

Understanding Ice-Makers

The main need for ice by a catering outlet is for adding to cold drinks such as cocktails or soft drinks, but other uses are for display cases of items such as fish of the day and chefs often use it for rapid chilling or keeping a food item cool while it is being worked on.

There are two basic types of ice-maker, an ice-cuber and an ice-flaker. If a lot of flaked ice is needed it will be necessary to have both a cuber and a flaker, but if just small amounts of flake are needed, say for certain cocktails or “slush”-type soft drinks, then cubes can be crushed in a commercial specification food processor or blender.

The simplest type of ice-maker works by automatically depositing water in moulds and then ejecting the ice cubes when frozen into a storage hopper. This gives ice cubes with the familiar cloudy appearance of ice made in a domestic freezer.

Where the appearance of the ice is part of the overall ambience of a drink, such as in a hotel cocktail bar or fine dining restaurant, there is a desire for very clear ice, often in a “designer” shape rather than just standard cubes. This ice is produced in an ice-maker which sprays water upward into little cup-like moulds to be rapidly frozen. This upward spraying of water makes very pure ice because many of the impurities present in tap water drop out before they can be frozen in the cube. The cubes are crystal clear, attractive in shape and very hard, so making them last longer in a drink.

Choosing the right ice-maker

Ice-makers are rated by their output in kilograms per 24 hours. Choosing the right output capacity of ice-maker should be done in conjunction with a manufacturer, who will calculate the production and storage capacity needed to allow for periods of peak demand, not just aggregated daily need.

With so much water needed in ice production the use of stainless steel in construction ensures very good corrosion resistance. There are two grades of stainless steel used, 304 and 430. The best is 304.

If the ice-maker is self-flushing this means that residual water from the ice-maker will be flushed out automatically as part of each ice-making cycle. Automatic shutdown will save on energy by stopping ice production when the storage bin is full.

The extras

Almost certainly a water filter will need fitting to prevent the internal pipework of the ice-maker becoming furred up through limescale deposit from dissolved salts in mains tap water. This will also assist in delivering clearer ice cubes. In busy operations it

may be necessary to have satellite ice storage bins served from one large central ice-making unit. Where there is a heavy and constant demand for ice, it makes sense to split production between two ice-makers for cover during servicing or in the unlikely event of a breakdown.

Health and safety

Ice is legally considered food and is subject to strict hygiene legislation just as food is. Cleanliness of the machine is very important and manufacturers' cleaning routines should always be followed. Good hygiene practice by staff handling ice is essential and they should have professional training which manufacturers can often arrange. Staff should never touch ice with hands and only proper ice scoops should be used to fill ice buckets from the storage bin. Using glasses to fill ice buckets is extremely dangerous through the risk of glass chips getting into the ice. Ice tongs should be present in every ice bucket.

Look After It!

An ice maker is a piece of equipment that is easy to be seen as self-contained, relatively maintenance free and one less bit of equipment that needs regular attention. That is not true.

Fridges produce a chilled environment for food and drink, but an ice maker is just as much a food production machine as an oven and needs the same care and looking after. Legally, ice is classed as food, since it is eaten.

Ice making machines are capable of delivering a completely safe food product. Where the problems can arise is if the maintenance, daily cleaning routine and hygiene if ice dispense is not what manufacturers recommend. Ice in bars has occasionally been targeted in the media as an area of poor hygiene. This is not a manufacturing fault, but a staff training and maintenance issue.

The single most likely cause of the contamination in ice is staff or customers using hands to pick up ice, instead of a proper ice scoop. While traditionally, ice buckets have been placed on the bar, this allows customers to access food that will be eaten by other customers. Ice buckets should always be placed on the back-bar area away from customers.

There are only four key guidelines for ice handling:

- Use a proper ice scoop when filling ice buckets from the ice maker storage bin and a scoop or ice tongs when putting ice into glasses. Never use hands to pick up ice, even if you've just washed and never use a glass to scoop up ice, it's very dangerous. Glass looks like ice and a single sliver of glass can cause serious injury in the mouth and throat.
- Never store anything except ice in the ice storage bin, anything else could cause contamination.
- Always keep the storage bin lid of the ice machine closed when not in use.

- Don't let customers help themselves to ice.
- Regularly clean and sanitise all equipment that comes into contact with the ice such as ice buckets, scoops, tongs using a sanitisers approved by the manufacturer of the ice maker.
- Thorough cleaning of the ice-maker and the storage bin should be done once a week following the manufacturer's instructions. Before cleaning the storage bin, turn the machine off and empty it, discarding any ice and mopping out any water using new cleaning cloths before a thorough clean out and sanitising. If the clean-down instructions have been lost, contact the supplier or manufacturer and ask for a copy.
- While an ice maker seems an item of catering equipment that needs little external maintenance, it should always be included in the regular servicing of refrigeration equipment to ensure smooth running.

In brief

Do

Use only ice tongs or ice scoops
Fit a water treatment system
Clean thoroughly
Use clean cleaning cloths

Sanitise in accordance with manufacturer's instructions

Don't

Let customers help themselves to ice
Allow staff to use fingers on ice
Leave the storage bin lid open
Put anything else in the storage bin
Neglect to clean the back of the ice-maker

How to find out more about ice-makers

Talk to the experts.

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