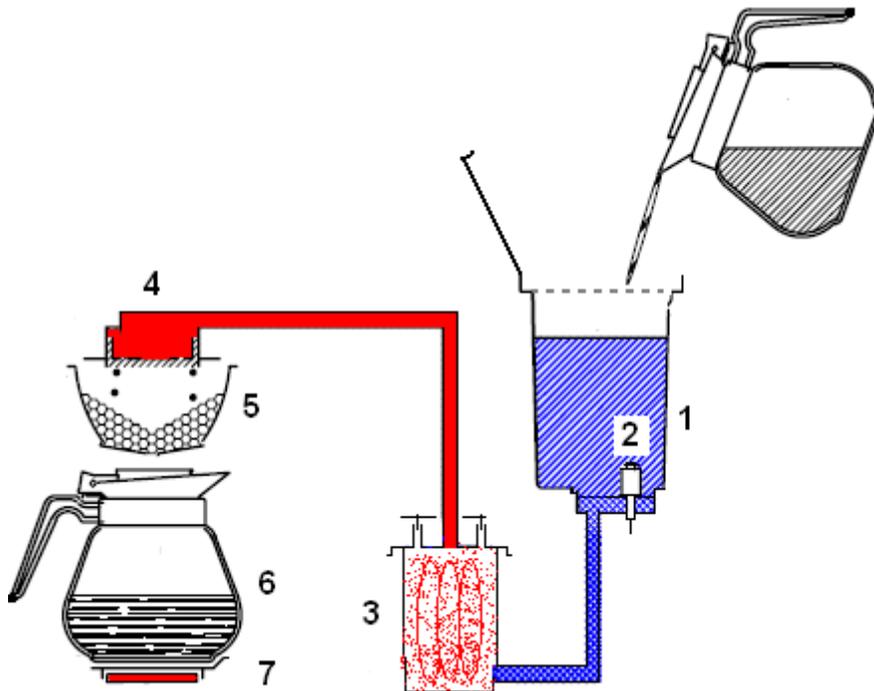


## 1. OPERATING PRINCIPLE NOVO



### 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 extract is collected in a glass jug and kept at temperature by a PTC element.

### 1.2 Water dosing system

#### 1.2.1 Initialisation

- Press the ON/OFF pushbutton.
- The indicator lamp next to the pushbutton lights.
- The machine is 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
5. Filter basket
6. Jug
7. PTC element

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 above the switch lights.

#### 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 linear float in the cold water reservoir is back in its lowermost position again. After the element has been switched off, the light above the switch goes out too.

#### 1.2.5 Extraction

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

### **1.3 Temperature holding system**

The warming plate consists of an aluminium part with a PTC element (Positive Temperature Coefficient) underneath it. This PTC element is constructed from a number of ceramic beads. The electrical resistance of these beads is determined by the surface temperature. Depending on the temperature in the coffee jug on the warming plate, less or more power is fed through the PTC element. In this way the coffee stays at the right holding temperature regardless of the quantity.

### **1.4 Operating system**

The operating system is connected directly to the mains supply voltage. On the operating system there are pushbuttons, indicator lamps, fuses and connections for the warming plates and throughflow element

### **1.5 Hardware protections**

The appliance is equipped with a hardware protection. This protection ensures that no dangerous situations can occur in the appliance.

#### **1.5.1 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 resets 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.