

INSTALLATION INSTRUCTIONS

WALL PENETRATIONS

Akatherm FIP wall penetrations offer a reliable and technically sound means of leading pipework through a wall without having to use different materials. This means that consecutive pipes can be connected to one another by means of a flange and routed into the building according to the type of wall penetration.



The flange plates of all standard versions are drilled to PN 10 in accordance with DIN EN 1092 (DIN 2501). Fitted with strap retainers, the rubber packing collar ensures that the penetration remains impermeable to presswater up to 5 bar for the sizes up to 315 mm and up to 4 bar for 355 mm and larger.

By the swan-necked metallic towels which are connected with the plastic flange plate, high pull strength properties will be reached.

Our variable production process enables us to manufacture a wide range of flexible, customised designs, whereby the minimum dimensions are limited by the length of the socket dowels and the rubber collar.

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- Like all Akatherm FIP products, the penetrations also undergo a stringent quality control process.
- Every wall penetration must be stored properly between delivery and installation.
- If penetrations are to be stored for a longer period, they should be kept away from direct sunlight to prevent any changes to the material (e.g. surface discolouration of PVC-U or PP) or deformation if exposed to excess heat.
- All parts must be kept free of tension and clean in interim storage until they are fitted.
- All national safety requirements must be observed with respect to installation.
- We cannot accept any liability for improper use or installation.

- Two-sided wall penetrations are delivered with transport safety devices.
- These must be removed as shown below immediately prior to installation.



- The wall penetration must then be secured in the correct position at its installation location.
- We recommend the use of a formwork aid made from a piece of particle board, for example, that has been shaped to fit the inside diameter of the mounting part and is fixed to the formwork.
- The mounting part is then fitted over the formwork aid and secured by means of screws or nails through all of the four holes provided for this purpose (in each corner of the wall penetration).
- It is important to ensure that the mounting plate is fitted as flat as possible against the formwork.
- Under certain circumstances the conditions on site may be such that larger wall penetrations ≥ 400 mm require more fixing points than the four provided in the factory, in which case additional mounting points must be provided (e.g. additional central attachment).



The metal socket dowels must not be used to fix the wall penetration. The socket dowels may sustain damage (corrosion) as a result of being in direct contact with reinforcement rods or mounting wire over a long period of time.

Cathodic corrosion must be prevented by ensuring that the reinforcement rods do not come into contact with the socket dowels or rest against them during the installation process.

We recommend the application of fine, flexible adhesive tape around the outside contour of the plastic flange plate to prevent it from being soiled during the concreting operation.

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- When filling the formwork with concrete (using a concrete pump or bucket) attention must be given to ensuring that the concrete is not dropped onto the socket dowels directly (at right angles).
- The force of the impact could result in the socket dowels being out of alignment in the wall penetration (wall) or ripped out completely. **In either case, it would no longer be possible to fit the screws and the wall penetration would be useless.**

- It is absolutely essential to ensure that the concrete is compacted properly around the wall penetration during the concreting operation. If it is not compacted properly, particularly in the vicinity of the socket dowels (cavity formation), the socket dowels will no longer be capable of absorbing the forces to which they are subjected and the tightness of the wall penetration cannot be guaranteed.



after removing the formwork



Clean the sealing surface and remove the plugs

- When the penetration has been encased in concrete and the concrete has set, the formwork can be removed.
- The sealing surfaces of the wall penetration must be cleaned if necessary.
- Sharp-edged tools must not be used, however, as these could damage the sealing surface.
- A tool that does not react with stainless steel (where stainless steel socket dowels are fitted / corrosion) must be used to remove the plugs from the socket dowels.



Fitting the connecting line

- We recommend the screw tightening torque values for profile gaskets laid down in DVS 2210-1, Supplement 3, to connect the on-going pipes to the penetration.
- All of the screws provided for by the design must be fitted to ensure that the connecting lines are installed properly.

Once the connecting line has been fitted, the Akatherm FIP wall penetration may be put into service.

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