



4.1.1 Tank heater



flexible installation with terminal box

Application

Exclusively tempering of EL heating oil with a flash point of >55°C to prevent malfunctions, caused by paraffin excretion. Installation from a free space of 500 mm above the tank possible.

Testing

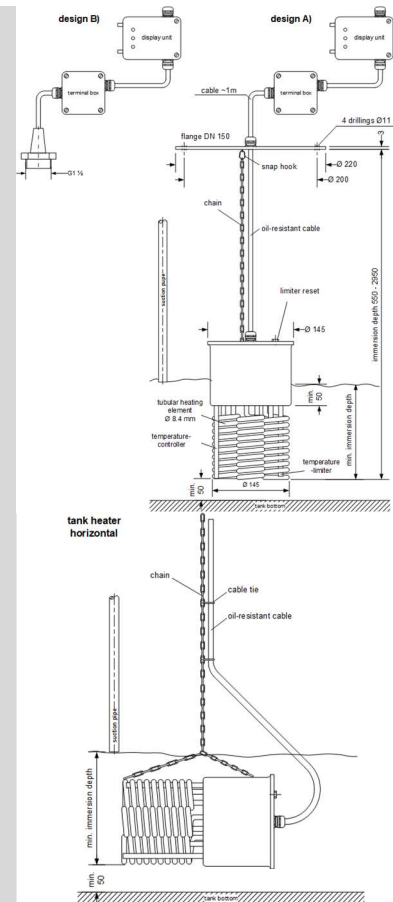
TÜV (Technical Inspection Association) according to: EN 60335-1
EN 60335-2-73

Design

Version A) steel flange DN 150
Version B) screw-in thread G 1½,
oil-resistant, flexible riser, 3 steel jacket tubular heating elements, surface load approx. 4 W/cm², temperature controller, safety temperature limiter, with chain and snap hook for fixing.
Immersion depth adjustable from 550 to 2950 mm.
Electrical connection to 3 x 400 V three-phase current.
Terminal box 98 x 98 x 59 mm high, IP 65
Display unit 130 x 94 x 58 mm high, IP 54
Control lights: red: malfunction / green: device ready for operation / yellow: device is heating

Non-binding calculation for a double-walled tank:

15 m³, 3.0 kW; 25 m², 4.5 kW; 30 m², 6.0 kW
40 m², 7.5 kW; 60 m², 9.0 kW; 100 m², 10.5 kW



ATTENTION!

Safety Note

The guideline VdTÜV 967 tank systems must be observed. Flammable liquids of hazard class A1, AII, B and mixtures with AIII, viscous oils such as hydraulic or lubricating oil are not allowed to be heated. Flammable liquids are also not allowed to be heated if the flash point has been reduced to or below 55°C by additives. (e.g. diesel fuel with gasoline admixture). The operation of the tank heater is only permitted as a **permanently immersed heating device**. The covering of the oil above the heater must be at least 50 mm (**note the minimum immersion depth**). The suction pipe is to be shortened accordingly. The heater must be **switched off** before a complete emptying of the tank. **Before removing the heater let it cool down** for at least 15 minutes. If the **immersion depth changes**, the weight of the tank heater must be supported by the chain.

Installation

Version A) Provide dome cover with hole diameter 150 mm and 4 stud bolts M 8, bolt circle diameter 200 mm. The immersion depth of the heater must be set to a ground clearance of at least 50 mm, hang it in and screw the flange.
Version B) Unscrew the dome cover, lift it and screw in the G 1½ nipple from above. Pass the cable from below through the nipple and the clamping device. Let the tank heater down to the tank, screw the dome cover. The immersion depth of the heater must be set to a ground clearance of at least 50 mm and fix the cable with the clamping device. Mount and connect the terminal box. It is important to ensure that the wires are numbered correctly. Mount the display device, lay the power cable and connection cable. A main switch must be installed.

Electrical Connection

The electrical connection must be carried out according to the attached circuit diagram no. 28-5.4 A and must be done by a qualified electrician. It is important to ensure that the cores are numbered correctly. If the connection cable is damaged, the heater must not be used longer. The cable cannot be replaced. The heater must be scrapped or sent to the manufacturer for repair.

Operating

If the system is switched on and the oil temperature drops to approx. 2°C, the temperature controller switches on the heater. If the oil temperature rises to about 7 degrees C, the heater switches off. Is the limit temperature at the heating pipes exceeded due to a malfunction, the safety temperature limiter switches off the heater.

adjustable Immersion depth [mm]	min. Immersion length [mm]	Weight [kg]	Power [Watt] approx.	Article-no. Version A (flange)	Article-no. Version B (nipple)
500-2950	210	3.9	3000	0401 1011	0401 1111
500-2950	230	4.2	4500	0401 1021	0401 1121
500-2950	250	4.5	6000	0401 1031	0401 1131
500-2950	275	4.9	7500	0401 1041	0401 1141
500-2950	300	5.3	9000	0401 1051	0401 1151
500-2950	400	5.7	10500		

tank heater hung horizontally

400-2950	180	5.6	9000	0401 1211	0401 1311
400-2950	180	6.0	10500	0401 1221	0401 1321