Claims

1. A drinking water circulation device (2) comprising a heat exchanger for cooling the drinking water, a return connection (24) for feeding drinking water returned from a circulation pipe into the drinking water circulation device (2), a supply connection (26) for discharging the cooled drinking water from the drinking water circulation device (2), a drinking water circulation pump (10) provided between the return connection (24) and the supply connection (26), a buffer tank (4) for a cooling medium (22), a cooling medium pump (8) provided in a cooling medium flow path between the buffer tank (4) and the heat exchanger (6), a control device (12) for controlling the cooling medium pump (8) and a supply temperature sensor (56), which is associated with the supply and is data-connected to the control device (12).

2. The drinking water circulation device (2) according to claim 1, comprising a temperature sensor (58) associated with the drinking water return, **characterized in that** the temperature sensor (58) is data-connected to the control device (12) and that the control device controls the circulation pump (10).

3. The drinking water circulation device (2) according to claim 1 or 2, **characterized by** a cooling medium temperature sensor, which is associated with the buffer tank (4) and is data-connected to the control device (12).

4. The drinking water circulation device (2) according to one of the preceding claims, **characterized in that** the buffer tank (4) defines a flat support area (20) and that the heat exchanger, the pipes of the drinking water path within the drinking water circulation device (2), the drinking water circulation pump (10), the cooling medium pump (8) and the control device (12) are arranged above the buffer tank (4) when the flat support area is horizontally oriented.

5. The drinking water circulation device (2) according to one of the preceding claims, **characterized by** at least one horizontally extending perforated plate installed in the buffer tank (4) in the area of a cooling medium inlet.

6. The drinking water circulation device (2) according to one of the preceding claims, **characterized in that** the heat exchanger is a plate heat exchanger mounted, in oblique ori-

entation relative to the gravitational field of the earth, above the surface of the buffer tank (4).

7. The drinking water circulation device (2) according to one of the preceding claims, **characterized by** a thermal insulation surrounding at least the buffer tank (4) and formed by thermal insulation components (28; 30), which are plug-connected to one another with an intermediate sealing element (38) therebetween.

8. The drinking water circulation device (2) according to claim 7, **characterized in that** the thermal insulation surrounds the media-carrying components of the drinking water circulation device (2) in a contour-following manner.

9. The drinking water circulation device (2) according to one of the preceding claims, **characterized in that** an operating unit (16) of the control device (12) is exposed in a cover of a thermal insulation surrounding at least the buffer tank (4).

10. The drinking water circulation device (2) according to claim 7 or 8, **characterized in that** the thermal insulation comprises a circumferentially extending foamed component (28), which insulates the buffer tank (4) on the outer circumference thereof and on the outer side of which the supply and return connections (26, 24) are exposed, cooling medium supply and return pipes (22), which lead to the buffer tank (4), extending through the foamed component (28).

11. The drinking water circulation device (2) according to one of the preceding claims, **characterized in that** the buffer tank (4) contains a water/glycol mixture.

12. The drinking water circulation device (2) according to one of the preceding claims, **characterized in that** the buffer tank (4) has a storage capacity of 100 l +/- 30 l.