

Compact technology:  
A secure investment, low maintenance, quickly available

thermoline®  
**ECO**

**thermowave**

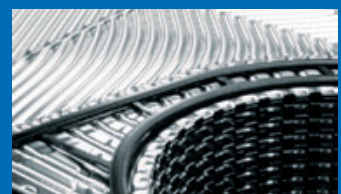
Plate heat exchangers from the thermoline® ECO series are characterised not just by their superior dynamic performance but by their extremely high reliability and efficiency.

thermoline® ECO products can be adapted to their operating conditions for optimal results, thanks to their combination of tried and tested technology with a particularly compact design.

thermoline® ECO plate heat exchangers are conceived as a highly standardised modular construction system and can be delivered at a fair price/performance ratio within a few days.



**TL ECO 50 - 850**



Powerful plate heat exchangers - worldwide.

type	width (mm)	height (mm)	connection DN	overall length (mm)				frame
EL 50	310	553	40	250	500			thermoline <sup>®</sup> ECO 10/16 bar
EL 90		755						
EL 150		1015						
EL 200	475	934	80	-	500	1000	1500	
EL 400		1519						
EL 250	510	1145	100	-	500	1000	1500	
EL 500		1625						
EL 650	706	1750	150	-	500	1000	1500	
EL 850		2290						



## Your Advantages

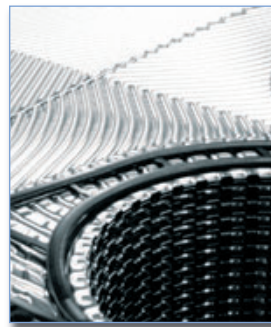
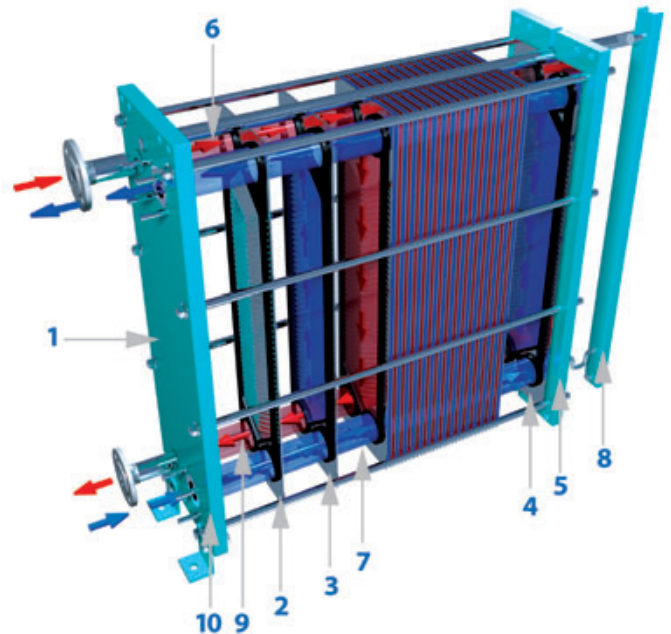
- low investment and maintenance costs
- short delivery times due to highly standardised modular construction system
- tried and tested technology in compact design
- quick and low cost installation
- low space requirement, low weight
- excellent fouling resistance due to high turbulence

## Working principle

The media involved in the heat exchange process, are fed into the plate pack via connections on the fixed and movable pressure plates.

The arrangement of the plates creates two separate channel systems, enabling the two media to flow past and between each other without physical contact, leaving the exchanger again via connections in the pressure plates. Plates with different patterns can be mixed in the heat exchanger in order to achieve optimum efficiency at a given pressure drop.

- 1 – fixed pressure plate
- 2 – starter plate
- 3 – heat exchange plate with gasket
- 4 – end plate
- 5 – movable pressure plate
- 6 – upper carrying bar
- 7 – lower carrying bar
- 8 – supporting column
- 9 – tightening bolt
- 10 – stud bolt connection



## Description of plate heat exchanger

thermoline® ECO plate heat exchangers consist of a number of corrugated plates. The plate pack is mounted between a fixed and a movable pressure plate, positioned by an upper and a lower carrying bar, and compressed by several tightening bolts. Gasketed-type plates with various patterns are

available for a wide range of applications. The media can pass the heat exchanger either in cocurrent or countercurrent flow. Depending on the operating conditions, medium and temperature-resistant gaskets of the glued-on or clip-on version are used.

## Range of products

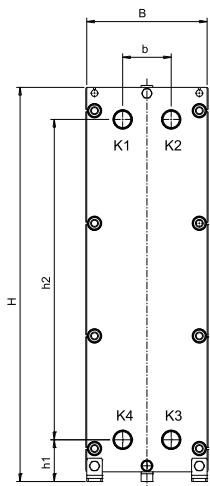
Plates with a variety of patterns, variable depths of stamping and different sizes are available.

### StandardLine plates

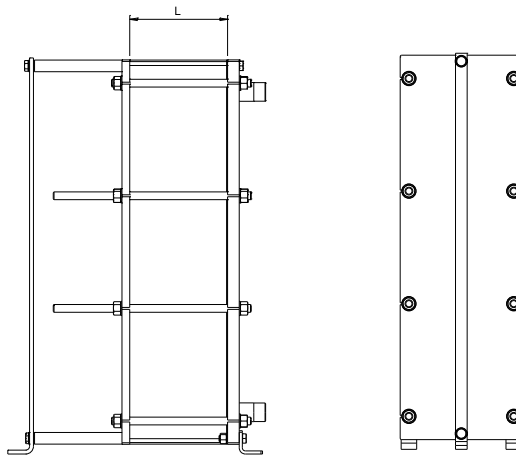
- thermodynamically soft pattern
- high flow rate
- low pressure drop
- wide range of applications
- suitable for viscous fluids and sensitive to shearing
- gentle treatment of products
- corrugation depths from 3.5 to 4.0 mm

### PowerLine plates

- thermodynamically hard pattern
- high heat transfer coefficients
- high thermal efficiency
- low hold-up volume
- suitable for homogeneous and low viscous fluids
- corrugation depths from 2,0 to 2,5 mm



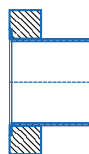
K1...K4:  
connections at  
fixed pressure  
plate



### Connections



DN 80...150  
connection acc. to DIN  
2501 (PN16) with rubber  
moulding



DN 40  
connection acc.  
to DIN 2999  
pin with outside  
thread R 1 1/2"

### Area of application

- industrial cooling
- oil cooling
- district heating / district cooling
- cogeneration
- air conditioning
- solar technology
- swimming pool technology
- HVAC

### Materials

Frame: carbon steel painted with RAL 5018  
Plates: 1.4301, 1.4404, Titanium on request  
Gaskets: NBR, EPDM

### Operating parameters

Design temperature: -10° C to 120° C  
Design pressure: max. 16 bar

### Design code

Design according to Pressure Equipment  
Directive (PED) / AD2000