

**Viega references**

**TURNING SPACES  
INTO LIVING ROOMS.**

**viega**







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**Viega.**

# INSTALLING LIFELINES FOR THE BUILDINGS OF TOMORROW

As innovation drivers in the SHAC and plumbing industry, we see it as our duty to improve people's lives. We do this by thinking holistically about solutions, not just individual products, and taking responsibility for the challenges we will all face in the future. And what's more, we do it as a family business with a history spanning more than 120 years.

Over that time, our products have found their way to every corner of the world, where they provide proof of our commitment to preserving and improving drinking water hygiene, energy efficiency, comfort and safety in buildings. We hold ourselves accountable to the strictest of sustainability standards and use pioneering methods in all we do. And with our intelligent systems we install the lifelines that turn rooms into living rooms.

It is always a wonderful feeling for us to be a part of something so great. And it is what drives us to carry on, to come up with new innovations and to keep on making our products even better. Whether it's for a leisure or an educational facility, an office complex or an industrial building: Our systems can be scaled up to any size and we can always offer the right solution for every application – even in the most extreme and challenging of circumstances. Because we are ...

**Viega. Connected in quality.**

For more information about our reference projects, please visit:



[viega.com/References](https://viega.com/References)





## European Patent Office, Rijswijk

# SAFETY INSTALLED AT A PACE NO-ONE ELSE COMES CLOSE TO.

Viega piping systems for the European Patent Office – transparent and just a classic example of innovation. This is a perfect description of the new European Patent Office premises in Rijswijk, the Netherlands. A look behind the building facade reveals a whole host of innovative ideas – a world created by engineers and manufacturers of well-designed, long-lasting system technology. The various Viega piping systems installed are typical examples of these new ideas.

**The double-walled glass facade not only protects against rain and wind, it also creates an indoor garden that provides a means of natural ventilation.**



### Avoiding downtime costs

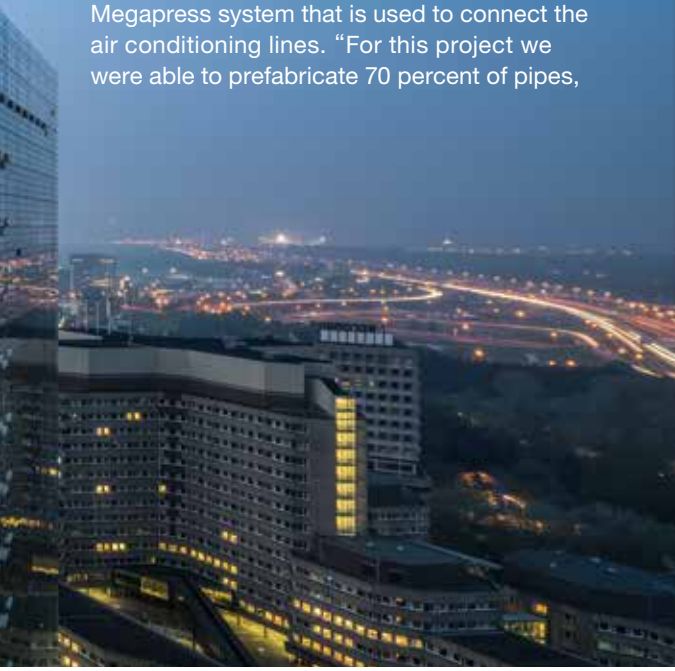
We spoke to Martijn de Roos, Construction Manager at Croonwolter&dros and responsible for all aspects of project implementation from a mechanical engineering and technical perspective. “When it comes to a building of this size, we are not dealing with any old ordinary systems. Ultimately, anyone can build them. But the much more important thing is to avoid downtime costs. And we can only manage that if we plan everything down to the very last detail: Choosing systems, coordinating work, incorporating new technology and – where appropriate – developing new working practices.”

This new technology comes up when discussing the air conditioning system: “This is another really large-scale system. The supply line is over 400 metres long on each floor. And that’s just for the heating, ventilation and air conditioning. The air conditioning lines in the basement and in the shafts supply the main part of the system with water.” This new technology consists of a Megapress system that is used to connect the air conditioning lines. “For this project we were able to prefabricate 70 percent of pipes,

which we normally manufacture on site, in Amersfoort.” Martijn de Roos goes on: “The main thing about the Megapress system is that it saves us time and materials when it comes to insulation. When we use grooved couplings, we usually have to spend a lot of extra time insulating them, which also requires a lot of extra materials. With Megapress there is no need for any of that. And given the vast distances covered by the lines, this saves us lots of time and makes the whole process much better.”

### An installation with zero guesswork

So the benefits were clear, but some conditions still had to be met. Martijn de Roos: “We are using special (deionised) water for the air conditioning systems in this project. Our client expects the building and its components to be of the highest quality. So we want to be certain that the manufacturers we work with are able to meet these standards. And that was no problem at all for Viega.”



© Photo: Ossip van Duivenbode.  
Commissioned by European Patent Office



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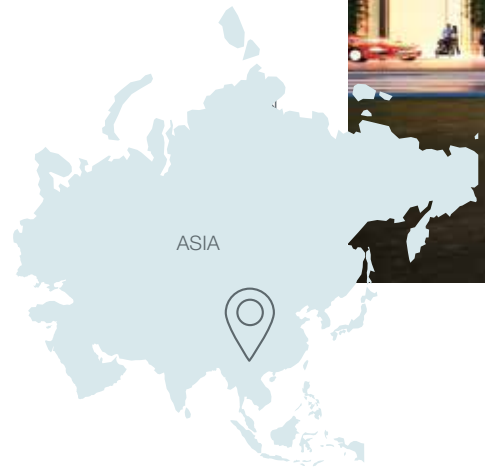
© Photo: Ossip van Duivenbode.  
Commissioned by European Patent Office



## Pavilion Damansara Heights, Kuala Lumpur

# WHEN EXCLUSIVITY IS DEMANDED, ONLY THE HIGHEST QUALITY WILL DO.

The Southeast Asian metropolis of Kuala Lumpur is a bustling, multicultural melting pot. Its inhabitants hail from all manner of different races and religions, with this diversity also being reflected in its vast array of contrasting architectural styles: Enormous skyscrapers sit side by side with residential and commercial buildings in the early 20th-century colonial style.



© Photos: KL Pavilion Design Studio in collaboration with NWKA Architects Sdn Bhd





### **Viega plumbing systems in Kuala Lumpur**

Malaysia's most populous city is home to the famous Petronas Towers, the world's tallest twin structures. Drive 15 minutes west of the city centre and those twin towers and you will find one of Kuala Lumpur's newest luxury developments: Pavilion Damansara Heights. This multi-use development in the exclusive Damansara Heights quarter features a 102,000 square metre lifestyle mall, five luxury residential towers and nine Grade A office towers. One of the key players on the Malaysian market was commissioned to supply technologically advanced Viega plumbing systems with a view to achieving a high-quality and, above all, long-lasting result. After all, here at Viega we are connected in quality.

### **Viega fittings for a unique development**

In keeping with the development's sophisticated architectural style and high-end material specifications, a total of 2,224 Viega Eco Plus concealed cisterns and Visign flush plates were fitted in the apartments. Combining innovative design and precise workmanship to exacting German engineering standards, Viega's concealed cisterns and flushing systems are simple to fit, easy to maintain and designed to withstand the test of time.



© Photo: Cbus Property

## 1 William Street, Brisbane

# LIFELINES FOR A BUILDING THAT'S BREATHING LIFE INTO AN ENTIRE DISTRICT.

When you're dealing with an iconic building for 5,000 public servants that is intended to revitalise an entire city district too, everything has to be just right. No problem for the reliable Viega connection pieces used for the building's lifelines.



© Photo: Cbus Property





Reliable piping systems for the hygienic supply of drinking water: The Profipress copper piping and press connector system by Viega proves its worth in buildings of any size.



FAST, SAFE AND FLEXIBLE:  
VIEGA PROFIPRESS HAS MANY BENEFITS.

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Rob McAlister, Project Manager  
at Axis Plumbing in Queensland



© Photo: Cbus Property

With high-profile projects that attract a lot of attention, such as the new building that is home to the Queensland Government offices, absolutely nothing can be left to chance. And this applies above all when it comes to installing vital piping systems. That's why Rob McAlister, Project Manager at Axis Plumbing in Queensland, chose Viega Profipress (Australian version). Despite a tight schedule and the huge scope of the project, Axis was able to complete its work

on time thanks to Viega Profipress. This was made possible by the unique combination of safety and time savings offered by the Viega press connector system – like the option to capture any unpressed connections immediately thanks to the Viega SC-Contur (aka Secure Connect) feature. This building is a striking example of the future in every respect.



© Photo: Beijing Longding Huayuan Real Estate Development Co., Ltd.

The residential complex not only boasts state-of-the-art building services engineering, it also features a picturesque garden landscape.



More than 1,000 luxurious bathrooms were equipped with Viega Advantix Vario floor drains, Advantix circular floor drains and Viega Eco Plus pre-wall systems.



© Photo: Beijing Longding Huayuan Real Estate Development Co., Ltd.





**Dayuan Haidian Mansion, Peking**

# CUTTING-EDGE DRINKING WATER SYSTEMS FOR A RESIDENTIAL COMPLEX WITH TRADITIONAL CHARM.

Beijing, the capital city of China, is the political, economic, cultural and transportation centre of the country – and is also known for its traditional Chinese gardens and buildings.

Where in the world can it be so important to safeguard drinking water quality than in China's capital city, where such huge numbers of people live in such close proximity? With our expertise, our dedication to quality and design, and our Profipress system, we have installed safety, reliability and comfort.

[Read more on the next page. »](#)







Over 100,000 metres of Viega Profipress copper pipes were installed in the buildings.

Located in the Haidian District of the city, Dayuan Haidian Mansion has 10 luxury residential buildings with 348 apartments from 170 to 340 square metres in size. The complex, which was designed by Beijing Victory Star Architectural & Civil Engineering Design Co., Ltd., features an impressive traditional Chinese garden landscape and a healthy living environment that make it the jewel in the crown of this residential sub-district. Over 100,000 metres of Viega Profipress copper pipes together with 1,200 automatic flush valves, which can be set to flush water at a certain interval to prevent water stagnation, were installed in the buildings to guarantee high drinking water quality. For the hot water supply, 350 thermostat valves were used in the system to keep the hot water temperature always above 55°C to prevent bacteria growing and to provide hot water within seconds. What's more, the Viega hygiene assistant was installed, which allows residents to easily monitor the status of the water exchange and the temperature range to make sure their water is safe.

The luxurious bathrooms, over 1,000 of them in total, were equipped with Viega pre-wall and drainage technology. They feature Advantix Vario floor drains, Advantix circular floor drains and Viega Eco Plus pre-wall systems.



Modern architecture in harmony with traditional design elements.





## Ingenuity House, Birmingham

# PROGRESS ACROSS FIVE FLOORS, SUPPLIED BY VIEGA PIPING SYSTEMS.

Whenever a construction company shows the public its strengths in the form of a landmark building, there is no room for compromise in the technology used. And that's not the only reason the British construction company Interserve chose to install only Viega piping systems at its new regional hub in Birmingham.



Interserve's new regional hub showcases the company's strengths in a state-of-the-art 12,000 square metre building. The entire drinking water installation and the piping network for the heating and cooling system were implemented together with Viega to ensure everything behind the wall meets the highest possible technological, hygiene and quality standards. The unique Megapress system allowed for fast and efficient installation of the thick-walled

steel pipes used for the building's heating and chilled water systems, while the copper pipings of the hot and cold water systems also features Viega's German-engineered Profipress connection pieces. For a long-lasting and reliable piping system that will provide the building with dependable lifelines for decades to come.



© Photo: Tilbury Douglas Construction Limited



## Philly Metropolitan Opera House

# REFURBISHING A CULTURAL GEM – WITH COLD PRESS CONNECTING TECHNOLOGY SETTING THE TONE.

A beautiful facility created for amazing music is being refurbished – and Viega is right there. The Philadelphia Metropolitan Opera House (MOH) is a historic building that has changed hands and its purpose several times over the years. After a series of preparatory work and agreements, a \$45 million renovation project, in which Viega ProPress played a part, began in 2017.



NORTH AMERICA



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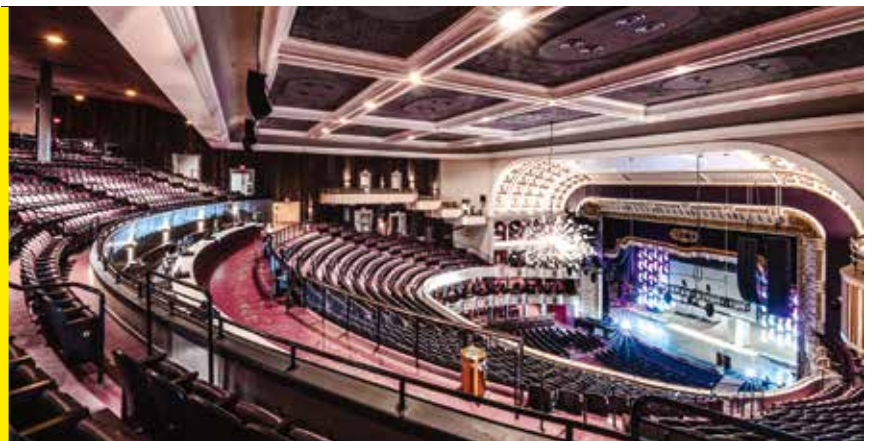
# THE SPEED IS A HUGE ADVANTAGE.

**Rich Devine,**  
President and CEO of Devine Brothers

Mechanical contractor Devine Brothers, whose crew tries to use ProPress wherever they can, was brought in to work on the sanitary installation for the massive building. “This is an old building”, says Rich Devine, President and CEO of Devine Brothers. “We didn’t want to use torches and have to worry about soldering or fire watch. There are plaster ceilings, too, and it’s a lot easier to get a pipe in there and press instead of getting your hands in there in the nooks and crannies in the walls to have to solder.”

The entire building has undergone a massive restoration and renovation process. Included on the National Register of Historic Places since 1972, careful work was done to keep the “bones” of the opera house in place as it was converted into a music hall. Around 4,600 metres of copper pipe were laid in the MOH for domestic water. Live Nation has signed as the tenant and concert promoter for the MOH and is expected to bring in large crowds. In such a huge facility – it will seat 4,000 when finished – the sanitary installation is a complex job.

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**Viega ProPress copper is a press connector system optimised for maximum throughput with over 400 different fitting configurations for a broad range of applications.**



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SADDLE UP FOR DRINKING WATER HYGIENE: 26 FLUSHING STATIONS WITH VIEGA HYGIENE FUNCTION.

Severin Pimperl  
General Manager/Prokurist  
Apassionata World GmbH

**Apassionata World, Munich**

# PURE DEDICATION AND PASSION FOR DRINKING WATER HYGIENE.

The best drinking water for man and beast  
Apassionata World GmbH is all about magical encounters between man and horse. A 16-year tradition of successful shows for the whole family has given rise to the popular CAVALLUNA European tour and the SHOWPALAST MÜNCHEN event space and grounds in the Bavarian capital of Munich. The horse shows put on by the company have already enthralled more than eight million spectators across Europe.







### **SHOWPALAST MÜNCHEN – the theatre for breathtaking shows and events**

With its peerless facilities and architecture, the SHOWPALAST MÜNCHEN is an amazing location for all kinds of events and has the flexibility to turn even the most creative ideas into reality. The issue of how to supply drinking water to a closely linked network covering the entire site proved a real challenge, as it was difficult to estimate how much water would actually be needed in the SHOWPALAST MÜNCHEN building itself, which has seating for around 1,700 people, and in the event space grounds in which it sits.

### **26 flushing stations for safe drinking water across a 5 hectare site**

An experienced team from DS elektrotherm GmbH took on this major project, choosing to use Sanpress connection pieces made from gunmetal. “The press connecting technology is fast and safe, so we were able to install well over 3 kilometres of stainless steel pipe on schedule in every phase of construction”, says Severin Pimperl, General Manager/Authorised Officer at Apassionata World GmbH. The company also installed 26 flushing stations with Viega Hygiene+ function to ensure the required water exchange will be achieved despite the usage profile being so hard to predict.





Allianz Arena, Munich

# A SHINING EXAMPLE OF MODERN ARCHITECTURE AND A MODEL FOR CONSERVING RESOURCES.

Regardless of whether you are a soccer fan or not, a trip to the Allianz Arena is an incredible experience. All the more so if you are watching from one of the exclusive boxes, which have been totally customised for their respective hirers – and even include baths and showers.





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**Building services planned down to the very last detail**

But this extreme level of customisation translated into a Herculean task for the SHAC and plumbing trades involved in building the Allianz Arena, who relied completely on the Steptec pre-wall system. This system is extremely quick to install and also highly flexible, which allowed the SHAC and plumbing trade professionals to pre-assemble elements of the sanitary equipment in the workshop. Then just a few manoeuvres were needed on site to achieve the perfect installation. Even the most unusual solutions could be implemented without any problems and each box was customised to the client's wishes.



**A total of 8 kilometres of Sanpress stainless steel piping was installed for the main drinking water distribution system.**

**Rulantica water world,**

# DRAINAGE TECHNOLOGY FOR A FUN BATHING EXPERIENCE.

Relaxing in style – that's what it's all about at the exclusive Hyggedal relaxation and sauna area in Rulantica water world, which is located next to Europa-Park. And the striking combination of Advantix Cleviva shower channels installed to drain the shower area is yet another premium touch.



Exclusive fittings in the shower areas, where Advantix Cleviva shower channels are installed in T and U shapes.





© Photo: Europa-Park GmbH & Co Mack KG



THE DRAIN WAS ADAPTED WITH PINPOINT PRECISION TO MATCH THE LEVEL OF THE SCREED.

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**Volker Decoux,**  
tiler

**Taking relaxation to the next level**

Rulantica water world has 32,600 square metres of indoor and 11,000 square metres of outdoor space where visitors can discover the mystical side of beautiful Scandinavia through thrilling slides, a huge wave pool and a wealth of other attractions. And when it is time to unwind, guests can head to Hyggedal, the exclusive 1,000 square metre relaxation and sauna area. The shower area here features rainfall and bucket showers, as well as wall-mounted hoses, all of which use huge amounts of water. To ensure so many litres of water could be dealt with efficiently, the HVAC and plumbing contractor Mau GmbH chose a sophisticated drainage system made up of more than two dozen Advantix Cleviva shower channels, installed almost seamlessly in an open U or a T shape.

The tiler set supplied with Advantix Cleviva made this work so much easier, as explained by Conny Lindner, Senior Installer at Mau GmbH: “We were able to position the floor drains and finish the entire drainage system before the screed installer took over and used a height adjustment piece to install the shower channels as he tiled.”

**Stylish: A champagne-coloured PVD coating ensures that the Advantix Cleviva shower channels fit the Nordic design perfectly.**



## Van Gogh Museum, Amsterdam

# A COLD WATER SYSTEM WHICH IS KEEPING AN ENTIRE LIFE'S WORK ALIVE.

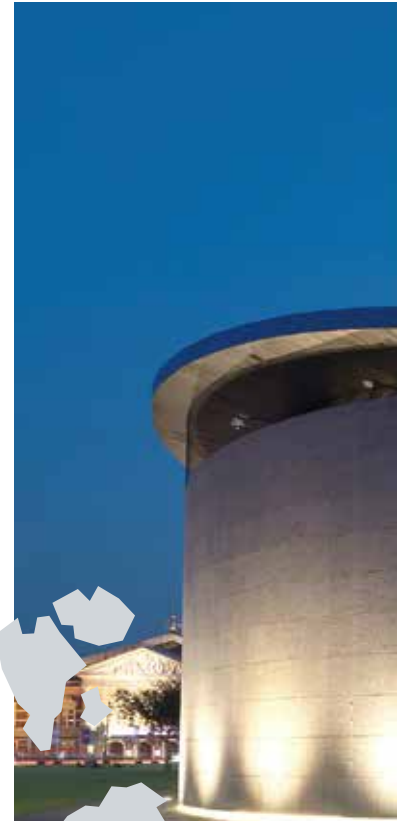
The Van Gogh Museum in Amsterdam is home to the world's largest collection of paintings, drawings and letters by Vincent van Gogh. It gives a fascinating insight into the Dutch artist's life and the lives of his contemporaries. The museum attracts over one million visitors every year, making it one of the most-visited art museums anywhere in the world.



Working with Megapress meant there was no need for a technical hot-work and grinding permit.

### A project with special requirements

When installation work is performed in museums, it is subject to certain rules. The cold water system is essential for cooling museums and helps to properly air condition the rooms where the valuable works of art hang. Basically, this system must never be switched off, which means the installation work has to be done with the cold water system still running. If conventional connecting technology such as welding were to be used, not only would there be a time-consuming process of obtaining a hot-work and grinding permit to go through, and increased safety risks to bear in mind, but also the systems would have to be switched off briefly.



EUROPE



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WE NEEDED A SOLUTION THAT WAS FAST, INNOVATIVE AND, ABOVE ALL, SAFE.

Sander Sint,  
Project Manager at Strukton Worksphere

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© Photo: Jan Kees Steenman

#### **Cold press connecting technology is the method of choice**

So, when a filter had to be installed for a storage reservoir in the cold water system at the Van Gogh Museum, Project Manager Sander Sint and his team decided to go with the Megapress system from Viega. In order to be able to install the filter, the 2-inch-thick steel pipe in the museum's mechanical service room was drilled into and fitted with a shut-off valve. It was then possible to replace the relevant piping. There was no need for any work using open flames, since cold press connecting technology was used instead. And thanks to the tried-and-tested SC-Contur (aka Secure Connect) feature, any areas that were inadvertently left unpressed could be seen immediately.

Polarstern

# TECHNOLOGICAL ADVANCES FOR CLIMATE RESEARCH.



It's one of the most famous research vessels in the world: Over the years, the Polarstern has covered more than 3.3 million kilometres across Arctic and Antarctic waters, where it has been researching climate change at the poles on behalf of the Alfred Wegener Institute (AWI), which is headquartered in Bremerhaven, Germany.

A crew of up to 44 people lives and works on board, plus the vessel plays host to alternating teams of up to 55 scientists and engineers. The floating research laboratory sails the waters of the Arctic and Antarctic 310 days a year on average, with lay days in the shipyard kept to a tight schedule accordingly. There are just a few weeks available to carry out any repairs and maintenance on the vessel and prepare the laboratory equipment for the next expedition.

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THE DIGITAL  
TWIN MAKES  
IT SO MUCH  
EASIER TO  
PREPARE FOR  
NEW RESEARCH  
TRIPS.

Captain Dipl.-Ing. (FH) Marius Hirsekorn,  
Logistical Coordinator for the Polarstern





© Photo: Alfred Wegener Institute/Tim Kalvelage



© Photo: Alfred Wegener Institute/Sina Löschke

### Speed and safety thanks to press connecting technology

To ensure this all runs as smoothly as possible, the heating and sanitary installations, for example, are constructed from the Profipress copper piping system with press connectors. This system not only offers a long service life under extreme conditions on the high seas, another advantage is that “cold” press connecting technology makes it possible to perform even extensive repairs or replacement installations swiftly and, above all, safely without the risk of fire.

### Preliminary planning on the digital hull

The AWI also commissioned Viega and its partner company DiConneX to digitise large parts of the Polarstern. A digital twin of the entire vessel was created, including models of the on-board laboratories. This means researchers can have access to the rooms on the ship in the form of a virtual model. They can then use appropriate software to equip the spaces accurate to the nearest centimetre while the research vessel is still out on an expedition. It is also possible to make better plans for maintenance in the dock, since permanently installed technical appliances are saved in the digital twin with corresponding technical data. Potentially, a point cloud can be used to digitally map all of the vessel’s technical equipment. This will again speed things up when carrying out repairs at sea or doing maintenance in the shipyard. Basically, this is a maritime adaptation of facility information modelling (FIM).

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© Photo: Alfred Wegener Institute/E. Horvath

Materials must meet the highest standards on board and elsewhere: The Polarstern was designed to withstand temperatures as low as  $-50^{\circ}\text{C}$  when spending winter in pack ice.



© Photo: VK Group



### Crucial awarding criteria

There were three key factors behind the decision to use the Prestabo press connector system from Viega, especially for connecting pipes on wards: The system is cost-effective, it saves time and it promises long-lasting quality. Unlike conventional welding work, for which it is difficult to find appropriately qualified specialists anyway, pressing takes just 3.5 seconds – and that is regardless of the pipe diameters involved. What's more, using this connection technology means less dust and dirt is created on the construction site. As soon as pressing has been carried out, Viega experts perform leakage tests that identify any

unpressed connections immediately, making subsequent tests, which could even cause costly damage to materials, completely superfluous. According to Project Engineer Steven Degryse, these are the reasons why the team decided to use the long-lasting solutions provided by German family company Viega for the hospital's HVAC and plumbing systems.



AZ Delta, Roeselare

# COST-EFFECTIVE SUPPLY FOR A PLACE THAT COULD HARDLY BE MORE VALUABLE.

The new main campus of the AZ Delta hospital complex in Rumbeke, Belgium, was built to a design produced by local design and engineering firm VK Architects & Engineers. Once the building fabric was complete and the surrounding landscape had been designed, work began on installing building services in May 2017. The HVAC and plumbing sub-area was assigned to three integrators, who chose to use the Viega press connector system for some of their heating needs.



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OUR MARKET STUDY OF  
PRESS SYSTEMS SHOWED  
THAT THE VIEGA SYSTEM  
IS THE BEST SOLUTION.

**Steven Degryse,**  
Project Engineer at AZ Delta



Project Manager Max Andersen in front of the newly built regional hospital in Gødstrup.



## Regional hospital, Gødstrup

# THE VERY BEST SUPPLY IN A BUILDING WHERE EVERYONE IS ALL ABOUT HEALTH.

It is an ambitious goal to flawlessly install 125 kilometres of piping used to supply a hospital. But with the right partner, it's a realistic one. Viega impressed across the board with its work on the new regional hospital built in Gødstrup, Denmark.



Where hospitals are concerned, the top priority is to achieve a flawless installation that meets incredibly high hygiene standards in order to maintain drinking water quality. In Gødstrup, this had to be done over a floor area of 145,000 square metres using 125 kilometres of piping system intended for potable and process water, heating and cooling, with over 10,000 connection pieces and fittings spread across the entire route.

To overcome this challenge, Max Andersen, Project Manager at Bravida in Denmark, turned to partner Viega for guidance and support. It was a great decision, as Viega dealt with every single detail: "It started with them teaching all our installers how to handle their products and machinery correctly, and we've just collaborated really closely ever since", he says. Max Andersen goes on: "The Viega system is wonderful, because when a project has over 10,000 connection pieces, there are so many potential sources of error." Sources of error that, thanks to technological solutions like the Viega SC-Contur (aka Secure Connect) feature, simply do not exist.





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IN MY 35-YEAR CAREER  
I HAVE NEVER COME  
ACROSS A SUPPLIER  
WHO HAS BROUGHT  
SO MUCH EXPERTISE  
TO THE TABLE.

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Max Andersen,  
Project Manager at Bravida in Denmark



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**Viega seminar centre, Broomfield**  
**A PLACE WHERE  
THEORY CAN BE  
EXPERIENCED IN  
PRACTICE.**



The second seminar centre was opened in Broomfield, Colorado, in 2019.





**Viega has trained tens of thousands of customers since opening its first seminar centre in 2006.**

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Our Colorado Seminar Center in Broomfield sits on the same site as our North American headquarters and boasts the very latest training facilities. At the same time, the New Hampshire Seminar Center in Nashua provides an equivalent training offering on the East Coast. The seminar centres were built to give existing and potential customers fascinating and hands-on ways of discovering the benefits that Viega has to offer. In these seminar centres, experienced specialists pass on all the latest information in seminar rooms, workshops and presentations.

**Expertise for the industry**

The New Hampshire Seminar Center boasts three seminar rooms and one workshop over 1,200 square metres. The Colorado Seminar Center covers 2,100 square metres and features four seminar rooms and two workshops. Both locations have an interactive learning centre with in-depth information on all areas the company is involved in, from gas supply lines to fire protection and solutions for living spaces. Visitors can view Viega products in real application scenarios, establish press connections, open additional sources of information via touchscreens and much, much more.



## Viega seminar centre, Attersee

# THE FUTURE OF CONSTRUCTION BROUGHT INTO THE PRESENT.

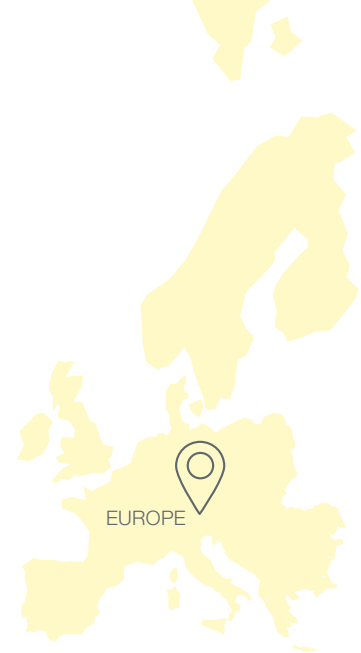
The new, high-tech seminar and sales centre is a flagship project for energy efficiency and digitalisation. The building, which was entirely integrally designed with BIM by ATP Vienna and ATP sustain, reflects Viega's philosophy in a really unique way: Straightforward when dealing with facts, emphatic when dealing with customers, sustainable when dealing with energy management.

### **Integrally designed and operated**

The issue that keeps coming up at Viega symposia was put into practice in exemplary fashion as part of Viega's own construction project on the Attersee lake: Integral design using Building Information Modelling (BIM). A digital twin was used to perfectly combine all energy-related and functional properties in order to create an architecturally sophisticated building. In future, the data model will also serve to continuously optimise running costs according to how the building is actually used in real conditions. It is this aspect that makes the pioneering Facility Information Modelling (FIM) technique so beneficial. After all, around 70 percent of the total costs of a building do not arise during construction, but during the operating phase. Use of the continually tracked digital twin as a facility information model is also an area covered by corresponding seminars, allowing attendees to get to grips with the subject in and on the living, breathing building itself.







### **Best practice in the field of sustainability**

Alongside the digitalisation of construction processes, sustainability is the dominant issue of tomorrow. Since the intention was for the training centre to become a new flagship building for Viega, as well as an interactive example of best practice for Viega seminars, it was crucial to construct it in a way that was energy-efficient. The fact that this building generates more energy than it consumes overall, despite its open-plan design and large dimensions, is thanks to a number of different passive and active construction measures, such as the state-of-the-art geothermal and photovoltaic systems installed, and how they

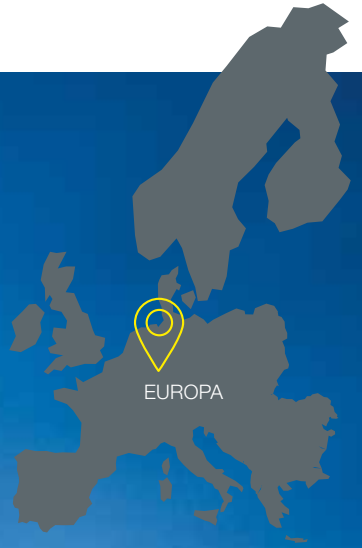
interact with each other. This meant the new-build project achieved a record number of points when it was assessed against the requirements of the German Sustainable Building Council (DGNB) and was awarded a preliminary Platinum certificate in recognition of its design. And once it was complete, it was certified again to exactly the same level. This new Viega building on the Attersee lake was also awarded the “Gold Building Standard”, which is the highest category within the Austrian government’s “klimaaktiv” climate protection initiative, to reflect its careful use of energy resources.

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# TRILUX lighting production, Arnsberg USING PRESS CONNECTING TECHNOLOGY WHERE DOWNTIME IS NOT AN OPTION.

Time is money, so downtime is taboo: When a production hall needs to be upgraded, it has to happen fast. Thanks to cold press connecting technology from Viega, all the work could be completed in a flash.







Pressed in seconds rather than laboriously welded: Megapress outlets in the production hall.

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RENOVATIONS DURING ON-GOING OPERATIONS: ONCE UNTHINKABLE, NOW POSSIBLE WITH VIEGA.

Martin Humpert, Facility Service TRILUX

Companies with high design standards like the light manufacturer TRILUX have to update their product range on a regular basis. It was time to upgrade their production facilities. They also needed to extend an old boiler pipe installation, which in the past had always been a very complex task due to the welding work involved. HVAC and plumbing trade professional Rolf Sydow from the company's Facility Service department explains the situation thus: "Each upgrade has inevitably required a great deal of effort. And at the same time, it is hard to find specialists who are able to weld boiler pipes like these to a professional standard. It was out of the question to completely replace the 'old' boiler pipes because of the cost involved."

#### **A faster process and no risk of fire with Megapress**

The Megapress piping system was able to overcome these challenges. The Megapress connection pieces are pressed onto the existing steel pipe installation in just a few seconds, without any need for complicated preparatory work – and they are at full strength immediately. This type of "cold" pressed connection can be established in a fraction of the time needed for welding. But Rolf Sydow rates Megapress highly for other reasons too: "There is no need to put the fire protection measures in place that are necessary when welding. The work can even be done without stopping operations. And thanks to Viega's ergonomic pressguns, the whole process is much kinder on the body too."

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No fire precautions, no fire watch: Cold Viega press connecting technology makes it all possible.



## Solar-thermal sewage sludge drying system, Bottrop

# A ROBUST SOLUTION FOR CONSERVING OUR RESOURCES.

The world's largest system for the solar-thermal drying of sewage sludge is currently under construction on the B224 road in Bottrop, Germany. Before it is incinerated, the sludge will be pre-dried using the environmentally friendly power of the sun in 32 drying halls. This step means the subsequent incineration process will be more energy-efficient and consume less resources.







“Sewage sludge drying on this scale is a huge leap, including compared to all previous applications, which achieved a maximum of 10 percent of the output we need”, explains Norbert Schepers, Project Manager at general planning company Emscher Wassertechnik GmbH.

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#### **Objective: To save energy**

The sewage plant in Bottrop is one of the largest in Germany. It purifies and treats or incinerates not only the waste water produced by around five million people from the entire catchment area of the Emscher river, but also external sludge that is delivered to the plant. It is a process that is at once complex and energy-intensive – to be able to incinerate 120,000 tonnes of sludge per year in the two furnaces at the neighbouring combined heat and power plant at a temperature of around 450°C, the sludge must meet a specific degree of dryness. The optimum level is a dry matter content of between 60 and 70 percent. Previously, this was achieved by adding around 20,000 tonnes of hard coal during the incineration process. As part of the overall “Emscher hybrid power plant” package, the solar-thermal drying system is set to reduce this quantity as far as possible in future – relieving the burden on the environment and preserving valuable resources at the same time.

To achieve this, the sewage sludge will be pre-dried in 32 halls. Constructed like greenhouses, these halls are situated on around 61,000 square metres of consolidated ground, the former site of sewage sludge ponds. In future, wheeled loaders will distribute the sludge to the glass halls via a central aisle according to a detailed material flow analysis. In the glass halls, the sludge will be turned over automatically on a regular basis and allowed to dry for about 10 to 14 days under the sun’s rays – a shining example of an environmentally friendly solution. If there is not enough solar radiation, heating coils below the hall ceiling feed in heat from the combined heat and power plant itself or from a four-stage cascading small-scale CHP unit with a 10-megawatt heating capacity.

[Read more on the next page. »](#)





The incredible strength of the steel pipes and the Megapress connection pieces means piping can be installed below the hall ceilings with a minimal number of fixed points.



Flexible, to compensate for movements caused by thermal and mechanical influences: The connections to the heating coils and to the main distribution system.





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WE SPEND UP TO 80 PERCENT LESS TIME ON EACH CONNECTION POINT COMPARED TO WELDING, DEPENDING ON THE NOMINAL WIDTH.



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**Michael Puckrandt,**  
IRB Construction Manager

**Implementation: Clever engineering**

However, this drying process also raises questions for installers, who have to consider the huge thermal influences at play in their engineering work. One figure in particular highlights the sheer scale of the numbers involved: Every year, around 100,000 cubic metres of water will evaporate from the sewage sludge when the drying system is operating at full capacity. This is roughly equivalent to the amount of drinking water consumed by the entire city of Frankfurt am Main every day! And because the halls are on unconsolidated ground, the heating coils will also be subject to dynamic structural movements, so they will need to have long-term resistance to considerable thermal, corrosive and mechanical influences. Therefore, thick-walled steel pipe with dimensions of 1¼ to

4 inches (DN 32 to DN 100) was used almost conventionally, but in combination with connection pieces from the Megapress (¾ to 2 inches) and Megapress S XL (2½ to 4 inches) systems from Viega that, in typical Viega style, had been “cold” pressed, not welded. In the meantime, however, more than 12 kilometres of steel piping have been successfully installed using the Viega Megapress system. The decision to press the connection pieces on the thick-walled steel pipes “cold” instead of welding them made things much faster and meant this solution was a more economical proposition, especially given the quantity structures and the extremely high loads involved.

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