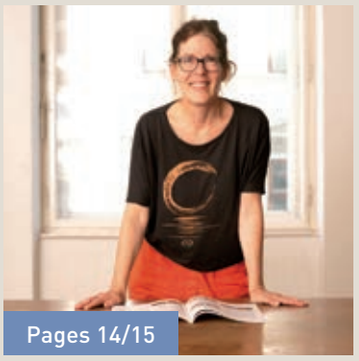
VarioTime

VARIOTHERM MAGAZINE

VARIOTHERM 2023

RENOVATION - Let's go!

www.variotherm.com


Pages 14/15

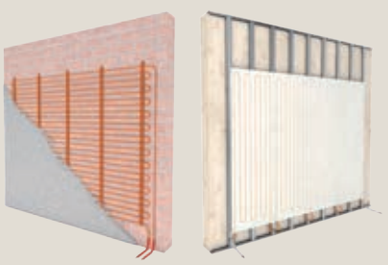

Pages 16/17

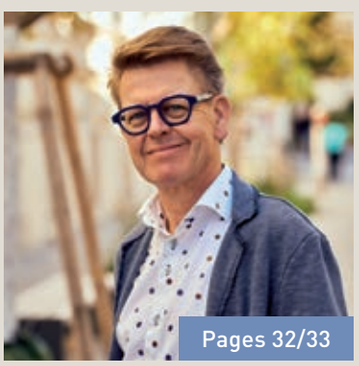

Pages 18/19


Pages 20/21


Pages 24/25


Pages 26/27


Pages 28/29


Pages 32/33


Pages 34/35

In this issue

St. Colmcille's Community School
Sports & Arts Complex

layer by layer

Pages 5-13

@ der_fassadenleser

2 PROJECTS BY ARCHITECT AND FACADE READER KLAUS-JÜRGEN BAUER

VARIOTHERM
Responsible for content:

Raphael Kindl, Head of Marketing - Variotherm
Jürgen Zwingl, Creative Director - Häc-Mäc
Written by Paul Szimak, Layout: Jürgen Zwingl
Photography: Reinhard Gombas - Häc-Mäc
Patrick Weichmann - weichmann.at
Print: Wograndl GmbH

Variotherm Heizsysteme GmbH
Günselsdorferstraße 3a
2544 Leobersdorf
AUSTRIA
www.variotherm.com

Renovation

Old versus new. The eternal question:
What makes more sense? Saving an old building and thermally renovating it? Courageous, but resource-saving. Or building a new home from scratch on a greenfield site? Costly and soil-sealing. What are the limits of renovation? Can a building be renovated to death? When does a new building become worthwhile, when wars and crises drive construction costs to dizzying heights?

Variotherm is convinced that the future of living lies above all in the renovation of old buildings. To this end, we present two projects that could not be more different - and yet have a lot in common. On the one hand, there is a house that is 450 years old and can still be renovated. On the other hand, there is a new building that is technically state-of-the-art but is oriented towards the cosy construction of an old farmhouse.

What would you choose? With Variotherm, you will always make the right choice.

It's worth thinking about!
Hand on your heart, says Alexander Watzek

The edition is all about

„Renovation“

1 450 years old and still rehabilitable.

He is a star architect, architectural philosopher and a friend of preserving historic buildings. On Instagram, he is known to a broad fan base as "Fassadenleser" ("Facade Reader"). In his private life, Klaus-Jürgen Bau bought a new house two years ago. One that tells 450-year-old stories.

Klaus-Jürgen Bauer: Bauer: In rural areas, many houses are often much older than you think. These buildings tell us something about their past. There were times when the owners had money and added buildings. Then there were floods or a part burned down. All the traces of these events are shown in the house. You only have to scratch the walls and at some point every house reveals almost all its secrets, layer by layer. In my own house I have discovered 30 layers so far.

Alexander Watzek: Your house is 450 years old and dates from the Renaissance. For all that, it is amazingly well preserved. What stories does your building tell?

KJB: The house was built as a small barracks after the Second Turkish Siege. It is located on a strategically important road that led from Vienna via Ödenburg in Hungary to Zagreb. In the extension there is an even older, 1.5 m thick stone wall. This is the remnant of the tower of a Gothic castle that once existed here. After the First World War, the building served the community as a poorhouse. I have dismantled all the small rooms so that the original structure can be seen again. The cellar is Renaissance. Everything here is unchanged. Even the flooring is from the 16th century.

AW: You are known for saving historical buildings

from decay. What is easier to renovate? An old house? Or a house from the 80s?

KJB: Certainly the old house. Because it's made of fewer materials. **I don't really like the word renovation. It sounds like the house is sick. My favourite word is repair,** because I'm doing the same thing I did back then. I close a hole in the stone wall with a stone and lime plaster and "We're done". I peel the house until I find the relevant layer that I want to preserve. Unfortunately, these are building sins from our time - from the 1960s onwards, when industry began to provide building materials. Materials that had been used for thousands of years, such as wood, clay, sand and lime, were replaced by glued petroleum-based materials - everywhere on ceilings, walls and floors. This presents us with the problem that such a house is, in fact, beyond repair. In my 450 year old house, I spackle off the broken layers and go over them with a lime plaster. That's it.

The floors in old houses are a challenge. In this case, an old vaulted cellar hides beneath the surface.

AW: If this house has survived so long and remained so dry, it's because there must have been a relatively simple but good heating system.

KJB: That's right, the heating is crucial. There used to be only one source of heat: The cooker in the kitchen. At that time, houses functioned according to the "grandmothers principle": Permanent, long-wave radiation thus hit a mass of masonry every day. Walls made of stone, clay, wood - protected with a plaster of lime or clay. There was nothing else. **Today we know: In a 70-metre flat, the weather, breathing, eating and washing produce around 7,200 litres of moisture in droplet form per year - that's the amount of a slurry tanker.** You get one third out by airing. The rest goes into the mass. Into the floor, into the walls, into the ceiling. The material has to withstand it. Clay can absorb as much moisture as nothing else in the world. The floor in this house is made of tamped clay. Right on top of it were ancient wooden floorboards. When we turned them over, they were as dry as dust.

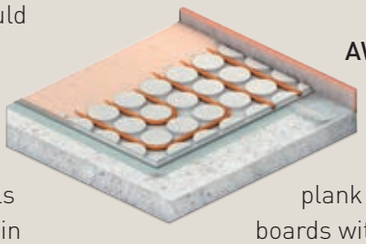
AW: Heating the building won't be easy, though.The only thing we can be sure of is that it will be warmer than before. Underfloor heating alone won't work if 3.5 cm thick spruce floorboards are put on top again, so it depends on the desired use. Should 23 degrees be possible here?

KJB: No. The room is to be used seasonally only for seminars.

AW: Since it is only a temporary use, you need it warm quickly and flexibly. In this case, I would not recommend laying the pipes directly in the clay

floor, but rather our super-slim underfloor heating in dry construction. Despite your low floor construction, our VarioComp with only 20 mm construction height is easily acceptable.

It can also be laid directly on top of the clay. We could get by with that, but not in such a way that it would be really comfortable. I would therefore fight for every strip of wall heating.



KJB: What I have often done is to use the surface of the window reveals and window bases, i.e. the recesses in the box windows. The old windows should be retained.

simple construction with great effect. If you use all 10 niches in the house, we are already a big step further. What about the attic?

KJB: The attic is an interim construction. The Russians shot into it on Holy Saturday 1945 and everything burned down. It is not a listed building.

AW: Even if your attic were listed, you would have no problem with our systems. Your roof slopes are predestined for our wall heating in dry construction. You simply plank the construction with our gypsum fibre boards with pre-integrated pipes for heating and cooling. A nice side effect is that you don't have to worry about old radiators cluttering up the room.

The window reveals are perfect for wall heating, but a well-insulated ceiling is important for surface heating.

AW: But they will not be completely tight. In this case, wall heating under the windows is an absolute must. If the entire reveal is piped underneath and to the side, the problem is eliminated. Simply fit our EasyFlex wall heating with 17 mm and plaster on with lime plaster. The pipe is very slim and flexible to install. A very

Despite good insulation, you won't be able to avoid cooling because our summers are getting hotter and hotter. And then there is the issue of manifolds. If we only do underfloor heating, it would be better in the basement. If wall heating is added, the manifold on the upper floor makes more sense.

Continued on next page >>>

This is what a 450-year-old cellar looks like. The flooring dates back to the 16th century and the facade is being reconstructed true to the original.

KJB: Good, then let's summarise: Technically, thermal renovation would be possible. You have to make an effort and we won't get a 1:1 result like in the brochure. But we don't need to. The function determines the use of the means. I am a friend of wall heating, even old castles and palaces can be upgraded with it. So it will work here too.

AW: For sure. I would do everything here with underfloor heating in combination with wall heating and cooling. It works and lasts for generations.

Interview with Christine and Gerhard Markowitsch, Architect Klaus-Jürgen Bauer and Variotherm Head of Marketing Raphael Kindl, Written by Paul Szimak Photography: Reinhard Gombas

2

HARMONY AS FAR AS THE EYE CAN SEE

It is well known that Streckhöfe offer a unique living experience. The new home of the winegrowing couple Christine and Gerhard Markowitsch proves that the age-old building concept also functions in a new interpretation.

Christine and Gerhard Markowitsch

Sense of style, design and living feeling. The whole house is decorated with works of art - but the greatest work of art is the building itself.

Raphael Kindl: What a wonderful day! A glass of wine, sunshine and nice conversations on the shady terrace overlooking the pool. As a guest in your new house, I feel at home and welcome!

Gerhard Markowitsch: There's something about a farmhouse, isn't there? Once you're used to this kind of living, you wouldn't want anything else.

Klaus-Jürgen Bauer: Unfortunately, there are not many of these stretch yards left today - even though this type of construction allows for unique, ultra-modern design possibilities. There are also only a few builders who dare to undertake a project of this type and size.

Christine Markowitsch: There are also not many architects and craftsmen who have the necessary expertise. The search for the right partners for this project was incredibly difficult.

Raphael: That leads me to the first question: How did you find your architect Klaus-Jürgen Bauer?

Christine: I simply googled typical Pannonian farmhouses that I liked - and the most beautifully renovated houses of this kind were always by Klaus-Jürgen. When it comes to renovating historical buildings, he is simply unrivalled. His expertise in old houses is enormous.That was important to us, because we wanted to preserve the old building substance at first. But then everything turned out differently - which we are very happy about today.

A house with charm and a clever concept

KJB: My love is repairing houses that tell centuries of history. So I am a great friend of preservation. But even with the best intention of preservation, there are sometimes natural limits to repair and renovation. In this case, the building fabric was not in good condition.

The building had previously been a simple utility building, the floors were all at different heights, the rooms were very small. From a structural point of view, renovation would not have paid off. So we decided to build a new building - in a form that builds on the old knowledge about this type of building.

Raphael: The result is extremely successful and also fits in perfectly with your traditional winery. How long have you been living on and cultivating the land here?

Raphael: The name Carnuntum has ancient Roman origins settlement area back. The ones exposed here Buildings from Roman times are surprisingly well preserved. There has always been long-term thinking here, built and managed.

Gerhard: In viticulture you have to think in terms of decades. Freshly planted vines only produce fruit after 5 years the first yield. Pure agriculture thinks ahead years. In viticulture you calculate with the next 50 years. So you always try to find the right ones to make decisions.

Raphael: Why did you choose a Streckhof?

Gerhard: Most of the houses on this street were old L-shaped stretching yards. Narrow and long.
The reason for this is the cooler climate back then.

A photovoltaic system on the roof provides 16 kWp of power. The covered terrace is used all year round. Over 70 m² of wall heating/cooling has been activated and plastered with lime plaster as in ancient Roman times.

Gerhard: Our family has lived here since 1750, when the area was burnt down and devastated by the Turkish wars. Under Empress Maria Theresa there was a new influx. Until the 90s, there were many mixed farms in the area. We live here in the middle of the Carnuntum wine region, which is why I have intensified viticulture in the last three decades.

The residential buildings were therefore placed on the south side. There were also farm buildings and barns.

KJB: Streckhöfe offer a wonderful feeling of living. In normal single-family homes the view only goes as far as the other Street side with concrete facades. A Streckhof, on the other hand, is self-contained. You have shading and quietness. Even if there was construction all around, you would hardly notice anything about it. The yard is one feel-good island for yourself.

Christine: Right. The living feeling of the Streckhof we wanted to maintain. I don't want a modern one living box – no matter how beautifully built it was.

Installer:
Kast & Schmidt GesmbH
www.kast-schmidt.at

Continued from page 9 >>>

Raphael: What ideas did the clients have?

KJB: In this case, everything developed very organically. **There was a very clear briefing from the clients. Point one: they didn't want any sunlight.** When they work in the vineyard, they have enough nature, sunlight and heat all day. We have hot summers here. That's why it was clear that we would put the building on the shaded side. The pool was also a central idea. The property lends itself to swimming lengths. The family is also very sociable and often has guests, which requires a lot of space indoors and outdoors. As was customary in the past, we simply outsourced some functions. The existing wooden stadium completes the whole thing.

Raphael: Really smart concepts everywhere you look!

KJB: A large part of the charm is that Gerhard and Christine demanded quality right from the start. The statement was: If we get windows, then we want quality windows. The floor should be a good floor that can take a beating, that can withstand something. Finding the right craftsmen was a very long and difficult phase. But we mastered it well and the companies at work were all people who understood their job. You can feel and see that in a house when the professionals are well coordinated.

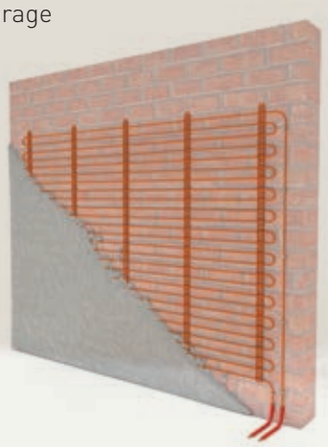
Raphael: Typically, builders want a sunny, light-flooded house. You, on the other hand, have opted for a clever shading concept.

KJB: With rising temperatures, the issue of cooling is becoming increasingly important for future generations. The building is designed in such a way that projections have been built wherever there is light. So we don't have any direct solar radiation into the room. This is enormously beneficial from an air-conditioning point of view. Nevertheless, the large glass surfaces make it very bright.

Gerhard: We first considered installing skylights. But I'm glad we didn't do that. We only turn up the light in the evening because it is always bright in the room. It's an indirect, pleasant light that doesn't dazzle.

The art of light and shadow - a view into the kitchen

KJB: The building also offers storage mass without end: a solid wooden roof, solid bricks and concrete walls, a solid floor and **Variotherm wall heating and cooling directly behind the lime plaster**. This gives us the opportunity to cool and heat via the walls - in addition to the reduced heat input.



Lime is a wonderful, natural material. Unfortunately, there are only a few people who have mastered the art of plastering with lime - but they exist and are becoming more and more. The central tiled stove also heats the house.

Christine: We have a lot of old wood in the vineyard, so it doesn't always have to be oak. We don't let anything go to waste and heat with what's there, just like in the old days. I am a passionate stoker. I like to keep it warm and I enjoy heating it up. Heating every day is a ritual for me. It makes you much more mindful of energy.

Gerhard: That's why the wall and ceiling heating was already included in the first proposal, because we can also use it for cooling.

Christine: That's right. An annoying air-conditioning system was out of the question anyway. So now we have wall heating/cooling in the living area and ceiling cooling and heating in the bedroom. Gorgeous!

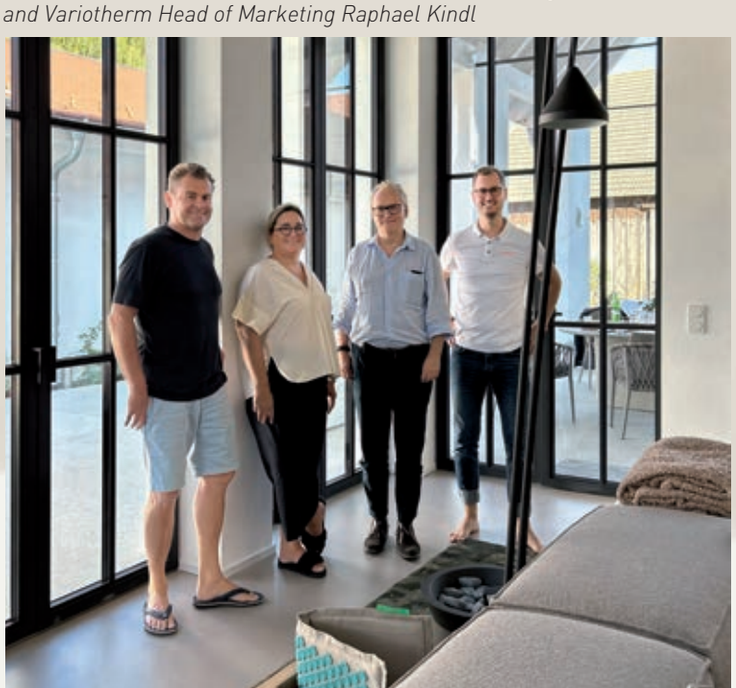
KJB: From experience with old houses, I am a friend of wall heating. The storage mass is always tempered by the heat source. Basically, the house functions according to the principle of a tiled stove. The activation of all surfaces creates comfort. But the house must also be able to regulate itself, because nowadays people go on holiday and are not always at home.

Gerhard: The main thing for us was that we simply wanted it to be cosy. And we didn't want a complicated heating system, but one that was easy to regulate. If you can also generate the electricity for the air heat pump yourself, then it's a perfect system. We would even have had a connection for district heating on site. But we simply liked the Variotherm system better.

In the bedroom the modular ceiling / cooling is installed.

Beautiful doors and folding shutters to match the facade.

Gerhard and Christine Markowitsch, Architect Klaus-Jürgen Bauer and Variotherm Head of Marketing Raphael Kindl



Interview with DI Julia Lindenthal | Österreichisches Ökologieinstitut
Written by Paul Szimak
Photography: Reinhard Gombas

„THE RENOVATION STARTS IN THE MIND!“

How can vacant spaces be used in new ways through innovative space utilisation concepts? What forms of living together can revitalise cities, communities and settlements? Julia Lindenthal from the Austrian Institute of Ecology deals with these and many other questions.

Variotherm: Ms Lindenthal, you are one of Austria's most renowned housing researchers. One of your books is entitled "New Living in Old Houses" - which renovation options have a future?

DI Julia Lindenthal: I am convinced that renovating existing buildings is generally preferable to building new ones for ecological reasons. In recent decades, everything has been focused on energy efficiency: many old buildings need better heating systems, and the efficiency must also be improved. Despite economical low-temperature heating systems, you shouldn't turn up the heat to 26 degrees in winter and walk around in a T-shirt and shorts.

In the past, when there was only one stove in the house, people thought very carefully about when and where they heated. So if I only rely on the technology and don't also

renovate in my head, then in reality it's all useless. You first have to rehabilitate your thinking!

VT: A renowned study on under-occupancy shows that practically half of all houses in Austria are occupied by a maximum of two people.

DI Lindenthal: Here's an impressive thought experiment: The unused rooms in the province of Lower Austria alone could accommodate 600,000 people. Of course, this is not feasible in practice. However, more communal living would be possible in many ways. The question is: Do I want to live alone at all? Shared flats are in vogue among young people, but also among older people.

VT: We are also noticing that there is more and more demand for additions and extensions. We are observing that multi-person houses are being built again - for example, young families who are converting and extending grandma and grandpa's house.

DI Lindenthal: Community use is not to be neglected, also in the sense of the loneliness of old people! Just think of the heating system, which could be purchased and used jointly. Why does each house have to have its own heat pump or pellet heating system? Joint energy production is technically possible and legally permitted.

In Austria, the number of actual vacancies is not collected. There are only the figures of the residence registrations. According to this, 16% of single-family houses are not used as primary residences. This does not mean, however, that they are completely empty. Secondary residences are also included - but these are often only used for a few days or weeks a year.

In 2011, a study on under-occupancy showed: 52 % - practically half of all houses in Austria - are occupied by a maximum of two people. 21 % of all single-family houses are even used by only one person.

VT: Your projects show in practice that the heating demand of very well renovated houses are reduced by more than a half!

DI Lindenthal: Yes, but not only. If the renovation is done well, the comfort level also increases, because the surface temperature of the building components in the interior is significantly higher. The point is: you have to crack the old stock - even if it's a tough nut to crack. It is basically about recognising the value of the old building stock. And here I mean in particular the architectural and emotional value. After all, a vacant building is always embedded in its surroundings. It is important that buildings are revitalised, cared for and maintained. Otherwise, a cycle is set in motion in which the neighbours or the last remaining businesses also move away. Vacancy is contagious.

Read the study >

Österreichisches
Ökologie-Institut

Österreichisches Ökologie-Institut
Seidengasse 13
A-1070 Wien
www.ecology.at

45 m²
ModularWall for
Heating & Cooling

Interview with Evelin & Klaus Brehm, Couples therapists and Martin Rührnschopf, engineer and planner
Written by Paul Szimak
Photography: Variotherm

Thinking unconventionally.

A pleasant room atmosphere is particularly important to Evelin and Klaus Brehm. When it came to equipping their sloping roof with heating and cooling, the two couples therapists were advised by architectural visionary Martin Rührnschopf. The result is a pure feeling of well-being in every season.

Evelin: Our new house is the final great living love of our lives. We are particularly pleased that our attic can now also be used as living space.

Klaus: That's right. Unlike all the other floors, it was not possible to install underfloor heating in the attic. But we didn't really think about heating and cooling before.

Evelin: Only with the heating costs of our old flat. In our house we now have a completely new concept with a heat pump, PV system and wall heating and cooling in the attic.

Klaus: An invisible heating system that creates a wonderful indoor climate. Our thermostat is set to 21 degrees - and that's it. We are very satisfied with our decision to use Variotherm.

Evelin: Satisfaction is when you have a good feeling without knowing where it comes from. Warmth and coolness make up the quality of a room. You enter the room and simply find it pleasant. But you don't know why that is. You don't think about the technology behind it. If you don't notice something, it has quality. I think that's great. **In winter it's warm, in summer the system cools, we don't have to worry about anything.**

Martin Rührnschopf: The heart of the house is the attic. Here you can feel the realisation of the guiding principle: air - space - sun - water. Especially in an attic, it's all about feeling good - on very hot days. The windows face east, which means that the room heats up very strongly in the morning. **A classic air-conditioning system is out of the question here, it only has disadvantages.** Instead, we use shading and Variotherm modular panels.

You can't see them - but they work. In combination with the water heat pump, we send the cool groundwater through the

wall surfaces in summer, take the heated water away again, thus removing the heat from the room and creating a very pleasant climate. In winter, on the other hand, there is a mild radiant heat. Using the example of these sloping roofs, we have succeeded in turning an ugly duck into a beautiful swan!

Our love of living. Click here for the video interview.
Simply scan the QR code with your mobile phone!

kierer INSTALLATEUR KIERER GMBH
www.kierer.at

Interview with OStR Prof. DDipl.-Ing. DDr. Adalbert Schönbacher (HTL Pinkafeld / Head of Building Technology Department),
Rebekka Reithmeier (5th grade student / Building Technology) and
Christian Trobits (Variotherm Head of Engineering. Research. Development.)
Photography: Patrick Weichmann, Written by Paul Szimak

HTL PINKAFELD

THE SUPERHERO SCHOOL

Energy shock! This word made the blood run cold in 1973. The massive increase in the price of oil by OPEC triggered a veritable boom in the search for more efficient heating systems - and helped the then newly founded HTL Pinkafeld for building services engineering to achieve a breakthrough.

Schönbacher: Our school was founded in 1967. One of the first departments was building services engineering - or as it was called at the time: mechanical engineering, heating, ventilation, air-conditioning technology. Due to the sharp rise in oil prices in the 1970s, there was a call from industry to use less oil and to research oil heating systems with higher efficiency. We were the only HTL in Austria to offer this subject - and we were way ahead of our time.

Christian: Exactly. But then IT came along. Mechanical and electrical engineering were not sexy - but computer science was. The training capacities for building services engineering were massively reduced, creating a huge hole. Then came the mathematics of climate control. People realised: Oops, the old buildings have to be renovated.

Schönbacher: Today we are the largest HTL for building technology in Austria, and our graduates are in great demand. Many of them go on to great careers, like you, Christian. You were a student here yourself 20 years ago - and today you are the Head of Research and Development at Variotherm. What was it like for you, Rebekka?

Rebekka: At first I thought: HTL? That's not for me. But I looked at every training programme at Girls Day and that's how I found the HTL Pinkafeld. I quickly realised how unique this offer is in our region. The percentage of girls at our school is only 17%, but it is increasing. It is important not to remain stubborn. Venturing into technical professions as a woman only brings advantages.

Christian Trobits, Rebekka Reithmeier and DDipl.-Ing. DDr. Adalbert Schönbacher

Schönbacher: That's right, Rebekka. You know, I grew up at a time when superheroes were still in. But who can save our world in the future? At our school we train the future Batmen and Supergirls who will help save the planet.

"Who will save the world? I know: the superheros of the HTL Pinkafeld - Building Services Engineering!

Rebekka: What I find cool is that our education is very practice-oriented. My diploma thesis is about energy-saving measures in the Palais Starhemberg, or Ministry of Education. We took comfort measurements in winter and summer. We found that the staff can contribute to reducing consumption with simple measures. We are also creating awareness for this. In the future, I would definitely like to stay in the industry. I don't know yet if I will work as a planner, draughtswoman or if I will go to university.

Schönbacher: Pinkafeld graduates are very much in demand and represented in the industry. The people in the industry simply get along well - like in a big family. They radiate warmth.

Christian: Radiating warmth is the right keyword - that brings us straight to our heat output systems.

Schönbacher: Variotherm made my ears prick up. That's something special, because it's about renovation. And we finally have to start renovating more than building new.

Rebekka: My generation thinks that renovation must be the future. Always building new simply doesn't work in the long run.

Every day, the area of 31 football fields is sealed, which is far too much. That makes it all the more important to breathe new energy into old buildings. The questions are: How can urban old buildings be perfectly renovated? How can surface heating systems be easily retrofitted? They offer the most potential.

Christian: That's right! Renovation projects are also much more intellectual than new construction projects. You have to be willing to compromise and find individual solutions. At Variotherm, we have decades of experience in turning old houses into future-proof buildings. But society at large still lacks a lot of know-how.

Schönbacher: Yes, unfortunately. For those who can afford it are building new. But not everyone has the money for renovation. That's why we need prefabricated products, such as your wall heating, and experienced specialists who can explain the solutions to builders. Unfortunately, this way of thinking is cemented in. "The best heating - and I am a big fan of this - is wall heating. **The insiders who really have a feeling for comfort have been talking about it for a long time. But they are not the loudest.**

HTL PINKAFELD
BILDUNG MIT ZUKUNFT

Higher Technical Federal School and Research Institute Pinkafeld
A-7423 Pinkafeld, Meierhofplatz 1
Tel.: +43 3357 42491
www.htlpinkafeld.at

EXACTLY ENOUGH!
THE GREEN TECHNEA-OASIS

How do you transform concreted-over floor areas with a nondescript industrial park hallway on top into a thriving world to feel good in? Technea, a long-standing Variotherm partner in the Netherlands, shows that change is possible - if you start with yourself.

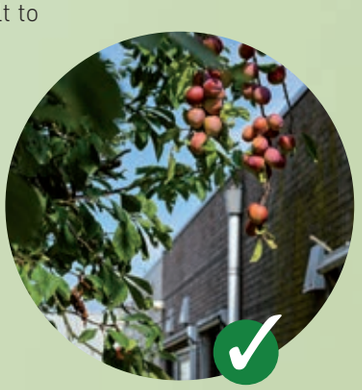
Written by Paul Szimak, Photography: Technea

With the redesign of its headquarters, Technea fulfilled a long-cherished wish. Thanks to its own expertise in renovation, an impressive sustainability project with an exemplary effect was created.

1 In the first phase, the focus was on the greening of the outdoor area and the design of a conference and lunch garden where employees can work in a relaxed atmosphere. The main goal during construction was to use or recycle everything that could be reused.

2 In the second step, a green-friendly paving was laid, which can absorb water and helps to prevent flooding. The drained rainwater will be used as service water instead of tap water in the future. By greening the facades, a pleasant, ecological environment was created. A cosy seating area was set up in the garden, inviting people to get together and relax. In addition, a greenhouse was integrated, which enables the residents to grow their own vegetables and herbs. The chicken coop next to it brings back originality and also provides fresh eggs. A bicycle shed was also built to promote the environmentally friendly mobility of the employees.

3 In the third section, Technea focused on sustainable measures of the circular economy. The road surface was not simply disposed of, but was crushed into a coarse mixture and reused as a hardener in the new surface. Climate-appropriate trees were planted to provide greenery and shade for the area. To improve the soil quality, part of the soil was composted. The excavated sand was used for a children's play mound.



Even the old concrete slabs were reused. They are now the borders for the flowerbeds. Particularly noteworthy is the transformation of the 500 m² of sealed asphalt. This was broken up and largely replaced by green spaces. Only the lorry parking spaces remained untouched, while the rest of the site was redesigned to create a resource-saving, green oasis.

www.technea.nl

Written by Paul Szimak
Photography: Adlerblick

EAGLES VIEW

Adlerblick Altbausanierung manages to preserve the old by using new technologies, thus saving its customers a lot of nerves, energy - and money.

How sustainable renovation works successfully in practice can be summarised simply: photovoltaic systems, thermal solar systems and low-temperature heating systems ensure the necessary energy efficiency. Ecological insulation materials made of wood fibres, rock wool, clay and loam plaster and wood bring nature back into the house. The use of innovative building technology quickly pays for itself through enormous savings potential. A wide range of subsidies make renovation highly attractive and easy on the wallet. Adlerblick specialises in all these areas.

"98% of our business is the renovation of old buildings," emphasises Andreas Haider. As CEO of the company, which is also experienced in installation and deconstruction, he focuses on conserving resources and using them respectfully. "We prevent the demolition of buildings, which makes the dream of owning your own home more affordable in view of the enormous increase in land and building costs. Wherever something new is built, the old has to give way. By renovating old buildings, however, it is possible to preserve the existing stock for several generations. In addition, we ensure the emotional connection of our customers with a building.

In addition to healthy living and energy efficiency, Adlerblick is also concerned with the ecological footprint of each renovation project. "In contrast to a new building, we focus on the existing substance when renovating old buildings. We recycle materials or give them away to private individuals, companies or charitable organisations. Sometimes we even deliver them ourselves to needy regions and countries. Only what cannot be reused is disposed of properly and correctly," says Haider. "We are also concerned about the well- being of society in other areas. When choosing our suppliers, products and their production, we pay attention to both quality and regionality. Our customers' projects are located in the vicinity of our site. Ernest Hemingway aptly summed up why we are so concerned with sustainability: 'The world is so beautiful and worth fighting for. That's what we're looking out for with our eagle eye."

"The future is the time when you regret that you did not do what you could have done today.

The quote from Arthur Lassen underlines the guiding principle of the Adlerblick team.

ADLERBLICK
ALTBAUSANIERUNG
www.adlerblick.com

Photography: deirdrehayesphotography.com

A SCHOOL MAKES IT EASY

On the outskirts of Dublin, in the young and fast-growing community of Knocklyon, stands St Colmcille's School. A wide range of sports, theatre and musical performances is becoming increasingly important for young people. In 2014, the first ideas for a three-storey extension were already being considered, and now a new sports hall, changing rooms and a large stage area have been built.

An important part of the brief from the outset was to create multi-functional spaces that would meet the different needs of the school as well as providing facilities that could be used by the community outside school hours. Equally important was to design and construct a building that would provide the highest level of comfort at the lowest possible running costs. Brian McPhillips of Proteus Consulting Engineers was commissioned to design a system based on an air-to-water heat pump for heat generation and Variotherm's innovative surface heating and cooling systems.

Heat Doc Ltd were appointed mechanical contractors and working closely with Variotherm partner HWI Sustainable Buildings installed underfloor heating in all changing rooms, showers ,toilets and lobby areas. **But the piece de resistance is the 15 m long and 5 m high wall** in the auditorium and as well as in the back of the stage: the innovative Easy-Flex wall heating is used in these and other places in the building. Why this size?

100 m² EasyFlex Wall

3 VarioManifold with 18 circuits

The EasyFlex wall heating/cooling is highly energy-efficient and easy to install.

Components and Tools for EasyFlex Wall:

VarioProFile pipe 11.6x1.5 and VarioBar

Well, the key to efficient heating or cooling is a large surface area. The larger the surface area, the lower the flow temperature and the higher the efficiency or COP (Co-efficient Of Performance) we can achieve with the heat pump.

The EasyFlex wall heating system with a pipe spacing of only 77 mm and the use of sand and cement plaster provides considerable heat storage. The combination of low temperature and the simultaneously very large heat emitting surface, supplies the auditorium including the stage area effortlessly. It is a good example of a high efficiency, low cost, high comfort solution for heating and cooling large spaces.

ohn McKennedy, the school principal believes that ' this building is a major achievement for the school and the local community. We look forward to the students and staff of the school past students and members of the community benefiting from these new facilitie for many years to come. **We are delighted with the heated walls and feel privileged to have such a modern , effective and energy efficient system.**

Technical Details of installation:

Heat Pump : Heliotherm Sensor Compact
40KW Air toWater, Buffer: 850 litre

2 x 850 litre fresh water tanks with plate heat exchanger

3 x Systemair Topvex

2 x Panasonic Heat Recovery ventilation units
Elysator chemical free water treatment unit

Professional Team

Proteus Consulting – Brian McPhillips | www.proteus.ie
Heat Doc Ltd – Damien Mullins | www.heatdoc.ie
JSD Contracting – Colm Kennedy | www.jsdcontracting.ie
Variotherm: HWI Sustainable Buildings Ltd – Peter Sullivan | www.hwi.ie

Damien Mullins, Peter Sullivan and Direktor John McKennedy

www.stcolmcilles.ie

Written by Paul Szimak
Illustration: Häc-Mäc

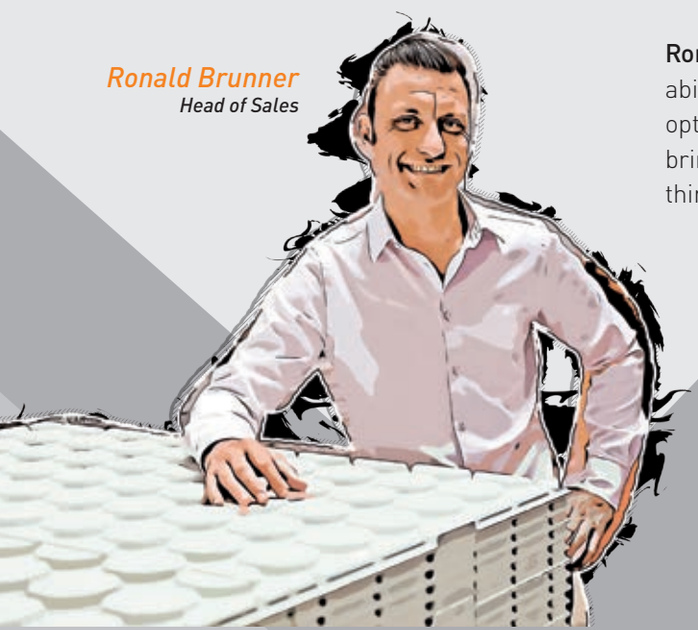
Having a great product in stock is not enough; it only makes sense when the customer is completely satisfied with it. It's a long way until then.

One on which our sales department will be happy to support you.

At Variotherm, we think far beyond pure sales. We see it as our responsibility to ensure that everything runs smoothly during processing and planning and that installation is easy. Because that makes a decisive contribution to satisfaction. And it helps us to bring our vision of environmentally friendly, energy-efficient and sustainable forms of contemporary heating and cooling into the world.

We treat our suppliers and customers as equals. Instead of putting pressure on prices, we give each other room to breathe so that all sides can prosper economically. The basis of every business relationship is therefore trust. And trust is earned through a sincere, loyal personality.

That is why we would like to introduce the team of our sales department to you personally.



Ronald Brunner
Head of Sales

Ronald Brunner is our Head of Sales. With his distinctive ability to bring structure into all processes, he ensures the optimal handling of sales. Every project is different and brings with it special requirements. Ronny brings order to things and takes care of the big picture.

Sales

As the CEO of Variotherm, Alexander Watzek is travelling the world with great passion. It is exciting for him to see that more and more people all over the world are no longer just thinking about how they want to build, but about the materials they want to be surrounded by for heating and cooling. Variotherm products are increasingly at the forefront of customer satisfaction.

Alexander Watzek
Export

Philipp Prinz
Sales Austria - Eastern Region

Philipp Prinz is new to the team, comes from the industry and therefore knows his way around. Geographically, he is area is on his doorstep. Traditionally, a lot of projects arise in our home area - Phillipp finds first-class solutions for them and looks after the customers in his obliging and friendly manner.

Robert Hofer
Sales Austria - Western Region

Robert Hofer is our man from the West. He is not related to the famous freedom fighter Andreas Hofer. But as a Tyrolean, he is a true free spirit who gets straight to the point and simply says what is important. Honesty is the best policy. And that's why our customers from Vorarlberg, Tyrol and Salzburg have appreciated him for many years.

Andreas Sickinger has been with Variotherm for six years. As an Upper Austrian, he knows his province, but also parts of Salzburg and the west of Lower Austria like the back of his hand. As a trained plumber, he likes to call himself a "local joker". He has a lot of humour and doesn't tell his customers any nonsense. Thanks to his extensive practical knowledge, he only needs to enter a construction site to know immediately what is really needed on site, which has saved many customers a lot of time and money.

Andreas Sickinger
Sales Austria - Central Region

Force

Johannes Kowald
Sales Austria - Southern Region

Johannes Kowald is an experienced man from the field. As a technician, he immediately understands what you need and want to know and has a gift for getting to the heart of complex issues. This also makes him a trustworthy, reliable contact for building owners.

Dagmar Kohl
Sales Assistant

Dagmar Kohl joined our team this summer! With her likeable, cheerful and friendly manner, she is a great asset to our company. She has been Ronald Brunner's assistant since August 2023 and is responsible for ensuring that customer wishes are perfectly fulfilled.

Interview with Architect Walter Brandhofer and Andreas Sickinger/Variotherm
Written by Paul Szimak
Photography: Patrick Weichmann

The feel-good place

Urban renewal projects undoubtedly belong to the top class of architecture. Old existing buildings, low room heights and poor acoustics pose great challenges. Variotherm assisted the architect Walter Brandhofer with the "Am Platz" project.

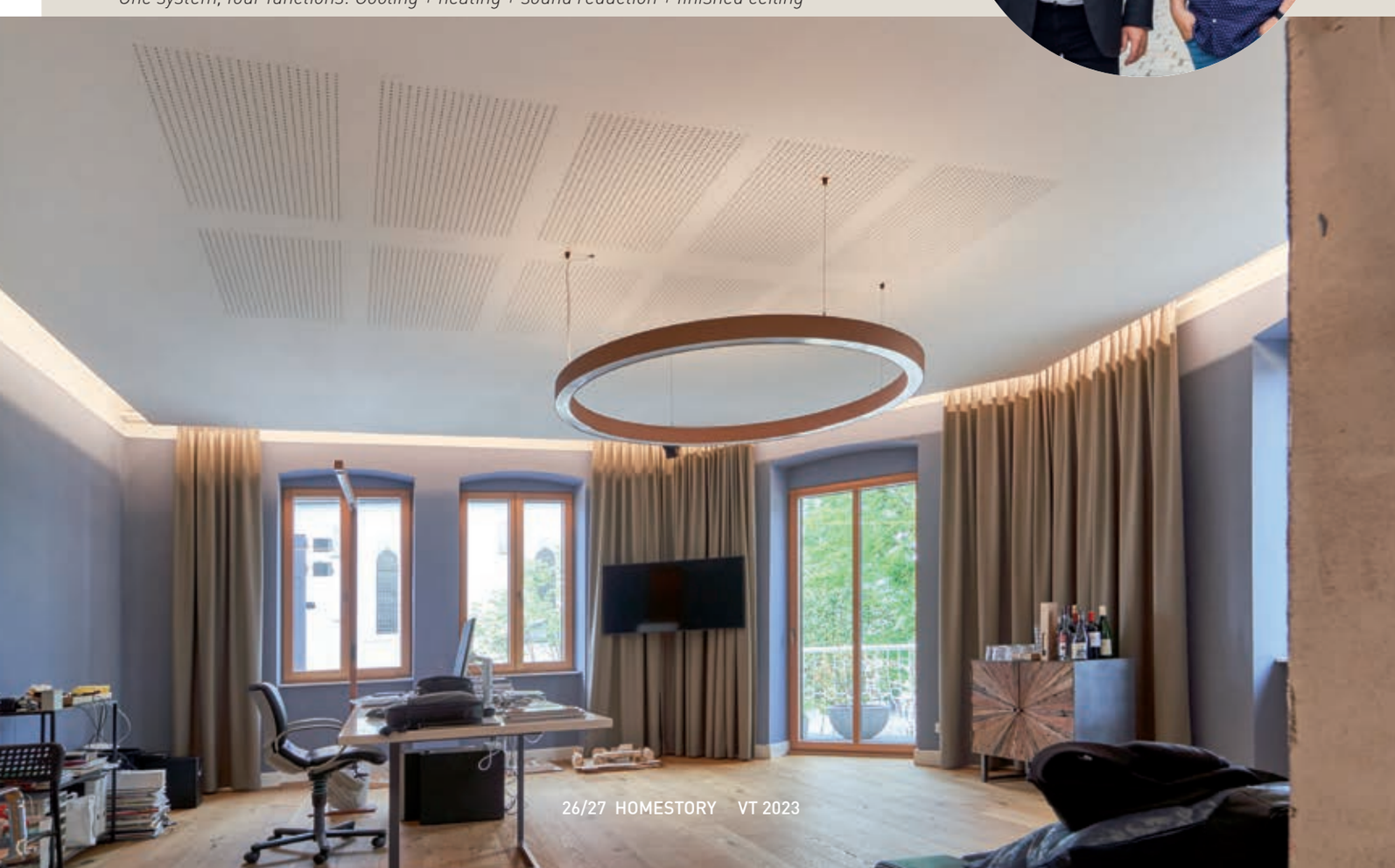
Andreas Sickinger: We are here in Purgstall an der Erlauf and have just visited your urban renewal project. The renovation has been impressively successful.

Arch DI. Walter Brandhofer: The project "AmPlatz" was really an exciting undertaking. Our vision was to create a lively and multifaceted centre where people feel comfortable and various services are united under one roof. In addition to the health centre with specialists and therapists, we have also accommodated an architectural office, a hairdressing salon and guest rooms. We are particularly proud of the auditorium on the ground floor, a multi-purpose room that can be freely rented and used for various events. And soon a café will open.

Sickinger: The Variotherm modular ceiling is used exclusively for heating and cooling. Why did you consciously decide against underfloor heating and air conditioning?

Brandhofer: The decision in favour of the heating and cooling ceiling system was advantageous for several reasons. First of all, it fitted perfectly into the existing building and enabled efficient pipe routing. But what is really outstanding is the working atmosphere we achieve with it. All year round, the technology ensures a pleasant temperature curve - and that completely silently and free of draughts. In my opinion, air conditioning is only a stopgap solution, firstly because of the high energy consumption, which should not be underestimated, and secondly because of the constant noise and draughts. Many people

One system, four functions: Cooling + heating + sound reduction + finished ceiling



find this so unpleasant that they say: Please turn off the air conditioning! Especially on hot summer days, it is a great advantage that the ceiling cooling provides pleasant cooling in the waiting room and in the corridor area. People come into the therapy room - and simply feel comfortable there.

Sickinger: You relied on the local installer, the Bruckner Haustechnik, for the realisation. The special thing about it is that you had never worked with Variotherm products before!

Brandhofer: That's right! The managing director, Niklas Bruckner, was significantly involved in the entire planning of

"Am Platz" is a successful urban renewal project with an exemplary effect for many communities.

Variotherm Head of Marketing Manager Raphael Kindl, architect Walter Brandhofer and Variotherm consultant Andreas Sickinger

Acoustic ceiling with 4, 6, 10 mm surface perforation | backside

Therapy room, guest room and waiting area with ceiling cooling

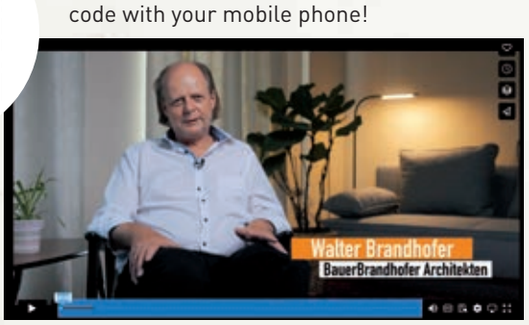
the building services and also recommended Variotherm products to us. We also received very competent support directly from Variotherm for the detailed technical planning. The implementation of the project was therefore very successful in all phases.

180 m²
Modular Ceiling Acustic for cooling and heating

Sickinger: When we first inspected the existing building, the acoustics in the rooms were extremely unpleasant. Today you can't hear any more of that! The acoustic ceilings have paid off completely, haven't they?

Brandhofer: That's right! The ceilings with acoustic function were enormously important to us; a pleasant background noise is essential, especially in the guest rooms and in the therapy rooms. In the guest rooms we also laid carpeting to further improve the acoustics. In the surgeries and offices, where carpeting was not possible, Variotherm acoustic ceilings proved to be extremely effective and aesthetically pleasing.

Really, really worth seeing - the interview with Walter Brandhofer. Simply scan the QR code with your mobile phone!



HAUSTECHNIK BRUCKNER
HEIZUNG KÜHLUNG LÜFTUNG BÄDER

www.haustechnikbruckner.at

THE PLASTERED WALL

The EasyFlexWall is becoming increasingly popular. The possibility of plastering the walls with different materials, eco-heating plaster, machine plaster, loam plaster or lime plaster is unique. With a construction height of only 17 mm, it is quick and easy to install. Perfect for extensions, renovations or new buildings - everything ready for HEATING and COOLING for COSY WALLS.

The system is perfectly suited for living room heating/cooling as well as for designed heating surfaces, cosy walls or centrally heated tiled stoves.

The components of a plastered wall: VarioRail, VarioProFil pipe, plaster grid and EcoHeatingPlaster.

Our brochure for the EasyFlex Wall!

The Variotherm plastered wall was developed 35 years ago. Since then, it has proven itself thousands of times in practice. The reason for its great popularity: it simply works on the principle of the sun and thus provides wonderfully cosy radiant heat.

- **Optimal for renovation**
- **Only 17 mm installation height**
- **saves up to 30 % energy costs**
- **healthy and silent cooling in summer**
- **Complete system instead of individual compo**

THE MODULAR WALL

Discover the sophisticated dry construction system for heating and cooling.
Different panel formats provide individual solutions for renovation or new construction.
Quick, simple and energy-saving. The VarioModul pipe is already integrated in the back of the ModulPanel - all ready for HEATING and COOLING for COSY WALLS.

Perfect for retrofitting during refurbishment and everywhere where it has to be quick and dust-free.

Sophisticated! Predetermined grain ensure precise positioning of the screws and at the same time make it impossible to drill into pipes.

Wall heating is one of the oldest forms of heating. Even the Romans appreciated the pleasant warmth of wall heating and heated their houses in this way. With water-guided wall heating, the surface of the entire wall is heated quickly and evenly by means of a pipe system. In summer, the same system can be used to cool the room pleasantly without draughts!

Our brochure for the Modular Wall!

- **There is no better system in dry construction!**
- **quick and easy to install**
- **saves up to 30 % energy costs**
- **healthy and silent cooling in summer**
- **Complete system instead of individual components with 8 different module panel sizes**

PATERNOSTER NEW STORAGE SYSTEM IN PRODUCTION

The new carousel, which is affectionately known internally as a paternoster, offers a remarkable 48m² of storage space on a 15 m² footprint. Around 800 spare parts - naturally provided with master data and article numbers - find their allocated space and enable smooth maintenance and repairs of our special machines. "This further important digitalisation step now ensures smooth maintenance processes," says a delighted Gernot Baumgartner, our Head of Production.

EASILY EXPLAINED

SNACKABLE CONTENT

"In renovation, the modular panel is your best friend!" says Ronny, our sales manager, deliberately avoiding technical details. Because the "easily explained" video series is aimed at the interested end customer. "Snackable content" regardless where the customer happens to be: via social media, directly on his smartphone.

Vario ProFile pipe

VarioComp

Hang up pictures

Filling compound

HALL 5 FOWARD- LOOKING SITE EXTENSION

A hockey match. After around a year of construction, the new warehouse was traditionally inaugurated. Together with the regional contractors, the variotherm family came together for an Oktoberfest with beer tapping and toured the premises of the new hall, because the new hall is much more than just a warehouse. In the basement, for example, there will be a modern application technology room that plumbers and drywallers from all over the world will be welcome to use for training purposes.

A look at the roof shows how seriously Variotherm takes environmental protection: An expansion of the PV system from the current 170 kWp to 280 kWp will cover more than 40 % of the energy demand in the future. A remarkable order of magnitude for a manufacturing company.

Trade fair HAUS - Germany

VARIO.SACHSEN

Very close to the building owner - and very close to the installers. Vario.Sachsen is the competent contact partner based in the Dresden area. More and more architects and clients are no longer satisfied with standard solutions for new residential and industrial buildings. Individuality, originality, functionality, economy and ecology are in demand. For this reason, Heiko Funke and Holm Kulik were sought-after contacts at this year's HAUS construction trade fair.

www.variotherm-sachsen.de

Interview with Dr. Gerfried Koch / Head of Climate and Energy Department Baden
Written by Paul Szimak
Photography: Patrick Weichmann

MONUMENT PROTECTION

About the climate-friendly redevelopment of the UNESCO World Heritage City of Baden

On the main square of the imperial spa town of Baden near Vienna, one beautifully renovated baroque house follows the next. But what about the thermal renovation behind the perfect facade? Climate and energy manager Dr. Gerfried Koch tells us during an on-site inspection.

Raphael Kindl / Head of Marketing Variotherm and Dr. Gerfried Koch / Head of Climate and Energy Department Baden

Variotherm: A stroll through Baden feels like a journey back in time. Beethoven lived here, and the town still looks as if he could turn the corner at any time. If we were to march across the main square in winter with a thermal imaging camera ...

Dr. Koch: ... the picture would be quite red. The thermal refurbishment of the historic building fabric is a mega challenge. But we are doing our best and are under the supervision of the Office for the Protection of Historical Monuments. The municipality of Baden has almost 100 buildings in the city. 97 % of the properties are now free of oil and gas. They are operated with heat pumps, pellet heating or district heating. We have made the transition in the public buildings.

VT: How great is the need for renovation in the city of Baden?

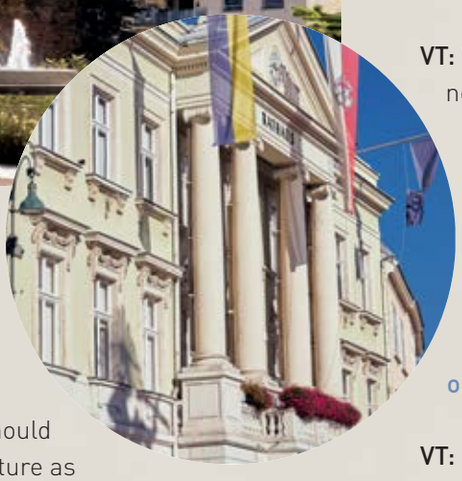
Koch: The need is huge. The financing costs are enormous. We would have to renovate 5% of our buildings every year to be climate-neutral by 2040. The average renovation rate in Austria is only 1.5%.

VT: What is the situation in the buildings "behind the facade"?

Koch: In our listed buildings we work primarily with district heating. Most of the buildings still have traditional radiators. There are very strict legal requirements for the protection of historical monuments. An example: The 19th century primary school is our largest educational building - with 180 box-type windows. From 2010 to 2012, an exemplary general renovation was carried out in cooperation with the Office for the Protection of Historical Monuments, but it took two years before we were able to install a barely visible PV system in the inner courtyard, because the regulations are so strict.

The fact that Baden was designated a UNESCO World Heritage Site two years ago will not make things any easier in the future.

The unmistakable cityscape of Baden is characterised by thousands of box windows



But of course: efficient heat output from new heating systems should be as low-temperature as possible, i.e. heat should be distributed over a large area..

VT: High-temperature heating. **That hurts, but our systems are fully compliant with the protection of historical monuments. Ceiling cooling is particularly popular in schools and kindergartens because parents don't want their children to be constantly chilled because of the air conditioning.**

Koch: That's right. We renovated a kindergarten in Bahngasse today that was not a listed building but still had gas heating. We made it climate self-sufficient with surface heating, a PV system and a heat pump. And, of course, ceiling cooling in our buildings are an issue - it benefits everyone who lives and works in them.

VT: Sounds like a lot of educational work.

Koch: In the upper rooms of the town hall it's 35 degrees in the summer. Since public buildings are not occupied at night, we cannot leave the windows open for ventilation. Natural shading and ceiling cooling is therefore an issue. It can't be the goal to hang air conditioners everywhere.

VT: You are also a board member of the Climate Alliance of Lower Austria. How do you assess the attainability of the climate goals?

Koch: It is obvious that we can achieve climate neutrality in Europe by 2050 with today's technical possibilities. That can no longer be denied. That's why, to be honest, I'm no longer a fan of relying on voluntarism in this area. **We have to get people on board - but we also need very clear guidelines and courageous political decisions.**

VT: Why is it that everyone is aware of the issue, but the necessary decisions are not being taken?

Koch: In general, I find that decision-makers in the municipalities have far too little information about energy-efficient systems such as wall and ceiling heating/cooling. **The traditional companies and building experts who advise the municipalities often know too little about it themselves and are therefore stuck with outdated solutions.**

VT: In your experience, how can a way out of this dilemma be found?

Koch: My urgent recommendation is that manufacturers such as Variotherm should approach the municipalities more directly and provide information to citizens through presentations. The climate region managers and environmental agencies are also grateful for any cooperation that promotes a change in thinking. The climate model regions are a perfect platform at the Austrian level. But it is no use if experts only talk to each other within their bubble. **The goal is to pass on our knowledge outside the bubble to everyone. That is the most efficient way to change.**

Baden bei Wien

Climate and Energy Manager Dr. Gerfried Koch / Head of Climate and Energy Department Baden, Board of Climate Alliance Lower Austria

Wood and clay

The beauty of nature

40 m² EasyFlexWall for heating and cooling

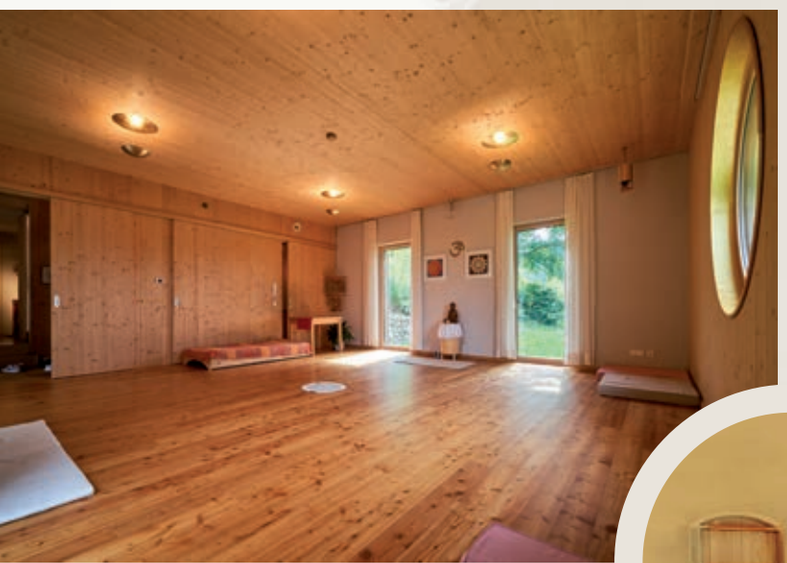
Interview with Ernst Gugler and Martin Rührnschopf | Building visionary
Written by Paul Szimak
Photography: Patrick Weichmann

A place of tranquillity in harmony with nature: the house of the entrepreneur Ernst Gugler was built entirely of wood and clay. The design was developed in a lively process together with the architect Martin Rührnschopf. With a lot of expertise in solar architecture and ecological building, the plan for a perfect home was created in just one day.

Ernst Gugler: As an entrepreneur, I have a restless environment all day long. I therefore need a place where I can find peace and regenerate. A place that inspires me and at the same time is useful for other people and living beings.

Martin Rührnschopf: In order to create a place of well-being of this kind, it was important that the house functions well climatically. That it stays cosy and warm in winter and pleasantly fresh in summer. We have solved this through various measures. On the one hand, window ventilation with special ventilation flaps, on the other hand, clay-plastered walls in which the flexible VarioProFile pipe is laid for heating and cooling. The perfect complement to a heat pump.

Gugler: "The heating costs are sensationally low. With hot water, electricity and heating, I only pay about 700 euros a year. In summer it can get up to 26 °C in the room. But when it's 36 °C outside, it doesn't matter. Because more than 10 °C difference in temperature doesn't feel good for the body. Where the Variotherm system is installed, it is pleasantly cool and therefore very comfortable. My yoga meditation room is also equipped with wall heating/cooling. It was important to me that the floor in this particular room yields a little. So using the wall is an optimal solution.



The heating and cooling system of the EasyFlexWall is mounted directly on the wooden wall and plastered with clay.

Rührnschopf: In my energy concepts, I look for efficient solutions that not only consume little energy in summer and winter, but also have a feel-good factor. Variotherm's EasyFlexWall offers the dual benefit of heating and cooling. Especially in combination with clay plaster, this has fantastic advantages because the clay absorbs and releases moisture and provides pleasant radiant heat or coolness.

Two visionaries in conversation.
The video of the interview.
Simply scan the QR code with your mobile phone!

3 NEW TOOLS FOR ADVISING CUSTOMERS!

#ROCK THE RENOVATION

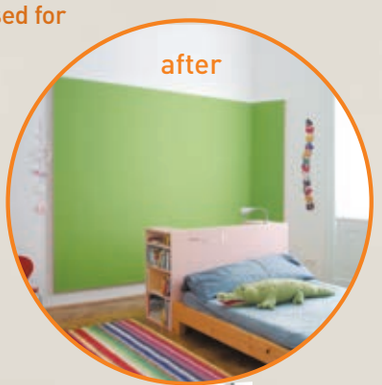
Discover all the answers to the most frequently asked questions about fast, efficient and energy-saving renovation. Easily explained for your customers!

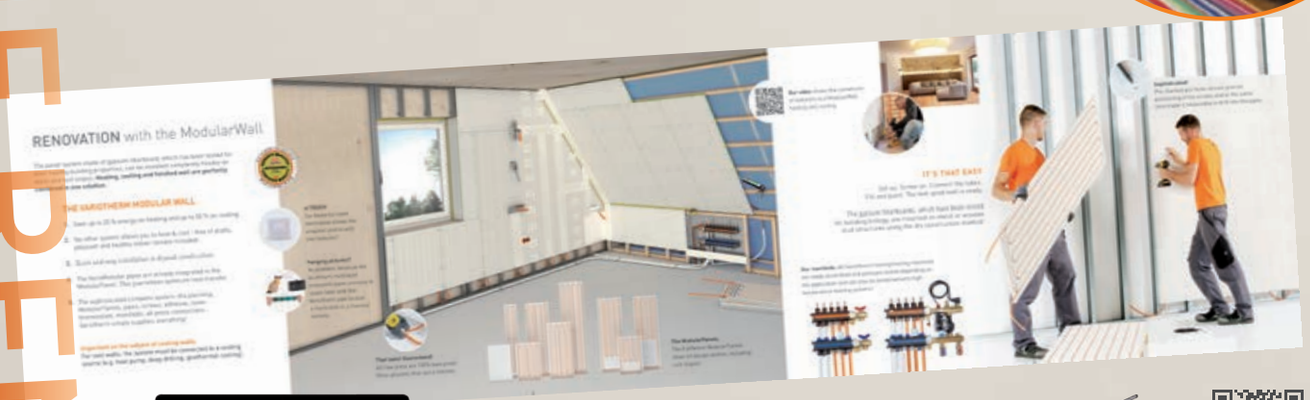
Renovation is all the rage! However, many people are not aware of the fantastic potential of heating and cooling with floors, walls and ceilings. So even nowadays they still enquire about and decide in favour of old-fashioned, energy-guzzling radiators or humming air-conditioning systems. The effort to come to terms with new and contemporary forms of heating - and even more importantly in the future - cooling seems too high to many. However, this concern is completely unfounded, because surface heating and cooling systems are the optimal complement to the heat pump!

In our new folders, we have put everything worth knowing about energy-efficient renovation of floors, walls and ceilings simply, clearly and understandably in a nutshell. As a valuable basis for customer discussions, they support experienced specialists in explaining complex technical content in a clear manner:

- **Can underfloor heating be retrofitted?**
- **Can sloping ceilings be used for heating and cooling?**
- **Is it really possible to heat and cool with the same system?**

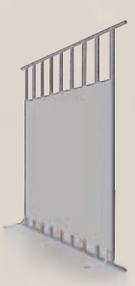
By the way, the answers are **3 x yes.**





Perfect assembly videos show how easy and quick the assembly is.

Get the ModularlWall directly on your smartphone!



AR

You can find all BROCHURES and ASSEMBLY VIDEOS on the subject of RENOVATION on our homepage > www.variotherm.com/renovation