General information on all ice makers

Water quality / ice quality

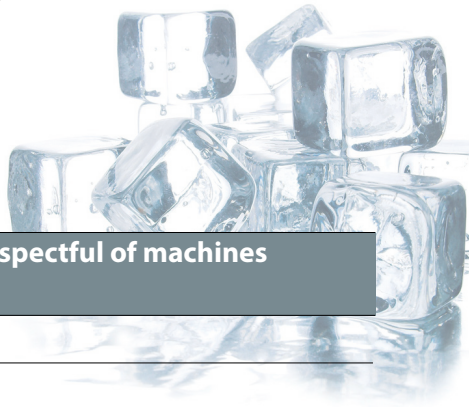
Ice, a potential concentration basin for bacteria

It is common knowledge that ice cubes or ice flakes concentrate within them all odours and water impurities, including bacteria brought to life by poor cleaning of the machine producing them. All businesses, but also any barista using ice for food purposes (i.e. added to drinks and long drinks), must be aware of three important factors:

- Customers like very compact, even-shaped, transparent and shiny ice cubes
- Customers do not like tastes that originating in the water used to produce ice cubes (taste of rust - chlorine)
- Ice preserves all the bacteria present in the water and releases them when it melts. The operator- barista is responsible for the safeguard of his customers' health.

Therefore, one might as well state that the quality of a bar – or similar business – also depends on the quality of ice used. It is necessary for water supplying the icemaker to be filtered, descaled (lime scale is responsible for ice cube opacity) and purified.

One should always take into account that water is fundamental also for the quality of coffee (see the library of "Coffee culture with Kreba").



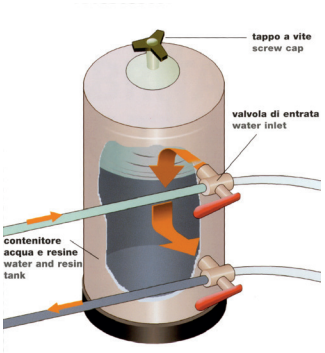
Solutions to purify – make water suitable and healthy for consumption and respectful of machines

(Coffee machines / Glass – cup washers / ice makers)

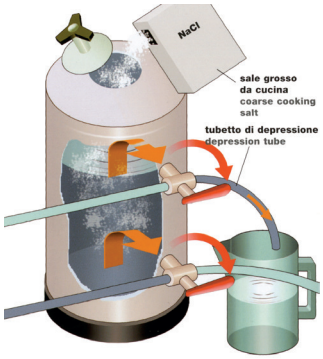
1) Water softeners

Water softeners are practically containers, in which some ion exchange resins are placed. Water flows through the resins, which absorb part of its lime scale and dirt. It is obviously necessary to regenerate the resins when they are exhausted (i.e. they are no longer able to purify water). The regeneration (time ranges) naturally depends on the quantity of water passing through the softener and its capacity (8 L, 10 L, 12 L, 16 L, etc.). Regeneration is performed by letting water flow (towards the drain) through some coarse salt placed in a basket on the upper part of the softener. The salt solution is able to clean up (regenerate) the resins from the waste already absorbed).

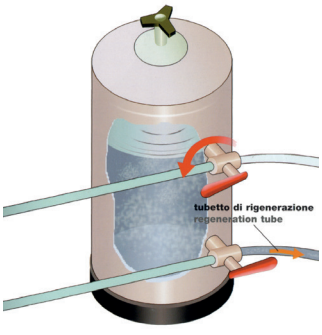
Example of operations with manual water softeners



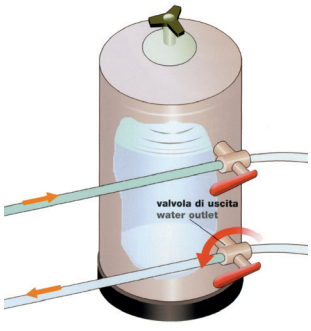
1. Operation phase: The frequency of the resin washing cycle is determined by the hardness of the water used and its consumption measured in cubic metres.



2. Depression and salt load: After placing under the depression tube a container of at least 2 L capacity, turn the inlet and outlet levers by 180°,from left to right. At this stage, the lid can be lifted and salt can be added.



3. Regeneration start: Once the lid has been closed and the inlet lever moved from right to left, let salted water drain from the regeneration tube until the water is sweet.



4. End of regeneration cycle. When the regeneration is complete, turn the outlet tap from right to left, going back to the initial operation phase.

Obviously, after a certain amount of regenerations (approx. 2 years) the resins need replacing.

General information on all ice makers

Warning:

What happens if resins are regenerated after their efficiency limit?

- In this case not only the water softener no longer performs its duty but also becomes a very powerful bacteria receptacle!

Water softeners are available in 4 versions:

- Manual
- Manual with bypass (manual regeneration but slightly facilitated)
- Automatic – time set (time set automatic regeneration according to estimated water consumption)
- Automatic – volumetric control (regeneration occurs automatically, programmed according to actual water consumption)

Manual and By-pass water softeners

Resins (to be changed on a regular basis)

Automatic regeneration water softeners

Cartridge Water Softeners

Art. 3010101

Manual Water Softeners (8 L, 12 L)

Art. 3010106

Manual + bypass water softeners (8 L, 12 L)

Art. 3010074

Automatic volumetric time set water softeners

General information on all ice makers

The considerably higher price of automatic versions leads customers to choose manual models although, in our opinion, this is a mistake.

Reasons:

- The efficacy of water depuration depends on the amount of resins inside water softeners and the number of litres purified.
- It is absolutely necessary that the user (the operator) knows what his consumptions is and must remember to perform regular water checks.
- The user must not only remember to carry out a regeneration before the resins are completely polluted – neutralized, but should also remember to fill the basket with coarse salt.

Users very often forget to carry out regeneration and perform it with much delay, without checking whether there is enough salt.

Most users (operators/barista/etc.) do not know how to perform a regeneration procedure correctly (like for instance check the outlet water to decide when the resins have been regenerated and stop the procedure).

It is understood that an incomplete regeneration process means using water filtered from resins that have been overused.

Examples of volumetric and time set automatic water softeners:

WATER SOFTENER
VOLUMETRIC
AUTOMATIC 8 L

Art. 2111764

WATER SOFTENER
"ELETTRONIC 12" 12 L
ø 3/4"

Art. 3010244

WATER SOFTENER "ECO
12" 12 L ø 3/4"

Art. 3010242

When using automatic water softeners (time set or volumetric), once they have been programmed according to actual needs, the operator only has to remember to keep the basket always full of salt.
The water softener will carry out the automatic regeneration (usually at night).

General information on all ice makers

2) Depuration – through disposable cartridges

Depuration cartridges are available from several manufacturers and for a relatively low water consumption.


Art. 3010606


Art. 3010602


Art. 3010705


Art. 3010700


Art. 3010216

Cartridges are usually applied to single machines, like:

- Coffee machines, cup washers, dish washers, oven, ice makers.
- Obviously, in this way first installation costs are multiplied.
- Cartridges are disposable. Once exhausted, they have to be replaced.
- Over time, the costs of replacement cartridges add up.
- The advantage is that cartridges they do not need regenerating; the operator- barista only has to remember to replace the cartridge when it has been used up.
- The advantage of not needing regeneration lies also in the significant amount of water (costs) saved, that would have been used for regeneration.

3) Comparison of Pros/Cons between water softeners and cartridges

	Water softeners	Cartridges
• Volume of purified water	Very high volumes of purified water, water softeners up to 18 L	Limited water volume
• Regeneration	To be performed on a regular basis and at the right time	No regeneration- only cartridge replacing
• Initial investment	- Manual and by-pass: low - Automatic: high - One single investment (1 water softener for all the machines)	Low – for single cartridge, but it multiplies with the amount of cartridges installed (1 cartridge/machine)
• Assistance/costs over time	Very low costs, only salt costs	Cost of cartridge replacing
• Regeneration costs	- High due to high water consumption - It is necessary to provide a suitable water drain system	0 costs, since it is not required
• Suggested use	- One single water softener supplying several machines - Bars, kitchens etc. (coffee machines, ice makers, dish washers, oven) - Practically: a centralized mounting	- Mounting on single machine, for instance: coffee machine and ice maker, 1 cartridge each - Decentralized mounting
• Dimensions	Large size and sometimes there is little space available	Small size, no space problems

General information on all ice makers

Our piece of advice:

Businesses with several machines (coffee machines, ice makers, dish washers, ovens, ecc.), with high water consumption.

- Centralized solution with automatic water softener


Art. 3010259


Art. 3010098


Art. 3010242


Art. 3010146


Art. 3010244

Businesses with few machines (example: coffee machine, ice maker), with low water consumption

- Decentralized solution with 1 cartridge for each machine
- Machines (for instance coffee machines) with low water consumption do not require frequent cartridge replacing


Art. 3010605


Art. 3010172


Art. 3010602


Art. 3600112


Art. 3600102


Art. 3600038


Art. 3600041


Art. 3010700


Art. 3010707