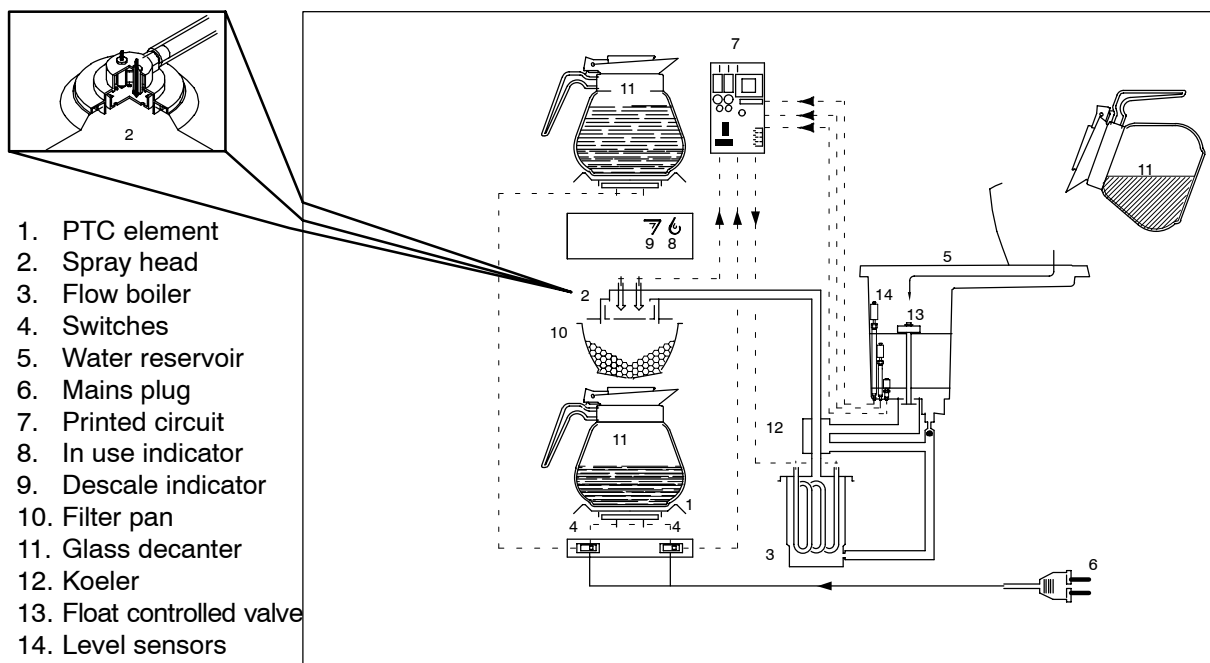


## **1. OPERATING PRINCIPLE MONDO/TH KTS**



The coffee maker is equipped with a flow through heater system. This contains a water reservoir (5), a flow through heater (3), a sprayhead (2) from which the water flows into the filterpan (10), with in between a heat exchanger (12). The entire system is controlled by a printed circuit (7).

The water reservoir is equipped with 3 level sensors (float) (14) –resp. whole jug, half jug and minimum level– and a float controlled valve (13), with which the cold waterflow through the heat exchanger is controlled.

The sprayhead is equipped with electrodes for the descale indicator.

Furthermore the device is at least equipped with:

- a switch to turn the system on and off (4);
- an indication light (green), which burns when the system is working (8);
- an indication light (red), which starts blinking when the system needs to be descaled (9);
- a buzzer for the acoustic signals.

When water is poured into the water reservoir, this is sensed by the level sensors (14). Then the flow through heater is turned on, and the water is boiled out via the heat exchanger and the sprayhead. In this situation the float (12) will close the valve in the cold water feeding tube to the heat exchanger.

When some time later the water level in the reservoir has lowered, also the float will be lower and the valve will open allowing water to flow to the heat exchanger.

In the heat exchanger the cold water will withdraw part of the heat from the hot water flowing to the sprayhead. The purpose of all this, is to allow the temperature to rise to about 92°C quickly in the first part of a coffee brewing cycle, after which the temperature is kept between 92°C and 96°C during the remaining part.

Herewith the system complies with the demand of the Norsk Kaffe Informasjon (Scandinavian Coffee Brewing Institutes).

As soon as the water level in the water reservoir becomes lower than the lowest sensor (14), the electronic control (7) will turn off the flow through heater.

The hot water will drain from the sprayhead. About 1 minute after the flow through heater is turned off, three beeps will sound and the green indicator lamp will go out.

During use scale will accumulate in the system including the sprayhead. This will cause the water to drain from the sprayhead slower.

When after the turning off of the flow through heater the contact between the electrodes in the sprayhead remains longer than 10 seconds the red descale indicator lamp will start blinking. It still will be possible to make coffee with the device for some time.

When the scale has been removed from the system the water will drain from the sprayhead at the normal speed. The indicator lamp will not start blinking again.