

4.1.3 Tank heater for hydraulic fluid



Application

Tempering of hydraulic oil to 15 to 50 °C to prevent malfunctions caused by cooling of the hydraulic systems of machine tools, presses, hydraulic lifts, etc.

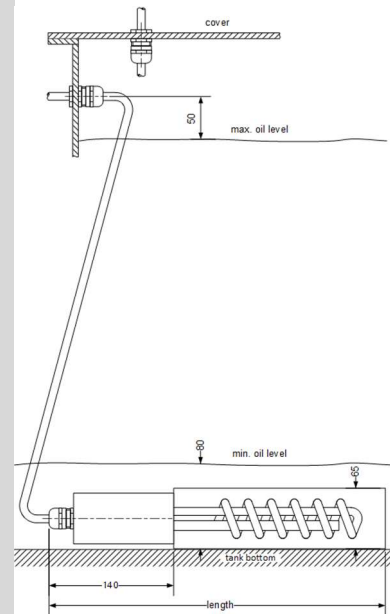
When installed horizontally, the low overall height allows heating from an oil level of 80 mm. In the case of vertical installation, the oil must be at least 50 mm above the topmost winding.

hydraulic fluid:		specific surface load:
mineral oil	HLP	1.2 W/cm ²
oil-in-water-emulsion	HFA	0.6 W/cm ²
water-glycol fluid*	HFC	0.6 W/cm ²
phosphoric acid ester*	HFD-R	0.6 W/cm ²
*with special cable		

Design

Coiled tubular heating element 250, 500, 1000 or 2000 W at 230 V, temperature controller adjustable from 15°C to 50°C (factory-made), 3-wire plastic cable, 2.5 m long, with an attached cable gland.

Available with holding magnetic clamps. Up to 390 mm length with 2 magnetic clamps, 600 mm length with 3 magnetic clamps.



Power calculation

For example (not-binding): At an ambient temperature of 0°C it will be possible to hold with a power of:

250 W	approx. 75 l at 35°C,	or	approx. 250 l at 10°C
500 W	approx. 150 l at 35°C,	or	approx. 500 l at 10°C
1000 W	approx. 300 l at 35°C,	or	approx. 1000 l at 10°C
2000 W	approx. 600 l at 35°C,	or	approx. 2000 l at 10°C

Installation

Place the heater in a horizontal position on the ground or set it up vertically. The cable is led outside through the side wall or the cover and attached with the cable gland.

In steel tanks the heater can be held up by magnetic clamps. In addition, the magnetic clamps will pull the unavoidable fine metallic parts from the oil and thus protect the aggregates from wear.

Temperature control

The thermostat turns off at approx. 20°C and turns on at approx. 17°C. The setting may be changed by the manufacturer. Kindly specify the turn-off temperature that you require.

Special design

With temperature-limiter 60°C (length +100 mm), other materials, voltages, powers and surface loads are available.

surface load	length [mm]	Power [Watt]	Article-no. (without magnets)	Article-no. (with magnets)
1.2 W/cm ² for HLP	250	250	0401 3011	0401 3041
	290	500	0401 3021	0401 3051
	390	1000	0401 3031	0401 3061
	600	2000	0401 3031	0401 3311
0.6 W/cm ² for HFC / HFD-R	290	250	0401 3111	0401 3141
	390	500	0401 3121	0401 3151
	600	1000	0401 3321	0401 3331
0.6 W/cm ² for HFA	290	250	0401 3211	0401 3241
	390	500	0401 3221	0401 3251
	600	1000	0401 3341	0401 3351