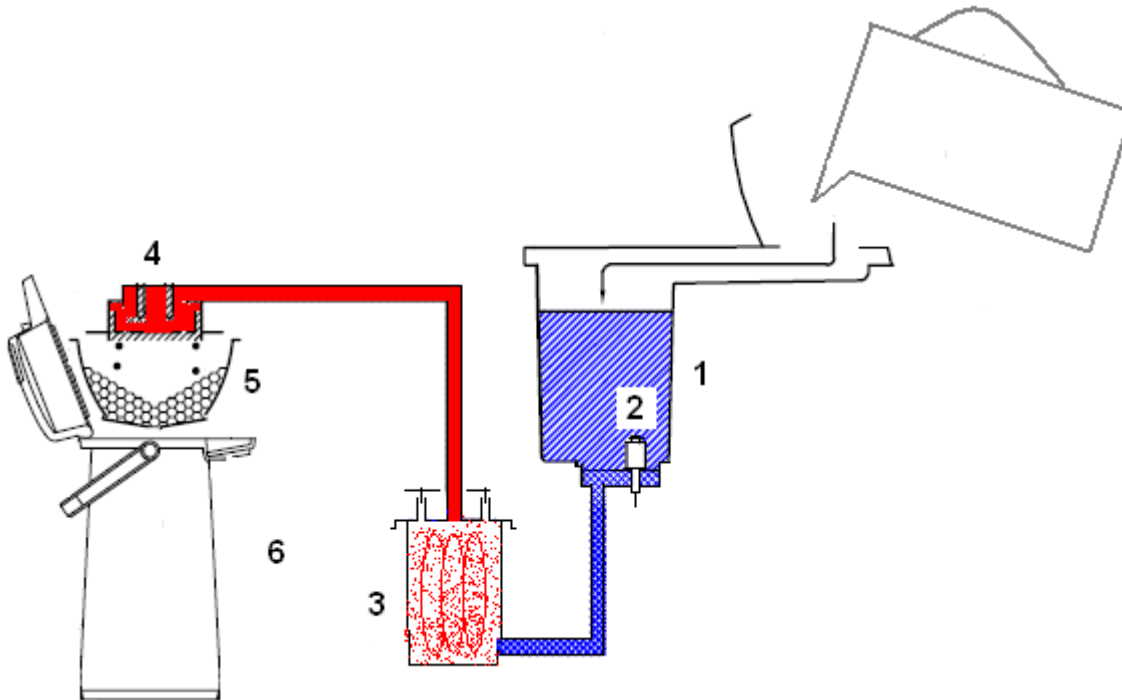


## 1. OPERATING PRINCIPLE TH



### 1.1 General operation

Cold water is evaporated using a throughflow element and distributed over the filter basket, which is filled with coffee, via the spray head. The coffee is collected in a vacuum flask or airtop.

### 1.2 Water dosing system

#### 1.2.1 Initialisation

- Press the ON/OFF pushbutton.
- Machine emits an audible signal and the illumination light goes on for one second
- The machine is now ready for use.

#### 1.2.2 First use

Before the first use the appliance must be flushed. To do this, fill the cold water reservoir with a full jug of water and wait at least 2 minutes before switching on the machine.

### 1.2.3 Filling

The quick filter works on the basis of the throughflow principle. The throughflow system consists of the following main components:

1. Cold water reservoir
2. Float
3. Throughflow element
4. Spray head with electrodes
5. Filter basket
6. Vacuum flask or airtop

When the machine is switched on for the first time, the cold water reservoir will be empty and the float at the lowermost position.

- A full jug must be poured manually into the cold water reservoir
- The water in the cold water reservoir flows to the throughflow boiler
- After the water has pushed the float upwards, the element is switched on.
- The indicator lamp in the switch starts to flash.

### 1.2.4 Heating

The water in the throughflow element is evaporated via the spray head to the filter basket. The element switches off when the float in the cold water reservoir is back in its lowermost position again. After the element has been switched off, the light in the switch will be lit continuously. 70 then the light in the switch switches off and a signal sounds 3 times.

### 1.2.5 Extraction

The water in the filter basket drains through the coffee and the filter paper. A filter basket spring on the bottom of the filter basket prevents the filter paper sticking to the bottom and the coffee not being able to flow to the outlet.

### 1.2.6 Descaling indication

Depending on the use and water hardness, in the course of time scale forms in the spray head. The more scale accumulates here, the slower the water flows out of the spray basin. If the electrodes in the spray head still make contact with the water 12 seconds after the heating has been switched off, the descaling lamp starts flashing. If the machine is descaled, the level of the water lowers fast enough again in the spray basin and the descaling lamp will no longer flash.

## 1.3 Water container full indication

When the machine is off and the cold water reservoir is filled, the water container indicator lamp on the front of the machine will light.

## 1.4 Operating system

The operating system consists of a:

- Keyboard
- Main board

### 1.4.1 Keyboard

The keyboard is located behind the control panel at the front of the machine. On this keyboard are the illuminated pushbuttons and indicator lamps.

### 1.4.2 Main board

The main board is located at the rear inside the machine and is fitted with various electronics for controlling the machine. The supply for the keyboard is controlled from the main board.

## 1.5 Hardware protections

The machine is equipped with a number of hardware protections. These protections ensure that no dangerous situations can occur in the appliance.

### 1.5.1 Overflow protection

This protection is located in the cold water reservoir and ensures that, if the water becomes too high, excess water is passed through an overflow hose at the bottom of the machine.

### 1.5.2 Boiling–dry protection

The boiling–dry protection consists of two thermal protections (klixons) on the cover of the throughflow boiler. These protections are connected in series with the element supply cables. If, as the result of a fault, the throughflow boiler is not switched off, the cover will become warmer than 100°C. One klixon interrupts one supply element cable if the temperature of the cover rises above 110°C and thus prevents the element boiling dry. This klixon reset automatically when the cover has cooled down enough. The second klixon interrupts the other supply cable if the temperature on the cover rises above 140°C. This klixon must be reset manually.