floor heating

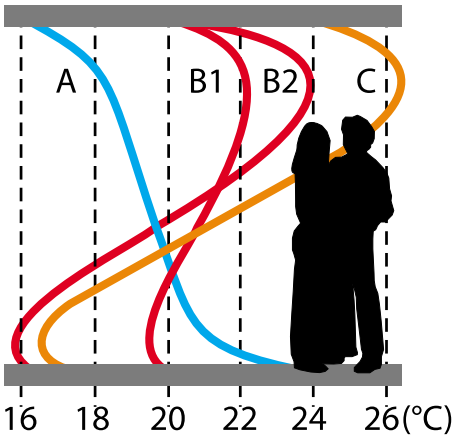
FRAGMAT

FLOOR HEATING PANELS

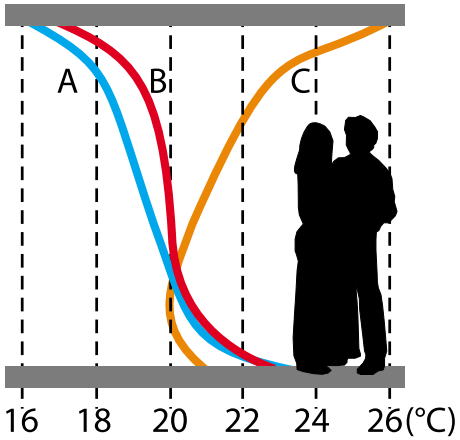
FLOOR HEATING PIPES

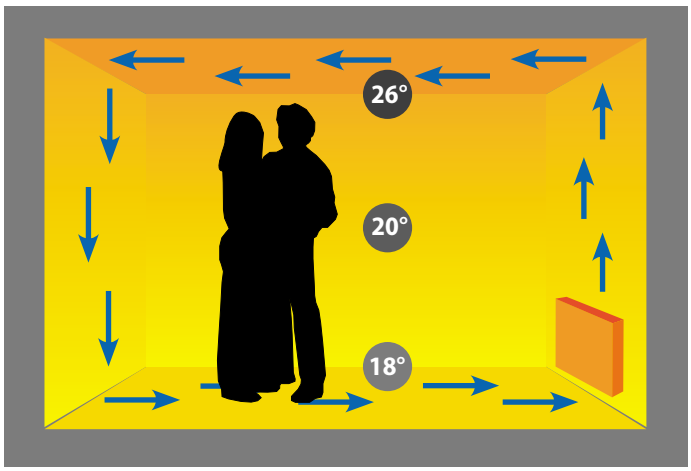
FLOOR HEATING CONTROL

Temperature profile of heating systems
(A) ideal
(B1) radiators - heater on exterior wall
(B2) radiators - heater on interior wall
(C) hot air

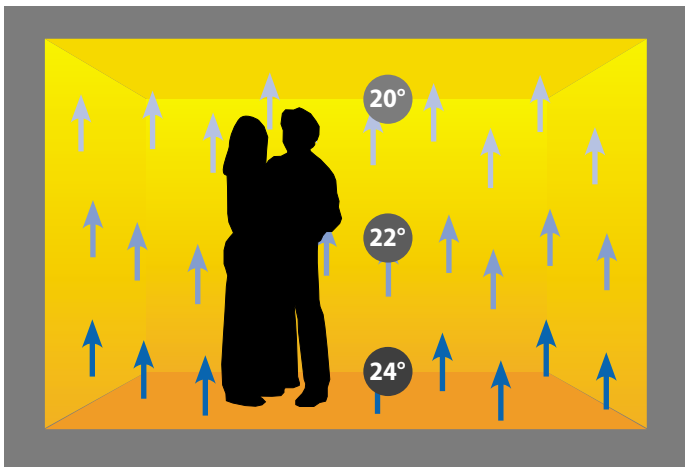


Temperature profile of panel heating systems
(A) ideal
(B) floor
(C) ceiling





Movement and temperature of air in radiator heating



Movement and temperature of air in floor heating

The development of contemporary surface heating started in the 30ies of the last century, lately new technologies in heating engineering, modern building materials and most of all suitable heat insulations for buildings made a wider use possible.

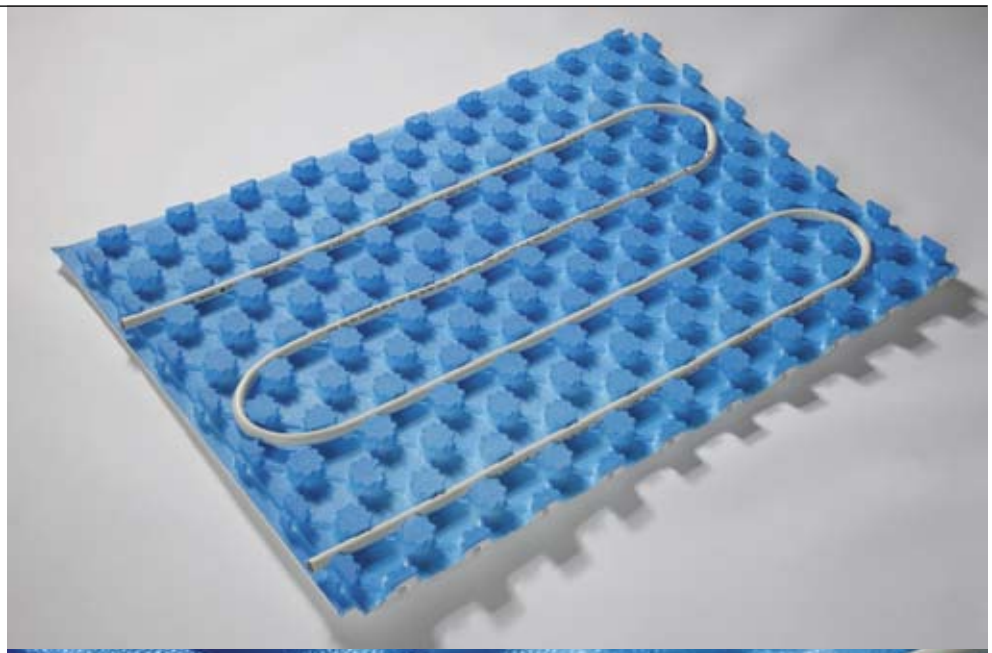
- **comfortable and healthy living environment**
  The temperature distribution is illustrated in the so-called temperature profile. When heating with radiators, warm air rises up to the ceiling and cold air sinks down to the floor. This causes a strong circulation of air and dust in the room. In floor heating the whole floor surface is a big heating element and therefore warm air rises from the whole room surface. That is why the temperature profile comes close to ideal: comfortable warmth at your feet, convenient colder air in height of your head, as well as slower air movements.
- **energy savings**
  In a room with floor heating the greatest part of heat is transferred by radiation, therefore we have a feeling of well-being already at a lower temperature than in rooms with other heating systems, a 1 to 2 °C lower air temperature means already energy savings from 6 to 12%.
- **convenient room humidity**
  By heating to a lower temperature we avoid a decrease in relative humidity, which is beneficial for the respiratory organs and the skin.
- **more space**
  When using floor heating, more usable space is created, because we do not have ovens or radiators; panorama windows may reach down to the floor.
- **less rising dust**
  Air movements are slower; therefore circulation of dust in the room is lower and hereby also the effect of dust, collecting at places difficult to reach, decreases.

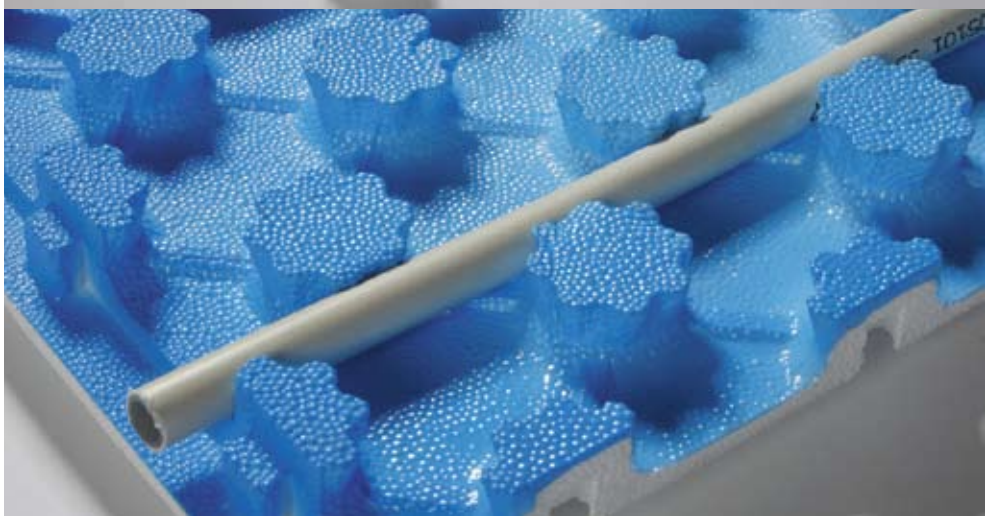
FLOOR HEATING PANELS

The panels **STIROTERMAL SILENT** enable through their shape an easy installation of the pipes. The panels are an excellent heat insulator as well as sound insulator against impact sound.
They are used for installing floor heating systems in residential homes and flats, as well as business premises with normal floor loading.

The panels **STIROTERMAL HARD** are heat insulation panels with higher resistance to pressure.
They are used for installing floor heating systems in rooms with high floor loading (garages, car saloons, car parks, industrial halls and similar).

The panels **STIROTERMAL ADAPT** are panels with lower, star-shaped knobs, allowing for very dense fitting of the heating pipes.
We use them in adaptations, when the total floor height is limited.



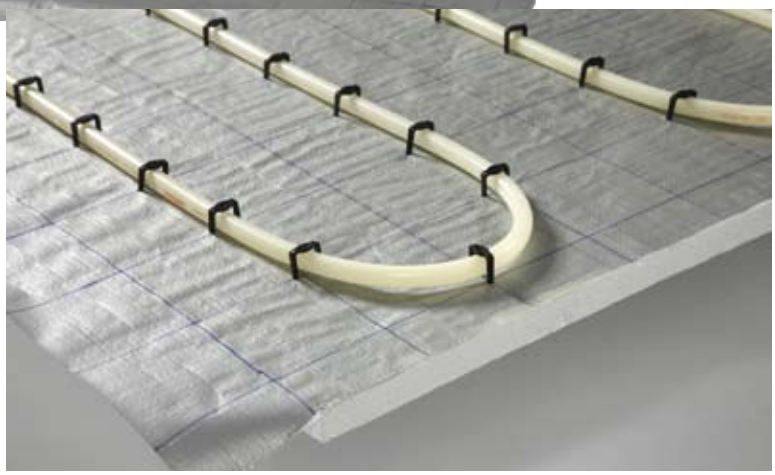


floor heating

STIROTERMAL PSF are panels, which can be adapted to the requests and needs of the user. They are composed of hard PS-foil and heat insulation from EPS.

TERMAL PSF are panels made from hard PS-foil, possible to lay on different groundings (concrete, heat insulation and so on).
We recommend them for self-laying in industrial objects, or in combination with normal EPS-panels of higher resistance to pressure.

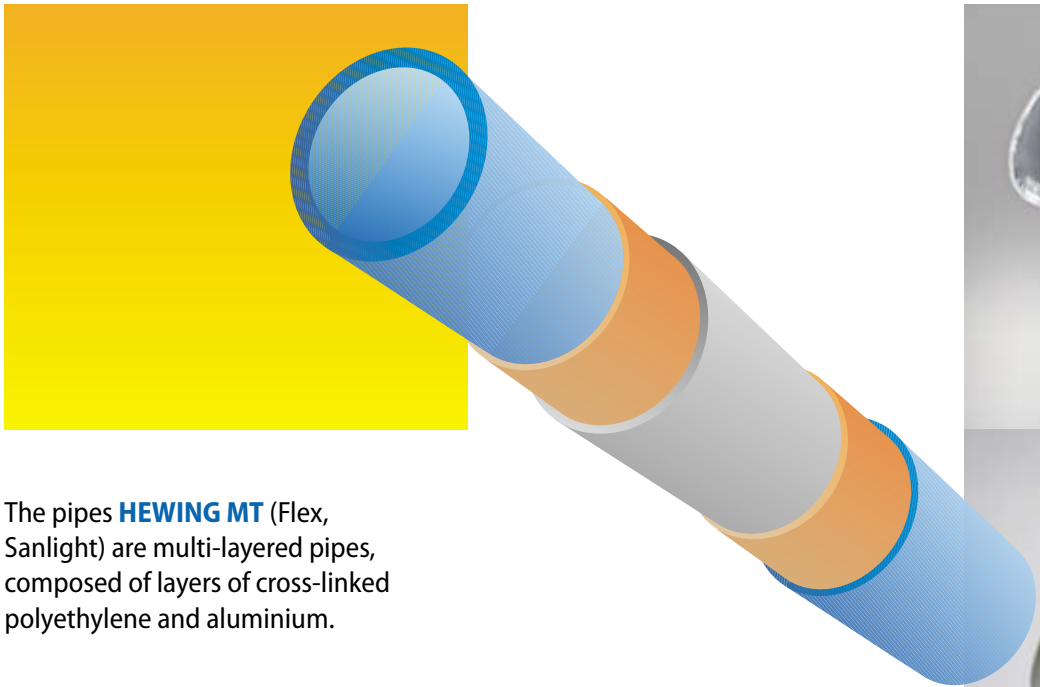
The panels **STIROTACKER** are used in installations with liquid screed. We offer **STIROTACKER R** in rolls, **STIROTACKER K** as stowable panels, as well as single panels **STIROTACKER P.**

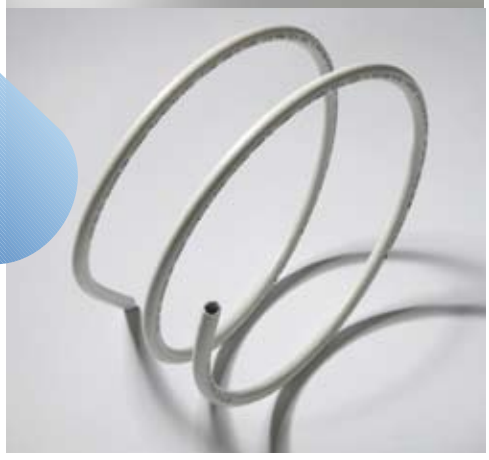


POLIREX RT is a self-adhesive edgeband, used as sound insulator against footfall sound at the joint screed - wall, as well as prevention against swelling of concrete between panel and edgeband.

FLOOR HEATING PIPES

PE- Xc pipes are elastic and adaptable pipes made from physically cross-linked polyethylene. They have a protective layer against the intrusion of oxygen into the system (EVOH - Ethylene Vinyl Alcohol Polymer). They are distinguished by their high durability.





The pipes **HEWING MT** (Flex, Sanlight) are multi-layered pipes, composed of layers of cross-linked polyethylene and aluminium.

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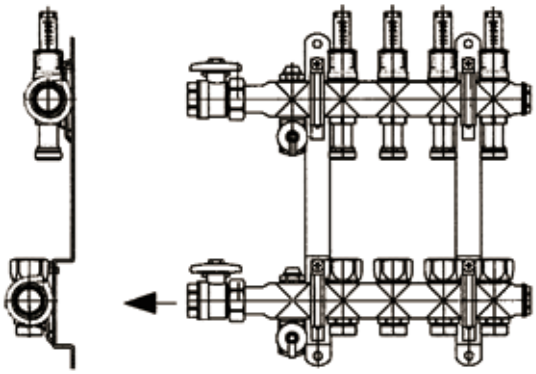
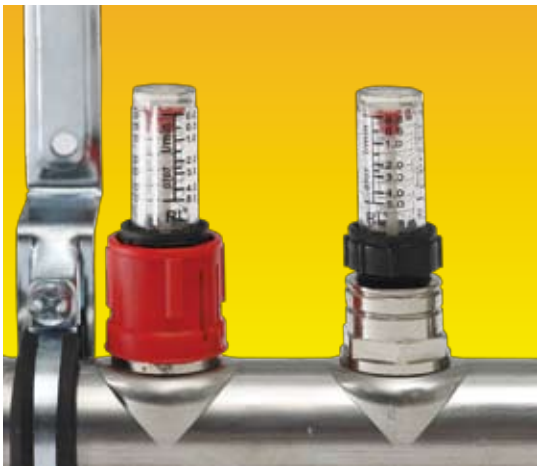
FLOOR HEATING CONTROL

DISTRIBUTOR
It provides optimal control of the floor heating. We can customize its configuration according to the system (number of heating circuits, valves, indicators, bleeders, pumps...).



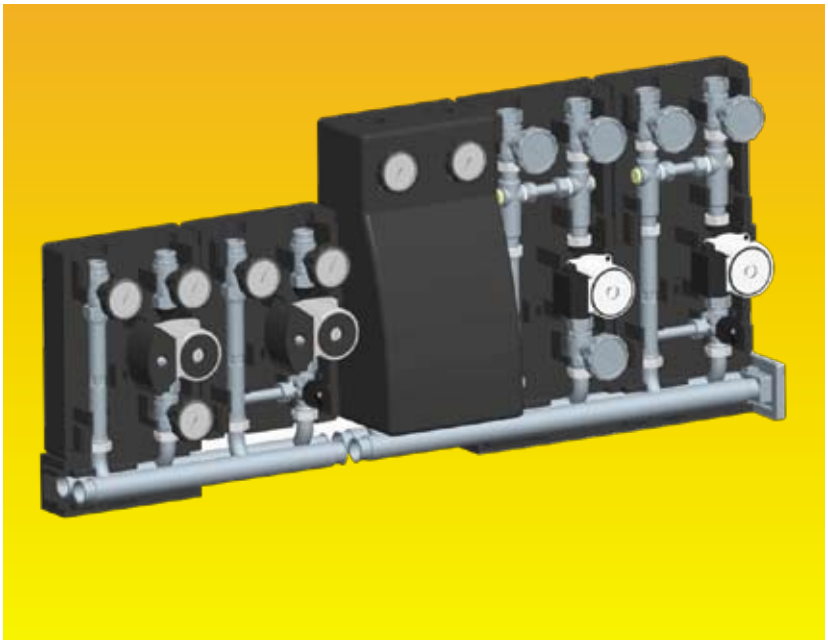


We offer the **CABINET** for the distributor in different designs.

floor heating

The **HYDRAULIC SWITCH** is made from stainless steel with four connections. It is equipped with an air valve and a valve for filling / emptying. An immersion sensor can be fitted onto it.

The **BOILER SET** controls the inflow of heat into the system by its function.



Single **ELEMENTS** for controlling the floor heating system

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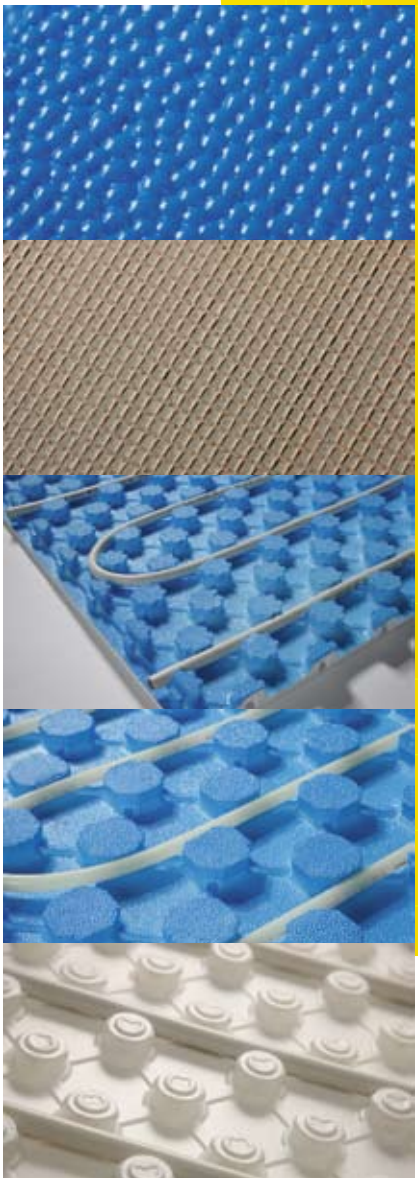

Floor and wall heating is getting more and more widely accepted nowadays because of its extraordinary properties. Its greatest advantage is an ideal temperature profile; this is a favourable temperature distribution from floor to ceiling. Therefore living in a room with floor heating is comfortable and healthy.

Already the Romans used it. The public baths - the thermae, where they spent their free time, were heated by hot air that was lead underneath the floor and through clay pipes in the walls (hypocastum). Thus the otherwise cold stone stays comfortably warm.

marketing FRAGMAT TIM /november 2008/ design PR-vizualne komunikacije