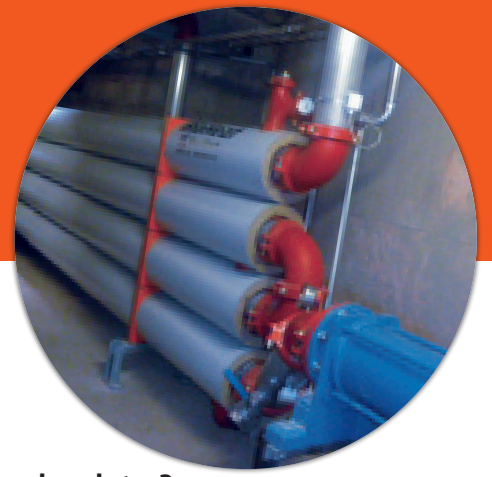


# BioHeat



## THE EFFICIENT, OUTDOOR HEATING SYSTEM FOR BIOGAS PLANTS

Is your fermenter heating causing you problems? Is it difficult for you to maintain constant operating temperature in your fermenter in winter?

## We HAVE THE SOLUTION FOR YOU!

In our outdoor heat exchanger, we offer you a reliable, effective heating system for your biogas plant – throughout the year!

Indoor fermenter heating systems often have difficulty in maintaining the temperature level in winter. Biomass that collects on the pipes has an insulating effect, barely allowing heat to penetrate. This often makes a time-consuming and cost-intensive cleaning necessary. For you as operator, this often implies several days of downtime!

BioHeat heating system has been adapted specifically to the requirements of cost-efficient biogas plants and ensures reliable and quick heating of the fermenter. The ideal solution for an economic, efficient biogas plant!

The BioHeat heat exchanger module can be installed without any problems in any biogas plant. The field of application ranges from fermenter heating to preliminary stage of homogenisation. This is because BioHeat proves to be a reliable component even in applications where organic waste is used in biogas plants. The substrate is already fed at a temperature of 70°C, which makes time-consuming heating unnecessary.

The BioHeat heating system is available in 2 to 24 modules. The pipe length can be adjusted to suit your requirement at your request.

**In this way, you save on cost-intensive and time-consuming fermenter cleaning and avoid possible downtime!**

## BENEFIT FROM OUR EXPERIENCE!

As a long-standing supplier of technology for biogas plants, we know exactly which characteristics, materials and designs are crucial for an efficient fermenter heating system. Drawing on this experience, we have conceived BioHeat. This heating system is installed on our premises and supplies the plant reliably and constantly with heat.

## TÜV CERTIFIED

FRITZ PAULMICHL GmbH is a firm certified by TÜV South to provide services in plants that produce or handle water-polluting liquids in accordance with the German Water Resources Act.

## SEE FOR YOURSELF!

We will be glad to welcome you to one of our reference plants and will be happy to advise you on technical details and use. Use the opportunity and allow yourself to be persuaded by BioHeat!



**RETROFITTING, PRIMARY HEATING,  
PRELIMINARY STAGE OF DISINFECTION**

## ITS ADVANTAGES

- Constant, reliable temperatures at all operating times
- No more downtime due to fermenter cleaning
- Preliminary stage of disinfection
- Rustproof
- Long life
- Maintenance-free operation
- Easy and quick installation of the complete system
- High cost-performance ratio
- Insulation made of Kai ex-protected F-Alu (aluminium-plastic composite film) has proved its worth in outdoor use
- Uncomplicated technology and few individual parts save time and money on repairs
- The heating system can be knocked down completely and can therefore be used flexibly.

### PIPELINE CONSTRUCTION

We install piping in a timely manner and according to your individual requirements. In the process, we implement projects beyond the planning stage:

- Construction
- Commissioning
- Servicing
- Maintenance
- Repair

Our customers are offered tailor-made, holistic and high-quality solutions. We work flexibly, precisely and economically. We react immediately to customer-specific requirements in the conception and implementation phase.

### OUR SERVICES

- Pipeline construction in stainless steel for gas pipelines
- Pipeline construction for substrate delivering pipes with rolled grooves (TubeConnect or Quickcoup)

## DATA + DIMENSIONS

Width: approx. 55 cm.

Heat transfer surface, user-defined

**THERMAL  
HEATTRANSFER  
RATE USE  
REDEFINED**

### MATERIALS USED

#### Outer jacket

Steel pipes DIN 2458 ( EN 10219 )  
Material St 37.0 ( P 235 )  
DA 219,1 x 3,0 mm

#### Substrate delivering components

Stainless steel pipe material number 1.4301 DN 150 DA 168,3 x 3,0 mm  
EN ISO 1127 DIN 17440 Tab. 6 D1/K1  
unannealed, DIN 17457  
Bends with rolled grooves DA 168,3

### CARRIER FRAME

Carrier plates made of steel St 37 ( S 235 JR )

### INSULATION

- Kai ex-protected F-Alu; aluminium-plastic composite film; highly weather-resistant; immune to condensate
- Glass wool, for setting up in a building

### TEMPERATURE DETECTOR

Substrate: Temperature sensor PT 100 at water inlet and  
Outlet: Temperature sensor in immersion sleeve PT 100  
at water inlet and outlet

### CHARACTERISTICS

- All substrate delivering pipes are made of stainless steel
- The pipe sizes DN 100, DN 150 and DN 200 allow for a layout that suits your requirements
- The high-quality insulation made of Kai ex-protected F-Alu ensures safe use outdoors, since the fabric mats do not absorb any water.

# PAULMICHL

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