



**LACKEBY HEAT EXCHANGER SLUDGE/ WATER**

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High heat transfer with minimal footprint

## Heating and energy recovery by efficient heat transfer

**In biogas plants and sewage treatment plants, large amounts of heat are often added to the digestion processes, which later become excess heat if it is not recycled.**

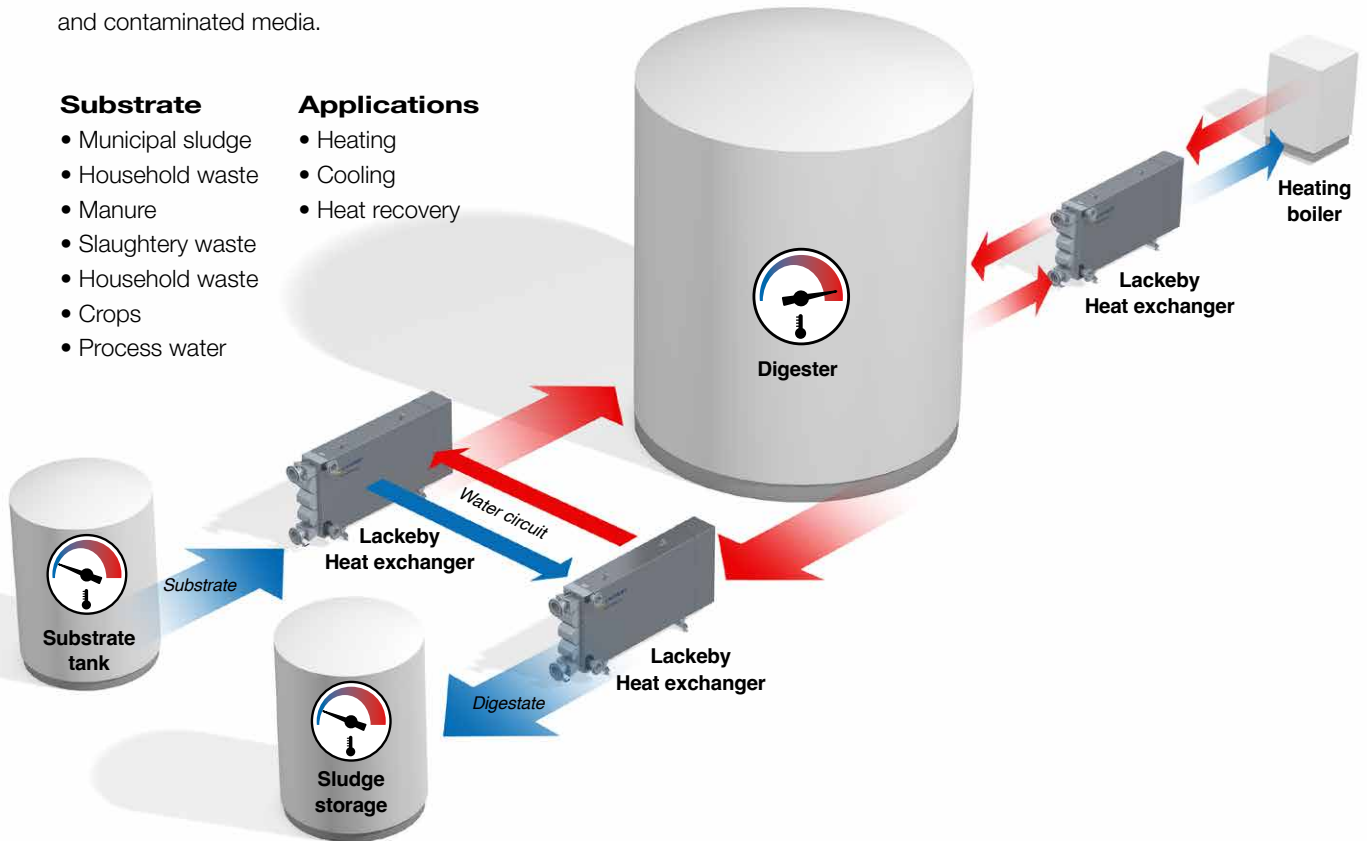
Lackeby Heat exchangers sludge/water are critical components in every modern energy-efficient digestion plant. The design is therefore adapted for maximum heat transfer of highly viscous and contaminated media.

### Substrate

- Municipal sludge
- Household waste
- Manure
- Slaughtery waste
- Household waste
- Crops
- Process water

### Applications

- Heating
- Cooling
- Heat recovery



### From substrate to biogas and biofertilizer

By recovering heat during the process, the biogas plant reduces its dependence on expensive external heating.

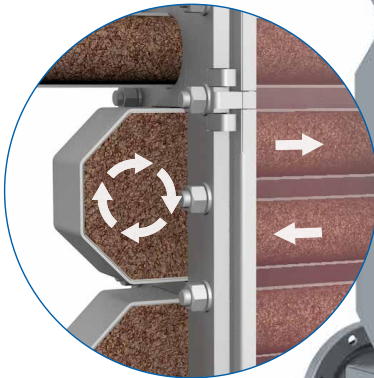
In the digester, the substrate is converted into renewable biogas and the digestate becomes a very high-quality biofertilizer - a sustainable process that provides many economic and environmental benefits.



# High heat transfer technology with a minimal footprint

## Hinged access doors

The access doors can be hinged left or right, making inspection and maintenance easy.



## Unique turning chambers

The unique design of the turning chambers contributes to increased turbulence, which is a critical factor for optimal heat transfer.



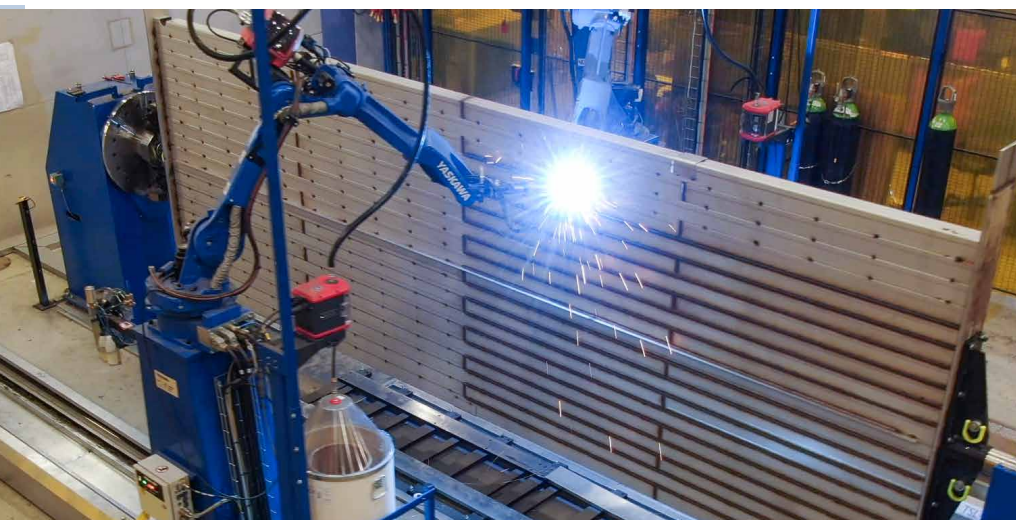
## Sludge pipes

The sludge pipes are adapted for each application area.



## Compact design

The smart design of the heat exchangers allows installation on a small surface.



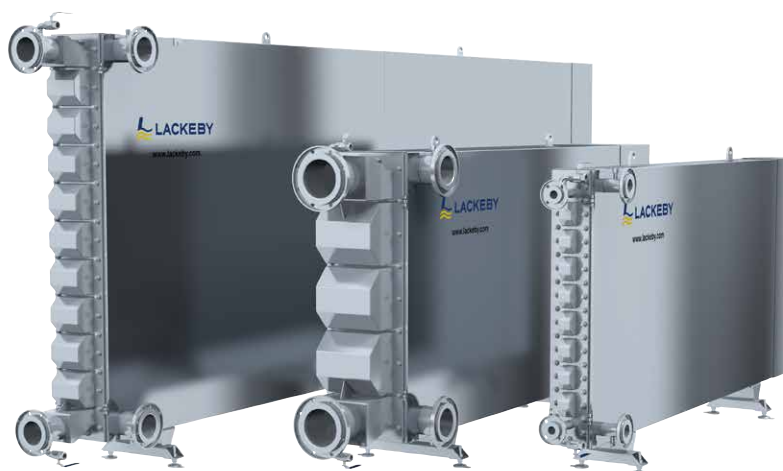
## In-house production

Lackeby has more than 30 years of experience in designing and manufacturing high-performance quality products.

More than 1200 Lackeby heat exchangers have been delivered to industrial and municipal facilities around the world.

# Heat exchangers that can be adapted to specific operating parameters

Lackeby Sludge/water heat exchangers can be designed to suit each specific operating condition and are always optimized for the specific processes they are to be used in. Its modular design enables adaptation to individual needs and conditions.



## Technical data

Model			-1x	-2x	-3x	-4x
HSW 40	Connections sludge / water	DIN	DN50 / DN65	DN65 / DN80	DN80 / DN100	DN80 / DN125
	Min / max flow	m <sup>3</sup> /h	5 / 12	10 / 23	15 / 35	20 / 45
HSW 50	Connections sludge / water	DIN	DN50 / DN65	DN80 / DN80	DN100 / DN100	DN100 / DN125
	Min / max flow	m <sup>3</sup> /h	7 / 18	14 / 35	21 / 53	28 / 70
HSW 65	Connections sludge / water	DIN	DN65 / DN65	DN100 / DN80	DN125 / DN100	DN150 / DN125
	Min / max flow	m <sup>3</sup> /h	12 / 30	24 / 60	36 / 90	48 / 120
HSW 80	Connections sludge / water	DIN	DN80 / DN80	DN125 / DN100	DN150 / DN125	DN200 / DN150
	Min / max flow	m <sup>3</sup> /h	18 / 45	36 / 90	54 / 135	72 / 180
HSW 100	Connections sludge / water	DIN	DN100 / DN100	DN150 / DN125	DN200 / DN150	DN200 / DN150
	Min / max flow	mm	29 / 70	58 / 140	86 / 210	114 / 280
HSW 125	Connections sludge / water	DIN	DN125 / DN125	DN200 / DN150	DN200 / DN150	DN250 / DN150
	Min / max flow	m <sup>3</sup> /h	44 / 110	88 / 220	132 / 330	176 / 440
HSW 150	Connections sludge / water	DIN	DN150 / DN125	DN200 / DN150	DN250 / DN150	DN300 / DN150
	Min / max flow	m <sup>3</sup> /h	65 / 160	130 / 320	190 / 480	255 / 635

Pressure vessel standard	Standard lengths	Material wetted parts	Material pipes	Cladding	Insulation
PED or ASME	3 or 6 m	EN 1.4162	EN 1.4404	EN 1.4301	Mineral wool

Lackeby Products AB has approximately 50 employees and designs and manufactures equipment for environmental cleaning and recycling. All manufacturing takes place in our workshop in Kalmar. The company is a committed partner with high process and product knowledge who always strives to fulfill our customers' real needs.

The company develops and manufactures equipment that reduces environmental impact, therefore it is a stated goal that the company's own routines and production methods are constantly improved in order to minimize the impact on the environment.