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The Magazine for Variotherm Customers and Partner 2020

# THE NEW ROOM CLIMATE

The next generation of healthy COOLING & HEATING

We love our new room climate 40 years of Variotherm Art gallery | A night in the hopper Product news | Varioquestions National & international partners P:UR news VI



## Climate is the changing times

Yes, I know: the call for a new, ecological, economical, social climate is nothing new. In fact, it's very old hat. After all, the need to have a cosy space to live in is as old as humanity itself. In 1716, a Swede, Marten Trivald, invented the first hot water heating system for a greenhouse. As a result, people's health, life expectancy and quality of life improved exponentially. However, somewhere along the way to the modern age, we have forgotten how to focus on what is really necessary, and sadly, we humans do this repeatedly. Technology and calculable physics have taken over control, and a sensitivity for human needs took a back seat.

For several years, we have now been consciously heading for the next dilemma. If the challenge used to be banishing cold from our homes, now, we are bringing it back inside with (over)technical building envelopes. This tendency is fuelled by modern architecture and construction methods, with large glass surfaces, low storage masses and barriers between the occupants of the building and outside nature. In large buildings, even ventilation during the night to cool down the air inside is no longer possible, since the windows simply can't be opened. Never before have we been so separated from our natural environment.

The solution is obvious and a long way off at the same time. It is clear what is really needed: planning that takes people's needs into account, and which put the wellbeing of the building's occupants and the environment above profit interests. Well-meaning architecture with cleverly applied (building) technology. A pinch of coolness and the time needed to resist over-bureaucratic norms, standardisations and false "prophets". And finally, a healthy degree of assertiveness among building owners and decision-makers. Under these conditions, good old common sense is sufficient as an answer to the climate change for which we humans are in part responsible.



Andrea and Peter are looking forward to their new home as a young family. Three Variotherm systems for sustainable, energyefficient heating and cooling will also create the basis for comfort and good energy in the elegant terraced house.

Pleasant, cosy warmth is a basic human need, and

for thousands of years, the provision of heating was always the most important challenge. However, the time has now come to shift our focus. In the future, it will become increasingly important to provide cooling for living spaces.

The summers have become hotter and last for longer, and standards of comfort have increased significantly. The heating market has changed dramatically. Nowadays, building owners increasingly want not just heating, but also cooling to be included in building plans right from the start. Surface heating and cooling systems for ceilings and walls with reversible heat pumps are ideally suited to this purpose. The system has a very promising future. After all, environmental protection around the world, a sense of social responsibility and increasing awareness of sustainability are important goals as our climate changes. For this reason, it is hugely important that sustainable heating and cooling are also made affordable for young people. The products are there. Now is the time to change our perspective!

## Floors, walls and ceilings in perfect combination

One question often asked is whether floor or wall heating or ceiling cooling is better. For this young couple, it was also important to be able to heat the rooms in the winter and cool them in the summer – with just one system. That's why the right answer, and the best recommendation, is to combine all three systems. During the winter, floor heating provides comfortable warmth. However, the same system used for heating through the wall or ceiling during the winter can also be used to gently cool rooms in the summer.

It's worth taking the time to think about it. Yours, <u>Alexander Watzek</u>





All rooms are heated and cooled individually. Depending on requirements, the floor, wall and ceiling surfaces provided a comfortably room climate.

# love our new room climate' Healthy cooling and heating can be so simple.

In general, walls offer the largest exchange surface, which is why wall heating systems ensure that the radiant heat is felt in a comfortable way. Wall and/or ceiling cooling is recommended for hot summer days. Instead of hot water, cold water flows through the pipes at a temperature of between 16 and 20 °C. Rooms are cooled to a comfortable temperature, in complete silence and without forced air. It can therefore also run at night.

### Saving on energy costs

are possible.

The water-bearing surface heating systems for floors, walls and ceilings are low-temperature systems. In other words: they are laid over large surface areas and can therefore operate at low flow temperatures. Depending on the outside temperature, it is sufficient when water is heated to between 26 and 40 °C. By comparison, conventional radiators require a flow temperature of up to 60 °C. Another reason why the couple opted for surface heating and cooling systems is that thanks to the radiant heat, the room air temperature can be reduced by up to 2 °C compared to standard heating systems. Even so, the room stays at a comfortable temperature. Every degree less saves around 6% on heating costs per year. With surface cooling, even savings of up to 30% on energy costs

Andrea, Peter and their baby will feel comfortable, happy and cosy in their terraced home in the years to come, thanks to the three Variotherm dry construction systems.

# All the benefits of surface heating and cooling at a glance

- Healthy heating and cooling
- Invisible heating and cooling systems
- Free of forced air does not blow dust into the air
- Silent can also run at night
- The temperature can be individually regulated in each room
- Can be combined with alternative energy sources
- Save up to 30% on energy costs
- Maintenance-free





# Fast installation of ceilings and floors

Our systems, which are perfectly tailored to each other, guarantee short installation times and the best assembly.

Editorial / Coverstory\_2/3





Managing Director Johanna Watzek and founder Wilhelm Watzek

# 40 years of VARI

It is well known that true stories always make the best stories. This history of Variotherm has been written by employees, partners, friends and loyal customers. The first step on this 40-year journey was made by the visionary and company founder Wilhelm Watzek in November 1979.



# From dream to reality

"If one dream fails to become reality, then life might have something bigger in store for you", says Wilhelm Watzek. Originally, he wanted to become a pilot. Then he was told he needed to wear glasses, and his dream of flying came to an end. Instead, a new, very down-to-earth chapter in his life began. It was the start of an exciting and successful business story.

# Automatically according to plan

After two more years, a further step was taken towards automation: little by little, production became increasingly automated, and a production plant for the wall and ceiling ModulePanels was purchased. In 2005, this was followed by the automated milling plant for the Vario-Comp panels for our floor heating for dry construction".

# A mousehole from room to room

In 1979, Wilhelm Watzek laid the foundation stone for Variotherm while working as a representative and later head of sales of a new type of heating system from America. He brought "base board heating systems", the forerunners of today's Variotherm skirting heating system, to Austria. The first advertising slogan for this concept, which at the time was a "do-it-yourself" system, was: "A mousehole from room to room is enough". The first self-assembly skirting heating systems were a revolution on the heating market.





# New ideas, from one person to the next

Right from the start, Variotherm's ideas and products met with an enthusiastic response. However, the first years were difficult, since there were hardly any openings on the market for new developments. "40 years ago, our market essentially consisted of radiators. Floor heating was frowned upon as being unhealthy and raising dust, since at that time, it was still operated at a high temperature. Today, surface heating systems operate with low temperatures. Computers and robots were not yet used in the production process. During my time, business was still conducted between one human being and another", Wilhelm Watzek explains.

## Low temperatures pave the way to success

In 1987, as a member of the Austrian environmental building institute (the Österreichisches Baubiologisches InstitutJ, the founder of Variotherm laid the foundations for sustainability within the company. He developed the first low-temperature system. Pipes were mounted directly on the wall and covered over with temperature-resistant plaster. The first Variotherm wall heating system was born. A heating system that not only heats but which also makes the home an oasis of comfort.

# People and friendships

40 years of Variotherm also stand for decades of well-nurtured friendships, some of which stretch back to the early days of the company. In some cases, the many years of close contact with customers, suppliers and partners led to long-term friendships. On many occasions, the personal communication and feedback from colleagues have inspired us to come up with new ideas and projects.

# The future is cooling

"Cooling? For a long time, that wasn't an issue. Although in theory, it has always been possible with our products," explains Managing Director Alexander Watzek. "However, now that the summers are becoming increasingly hotter, people have been talking more about cooling in recent years. In 2002, we already developed the cooling ceiling, which rounds off our product range".

# Sustainable gratitude

The basic requirement 40 years ago hasn't changed today: to create a healthy room climate for people where they feel comfortable. Alexander Watzek looks back in gratitude over 40 successful years of company history: "Our thanks go to our customers, partners and staff for their untiring work, and for their appreciation of and fun with Variotherm. We are already excited about the adventures that we will share with you in the



The storage stones were the precursors to today's wall heating systems

# The new innovation generation

Every family business comes to a point at which a new generation takes over the reins. At Variotherm, the time came in 1999, when the father transferred the management of the business to his son. "I wanted to continue my father's life's work, but I also had ideas of my own," says Alexander Watzek, who continues to successfully manage the company today. In 2001, the young director already brought the innovative VarioComp, the floor heating for dry construction, onto the market.

future".





Change of generation: the role of Managing Director is passed on to Alexander Watzek by Wilhelm Watzek





The Variotherm family has grown constantly over four decades. Every individual member of the team plays an active and creative role. From one generation to the next, our staff successfully maintain our values and basic principles so that they will continue to apply the future. They are the foundation, the heart and the energy of Variotherm!

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# **OTHERM**

Since 1999, the VARIOTIME customer magazine has been one of our most important communication tools. Loyal readers enjoy the tips from professionals, information about new products, insights into exciting reference projects and the interesting P:URe topics.

life of comfort

Variotherm has been thinking sustainably for 40 years now. Our commitment to a regional approach is a key part of our corporate culture.

Our headquarters, which were built in Leobersdorf in 1992, were and still are our future and the busy heart of our company.

> Foundation, patent for skirting heating systems

22.Nov

1979

European patent awarded for the storage stone

1984

The first system wall heating

1987

**Transfer to Leobersdorf** 

1992

arioclimate pipe

1994

Alexander Watzek takes over as Managing Director Modular wall heating

1999

Modular floor heating system VarioComp in drywall construction

2001

estones

Module ceiling cooling

2002

Production plant for ModulePanels

2003

Production plant for VarioComp – floor heating circuit 1

2005

VarioProFile pipe

2008

Production plant for VarioComp - floor heating circuit 2

2009

Acoustic ceiling

2010

Two new halls

2013

Production plant for VarioComp – floor heating circuit 3

2014

VarioManifold 5.0

2016

Vew company building

2018



Read about 40 years of Variotherm. You'll find all the milestones of our successful company history in our anniversary brochure.



"It was an exciting challenge to find the right heat distribution system for this rural artist's studio and gallery", says Peter Sullivan, our Variotherm partner in Ireland. A real work of art!

# Outstanding art – high-quality solutions

In the words of a well-known artist who recently had his studio renovated and upgraded: "To be able to work creatively, you have to feel comfortable in your environment".

Behind the thick walls of a picturesque 19<sup>th</sup> century Irish manor house, there is an artist's studio. Recently, the 115 m<sup>2</sup> space, which now also houses a work space flooded with light thanks to a large glazed area set into the roof, as well as individual exhibition areas that are used as a gallery, was extensively restored.

One of the biggest challenges of the project was to install the right building technology. The task was to meet the heating requirements of this valuable old building, as well as to create a comfortable working environment for the artist. In addition, the room climate was to be suitable for large gatherings of people – for example for exhibition opening events – and to create the right conditions for the finished works of art, as well as those that were still in progress.

## Ingenious system solutions

Here, after long discussions with the artist and the team of restorers, Variotherm turned out to be the perfect partner. The combination of 80 m<sup>2</sup> of modular wall heating and 40 m<sup>2</sup> of VarioComp modular floor heating system meets all requirements – and both are designed for use in dry construction.

Since the invisible wall heating works with radiant heat, there is now a comfortable room climate in the studio, which is not impaired by forced air or swirling dust. In other words, the ideal conditions have been created for the artist and his work. The wall heating was installed up to a room height of five metres on the interior sides of the outer walls, and on the separating walls of the individual art areas. Even with the integrated modular elements, the works of art can be hung on the walls without any problems arising. A pipe locator indicates where the heating pipes are integrated in the modular panel.

The VarioComp modular floor heating system for dry construction was laid in the entrance area and in the wide central corridor. Their thin construction height of just 20 millimetres and their low own weight and simple assembly all had a very positive impact.

### Sustainable ideas

Entirely in keeping with sensitivity towards the environment, both wall and floor systems are produced from the same environmentally friendly building materials. Another bonus is that with a biomass system fired using wood from local forests, a well-functioning, aesthetic solution was found, and a sustainable energy source was created for the water-bearing surface heating systems.

# **TECHNOLOGY** Modular floor heating 20 mm – VarioComp ModuleWall heating/cooling



# Irish manor house

### Variotherm partner

HWI Sustainable Buildings IE-Blackrock, Co Dublin www.hwi.ie

#### Architect

Mark Roberts Architecture IE-Liverpool L3 6AA www.kkaarchitecture.co.uk

# Installation engineer Frank Fennessy, IE-County Tipperary Variotherm systems 40 m<sup>2</sup> Modular floor heating

80 m² ModuleWall

## References **6**

**vario**project

Irish manor house



Ever thought of spending a night in a hopper? In Harlingen, in the Netherlands, you can try it out. This unique hotel gets extra points for its sustainable building technology concept..

Anyone looking for an unusual holiday experience is in just the right place in the port of Harlingen in the Netherlands. A long time ago, an old lighthouse and a large port loading crane were converted into stylish hotels.

Now, you can also spend the night in a disused sand hopper, and start the day with an impressive view out over the mud flats. The twelve metre-high filler crane was built at the beginning of the 20<sup>th</sup> century and was originally used to load sand, shells, grain, gravel and other bulk goods. This eye-catching structure was converted into a 48 m<sup>2</sup> hotel room, and now has a king-size bed, a seating corner with minibar, rain shower, WC, whirlpool and double wash basin.

## Perfection through comfort

It became clear that the ideal solution was to install an energy-efficient floor heating system for dry construction. This task was smoothly completed by Variotherm partner Technea Duurzaam without a hitch. With its thin system height of just 18 millimetres and low weight of around 25 kg/m<sup>2</sup>, the floor heating is perfectly suited for the conversion of this "building". It emits radiant heat evenly over the entire floor area, thus ensuring that feet stay warm and providing a cosy atmosphere.

In addition, due to the low flow temperatures, hardly any convection is created, and the room remains free of dust circulation. The gypsum fibre board panels, which were tested for environmental sensitivity, were mounted on a wooden floor construction. The 11.6 mm VarioProFile pipe (aluminium multi-layer composite pipe with profiled surface) was evenly laid out onto the pre-milled, 18 mm-thin VarioComp panels. The thermally conductive VarioComp filling compound rounds off this efficient heating system. Since the VarioProFile pipe is laid close to the surface, the floor heating system for dry construction enables very fast reaction times, quickly bringing the floor surface up to the right temperature. The floor heating also creates a comfortable room climate, thanks to the radiant heat. Not only that: it also leads to a reduction in heating costs.

### Sustainable measures

The building technology concept in this unusual hotel also has other outstanding intelligent installations to offer. Other environmental and efficient measures have been taken in the form of the shower water heat recovery and 20 solar panels affixed to the flat roof using a storm-proof mounting system.

# TECHNOLOGY Modular floor heating 20 mm – VarioComp

## COMPONENTS

- 1 VarioComp Panel
- 2 VarioComp filling compound
- **3** Bucket set with watermark
- 4 PE construction foil
- 5 XPS panel, 10 mm
- 6 SILENT underlay panel
- 7 Edge insulation strips, 75 mm



# The hopper in Harlingen

### Client and operator

Bambach Installatie, NL-8861 HD Harlingen www.bambachinstallatie.nl

## Planning

Technea Duurzaam NL-8938 Leeuwarden www.variotherm.nl

#### Installation engineer

Bambach Installatie, NL-8861 HD Harlingen www.bambachinstallatie.nl

Variotherm system

45 m² Modular floor heating

# The VarioProFile pipe 16x2 plus+ Bends more easily, easier to mount, and light as a feather.

The VarioProFile pipe 16x2 plus+, the new aluminium multi-layer composite pipe, is now even easier to bend and faster to mount. It is also very light, with a stable form.

The 5-layer composite pipe exploits the advantages of both aluminium and plastic. The core of the interior aluminium layer has been optimised, and the formula of the plastic granulate in the surrounding sheath has been improved. The usual radii for mounting the screed floor heating and plastered wall heating are now even easier to bend, making them quicker to mount.

The improved aluminium multi-layer composite pipe also offers other advantages as well as the existing quality features:

# + Easier Bending

# 30% less effort needed for bending.

Since the pipe is easier to bend, it is also easier to work with.

# **Faster installation**

# 20% faster work.

The pipes can now be laid more quickly. This reduces labour hours and saves money.

# + Less Weight

# 13% lighter than before (-3 kg per 300 running metres).

During transportation to the building site, weight is an important factor. The lighter construction sustainably saves  $CO_2$  and muscle power.

# The benefits at a glance:

- Flexible, easy to bend, extremely good hydrostatic stabilit
- Profiled surface structure for optimised heat transfer
- First-class plaster adhesion for wall heating systems
- High thermal conductivity
- Fully corrosion-free, resistant to hot water additives
- High pressure and temperature resistance (6 bar, +70 °C)
- 100% oxygen diffusion-tight
- Mirror-smooth inner surface less pressure loss no encrustation



# The VarioProFile pipe 11.6x1.5. 800 metres of enjoyable work.

In future, the VarioProFile pipe 11.6x1.5 will also be available in 800-metre rolls. Of course, we will continue to offer the 100, 300 and 500-metre rolls available to date. The advantage: the pipe, which is now even longer, is ideal for large building sites. This means less offcuts on large building sites.



# Well packaged! Securely protected against sunlight!

The 800-metre roll of the VarioProFile pipe 11.6x1.5 is delivered in protective foil.



# The useful outer bending spring. Perfect bends every time!

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The outer bending spring enables safe, kink-free bending of the VarioProFile pipe 16x2 plus+. The outer bending spring is pushed over the pipe at the start and is pulled through to the end of the pipe. This makes the pipe even easier to bend into the right shape during laying.





# No more getting tangled up! The new pipe uncoiler.

The new pipe uncoiler has been enlarged and can now be used with the 100, 300, 500 and 800-metre VarioProFile pipe. Thanks to the ball bearing, the pipe is even easier to unroll.

# varioquestions

# ) questions customers often ask about comfort



# Why is wall heating so comfortable?

The comfortable environment created by wall heating systems is produced by radiant heat. It warms the body like the rays of the sun. The heat is not transmitted via the air, but by infra-red waves. When these waves hit furnishings, the floor or people, they are converted into warmth. A general feeling of comfort spreads around the room.



"Wall heating systems offer many great benefits to building owners, architects and professional installers. They are invisible in the room. The wall is not covered by radiators or an unattractive air conditioning system. Also, they are completely silent, both by day and during the night. No noise. No forced air. Outstanding comfort. Unlimited development and design options. Simply a perfect complete system that never fails to please!" Andreas Karner, KARNER Haustechnik GmbH (AT)



*Why is ceiling cooling more comfortable than an air conditioning system? "Surface cooling systems are strongly influenced by climatic conditions and the system design, but they offer considerable advantages over standard air conditioning systems. Ceiling cooling is the perfect system for covering sensitive cooling loads and achieving an evenly spread* 

standard air conditioning systems. Ceiling cooling is the perfect system for covering sensitive cooling loads and achieving an evenly spread, draught-free sense of comfort in the room. In combination with other systems, such as a well-designed ventilation system, surface cooling systems offer a very high degree of flexibility and individuality. With a ceiling cooling system, the cost of ventilation pipes and other room climate installations can be significantly reduced. High energy savings result from operation with relatively high water temperatures of 16-20 °C. All in all, this can lead to considerable capital and operating cost savings. When it comes to visual appearance, there are no visible elements such as grids, inspection openings or conduits, which is perfect for interior designers. This makes surface cooling systems in ceilings and walls the future of climate design for new buildings or refurbished residential and commercial buildings."

# Lefteris Fotopoulos, CALDA Energy (GR)

"The Variotherm acoustic ceiling not only heats and cools as required; it also dampens the surrounding noise. The perforated pattern and the acoustic fleece on the rear side of the ModulePanels absorb sound into the hollow chamber behind. This prevents the reverberation from interfering when people talk to each other." **Bozo Miskic, Trockenbau Bozo MISKIC GmbH (AT)** 

In large rooms with little furniture, the reverberation can be heard for a long time. The reason is that the noise is not absorbed and is thrown back and forth between the walls like ping-pong. This is where acoustic ceilings help. The larger the acoustic surface, the lower the reverberation time, which makes the room and working environment all the more pleasant.

How does an acoustic ceiling work, and why?





# Can I also install floor heating at a later stage?

In nearly all building situations, it is possible to install a modular floor heating system VarioComp at a later stage. With its total construction height of just 20 mm, it is perfect for renovation purposes. In old buildings or in ceilings with wooden beams, the system weight also plays a role. The Variotherm floor heating for dry construction weighs in at just 24.5 kg per square metre.

"Yes! With the right system, an old building or a listed building can also be retrofitted with a floor heating system. Personally, I recommend the super-flexible VarioComp. It is quick to lay in dry construction and can be used almost anywhere with its construction height of just 20 mm. **Cyril Lenz, H. Lenz AG (CH)** 





# Which energy source do I need to be able to cool?

"With a cold water unit, the cooling circuit is completely closed. This makes it possible to install the system even without a refrigeration engineer. The heating installer simply connects the device and can put it into operation. The devices are almost entirely maintenance-free. After 5 years, a refrigeration engineer should check the system according to the manufacturer's recommendations." Lukas Junker, Wärmetechnik Junker aus Laufach (DE)



In order to use wall and ceiling surfaces for heating and cooling, you need the right energy producer. Here, a heat pump must be fitted with a cooling module. Gas or pellet heating systems can be retrofitted with a cold water unit. Then, you can simply switch between cooling or heating at the click of a switch.





# Invisible ModuleCeilings

Near Amsterdam, there is an impressive villa that is perfectly integrated into the surrounding landscape. Not only is the elegant house a real eye catcher; it also boasts a sophisticated heating and cooling system solution.

The remarkable building not far from the Dutch capital was designed with a love for detail and fitted to a luxury standard. The large glazed areas also offer the occupants an incredible view and a large amount of natural light. The only disadvantage: extremely high room temperatures during the summer.

# Perfect living comfort

However, for the building owner, installing an air conditioning system was not an option. On the one hand, the owner wanted to avoid cold forced air, while on the other, they didn't want to spoil the aesthetic appearance of the rooms with a large appliance. That's why the discreetly installed Variotherm ModuleCeilings turned out to be the perfect alternative option. They are used to both heat and cool the stylish country house. Using radiant exchange, they provide comfortable temperatures all year round, and save 30 percent on energy costs.

## Energy-efficient installation

To be able to benefit from all the advantages of ceiling heating and cooling, 72 m<sup>2</sup> of the 18 mm-thick gypsum fibre board panel with integrated aluminium multi-layer composite pipe were cleanly and quickly laid using a dry construction method. The work was completed by Variotherm partner Technea Duurzaam. During the summer, cold water circulates in these pipes at a temperature of 16 to 20 °C, which means that ceilings cool down gently and the heat emitted is literally "swallowed up" by furniture, floors and walls. A comfortably cool room climate is created.

During the winter months, a healthy radiant heat spreads out, with the water flowing through the pipes at a temperature of 26 to 38 °C, and the heat that is emitted – from above to below – can impact the surface at right-angles. Furniture and other fixed elements in the room absorb the rays and

emit the energy back out into the room as heat. The occupants feel warm "from the inside". Added comfort: low air circulation to prevent dust swirling and silent operation, making it possible to run the system at night.

## Ecological and smart

An air-water heat pump functions as an energy source, entirely in the spirit of sustainability. Its integrated compressor raises or lowers the energy to the required temperature and sends it directly to the surface heating or cooling via the heat pump circuit. The sustainability bonus is that a solar energy system heats up the buffer storage facility. Furthermore, a building management system has been developed and installed that enables the systems to communicate with each other. In this way, the indoor temperatures are kept constantly at the desired level.

**In summary:** the temperatures in the picturesque villa are kept at a comfortable level, even on the hottest summer days or during a severe winter.





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# Loft house meets 20 mm

According to Gerold Peham, "The VarioComp perfectly fits in with the Nomad Lodge's modular structure". "The connections for this dry heating system are easy to detach and reconnect. Also, the construction time is reduced, since we don't need to take drying times into account as is the case with standard screeds."

Make sure you visit the website: www.loft-factory.at

In Seekirchen am Wallersee, a loft house has been built using modular construction and fitted with dry construction floor heating. This surface heating has a low construction height of just 20 mm, and decreases the construction time needed thanks to its dry construction. With its low flow temperatures, it heats in an energy-efficient, sustainable way.



The 125 m<sup>2</sup> "Nomad Lodge" in Seekirchen am Wallersee (Salzburg), with its purist design, offers flexible and sustainable living accommodation. The duplex house is connected via an access element, while a covered area protects the entrance against rain and snow. A larch terrace is a good space for relaxing in the open air.

# Flexible living

Thanks to its modular construction, the individual parts made of solid wood and other recyclable materials could quickly be put together to create a loft house with a gabled roof, and securely anchored into the ground. If necessary, the house can simply be dismantled and rebuilt elsewhere.

The advantages of this method of construction are easy to see: the owner of the building doesn't have to stay in one place, and protects the environment. "Construction workers no longer need to travel to the construction site for months on end, but produce the modules in a factory. The kilometres saved on the road make a significant contribution towards reducing CO<sub>2</sub>," explains the architect, Gerold Peham, who is the founder and Managing Director of "Loft-Factory". He

has been successfully planning temporary architecture projects for nearly 20 years.

#### Sustainable concept

The modular floor heating system VarioComp rounds off the clever building technology concept. With a construction height of just 20 mm and a low weight of around 25 kg/m<sup>2</sup>, the modern heating system operates at low flow temperatures of between 26 and 38 °C, and reacts very quickly. With its radiant heat, it provides a comfortable room climate and was installed into each individual module in the production hall by the installers at Pöllmann & Partner. Twelve heating circuits were installed on the ground floor overall. Only the inspection openings need to be connected to each other on the building site.

The light-filled loft house was adequately insulated, using natural insulating materials such as cork and cellulose mineral wool. On particularly hot days, the Nomad Lodge can also be cooled via the water-bearing floor heating. An air heat pump combined with a photovoltaic system and surface heating rounds off the environmentally friendly building. In the future, other Nomad Lodges will also be fitted with the VarioComp.

# TECHNOLOGY

# Modular floor heating 20 mm – VarioComp

#### **COMPONENTS**

- 1 VarioComp Panel
- 2 VarioComp filling compound
- 3 Bucket set with watermark
- 4 PE construction foil
- 5 XPS panel, 10 mm
- 6 SILENT underlay panel
- 7 Edge insulation strips, 75 mm



# Loft house on the Wallersee lake

### Architect

Loft Factory by Gerold Peham A-4813 Altmünster/Traunsee www.loft-factory.at

#### timber construction

Appesbacher Zimmerei. Holzbau. GmbH A-5342 Abersee www.holzbauappesbacher.at

Installation engineer Pöllman & Partner A-4893 Zell am Moos www.poellmann-partner.at

Variotherm system 109 m<sup>2</sup> Modular floor heating

# variopartners

# Growth in exports that

A 10-year upward trend. Variotherm's development into an international company is making good progress. Currently, nearly 60% of turnover is generated on the export markets. The 10 largest Variotherm markets are Germany, the Netherlands, Britain, Italy, Switzerland, Ireland, Belgium, Slovakia, Luxembourg, New Zealand and Hungary. The examples below represent just some of our many great sales partners in a number of different countries. The "Made in Austria" surface heating and cooling systems are known in many parts of the world. However, to a far greater extent, exports are intensifying to our European neighbours. The key factor here is that transport routes should be kept as short as possible in order to protect the environment. Even if export figures show that the world has a burning interest in our cool products, we prefer to proceed carefully when it comes to growth. While Variotherm is keen to achieve export success, we are not prepared to do so at the expense of sustainability.

# Belgium 🚺

The Belgian company Climatrix has been developing special solutions for heating and cooling via the walls and ceilings for many years now. After several attempts with other products, Climatrix finally found its way to Variotherm. Now, the business is doing well, and can look forward to a highly promising future. This is due above all to the commitment of the innovative company director, Kim Vaessen, and her creative team. Currently, our Vario-Manifold 5.0 is hugely popular on the Belgian market.







Peter Sullivan – the director of our Irish importer HWI Sustainable Buildings Ltd – can rightly be called a Variotherm old hand. For decades now, he has represented our philosophy and product solutions with his unique sense of enthusiasm. The Irish market is by no means an easy one. The structures in the building technology sector and in the building sector in general, are extremely conservative. With his many years of experience and perfectly managed projects, Peter Sullivan also knows how to make the best use of the potential on the Emerald Isle, however. We are particularly proud of our success in Ireland. You'll find many examples of this in our reference projects and projects of the month.



Masculinus d.o.o. is a Croatian company with five employees, which specialises in planning and selling Variotherm surface heating and surface cooling systems. During its three-year cooperation with Variotherm, a partnership has been developed based on mutual trust and respect.

The company's core business area is luxury apartments. In this field, a combination of the three Variotherm systems for floors, walls and ceilings is often advisable. In their sales and showroom in Zagreb, the following Variotherm systems are on display and can be seen and experienced: the modular floor heating system VarioComp for dry construction, ceiling cooling and heating with smooth and sound-absorbing surfaces, and modular wall heating for heating and cooling.





# nks to strong partners

# Hungary 🛼

We are pursuing a particular kind of export policy for our neighbour Hungary. In all other countries, Variotherm works – at least in most cases – with exclusive importers. However, in terms of sales and logistics, the Hungarian market is covered from our headquarters in Austria. Since the two countries are so close, this makes logistical sense.

There are some great installation companies in Hungary that work with Variotherm products, however. Companies such as DRGB, M.H-M. Kft, Sipos Kft, WEST-MONT and Hiro-Geotherm realise unusual projects in Hungary with Variotherm surface heating and cooling systems.





WEST-MONT Kft.





# Leberbauer celebrates 60 years in Austria 🌉

When it comes to sanitation, heating and solar energy systems, Leopold Leberbauer is a true professional. As a tested heat pump installer, a professional partner for old building renovation and a certified installer of environmentally friendly heat and solar heat systems, he has successfully worked with Variotherm as a partner for over thirty years.

"Right from the very start, our company bought products from Variotherm. I think we made our first purchase around 35 years ago. Since then, we have felt a close connection with the Variotherm philosophy. As well as their great products, we also value their ongoing further development and the friendliness, reliability and professionalism that characterises their collaborative relationship with us," he explains.

The company was founded in 1960 as a one-man business by Leopold Josef Leberbauer. The hard-working founder travelled by motorbike to his customers, transporting materials and tools in a side-car. The company grew steadily over the years. Today, Leberbauer is a highly respective regional supplier of sanitation, heating, ventilation and air conditioning systems in the Marchfeld area and in parts of Vienna. The business is now being run by the second generation of directors, Leopold Christian and his wife Marion. However, his son Leopold Friedrich has also worked enthusiastically for the company since the young age of 12.

In a few years' time, the Leberbauer family business will be passed on to the third generation. Here, too, the company plans and wishes to continue its collaboration with Variotherm. As in previous years, the company wants to continue its ongoing development, and to influence how the market develops by using innovative products.









# quality of life in a conservatory

Relaxation and restoration: in the south of Lower Austria, a family home has been extended by an 18 m<sup>2</sup> conservatory filled with bright light, with a wonderful view onto the "Hohe Wand" hill in Lower Austria. However, the family's enjoyment of their new space didn't last long: with the two radiators that had been recommended, they were unable to heat their new living space to a comfortable temperature during the winter months. Not only that: condensate also formed on the glass panels.

## The ideal combination

The home-owners therefore decided to dismantle the radiators and replace them with a combination of 17 m<sup>2</sup> of modular floor heating system VarioComp and 5.7 running metres of floor trench heating system.

Within the space of just a week, the family was delighted with the result. The underfloor convector bearing hot water was installed in the floor along the length of the large windows. The heating elements installed in the floor trench heating system build up a warm air curtain along the cold glass surfaces. This heats the wall and emits the warmth into the room in the form of radiant heat. Condensate has no further chance of developing.

Together with the energy-efficient dry construction floor heating, the underfloor convector ensures a comfortable room climate and low air circulation. The modular floor heating system VarioComp also impresses with its thin construction height of just 20 mm and low weight of around 25 kg/m<sup>2</sup>. Another bonus: thanks to the discreet trench heating system, which is installed flush with the upper edge of the floor covering, there is more space in the conservatory for a cosy seating area and indoor plants. To protect the heating elements, weightbearing grilles in matt aluminium were chosen, creating a contrast with the dark floor covering and making the narrow space look larger.

Since the radiators have remained in place in the other rooms, the floor heating was connected as a low-temperature system to the high-temperature heating system via a Variotherm pump microstation.

## A successful result

"After two floods, and after dismantling the conservatory twice right down to the foundation slabs, I swore to my wife never to convert a part of the house again," the building owner explains. "Luckily, I was able to persuade her to agree to this heating project. With the Variotherm products, we've found the perfect alternative solution to radiators. For the first time, we can now heat the conservatory properly. We spend a lot of time here in the winter, for reading, relaxation, yoga or working. Even our cats love the cosy room and enjoy the warmth from the floor heating."

# TECHNOLOGY

# Trench heating system THS 1

# Modular floor heating 20 mm – VarioComp

### **TRENCH HEATING**

- 1 Trench heater frame
- 2 Heating element
- 3 Air baffle plate
- 4 Grid
- 5 Adjustment screws
- 6 Copper pipe/alternative stainless steel pipe
- 7 Side strips, green
- 8 Attachment bracket



# COMPONENTS

- 1 VarioComp Panel
- 2 VarioComp filling compound
- 3 Bucket set with watermark
- 4 PE construction foil
- 5 XPS panel, 10 mm
- 6 SILENT underlay panel
- 7 Edge insulation strips, 75 mm



# Family home in Grünbach

# **Power generation:** pellet heating

Variotherm systems 15 m<sup>2</sup> Modular floor heating 5,7 lfm Trench heating system THS 1



# Green Styria: a pretty impressive region



Variotherm has always known how to appreciate the beauty of Austria in the past. So it was no coincidence that our two-day company outing last summer took us to Palfau in the beautiful federal state of Styria. Often, the nicest experiences are the ones you aren't expecting. At any rate, our two days in the countryside were filled with wonderful memories.



On the first day, we explored the "Erzberg" ore mountain. The guided tour around the show mine with a walk around the interior of the mountain ended with a spectacular "hauly drive" right through the open-cast mine. A refreshing dip in the Leopoldsteinersee lake provided a welcome chance to cool off on the hot summer afternoon. We wound down at the end of the day in the rafting camp close by, with a campfire, beer and a lot of fun. Life can't get much better than that.

Pure adventure and fun was also on the menu for the second day, with rafting and a jump from the rocks into the ice-cold Salza river. With archery on a 3D course. Hanging about in the climbing park. Or simply relaxing in the camp. It's amazing what you can experience in just one morning! We then took the bus back to Leobersdorf. However, we carried the memories of this wonderful place for a long time afterwards.





# Team Office. Finance.



The dynamic team players in the Office+Finance department contribute to the positive spirit at the company. They are the interface between the customer, the sales representatives and the Logistics department. However, they also support the Sales department and make sure that all the goods are delivered correctly and on schedule.

# **Our Finance Minister!**

Eva DEMUTH is a true professional. Her expert knowledge on sustainability is well known and in demand far beyond the company premises. However, she is not only respected as the committed head of the P:URe team at Variotherm. Her area of responsibility stretches from accounting to personnel issues through to holistic organisation and internal communication. She has been Head of Office Finance since 2012. Since 2016, she has also been an authorised signatory and a core member of the Variotherm management team.

# Our creative input!

Doris BERNSTEINER has the rare gift of being able to juggle 100 different things at once. A mistress of multi-tasking, she is mainly responsible for supporting our customers in third countries. At the same time, however, she also gives expert answers to customer enquiries from within Austria. She takes care of complex travel plans for sales representatives and ensures the smooth running of seminars with ease. Incidentally, anyone who notices the ever-changing, beautiful decorations at Variotherm should know that here, too, Doris has been at work.

# A talent for winning orders joins forces with experience!

Uschi UNGER, with her warm, friendly nature, is respected and liked by all our partners in Germany, Switzerland and Italy. Due to the extensive rebate systems and transport management, orders from neighbouring countries are complex and tricky to organise. With her high level of experience, knowledge and skill, Uschi does a great job of handling all these logistical and accounting challenges.

# Our combination joker!

Bianca LEITNER is a double winner for us. She spends half of her 30-hour week processing contracts for Austria. During the other half, she takes care of booking daily transactions for the Accounting department. In both areas, our cheerful colleague is well known for her accuracy and ability to concentrate.

# The added bonus from Carinthia!

Nicole METZ is living proof that you can bring a breath of fresh air to a company as a career changer. She not only supports the Office+Finance team, but also looks after the mental and physical wellbeing of the team with her warmth and caring support. She is also a great help when it comes to organising events, with her charm, vitality and high level of energy.

On 1 October, we will welcome a new member of staff! We look forward to our new colleague, who will look after our customers in Austria

# A duo who gets it all done

Christian Trobits and Bernd Schildorfer are men of action. Both are true believers in being able to work innovatively and creatively. For Christian Trobits, this was a key factor in deciding to take on the management of the "Research. Technology. Development" department at Variotherm. As a building technology engineer, he brings a broad spectrum of experience and knowledge to his new role. In worked for a major installation company and in HVAC (heating, ventilation, air conditioning and sani-

Bernd Schildorfer already has 30 years of professional experience in the field of "Technical Purcha-Austria's largest technical trading company for the industrial sector. He joined Variotherm in July expand our valued relationship with our suppliers.



# Putting voluntary donations to good use

news

Seven years ago, an important and sustainable project, the "salary and wage round-off donation", was initiated at Variotherm. Every month, staff round off the net amount of their salary. Variotherm then doubles the amount of money collected. The money is used to support children in need who live in the Baden and Wiener Neustadt regions. The projects supported are chosen through a democratic process after detailed information is given to all staff.

In this way, we have already been able to fund 50 projects, some of them fully. During the last round of donations, for example, a special needs bed for a four-year-old girl costing 6,000 euros was purchased almost entirely from the donations. The girl suffers from mucopolysaccharidosis (or MPS), a congenital, incurable and very rare metabolic disorder. Since she needs particular care, a special bed is also necessary. Without the adjustable care bed, with a kind of protective structure made of wood, the girl is unable to sleep safely and alone. During the day, the bed is used as a kind of "play area", where the girl can sit securely. It is nothing less than her own small world, where she is safe and is well taken care of.



New!Paper replaces PVC WOGRANDL Mattersburg • Publi

# Sustainability in our packaging design

Delivery notes and invoice pockets are considered standard small office items, which most people don't usually think twice about. However, at Variotherm alone, around 10,000 of them are used every year. This is reason enough to take a critical look and think more sustainably. From now on, our delivery note and invoice pockets will be made of paper instead of PVC, and can be disposed of with the rest of the waste paper.

For our packaging, we have also cut down on threaded rods for heating and cooling manifolds. Previously, these were wrapped in round cardboard sleeves in packages of 50 each, which were also closed with staples. This meant that sorting the different types of waste occasionally became a time-consuming activity. Now, the threaded rods are placed on a euro pallet in lots of 500 items each and packaged with outer cardboard packaging. This saves a considerable amount of time, packaging material and disposal time.

**As regards threaded rods:** thanks to a new cutting device and an improvement to processes, we have succeeded in bringing down the cut-off from the threaded rods to zero.

# Improving visibility with old glasses

Many of us have old pairs of glasses lying around at home that we no longer wear, and that we don't know what to do with. With this in mind, the Variotherm team is now participating in the "Glasses without borders" collecting campaign. The glasses are cleaned and measured by 30 voluntary staff at the "blind apostalate" in Vienna and sent to Central Africa. In these countries,



glasses often cost up to a year's wage, and are therefore almost impossible to buy for many people. For more information on this visible commitment to helping others, go to www.blindenapostolat-wien.at

# P:URe team – heading for the sun

The only thing that is constant in life is change. The Variotherm team shifts and changes over the course of the years, whether through time out from work, moving house or switching jobs or duties. That's why a new P:URe team was created at the start of the year.

P:URe stands for "Potential and Respect". "URe" also means "original, true" ("ur" in German). We show respect towards the environment and people. The task of the P:URe team is to bring sustainable topics and ideas from the individual departments to the P:URe team, to collect them and to incorporate them into the company as a whole. Together, sustainable projects are brought to life and realised. Another

purpose of the team is to organise joint events, which are a great source of fun.

# Efficiency thanks to longer adhesive tape

People who don't stick to the old ways of doing things get more out of life. That's why the new adhesive tape from Variotherm is now double in length, with 132 running metres instead of just 65.

By comparison: In 2019, we ourselves used no fewer than 1,080 rolls of adhesive tape. Now, with the same amount of tape used per year, we only need 525 rolls. And that's not all: The roll doesn't need changing so often. This saves time. At the same time,

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555 fewer cardboard sleeves are used. That saves on waste. There's more tape on each roll. That saves resources. The new adhesive tape is therefore even less expensive than before!

