



Thermo-Floor

underfloor heating & cooling since 1986

Comfort in the care sector
Your comfort, our mission!

Thermo-Floor Ltd. is a **WPM** company

Thermo-Floor works in the care sector

So many sectors, so many wishes. WTH, as a supplier of heating and cooling systems knows this only too well. Our years of experience have allowed us to be very successful in a wide range of industries including the care sector.



The name 'care sector' gives away its character: it's all about comfort. This applies in the area of service provision but also the design and construction of the building itself. The care unit must 'breathe' comfort. The residents are exceptionally sensitive to their personal comfort. That is why reducing the temperature in the summer requires as much attention as warmth in the winter. The centre itself may also benefit financially from a significant energy saving. In this brochure several recent practical examples from the care sector will be reviewed. You will see that Thermo-Floor really feels at home here.

Thermo-Floor answers every question for the care sector

Why is Thermo-Floor regularly called upon to install an underfloor heating and cooling system in a care home? Which system efficient for this particular care home and why? What do the mechanical consultants, engineers and architects think of WTH/Thermo-Floor's system design? The answers to these questions form the thread running through this brochure. These are bold statements that show that Thermo-Floor systems really work in the care sector.



Questions?

Thermo-Floor has realised a large number of projects in the care sector. This brochure describes just a handful of practical examples. If you want more reference projects or information about our systems then contact us. If you want to know more about a specific subject, please take a look at www.wth.nl. Here, you will find detailed information about our systems.





Total care from the bottom up

“Thermo-Floor is also careful with its own energy usage.”



Avoord Care and Resident Home takes care of the elderly in Etten-Leur, Rijsbergen and Zundert. The facilities include personal care, therapy, nursing, household help and a sense of well-being. In 2002 Avoord started building unique care homes that include individual apartments suitable for the elderly. Facilities also includes cafés, shops, libraries etc. In the last few years, other organisations have also made great use of this care concept.

“Total care.” This is how Nico Springintveld, head of technical services at Avoord, describes the service provided by the complex. “Everything is laid on to provide optimal levels of comfort. We also look into caring for the environment. The consequences of CO2-emissions are becoming more tangible, not only on the environment but also economically. So Avoord deals with energy carefully. That is why we contacted Thermo-Floor for our heating installation. The number 1 in sustainable heating and cooling.”

Alternative heating methods

Energy costs have increased in the past few years by as much as 40%. Alternative forms of climate control will be available. Thermo-Floor is often asked: how do we make the residents feel as comfortable as possible with the minimum consumption of energy? For Avoord, the answer lay in a gas-free, sustainable energy system.

Customised for each resident

Carla Koppers, facilities manager from Avoord: “The heart of the system lies in the basement, where the hot and cold source is available from the ground. The floor is then warmed or cooled via heat pump technology. This is an ideal solution for the care sector. You can, for example, determine the temperature separately in each area. It is extremely important because our target group is very sensitive to the climate. They are particularly fussy.”

Always keeping an eye on improvements

Mrs Van de Put, one of Avoord's residents: “The internal climate is lovely and stable and you don't feel any draughts. You set the desired temperature and then the system does the work throughout the summer and winter. One advantage is that: we don't have any radiators so we are free to arrange our rooms to our own individual taste.”

“Our target group is very sensitive to climate. This requires optimum comfort.”

Care home is absolutely care-free

On the border of Nijmegen and Berg en Dal lays care home Vijverhof, peacefully on the edge of a vast wooded area. Residents go there for both permanent and temporary care and psycho-geriatric nursing. All facilities, such as the physiotherapy practice, can also be used by the independent residents of the 140 sheltered accommodation units.

At Vijverhof the fact that the population is aging is very visible. In 2005 it outgrew its premises and had to expand. Halfway through the year the first building work took place; six months later the Vijverhof had new wings and the new residents had already moved into their new accommodation. Mechanical contractor, Jan-Willem van Bokhoven from the Van Delft Group explained their choice of the WTH/Thermo-Floor heating and cooling system...

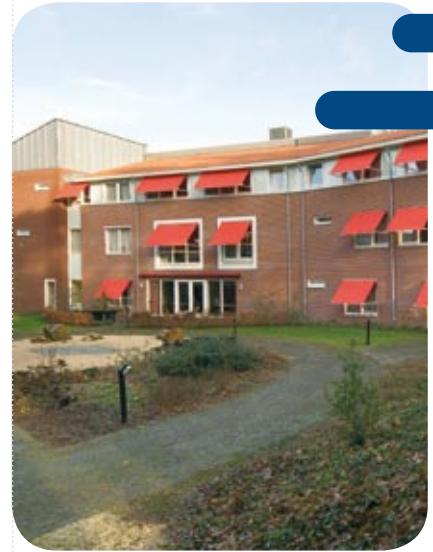
Taking care of the residents and the environment

"The consultants Dubotechniek stated that a delivery system with hot and cold storage in the ground was most suitable for the Vijverhof. The heating and cooling works via a network of pipes within the floor screed. This is a modern system that takes care of both the residents and the environment. Also, you can recover the costs rapidly. Again, that is ideal for a care home as budgets are getting tighter. You are actually buying a heating system and then getting free cooling as well."

Comfortable in the winter and summer

"The cooling makes the system absolutely care-free. In the summer heat waves can be fatal for the elderly. This system helps to prevent this from happening. But also the way in which the systems solves a well-known problem in care homes, namely cold feet for the residents. Under-floor heating warms up the floor evenly. Also, the residents no longer have problems with radiators on which they could injure themselves. There is no risk of burning as the system is hidden. This improves hygiene as there are no dust pockets which can be difficult to clean. In this way the Vijverhof can really contribute to a healthy living environment for its residents."

"No radiators mean no dust pockets and no risk of burning. You are also eliminating a risk of injury so the residents cannot injure themselves on radiators."



***"You buy a heating system that cools as well?
A real money-saver!"***



Care is all about perception



“Radiant heat is much healthier than convected heat from a radiator or forced air system.”



Maasduinen Staete is a service complex from care association Noord-Limburg. It provides psycho-geriatric nursing care under the motto Continue your latter years in safety and privacy. This means that the residents, in their own apartments, have luxurious facilities at hand; such as a recreation hall, restaurant, café with shops and a quiet-room.

The complex incorporates 44 one-room apartments, 4 group-residences and 50 sheltered accommodation units. Architect Frans van der Werf indicated that the complex was designed according to a very well thought-out concept. Frans van der Werf explains the chosen architecture.

Design and perception go hand in hand

“Nieuw Bergen was built with open spaces in mind and an organic feel to the architecture. The perception of the residents was foremost in the criteria for the design. For example, traditionally straight corridors were taken out of the equation in favour of curved passageways; a walk through the property becomes a more interesting and relaxing experience and enhances the ambiance of the building. The use of materials such as natural paint, limestone and wooden window frames contributes to creating a vital and healthy radiance from the residential environment.”

A direct link between floor temperature and people

“The under-floor heating from WTH provides radiant heat that compliments this organic architecture. This is a much healthier form of heating than traditional radiators or air forced systems which can cause draughts and dust. Radiant heat provides a direct link between the heated floor and the comfort of the residence. It also saves energy: the under-floor can be set two degrees less than a conventional system to provide the same level of comfort. Thus having a financial beneficial and helping to improve the environment – this also plays a role in the organic concept.”

A constant factor

If Frans van der Werf is being critical he can see one limitation with the chosen system: “Under-floor heating is a bit slower than a radiator system, therefore at initial start up takes longer before it reaches an optimum level of heat. But for a care home that is not a problem because it will always have a constant temperature. We also advise not to alter the temperature throughout the day or night. The constant temperature makes under-floor heating an exceptionally energy-efficient method of heating.”

“Under-floor heating needs two degrees less than a conventional system to provide the same level of comfort.”

Care homes energetic appearance

A few years ago the housing association CWG prepared to build a large care complex, covering 6000m². The atrium building encompasses 51 apartments for those aged over 55.

The housing association CWG chose a sustainable and comfortable energy system. "If anywhere needs a pleasant and comfortable internal climate, it is housing, care and nursing centres", according to Kees-Jan van Bekkum from the Dubotechniek consultancy. This agency took on the whole project, from consultation to design and build.

Comfortable cooling and heating

"Heating individual rooms is a relatively easy problem to solve. Specific cooling per room during the hot, summer days is, challenging. Luckily we have a comfortable and efficient solution for this: the sustainable energy system from WTH/Thermo-Floor. This comprises a ground source system in combination with heat pumps and a low temperature system. This can be used to heat and cool the building. This system also uses less energy than a traditional system."

Radiant heat instead of air circulation

"The biggest advantage is that the residents are free from restrictive radiators. With a radiator system 70% of the heating is through convection and only 30% through radiant heat. With under-floor heating this is the reverse and conducive to a healthier climate. The cooling also offers better comfort than air conditioning, for example. The climate can be compared with a traditional church, where the building mass radiates a cooling effect. With cooling there is little air circulation, this makes it ideal for care units. A few years ago we measured the temperature in the summer. Outside it was about 30 degrees, inside it was just 21. The reactions from the residents spoke volumes: they preferred sitting inside than outside."



***"In the summer
the residents prefer
to sit inside,
rather than out."***



"For us, WTH/Thermo-Floor has been the supplier for years in the heating and cooling sector. WTH/Thermo-Floor has short lines of communication and has been proving this for years. At an organisational level and at product level. A supplier that delivers quality on every front."





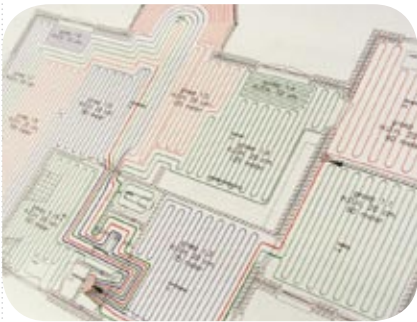
Your comfort, our mission!

Thermo-Floor is the leading supplier of under-floor and wall systems for heating and cooling. For more than 30 years Thermo-Floor has been successfully developing, producing and selling quality systems that contribute to low energy usage and optimum comfort. In both the commercial as well as the residential sector.



Everything "under one roof"

Benefit from the market leader in under-floor heating and cooling. With Thermo-Floor you have the whole process in one. Design, calculations, engineering, project management and construction; Thermo-Floor can manage the whole underfloor heating and cooling project.



Knowledge centre for heating and cooling

Knowledge is essential for Thermo-Floor in order to provide an optimum service for you. Our engineers work on the latest developments on a daily basis. All our employees will be delighted to share their comprehensive knowledge and experience with you. For example, at our information days where advisors, architects and installers can get to know our innovations and practical experience.

From the start of the project to using the system: your comfort, our mission!



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