

Understanding Beverage Equipment

Hot beverages offer some of the best profit margins in catering with ingredient cost a few pence and selling price usually in excess of £1. That margin allows caterers to invest in high performance beverage equipment, since a quality drink allows for a premium selling price. Yet while the end product is a cup of coffee, there are different ways of making it. What caterers have to do is understand what the different beverage systems are for and which is right for the business. These are different types of coffee systems available.

Cafetieres

The most simple of coffee making systems yet still capable of delivering excellent freshly brewed coffee. Despite their low cost and simplicity, cafetieres are seen in very smart hotels and restaurants.

It is possible to get them in polycarbonate (a plastic), but heat-resistant glass is the more common construction material with a brass or chromed cage. The size of a cafetiere is given in the number of cups it can deliver, usually from three to eight.

Because different quantities of coffee will be ordered according to the customers sat around the table, it is important to carry a wide range of cafetiere sizes. A three-cup size will normally be enough for one or two customers and likely to be the most popular order size, but should a party of four order coffee a six or eight-cup size will be needed.

The one word of caution is that the detergents used in commercial dishwashers may be unsuitable for a cafetiere and hand washing will be needed. A supplier will advise on washing prior to purchase.

Pour and serve

This is the familiar balloon-shaped glass jug unit, usually two jugs to a unit, one being filled underneath the unit by hot water run through coffee grounds held in a filter while the other glass jug is held warm on the top of the machine from a heat pad. This system is inexpensive and provides a good cup of coffee, providing the coffee is not allowed to stew on the heat-pad for too long. One hour is considered the maximum time to hold coffee in this manner. Pour and serve systems are ideal for catering operations such as pubs, cafes and small restaurants where demand is steady, but not huge.

Soluble machines

These work on freeze-dried ingredients, often a similar type to coffee granules seen on supermarket shelves. They are very convenient and can be cheap for the smaller machines, making them suitable for low-demand coffee needs such as cafes or pubs. The bigger automatic soluble machines are very fast, delivering a cup of coffee from one-button touch, making them popular with fast-food chains, airports and motorway service areas.

Espresso machines

These are usually semi-automatic or fully automatic. The semi-automatic machines need dispense staff to be well-trained on machine operation to provide coffee with the best flavour and the trademark creamy topping on espresso (called the crema), but manufacturers often offer training packages with the sale of a machine. Fully automatic machines require less operator skill, but staff still need proper training. The two main advantages of automatic espresso machines are that they deliver quality with consistency and speed.

Bulk brewers

These are aimed at any catering operation which has the need for a large volume of coffee to be available in a very short time. Typically, this would be a hotel for breakfast service, refreshment periods during conference breaks or for after-dinner coffee in banqueting, but bulk brewers can also be very useful for staff restaurants, roadside catering, universities and hospitals. They are plumbed-in systems which will both brew the coffee, usually from fresh coffee grounds, and hold it in an internal tank so it can be dispensed for service to customers through traditional table-top coffee pots or into airpots or vacuum jugs.

Tea making and water boilers

An on-demand supply of very hot water is essential for every catering operation and while tea making may be the main function of a hot water boiler, they have many more uses in a catering environment, from hot beverages other than tea, to chefs needing a quick source of very hot water. It is essential to get the right capacity of hot-water output which meets both the current need and future needs after growth of the business. The best way to do this is to talk to manufacturers. They will look at the nature of the business, assess water boiler needs and recommend a size of machine which is neither too small or too large. The advice will be free.

Look after it!

Beverage machines cover a wide range of hot drink dispensers and looking after them can range from basic hygiene principles to strict hygiene routines depending on the type of machine.

Looking after water boilers, which are mostly used for tea making, but have a much wider application in the kitchen and for hotels and restaurants, primarily concerns water treatment to deal with limescale build-up on heating elements, the holding tank, inflow and dispense pipework.

This should be done through a water treatment system, which is essential in hard water areas and recommended in soft water areas. Beyond water treatment control, water boilers need little maintenance beyond a quick check during a regular maintenance programme. Pour and serve coffee machines, usually the balloon jug underneath a percolating filter of fresh coffee are also fairly maintenance free apart from the hard water issue which means regular de-scaling is essential.

Where careful looking after beverage machines becomes more important is with coffee machines that produce espresso and the fresh-ground coffee variant drinks that come from an espresso machine.

Espresso machines work under high pressure and have internal pipework through which water and coffee flows. They can also have internal milk holding and frothing systems which bring both hygiene and maintenance issues.

The traditional image of a coffee barista shows used dispense heads being banged to release used coffee grounds into a disposal bin, slapping new coffee heads into place on the machine and generally treating the coffee machine as part of the rough and tumble theatre of good coffee production.

The theatre is very important for front of house coffee sales, but too much robust use of expensive espresso machines might please the barista and the customer in the short term. But add significantly to maintenance and replacement costs not just in the long term but in the medium term.

As with any equipment that uses mains water within internal pipework, all plumbed in coffee machine should have a water treatment system fitted. The type of water treatment should meet the challenges of the local water. A specialist water treatment company will advise on the correct type of system for the local water.

Most coffee systems have a facility for steam heating milk for the production of milk-based coffee drinks such as latte and cappuccino. This is often a steam wand on the side of the machine into which a jug of milk can be placed to both heat and froth.

Milk is a prime breeding ground for harmful bacteria and coffee machines with a milk steam wand should have the steam wand cleaned and sanitised at least every six hours. Some semi-automatic machines have a refrigerated milk system within the unit. These need rigorous care and it is essential to follow the manufacturer guidance on how to keep the unit clean and safe.

Where a machine has a steam wand cleaning cycle this should be used according to manufacturers instructions. Many espresso machines now have a self-cleaning cycle which can work from a button touch and takes just a few minutes.

In Brief

Do

- Fit a water treatment system
- Thoroughly clean where milk has been
- Keep the drip tray clean
- Clean machines daily
- Train staff to make good coffee

Don't

- **Rough handle dispense heads**
- Leave sugary spills to attract pests
- **Use hard tap water in unplumbed machines**
- Allow untrained adjustments to machines
- Leave spilt ingredients in soluble machines
- Wash cafetieres in a dishwasher

How to find out more about hot beverage systems

Talk to the experts.

The Catering Equipment Suppliers Association

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