, awarded not for an individual product, but for Meiko's 'ergonomics.'

But does quality only come at a price?

The answer is no, quality in terms of product development, training, customer service and support should come as an essential part of the package. Quality is a matter of the manufacturer doing its very best, never becoming complacent, caring and putting the customer first.

In terms of products, Meiko is constantly evolving and developing, meaning the best parts and technology are integral to all our products, ensuring the highest quality at all price points.

The new Meiko UPster series, of entry level under counter and hood machine, for example, has evolved from what used to be Meiko's 'Premium' range, so the heritage of our new line includes decades of proven component reliability.

The issue of hygiene, now more than ever, is critical when purchasing a dishwasher, as are the issues of quality and the package itself, not just the price.

To get this package right, we need more than just reliable machinery; we also need the sound judgement of experienced professionals, ensuring reliable, economical and ergonomically sound processes in the dishwashing area.

So, as far as I'm concerned, customers should be striving for the very best quality, not just in terms of the product, but also the service. And as with the new UPster series, it doesn't have to break the bank!

A GREAT PRODUCT INVOLVES THE MANUFACTURER'S INVESTMENT IN TRAINING AND KNOWLEDGE, ITS CULTURE OF CARE AND SUPPORT AND THE DEDICATION OF THE STAFF

C A S E S T U D Y



Latest generation of dishwashers helps hotel group drive down energy bills



Operator responsible for 10% of Jersey’s bed stock has achieved a significant saving in energy, water and chemicals by investing in upgraded warewashing machines.



Seymour Hotels of Jersey is responsible for 10% of Jersey’s bed stock and its portfolio includes the Merton Hotel and Suites, the Pomme d’Or Hotel and the Greenhills Country House Hotel.

Energy-saving is one of Seymour Hotels’ key priorities and in 2018, a £5m investment programme prepared the hotels for the summer season.

Almost half the investment – some £2.3m – was spent moving from steam to low-temperature hot water systems at the Merton Hotel, providing major environmental and economic savings for the property.

“Over the last decade we have reduced oil consumption across the Merton complex by about 35%, by introducing better controls, processes and making a significant capital investment in energy saving equipment,” explains Dave Donoghue, group maintenance manager at Seymour Hotels of Jersey.

An energy-saving investment in catering equipment included replacing the large commercial dishwasher systems at two of Seymour Hotel's properties, the Merton Hotel and Pomme d'Or Hotel.

Mr Donoghue was senior engineer at the group before his appointment as maintenance manager so he was well aware of the performance of Meiko machines.

"We looked at what the competitors had to offer when it came to replacements, but we decided to stick with Meiko because of their machine build quality, reliability and the good technical support," he explained.

"Being in Jersey, we can be stuck out on a limb sometimes with not having Meiko engineers to attend to breakdowns, but Meiko engineers always answer their phones to us and help my own team of engineers as much as they can. We talk through technical issues over the phone as and when they occur, and spare parts are quick and easy to order."

Meiko's new generation of commercial dishwashers deliver significant energy, water and chemicals savings compared to the previous generation. "In terms of energy and water savings, we do not monitor the machines separately from the rest of the hotel, but there are noticeable differences," said Mr Donoghue. "There is a noticeable improvement to the air quality in the dishwash areas, chiefly thanks to the integral heat recovery systems on the new machines."

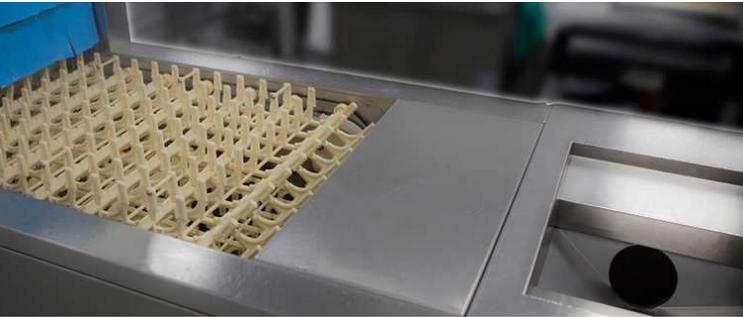


Analysing the saving

Meiko has calculated the savings between the old and new Meiko commercial dishwashing machines at the Merton Hotel at a 40,880 k/W annual saving on electricity and 322,660 L annual saving in water consumption. In 2003, The Merton Hotel was fitted with a Meiko B190 dishwasher, replaced 2018 by a Meiko M-iQ model. The figures below, supplied by Meiko, show the energy/water consumption difference between the two machines, both using an electric supply.

THE MERTON HOTEL	B190 CSS top	M-iQ B-M54-V6-P6	
Capacity plates/h for 2 min. contact time acc. to DIN 10510	2000	2400	
Average energy consumption 12 hours daily use/365 days/cold water in at 10degC	33	23.5kw/hr	
		9.5 kw/hr saving = 114 kw saved X 12 hr shift 112 x 365 = 40,880 k/W annual saving.	
<i>Water consumption</i>			
Final rinse water	240lh	165lh	+75 (x 12hrs daily= +900L
Tank filling x1	190	206	-16
		884 L daily saving final rinse per 12-hour shift 322,660 L annual saving	

C H E C K L I S T



Make warewashing innovations work for your kitchen operation

////////////////////////////////////

Water consumption is a major factor in terms of how much energy a warewasher consumes. That's because most of the energy used by a warewasher is to heat up the water. By using less water, you use less energy.

Using less water also means less detergent and rinse aid is needed. And less water going through will extend the life of the water treatment system, too, according to the Foodservice Equipment Association. This is why manufacturers have developed technologies to use less water, and to keep the washwater cleaner for longer, such as sophisticated multiple filtration systems, reduced wash tank capacities and more efficient rinse systems.

Energy saving features

There are plenty more technologies that can help operators save on the running costs of their warewashers. They include heat exchangers that recycle energy normally lost in waste water or steam, designs that eliminate the need for heat pumps on larger machines, and machines that operate vent-free, taking out the need for direct ducting and extract fans that use energy continuously.

Then there are variable wash cycles. This will mean that if your crockery is only lightly soiled, then you can run a quick program using less water, power and chemicals. Conversely, if you've just served a sauce-heavy dinner, a more powerful wash will ensure the ware is hygienically clean.

Many machines also offer 'eco' modes. If you've time to spare, using it will reduce energy consumption – but it will mean the wash cycle takes longer to complete. However, if the pressure's on and you need to clean quickly, then simply revert back to the standard or fast wash cycle.

Warewashing best practice

- ✚ Only wash when the machine is fully loaded. Turning on a half empty machine wastes resources.
- ✚ Buy equipment that offers energy, water and chemical saving features, such as energy heat recovery, more efficient rinse systems, double insulation and machines that operate vent-free. Pre-rinse machines that use recycled waste water can reduce consumption of all three, too.
- ✚ Check filters daily to ensure they are not damaged or allowing food waste to pass into the unit.
- ✚ Ensure that the water treatment system is looked after. Scale causes major faults to warewashers and impacts on cleaning results.
- ✚ When purchasing pre-rinse spray units, look out for optional water-saving faceplates and guns.
- ✚ The right rack can make a big difference, not only in terms of cleaning, but also protecting the glasses or dishes being washed and preventing breakages.
- ✚ The right chemicals and the correct dosing are important, too.
- ✚ Pot washers or utensil washers are more hygienic and efficient than washing by hand – plus, in the long run, they will be more cost effective.

P R O F I L E



Meiko: Exceptional build-quality and sustainable performance



Meiko UK has without a doubt, grown to be the most highly-regarded warewashing supplier in the UK catering industry. Meiko is a warewashing specialist - we make nothing else! Our reputation for exceptional build-quality is matched by sustainable performance in energy, water and chemicals savings.

Our regional sales managers offer experienced advice, including design. Our 'No Extra Bills' warranties combined with the most highly regarded UK warewashing technical support reinforce the fact that Meiko has never sold 'boxes'. We have always provided our customers with what we consider to be the best total package.

Our products include undercounter M-iClean glasswashers and dishwashers with integral GiO reverse osmosis and the new ergonomic-design M-iClean H auto-hood dishwasher which eliminates the need to manually lift or lower the hood. These new pass-through machines automatically raise or lower the hood when a rack is put into the machine.

These save kitchen staff bending or stretching, so they are especially appreciated by short people or those with infirmities such as back or shoulder problems. Auto-hoods also save significant time per shift, which saves labour and saves money. Meiko's new UPster range might be entry-level but its heritage is premium quality. Offering extraordinary build-quality, wash-quality and value for money,

MEIKO



ADDRESS: 393 Edinburgh Avenue, Slough, Berkshire, SL1 4UF
TEL: 01753 215120
EMAIL: MeikoUK@meiko-uk.co.uk
WEBSITE: www.meiko-uk.co.uk
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the H 500 hood machine is available with optional AirConcept heat recovery generating 18% energy savings and also with optional GiO reverse osmosis water treatment.

Meiko's UPster H 500 undercounter dishwasher provides outstanding value and almost unlimited installation possibilities; it also features the option of GiO reverse osmosis water treatment, saving space and eliminating traditional water softeners.

Our largest dishwashers are also among the most user-friendly and sustainable on the market.

They work seamlessly with Meiko food waste handling systems including vacuum food waste storage tanks to create enviro-friendly facilities turning waste into biogas.

Meiko Green Solutions BioMaster, unlike many

competitive food waste solutions, takes all food waste including cooking oils and fats and even bones, creating a biomass product that is pumped to holding tanks for collection.

Meiko is the UK market leader in warewashing and has a reputation for exceptional equipment, in terms of sustainable performance in energy, water and chemicals savings.

This is backed up with provision of honest information detailing the energy, water and chemical consumption of our equipment. This 'benchmarking' data is further supported by a nationally available list of reference sites, where prospective customers can gain impartial feedback on our performance.

Breakdown and maintenance support are provided by Meiko Technical Services, the most highly regarded in the UK industry. The greatest service we now perform for our customers is to do our utmost to protect the environment, while providing them with the best quality warewashing solutions and technical service support.



VIDEO EXCLUSIVE



Meiko's managing director Paul Anderson discusses the secrets to a successful warewash set-up.

Visit Foodservice Equipment Journal's YouTube channel to watch the full interview

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KITCHEN SAFETY & MANAGEMENT



I N S I D E T R A C K



Creating a Covid-secure catering workplace



As we come out of lockdown, operators are faced with the challenge of protecting staff and returning customers by ensuring their sites are Covid-secure, both front- and back-of-house, writes Kristian Roberts, marketing manager at Mechline Developments.

Whilst this may seem a daunting prospect, there are thankfully some simple cleaning and hygiene procedures that can be quickly put in place to help comply with government guidance.

Coronavirus is a respiratory illness, which is transmitted either through virus-laden particles in the air or through touching contaminated surfaces. Furthermore, the virus can survive on surfaces for long periods creating a significant health risk.

Unfortunately, standard room cleaning and disinfecting procedures can only offer a temporary solution and even if you have staff cleaning surfaces 24 hours a day, as soon as an area is cleaned, virus-laden airborne particles can immediately resettle.

Whilst this is bad enough in normal times, at the height of a pandemic it means the latest technology can play a crucial





role in significantly enhancing hygiene and safety protection. The advanced and compact wall-mounted HyGenikx unit is a plug and play option that will quietly go about its business in food preparation areas, cold rooms, front-of-house, washrooms, refuse areas and beyond – keeping staff, customers, food and surfaces protected from viruses and bacteria, even in the hardest to reach areas.

HyGenikx units have not been tested against the current coronavirus strain (SARS-CoV-2), as there is not sufficient detail freely available, there is a great deal of scientific evidence that this technology can kill a wide range of microbes that are more difficult to eradicate. HyGenikx models start from as little as £289, require no costly installation as they simply plug in to a standard socket and consume very little energy, requiring only 9-13 watts.

In addition to sterilising air and surfaces, frequent and thorough handwashing for 20 seconds with soap and running water is still central to preventing and slowing the spread of coronavirus.

However, using traditional taps means the same lever or handle has to be touched by the clean hands to turn the tap off, resulting in possible re-contamination.

Our BaSix range of non-contact hand wash stations features leg activation, soft touch technology to help customers and staff achieve optimal hand hygiene. Increasing the number of washbasins on site can also help to reduce the risk of shared touchpoints.

With this in mind we can offer a conversion kit to easily change taps into hands-free operation.

For operators looking to install additional basins, compact models such as Mechline's Basix range, are highly recommended as they are quick and easy to install and are supplied with a mounting bracket and integral spirit level which can be placed at both entrances and exits.

**THE LATEST TECHNOLOGY CAN PLAY A CRUCIAL ROLE
IN SIGNIFICANTLY ENHANCING HYGIENE AND SAFETY
PROTECTION**

C H E C K L I S T



Cleaning and hygiene best practice for kitchens facing up to the ‘new normal’



In the current climate, cleaning and hygiene have taken on added significance and the government has issued special guidelines on how pubs, restaurants and foodservice operators can work in a safe way.

Much of it is reinforcement of what should be standard daily practice anyway, but here is a full rundown of what the latest advice suggests:

Before reopening

Objective: To make sure that any site or location that has been closed or partially operated is clean and ready to restart, including:

- An assessment for all sites, or parts of sites, that have been closed, before restarting work
- Cleaning procedures and providing hand sanitiser, before restarting work

Steps that will usually be needed:

- Checking whether you need to service or adjust ventilation systems, for example, so that they do not automatically reduce ventilation levels due to lower than normal occupancy levels.
- Most air conditioning systems do not need adjustment, however where systems serve multiple buildings, or you are unsure, advice should be sought from your heating ventilation and air conditioning (HVAC) engineers or advisers.



Keeping the venue clean

Objective: To keep the workplace clean and prevent transmission by touching contaminated surfaces.

Steps that will usually be needed:

- Wedging doors open, where appropriate, to reduce touchpoints. This does not apply to fire doors.
- Frequent cleaning of objects and surfaces that are touched regularly including counters, tills, and making sure there are adequate disposal arrangements for cleaning products.
- Cleaning surfaces and objects between each customer use. For example, cleaning tables, card machines, chairs, trays and laminated menus in view of customers before customer use.
- Frequent cleaning of work areas and equipment between uses, using your usual cleaning products.
- Maintaining good ventilation in the work environment. For example, opening windows and doors frequently, where possible.

Keeping the kitchen clean

Objective: To ensure the highest hygiene standards are operated in kitchen areas.

Steps that will usually be needed:

- Recognising that cleaning measures are already stringent in kitchen areas, consider the need for additional cleaning and disinfection measures.
- Having bins for collection of used towels and staff overalls.
- Washing hands before handling plates and cutlery.
- Continuing high frequency of hand washing throughout the day.

Hygiene - handwashing and sanitation facilities

Objective: To help everyone keep good hygiene through the working day.

Steps that will usually be needed:

- Using signs and posters to build awareness of good handwashing technique, the need to increase handwashing frequency, avoid touching your face and to cough or sneeze into a tissue which is binned safely, or into your arm if a tissue is not available.
- Providing regular reminders and signage to maintain hygiene standards.
- Providing hand sanitiser in multiple locations in addition to washrooms.
- Setting clear use and cleaning guidance for toilets to ensure they are kept clean and social distancing is achieved as much as possible.
- Enhancing cleaning for busy areas.
- Providing more waste facilities and more frequent rubbish collection.

R E G U L A T I O N



Updated allergen guidance you need to know about



Allergen labelling has been a hot topic for the industry – but did you know there has been an update to the technical guidance published for foodservice operators?

The latest guidance for allergen labelling issued by the Food Standards Agency follows changes for pre-packed for direct sale food.

These changes complement existing labelling rules on providing allergen information to consumers.

The changes, which are now enshrined in legislation in England, Wales and Northern Ireland, will come into effect from 1 October 2021.

The changes were introduced after an earlier UK-wide consultation following the death of teenager Natasha Ednan-Laperouse as a result of an allergic reaction to sesame in a baguette she had eaten.

The new requirements only apply to food known as prepacked for direct sale (PPDS), which is packaged onsite by a business before a customer selects or orders it from the same premises.

It means that PPDS food will be required to have a label with an ingredients list and the allergens contained emphasised on the list.

This brings the way allergen information is provided for it in line with other prepacked food and reduces consumer confusion.

Emily Miles, chief executive of the FSA, said: "Consistent and accurate labelling can be life-saving for those living with a food allergy or hypersensitivity. These new measures are vital as they provide information to hypersensitive consumers in a form that is familiar and convenient for them.

"Food businesses and enforcement authorities need to be ready for the rules coming into effect in October 2021 which the updated technical guidance on food allergen labelling will help them to do."

Allergen best practice

Food business operators in the retail and catering sector are required to provide allergen information and follow labelling rules as set out in food law.

According to the FSA, this means that food business operators must provide allergen information to the consumer for both prepacked and non-prepacked food and drink; and handle and manage food



allergens effectively in food preparation. The FSA's allergens checklist for staff working in commercial kitchens includes the following:

Food storage

- Are ingredients stored in sealed and labelled containers?
- If you transfer ingredients from their original packaging do you have a way of identifying the allergens present in the product?
- Are open ingredient packages stored in sealed containers where appropriate?
- Do you have a spillage policy to deal with spillages of one ingredient onto another ingredient?

Food preparation

- Do you have accurate recipe lists, so that there is a clear list of the allergens present in the food you serve?
- Do you have reminders in place to update records when you make recipe changes?
- Do you wash your hands thoroughly with soap and hot water when preparing allergen-free meals?
- When an order comes in from an allergic customer, do you have a clear process in place to ensure that the food can be safely prepared and served to the correct customer?
- Are you aware of the allergens in garnishes, toppings, sauces or dressings so that you can avoid using them?
- Do you clean kitchen surfaces regularly so that there is no visible food debris or crumbs from other meals?

THE 14 ALLERGENS

Food businesses must tell customers if they use any of the 14 key allergens as ingredients in the food and drink they provide:

- **CELERY**
- **CEREALS CONTAINING GLUTEN** - including wheat, rye, barley and oats
- **CRUSTACEANS** - such as prawns, crabs and lobsters
- **EGGS**
- **FISH**
- **LUPIN**
- **MILK**
- **MOLLUSCS** - such as mussels and oysters
- **MUSTARD**
- **TREE NUTS** - Including almonds, hazelnuts, walnuts, brazil nuts, cashews, pecans, pistachios and macadamia nuts
- **PEANUTS**
- **SESAME SEEDS**
- **SOYBEANS**
- **SULPHUR DIOXIDE AND SULPHITES** (if they are at a concentration of more than ten parts per million)

P R O F I L E



Mechline: Specialised equipment to address common issues in foodservice



Mechline Developments is a leading manufacturer of specialised equipment for the foodservice and hospitality industry. The Mechline story began in 1984 as a commercial kitchen equipment service and installation company and in 1988 we developed our first patented product (QuickLink) – a quick disconnect system for catering sinks that allows for easy cleaning.

Since then we have built a portfolio of innovative, unique and award-winning products for the foodservice industry focusing on hygiene, safety, efficiency and the environment. All products, whether manufactured by us or selected by us from specialist partner manufacturers, are engineered to address common issues in the foodservice and environmental sectors – whether it's in function, design or operational ease-of-use.

Each range (including HyGenikx, GreasePak, BaSix, AquaTechnix and more) has a unique feature or characteristic that simplifies the catering professionals' work environment and helps operators to maintain good practice for hygiene in commercial kitchens.

Through continuous research and ever-growing expertise, we always strive to understand and deliver what our customers need and value. Our management systems are ISO 9001 accredited, which recognises our commitment to continuously monitor and manage quality across the business, as well as our endeavour to make continuous improvements

We design and build equipment from an end-user perspective, with human engineering and ease of use in mind, but also from the viewpoint of the installer and operator. Through rigorous testing and quality control we hope to minimise any downtime at installation, and definitely further down the line.

We actively seek accreditation from industry bodies such as BSI (Kitemark), BBA and WRAS and other recognised organisations. Our intention is to make our customers' lives easier – not harder – so we consider the time and dedication invested in the manufacturing and testing process of the utmost importance. All Mechline products help in some way to lessen the 'pains' foodservice operators can experience on a day to day basis, in areas of efficiency, safety, environment & hygiene.

Efficiency

Efficiency is at the heart of Mechline's design principles. Mechline offer many product ranges which offer both energy and water savings to save money for the end user.

**MECHLINE
DEVELOPMENTS**



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Safety

Mechline offer safe and accredited products which you can rely on, toughened against misuse and designed to facilitate a safe working environment.

Environment

Mechline offer a range of products to help with the ever-increasing environmental concerns of the food service industry. Responsible and effective solutions.

Hygiene

Good hand-washing and water-saving habits can be encouraged with the right equipment and systems, such as Mechline's hands-free products.

Whether it's relating to work-flow optimisation, productivity and cost reduction, or food safety,

waste management and issues in meeting standards and regulations, Mechline has the right products and expertise to enhance the working environment for kitchen operators.

Commercially, Mechline has developed a strong distribution network throughout the UK and Ireland via foodservice equipment distributors, dealers, project contractors and service companies and are now expanding this network internationally. We strive to distribute and market products that provide innovation and value for our customers, promoting best practices in commercial foodservice facilities, operational benefits, quality and safety.

According to the FSA, this means that food business operators must provide allergen information to the consumer for both prepacked and non-prepacked food and drink; and handle and manage food

VIDEO EXCLUSIVE



Mechline commercial director

Peter Galliford shares the science behind keeping kitchens safe.

Visit Foodservice Equipment Journal's YouTube channel to watch the full interview

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sources of infections

HyGenikxTM is an advanced and compact, wall mounted air and surface sterilisation system, proven to eradicate viruses and bacteria throughout foodservice and hospitality environments, washrooms, changing rooms and beyond.

Utilising a combination of the most effective air and surface sterilisation technologies available, HyGenikx provides round-the-clock hygiene and safety protection, helping to protect customers and staff, as well as neutralising all odours.

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KITCHEN DESIGN & EFFICIENCY



I N S I D E T R A C K



Cut your kitchen energy costs and carry on cooking



Ventilation can be a large cost for commercial kitchens that are prepping and cooking around the clock, with energy demands often increased further through large quantities of conditioned air being lost to the atmosphere and replaced unnecessarily by inefficient systems.

However, developments in smart technology mean it is possible for foodservice operators to have greater control over how hard these systems work and when.

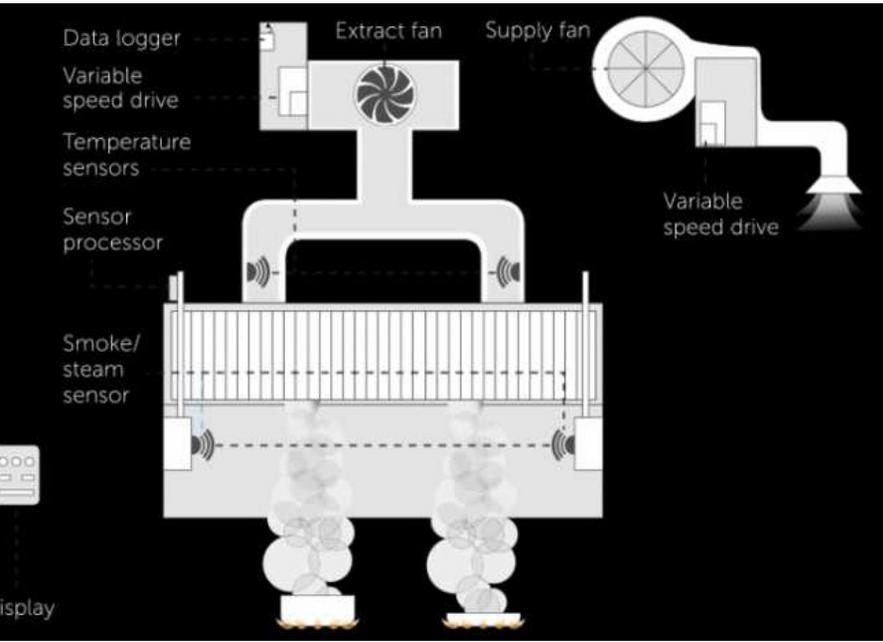
Quintex's Cheetah solution saves energy by controlling ventilation fan speeds so that extract rates are matched with cooking demands, resulting in savings of up to 80%.

The patented demand-controlled kitchen extraction system – which is equally at home as either a retrofit or new -build solution – works on the principle of the 'Affinity Laws for Centrifugal Loads', the result of which is that a fan running at 40% of its normal operating speed will only consume 6% of the energy required to run the fan at 100% of its operating capacity.

Variable speed drives are mandatory for the control of larger extract fans. In commercial kitchens Cheetah controls these drives effectively and efficiently to create a variable air volume (VAV) system, safely minimise energy usage.

INTELLIGENT MODULES

The Cheetah kitchen extraction system consists of a number of intelligent modules which are interconnected by a data communications network. (A typical configuration is shown below).



The standard modules include a display processor with system power supply and override facility, a sensor processor and a data logger with GPRS remote access system, as well as temperature sensors (located in ducting) and optic sensors detecting smoke and steam (located in the extract hood).

Air flow meters in ducts and carbon dioxide sensors are optional.

With Cheetah operating in normal mode, the system's sensors control the fans. The fans are set to a minimum speed by default but demand-based extraction automatically increase in the event of smoke, high temperatures in ducts, low air flow in ducts and high levels of carbon dioxide, in the kitchen.

BENEFITS & SAVINGS

Energy savings of up to 80% are typically achieved

Cheetah saves energy by controlling the extract and air supply fans via its VAV systems. Typically, fan speeds are reduced to 40% of their normal operating speed when activity levels in the kitchen are low. At this speed, the energy consumption is only 6% of that with the fans running at 100% of their operating capacity. Significant further energy is saved by the resulting fall in demand for conditioned air supply.

Providing a comfortable and safe commercial kitchen environment

Noise in a commercial kitchen is greatly reduced, along with better controlled working temperatures. Carbon dioxide sensors, if fitted, will also improve the working environment by ramping up the extract fans when excess carbon dioxide is detected, hence bringing the level back to a pre-determined range.

Remote monitoring

Remote access means key system KPIs such as fan speeds, temperature and air flows can be monitored. Faults can be quickly identified and often fixed remotely, while maintenance needs can be identified and performance optimised, all without attending site.

Energy monitoring

Cheetah's energy monitoring unit can meter energy usage in up to eight locations in a restaurant/kitchen. The data is downloaded remotely and presented to the customer. This verifies the savings from the system and identifies where further optimisation could enhance performance.

Maintaining the extract system in good condition

Air flow meters in the extract ducts enable the condition of the extract system to be monitored remotely, giving early warning of preventative maintenance needs.

Fire safety

The temperature in the extract ducts is measured continuously and if high temperatures are detected, action is taken to alert the operators of a possible fire condition.

C A S E S T U D Y



JD Wetherspoon cuts carbon and energy costs through focus on ventilation



The introduction of an energy control system at The Jack Fairman pub in Surrey has led to significant gains for leading chain JD Wetherspoon.

Preservation and protection of the environment is key to JD Wetherspoon and The Jack Fairman pub in Horley, Surrey.

Its emphasis on creating a positive impact on society means JD Wetherspoon considers how it can interact positively with the environment and those around them – leading the 900-strong chain to continuously update its environmental policy.

Along with other policies, it has introduced processes to minimise energy consumption. ‘We have set ourselves a target to reduce business wide usage of energy and water consumption tangibly year on year,’ the company publicly states on its website.

Investments in the kitchen have a major role to play in this and at The Jack Fairman Quintex’s Cheetah energy control system has been introduced to reduce ventilation energy consumption.

The system controls the extract and supply fans which only allows the fans to run when necessary. Using temperature, optic and flow sensors, it detects the heat, steam and smoke created by cooking and reacts accordingly by altering the fan speed up and down when required.

The system – which continues to be rolled out across other sites in its estate – is a great benefit to The Jack Fairman as it not only reduces energy consumption from the extract and supply fans but also reduces heating and cooling losses.

Additionally, it helps save money and time for the restaurant by reducing maintenance costs, resulting in equipment having a longer life span and needing fewer repairs.

The Jack Fairman will be saving 36,167 kWh per year, giving it tangible payback and a 69% reduction in its ventilation energy consumption, too.

IN FIGURES

JD Wetherspoon pub The Jack Fairman calculates that it has made the following savings introducing the Cheetah energy control system to its estate.

36,167 kWh Saved per annum

18.9 tonnes carbon saved per annum

Reduced energy consumption – 69%

Annual saving in pounds – £2,729

Payback of initial investment – 1.88 years

R E G U L A T I O N



Vital infrastructure for a high-performing kitchen



Ventilation and extraction systems use plenty of power – they are usually the first thing turned on and the last thing turned off in the kitchen.

According to the Foodservice Equipment Association, they’ve become even more complex as the laws on extraction and interlock safety systems have got tighter.

However, there are ways to reduce running costs – for example, by using heat exchangers to recycle the heat in the waste air going through the extraction system or through the use of demand-controlled ventilation systems that control fan speeds in relation to activity.

There has been a big focus on the need to clean ventilation systems, too. Several kitchen fires have been fuelled by burning grease that had been trapped in air ducts. Deep cleaning them is an essential part of the modern kitchen routine.

Meanwhile, an increasing number of appliances are available in ventless formats, designed for front-of-house cooking and for the growing number of kitchens being shoed into premises that can’t



accommodate a large ventilation system. Anyone looking for information on the complex issue of ventilation should talk to the experts. For background, the code of practice and de facto standard to follow can be found in a Building Engineering Services Association (BESA) publication: DW/172 (Specification for Kitchen Ventilation Systems).

The latest version of this includes an update on the risks associated with solid fuel appliances and changes to the equipment coefficients for calculating air movements.

The FEA was part of the consultative group that helped compile the revision. Solid fuel releases carbon monoxide when burned, a highly toxic and odourless gas. Special ventilation systems are required for any operator cooking on a solid fuel appliance.

Food trend: cooking on solid fuels

Establishing authenticity is a big task for many restaurateurs. For example, being knowledgeable about the provenance of your ingredients is now seen as a must for many establishments.

Of course it doesn't need to stop there, and the cooking method itself can be a big part of establishing the authenticity of your methods.

Whatever the health and safety issues, cooking on solid fuels is undoubtedly seen as a big plus and a major draw by most consumers, which is part of the reason for its growing popularity in foodservice.

Solid fuel appliances are found in a wide variety of restaurants – typical appliances range from tandoori ovens to charcoal grills to wood-fired pizza ovens.

For example, in pizza restaurants a traditional wood burning oven is a great focal point and sends a message to customers that they're getting the real thing.

Of course there's the inherent drama of seeing bursts of flame, such as when meat hits a grill, but also there's the taste. There's something primordial in the appeal of cooking with a wood or charcoal flame – it takes us back to our roots.

P R O F I L E



Quintex Systems: Delivering smart technology to make kitchens more efficient



At Quintex we are constantly striving to develop innovative products and solutions that help our clients achieve their goals. We currently have over 8000 of our bespoke systems installed in the UK and this will only continue to grow as we strengthen our relationship with our numerous blue chip customers, many who we have worked with for over 15 years. Our client list is not only testament to the quality our products but to our commitment to excellent service and the high standards we achieve during installation.

When you think of Quintex, you think of Cheetah. Cheetah is our market leading demand control ventilation system, which for almost 20 years, has been developed, designed and manufactured right here, in the UK. We offer a bespoke but affordable system which is guaranteed to improve the energy and cost efficiency in the kitchen, suitable for new build installations but mainly suited to the retrofit market, giving us access to pretty much every commercial cooking environment throughout the UK and Europe.

QUINTEX SYSTEMS



ADDRESS: 8 Ivanhoe Road, Finchampstead,
Berkshire, RG40 4QQ
TEL: 0118 973 9310
EMAIL: enquiries@quintex.co.uk
WEBSITE: www.quintex.co.uk
TWITTER: @Quintex_Systems

As we refined Cheetah, we have also looked into other areas in the kitchen that we can offer unique products that benefit our users. Rather than energy related, in the last five years we have developed new solutions focused around grease management within the ductwork and drainage systems, both of which having issues that have plagued the catering industry for years.

Firstly we have Ecofix, our unique automated duct cleaning system, which in simple terms negates the need for costly manual clean outs by ensuring grease depth is kept to a safe minimum at all times. We introduce our unique biological micro-organism via spray points at key areas in the ductwork which digests the grease leaving little or no residue, but more importantly no flammable grease in the duct.

Biofix has been developed along the same lines but more specifically for drains, our dosing system uses a unique formulation of foaming micro-organisms which treats the entire diameter of the drain, for greater coverage, rather than simply flowing along the bottom. The treatment, again, doesn't simply break down the grease and transfer the grease downstream but digests the grease in the drain leaving no discernible residue.

We've increased the reach of Quintex with our key partnerships around the globe, meaning we can offer our solutions in Europe, the Middle East and Far East.

As businesses continually strive to become greener and more energy efficient, Quintex will be there to help all our clients reach their environmental goals. Whether that's through reducing carbon footprint, negating costly manual duct clean and drain pump outs or through being efficient with the energy used in the kitchen extracts, we will continue to push the boundaries on where commercial kitchens can become more efficient.



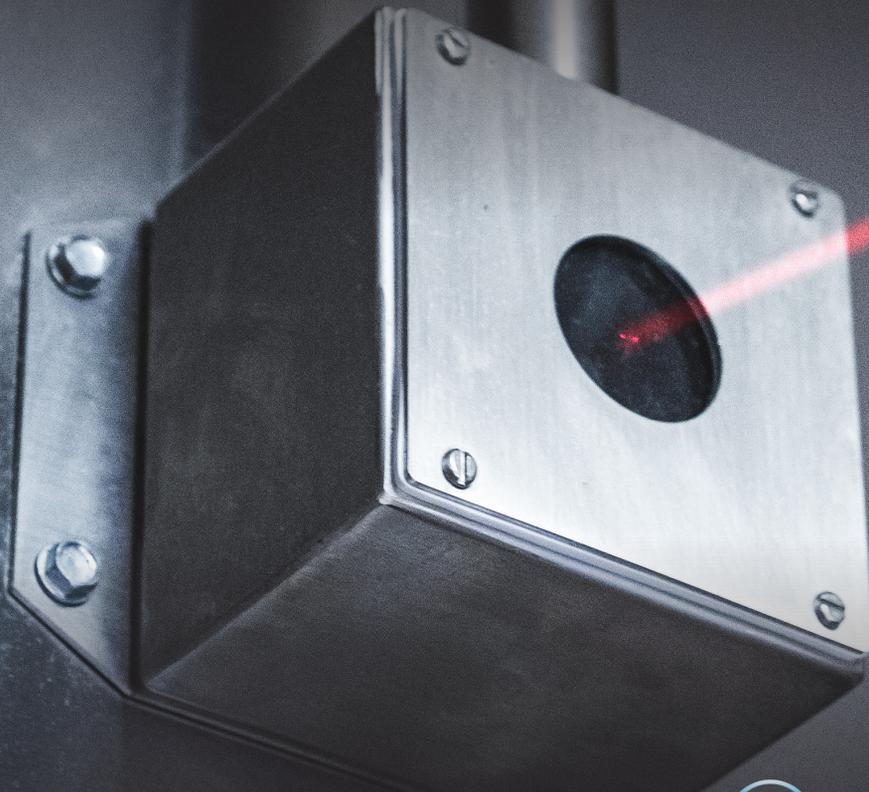
VIDEO EXCLUSIVE



Quintex Systems' general manager Emma Brooks explains how smart technology can make commercial kitchens more profitable.

Visit Foodservice Equipment Journal's YouTube channel to watch the full interview

**RE-IGNITE YOUR
ENERGY SAVINGS**



Cheetah 
Ultimate Energy Control

In a time where every penny counts – don't let your
ventilation leave you hot and bothered



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