

# Storage Tank Heater

## GALMATHERM®

Direct heating of liquids in storage tanks and containers efficiently prevents freezing, crystallizing out and thickening. The type approval of your container is not affected in any way by fitting GALMATHERM storage tank heaters.

Storage tank heaters are always planned, designed and built individually for our customers. They consist of a heater GALMATHERM, which can be complemented with a temperature probe and a level sensor.

### Storage Tank Heater GALMATHERM

The very good chemical resistance of the heating cable is achieved by the use of a special coating made of FEP or PFA. The surface load is only 1 W/cm<sup>2</sup>. This makes it suitable for heating of acids and alkalines.



### Construction

The heaters consist of a metal heating wire in a fluoroplastics coating, wound on a flexible PP, PVDF or FEP support. The necessary distance between the heater and the tank bottom is ensured by the support feet attached to the stable frame. PVDF, PP, FEP or stainless steel can be used as frame material. An optional loading ensures that the heater can not float.

The unheated connection cable leaving the heater is also coated in fluoroplastics as far as the connection sleeve and is secured in a PP expandable braided sleeving. This part of the heater can be immersed in the process liquid and is attached to the container lid with a threaded nipple (250 mm below the connection sleeve).



*Installed storage tank heater GALMATHERM  
with a stainless steel frame and protective cover*

From the PVC connection sleeve (degree of protection IP 64 according to EN 60529), a PVC connection cable leads to the control cabinet. The connection sleeve may not be immersed in the liquid.

In the case of containers installed outside, the connection sleeve must be protected from the effects of weather and direct sunlight.

The dimensions and performance data can be found in the product data sheet Heaters GALMATHERM.

### Threaded Nipple

The threaded nipple is used to lead the cable through the container and must always be above the liquid level. It is mounted in a drilling with  $\varnothing$  75 mm.





# GALMATHERM® as Storage Tank Heater

## Electronic Controlling and Monitoring Devices

Our electronic devices necessary for controlling and monitoring temperature and liquid level are designed for installation in control cabinets or for panel mounting.

## Temperature Probe

The TF temperature probe with integrated Pt 100-sensor registers the liquid temperature. It is led by the threaded nipple along the unheated connecting cable. The result is transferred to an electronic controller in order to maintain the desired temperature.

The temperature probe can be fitted with two Pt 100-sensors so as to combine temperature control and monitoring.

## Level Sensor

Float switches or level rod-probes can be mounted with a flange as level sensors. They monitor the minimum liquid level in order to protect the heater and the container from damage in case of drying out. If necessary the heating is switched off.

## Safety

Overheating of the fluoroplastics coating can cause thermal destruction. Take care that there is always sufficient convection and take precautions to prevent dirt or deposits on the heater.

Please note that it is still necessary to install the normal overheating and dry-running protection devices in plants and tanks with electrical heating systems.

The optimum solution to this can be found in our product range of float switches, conductive

level probes and the related electronic controllers. We will gladly advise you in the solution of your safety problems.

The products are subjected to a 100% outgoing goods inspection to ensure the safety and functionality of each heater. The GALMATHERM storage tank heater is assigned to protection class 1.



*Storage tank heater GALMATHERM with a PVDF frame*

