Expert article
Across industries

Contherm Max set to storm the market with its smart solutions

It has been more than a decade in the making, and now the conditions are just right for Alfa Laval's Contherm Max heat exchanger to take the market by storm, according to our expert who has been closely involved in its development.

Niche but versatile, powerful but compact – there is nothing quite like the Contherm Max on the market, says Giovanni Treglia, Contherm Global Sales Manager at Alfa Laval, about a scraped surface heat exchanger big on sustainability that deals with viscous fluids that would quickly clog up other units, and can be applied across a range of industries.

"The Contherm Max came to concept in the early 2010s when some proactive Alfa Laval colleagues identified a gap in the portfolio in terms of the size of the scraped plate heat exchangers," he explains. "They saw there was a niche demand for a very specific product that could manage viscous fluids with a compact physical footprint."

By 2014, a prototype had been developed, and in 2016, it went to market – although, at the time, it was looked upon as a very specific product with limited applications. Over time, that perception has changed. More and more companies are seeking solutions that deliver efficiency and profitability without taking up much space – and Giovanni believes the floodgates are about to open for Contherm Max.

"With Alfa Laval, innovation and efficiency are built into every strategy and product development, and in the Contherm Max, we have a real asset, which brings a lot of operational benefits." One of the key features of the Contherm Max is the rotating, scraping nature of its performance with a blade turning in a double-concentrical cylinder system.

"Contherm Max is a very smart solution that appeals to today's market. It is unique because it works on products with a lot of particles, sugar or fouling ingredients – basically anything that would make life more complicated and difficult for a conventional heat exchanger."

Giovanni Treglia,
Contherm Global Sales Manager
Alfa Laval

These blades clean the heat exchanger surfaces, prevent fouling, and reduce pressure drops. "If you can stop fouling, then you can optimise the cleaning cycle," explains Giovanni "That means more uptime, shorter CIP cycles and significant water, chemical and energy savings. Added to this, the Contherm Max crossflow sections are much larger than other heat exchangers, and this geometry makes displacement of products easier and requires less pumping and energy use."

The ease of cleaning allows producers to transition between products flexibly with limited downtime, and there is also flexibility in the installation, with a vertical configuration that ensures a compact geometry and optimized footprint. In many ways, the Contherm Max was ahead of its time, and now, with the market requirements and understanding catching up, orders are rolling in for this world-leading piece of innovation. The unique design can handle particle sizes up to 25 mm, provides low hold-up volumes and can handle product pressures up to 15 bar (220 psi), with rotational scraping speeds ranging from 40 to more than 100 rpm. This flexibility means it can thrive in a number of different sectors, such as food, personal care, pharmaceuticals, and more.

"Feedback from customers is excellent," says Giovanni. "With Contherm Max, they get peace of mind on maintenance costs and process efficiency. It becomes a no-brainer to have a piece of equipment that offers very limited alteration to the process. "By that, I mean it does its thermal job. It heats and cools and doesn't add any challenges to the process, such as pressure restrictions or a lot of CIP and maintenance.

It is a gentle piece of equipment and handles products with care." While it is a versatile, cross-industry solution, handling everything from caramel to hand cream, customers from the food industry are taking particular notice, prompted perhaps by examples of businesses who are already seeing great results using Contherm Max, such as US-based hummus maker Cedar's. This is a textbook case of Alfa Laval partnering for the long term and supporting the growth of a company over the years.

Contherm® Max is a high-performance double-wall heat exchanger designed to continuously process low to medium-viscosity and crystalline products, including those with large particulates.

Having already worked with them for decades, Cedar's believed in Alfa Laval's equipment and were an early adopter of Contherm Max, with almost 30 units now in operation at their Massachusetts base. "They are a perfect match for us and for Contherm Max," says Giovanni.

"They are processing a product with high viscosity and are looking to grow while having limited resources and space. We absolutely get that, and they have grown significantly over the last five years while optimizing their performance." These success stories, which are reinforced by Alfa Laval's very active after-sales service that supports and maximizes operations, drive Giovanni's passion to spread the word when it comes to Contherm Max. He explains: "It is not just working with this quality of technology that I enjoy; it is the relationship building and partnering with a customer so they get the most out of Contherm Max, whether they are upgrading or starting a new greenfield project.

"This is a unique machine that fits with the demands of the moment, and the future looks very bright. I am really looking forward to the next few months and to helping customers hit their sustainability targets and measuring and proving the benefits of Contherm Max.

"I would much rather be talking to customers all day than tapping away on the keyboard. Talking is paramount – building trust and understanding their pain points. We like to get onto their site, live their life, and understand their challenges – that is the Alfa Laval way."

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