



# thermolinePURE

Plate heat exchangers for food and hygienic applications

DN25 - DN500







thermowave GmbH is a leading manufacturer of plate heat exchangers configured according to customer specifications in a wide range of materials, frame designs and sizes. Its head office is in Berga halfway between Göttingen and Leipzig.

The product portfolio covers everything from standard heat exchangers for HVAC applications to highly specialised apparatuses for industrial refrigeration, the food and beverages industry, the chemical and process industry, and the energy sector.

> 10 000 sqm Production area

3000 Units per years

A quarter-century quality and experience

#### Rapid expansion of product portfolio and equipment

The product portfolio was already undergoing expansion as a laser-welding machine now complemented the machine park, making it possible to also offer welded modules.

The product range as well as the technical equipment of the production facilities also continued to grow continuously in the subsequent period. Three product lines leading to the company's decision to build a second production hall for even more sophisticated plate heat exchangers.

#### Quality experience

Qualified and motivated staff ensure a consistently high level of quality across all products to the benefit of their customers, thermowave's experience in the industrial transfer of heat allow them to develop new innovative products to launch onto the market.



# thermolinePURE

# **Hybrid design**

Gasketed & Semi-welded

















MAINTENANCE

HIGH TRANSFER **FEEICIENCY** 

# **Key features**

### **Advantages**

- High corrosion resistance
- Fail-safe operation
- Capacity can be adjusted subsequently by adding or removing plates
- Excellent fouling resistance due to high turbulence and smooth surfaces
- Food-safe materials
- Product-friendly design
- Reliable calculation

### **Service friendly**

- Low weight
- Compact design
- Low maintenance
- Easy to clean

#### **Available accessories**

- Stainless steel protective sheet
- Brass nuts
- Tightening bolts covers
- Hook wrench
- Sanitary feet
- Intermediate frame with double connection

# **Energy-saving** operation

- Efficient heat exchanger for small  $\Delta t_m$
- Heat recovery up to 96 %

#### **Rack frames**

- Stainless steel
- Carbon steel, stainless steel cladded
- Intermediate frames with connections

#### **Connection variants**

- Dairy screwed pipe joint -DIN11851
- Aseptic connection
   DIN11864-1 (pipe connection)
   DIN11864-2 (flange connection
   APV-FN1 / FG1 (APV small flange)
- Neumo BioConnect® clamp connection DIN32676

### **Gaskets**

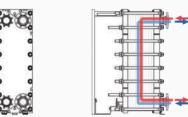
- NBR
- EPDM
- FKM (Viton)

For all processes that involve cooling and heating in the food and beverage industry, the thermolinePURE product line has a plate heat exchanger which is suitable for this application.

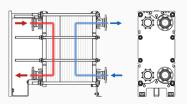
Our extensive experience in the high-pressure application provides the highest quality in thermolinePURE plate heat exchangers. Our pasteurisers for beer, water, soft drinks and other beverages meet the most stringent requirements.

## Frame types

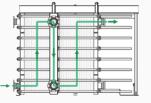
#### Standard configuration



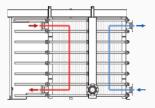
#### Two in one configuration



#### Multisection configuration







# **Plates range**



| Plate type         | 0050 | 0090 | 0150 | 0200 | 0400 | 0250 | 0500 | 0650 | 0850 | 1100 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Port diameter (DN) | 40   | 40   | 40   | 80   | 80   | 100  | 100  | 200  | 200  | 250  |
| Length (mm)        | 519  | 721  | 981  | 795  | 1383 | 1014 | 1495 | 1495 | 2034 | 2034 |
| Width (mm)         | 244  | 244  | 244  | 369  | 369  | 437  | 437  | 586  | 586  | 774  |
| Length / Width     | 2.13 | 2.95 | 4.02 | 2.15 | 3.75 | 2.32 | 3.42 | 2.55 | 3.47 | 2.63 |

### **Plates types**



#### StandardLine plates

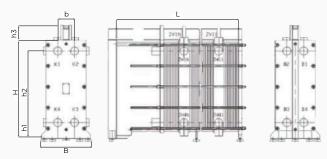
Thermodynamically soft pattern
High flow rate
Low pressure drop
Wide range of applications
Also suitable for viscous fluids
and shear-sensitive media
Gentle treatment of products
Corrugation depths from 3.5 to 4 mm

#### PowerLine plates

Thermodynamically hard pattern
Very high heat transfer coefficients
High thermal efficiency
Low filling volume
Suitable for homogeneous and low viscous fluids

Corrugation depths from 2.0 to 2.5 mm

# **High flexibility and versatility**



#### Technical data

| TL  | Frame<br>type | н    | В   | L        | h1         | h2           | h3    | Nominal<br>width | bar   | m²  | kg        | dm³ |
|-----|---------------|------|-----|----------|------------|--------------|-------|------------------|-------|-----|-----------|-----|
| 90  | F             | 887  | 450 | 250-2000 | 194<br>187 | 565<br>578   | 0-100 | DN 40<br>DN 25   | -1/30 | 43  | 120-600   | 46  |
| 150 | F             | 1147 | 450 | 250-2000 | 194<br>187 | 825<br>838   | 0-100 | DN 40<br>DN 25   | -1/30 | 70  | 160-830   | 70  |
| 250 | F             | 1265 | 650 | 500-4000 | 316        | 774          | 0-280 | DN 100           | -1/30 | 236 | 510-1820  | 256 |
| 400 | F             | 1712 | 575 | 500-4000 | 318        | 1207         | 0-280 | DN 80            | -1/30 | 334 | 390-2100  | 347 |
| 500 | F             | 1745 | 650 | 500-4000 | 316        | 1255         | 0-280 | DN 100           | -1/30 | 425 | 690-4160  | 425 |
| 650 | F             | 1750 | 900 | 500-4000 | 371<br>345 | 1153<br>1205 | 0-280 | DN 200<br>DN 150 | -1/30 | 381 | 700-4700  | 496 |
| 850 | F             | 2290 | 900 | 500-4000 | 370<br>345 | 1693<br>1745 | 0-280 | DN 200<br>DN 150 | -1/30 | 536 | 1000-7000 | 645 |

5

# Your applications at a glance

| PRODUCT                | APPLICATION  | PROCESS   | MEDIA   |  |  |  |
|------------------------|--------------|---|---|--|--|--|
| thermolinePURE         | Pasteuriseur | - Cooling<br>- Heat Recovery<br>- Heating                         | Beer<br>Brewer's yeast<br>Beer wort   |  |  |  |
| thermoline <b>PURE</b> | Cooler       | Cooling of : - Brewery products - Milk - Soft drinks - Foodstuffs | Soft drinks<br>Fruit juice<br>Ketchup<br>Mayonnaise<br>Milk<br>Whey         |  |  |  |
| thermoline <b>PURE</b> | Heater       | Heating of: - Brewery products - Milk - Soft drinks - Foodstuffs  | Cream<br>Yoghurt<br>Cooking oil<br>Water<br>Syrup<br>And many others medias |  |  |  |

# References

SAB Miller



Krones AG



AIDA









LinkedIn

# **EXPERT OF PLATE HEAT EXCHANGERS**

**Makes life fresh** 



#### thermowave

Eichenweg 4 06536 Berga GERMANY

www.thermowave.eu thermowave.eu