Contherm® Core Scraped-Surface Heat Exchanger

For low to medium viscosity products

Application
Scraped-surface heat exchangers (SSHE) are at the heart of both continuous and semi-continuous viscous food and personal care processes. The Contherm® Core SSHE provides exceptional thermal efficiency, which is a prerequisite for viscous processing. Contherm Core ensures higher throughput, uniform heat transfer and more economical operation, compared to other heat exchangers.

Contherm Core is designed specifically to process low to medium viscosity products, such as soups, sauces, ketchup, fruit purees, dressings, baby food and desserts as well as skin lotions, facial cream and shampoo.

Contherm Core features and benefits
- The 6x11 model offers 0.15 m² (1.62 ft²) larger surface area than other scraped-surface heat exchangers in the market
- Features the same proven critical core components of the Contherm including the heat transfer cylinder, seals and blades
- The Contherm Core can handle up to 50,000 cps and 25 mm (1 inch) particles
- Optional flushed seals allow for aseptic processing

Design
When processing less complicated low to medium viscosity products, sometimes a more simple scraped-surface heat exchanger solution is needed. Based on the traditional Contherm and exact “core” components, Contherm Core was developed to provide a cost-effective, simple design with the quality and reliability expected from Alfa Laval.

This design ensures easy installation and reliable operation adding up to an increased product lifetime and return on investment.

Contherm Core is only available in a horizontal installation frame and with an option to stack three Contherm Core units on top of each other. The frame set-up requires only a minimum of interconnecting pipework and is made of bead-blasted 304 stainless steel.
Working principle
Product is pumped into the Contherm heat exchange cylinder. As it flows through the cylinder, it is continuously mixed and removed from the cylinder’s precisely finished wall by the scraping blades. This scraping action results in thin film product heating or cooling, a surface free from fouling deposits, and a corresponding high heat transfer rate. The drive can be adjusted for varied rotor speeds – an important feature when a number of different products are to be processed. Heating or cooling media flows in the annular space between the Contherm’s heat exchange cylinder and the insulated jacket.

Specifications
- Models 6x9 (0.85 m² (9 ft²)) and 6x11 (1 m² (11 ft²))
- 316/316L stainless steel cylinder
- FDA approved Alfalon® III scraping blades
- 76 mm (3 inch) or 114 mm (4.5 inch) staggered rotors
- Single or double mechanical carbon seals
- 51 mm (2 inches) SMS, DIN or Tri-Clamp connections
- Center port product heads for bidirectional product flow
- Up to 7.5 kW (10 HP) motor and directly coupled gear reducer
- Simplified mounting frame (optional)