



# INDUSTRIAL WASHING MACHINES

...taking hygiene to the 21st Century

## IWM supports the food industry during pandemic

IWM is currently making special efforts to support the food manufacturing industry in the UK during and after the Coronavirus crisis. In addition, the company is continuing to offer a full service that includes repairs and supply of spares to customers across the food sector, whilst observing social distancing rules and all other safety guidelines.

IWM has wide experience of supplying washing and sanitising equipment to food manufacturers around the world, ranging in size from the biggest multi-nationals to the smallest independents, and has pledged to continue providing comprehensive and responsive support to this vital UK sector.

“Although they are under a lot of pressure at the moment, UK food suppliers are committed to maintaining the highest standards to protect their customers and their reputations”, explained Carl Hollier, Managing Director at IWM. “Today, arguably more than at any other time, food safety, hygiene and the prevention of contamination are paramount concerns. At IWM, we’re proud to be playing a part in making sure that requisite high standards are reached consistently and cost effectively so that food manufacturers are able to continue feeding the nation”.

An example of IWM’s experience is the company’s longstanding collaboration with a business that is the principal supplier to more than 700 grocery stores in England and Wales. The installation of IWM’s efficient and dependable washing machines has made possible the use of reusable plastic trays for deliveries to the stores, instead of disposable cardboard cartons. The highest levels of hygiene and cleanliness are consistently achieved, and the reduction in environmental impact is substantial and ongoing.

Among the machines currently on order from IWM are custom weigh pan washers that are capable of washing and drying a full set of weigh pans, wheelie bin washers, cabinet utensil washers for use in the confectionary industry and crate washers that are ensuring food production continues uninterrupted by downtime as a result of washing bottlenecks, with service and spare parts support.



Hand Disinfection Station



High Care Tray Washer

# IWM gives hosiery manufacture a leg up!

As a longstanding manufacturer with forty years of experience, IWM prides itself on developing and producing innovative washing and sanitising solutions for a wide range of applications. But recently the company's creativity and expertise were tested by an unusual challenge when its development team was asked to provide a unique washing machine for a hosiery application.

The challenge came from Adria 2, an innovative new hosiery manufacturer based in Northern Ireland. The company was looking for a special machine to rinse, silicon coat and dry a new design of ladies' seamless tights.

"Adria 2 wanted to shorten production times, automate production and improve the look and feel of the tights", explains Paul Thurston, Sales Engineer at IWM. "Conventionally, tights are made in large batches and are then dyed and washed in one operation in a very large vat. Adria 2 wanted to complete the process without the use of a dye vat, which would allow them to process smaller quantities and eliminate the need for them to rely on outside services. We worked closely with Adria 2 to redesign the entire process, resulting in a highly automated line that

requires minimal human intervention and that can efficiently handle batches as small as a single pair of tights."

In response to the challenge, the IWM design team developed a three-tank machine with a dryer and a carousel chain conveyor. The machine modules were designed especially for the unique application and comprise 1200 mm wash, hot rinse and silicone spray sections, together with a 2000 mm long dryer section. There is provision for Adria 2 to add a softener and a fragrance to the tights to provide an enhanced customer experience.



# IWM helps in a sticky situation!

Set up in 1880, Bennett Opie is a family-run food manufacturing business located in Sittingbourne, Kent. The company produces a variety of preserves, jams, pickles, chutneys, syrups and sauces that can be found on supermarket shelves across the country. One of the company's biggest challenges in recent times has been finding a machine to clean and sanitise the trays used for the fruit, vegetables and syrups, that would be reliable, easy to use and environmentally friendly.

"We had been using a tray washer that was not quite up to scratch, so we realised we needed a customised solution", explained James Jennings, Engineering Manager at Bennett Opie. "Our trays are heavily soiled with fruit debris and syrups and with the old machine they required two or three washes each time, which was expensive and time-consuming."

The engineering team at IWM developed a customised version of the T400e High-Care single-lane continuous-wash tray washer, which can handle up to 400 trays per hour whilst being operated by one person, making easy work of Bennett Opie's sticky trays.

"We initially went to see IWM and took with us heavily soiled trays that we had used for manufacturing pickled walnuts, stem ginger and cherry syrups", said Jennings. "We wanted to show IWM exactly what we are up against by purposely leaving the contamination to dry and see what they could do about it. They did not disappoint! In the past, running the trays multiple times though the wash used 10 cubic metres of water for one batch of trays. The T400e uses less than 5 cubic metres thanks to IWM's innovative design. And it also greatly reduces the time needed for the washing operations."



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## IWM is ready for supporting insect protein processing

At the time of writing, the Earth's population stands at 7.7 billion and counting. Some sources believe that by the end of the 21st century the world population will expand to a whopping 12 billion people, with most of them living in developing countries where food scarcity is already a problem.

To pre-empt global-scale food shortages, scientists are looking for sustainable solutions. Alternative protein sources are urgently required as the land area currently available is not sufficient to satisfy the growing demand for food, and in particular for meat. The result is that insects are now likely to become the new miracle ingredient in the food and animal feed industry, mainly because of their many environmental benefits when compared to meat production.

Among the hundreds of different insect species, the common cricket is the most frequently used for human consumption. The cricket is one of the most nutritious edible insects, and in many parts of the world crickets are consumed dry-roasted, baked, deep-fried, boiled or as a powder of dried and ground crickets, which is easily integrated into many food recipes. Crickets are commonly farmed for non-human animal food, as they provide much nutrition to the many species of reptiles, fish, birds and other mammals that consume them.

Waxworms are the larvae of wax moths and are also used widely across the world for food, fish bait, animal testing and plastic degradation. Low in protein but high in fat content, they are a valuable source of fat for many insectivorous animals. Waxworms can live in low temperature environments and producing them in high volumes is straightforward. For these reasons, it is anticipated that waxworms will soon be playing a significant role in human food products.

As well as being a promising ingredient in food for human consumption, insects are also expected to become increasingly widely used in animal feed. For instance, fly larvae can replace the fish meal, which is currently used in animal food, as it has a similar aminoacidic composition. It is possible to formulate the fish meal to increase unsaturated fatty acid. Wild birds and free-range poultry can consume insects in adult, larval and pupal forms while grasshoppers, moths and houseflies are seen as useful feed supplements for poultry.

At IWM, we have already designed and manufactured a specialised washer for a local company that breeds larvae for animal feed production. The larvae is then dried and processed into specific high protein food for animals.

But including insects into our diets (and those of our pets) comes with its own caveats. For a start, it may be that some people are allergic to certain types of insect but don't know it. Safeguarding against such health risks must, therefore, be carefully taken into consideration. New manufacturing practices, labelling, certification and legislative frameworks will have to be created to accommodate these new foods.

It is possible that insect-based food manufacturing will require updated hygiene options for mixing bowls, moulds, utensils and trays used in food production and transportation. Specialised crate and basket washer and drying systems, rack washers, pallet washers and purpose-built cabinet utensil washing machines will perhaps have to be developed to accommodate the new textures and substances.





# COMPLIANCE FOR CHALLENGING WASHING APPLICATIONS

As a washing machine manufacturer, IWM is always at the forefront of the industry, working alongside companies that demand the most efficient and cost-effective washing and sanitising solutions for use in sectors as diverse as food, automotive, engineering components, pharmaceutical industries and cosmetics. IWM regularly supplies equipment to customers that require high care washing systems, helping them to consistently satisfy even the most challenging quality and reliability standards.

High temperature rinse systems, sanitising sections and effective allergen control technology, are just some of the key features of IWM machines. Ensuring consistent high temperatures and/or precise chemical concentrations throughout the washing cycle is particularly important for the food sector, where harmful pathogens can only be destroyed at 82+ degrees Celsius.

What's more, to remove allergens from cooking utensils, the temperature and washing liquid need to be accurately controlled. For instance, if a food production environment where wheat is present in some products is also used to process gluten-free foodstuffs, the utensils used need to be scrupulously cleaned after each batch to ensure that no traces of gluten, which is a common allergen, remain. This is essential for the health and safety of end customers and also from a compliance perspective. And with stringent regulations such as Natasha's Law coming into force, food producers will need to take even greater care over allergen handling.

For all applications, especially those in the food and beverage sector, IWM supplies machines that are efficient, reliable and durable. The machines can be individually customised to wash items to agreed specifications to meet the user's quality assurance and compliance needs. And with their unique fully stainless-steel construction, IWM products provide years or even decades of service, provided that they are properly maintained and cared for by adopting a regular schedule of cleaning.

When it installs a new machine, IWM puts it through a stringent FAT (Factory Acceptance Test) procedure. This is a process that evaluates the equipment during and after assembly to verify that it is built and operating in accordance with design specifications. The FAT procedure ensures that the components and controls are working properly and that all of the facilities provided by the machine are fully functional from day one.

To complement and augment the FAT procedure, IWM now offers temperature validation and certification, as well as very precise chemical concentration and dosing assessments. Since these operational aspects need to be regularly checked and documented to ensure that the machine user is consistently achieving critical control points, this service is usually offered as part of a regular service agreement. This has the added benefit of ensuring that the machine continues to operate efficiently and effectively for many years to come. Validation and certification services are, however, available separately if required.

As standard, IWM provides comprehensive operation and maintenance manuals but the company can also supply an extensive range of additional documentation tailored, if required, to meet the needs of specific industry sectors. This can, for example, include training certificates, detailed service reports, material and component documentation, and specialised health and safety information.

Ensuring that washing and sanitising machines are built to the highest standards, based on customer-led specifications and stringent acceptance criteria, may seem like a daunting task. But the documentation and certification side of the business is fast becoming as important as the machinery itself!

