



INTERNATIONAL FEDERATION
FOR HOME ECONOMICS



IFHE Programme Committee
Household Technology & Sustainability –
the experts in household management

Best Practice FAQs in Automatic Dishwashing[©]

Frequently Asked Questions (FAQs):

1. What to do before using an automatic dishwasher?

Question: What do I need to consider before purchasing a dishwasher?

Answer: The size of the new dishwasher should be selected according to the amount of your daily dishwashing load, and the space in your kitchen. The market offers free standing dishwashers, build in and integrated dishwashers. The doors of fully integrated dishwashers can be adapted to the kitchen furniture. The appliance are offered with different capacity with amplitudes of 45 cm, 55 cm, 60 cm and 90 cm and with heights ranging from 81 cm to 95 cm. Special forms are compact dishwashers and dishwashers that fit into a drawer or on a worktop.

Especially at eat-in kitchens you should pay attention to a low acoustical noise level.

How many and which programs you need is depending on your dishwashing habits, the soiling of the crockery and its temperature sensibility. Popular dishwashers come with normal-, eco-, intensive-, glass- and a quick program with differences in temperature, program duration and drying cycles as well as a cold water pre-rinse program. An automatic program varies the temperature, the amount of water and the number of rinsing cycles depending on the amount of soil and load size (some). In addition further special programs can be offered.

Think about which basket parts should be able to be folded away, if you want to clean glasses and backing trays in your dishwasher and which form of basket shall gather your cutlery.

Pay attention to a simple handling. The dishwasher can have additional functions: diverse displays give information about the program sequence and an error status. There are choices for extended drying, higher cleaning temperatures, additional rinsing or a program adjusted to multifunctional-tabs.

With the help of a start delay mode the cleaning process can be delayed for up to 24 hours and could be moved into a time with lower energy tariffs. A childproof lock also can avoid the opening or running of the dishwasher without authority via mechanic or electronic.

Question: When should I purchase a new dishwasher?

Answer: The consumption values declined enormously during the past 20 years. In Germany or the US the water consumption values were reduced about 70 %, while the energy consumption declined for about 50 %.

Next to these general savings there are also sensors to help saving. Older dishwashers may always need the same amount of energy and water independent of the number of dishes in the dishwasher and their amount of soil. Some new dishwashers are equipped with automatic programs, sensors for turbidity and load identification and can save water and energy.

In addition to these savings a new dishwasher can offer you more comfort with its multitude of programs and basket-elements. They also offer programmes better adjusted to new detergents (e.g. offer tab programme).

Question: What do labels tell me?

Answer: Labels indicate the effectiveness of electrical household appliances to consumers by declaring different parameters which characterise the performance profile of different appliances. They provide the opportunity to compare the water and energy consumption of different products and sometimes even the cleaning and drying performance. These declarations are based on just one of the programmes offered. Other programmes may have a different performance and use different amounts of resources.

Question: Shall I connect my dishwasher to warm water?

Answer: Most dishwashers can be connected by choice to cold or warm water with a maximal intake temperature of 60 °C.

The warm water supply has advantages if the warm water can be provided with low cost of operation. It is always useful while using a solar heating system or a heat pump. While using oil- or gas heating the savings depend on the equipment's efficiency factor and short pipe-ways.

2. How to run an automatic dishwasher?

Question: Why do I need to adjust the water hardness of my dishwasher?

Answer: A dishwasher needs soft water to archive a good cleaning performance and to avoid white coating on the dishes and in the dishwasher.

That is the reason why the entering hard tap water is directed over a softener which detracts the Calcium and Magnesium ions and dispenses Sodium ions in compensation. The softening process works until all Sodium ions are carried out. The Sodium then has to be replaced with new ones provided from the pool of Sodium ions in the recycling salt added by you.

The frequency of this regeneration depends on the water hardness your dishwasher is adjusted to.

If you chose a wrong degree of hardness for your dishwasher it will regenerate too often and too much salt will be used or it will regenerate too seldom which can lead to a lower cleaning performance and white coats.

Some newer dishwasher adjust to the water hardness automatically.

Question: Does it damage the dishwasher if I do not fill in salt at all?

Answer: No, there won't be a damage at your dishwasher. In worst case, depending on the water hardness and the used dishwashing detergent, the cleaning and drying performances can decline. If you have soft water (under 4 °dH = 0,71 mmol/l) or you use a dishwashing detergent with salt replacement, you usually do not need additional salt.

If your water has a higher degree of hardness than 4 °dH (0,71 mmol/l) you should either use a dishwashing detergent with salt replacement or while using a single detergent use regeneration salt to avoid lower cleaning performances and white coats on dishes and machine.

Question: How do I load my dishwasher properly?

Answer: You can put any piece of crockery at every spot of the baskets as long as it has a save stand. While loading your glasses you should keep in mind that dishwasher may have stronger water jets in the lower basket. In dishwashers with a visible heating device maybe plastic devices lying to close to the heating could be damaged.

Adapt the dishwasher to your needs with adjusting the upper baskets height, use elements that can be folded away and leave or use additional elements.

Cutlery and crockery should not lie on top of each other and cover one another. They should be arranged in a way that all areas can be reached by the water. Glasses, cups, pots and such are placed face down in the baskets.

Items with a low bottom should be placed angular so that the water can drain off.

When using a cutlery basket, place sharp item such as knives and forks with its face down to avoid injuries.

Question: Why does the cleaning programs need so much time, nowadays?

Answer: Today's dishwasher need significantly less water and energy then older ones.

These savings are reached because of lower temperatures and lower pumping capacity. To guaranty a good cleaning performance the cleaning time has to be extended sometimes up to more then two and half hours. In some programs additional soaking stages are integrated. In addition to that heat exchanger or condensation units are used, which lead to less sound and avoid the escape of hot air during the drying process. This takes more time then the drying with the conventional heating systems.

Question: What happens during an automatic program?

Answer: In automatic programs the numbers of rinsing cycles is controlled by sensors as are the water amounts and temperatures of the different rinsing cycles.

Loading sensors adjust the water amount to the evaluated load. Sensors for turbidity monitor the water for dispersed particles and rearrange the program depending on the observed values.

If a high turbidity can be measured because of a lot of soil in the water the dishes may be pre-rinsed before the actual cleaning begins. After pre-rinsing the water may get changed and a higher temperature during the main cleaning is used. Slightly soiled dishes produce only a low turbidity and a less intensive program can be chosen.

Under certain circumstances the automatic program can be chosen unfavourably. For instance if the breakfast dishes are cleaned and the program intensity in not high enough due to light turbidity then the teapots may not be cleaned properly. There also could be pots and pans in the dishwasher who's soil only can be removed late in the program which then can not be change eventually.

Question: Do I need to clean my dishwasher?

Answer: The interior of the dishwasher is usually cleaned by itself if you use the right amount of dishwashing detergent. In case of remains of white coats and fat you can remove them with the help of a dishwashing machine cleanser.

The filters at the bottom of the dishwasher can be plugged with soil particles over the time. How long this takes depends on your household conditions.

Clean the filters if necessary after the description in your manual. Carefully replace the filters afterwards and relock them. Without the filters chunky pieces of soil could plug the circulation system.

In the jets and the bearings of the spray arm leftovers could get stuck. This is the reason why you should control the spray arms continuous and clean them following the users manual, if you recognise residuals on the cleaned dishes or low cleaning performances.

Question: What do I need to take in account if the dishwasher is/was not used for a longer time for example a dishwasher in a holiday home?

Answer: Close down the tap and pull out the power plug. You should leave the door ajar to avoid the increase of germs and smell.

It should be regarded that after a holiday period bacteria may be grown in the leftover water deep down in the bottom of the machine. They are usually killed and washed away during the first normal program run with at least 60 °C.

Then a separate disinfection is not necessary.

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