

What you need to know about...

Warewashing for Education



Dishwashers for schools and colleges tend to fall into two categories. In the main or larger kitchens you're likely to find a passthrough or hood machine. These workhorses are fast and efficient. In secondary or smaller kitchens many opt for undercounter machines.

Sterilising sink or commercial dishwasher?

Some schools still use a sterilising sink rather than a dishwasher. The simple fact is that a commercial dishwasher is faster, more hygienic and, over time, will reduce running costs compared to a sink. Plus, of course, it's much safer for staff to operate! Then there is

the issue of flexibility – a dishwasher like the Winterhalter PT Utensil passthrough can have separate programs to clean dishes, glasses or utensils, pots and pans, so that all are washed perfectly, quickly and, for staff, effortlessly.

One argument for the old sterilising sink is to wash plastic cups and plates, but modern dishwashers also have the capability to clean plastics easily and efficiently. For example,

Winterhalter offers a specific system that can be used in its PT passthrough and UC undercounter machines. The system uses special racks that hold plastic cups, bowls or plates in place, a smart program to ensure the temperature is right for the ware, and dedicated cleaning chemicals so that the plastics are not only clean but also dry quickly after the wash (see page 3 for more info).



What to look for in a dishwasher

Cleaning performance: the critical issue. Cleaning performance will depend on a variety of factors, not just the machine itself. The right chemicals. The right dosage of the chemicals. The right water treatment for your local conditions. The water pressure. How well-trained staff are.

Some machines offer the option to change wash water pressure, so that heavily soiled items can be washed more vigorously. With Winterhalter machines this feature is called VarioPower.

Flexibility: although commercial warewashers are usually set up to be dishwashers or glasswashers, they can also act as 'do anything' washers. Winterhalter calls this set up 'bistro' – a bistro machine can wash glasses, dishes and cutlery, all at the same time.

Ease of use: mistakes by staff remain the biggest cause of service call outs, so choosing a machine that's easy to use is going to save a whole lot of stress. Single button control

panels are a bonus here, since you just push the button and go (as there's only one button to push, there's no confusion). Quite a few dishwashers will have alerts that show on the control panel if something needs sorting – such as a blocked filter, or a chemical dispenser needs topping up. Some of these even show how to sort the problem out, using a video or graphics. Look for models that have the simplest graphics and, ideally, are language-neutral, so any member of staff who doesn't have English as their first language can use them easily.

Reliability: it's no use having a super-fast, easy to use, high performance dishwasher if it keeps breaking down. These machines get a lot of wear and tear so they need a certain amount of TLC. Make sure staff are trained not only to operate but also to look after the machine day to day (for example, by clearing blockages and draining down at the end of the day) – and that they understand the importance of following the routine procedures. Also make sure the machine is regularly serviced by a qualified engineer.

Speed: check the wash times of the models you are looking at. For example, a passthrough dishwasher, such as the Winterhalter PT, can have a theoretical capacity of up to 72 racks of dishes per hour. However, if ware is heavily soiled, you'll need to use a more thorough, slower wash program. But for lightly soiled items a short wash cycle will be fine and it will speed things up when the pressure is on.

With dishwashers, look for machines that can quickly get back up to temperature between wash cycles. For example, the PT has a clever energy management system that is so fast it offers virtually back-to-back rack-to-rack washing, with no waiting time for the water to heat up between wash cycles, which is a huge benefit during busy periods.

Another option to increase capacity and speed is the double-rack system. This features two racks on top of each other, effectively doubling the capacity of the standard passthrough dishwasher. Typically, the lower rack will hold cups and the upper one plates and cutlery. With the Winterhalter double-rack system, the efficiency of the PT's wash field ensures brilliant cleaning results even with double loads.

Sustainability and energy saving: sustainable equipment can help reduce your environmental impact and future-proof the kitchen. Dishwashers are big users of resources – energy, water and chemicals – so it's not the initial cost that operators should focus on, instead they should look at the lifetime cost.

Manufacturers have developed technologies that reduce the consumption of energy, water and chemicals. Reducing water consumption is very important, not only to reduce water costs but also because most energy is used to heat

the water supply – so less water intake means less energy consumption. Less water also means lower chemical consumption.

For example, Winterhalter's latest UC undercounter machine has a redesigned wash arm, including changes to the water channels and jets to optimise the water flow and create an optimised washfield. This not only improves the wash results, it also reduces water consumption by 25%, leading to a reduction in overall running costs of 22%.

Heat exchangers can also reduce energy consumption. They recycle the energy normally lost in steam and waste water to heat up the incoming cold water supply. The latest version of Winterhalter's PT passthrough hood dishwasher, the ClimatePlus, uses radical technology to cut energy consumption by over 50%. ClimatePlus machines will actually act as an air conditioner, by drawing hot air from the kitchen environment, using it to heat incoming cold water, then pumping cool, dry air back into the kitchen, greatly enhancing working conditions.



The PT Utensil: the multifunctional dishwasher

Most commercial dishwashers are programmed to wash one thing: dishes, glasses or utensils, pots and pans. The PT Utensil is different – and its multifunctionality makes it ideal for schools. The PT Utensil delivers superior results in a compact footprint, plus, it can be switched to wash dishes, glasses or utensils as required. Or one of the programs can be set to 'bistro', for light washing of a variety of dirties. It can even be programmed to wash plastics (when used with the special rack and chemicals, see 'Plastic fantastic').

Underpinning the design of the PT Utensil is Winterhalter's hygiene concept. Every component has been tweaked to ensure that there are no nooks and crannies where dirt can accumulate. Each PT Utensil comes with a set of custom racks specially designed for plates and utensils, protecting each from damage while ensuring optimum water coverage and facilitating fast drying.

Plastic fantastic

Winterhalter has developed special systems to wash reusable plastic cups and bowls easily, hygienically and effectively. Plastics can be challenging to clean and dry in commercial dishwashers. They can flip over, fill up with water, and high heat can damage the plastic. Plastic requires different chemicals to guarantee safe and effective cleaning, and to ensure they dry quickly, to speed up handling, storing and stacking after the wash.

The new system can be used with any of Winterhalter's UC undercounter, PT passthrough and CTR compact conveyor products, allowing for plastic cups and bowls to be cleaned in less than two minutes. It involves three main elements: a special rack, a new wash program and plastic-specific chemicals.

Health and safety 2: HACCP

The detailed data collection for HACCP is important in every school and college. Many modern dishwashers can provide this at the touch of a button. For example, the latest Winterhalter UC machines feature a SmartTouch, multifunctional, multilingual touchscreen that tells operators all they need to know, using easy to read text and symbols to help eliminate operator errors. The touchscreen controls allow for comprehensive monitoring at all times, storing HACCP and relevant hygiene data, and even monitoring external water treatments to enable quick responses to error messages, thus reducing downtime.





The water supply: hot or cold fill?

Most commercial warewashers use a cold fill water supply. Some suppliers may suggest fitting a dishwasher to a hot water feed. However, this should be viewed very cautiously as it can cause serious issues that can compromise wash results and even damage the machine.

The problem is that some sites have a hot water supply that is set at a high temperature, up to 70°C in some cases. Most manufacturers recommend a water supply temperature of no more than 60°C – and even that can cause issues.

There are two critical areas. Firstly, many modern machines use plastic components which can be damaged by high temperatures, causing them to swell or weaken. Secondly, the high water temperature can impair the action of the water softener, by making the resin inside the system clump together. This will mean it no longer softens the water effectively, and can lead to the system breaking down altogether. Using untreated water will cause damage to the dishwasher or glass washer, too, as it will lead to limescale build-up.

Winterhalter recommends NOT fitting a commercial warewasher to a hot water fill. It's not only about the potential damage to the equipment: most good quality modern commercial machines use clever technologies to reduce the energy required to heat up a cold fill supply – so in many cases, the potential cost savings associated with a hot feed are negligible anyway. (See 'sustainability and energy saving').

Chemicals – getting it right

Using the right chemicals is as important, in terms of getting the best results, as choosing the right machine. Ideally you want dishwash chemicals that have been specifically designed to achieve the hygienic results you need. There are various suppliers, including Winterhalter. At Winterhalter we've developed a range of warewasher chemicals that guarantee the best results with our machines. They include our BLUE range, which use eco-friendly formulae without compromising on results and feature packaging that has minimal impact on the environment.

Water treatment

If a dishwasher uses untreated water then limescale build-up will occur – and it can kill the machine if untreated, as it can lead to metal erosion, blocked pipes and damaged elements. Untreated water will also impact on your warewasher's ability to deliver effective cleaning and leave unpleasant odours, which will taint glasses, cups and bowls.

Warewashers with built-in water treatment will normally either use a water softening system or reverse osmosis (RO). Both will help to reduce limescale build-up – though the machine will still require a descale occasionally. Water softening is the most common type of water treatment. Reverse osmosis is more complicated and more effective. The downside is that RO systems cost more to buy and more to run, since the process discards a proportion of the mains water.

Winterhalter has developed a hybrid technology that combines reverse osmosis and a water softener. This offers a variety of benefits, including preventing blockages of the RO membrane, extending membrane life and ensuring perfect wash results from first wash to last. It also lowers running costs, since the operator can switch between using the RO system or just the water softener as required.



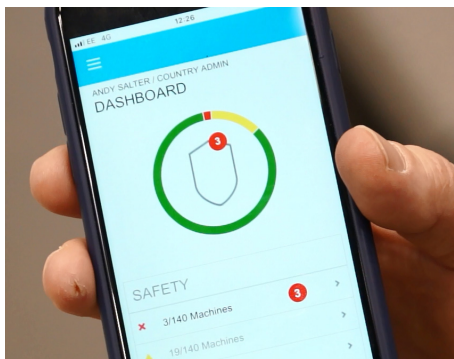


Connectivity: a safer, more efficient future ...

Winterhalter has more experience than most with connectivity – its Connected Wash technology was amongst the first to hit the market. It not only allows users to remotely monitor the operation of their dishwashers, but also for the manufacturer to send software updates.

The technology can optimise operations, for example by showing when doors are opened too early, when machines are being switched on unnecessarily before the first wash, if the machine's self-cleaning program is not being used, and so on.

It can help ensure that service providers can deliver a 100% first-time-fix rate, since data can be viewed by engineers before arriving



on site allowing them to bring the right equipment for the job. It can even warn of a potential component failure before it happens, so the engineer can fix the machine before it breaks down!

It also allows users to monitor all the data stored on the dishwasher, including, for example, HACCP logs.



Pay Per Wash – the new way to own a quality warewasher

Investing in a good quality dishwasher is the best way to ensure you get good results, fast, reliably and easily. But good quality warewashers come at a price. If your budget is tight then Winterhalter's Pay Per Wash (PPW) may be just right for you. It means you don't have to pay for a Winterhalter up front – you pay as you wash. It's flexible, too: if your needs change, you can change the machine. For example you might start with a small undercounter model then move up to a large UC or even a passthrough. And, of course, you don't have to find upfront capital cost to be cleaning with a market-leading warewasher.

With PPW, you load the machine with wash credits, either by phone or online, using a credit card. The number of washes you buy are automatically allocated to your machine, via the internet, and you're good to go. With PPW you don't only get a Winterhalter for no capital outlay, it also covers chemicals and service, too – so there's nothing more to worry about.

For schools and colleges, PPW means you only pay when you are operating the machine. So, for example, in holiday time, or at weekends, if the machines are unused, you pay nothing.

This Blue Paper is produced by Winterhalter, the market leader in commercial warewashing.

Winterhalter provides a total solution for dishwashing and glasswashing, from pre-sales advice to after-sales service, training and maintenance. Alongside its market-leading dishwashers and glass washers, the company's range includes utensil washers, advanced water treatment machines, cleaning detergents and rinse aids. For further details, call Winterhalter on +44 (0)1908 359000, see www.winterhalter.co.uk, or [www.winterhalter-scout.biz](mailto:info@winterhalter.co.uk) or email info@winterhalter.co.uk.

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