

Microwave Heating Unit

New technology for heating liquid products



DANTECH®



C.van't Riet

specialist in dairy equipment



Microwave Heating Technology (MT) offers a new efficient way of pasteurisation and sterilisation of liquid foods. Though conventional heating has provided an effective way of heating liquids for many years, MT now allows for rapid achievement of retention temperature by direct interaction of the liquids with microwaves.

Heating Technology

Based on extensive scientific research, Microwave Heating Technology offers a low energy, time efficient and easy to clean processing system for heating liquid foods. The tubular system allows for quicker and equal continuous heating due to rapid and targeted microwaves.

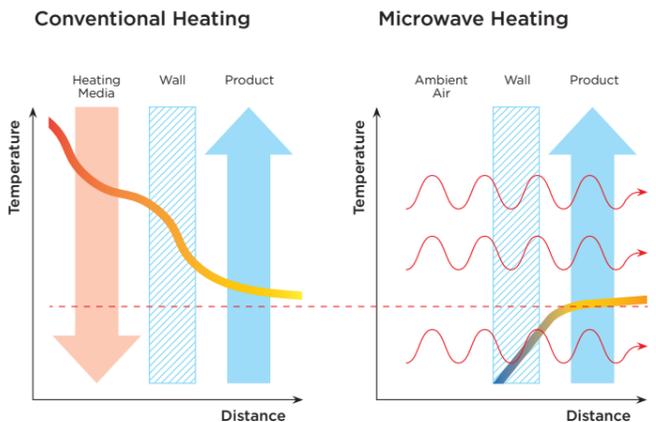
In the conventional plate-heat-exchangers, heat is transferred through the wall of the heat exchanger which causes heat loss and high needs for energy. MHT allows the heat to be directly transferred into the product stream resulting in a quicker and more controllable heating process.

Heating Unit

The Microwave Heating Unit (MHU) is especially useful for "difficult" liquid food products like yoghurt (with fruit), soups or sauces. Due to homogeneous heating and therefore shorter heating times, there is a better preservation of colour, texture, taste and smell compared to conventional pasteurised liquids. The MHU also allows for easier cleaning and subsequent reduction in shut down time due to direct interaction of the microwaves with the liquids instead of through the conventional plate-heat-exchangers. With advantages being a reduction in both the risk of contamination and the risk of fouling.

Great variety in capacity:

Capacity: 2 - 150 GHz
2 types: 2,45 GHz
915 mHz



Main benefits:

Using the frequency range 896-915 MHz, we have developed a unique method of Continuous Volumetric Liquid Heating for pumpable liquids that can contain solid matter of up to 30%.

Major benefits are:

- With renewable energy conversion efficiencies above 90% can be achieved thus reducing the carbon footprint.
- Due to the direct heat transfer, hot spots can be avoided where proteins can form within the process tubes.
- Lean manufacture by reduced downtime for cleaning.
- More time for production.
- Flows and powers ranging from 20-2000l/h can be achieved by this advanced microwave technology.



Type 915 MHz



Type 2,45 GHz

Cooperation

The MHU is developed with support of the European Union Innovation Fund. C. Van 't Riet Dairy Technology is an international specialist in dairy equipment with 125 years of experience in combining pure craftsmanship with the latest innovative technologies. Together with our partners Fraunhofer-Gesellschaft, Dantech, Malthe Winje Automasjon AS, Schwarzwaldmilch GmbH Freiburg and Universität Hohenheim, the combined knowledge in research and development has resulted in an innovative and high-quality unit. Contact us for more information on technical specifications, tube measurements of pricing information.



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