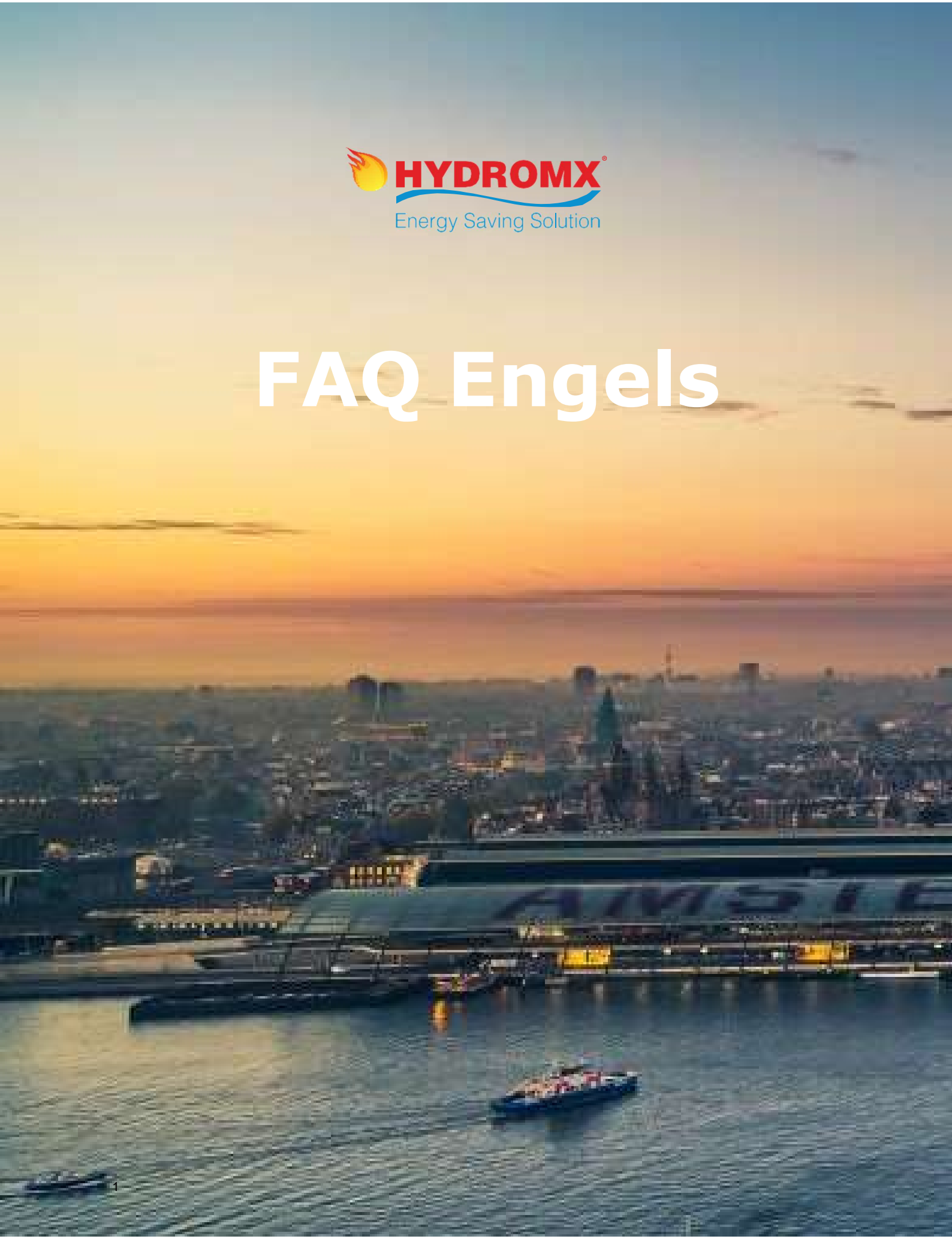
HYDROMX
Energy Saving Solution
FAQ Engels

Hydromx® FAQ

Where does Hydromx® come from and how did it come about?

The history of Hydromx®

Hydromx® has been around for more than 18 years. After three years of development, Hydromx® was first installed in 2008 at a NATO air base in the mountains of Turkey to improve the performance of a hangar heating system. The 10,000-litre installation was completed in one day and resulted in energy savings of 35% with an ROI of less than two years.

India was one of the first major markets for Hydromx®. Numerous installations equipped with Hydromx® have delivered between 20-35% energy savings in cooling, heating and heating applications.

The first installation in the United States took place in 2015 in the server rooms of the HBO broadcast center in New York. The building achieved energy savings of 27% and 90% more free-cooling hours. The annual savings of 65,000 kWh resulted in an ROI of one year.

Of the numerous case studies, Hydromx® is the only approved heat transfer fluid at the Empire State Building in Manhattan.

1. What is Hydromx®?

Hydromx® is a revolutionary heat transfer fluid to replace water or glycol in hydronic heating, cooling and solar systems. Its unique formula improves thermal performance and energy efficiency. In heating systems, this results in lower energy consumption of up to 35%!

2. What can Hydromx® be an advantage for?

Hydromx® is a new category of energy efficiency products applicable to commercial and domestic heating and cooling systems as well as industrial applications where more efficient heat transfer is advantageous. Hydromx® is an energy-saving solution that is mixed with water in a 50:50 ratio and used in heating and cooling systems to improve heat transfer and reduce energy consumption.
Hydromx® can be used in all water-based (hydronic) heating and cooling systems as a heat transfer medium (excluding steam-based systems).

3. How does Hydromx® work?

Hydromx® uses advanced nanothermotechnology, consisting of a protected formula that improves heat transfer. It works in conjunction with the room/radiator thermostats and/or the boiler/chiller controllers, to reduce energy consumption.

By transferring heat more efficiently, the system heats up faster or cools down faster. As a result, the thermostats are turned off sooner and the system changes the on/off cycle to save energy. There is a lot of complex science at the level of nanothermotechnology, but in short, it really is that simple!

4. Can I trust Hydromx®?

Hydromx® has been proven over the years to increase comfort and save energy. Hydromx® is not harmful to people and the environment and prevents oxidation and calcification in your heating system. Hydromx® increases the efficiency of your heating system by reaching the desired temperature settings faster and maintaining this temperature for longer. This special feature of Hydromx® will therefore reduce energy costs and reduce CO2 emissions.

5. Does Hydromx® have insurance?

Following technical assessments and the system protection reporting process, Hydromx® is insured by ACE, one of the largest insurance companies in the world. Hydromx® has a product liability insurance of 2,000,000 USD, and the insurance limit can be increased if necessary. No claim has been made so far.

6. What are the unique features of Hydromx®?

- Faster heating, approx 37%;
- Better comfort due to effective release of energy;
- Approximately 20% to 35% less energy consumption;
- Up to 37% less CO2 emissions;
- At least 20 years guaranteed lifespan;
- It keeps your system clean;
- Non-corrosive;
- Easy installation without chopping and/or demolition.

7. What is the life cycle of a product?

The operation of Hydromx® is guaranteed for at least 20 years.

8. Is Hydromx® harmful?

Hydromx® is not harmful: the components of Hydromx® are organic. If applied and handled properly, it will not cause harm to people and the environment. Hydromx® is non-corrosive, non-flammable and it does not contain carcinogens. To ensure the safety of the product, the following precautions should be taken; Hydromx® should not be used in drinking water systems.

Wear proper eye protection when handling and working with Hydromx®. In case of skin contact with Hydromx®, only wash thoroughly with water. No soap or detergents should be used. In case of contact with eyes, rinse thoroughly with water. If swallowed, drink water and do not induce vomiting. Before using Hydromx® , make sure you know the MSDS document (safety data sheet) from Hydromx®. Please refer to the MSDS document for full details

9. Will Hydromx® damage heating and cooling systems?

Hydromx® has built-in corrosion, calcification, microbiological and frost protection and is compatible with common materials in heating systems, including aluminium.
There are now thousands of installations using a wide range of boilers, radiators and taps and have done so for 15 years.

This includes case studies with aluminum heat exchangers and fan coil units that have been in use for more than two years without any problems.
Hydromx® meets ASTM-D and BUILDCERT corrosion standards and can be used as an inhibitor. For full details; see Hydromx® System Protection.

10. Who are BuildCert?

BuildCert is the product certification arm of WRc-NSF, a testing and certification organisation based in Great Britain, with over 75 years of experience in the water supply industry. They use their knowledge of sanitary systems to research, test and recertify water fixtures. Their independent audits ensure that when you buy BuildCert Approved products, you can do so with confidence. Hydromx® has passed the BuildCert Chemical Inhibitors Approved Scheme and is allowed to use the BuildCert logo in Great Britain.

Quote from BuildCert:

The service life and efficiency of primary circuits and water heaters, including central heating systems, can be significantly improved by the use of chemical water treatment. The purpose of these treatment fluids in central heating systems is to inhibit corrosion of vital metal parts such as pipes and radiators, preventing limescale from forming in the system, and in particular in the boiler. In addition, the fluid must not cause any damage to the plastic and rubber components of the system and have a low impact on the environment.

All BuildCert certified chemical water treatment fluids are tested against the standard specification for the performance of chemical inhibitors for use in domestic hot water central heating systems, prepared by industry experts to ensure inhibitors meet a minimum performance requirement. BuildCert's quality assurance requirements verify that each bottle of water treatment fluid sold with the BuildCert CIAS logo on it performs as well as the last. BuildCert CIAS approval gives boiler manufacturers, installers and consumers the assurance that their hot water system is protected.

11. Does Hydromx® affect the warranty on my boiler?

All manufacturers recommend the use of inhibitors for system protection, and Hydromx® is approved by certification bodies for use as a chemical inhibitor in heating and cooling systems. No cases have been reported where the boiler warranty was affected by the installation of Hydromx®.
If you have any questions about specific boiler manufacturers or if you have any doubts about a boiler manufacturer's warranty, please contact us.

12. How are CO2 emission savings calculated for gas boilers?

The Carbon Trust (UK) is a valuable source of information on all things carbon. They provide a guide to conversion factors that will help you calculate your organization's CO2 emissions, with guidelines on how to convert energy consumption and CO2 emissions into common units.

Carbon Trust Conversion Factors.

When gas and/or electricity is consumed for heating, carbon dioxide (CO2) is emitted into the atmosphere. These conversion factors indicate that for every M^3 of gas consumed, 1.78 kg of CO2 is released. 0.37 CO2 is emitted per kWh. Any reduction in gas and/or electricity consumption will reduce CO2 emissions by the same amount.

13. How to save trees with Hydromx®

According to the United Nations Environment Programme: One hectare of trees can absorb 6 tonnes of CO2 per year, which equates to about 100 trees per hectare. By reducing the amount of carbon fuels burned for space heating, the amount of CO2 emitted is also reduced.

The amount that is reduced can be equated to the amount that a tree absorbs in a year and hence the reduction in the number of trees that we need to plant in order to bring our planet back into balance.
According to the UN's Billion Tree campaign, check out their quick facts here. To make up for the loss of trees over the past decade, we would need to plant 130 million hectares (or 1.3 million km2), an area the size of Peru.

To cover the equivalent of 130 million hectares, it would be necessary to plant about 14 billion trees each year for ten consecutive years.
The net loss of forest per day is 20,000 hectares or the equivalent of an area twice the size of Paris. This equates to 7.3 million hectares per year. We calculate that a representative house emits 3.7 tonnes of CO2 per year due to heating. This requires about 60 trees to absorb the CO2. Using Hydromx® can save up to 35%, which is about 20 trees per house,

14. Can I install Hydromx® in my system?

Installation work must be carried out by a qualified plumber/installer. Who has read the instructions and has been trained by the manufacturer or distributor of Hydromx®.
Before a Hydromx® installation is carried out, according to these installation instructions, a valid purchase agreement with associated conditions must have been concluded between the customer and Hydromx® Installation or use of Hydromx® without a valid agreement and/or non-compliance with these installation instructions will void any warranty given by the manufacturer.

For full details, please refer to the installation protocol document.

15. What is the amount of Hydromx® required for heating systems?

The most effective heat transfer solution from Hydromx® in Europe is *Hydromx® ready to use (50:50). The amount of* Hydromx® can be estimated by calculating the amount of water in the system components, the radiators/fan coils, boiler and pipework. This can be done from drawings or after a short site survey.

Examples:

- A common type of 3 bedroom property needs approximately 80-120 litres of Hydromx®
- A detached house needs approximately 150–300 litres of Hydromx®
- A block of 700 apartments needs approximately 54.00 litres of Hydromx®
- An educational institution (depending on the building) needs approximately 10,000 litres of Hydromx®
- A large social club (approximately 7000 members) with restaurants, lounges and spa (depending on the building/m3) needs approximately 8,000 liters of Hydromx®
- A district heating system (depending on the size) requires approximately 100,000 litres of Hydromx®

16. How do I calculate the volume of water in heating and cooling systems?

Each building has its own characteristics, which means that the volume of water cannot be calculated by looking at m^3 alone.
There are several methods that can be used to calculate the volume of water in hydronic heating or cooling systems. However, these methods are not always 100% accurate due to inaccurate or incomplete system information and variations in measurement techniques. Therefore, we recommend using at least two methods at the same time for accuracy.

17. Is the performance of the Hydromx® stable over time, or does its efficiency deteriorate?

Hydromx® has a lifespan of at least 20 years, subject to compliance with the instructions for use; proper maintenance of the concentrations levels of Hydromx® and avoidance of abnormal use and/or modifications. Hydromx® works correctly at concentrations between 45% - 60%, so in many systems there is no need to top up the concentration levels in the years following installation.

However, we do recommend that you perform at least annual regular maintenance on the system. The Hydromx® can be tested to ensure that it matches the concentration at the time of installation and any adjustments can be made. Some systems may require additional testing, e.g. pH values and more regular checks, as recommended by your installer or heating technician, e.g. for aluminium parts.

18. Can I mix Hydromx® with other chemicals in the heating system?

Hydromx® is a carefully formulated chemical solution that, after many years of research and development, has led to a potential energy saving of up to 35%. The manufacturer strongly advises not to use any other chemicals in combination with Hydromx® as it may affect performance and have unknown effects on the system.

Note: No other chemical products are required within a heating system, as Hydromx® has built-in calcification, corrosion and frost protection. If you have specific wishes, please contact us .

19. What should I do if I need to clear the system for major maintenance and repairs?

It is not often necessary or desirable to completely drain a system during maintenance work. Individual radiators or parts of the system can be insulated for most applications. Hydromx® is a valuable long-life heat transfer solution and should be reused wherever possible.

The Hydromx® fluid can be drained and stored in suitable plastic cans or tanks (plastic collapsible tanks are recommended for large heating systems) and the system can be refilled after maintenance is complete. During this operation, the concentration of Hydromx® should be monitored and adjusted with additional Hydromx® if necessary to maintain the highest efficiency savings.

20. How do I order Hydromx®?

You can order Hydromx® through national distributors. If there is no distributor in your area, please contact us. *Sales@hydromxeu.com*

21. How is Hydromx® stored, transported and what is the usual packaging?

Hydromx® can be stored as a non-hazardous chemical and is non-explosive. It is also classified as a non-hazardous good for transportation.
It comes in 900 liter IBC packaging Hydromx® Ready to use.

22. Can I become a reseller of Hydromx®?

Hydromx® Europe is building a distribution network of authorized Hydromx® distributors/installers throughout Europe. Feel free to contact us and discuss the business opportunities.

Thank you for showing interest in Hydromx®

Do you have another question?

The expert team is ready to answer any questions you may have and provide you with the necessary information, whether you are an individual, a corporate customer, or a professional in the HVAC industry.

We make sure you get the best support with your purchase and installation of Hydromx®.

The support team Hydromx® Europe

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