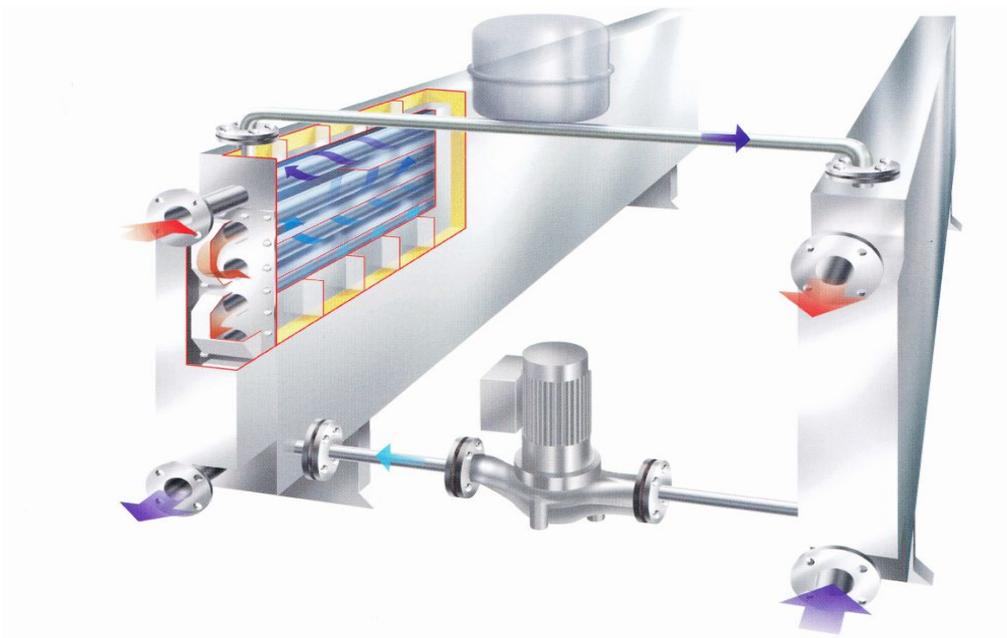


Läckeby heat exchangers sludge - sludge technical data sheet



Heat exchanger units sludge/sludge from Läckeby are a further development of the heat exchanger sludge/water. The unit, combining innovative thinking with 40 years of experience in this sector, has been developed for the specific requirements set for heat recovery from hygienized or digested sludge. This unique patented design provides a compact unit with minimal maintenance requirements.

Function

The heat exchanger unit sludge/sludge consists of two heat exchangers sludge/water connected by a closed water circuit. This creates a compact unit, easy to install and requiring minimal installation volume. The closed water circuit between the heat exchangers eliminates the risk of digested or hygienized sludge being contaminated by raw sludge. Circular sludge channels deliver a large throughput area, which means low pressure loss and a minimized risk of clogging. Inspection, disassembly and maintenance are made easier, thanks to the patented turning chambers, mounted on a common flange. The turning chambers also provide higher temperature transfer by equalizing the sludge's temperature profile. Based on a modular principle and patented turning chambers, the compact design stands for low operating costs. Therefore, the Läckeby heat exchanger unit will prove to be a good investment..

Technical features

- Unique design, specifically for sludge
- Patented turning chamber
- Compact and easy to install unit
- Simple inspection and maintenance
- High heat transfer
- Large throughput area
- Closed water circuit between two separate heat exchangers

Process benefits

- Enhances efficiency of digestion and hygienization
- Equalizes the temperature profile of the sludge
- Easier maintenance and eliminates problems with multiple flanges and loose connections
- Minimizes installation volume
- Reduces pressure losses
- Minimizes risk of clogging
- Eliminates risk of sludge contamination

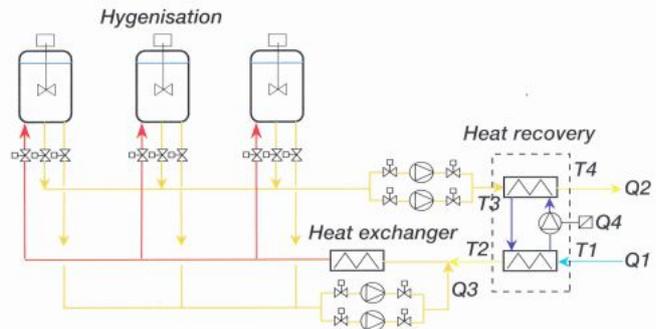
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Design

The heat exchanger unit sludge/sludge is a compact design with circular sludge channels surrounded by rectangular water circuits. Based on a modular principle and patented turning chamber, the heat exchanger unit can be adapted to the unique conditions of each plan. As a standard, the heat exchanger unit sludge/sludge is manufactured in stainless steel, The water circuit with pipes, pump and pressure vessel is not included in the standard Läckeby supply.

Temperature and flow examples

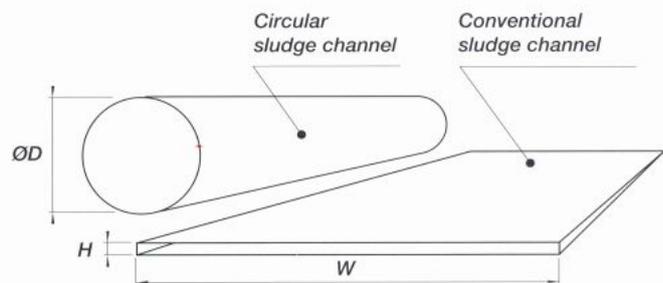
	Example 1	Example 2	Example 3
T1	10 °C	12 °c	10 °C
T2	42 °c	43 °C	41 °C
T3	70 °C	70 °C	70 °C
T4	38 °C	38 °C	38 °C
Q1	5 m³/u	5 m³/u	7 m³/u
Q2	5 m³/u	5 m³/u	7 m³/u
Q3	30 m³/u	30 m³/u	30 m³/u
Q4	12 m³/u	7,5 m³/u	15 m³/u



Due to the variable water flow (Q4), the temperature of the digestion chamber (14) after the hygienization process can be kept constant, regardless of the inlet temperature (fi) and sludge flow rates (O1) and (Q2).



Two heat exchanger units sludge/sludge installed at Vimmerby wastewater treatment works in Sweden



Läckeby develops, designs and manufactures heat exchangers. Coordinated expertise and production ensures high quality service and delivery. Läckeby can also participate and assist as from the planning stage and take on responsibility for everything from dimensioning to installation. Through our involvement at the planning stage, we can offer a total process guarantee.

References :

Since the nineties, Läckeby has supplied over 700 heat exchanger units sludge/water and heat exchanger units sludge/sludge to municipal and industrial plants worldwide.



Task Environmental Engineering is your contact for the Benelux countries (Belgium, the Netherlands and Grand-Duchy of Luxembourg) concerning the Läckeby heat exchangers.