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**PIPE**  
SYSTEMS  
MADE OF PLASTIC

# TECHNEWS

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TRADE FAIR NEWS



**aquatherm**

state of the pipe



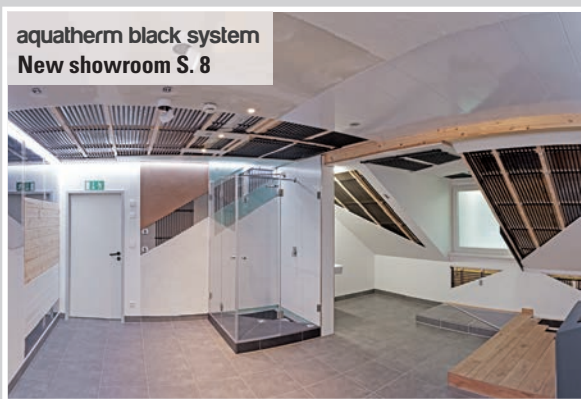
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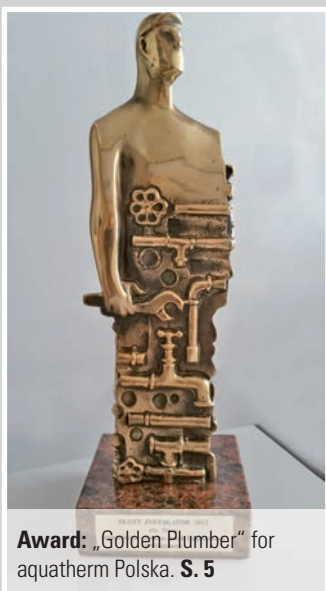
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## BVF-AWARD 2016 IN BERLIN FOR PATHBREAKING PROJECT HUF CITY LIVING

The professional interaction of the client, specialist planner and the system manufacturer of the heating and cooling systems is exemplary in the HUF City Living project. The Federal Association for Surface Heating and Cooling (BVF) awarded the BVF Award 2016 to the protagonists, Builder HUF Haus with Benedikt Huf (Member of the management of HUF HAUS), TGA specialist planner Thomas Runkel, processor Willing (Heating installation) and the system manufacturer aquatherm. Within the scope of a solemn award ceremony on the occasion of the BVF symposium in Berlin on 24th November, the

four prizewinners accepted their certificate and the BVF Award 2016 from the hands of Managing Director Axel Grimm and Chairman of the Executive Board, Ulrich Stahl. In 2016, the BVF recognizes outstanding achievements and extraordinary architecture in which surface heating and cooling systems play a significant part in the project success and objectively improve the energy balance and the well-being.

The settlement HUF City Living is located in the center of Montabaur. The tranquil district town in Rhineland-Pfalz offers an almost perfect infrastructure for local residents, potential builders and tenants with optimal traffic connections to the Rhine-Main-Ruhr regions. Georg Huf, the owner of HUF Haus from Hartenfels in Rhineland-Pfalz, also recognized this potential. The entrepreneur planned and built together with his company and the support of son Benedikt Huf a total of 44 high-quality, barrier-free apartments of approx. 60 to 130 m².

The well-thought-out HUF City Living energy concept, which combines regenerative energy production, photovoltaics, hot water collectors, heat pumps and ice energy storage as an energy carrier, was developed by the Etgenium GmbH from Königs-winter. Thomas Runkel worked closely with the manufacturer of the built-in surface heating and cooling systems, the company aquatherm. The BVF-member provided its efficient aquatherm black system. It is installed in the ceiling and floor areas of the residential complex, both for heating and cooling.

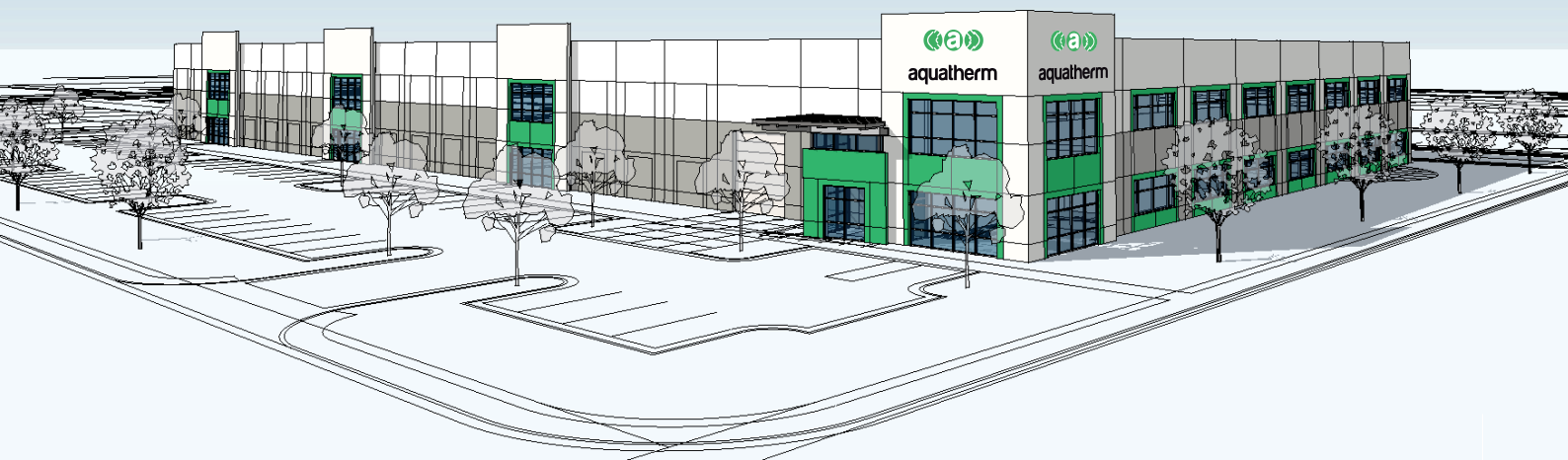
Ulrich Stahl, Chairman of the BVF's Management Board, sees the connection of regenerative energy generation and modern surface heating as a pioneer. He pointed out at the award ceremony in Berlin: "Surface heating and cooling have an important share in the positive overall energy balance of the residential complex. In the project, their positive properties are optimally utilized and ideally implemented for the residents of HUF City living. A result, which became possible only through the interaction of all participants, according to the principle of integrated planning and execution. An important reason for our decision to award this year's Award to all the client, the TGA specialist planner, the executing craftsman and the system manufacturer.



The lucky winners of the Award, the laudator and the BVF's Board of Directors at the award ceremony for the BVF Award 2016 in Berlin. (From left to right: BVF managing director Axel Grimm, laudator Georg Lange of the Federation of German Prefabricated Production e.V., BVF-Board Members Michael Muerköster and Heinz Eckard Beele, prize winner Benedikt Huf, TGA specialist Thomas Runkel, Achim Schnell of aquatherm, Christoph Eßeling of the processor Jupp Willing, heating construction.)



Further information on the BVF and the prize-winning project can be found at:  
[www.flaechenheizung.de](http://www.flaechenheizung.de) | [www.huf-haus.com](http://www.huf-haus.com) | [www.aquatherm.de](http://www.aquatherm.de)



## NEWS FROM NORTH AMERICA

As reported in the TechNews edition in January, the company aquatherm in North America operates, since December 1, 2015, with two independent sales companies, one in Utah/USA and the other one in Alberta/Canada. Both companies are 100 % part of the aquatherm group of companies. In the meantime, there are a total of 65 employees, which are intended upon marketing the aquatherm brand and the innovative products.

Due to the massive growth, a new building is constructed for our branch in Lindon (Utah), which will have a total area of 7,620 m<sup>2</sup>. From the beginning of 2017 the rented building will be ready to move into. Offices over two floors, a laboratory, prefabrication, logistics and storage areas provide plenty of room for productivity and enough opportunities to meet particularly the growth expectations. Through the extensive marketing activities, but

also the changes in other areas of the company, we can already announce very positive and pioneering trends in our local development.

The rising demand, especially in the field of XXL-dimensions, develops very promising. Thus, we had to expand the daily operation in the field of pre-fabrication to two-shifts to ensure the implementation of the high order volumes for special customized components. The advantages of the aquatherm pre-fabrication by planning, production and service have a very high priority in the market. So our innovative products and reliable services become more and more important for a variety of customer groups.

## “USP CLASS VI” AQUATHERM PASSES MOST STRINGENT MEDICAL DEVICE TESTING

The U.S. Pharmacopeial Convention (USP) was established in 1820 to create a national set of requirements for pharmaceuticals and health products. This non-profit organization is now a global entity relying on experts around the world to create standards for medical devices and materials along with many other areas such as dietary supplements, food ingredients, medicines and other healthcare products. USP standards are recognized by and integrated into US federal legislation and used in more than 140 countries.

In addition to medicines, the USP publishes biocompatibility protocols for the plastics and polymers used in medical devices or surgical equipment that may come in contact with human tissue. This strict standard was recognized as a good test for other products, and is now used in a large variety of medical and pharmaceutical applications. Depending on the specific use of the plastic, as well as other factors such as the length of patient contact time (limited, prolonged, or permanent), materials are categorized into one of six classes. The USP Class VI designation is considered the most stringent and is now the standard requirement for many products and materials.

In addition to demonstrating an extremely low level of toxicity by passing the Class VI tests, the material will be subjected to several elevated temperature assessments for set periods of time. As such, materials and products



that meet USP Class VI standards are generally considered to be of a higher quality level and are more readily accepted with the FDA and USDA.

Aquatherm sponsored a study to determine if the green pipe material, fusio-<sup>®</sup>len, would comply with the requirements of USP Class VI testing. This is the most stringent level of testing for plastic materials in medical devices, and is used as a reference for plastics products such as piping systems pharmaceutical plants. The study was conducted in full compliance with 21 CFR 58 Good Laboratory Practice (GLP) for Nonclinical Laboratory Studies. As noted in the study report, “Based on the criteria of the protocol and the USP Guidelines for Class VI Plastics – 70°C, the test article, aquatherm Greenpipe, meets the requirements of the test.”

This helps to ensure that when Aquatherm piping is being used in highly sensitive areas such as pharmaceutical and biochemistry plants and applications, the piping will not contaminate or otherwise interfere with the biological and chemical processes being used.

For a summary of the study results, please contact your Regional Sales Manager.



## STATE-OF-THE-PIPE FOR BRAND NEW BURWOOD HOSPITAL WING

Canterbury's Burwood Hospital is a brand new facility which incorporates state-of-the-art medical technology to deliver the best outcomes for all patients who visit the centre. But, while perhaps less glamorous, just as important to the successful operation of Burwood Hospital is its plumbing and reticulation systems – and these are just as cutting-edge as the gear which powers the theatres. Incorporating aquatherm piping systems for potable domestic hot and cold, and chilled, water systems, the building's plumbing is designed to deliver high performance and low maintenance for the full life of the hospital.

According to Paul Eagleton, South Island manager of local importer and distributor aquatherm NZ, the piping systems selected for the hospital are reflective of the overall focus on future-proofing. "This is a building built for the new millennium. It incorporates every advantage the construction industry has to offer and that extends to the piping systems."

Burwood Hospital has long been recognised as one of New Zealand's centres of excellence for rehabilitation and elective orthopaedic surgery. As of June 2016, it became much more as site clearance began for the creation of state-of-the-art facilities linked to the 'old' Burwood Hospital. Innovative thinking and design has shaped these new facilities to deliver better, more efficient healthcare now and in years to come. These new buildings house over 32 thousand square metres of purpose-built facilities on three floors and provide a total of 230 new inpatient beds. Included are new ward blocks for medical, rehabilitation and mental health services for older people. There are also new outpatient areas, including radiology and pharmacy areas. Each 24 bed ward has three communal patient lounge areas plus a whanau room where patients can spend time with family members; the entire new build has beautifully landscaped courtyards throughout, designed to let in as much natural light as possible and help keep people connected to the outdoors.

### Unique properties for a lasting advantage

Continuing, Eagleton says engineering consultancy Beca had no hesitation in specifying aquatherm for this prestigious project. That's because there are distinct advantages associated with the unique construction of these piping systems. "aquatherm is a German-engineered product which is made from a proprietary raw material called Fusiole PP-R," he explains.

PP-R is polypropylene-random, a chemically inert thermoplastic. Its advan-



Dirk Rosenberg, aquatherm GmbH, and Warwick Muirhead, David Browne Contractors Burwood team leader, conducting a site inspection prior to completion.

tages over the metal pipes used since antiquity are all directly linked to its base form: unlike metals, PP-R does not react with minerals or contaminants in the water. It doesn't break down (although it is fully recyclable) and delivers an extraordinarily long life. Because it is by nature flexible, it delivers a further advantage which has never been more relevant in Canterbury: it is earthquake resistant. "What's more," Eagleton points out, "The mineral-rich water in Canterbury lends itself more to the use of plastics rather than metallic pipe." Where metal pipes will scale and potentially clog over time, there is no such issue with aquatherm's products; where metal conducts heat, PP-R is a natural insulator, preserving the heat (or chill) of the liquid it transports and reducing the necessity for external cladding.

### Installers love aquatherm

While Eagleton says specifiers like Beca recognise the advantages of aquatherm in modern building projects ("We have piping systems going into a lot of projects in Christchurch and around the country," he notes) installers see a definite advantage too. With PP-R piping and fittings being a flexible material which is a fraction of the weight of old fashioned metal pipes, it is easier to get the job done.

Tim Browne, manager at mechanical and hydraulic services company David Browne Contractors which is responsible for the implementation of some 17 000 metres of aquatherm on site, provides further insight: *"We had proven the success of aquatherm on many other recent projects in Christchurch and around the South Island. It delivers a real advantage with its 'cost versus time' ratio."* He says the time saved installing PP-R over other products makes it a preferred material to work with. *"It's light, easy to handle, quick to install and clean to use. Little wonder my installation teams enjoy working with this product."* Browne explains how Fusiolen PP-R is worked. *"The pipework is joined by fusion welding, where both ends of the pipe and fittings are heated to a set temperature, pushed together and held for a short time, allowing the product to fuse and bond. This method is far less stressful and takes much less time than other piped options."*

Importantly, he notes that the risk of leaks is reduced if the task is completed correctly. *"With projects like these, the ability to save time and effort while achieving an excellent outcome is like gold. We've used aquatherm successfully in New Zealand for 18 years now, and we've never looked back."* Eagleton says the growing number of qualified installers and successful projects completed with aquatherm piping systems attest to the suitability of this world-proven product for the local market.

*"Importantly, we don't sell pipes and fittings, we sell the system and provide solutions. That means we make sure the product is accurately specified from the available range. Crucially, it means training and support for installers so they deploy it in accordance with applicable standards to get the job right. And finally, it means complete backing from aquatherm NZ from specification through to final pressure test. That provides the assurance to building owners – like the Canterbury DHB with Burwood Hospital – that their piping systems will stand the test of time."*



A very well detailed domestic hot water plant room using aquatherm pipes.



The installation Team installing high level pipe runs of reclaimed water (lilac pipe) and cold and hot aquatherm green pipe for potable water.



## „GOLDEN PLUMBER” AWARD FOR AQUATHERM POLSKA

In May of this year, Kornelia Ligaszewska-Lesniak, CEO of our partner aquatherm Polska, could receive the award of the „Golden Plumber”. Premium products are for example awarded, in this case aquatherm ti.

The “Golden Plumber” is annually granted by the Polish HVAC cooperation in Warsaw and is considered as the highest award of the HVAC industry in Poland.



## INNOVATIONS-CHAMPIONS 2016

Exklusives Ranking der innovativsten Mittelständler

## INNOVATION CHAMPION 2016

## AQUATHERM AMONG THE MOST INNOVATIVE MEDIUM-SIZED COMPANIES

Exclusively for the "Wirtschaftswoche", one of the leading economic magazines in Germany, the well-known Munich business consultancy, Munich Strategy Group (MSG), has investigated the innovative capacity of German medium-sized companies. In a multi-level process, approximately 3,500 medium-sized companies from eight sectors were analysed and their behavior of innovation was judged. The MSG innovation ranking is awarded to companies achieving competitive advantages and taking a position of strength based on continuous innovation efforts. The analysis was focused on the innovative capacity and business performance, by which new approaches for products, services, business models or processes are realized.

The study clearly shows that the innovative capacity does not depend on the volume of turnover. Among the top 50 innovation champions, there are 14 companies, of which the annual turnover is lower than Euro 100 million. Now it has been confirmed again that the South Westphalian industry characterized by medium-sized and family-owned companies is highly innovative: In this ranking aquatherm made a considerable seventh place, thus belonging to the 50 most innovative medium-sized companies in Germany. Gebr. Kemper from Olpe reached the excellent third place.

Two companies from the Olpe county among the first ten nationwide – that is awesome and stands for the innovative capacity of all the South Westphalian economy", Maik Rosenberg is pleased, one of the three Rosenberg brothers leading the aquatherm company together in second generation, during a conversation with Rupprecht Kemper, managing shareholder of Gebr. Kemper.



Are happy about the good results of their companies (from the right): Maik Rosenberg from aquatherm, Rupprecht Kemper and Achim Maiworm, managing directors from the Kemper subsidiary Dendrit.

AWARD:  
COMPANY OF THE YEAR 2015

aquatherm Russia was nominated for "Company of the year 2015" in Russia. This status is a symbol of the success of our company and the superiority over the competitors. We owe this to our reliable, well-organized staff and the professional business management. The award reflects our daily living corporate values and shows: We are "state of the pipe", because we act independently and decisively, always reliable which makes us the leading manufacturer of polypropylene pipes.

We are very pleased about this success, because it is a further step to strengthen our competitive position and to meet the high standards and responsibility towards customers, partners and our environment.





## PIPE EXTRUSION 2017

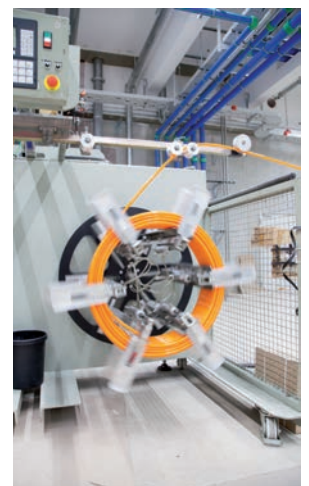
### THE FUTURE OF PIPE MANUFACTURING HAS BEGUN.

The ‚ZuRo‘ building measure, which was commenced in 2015, is bringing the final stage into view for everyone. 19 systems have already been constructed in the new building, and are producing our PP-R pipes around the clock in a 3-shift operation, as is the usual practice.

The new extrusion building has produced a state-of-the-art and, above all, innovative and practical production facility, where ideal framework conditions help to make work more enjoyable. The capacity of the old extrusion site in Building 2 has completely reached its limits over the past year. Production was divided into three areas on two floors, making the work extremely confusing and cramped. Materials were not stored on one level; instead, they were stored wherever there was any space left. Long journeys had to be made every day as a result of the unfavourable space distribution.

However, things are different in the new extrusion building; the enormous materials warehouse is all on one level on the first floor, as is the production area on the ground floor. Structured and carefully considered work steps - starting at the delivery of raw materials, and the storage of raw and other materials, via the process-controlled supply of materials to the extrusion system, to the manufacture and packaging of products - make work considerably more economical and effective.

This process has also resulted in completely different opportunities for team work, quality, order and cleanliness. Moreover, there is enough space available for more machinery, meaning that the growth of pipe manufacturing here will not be limited.





## PROJEKT: **AQUATHERM BLACK SYSTEM SHOWROOM**

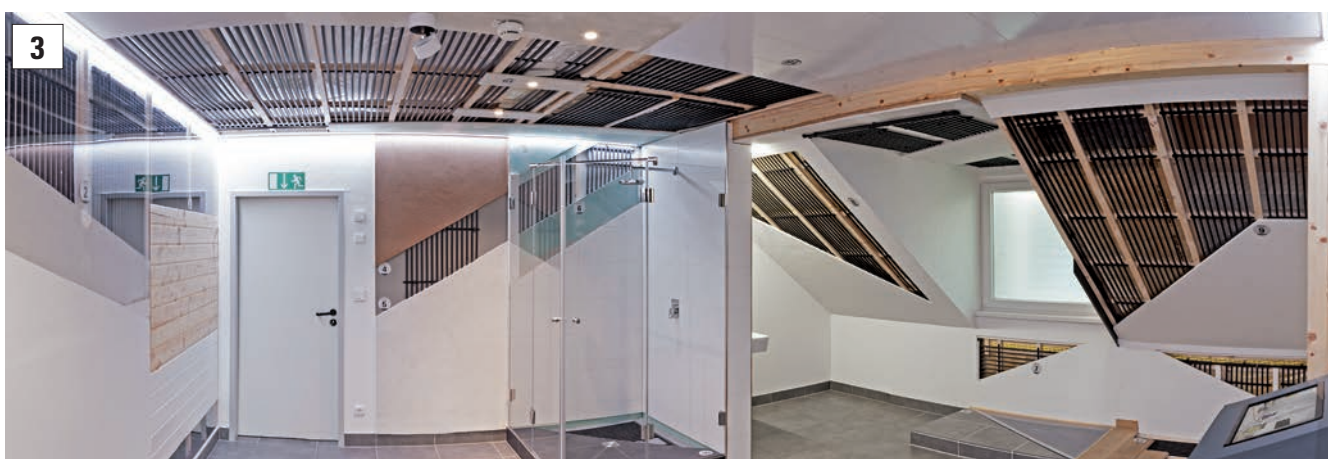
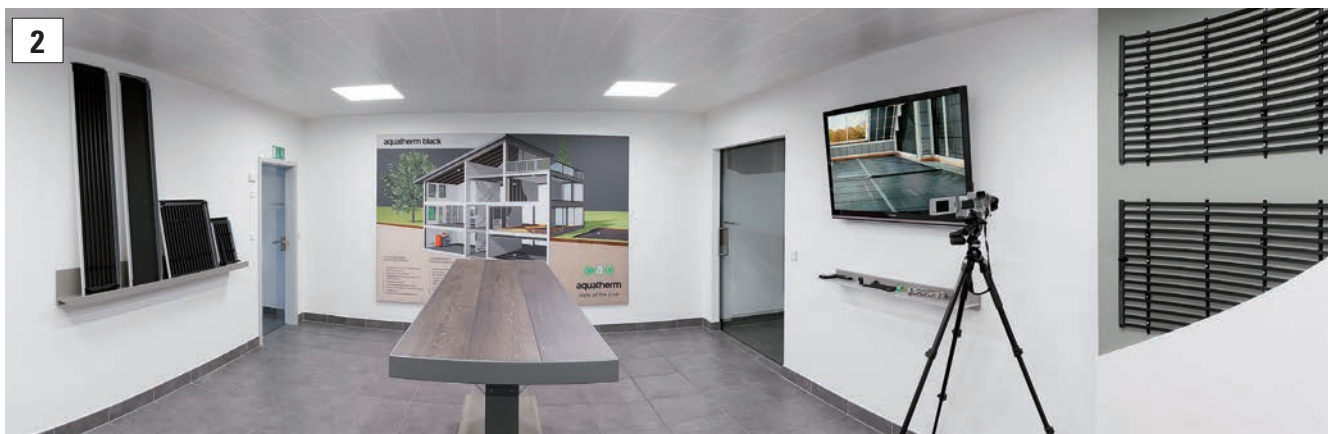
With black system aquatherm provides a universal applicable surface heating and cooling system for applications below the ceiling, at the wall and on the floor. The many different fields of application can be inspected in the newly built "aquatherm black system showroom" as of now. All applications are real in function. In the rooms the pleasant climate is noticeable by radiation, either for the field of "heating" or "cooling".

Room 1 shows the application of aquatherm black system in the world of metal panel ceilings for office and industrial area. Different formats, colors, perforations and ceiling sails are presented.

Room 2 demonstrates a single-color metal panel ceiling. Here the aquatherm black system is integrated as a square and rectangular panel with different lighting. Even the application in curves is impressively presented. An infrared camera visualizes the function of the heating and cooling panels for the visitors.

Room 3 offers a total of 21 applications of the aquatherm black system in interior construction. Among other things, the following applications are presented:

- Static wooden sub-structure with planking by dry construction components
- Use in pitched roof area and jamb wall
- Wall and ceiling heating plastered in mineral plaster or organic clay plaster
- Heating of shower inside walls
- Mirror heating
- Special top structures of the floor, such as beamed ceilings





## DRILLING OF AQUATHERM PP - PIPES UNDER PRESSURE

The aquatherm weld-on saddle set (consisting of ball valve, pipe and saddle in the dimensions 40 mm and 63 mm) is used for the additional installation of branch connections.

The PP-R pipes aquatherm green pipe, blue pipe and lilac pipe with the pipe structure S, MF and MF UV in the dimensions 75 – 630 mm can be drilled under pressure.

### SAFETY INSTRUCTION::

The medium pressure (e.g. water) in the main pipe of 6 bar and the medium temperature of max. 60 °C must not be exceeded.

### 1. Preparation and fusion

After removal of the oxide layer on the main pipe and the cleaning of the welding surfaces, the welding device is placed with the weld-on saddle tool on the surfaces to be welded. Under gentle pressure and a warm-up time of 90 sec. an even bead must be there on the welding surfaces. After a warm-up time, the component is placed quickly on the main pipe. The component is fixed and aligned on the main pipe for max. 15 seconds. The connection is fully able to work under pressure after a cooling time of 15 minutes.

### 2. Assembly of the hot tapping tool

The hot tapping tool is screwed onto the component with the retracted

drill rod, which is secured by the clamping claw. The screw connection on the ball valve is tightened by hand. After the ball valve has been opened, the welded component in conjunction with the hot tapping tool is tested for leaks with water or air.

### 3. Drilling process

When the clamping claw is loosened, the drill rod is pushed until the drilling tool contacts the pipe. Depending on the branch size, the appropriate feed rate must be set. The drilling is carried out by actuating the ratchet handle and simultaneously by giving a manually sensitive feed on the feed handles. After completion of the drilling and the release of the clamping claw, the drill rod is lead back to the stop by hand. Caution: The drill rod can rebound by the pressure in the pipe. The ball valve is then closed and the hot tapping device is relieved of pressure.

### 4. Disassembly

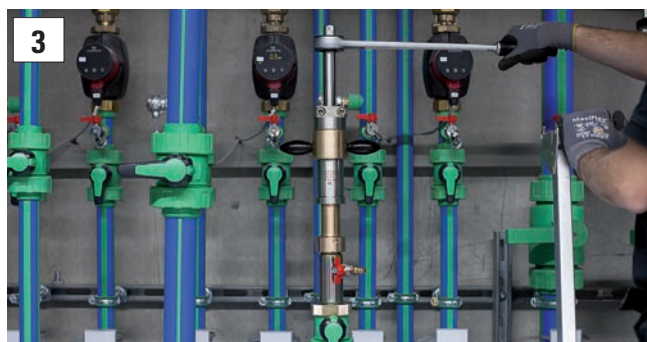
Detach the hot tapping device by holding the screw on the ball valve and remove it from the component. Pull the drill rod out of the hot tapping device and screw the drilling tool from the drill rod using a suitable wrench or armature tongs.



1. Welding-on of weld-on saddle set onto the main pipe



2. Assembly of the hot tapping tool onto the component



3. Start of the drilling process



4. Removal of the drilling residues out of the drilling tool



## HISTORY OF SUCCESS, JOHN E. GREEN SELECTS AQUATHERM PP-R PIPING FOR SCHOOL EXPANSION

John E. Green Co. of Highland, MI, cut labor and installation time by using Aquatherm's polypropylene-random (PP-R) pipe systems for a 2013 project at the University of Detroit Jesuit High School and Academy (U of D Jesuit). The project went so well that when U of D Jesuit and John E. Green teams reconvened in 2014 to plan the school's new science building, no other piping options were considered.

### Past Success with Piping

Aquatherm's PP-R pipe systems played a key role in the success of the 2013 direct-bury water-source heat pump installation at U of D Jesuit. During that project, 4" Aquatherm Blue Pipe® was buried in an underground trench, serving as the supply and return piping that linked the campus' boiler house to a 50,000-square-foot building that originally housed the school's priests, but now serves as administrative space.

For that project, John E. Green provided design-build support. Bob Williams, director of plant operations at U of D Jesuit, worked closely with John E. Green's Mark Bobrowski, senior mechanical engineer of preconstruction services and a U of D Jesuit alumnus.

The 2013 installation is leak-free. The pipes will not corrode or leach into the soil and are environmentally friendly. In fact, Aquatherm currently has the only piping systems in North America that can contribute directly to LEED v4 credits.

### Science Wing Takes Flight

Construction of the new science wing began at the end of the 2015 school year, and the new building opened in time for the 2016–2017 school year. The four-story, 40,000-square-foot science, technology, engineering, and math (STEM) center includes laboratories for robotics, chemistry, CAD, biology, and physics. It also houses U of D Jesuit's Shell Eco-Car program. The new STEM center is the largest addition to the campus since the main

school building of the current campus was built in 1930. (The original high school was built in 1877.)

To condense installation time to meet the construction schedule and save on labor costs, some sections of the new chilled-water pipe system were fabricated at Aquatherm North America's London, UT, facility. With the fabrication assistance, Bobrowski noted, "we were able to maintain the schedule and budget by getting this work done efficiently."

Because of their light weight compared with metal pipe, Aquatherm fabricated spools were carried manually to the roof without a mechanical assist. Tying Daikin air handling units and air-cooled scroll compressor chiller and Armstrong pumps together is Aquatherm SDR 7.4 Green Pipe® in 2, 2 1/2, 3, and 4 diameters.

*"The more you do, the better you become. Toward the end, I really had a good handle on what to do and how to make a perfect fusion [with Aquatherm's heat-fusion process], and there's definitely a labor savings compared to welding steel pipe."*

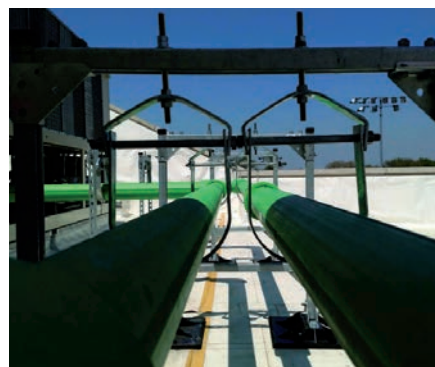
—Josh Umphrey, Journeyman Pipefitter, John E. Green

Aquatherm is joined by heat fusion. The pipe and fitting are placed on a 400–500° F heating iron, then connected. This process bonds the pipe and fitting at the molecular level without the use of chemicals or mechanical connections and eliminates systematic weaknesses and fail-points. Once the installation was complete, the Aquatherm-required pressure test was performed using compressed air. There were no leaks.

### Seeing Is Believing

Aquatherm trained and certified John E. Green's Journeyman Pipefitter Josh Umphrey onsite to install Aquatherm piping. Although this was Umphrey's first experience with Aquatherm, he was impressed.

"The more you do, the better you become," Umphrey said. "Toward the end, I really had a good handle on what to do and how to make a perfect fusion,



and there's definitely a labor savings compared to welding steel pipe." He added that there is a tendency to be skeptical when a product almost seems "too good to be true."

"Most of us tradesmen in the field are 'I'll-believe-it-when-I-see-it' types," said Umphrey. "But I will say that after going through the process and the pressure test, I'm more than comfortable installing and recommending Aquatherm pipe."

### Safe and Efficient

Bobrowski recommended and specified Aquatherm for the project's chilled-water piping system because it is corrosion-resistant and will not scale. No hot work permits are needed because Aquatherm's heat-fusion technique poses virtually no fire hazards. Additionally, no solder or glues are used that could wear or corrode the pipe.

Because Aquatherm is so light, installers can move faster without the risk of injury that often accompanies metal pipe, saving on labor costs. The pipe's light weight also eliminates the need for extra heavy-duty hangers.

Finally, joining the PP-R pipe via heat fusion speeds up the welding process, saving even more on labor costs.

"I think it was a good deal for U of D Jesuit and a good experience for John E. Green," Bobrowski said. He called Aquatherm's PP-R piping "a great new product" and anticipated using Aquatherm piping on future jobs.

Most importantly, the customer is pleased. "When [Bobrowski] first introduced the Aquatherm pipe to us, I liked its insulation properties and the speed of putting it together," Williams said. "On [the 2013] job, the team had budgeted for the trench to be uncovered—and an excavator operator required onsite at his hourly rate—for eight or nine days. The Aquatherm installation only took six days. If we had put steel or welded pipe in, it would have taken a lot longer and increased costs dramatically.

"So when John E. Green wanted to bring it in on this other project, I was all for it," Williams continued. "On this project, we again appreciated the inherent insulating properties of the Aquatherm pipe, and we can bill this as a green product. Even though we're not building a totally green building, we're able to boast a bit about what we are doing here."

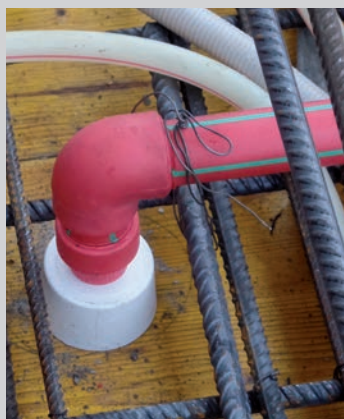
## aquatherm red pipe FELLBACHER GEWA-TOWER

With its height of 107 meters, the GEWA Tower in Fellbach will become Baden Württemberg's highest residential building and Germany's third highest one. In 34 storeys, 65 exclusive freehold flats come into being – the most expensive one costs € 5 million.

The GEWA Tower's special feature is not only its height, but also its strikingly extraordinary architecture. The outside walls are rising slightly inclined upwards, more precisely in an angle of 3.5 degrees. Thus, the upper storeys are larger by approximately 10 m<sup>2</sup> than the building area.

The costs for the building project amount to approximately € 57 million. After a building time of two years, the tower is supposed to be finished at the end of this year.

In around 30 storeys, approximately 4,200 meters of aquatherm red pipe were installed for 1,500 concealed sprinkler connections. The first contact to the executing planner, the IGL engineering office, Grolik & Ladwig Partnerschaft from Willich, took place in 2014. The implementation was effected by Brandschutztechnik Jockel-Bramax from Gladbeck.





## AWARD: BVFA QUALITY SEAL „SPRINKLER PROTECTED“ FOR KÖ-BOGEN IN DÜSSELDORF

At the start of building in 2009 the huge Kö-Bogen [Kö refers to Düsseldorf's main shopping street, the famous Königsallee] was the biggest German city centre building project and one of the biggest in Germany with investments far exceeding 400 million euros. With its height of 26 metres on a land area of 9,000 square metres in the city centre and curved arcade, it is already regarded as a style icon – a complex urban architectural concept which reflects on the historic features of Düsseldorf's centre. The Kö-Bogen was developed and designed by the famous New York architect Daniel Libeskind, who is regarded as a poet in his profession.

The future orientated subject of sustainability is very present both outside and within the building and was also very important in the planning of the Kö-Bogen – both for the project developer as well as the city of Düsseldorf. The aquatherm products fulfilled the very high standards with view to the environment and sustainability and the company is very proud to also be represented in this project.

The aquatherm red pipe system has been built into the ceiling on three storeys of the Kö-Bogen for which the pipes were cast in concrete. All the necessary pipes including supply pipes were pre-fabricated according to designs in aquatherm manifold construction, tested for tightness in Attendorn and a welding report compiled. The products were then supplied to Düsseldorf where they were built in.

A total of approx. 3,400 sprinkler connections and 6,500 pipe metres including the moulded components were built into 25 building sections and the building time also included the winter months. The pressure testing of the pipes, therefore, involved a water-glycol mix to prevent the piping being damaged by the frost. The number of sprinklers was so high as the project had the luxury of having these double which means that the so-called area of coverage can be kept even if there are building changes in the rooms later on e.g. if walls are moved.

On 22 February the building complex was honored for comprehensive fire protection measures with the quality seal "Sprinkler Protected" by the bvfa (German Association of Technical Fire Protection). "Those in charge of the Kö-Bogen gave a clear signal with their decision to opt a full scale fire protection with sprinkler systems. The protection of human life must be top priority in any situation, whether leisure, work, school or education," said Dr. Wolfram Krause, CEO of bvfa, with regard to the jury's decision. Andreas Stolz, representative of the Kö-Bogen area and Head of Asset Management of the Art-Invest Real Estate Management GmbH & Co.KG, accepted the award. "We took care in offering fire protection at the highest level to all people visiting the Kö-Bogen – and achieved this goal. The more we are pleased that our commitment is now honored with the fire protection seal", says Stolz.

Since 1993 the bvfa awards public buildings in Germany that have an exemplary fire protection with the seal of quality "Sprinkler Protected". Already in the past 10 years more than 40 exposed objects have received the award by the Federation Technical Fire Protection e.V. It is considered the authoritative organization for preventive and defensive fire protection in Germany. In the association the leading German providers of stationary and mobile fire protection technology and of systems of fire protection in buildings are represented. The association, which currently represents about 120 companies, was established in 1972 and is based in Würzburg.

