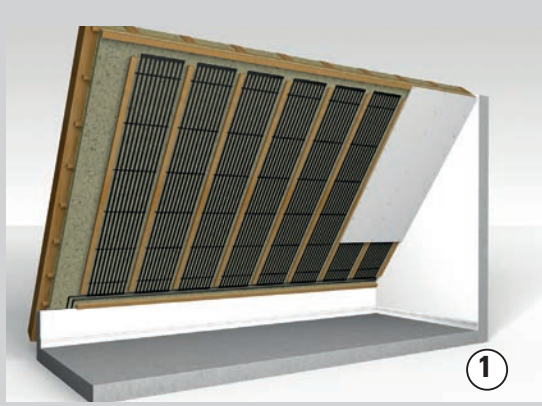
Edition: 01.2016

aquatherm black system

THE MODERN FORM OF HEATING ECOLOGICAL AND COST EFFECTIVE

Panel heating and cooling system
Scope of application: Wall, floors, ceilings, roof pitches

aquatherm
state of the pipe

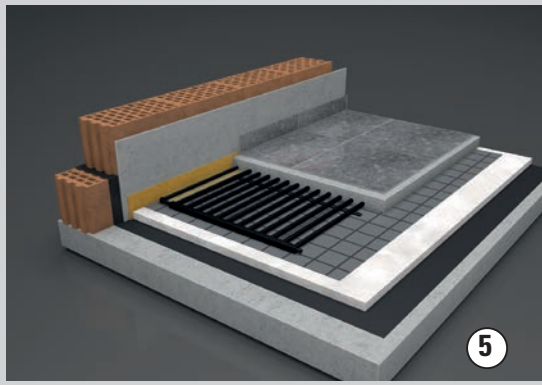


Plasterboard ceiling with wooden base

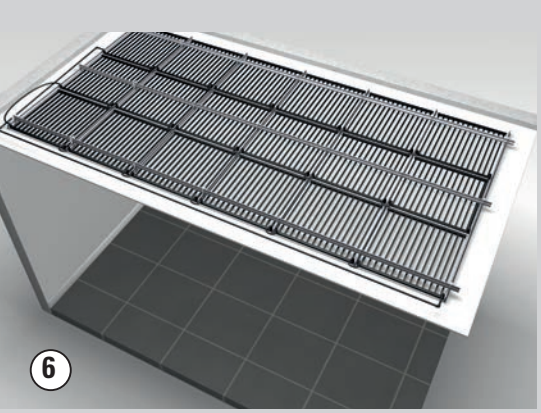
Wall heating plaster

Use in the shower area

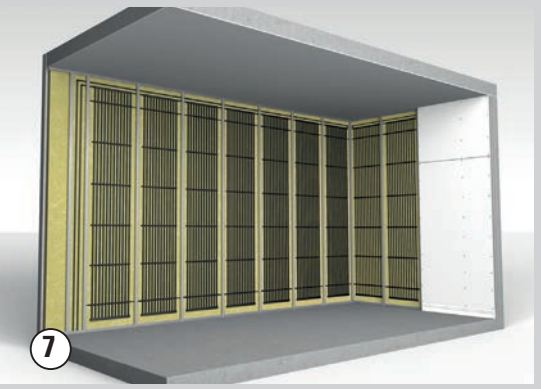
Mirror heating



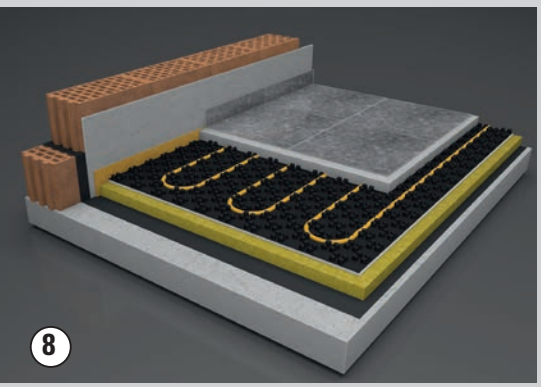
Floor heating



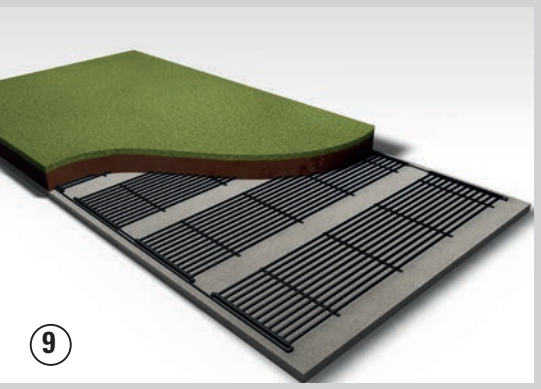
Metal tile ceiling



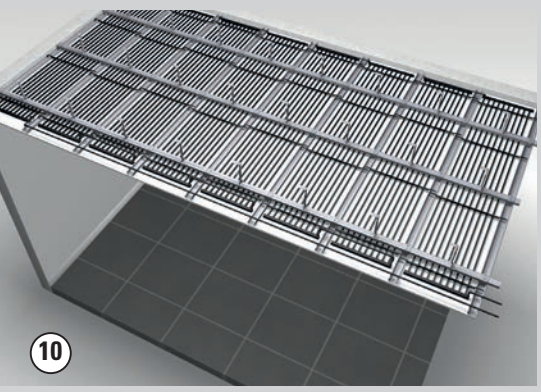
Drywall with plasterboard ceiling



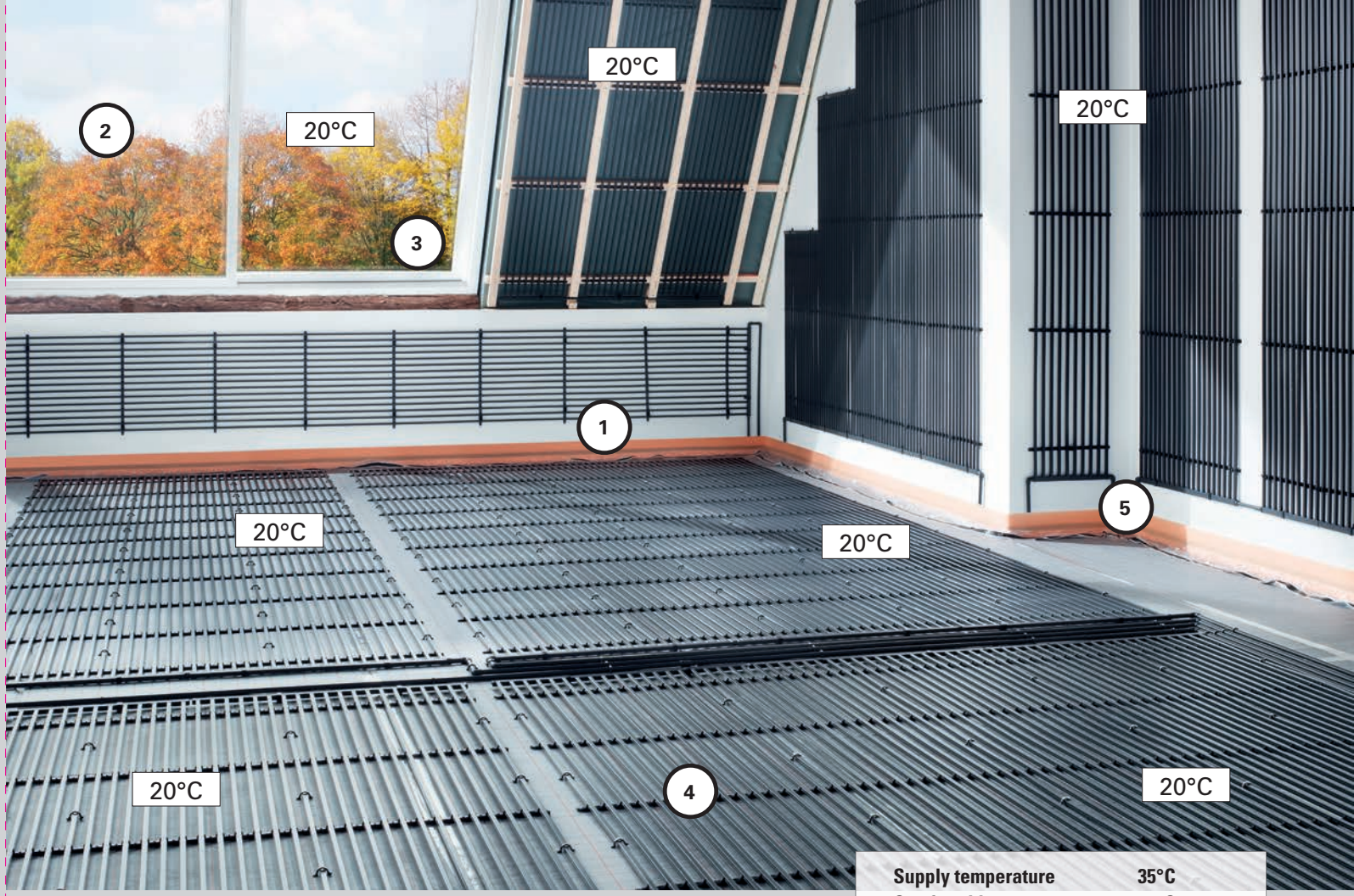
Combination with classic floor heating



Ground collectors



Plasterboard ceiling with metal base



RADIANT HEATING WITH THE NEW AQUATHERM BLACK SYSTEM

1 Save energy 1:
Radiation heating, comparable to the sun, first heats the solid and fluid substances in the room. The upshot is that walls, ceilings and floors are uniformly heated; the room air is only heated in the second step. However, radiation heating does not require higher air temperature. An air temperature of 20°C is perfectly sufficient and provides the room user with a pleasant, cosy feeling.

2 Save energy 2:
There are no losses through the window. Heat radiation is reflected by the glass and radiated back into the room.

3 Save energy 3:
The room air temperature is low. That means there are no great energy losses even when letting some air in.
- The low air temperature creates a natural, pleasant climate.

4 Feeling of well-being:
With radiation heating there are no temperature differences of the room air as can crop up in convection heating systems. Here, the head stays cool and the feet warm.

5 Dry walls:
Since the walls are not directly heated, there is no condensation and thus no mould formation.

EMPIRICAL FORMULA:
REDUCTION OF THE ROOM TEMPERATURE BY 1°C = 6% ENERGY SAVINGS

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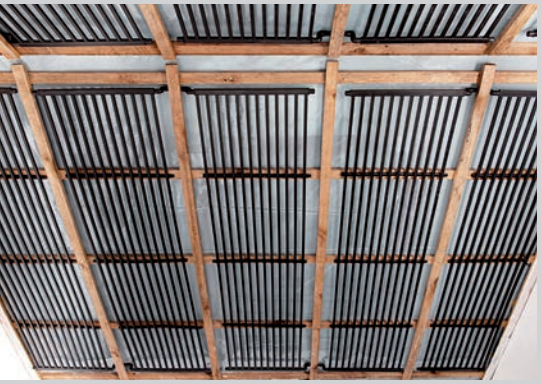
Management System ISO 9001:2008 ISO 14001:2004 ISO 50001:2011
www.tuv.com ID 0091005348

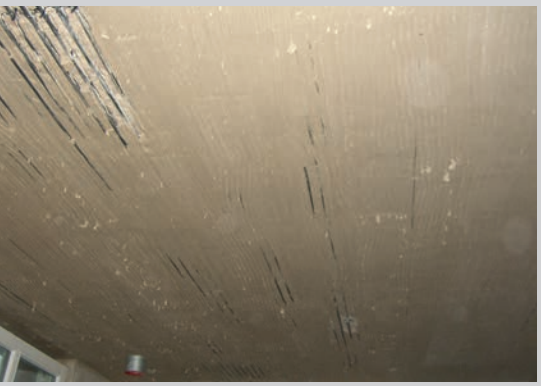
aquatherm GmbH
Biggen 5 | D-57439 Attendorn | Phone: +49 (0) 2722 950-0 | Fax: +49 (0) 2722 950-100
info@aquatherm.de www.aquatherm.de

Mitglied des BVF

Order-No.: E20100
Edition: 1.2016



Plasterboard ceiling with wooden base



Ceiling heating plaster ceiling

Use in the shower area

Mirror heating and towel warmers

Floor heating

1. PLASTERBOARD CEILING

The registers for heating and cooling are installed between the cross joists of the substructure. The ceiling is then boarded with plasterboard panels. Plasterboard panels with different thermal conductivities can be used. When installed in accordance with ENEV, the aquatherm black system can really show off its advantages in new construction or when expanding the living space through roof structure extension. The low supply temperature allows ideal use of the radiation heating. Heat accumulation in the gable area becomes a thing of the past.

2. PLASTERED WALL & CEILING HEATING

The registers for heating and cooling are integrated right under the bare ceiling into the plaster coating. The registers which are individually fabricated to size and the connected piping are attached to the ceiling. Plaster according to general plastering guidelines. All commercially available gypsum, lime, cement and loamy clay are ideal. The low installation space of black system and the loss-free heat emission through the enclosing material are perfect for generating natural and healthy heat.

3. USE IN THE SHOWER AREA

aquatherm black system registers provide cosy warmth in the shower area. Tiles that radiate cold along with mould formation are a thing of the past. The individual adaptability to the shower size and the shower fitting enables installation in both new and old buildings. Can be connected and combined with the existing heating appliance or floor heating system.

4. MIRROR HEATING

The aquatherm black system registers behind a mirror prevent the heated mirror from misting up. Simple assembly and individually adaptable to any mirror size makes it the ideal supplement to wall heating in the shower. aquatherm black system registers as invisible towel warmers provide an additional comfortable solution with two benefits.

5. FLOOR HEATING

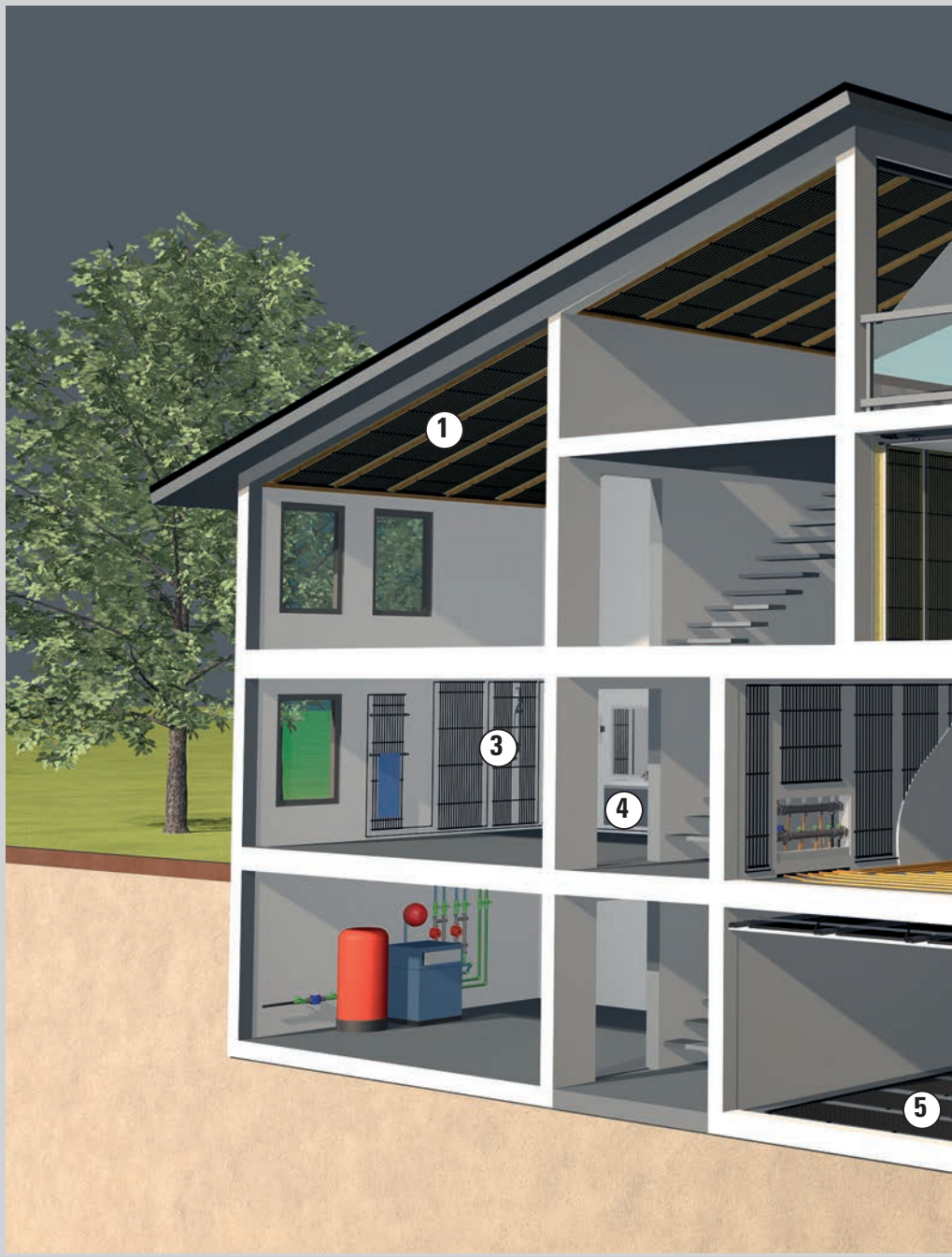
When used as floor heating, the aquatherm black system allows going barefooted in the house even in winter. Another advantage is the architectural freedom of design. Added to that are the hygienic aspects of a floor heating system. There is no swirling up of dust. The uniform panel heating prevents the growth of house dust mites and mould formation. Whether open screed in workshops, production facilities or garages, tiles, parquet and laminates in apartments and houses, the floor can always be structured individually and versatile.

aquatherm black system

High heating costs associated with the swirling up of dust, allergies, unfavourable temperature distribution, high inlet temperatures and large space requirements for heating appliances - all of these can be rectified with the aquatherm black system!
The system in compact register-type construction for heating, cooling and for the heating and cooling of rooms through ceilings, wall and floor surfaces.

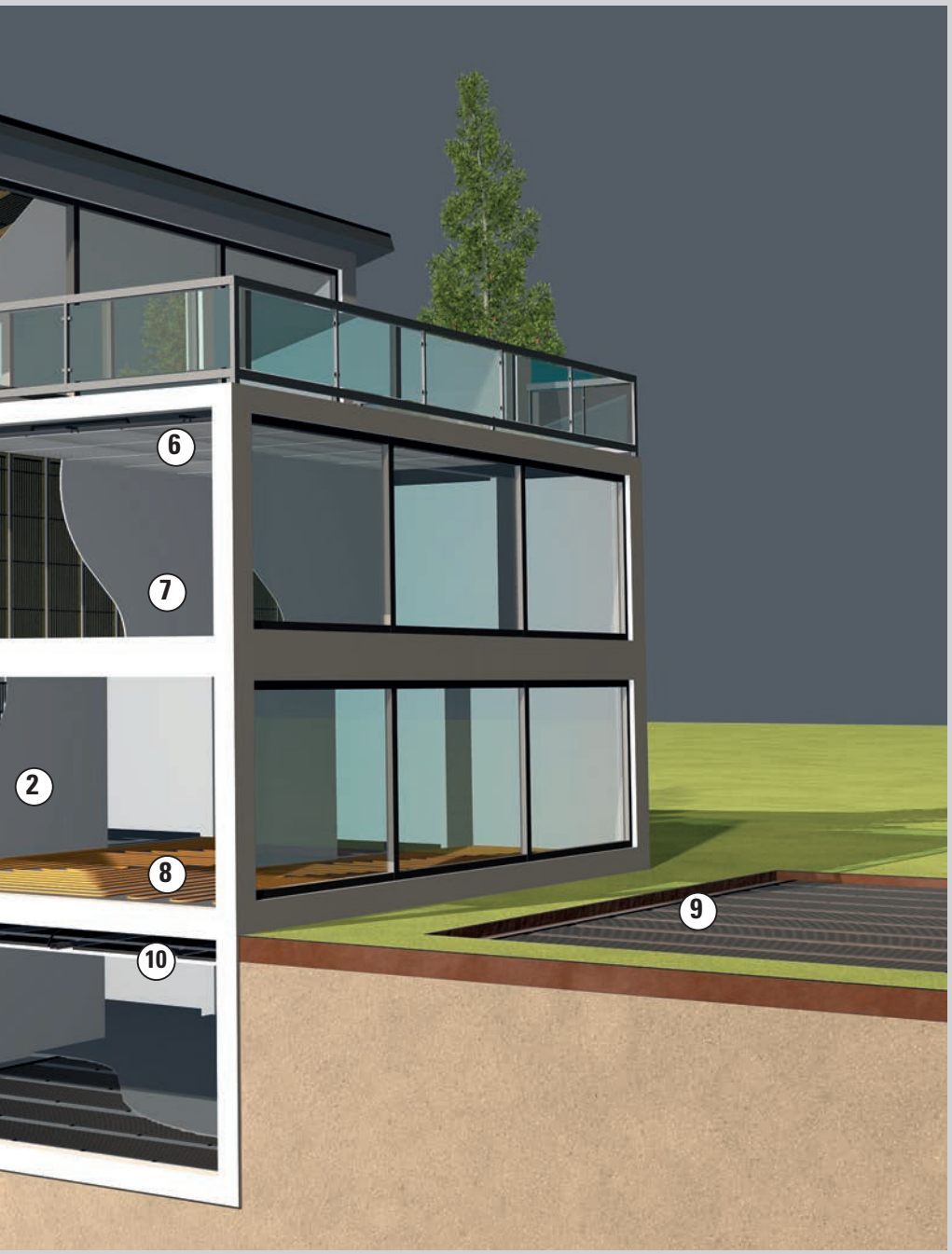
People's satisfaction and performance depends largely on the climatic room conditions of their environment. Work efficiency and comfort are greatly determined by a personal feeling of well-being, which is predominantly influenced by the ambient temperature.

The sophisticated aquatherm black system creates a pleasant room climate without bothersome draughts. With this technology, you can heat or cool depending on the selected water temperature. Automatic switchover from heating to cooling mode complements the system from simple single-room control up to perfect control engineering.



ADVANTAGES:

- Saves energy
- Silent
- No additional dust burden
- No draughts, so highest possible climate comfort
- Uniform temperature distribution
- Ideal for subsequent installation
- Fast assembly
- Extensive architectural freedom
- Low installation space



6. METAL TILE CEILING

The registers for heating and cooling are placed in the metal tiles. The direct contact of the register on the sheet or acoustic tiles ensures excellent output transfer. In office spaces or clinics the aquatherm black system provides draught-free cooling in the summer and pleasant warmth on cold days.

Metal tile ceiling

7. DRYWALLS

The heating and cooling registers are installed in the drywall strut frame and then boarded with plasterboard panels. They can be used, e.g., for installation during renovations when it is no longer possible to install in the floor or ceiling or during subsequently placed walls for room partitioning. In new buildings it can be perfectly combined with ceiling and floor heating.

Drywall with plasterboard ceiling

8. FLOOR HEATING

The aquatherm black system can be combined with existing panel heating systems in old and new buildings. The supply and return-flow can be easily connected to the heating circuit distributor of the floor heating. Room thermostats can also be used in combination for both systems.

Combination with classic floor heating

9. GROUND COLLECTORS

When the aquatherm black system is used as a ground collector, it takes advantage of the energy stored in the ground. A heat pump uses the stored energy through horizontal collectors. For heating, the aquatherm black system requires significantly lower supply temperatures than conventional radiator heaters. Modern, regenerative energy sources such as ground collectors, solar and photovoltaic systems and heat pumps are thus ideal for use with the aquatherm black system. Naturally, pellet, calorific value oil and gas heating or gas-water heaters can be used for hot-water heating. Here again, lowering the supply temperature saves heating costs.

Ground collectors

10. PLASTERBOARD CEILING

The registers for heating and cooling are installed between the bearing profiles of the substructure. The ceiling is then boarded with plasterboard panels. That means large-area production and manufacturing facilities as well as entrance and exhibition halls can be extensively heated and cooled with the aquatherm black system. Whether a major project or a one-family house, the subsequent installation during renovation or maintenance jobs is fast, simple and clean. The low installation space only slightly reduces the room height and actually creates more usable living space through the omission of the heating appliances.

Plasterboard ceiling with metal base