



MMS NORDIC

**YOUR PARTNER FOR
MEMBRANE FILTRATION**



MMS Membrane Systems provides novel processes for the separation, fractionation, purification, and isolation of all classes of molecules – for dairy, food, beverage, pharma, biotech, extracts, and water management applications.

HISTORY AND BACKGROUND

MMS AG designs and manufactures complete membrane filtration systems of all sizes at the manufacturing plant in Zurich, supplying to customers worldwide. We are frontrunners, and our success is built on innovation, ingenuity and flexibility. We offer a customized approach to the needs and requirements of our customers, and strive to realize them on standardized platforms.

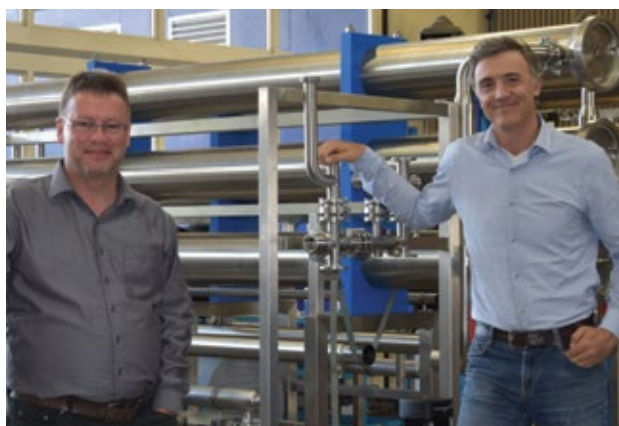
MMS AG was founded in Zurich in 1995 by Alain Messinger. Within a few years of operation, MMS set up an efficient infrastructure, including laboratory and testing facilities, construction, engineering, and manufacturing, and the company had great success with its membrane filtration solutions to the Swiss pharmaceutical industry.

In 2002 George Bou-Habib, who came from Nestlé Research Centre in Lausanne, joined MMS to develop membrane solutions for the food and beverage industry.

In 2006, Alfred Hirschi joined MMS to drive membrane solutions to the Swiss cheese industry.

The dairy industry soon turned into the largest customer segment of MMS. In 2011, Alfred Hirschi and George Bou-Habib did a management buyout and are now the largest shareholders of MMS AG.

MMS has supplied more than 350 systems and units to customers around the world.



ALFRED HIRSCHI AND GEORGE BOU-HABIB

MMS NORDIC

On 1st October 2018, MMS Nordic was established in Denmark to be closer to customers in the Nordic area. As your membrane filtration technology partner we shape large as well as small designs and solutions to the needs, expectations and culture of our customers. Located in Silkeborg Denmark, we are close to you and straightforward to work with, looking at challenges with flexibility and open minds.

We offer qualified guidance to experienced as well as new users of membrane filtration on processes, products, and best use of all filtration product streams. In partnership with our customers, we help to innovate and seamlessly implement new solutions.

MMS Nordic is headed by Niels Osterland, the founder of DSS. The MMS Nordic team of 12 has many years of experience in membrane filtration solutions to customers in most parts of the world. We handle design, project management, engineering, automation, manufacturing, as well as commissioning and service directly from Denmark to ensure maximum ease and accessibility.

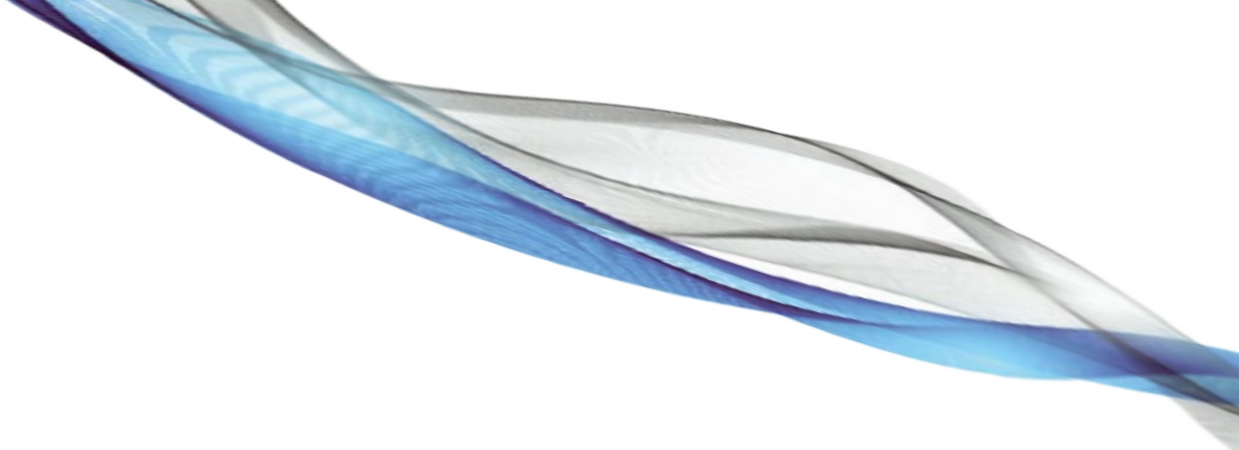


NIELS OSTERLAND

FROM WELL-KNOWN TO PIONEERING APPLICATIONS

MMS has more than 25 years of experience in well-proven, large-scale dairy applications, such as concentration of whey, skim milk and fermented milk, standardization, whey protein concentration, bacteria and spore removal, defatting of skim milk and whey, polishing of water streams etc.

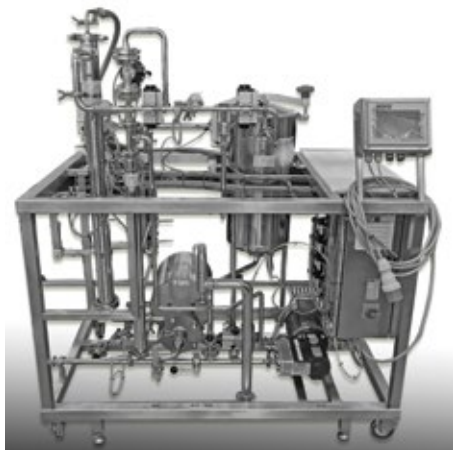
We are continuously optimizing these well-known processes and dedicating resources to developing new



MMS HOLLOW-FIBER SYSTEM

and even better designs and more efficient machines with minimal carbon footprint.

Based on this experience, we have further developed and improved our membrane systems to handle more demanding applications such as the production of MCC85 and MCI, high concentration of skim milk up to 35 % TS, protein fractionation, demineralization of milk and whey, oligosaccharide fractionation, etc.



MMS SW 25 PILOT SYSTEM

DEVELOPMENT SERVICE

In addition to offering solutions to known and well-proven applications, we cooperate with our customers on development projects involving membrane filtration. Our customers are interested not only in the solution, but in the feasibility, costs, speed of realization and

consequences of a novel process.

MMS can shorten the time-to-market of new products, as we undertake careful development work in our laboratory to ensure a superb full-scale result. Trials, membrane screenings and analyses can be done at our lab facilities in Zurich. Full documentation of the results makes it easy for the customer to decide whether to move on to an industrial scale plant.

CROSS-INDUSTRY APPROACH

We work across many different industries: dairy, food, beverage, pharma, biotech, extracts, and water management. And we master all filtration processes: microfiltration, nanofiltration, ultrafiltration, and reverse osmosis.

This fact provides us with a unique opportunity to analyze and combine cross-industry experiences and utilize them to enable new processes for our customers. A strong team of innovative experts pick up new market trends, ideas and challenges from customers in different industries — and connect the dots. They are the link from science and innovation to the practical needs and requirements of the customer.

INDEPENDENT SUPPLIER

MMS is an independent supplier of membrane filtration systems. This goes for components, automation as well as membranes. We have many different types of membrane modules on stock: spiral, ceramic, hollow- fiber, stainless steel, etc. We do not represent any specific manufacturer but use membranes from excellent membrane manufacturers world-wide.

Our purpose is clear: to enable the processes of our customers, designing according to their needs.

WHY CHOOSE MMS

- We offer solutions and guidance for all stages from development through pilot trials to full-scale systems
- We understand the technology and processes and match them to your needs and requirements
- We have more than 25 year of experience
- We are open to new ideas and opportunities
- We are easy to communicate with in all respects
- We innovate based on customer challenges and cross-industry experience
- We are independent and do not represent any specific manufacturers

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