GEBERIT

GEBERIT PLUVIA FASTENING

THE SIMPLE SYSTEM FOR SAFE MOUNTING

KNOW HOW INSTALLED

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 PE-HD pipe system is used for both building drainage and roof drainage. Geberit PE 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 PE 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 THE 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.

This system can be installed without any special tools.

Installing the anchor points with the Geberit electrofusion tape.

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.

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 ROOF DRAINAGE

The overall system: Geberit Pluvia is a roof drainage system that works based on negative pressure. The compact pipe system fills completely and the resulting negative pressure then suctions off the rainwater from the roof.
The Geberit Pluvia roof outlets prevent air from being drawn in and ensure reliable performance. The Geberit Pluvia system is laid horizontally, does not require a slope and requires fewer stacks, thus offering more design flexibility.

FEWER PIPES

Geberit Pluvia allows compact installations as the system requires fewer pipes and smaller pipe diameters are sufficient thanks to complete filling. This ensures quick installation, high savings in materials and optimal use of space.

A RELIABLE SYSTEM

Depending on the type of roof, Geberit Pluvia features various roof outlets and modules. Accessories which facilitate installation are available for virtually all applications. Safety is also ensured by the proven Geberit PE-HD piping system, which is particularly suitable for this purpose due to its high resistance and the sealed, positively bonded welding joint.

GEBERIT PLUVIA
SUPPORT SET

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.

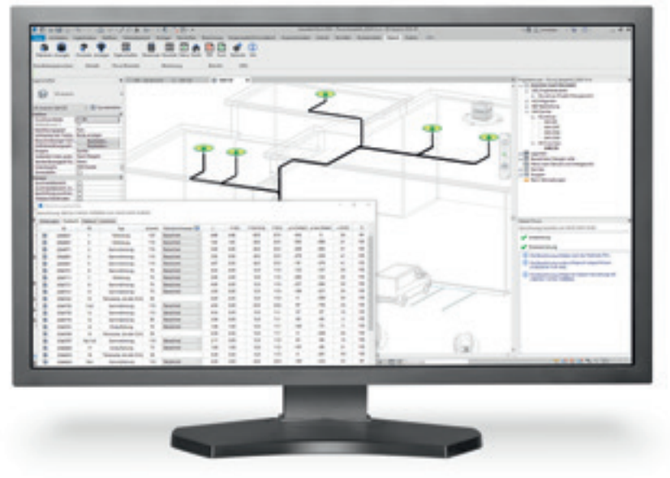
The distances are defined as follows:

- 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.



Pluvia calculations are carried out directly in Autodesk® Revit®.

ALL DATA
UNDER CONTROL

A program for success: everything starts with a good plan. That's why Geberit supports building owners, architects, engineers and sanitary engineers with the tailor-made Geberit ProPlanner software for planning and making calculations for medium-sized to larger projects. For Geberit Pluvia, Geberit also offers parametric BIM (Building Information Modelling) data and a plug-in for hydraulic calculation directly in Autodesk® Revit®.

GEBERIT PROPLANNER

Making roof drainage calculations easy – with the Geberit Pluvia module, the planning process is significantly faster and more reliable using artificial intelligence. This means that the full array of syphonic roof drainage system functions can be ensured and the entire system can be configured to be as functional and cost-efficient as possible. In this way, the majority of systems can be dimensioned fully automatically, thus saving a lot of time during the planning phase.

With a few clicks of the mouse, a fully dimensioned and calculated plan is created. The isometric visualization, hydraulic certificates, material lists and options complete with individual hourly rates are available straight away as output results.

A material list with article numbers and the positions of the anchor and sliding points on the sections is also created to plan the fastenings. The MEP planer can then choose to create a design with or without the Geberit Pluvia support set.

Thanks to Geberit ProPlanner, customers can easily and safely plan their Geberit Pluvia fastening system.

GEBERIT PLUVIA CALCULATIONS DIRECTLY IN AUTODESK® REVIT®

The Geberit Pluvia plug-in enables the Pluvia system to be calculated directly in Autodesk® Revit®. This makes Geberit Pluvia fully BIM-compatible. Just like in Geberit ProPlanner, a hydraulic certificate indicates that the system has been planned correctly.

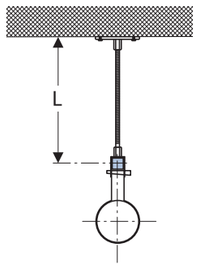
GEBERIT PLUVIA SUPPORT SETS: **NEW PLANNING**

SUPPORTS FOR THE GEBERIT PLUVIA FASTENING SYSTEM

Geberit Pluvia support sets provide additional support for the Geberit Pluvia fastening system. They are used to prevent the Geberit Pluvia fastening system from oscillating laterally and longitudinally.

Geberit Pluvia support sets are used in the following two situations::

- horizontal Geberit Pluvia pipes ≥ ø 90 on support rails
- with suspension elements on the ceiling (L)
  - pipes ø 90–125: support rail suspended more than 60 cm abgehängt.
  - pipes ø 160–315: support rail suspended more than 30 cm abgehängt.



Geberit Pluvia support sets are used in new installations of Geberit Pluvia fastening systems. However, they can also be retrofitted in existing Geberit Pluvia fastening systems. Depending on the pipe dimensions, the following articles are required to attach Geberit Pluvia support sets:

Pipe diameter [mm]	Geberit Pluvia support set	Threaded rod dimensions
ø 90–200	Art.-Nr. 358.061.00.1	1/2" standard or art. no. 362.852.26.1
ø 250–315	Art.-Nr. 358.062.00.1	

Pluvia support sets can be fastened on ceilings as well as walls.

CEILING FASTENER FOR GEBERIT PLUVIA SUPPORT SETS

When fastening Pluvia support sets **sideways** on the ceiling, the following rules must be observed:

- Attach a support set at the start and end of every pipe section.
- The maximum distance between the support sets must not exceed 10 m.
- The support sets must be attached on the left and right sides of the support rail alternately, at an angle of > 45° to the ceiling.

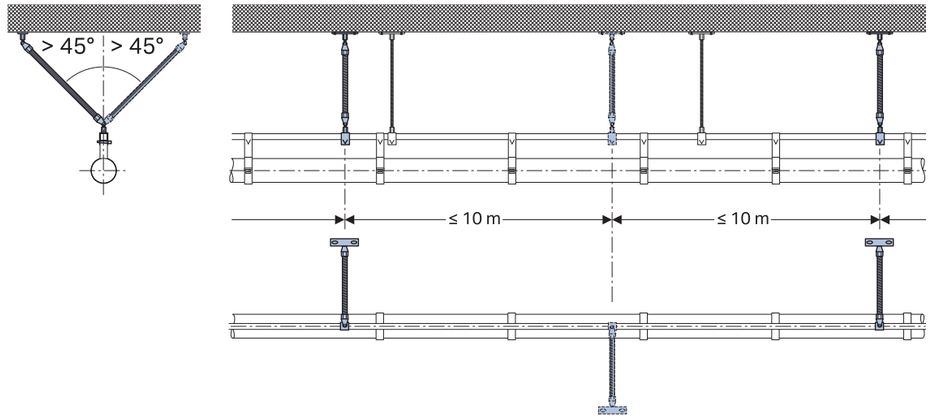


Figure 1: Positioning of Pluvia support sets installed sideways on the ceiling

If pipe sections longer than 30 m are being used, additional support sets must be mounted on the ceiling, **lengthwise** in relation to the pipe. The following rules must be observed during this process:

- The maximum distance between the support sets must not exceed 30 m lengthwise.
- The support sets must be mounted lengthwise in relation to the support rail at an angle of > 45° to the ceiling. They can be installed either in the direction of flow or against it.

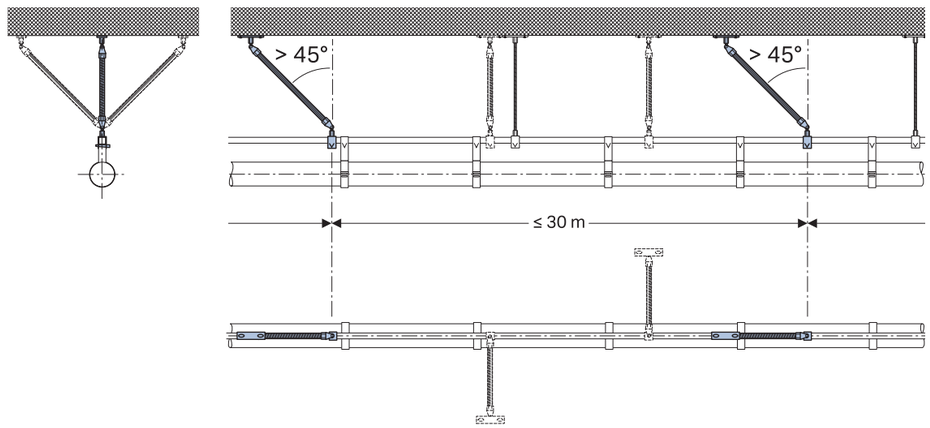


Figure 2: Positioning of Geberit Pluvia support sets installed on the ceiling, lengthwise in relation to the pipe

WALL FIXING FOR GEBERIT PLUVIA SUPPORT SETS

In the case of Geberit Pluvia support rails suspended at a distance, or Geberit Pluvia pipes positioned close to the wall, Geberit Pluvia support sets can be fastened to the wall **sideways.** The following rules must be observed during this process:

- Attach a support set at the start and end of every pipe section.
- The maximum distance between the support sets must not exceed 10 m.

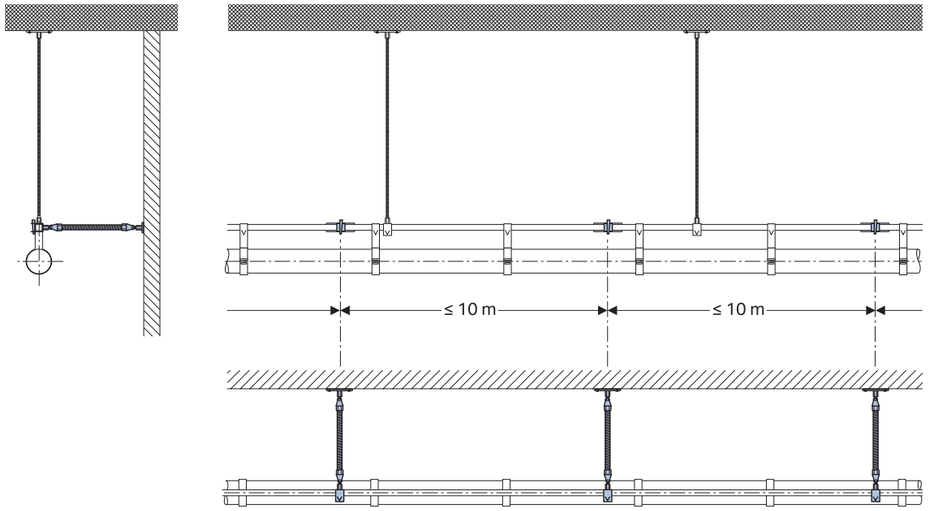


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Figure 3: Positioning of Geberit Pluvia support sets installed sideways on the wall

If pipe sections longer than 30 m are being used, additional support sets must be mounted on the wall, **lengthwise** in relation to the pipe. The following rules must be observed during this process:

- The maximum distance between the support sets must not exceed 30 m lengthwise.
- The support sets must be mounted lengthwise in relation to the support rail at an angle of > 45° to the wall. They can be installed either in the direction of flow or against it.

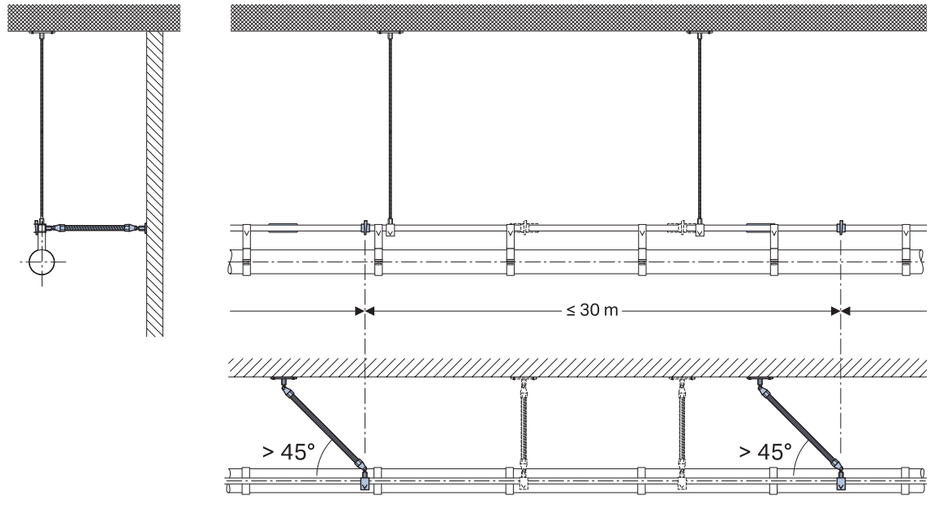

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Figure 4: Positioning of Geberit Pluvia support sets installed on the wall, lengthwise in relation to the pipe

The number and positioning of the Geberit Pluvia support sets in a piping system can be determined with the Geberit ProPlanner planning software.

GEBERIT PLUVIA SUPPORT SET

Examples of supports on Geberit Pluvia branch discharge pipes:

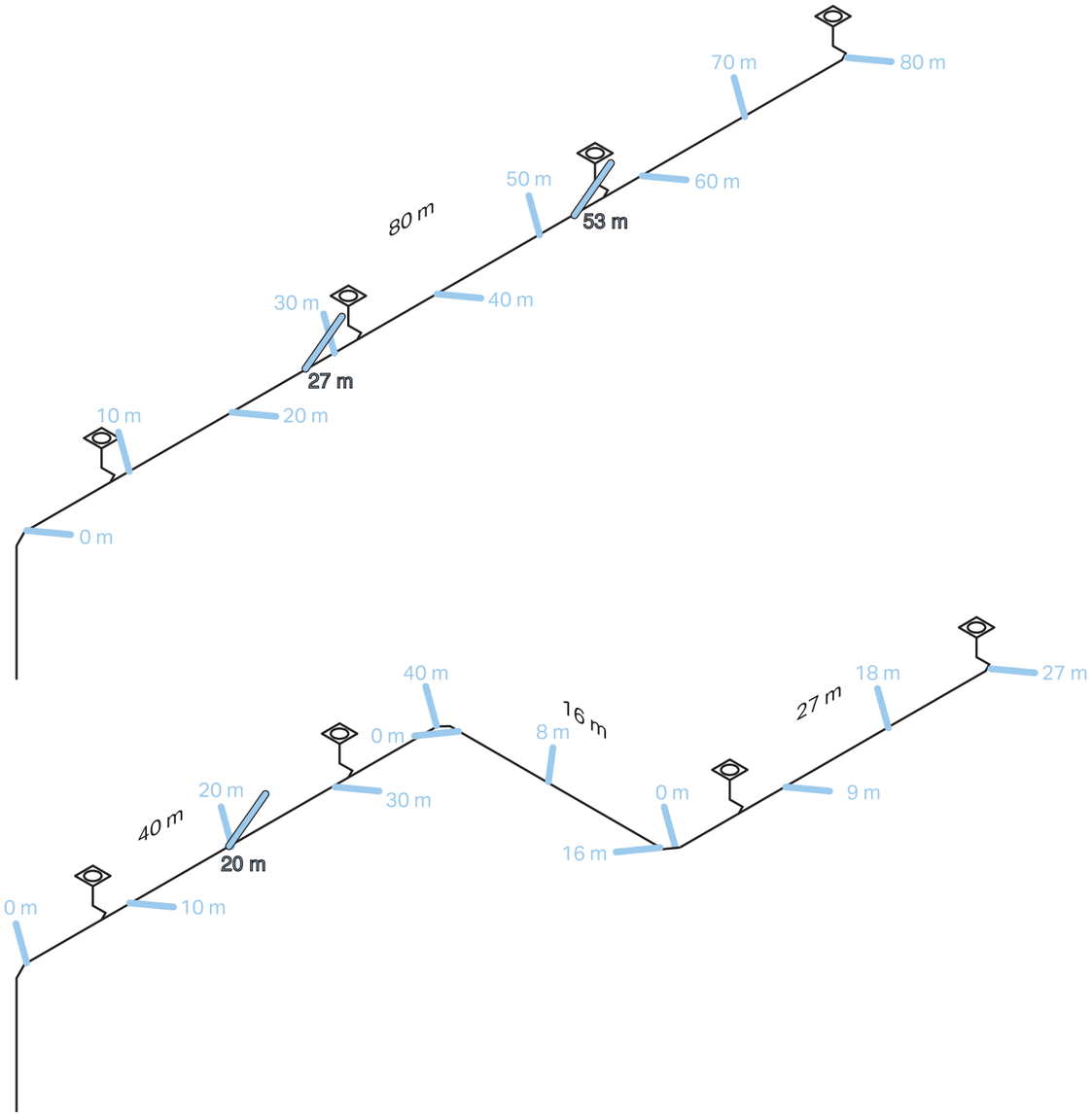

Figure 5: Examples of attaching supports to Geberit Pluvia connecting pipes