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mfh systems surprises: Self-regulating electricity-based underfloor heating E-ENERGY

Introducing **IDEAL E-ENERGY**, mfh systems GmbH is offering an alternative solution to previous electricity-based underfloor heating solution for renovation and new constructions. Specifically, the heating pipes within the heating elements of the proven hydraulic system **IDEAL CLASSIC** are replaced by self-regulating electrical heating tapes.

mfh:systems
modern floor heating



KWD-globalpipe, 23.03.2018. Heat is generated quickly while the system regulates itself autonomously. As a decentralized space heating, E-ENERGY renders the boiler room redundant newly constructed buildings and provides for low costs in the renovated

buildings due to the fact that the system merely needs to be connected to the existing power supply. Having installed over 6 million m² installed heating surfaces, mfh systems is a leading partner for dry construction underfloor heating.

Underfloor heating is common in newly constructed buildings and is gaining more and more market share in practical use in the renovation sector. “Unfortunately”, according to Achim Nierbeck, “despite a continuous lower heat requirement, heating systems have become more expensive. Screed underfloor heating has seen a negative technical development, because the low heating water temperatures increased inertia. Therefore, the users are permanently heating, whether they are the in the room or not.”

Now, however, IDEAL E-ENERGY, an electrical alternative has a lot to offer is being released! “Even compared to hot water-underfloor heating, E-ENERGY can offer significant benefits,” explains Andreas Piephans, Managing Director with mfh systems GmbH, “because electricity, and therefore warmth, is available immediately, completely and evenly-distributed across the space. Optimal for our well-known IDEAL heating elements, for which we had to adjust the aluminium canal in proper form. The unique selling point is the self-regulating heating tape, which was developed in accordance with the temperatures of the underfloor heating.”

The system IDEAL E-ENERGY operates at 230 volt and is connected analogically to normal electrical wirings. Thanks to its physical properties, E-ENERGY heating tapes operate performance-modulating without sensor systems. “This means: the heating tape reacts with differentiated heat output, depending on heat requirement.” adds Daniel Schuschan, Technical Lead with mfh systems. “It adjusts its power output dynamically to its needs and only heats as much as necessary for any room. When detecting invading warmth, it reduces its power immediately.”



The pressure-resistant, 20mm-strong heating element including pre-installed thermal conductivity panels of aluminium and a lower thermal insulation. The electrical, self-regulating heating tape lies in proper form within the oval channel.



The self-regulating heating tape, which has been specifically developed for this purpose, is supplied in 50, 100 and 500 m including an unwinder.

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The constructive floor structure has more than 6 million m2 worth of experience – this is the know-how and expertise provided by mfh systems. Yet, mfh needed many years for developing electrical heating tapes, which guarantees a quick heat output to the aluminium as well as avoiding excessive temperatures! The newly developed heating tapes cannot exceed the maximum temperature of 50°C, thus floors cannot overheat therefore providing a need for the use of gypsum dry screed elements. E-ENERGY heating elements are insulated on the lower side. This ensures an optimal heat dissipation towards the room. Heat-conducting plates of aluminium provide for an even and quickly-generated floor temperature. Distribution layers and all common floor coverings can be installed on top of the heating elements. On the day after installation has taken place!



The height of the constructive structure of this electrical dry construction underfloor heating solution spans just 30-40 mm, IDEAL E-ENERGY is suited for all common floor coverings which can be relocated immediately.

A noticeable cost advantage is the decentralized function of the system. Installation, relocation and regulation take place room for room. The short heating up and cooling down periods enable a single-room-control. Each room can be separately heated according to temporary needs. Therefore, maximum energy-saving is achieved. Daniel Schuschan, “the heating tapes and the complete system IDEAL E-ENERGY are maintenance-free. And houses without chimneys do not smoke any longer!”

The normal, cheap electrical connection can be executed by heating installers or electrical companies. The installation of system components, which are indispensable for hydraulic underfloor heating, like uptakes and distribution lines, heating manifolds, control components, boiler and heating pump, is no longer required. This makes the system economical. The now redundant boiler room can be used as additional living space!

Andreas Piephans emphasizes: “IDEAL E-ENERGY is an underfloor heating system for all renovated and newly constructed buildings across Europe.” Piephans is an expert and accompanied the system technology of dry construction underfloor heating from the beginning. In the last 20 years, more than 100 different floor constructions have been developed, certified and documented. “This comprehensive technical know-how in the area of floor-technology is our biggest bet on the future.” With E-ENERGY, a valuable innovation has been developed. This can actually be seen as the future of underfloor heating. It is certainly comparable with the significance of electric cars for the automotive industry. In addition, it has been developed and is produced here in Europe! Please find the video and further technical information under: www.energy-heating.com.

Contact: mfh systems GmbH, Germany, www.mfh-systems.com. / E-ENERGY website: www.energy-heating.com.



The room thermostat and a ground sensor assume control of the complete underfloor heating of the system E-ENERGY. A heating aggregate is no longer required. Where there used to be the boiler room, additional living space can be had.