

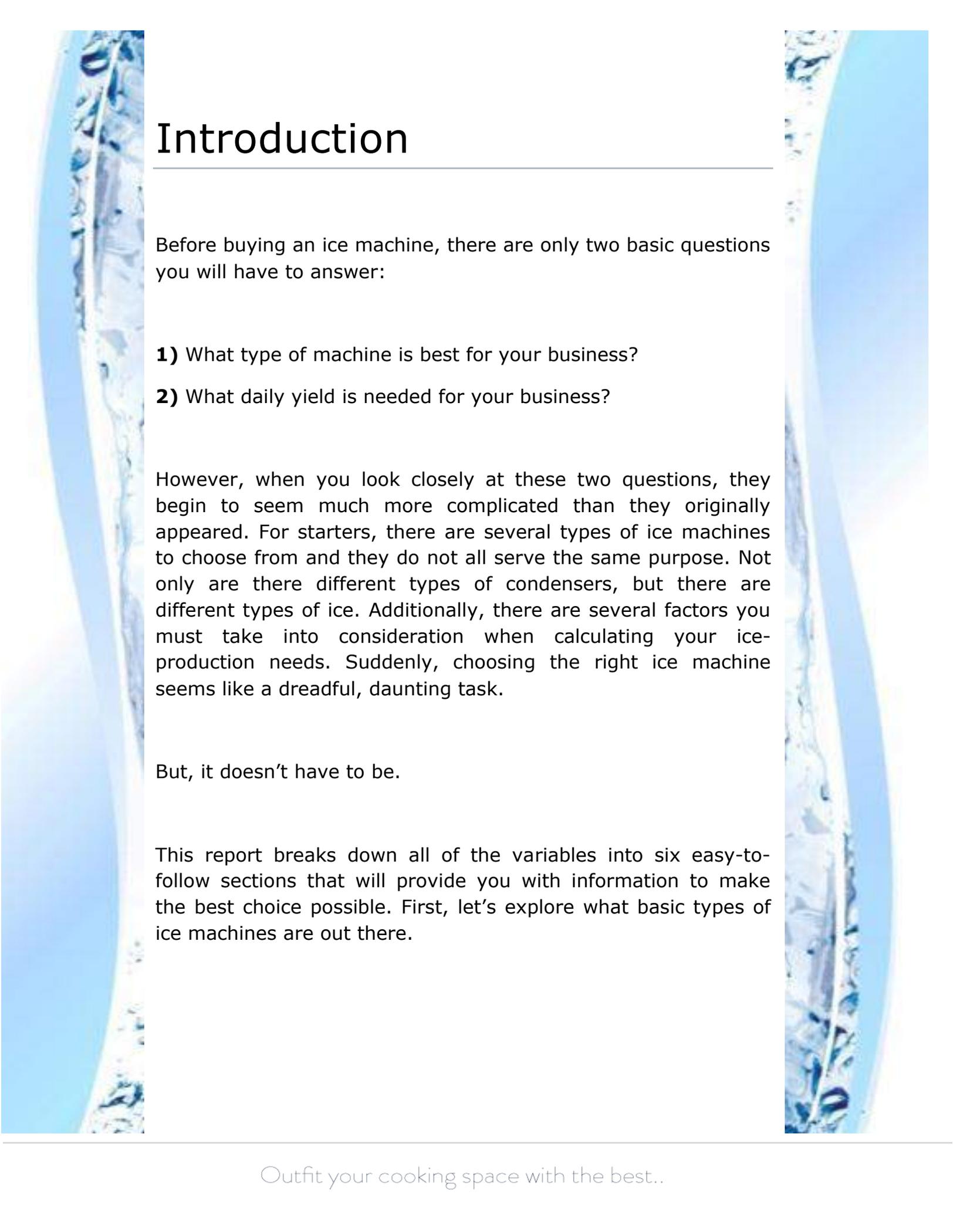
RESStaurant

EQUIPMENT | SALES | SERVICES



How to Select the Right Ice Machine for Your Business

Outfit your cooking space with the best..



Introduction

Before buying an ice machine, there are only two basic questions you will have to answer:

- 1) What type of machine is best for your business?**
- 2) What daily yield is needed for your business?**

However, when you look closely at these two questions, they begin to seem much more complicated than they originally appeared. For starters, there are several types of ice machines to choose from and they do not all serve the same purpose. Not only are there different types of condensers, but there are different types of ice. Additionally, there are several factors you must take into consideration when calculating your ice-production needs. Suddenly, choosing the right ice machine seems like a dreadful, daunting task.

But, it doesn't have to be.

This report breaks down all of the variables into six easy-to-follow sections that will provide you with information to make the best choice possible. First, let's explore what basic types of ice machines are out there.

What are the basic types of ice machines?

There are two basic types of ice machine: modular and self-contained.

Modular Ice Machines:

Modular ice machines produce ice but do not provide storage. These machines require the additional purchase of a storage bin or dispenser, though some are sold as “combination units” along with the requisite storage. Modular ice machines are ideal for businesses that require a moderate to very high yield, such as hotels, hospitals, or large night clubs.



Self-Contained Ice Machines:

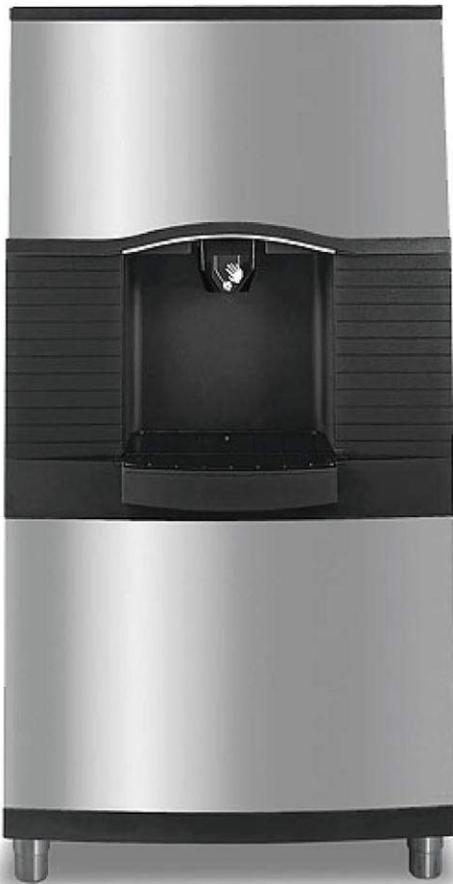
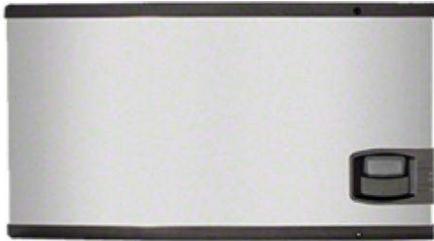
Self-contained ice machines are typically undercounter units that produce and store ice. They are ideal if your business' daily ice requirements are low or if you have space constraints. Self-contained ice machines are typically used by small to mid-sized restaurants and bars as well as daycares, cafés and churches.



If you decide to purchase a modular ice machine, the next step will be finding a storage bin or dispenser that will work best for your operation.

What do you need to know about ice storage bins and dispensers?

There are two types of storage you can attach to your modular ice machine: storage bins and ice dispensers. Storage bins are used by staff while ice dispensers are used by customers or guests.



Ice storage bins are attached to the ice maker to catch and store the ice as it is made.

Features

Here are the basic features of ice storage bins:

- **Size:**

Ice storage bins range from 100 to 2500 pounds in capacity, and can measure between 20 and 60 inches wide

- **Material:**

Storage bins are made from durable stainless steel and some have corrosion-resistant steel on the back and bottom. The bin liners are made from polyethylene.

- **Insulation:**

Bins are insulated but not refrigerated, so ice will melt slowly throughout the day.

- **Drains:**

Storage bins are equipped with drains and will need to be positioned near a floor drain in order to dispose of excess water.

Storage Bin Health Tips:

According to most health regulations, ice must be scooped with a designated utensil, not with a drinking glass or by hand.

You can avoid cross contamination by having an ice scoop holder next to the storage bin, rather than letting the ice scoop sit inside with the ice



What size storage bin should you purchase?

Ice storage bins should have enough capacity to hold 10 to 20 percent more ice than your ice machine can produce in a day. This will ensure that you do not run out of ice in the middle of a rush, nor will you run out of storage for your ice.

It might be a good idea to opt for a storage bin that is 50 to 75% larger than your ice machine. This is ideal if most of your business is from weekend traffic, and you do not need very much ice during the week. This will allow you to purchase a smaller ice machine and still have enough ice to meet customer demand.

Ice dispensers are storage bins that also have a dispensing mechanism, which makes it easy for customers or guests to get their own ice.



There are two basic types of ice dispensers, hotel and countertop:



Countertop dispensers range in capacity from 100 to 250 pounds and are filled with ice either manually or via a modular ice machine that is attached on top. They take up a minimal amount of counter space and can typically be found in quick-service restaurants, employee break rooms and injury treatment facilities. Some models dispense drinking water as well as ice. Countertop dispensers are designed for use with cups, rather than buckets.



Hotel dispensers are large floor units that hold up to 300 pounds of ice. They are designed for use with hotel-sized ice buckets, rather than cups. Hotel ice dispensers are ideal for their speed in dispensing, which is up to ¼ pound of ice per minute, so that guests will not need to wait long for their ice. These dispensers are also available in both coin-operated and token-operated models.

Now that you have a good handle on what type of ice machine and storage bin you need, let's take a look at the varieties of ice that are available.

What are the different types of ice?

Ice machines vary further by the type of ice that they produce. Different types of ice are ideal for different applications, and can provide utility as well as add subtle flair to cocktails, soft drinks and salad bars.



Full-Cube Ice

Full-cube ice, as the name suggests, resembles a cube in shape. It typically measures 7/8 of an inch on all sides.

Benefits

Full-cube ice has a lot of surface area and melts slowly, keeping beverages cold for long periods of time without becoming watered down. Full-cube ice is attractive in whisky, scotch and other cocktails.



Ideal for: Bagged ice, hotel dispensers and cocktails.

Half-Cube Ice

Most half cube ice cubes measure 3/8 x 7/8 x 7/8 of an inch and can be used in a wide range of applications

Benefits

More half-cube ice can be packed into a glass than fullcube ice. This can increase profits by giving customers a higher ice to beverage ratio. It also makes for a very cold drink, perfect for a hot summer day. Half-cube ice is ideal for smoothies, frozen margaritas and frozen coffee drinks as it blends more easily than full-cube ice.



Ideal for: Blended drinks, iced coffee, mixed drinks and soft drinks.

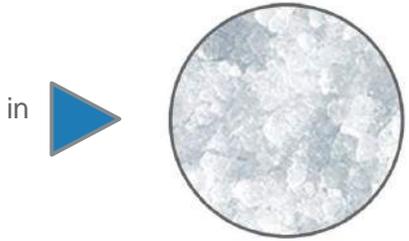


Flake Ice

Flake ice consists of soft slivers of ice that are ideal for packing in products on display.

Benefits

Flake ice is soft, which makes it easy to pack around products to keep them evenly cooled as well as prevent bruising. This also makes flake ice effective in keeping items such as seafood or salad fixings cold and safe to eat. Flake ice is also ideal for therapeutic uses.



Ideal for: Blended cocktails, ice wraps, seafood displays, produce displays, salad bars and therapeutic uses.

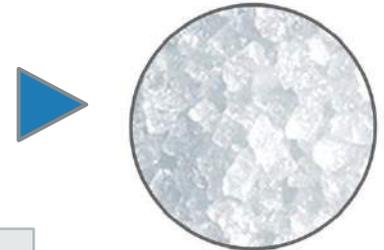
Nugget Ice

Nugget ice is a customer favorite, as it is soft and chewable. It is also known as pellet ice, pearl ice or “Party” ice.

Benefits

Flake ice is soft, which makes it easy to pack around products to keep them evenly cooled as well as prevent bruising. This also makes flake ice effective in keeping items such as seafood or salad fixings cold and safe to eat. Flake ice is also ideal for therapeutic uses.

Ideal for: Nugget ice displaces more liquid than cube or half-cube ice, so it provides even more beverage profitability. It is ideal for flavor and color retention, as it melts slowly. Because it is so easy to chew, health care facilities often use this type of ice for patient drinks. It blends easily and cools drinks quickly. For this reason, it is not ideal for bars as it can water down alcoholic beverages too fast.



Nugget Ice is a Customer Favorite!

In a taste test conducted by Scotsman Ice, 85% of participants preferred this soft, chewable ice to other types.

You now have a good idea of the type of ice machine you need, as well as storage and the ideal applications for each type of ice. Next, you need to understand the benefits each type of condenser has to offer before selecting the best unit for your business.

What type of condenser should you get?

There are three types of ice machine condensers: air-cooled, water-cooled and remote cooled. Choosing the right condenser requires you to consider your location, space constraints and ice-production needs.



Air-Cooled Ice Machines

In air-cooled condensers, the air is moved via vents and fans over the condenser in order to draw heat from the refrigeration lines.

Benefits

- Ice machines with air-cooled condensers are easy to install and are the best choice for most businesses.
- Air-cooled machines are generally less expensive than other condensers.
- Because they use less water, these units are better for the environment and easier on the utility bill.

Additional Considerations

- Depending on the manufacturer, 6 to 12 inches of clearance is needed on the top and sides of these machines in order to facilitate air flow.
- To keep the machine running smoothly, filters and vents need to be cleaned regularly.
- Air-cooled machines can be noisy during ice production.
- Air from the exhaust can create extra heat inside an already-steamy commercial kitchen.
- Air-cooled condensers must work harder in hot climates, and are not ideal for room temperatures over 90 degrees.



Water-Cooled Ice Machines

Water-cooled ice machines are cooled utilizing a water line that runs along the condenser to remove heat from the refrigerant lines.

Benefits

- Both the amount of ice produced and the energy consumed by water-cooled machines is not affected by changing air temperatures.
- These units use less electricity than air-cooled machines.
- Water-cooled machines operate more quietly than air-cooled condensers.

Additional Considerations

- Water-cooled ice machines use a lot of water, so they should only be used if your business does not have space for an air-cooled machine or is located in an especially hot environment.
- These units require two water lines: one for making ice and one for the cooling mechanism.
- Some municipalities have water-usage restrictions that prevent businesses from installing water-cooled machines.
- Water-cooled ice machines significantly increase water, sewer and overall operational costs.

Remote-Cooled Ice Machines

Remote-cooled ice machines are also air-cooled, but the condensing unit is placed outdoors or in another room and refrigerant is piped to the ice maker via copper tubing.

Benefits

Remote-cooled machines allow you to place the noisy condenser out of customers' hearing range, in addition to the other benefits of air-cooled condensers outlined above.

Additional Considerations

- These units are ideal for large operations such as grocery stores as well as restaurants in which the ice-production area is sensitive to noise.
- It is important to consider distance between the condenser and ice maker; the greater the distance the greater your utility and copper tubing costs.
- The length of copper tubing used is limited to between 55 and 60 feet, so you will need to consider how close you will be able to put the condenser to the ice maker.
- In order to function properly, tubing needs to have a certain amount of drop. The tubing must be raised approximately six inches for every five feet of distance.
- Remote-cooled machines keep utilities down as they do not add heat to the kitchen.



When you put together all the factors necessary to determine the ideal ice machine for your business, the last step is determining how much ice your business needs.

What size ice machine do you need?

The most common ice machines range in daily production from 300 to 600 pounds, but there are machines which make up to 2500 pounds of ice in a 24 hour period. Your daily needs will vary, so it is important to plan on purchasing a machine that will meet your customers' demands on your busiest day. You should also take into consideration the possibility (hopefully!) of future growth in business, and purchase a machine that produces enough ice to exceed your current demand by 10 to 20%. But how much ice do you really need? Use the chart below to calculate your establishment's needs.

Type of Operation	Usage	Unit of Measure	Recommended Ice Type
Food Service			
Restaurant	1.5 lbs	Per Person	Half-Cube
Bar/Cocktail	3 lbs	Per Seat	Half-Cube
Salad Bar	40 lbs	Per Cubic Foot	Flake
Fast Food	5 oz	Per 7 – 10 oz Drink	Half-Cube
	8 oz	Per 12 – 16 oz Drink	Half-Cube
	12 oz	Per 18 – 24 oz Drink	Half-Cube
Lodging			
Guest Ice	5 lbs	Per Room	Full-Cube
Restaurant	1.5 lbs	Per Seat	Half-Cube
Cocktail	3 lbs	Per Seat	Half-Cube
Catering	1 lb	Per Person	Half-Cube
Convenience Store			
Beverage	6 oz	Per 12 oz Drink	Half-Cube or Nugget
	10 oz	Per 20 oz Drink	Half-Cube or Nugget
	16 oz	Per 32 oz Drink	Half-Cube or Nugget
Package Ice	Pounds per bag	X Bags Sold Per Day	Full Cube
Healthcare			
Cafeteria	1 lb	Per Person	Half-Cube
Patient Ice	10 lbs	Per Bed	Nugget
Beverage Service			
Drinks	40% of the cup	X Drinks per Day	Half-Cube or Nugget
Supermarket			
Seafood Display	30 lbs	Per Cubic Foot	Flake
Produce Display	60 lbs	Per Cubic Foot	Flake
School			
Self-Service Beverages	1.5 lbs	Per Student	Half-Cube
Full-Service Beverages	0.5 lbs	Per Student	Half-Cube

Once you have calculated your production needs, you should be able to confidently select the right machine for your business. The only thing left to consider is whether or not you need a water filter, and if so, what size do you need?

Should you get a water filter?

Contaminants such as mineral deposits and chlorine can build up over time and damage your ice machine. This can cause malfunctions which require costly repairs and maintenance. Furthermore, contaminants in the water can give ice an unpleasant taste, hinting to customers that your establishment is unclean. A water filter is an inexpensive way to avoid these problems.

The Benefits of Water Filtration

- **Filtration helps keep production levels high.** Mineral build up slows down your machine. Without a water filter productivity will decrease over time.
- **Water filtration decreases the need for maintenance.** Mineral build up also causes your ice machine to work unnecessarily hard in production, increasing the need for maintenance and repairs.

How do you change the water filter?

You should change your water filtration system every six months.

Luckily it is a very easy process.

- First, shut off the water valve
- Second, remove and replace the filter cartridge



Is a water filter required?

There is no health law mandating your ice machine be equipped with a water filter. However, that means if you don't use such a system you might be left paying for repairs that the manufacturer would otherwise cover.



What size water filter do you need?

Water filter systems have between one and three filters. Which size you need depends on the size and type of ice machine you are operating. The chart below should give a good idea as to how many water filters you need.



Filter Quantity	Cube Ice Machines (lbs)	Flake and Nugget Ice Machines (lbs)
1	Up to 650 lbs	Up to 1200
2	650- 1300 lbs	Over 1200
3	Over 1300 lbs	Not needed

What are the most common manufacturers of ice machines?

Manitowoc

Manitowoc began adding ice machines to their repertoire in 1995 and has since then been awarded many of Energy Star's awards for producing low-energy consuming machinery, most recently the Sustained Excellence Award.

Scotsman

Scotsman Ice has over 300 models of ice machines, and has recently been given a Sustainable Supplier award from McDonald's.

Ice-O-Matic

Ice-O-Matic has been a leading manufacturer for over 50 years, and offers a special 7-year water filtration warranty program.



Though at first buying an ice machine can seem like a daunting task, once you have determined your production requirements and the type of ice and condenser you prefer you should be able to find a machine that suits your needs. After that, with regular cleaning and replacement of water filters, your ice machine should continue working as your silent partner for years to come.

Contact **RESS**

Call a sales representative at Restaurant Equipment Sales & Services today to find out more!

(246) 233-7646

