

# PROJECT REPORT

Augsburg, Nov 14, 2022

System cooperation between PCI Augsburg GmbH and Roth Werke: thin-film heating with a low installation height

## Old farmhouse with new underfloor heating

**A height of 20 millimeters for underfloor heating and screed is not much. But the installation is feasible with the cooperation system of PCI and Roth. The solution was convincing in the core renovation of a farm in Monschau. Because it is simple, fast and practical.**

The farm from 1938 is located on the outskirts of the half-timbered town of Monschau which is idyllically situated between mountain slopes in the Rureifel. The individual property has always been family-owned. Lutz Müller planned the complete renovation of the building to preserve his grandparents' house for future generations and to meet the demands of contemporary living. The focus was on sustainability. The renovation was carried out ecologically where possible. Some walls have been knocked out to make large, friendly living spaces out of the once small rooms. Underfloor heating should ensure a pleasant temperature in the cold-floor rooms in the living-dining room with open kitchen and the two bathrooms.

### Different assembly heights

After dismantling the old surface, inhabited by mice, the low construction height became visible. A steel girder ceiling without any insulation was under the floorboards laid on battens. The construction heights varied, around six centimeters at the lowest points. After the floor construction was built up, only around two centimeters would remain for the installation of the underfloor heating. Lutz Müller, himself a master carpenter in the construction industry, sought advice from PCI consultant Sascha Wilden and carried out the jointly developed planning with the commissioned plumber. After leveling out the

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unevenness on the raw ceiling, XPS insulation boards were first bonded with the flexible 2-component reactive waterproofing PCI Barraseal Turbo. The mineral waterproofing slurry is used in variable layer thicknesses and is suitable not only for bonding insulation boards but also for waterproofing work. The substrate could be primed with PCI Gisogrund 404 after a short setting time of only around three hours. The solvent-free special adhesive primer can be diluted with water and is easy to apply thanks to the violet control color.

### **Minimum structure: System for retrofitting in old buildings**

The plumber bonded the thin-film underfloor heating to around 60 square meters of the prepared substrate. With the extremely low structure of 17 millimeters, the Roth ClimaComfort® Compact system is ideal for retrofitting old buildings. Processing is easy: The self-adhesive system panels can be cut to fit perfectly without cracking and easily attached to the substrate, the system pipe can be installed reliably thanks to the special shape with undercut. The craftsmen then filled the assembly of system panels and system pipe with PCI Periplan Extra. The fiber-reinforced special filler is suitable for layer thicknesses of 3 to 60 millimeters under textile and elastic floor coverings. Low in dust and self-leveling, even pumpable, the floor leveling compound is very easy to work with. Like the primer used, PCI Periplan Extra is very low in emissions according to GEV-EMICODE EC 1 PLUS.

### **New underfloor heating in three days**

"The new underfloor heating was installed in three days and also has the advantage that no further leveling compound is required for the subsequent laying of the vinyl floor. That accelerates the construction progress," says Lutz Müller and adds: "The ClimaComfort® Compact system together with the PCI products completely convinced me, also for my own business, the construction of turnkey wooden houses. The fewer trades required for a construction phase, the better."

## Images



*Teamwork in the renovation of an old farm in Monschau: A cooperation system from Roth Werke and PCI was used to install the underfloor heating.*

*From left to right: PCI consultant Sascha Willden, Lutz Müller, Rolf Müller, Peter Jansen, Marco Müller, PCI application engineer Knut Borck (© PCI Augsburg GmbH, [Link](#) to high-resolution photo)*



XPS insulation boards bonded with PCI Barraseal Turbo followed by the thin-layer underfloor heating only 17 mm high. (© PCI Augsburg GmbH, [Link](#) to high-resolution photo)



Roth's ClimaComfort® Compact system was cast with the fiber-reinforced special filler compound PCI Periplan Extra. (© PCI Augsburg GmbH, [Link](#) to high-resolution photo)



*PCI Periplan Extra is self-leveling and therefore easy to work with.  
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*Ready for laying the vinyl floor after a short drying time: PCI Periplan Extra is suitable under textile and elastic floor coverings, is dust-reduced and very low in emissions according to GEV-EMICODE EC 1 PLUS..  
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*About PCI*

*PCI Augsburg GmbH is part of MBCC Group and leader in the tile laying materials sector for specialist firms in Germany, Austria and Switzerland. In addition, the company supplies product systems for waterproofing, concrete protection and repair, as well as a complete product range for the flooring sector. The PCI Group employs a staff of more than 1,200 in Europe and generated sales of significantly over €350 million net in 2021. Further information about PCI on the Internet under [www.pci-augsburg.de](http://www.pci-augsburg.de).*

*About MBCC Group*

*The MBCC Group is one of the leading suppliers of construction chemicals and solutions worldwide and has emerged from the carve-out of the former BASF Construction Chemicals business from BASF Group. We offer innovative and sustainable products and solutions for the construction industry across different sectors, such as buildings, structures, underground construction, new construction, as well as for renovation. Our strong brands Master Builders Solutions®, PCI®, Thermotek®, Wolman®, Fire Protectors®, Colorbiotics®, Watson Bowman Acme®, TPH®, Bluey® and Nautec™ are well established in the marketplace. With our innovations, we address sustainability challenges in the industry. MBCC Group consists of approximately 70 legal entities worldwide and is home to around 7,500 construction experts in over 60 countries. For more information go to: [www.mbcc-group.com](http://www.mbcc-group.com).*

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