GEBERIT PLUVIA

LET IT **RAIN**

SUPERIOR ROOF DRAINAGE



KNOW
HOW
INSTALLED



More convenient and faster handling

- More compact construction and an ergonomic design for all Geberit roof outlets up to 25 l/s
- New rotating lock bar sealing for easy installation and maintenance
- Extra-long Geberit HDPE straight connectors for greater flexibility in terms of installation

FEWER PIPES, **MORE PERFORMANCE**

Geberit Pluvia drains roofs efficiently and reliably even under the heaviest rainfall. Because significantly less product material and space is required for siphonic roof drainage than for conventional systems, free space is created. Greater design freedom in planning, higher cost-effectiveness during installation and operation – all good reasons to choose Geberit expertise. Through tried-andtested technology, innovative details and a holistic service, Geberit Pluvia has been setting new standards for many years.

ROOF DRAINAGE WITH **NEGATIVE PRESSURE**

The right technology ensures a better result: While conventional systems simply allow rain to run off through sloping pipes, the compact Geberit Pluvia pipe system fills up quickly and extracts the rainwater from the roof using the resultant negative pressure. The Geberit Pluvia roof outlets prevent air from being sucked in and guarantee reliable performance. The result: double the amount of rainwater discharge at half the pipe diameter. There is also greater design freedom in terms of planning, since there is no longer any need for pipelines that have to be laid with a slope.

FEWER ROOF OULETS
Thanks to the high discharge rate of the siphonic system, fewer roof outlets are required. This results in savings in product material and the amount of work needed, while also preserving the roof.

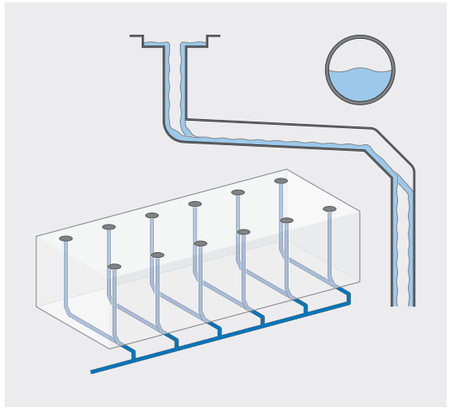
FEWER DISCHARGE STACKS
Because the pipes are filled completely, fewer drains are required. The result: greater flexibility in planning.

FEWER UNDERGROUND PIPE CONNECTIONS
Fewer discharge stacks and fewer connections mean lower installation and material costs.

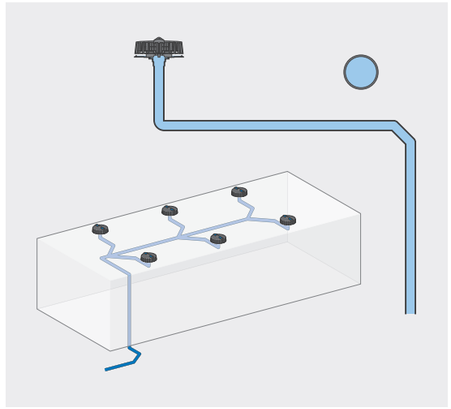
SMALLER PIPE DIAMETER
Geberit Pluvia pipelines are designed for complete filling. This reduces the pipe diameter to the bare necessity.

SELF-CLEANING SYSTEM
The high flow velocity of more than 0.5 m/s when the pipeline is filled produces suction which contributes to the self-cleaning of the system. This ultimately means less time spent on maintenance.

NO SLOPE
Because Geberit Pluvia pipelines are laid horizontally, the drainage system does not result in any loss of space.



↑
Conventional roof drainage system

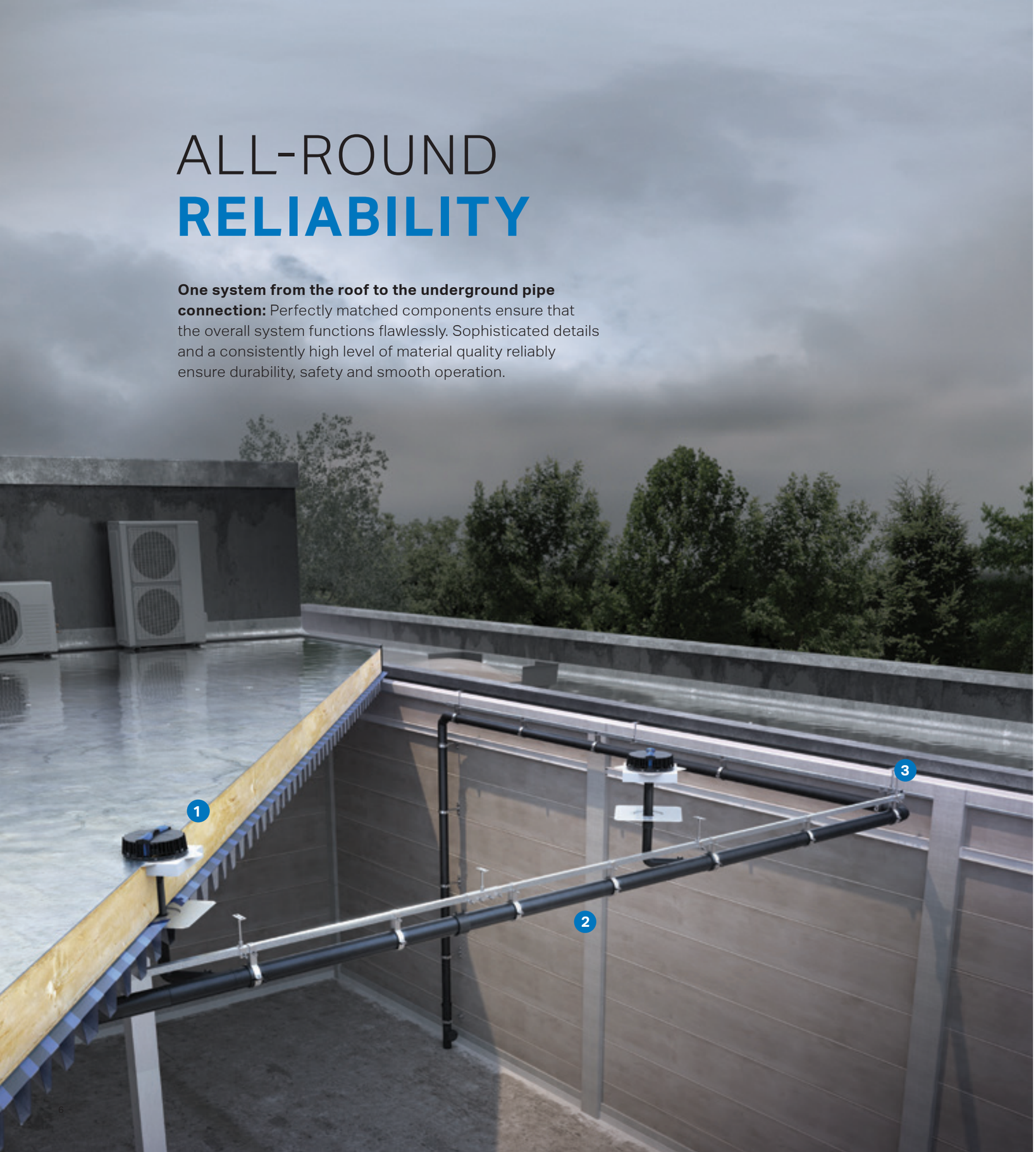


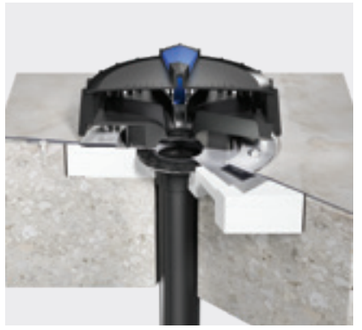
↑
Geberit Pluvia siphonic roof drainage

- High savings in materials
- Fast installation
- Optimal design freedom and use of space
- Less time spent on maintenance
- High performance and reliability

ALL-ROUND **RELIABILITY**

One system from the roof to the underground pipe connection: Perfectly matched components ensure that the overall system functions flawlessly. Sophisticated details and a consistently high level of material quality reliably ensure durability, safety and smooth operation.



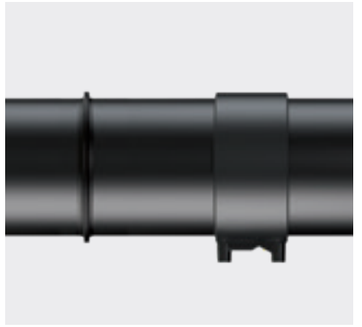


1 THE GEBERIT PLUVIA ROOF OUTLETS

- Reliable sealing with the Geberit flange gasket made from EPDM
- Each roof outlet is tested individually for tightness at the factory
- The function disc prevents air from being sucked in
- Twist lock mechanism for easy installation



- Can be used as an emergency overflow system (with installation kit)



2 THE GEBERIT PIPES MADE FROM HDPE

- Wide range of diametres
- Maximum abrasion resistance, zero corrosion
- Totally sealed, substance-to-substance welding joint
- Can be safely used for extreme temperature
- Can be connected via butt welding or with electrofusion couplings
- Safe against ageing caused by UV rays
- Cast-in concrete possible



3 THE GEBERIT PLUVIA FASTENING SYSTEM

- All mechanical forces are transmitted to the square steel rail
- Fewer fastening points to the structure than with conventional fastening
- Can be installed easily using a hammer thanks to the universal tension wedges
- Ideal for lightweight roofs since there are only weak forces acting on the building structure

OPTIMAL DISTRIBUTION OF FORCE

Geberit Pluvia features a specific fastening system that can be attached to the building structure in just a few steps. All it takes is a fastening point every 2.5 metres. As very little force is exerted directly on the building structure, the system is flexible and ideal for lightweight roofs.

THERMALLY CAUSED CHANGE IN LENGTH

The Geberit HDPE pipe system is used for both building drainage and roof drainage. Geberit HDPE has a thermally caused change in length of 0.17 mm/m*K. This means that the pipe system expands or contracts when there is a change in temperature. This change in length must be accommodated by suitable measures.

In conventional drainage systems, this is usually done by using expansion sockets which are installed at a maximum distance of 6 metres. The force that is produced on the expansion socket as it absorbs the thermally caused change in length must be absorbed by suitable anchor points.

FORCE TRANSMISSION WITH THE GEBERIT PLUVIA FASTENING SYSTEM

The Geberit Pluvia fastening system prevents this force from being transferred to the building structure. In contrast to conventional pipe fixations, this system uses a support rail which absorbs this force. To achieve this, the horizontal Geberit HDPE pipeline is connected at regular intervals to the Geberit Pluvia support rail with anchor brackets.

EASY INSTALLATION WITH WEDGES

Tension wedges can be used to mount both the pipe brackets as well as the ceiling suspension onto the support rail – without requiring any special tools. The universal wedges are quick and easy to hammer in and the system can even be premounted on the floor.

FASTENING OF ANCHOR POINTS

Compared to the usual method with two electrofusion couplings, the anchor points can be installed in just a few simple steps with the Geberit electrofusion tape. Additional anchor points can also be set or placements corrected after mounting.

LITTLE FORCE EXERTED ON THE BUILDING STRUCTURE

As the force is absorbed by the support rail, significantly less force is exerted directly on the building structure. Compared to conventional fastening systems, the number of fastening points on the building structure is substantially reduced. The Geberit Pluvia support rail is fastened at a maximum distance of 2.5 m to the building structure and, in contrast to conventional fastening systems, it only needs to carry the weight of the pipe system. This means that all pipe dimensions can be fastened to the building structure with an M10 threaded rod. As very little force is exerted on the building structure, the system is also easy to install on lightweight roofs.

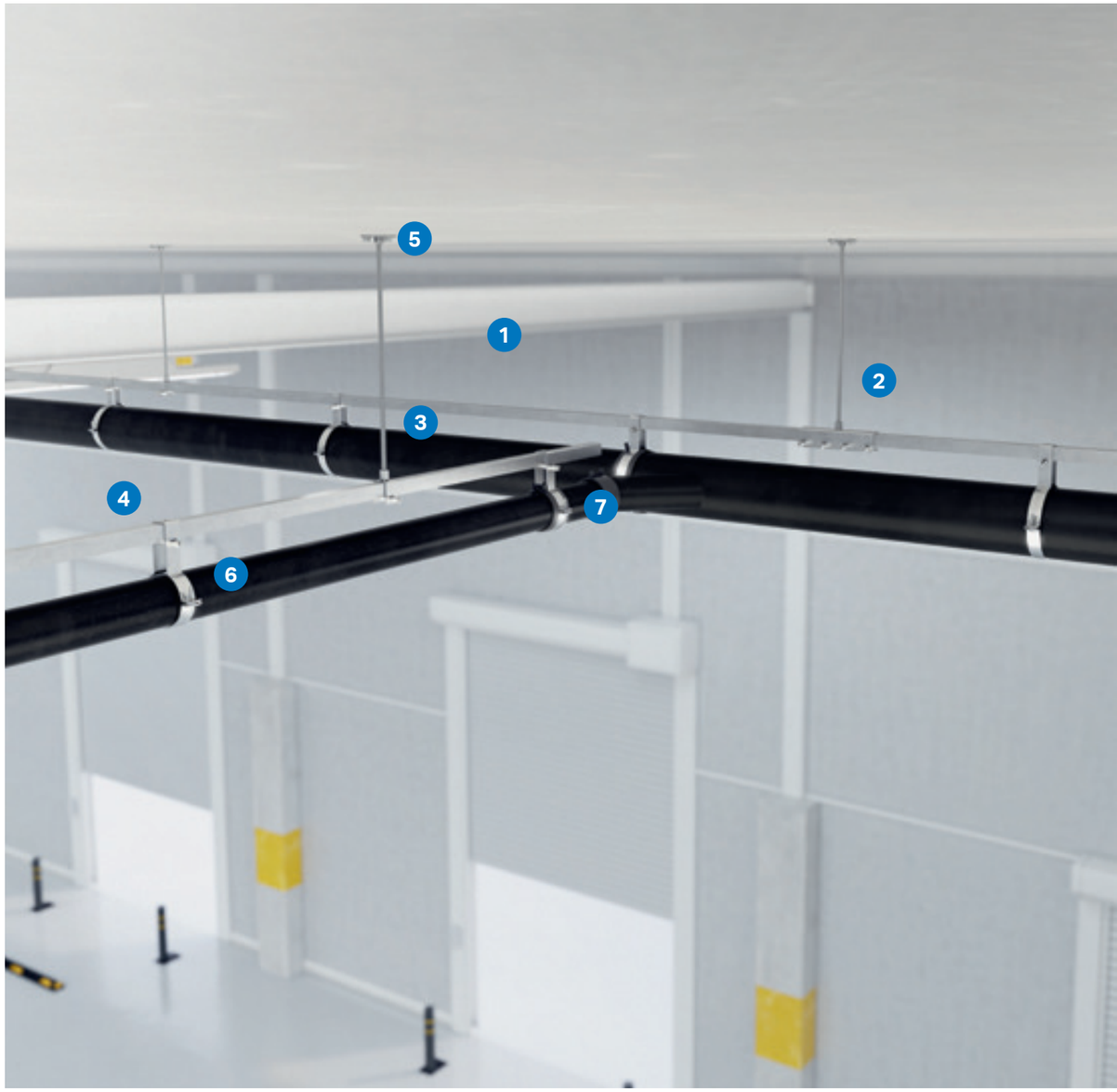
The Geberit Pluvia fastening system was developed for the installation of surface-mounted, horizontal roof drainage pipes. Changes in the length of the pipe are accommodated within the system and the resulting force is transferred to the support rail routed parallel to the pipe via the pipe anchor brackets.



↑ This system can be installed without any special tools.



↑ Installing the anchor points with the Geberit electrofusion tape.



Fastening with square profiles for pipes d40–d200

1. Support rail
2. Connection element
3. Suspension element
4. Tension wedge
5. Threaded rod and mounting plate[1)]
6. Sliding point with pipe bracket
7. Anchor point with pipe bracket and electrofusion tape

[1)] This mounting plate is only an example. Other mounting plates from the Geberit product range may also be used.

GEBERIT PLUVIA SUPPORT SET

THE SIMPLE SYSTEM WITH A FEW PARTS

The Geberit Pluvia support set with just a few parts increases both safety and stability. It greatly reduces the risk of lateral vibrations or oscillations caused by the high flow velocity of the water to be discharged. Even systems that are already installed and in operation can be retrofitted with supports.

TYPES OF USE

From pipe diameter d90, the supports for the Geberit Pluvia fastening system should be used for suspensions deeper than 60 cm (for d90–d125) or 30 cm (d160–d315). This significantly reduces vibrations in unfavourable installation situations.

The distances are defined as follows:

- every 10 m, alternating between the left and the right, on the sides of the pipeline
- for pipe lengths > 30 m, a support is installed every 30 m in the direction of the pipe axis
- at the beginning and end of each pipe section



↑
Geberit Pluvia support set for d90–d200



↑
The supports can also be mounted to the wall.



↑
The tension wedges are easy to hammer in without requiring any special tools.

SUITABLE FOR MANY ROOFS

Siphonic roof drainage for all scenarios: Thanks to the modular construction and the many models of the Geberit Pluvia roof outlet, the system is suitable for almost all installation situations on large buildings and roofs. Required accessories for virtually all applications are available, and can make the system highly flexible. Whenever complex roof structures or difficult geometries pose a particular challenge, the Geberit team would be happy to work with you to find a solution.



←

GEBERIT PLUVIA PRODUCTFINDER
The information pool for all plumbers and sanitary engineers: the Geberit Pluvia Product Finder gives you access to the appropriate Geberit Pluvia roof outlet complete with accessories and installation instructions suitable for the respective roof structure. With just a few clicks you can find the right solution for your construction situation.



EXAMPLE 1:
CONCRETE ROOF WITH BITUMEN ROOF FOIL
Geberit Pluvia features a contact sheet that exceeds standard sizes and therefore makes for a better connection. Both the roof outlet for foil and the roof outlet for bitumen are directly fastened to the roof structure on site.



EXAMPLE 2:
LIGHTWEIGHT ROOF, INSULATED WITH ROOF FOIL AND THE GEBERIT VAPOUR BARRIER CONNECTION
Lightweight roofs benefit from the low static load thanks to Geberit Pluvia. The installation is performed with a flange connection, allowing the long connection pipe to effortlessly overcome high insulation thicknesses. The Geberit vapour barrier connection can be used both for foil and bitumen.



EXAMPLE 3:
WEIGHT-BEARING CONCRETE ROOF WITH BITUMEN ROOF FOIL
Green roofs and those that are suitable for promenade or parking decks are aesthetically pleasing and highly useful. Such roofs can be implemented with a supplementary set. The Geberit Pluvia supplementary set can be height-adjusted according to the configuration of layers.



EXAMPLE 4:
ROOF WITH STEEL GUTTER
Thanks to its compact design, Geberit Pluvia is also suitable for installation in gutters. Depending on the product material, the system can be installed using soldering or by means of a flange.



Happy with the positions of the roof outlets and satisfied with the quality of the welding joints and pipe fixtures: Fikret Gençgel (left) on a site visit in Turkey's Marmara Region with plumber Önder Özdemir.
→

A STRONG PARTNERSHIP

Technical support with experience from more than 50'000 projects: For over 40 years, Geberit has supported sanitary engineers, plumbers and building owners around the world in the use of Geberit Pluvia. Thanks to the in-house product development and research in the field of hydraulics, customers have access to Geberit's comprehensive market and technology expertise. Reliability and trustworthiness are key factors when it comes to supporting complex projects with optimal support services. The Geberit team is on site to provide help wherever it is needed.

1 PLANNING PHASE | **2 TENDER INVITATION AND QUOTATION PHASE** | **3 EXECUTION**

1 IN THE PLANNING PHASE

Supporting customer planning

- Geberit ProPlanner software for planning Geberit Pluvia
- Software training free of charge
- Provision of BIM data for Autodesk® Revit®
- Hydraulic calculation directly in Autodesk ® Revit®

Geberit planning service

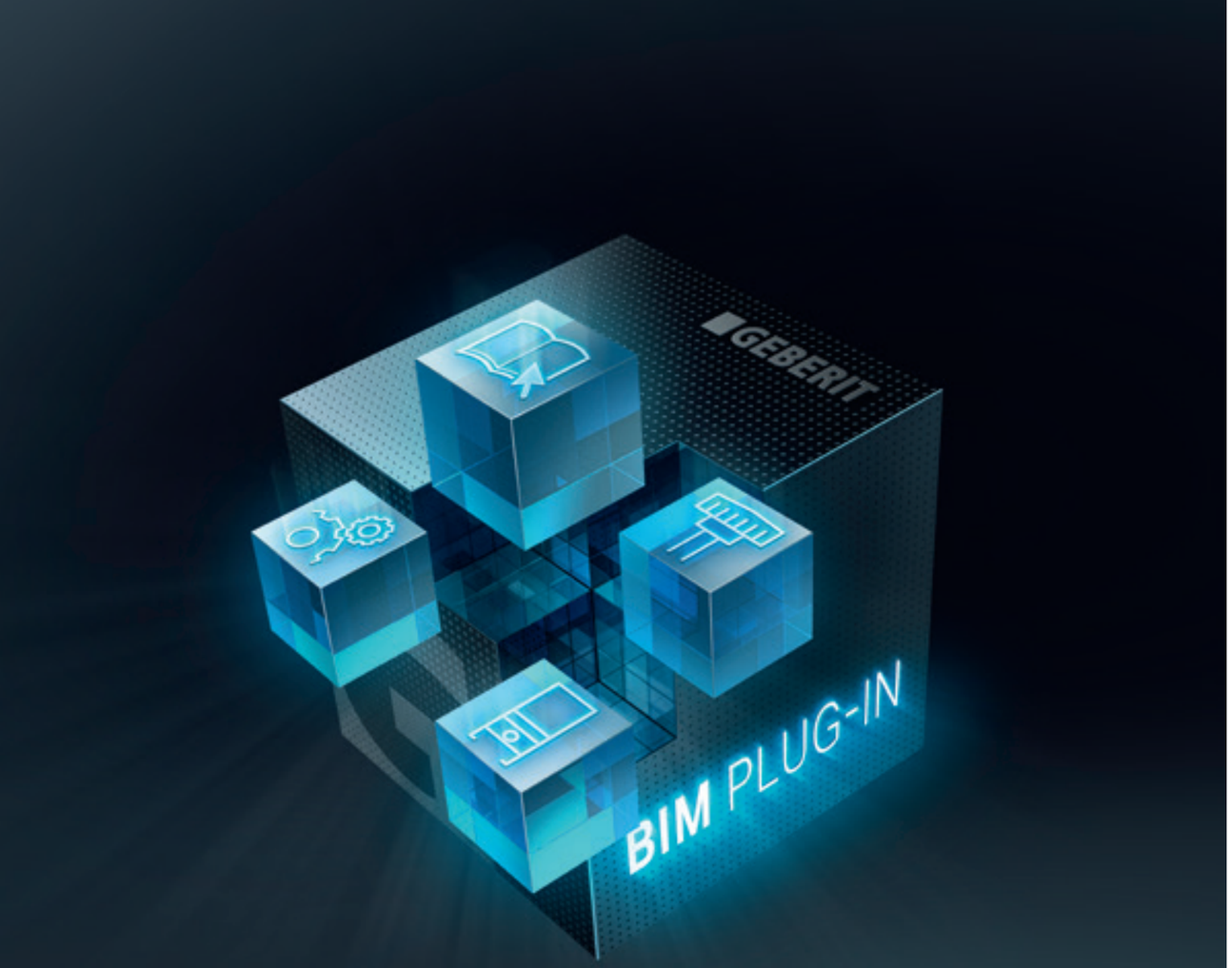
- Planning the number of roof outlets according to rainfall
- Creation of isometrics with Geberit ProPlanner
- Complete planning on the basis of construction plans
- Meaningful comparisons of system costs
- Creation of additional complete packages for plumbers
- Material planning
- Hydraulic certificates for correct planning

2 IN THE QUOTATION PHASE

- Provision of tender invitation texts
- Assistance in preparing a quotation
- Creation of a material list with Geberit ProPlanner
- Creation of additional complete packages for plumbers

3 IN THE EXECUTION

- Construction site training for plumbers and roofers
- Regular construction guidance as necessary
- Support for change planning
- Final project acceptance
- Maintenance training





CATALOGUE MODULE
Quick and direct access to all Geberit BIM content. The Catalogue module includes a whole host of product groups spanning piping systems, installation systems, and now also ceramic products and bathroom furniture.



PLUVIA MODULE
For calculating the hydraulic certification and dimensioning for roof drainage with Geberit Pluvia directly Complex static data becomes simple parametric models. in Autodesk Revit®.



WIZARD MODULE
Practical functions for planning supply networks and pipe runs facilitate prefabrication significantly by enabling accelerated and cost-optimised prefabrication planning processes. What's more, it is now possible to search for products using Geberit article numbers.

DIGITAL CONSTRUCTION

FOR GETTING TO GRIPS WITH ALL **YOUR DATA**

Digital planning and construction using the BIM method has brought about fundamental changes in the construction industry. The holistic and model-based approach means that planning and construction processes can also be optimised and accelerated within the sanitary industry. Geberit's aim is to create simple and innovative solutions that offer sanitary engineers, architects and contractors added safety and greater cost-effectiveness. And with the new Geberit BIM Plug-in for Autodesk Revit®, another important step has been taken in the right direction.

A SINGLE PLUG-IN FOR ALL TOOLS

It's never been so easy: The new Geberit BIM Plug-in for Autodesk Revit® is an integrated tool that brings together all previous Geberit planning and calculation tools for Autodesk Revit® in a single integrated application.

This way, you can reliably avoid collisions with other technical building systems and everyone involved in the construction project can access the same version of planning at any time.

LIGHTWEIGHT AND HANDY BIM OBJECTS

Geberit relies on highly simplified, parametric geometries with all the metadata that is relevant for planning in the background. This avoids overloading CAD systems from the outset and allows for efficient planning. Despite their highly simplified geometry, Geberit BIM objects meet the requirements of all planning and construction phases, right through to facility management.

STRAIGHTFORWARD SANITARY PLANNING

Finding up-to-date, complete and valid BIM content that is easy to manage is often a challenge in itself. The Geberit BIM Plug-in offers a reliable, integrated solution that meets all the needs for a straightforward and correct planning process.

AS CURRENT AS IT GETS

The direct connection to the Geberit product information management (PIM) system ensures that the user only uploads tested and approved BIM objects. This prevents the opportunity for planning errors caused by faulty or invalid BIM content.

GEBERIT BIM PLUG-IN FOR AUTODESK REVIT®
The plug-in is available to download free of charge. **Here's how it works:**

1. Download the plug-in on the Geberit website: **www.geberit-global.com/BIM**
2. Log in and install the plug-in

PLAYMOBIL LOGISTICS CENTRE

FOR GREATER **COST-EFFECTIVNESS**

Germany‘s biggest toymaker is making more space for childhood dreams. Millions of toy packages are exported around the world every year and, with the company continuing to produce record volumes, a larger logistics centre is needed. Eight new storage halls with a total area of 80‘000 m² have been built, featuring trapezoidal roofs the size of 12 football pitches: clearly a job for Geberit Pluvia roof drainage.

Because the pipelines are mainly routed horizontally and close to the ceiling, almost the entire converted room can be used for high-bay storage.

Teamwork was required at a height of 15 metres for this installation. The Geberit HDPE pipes and fittings were pieced together using a mobile electrofusion machine to create a leakproof overall system. This system was stabilised with the Geberit fastening system. This ensured a speedy installation of the surface-mounted, horizontal roof drainage pipes.





Playmobil logistics
centreHerrieden, Germany
↓



«Especially for this kind of mammoth project involving a huge amount of materials and coordination, it’s important that Geberit is a reliable partner and that we have a cost-effective system.»

Wolfgang Schirmer,
Planning office
Schirmer,
Sugenheim, Germany

«In terms of technology, Geberit covers a great deal with a good price-performance ratio. Because the individual components are perfectly fine-tuned to each other, installation can be performed both quickly and cost-effectively. »

Benjamin Heuchel,
Project manager
Güther Sanitär GmbH,
Feuchtwangen, Germany

Titanic Visitor Centre
Belfast, Nordirland
↓

Foto: Chris Heaney/Titanic Belfast

TITANIC VISITOR CENTRE

FOR MORE **DESIGN FREEDOM**

Spread over six floors and with a total area of 14 000 m², the visitor centre – which, with its sharp and gleaming façade, is reminiscent of both a ship's bow and an iceberg – not only tells the story of the legendary steam-powered cruise liner but also transports visitors into Belfast's industrial heyday. With over 800'000 visitors in its first year, the museum has far exceeded expectations.

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With the unusual design of the building, the roof drainage had to be meticulously adapted to the conditions on site. And then there was the inflexible deadline of the spring 2012 opening date – exactly 100 years since the legendary Titanic sank. Nevertheless, the expert advisers at Geberit were always on hand to provide experience and support, even given the difficult and ongoing nature of the planning.



«Based on the typical volume of rain in the region, we decided to implement a negative-pressure solution. It was particularly important for us to include some kind of overflow protection. Geberit and the plumbing engineers suggested installing graduated thresholds in order to level out the amount of water per roof outlet. That was precisely the kind of watertight solution that we needed. For the overall job, choosing anything other than Geberit Pluvia was out of the question.»

Paul Crowe,
Todd Architects

VODAFONE ARENA

FOR ADDED **RELIABILITY**

In order to fulfil the required UEFA standards and increase capacity to 43’500 seats, Istanbul’s long-standing Beşiktaş football club decided to demolish the İnönü Stadium, which had been in use since 1947, and to construct an impressive new stadium directly on the Bosphorus.



↑
Vodafone Arena
Istanbul, Turkey



«We played an active role in the project and were able to provide ongoing technical support thanks to our know-how. With the seamless cooperation between our on-site team and the experienced plumbers from the company carrying out the job, the project was carried out safely and successfully. We are very pleased at the level of customer trust in Geberit.»

Fikret Gencgel
Product Manager
Geberit Tesisat Sistemleri Ticaret Ltd.

One part of the architectural concept was the impressive roof design, which posed particular challenges in terms of drainage. For example, the large overall size and the specific inclination of the roof called for the use of negative-pressure technology. A solution was needed that would cope with as few stacks as possible with a distance of around 150 – 200 m to each of the roof outlets. On this basis, Geberit Pluvia was the obvious choice.

During the intensive preliminary planning stage, the team comprising the architect and construction company used the ProPlanner software and consulted the on-site Geberit project management team to find the economical solution they were looking for. The 125 roof outlets were reliably drained as required with only 19 stacks.

The installation had to be carried out using hoisting cranes because the structural conditions of the roof were unsuitable for scaffolding.



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