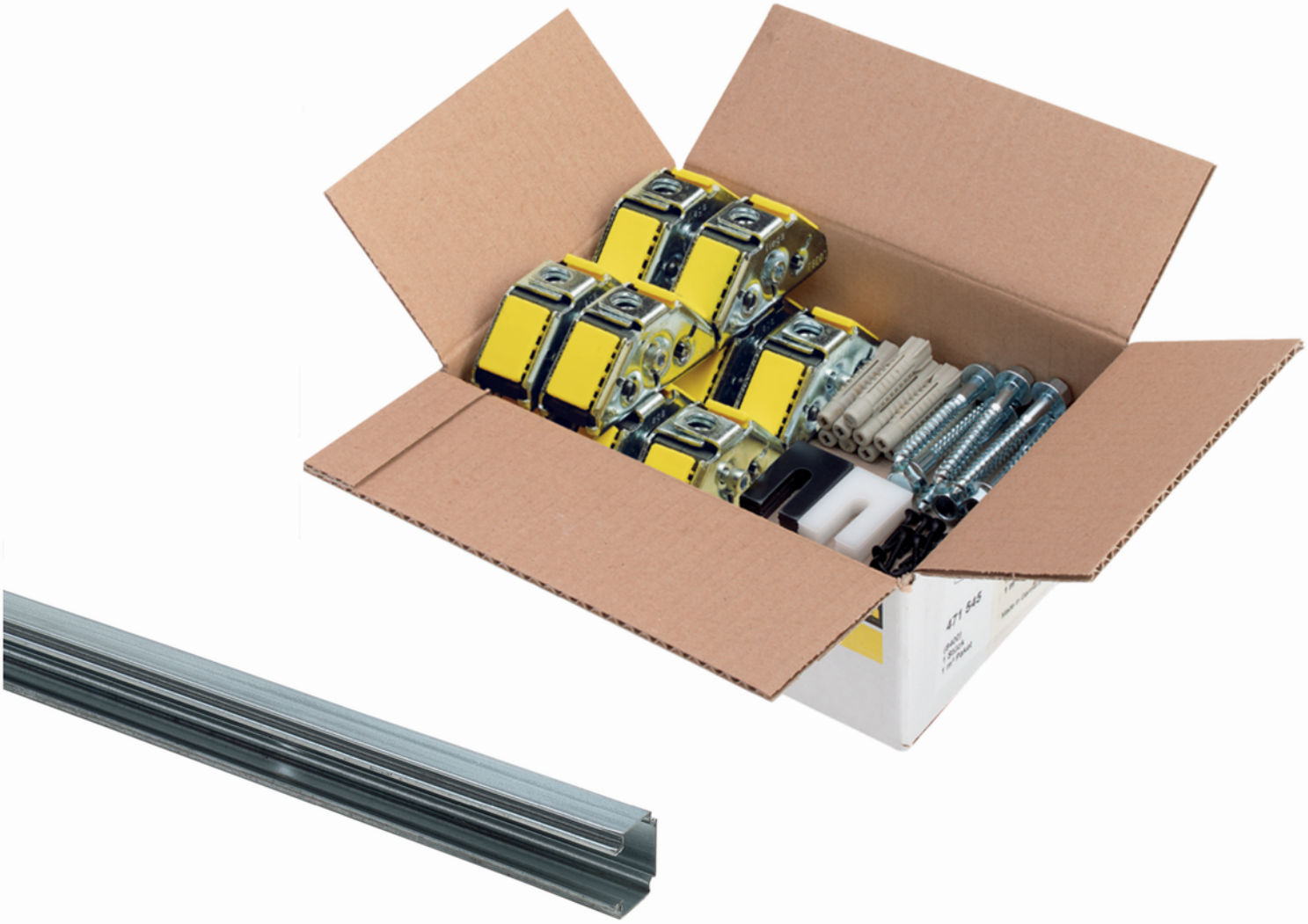
Steptec Pre-wall System

Instructions for Use



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1 About this instruction for use

Trade mark rights exist for this document, further information can be found at *www.viega.com/legal-notices*.

1.1 Target groups

The information in this instruction manual is directed at the following groups of people:

- Heating and sanitary professionals and trained personnel
- Drywall builder

It is not permitted for individuals without the abovementioned training or qualification to mount, install and, if required, service this product. This restriction does not extend to possible operating instructions.

The installation of Viega products must take place in accordance with the general rules of engineering and the Viega instructions for use.

1.2 Labelling of notes

Warning and advisory texts are set aside from the remainder of the text and are labelled with the relevant pictographs.

DANGER!
This symbol warns against possible life-threatening injury.

WARNING!
This symbol warns against possible serious injury.

CAUTION!
This symbol warns against possible injury.

NOTICE!
This symbol warns against possible damage to property.

Notes give you additional helpful tips.

1.3 About this translated version

This instruction for use contains important information about the choice of product or system, assembly and commissioning as well as intended use and, if required, maintenance measures. The information about the products, their properties and application technology are based on the current standards in Europe (e. g. EN) and/or in Germany (e. g. DIN/DVGW).

Some passages in the text may refer to technical codes in Europe/ Germany. These should serve as recommendations in the absence of corresponding national regulations. The pertinent national laws, standards, regulations and guidelines, as well as other technical guidelines, have priority over German/European guidelines in this manual: The information is not binding for other countries and territories and should, as mentioned, be considered as support.

2 Product information

2.1 Intended use

2.1.1 Areas of use

The Viega Steptec system is intended for the creation of partial or room-height pre-wall and partition constructions.

Steptec is inspected for sound insulation in acc. with DIN 4109.

Steptec can be combined with Viegaswift modules.

2.1.2 Using components

The Steptec system consists of:

- mounting rails
- connectors
- modules
- fitting holders
- Steptec punch
- accessories
- pre-wall finish

The Steptec rails as well as the Steptec connectors are the basis for the mounting of the pre-wall or partition construction. Both components are adapted to one another.

Apart from the mounting rails, the Steptec complete package contains all of the required components to enable mounting of the required size, flexibly and irrespective of possible unevenness of the walls.

You can find more information about the optional accessories in the Viega product catalogue.

Fault-free functioning is only guaranteed in combination with Viega original parts.

See *Chapter 3.1.3 'Required material and tools' on page 24* for the correct calculation of the material.

2.2 Product description

2.2.1 Overview

Scope of delivery complete package

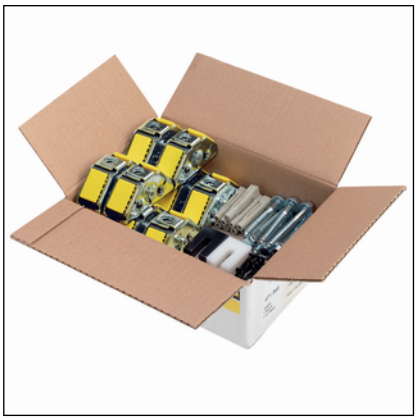


Fig. 1: Complete package

The complete package contains:

- Steptec connectors (universal connectors for 45° and 90° joints with threaded drill hole M 10 for pipe suspensions)
- fixing material for the mounting rails
- levelling material for uneven walls
- screws (self-drilling) of IFGP cladding panel

The size of the complete package is based on the surface to be clad. It is available for 1, 3, 5 and 10 m^2.

Mounting rail

Fig. 2: Mounting rail

The mounting rail made of galvanised steel is 5 m long, open on one side and perforated every 30 cm for wall and floor mounting.

Modules

Various modules belong to the system, they can be integrated into the rail system as required. All module are 430 mm wide.

2.2.2 Mounting versions

You have the possibility of assembling the pre-wall construction in the desired place or pre-mounting it. The Steptec construction can be installed in the desired place with the help of a Steptec mounting elbow. Observe the specifications in chapter *Chapter 3.2.4 'Special mounting variations' on page 37*.

Observe the specified minimum and maximum sizes with all mounting versions.

Half-height pre-wall

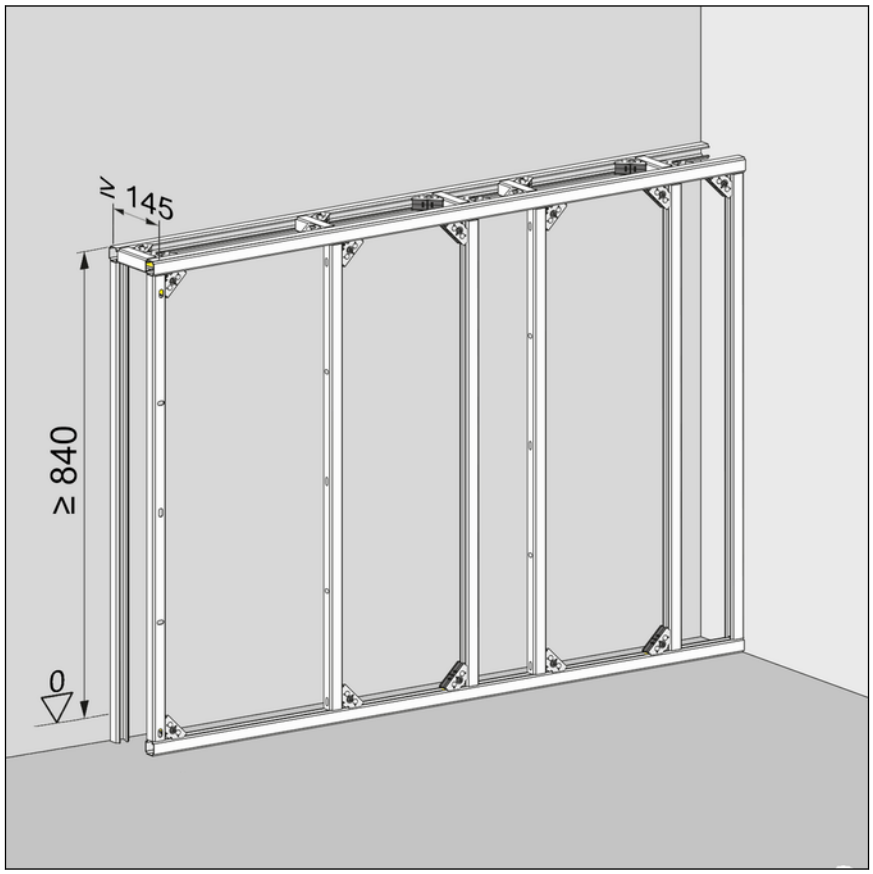


Fig. 3: Installation dimensions half-height pre-wall

Room-height pre-wall

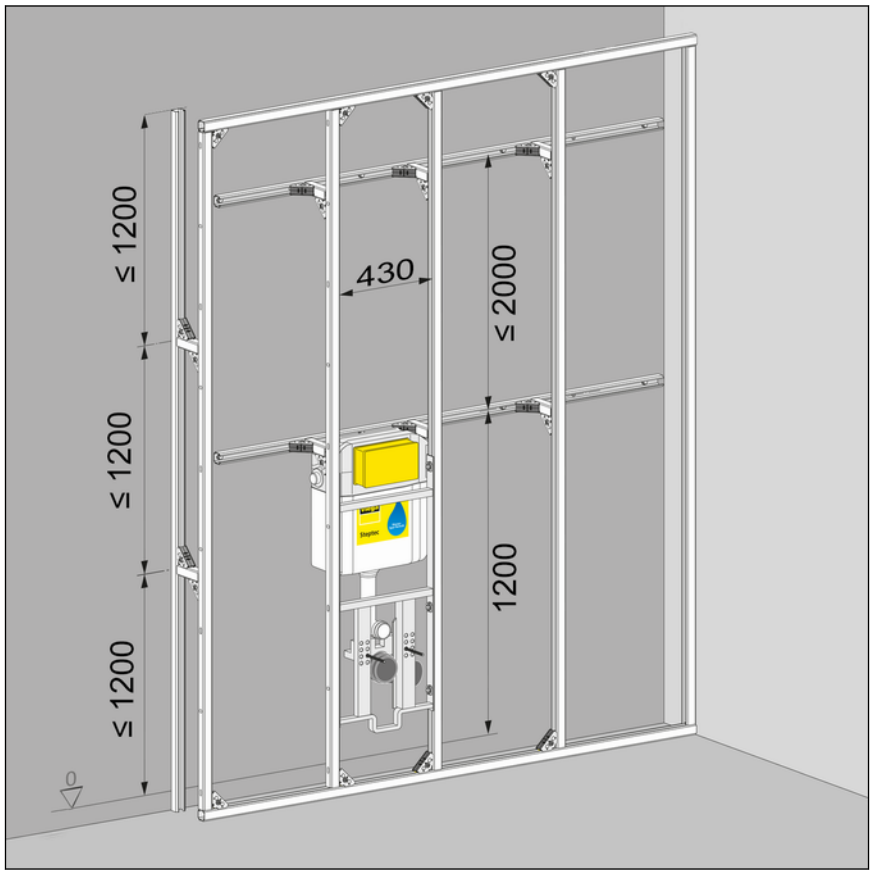


Fig. 4: Installation dimensions room-height pre-wall

Corner mounting

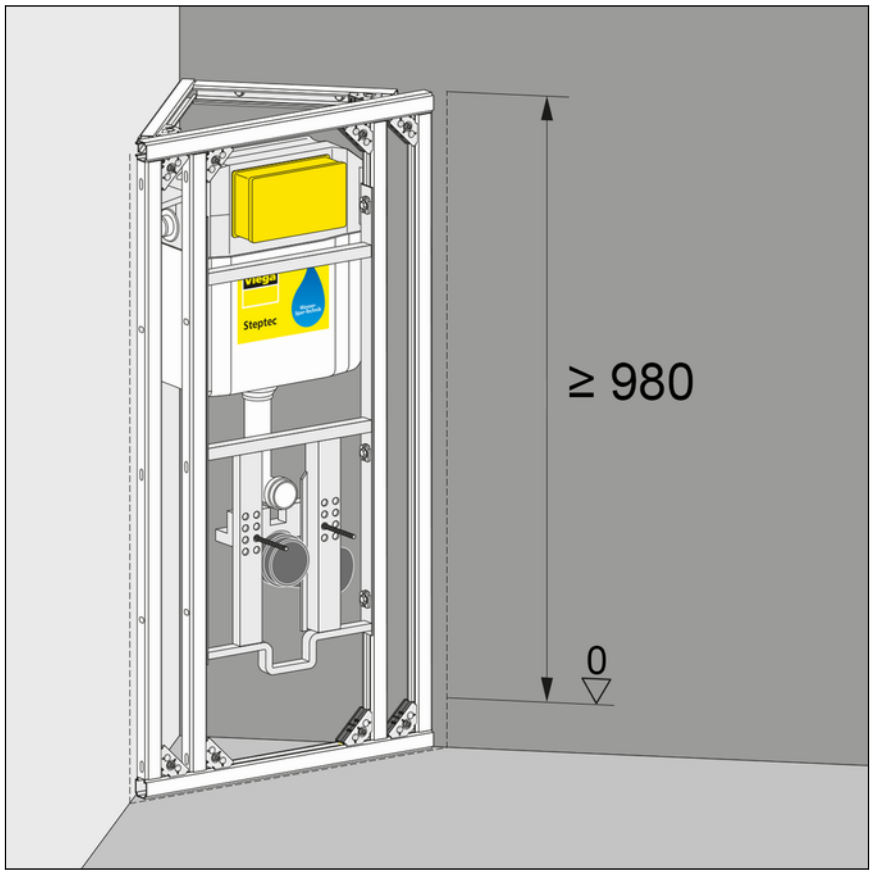


Fig. 5: Steptec, 8400, corner mounting

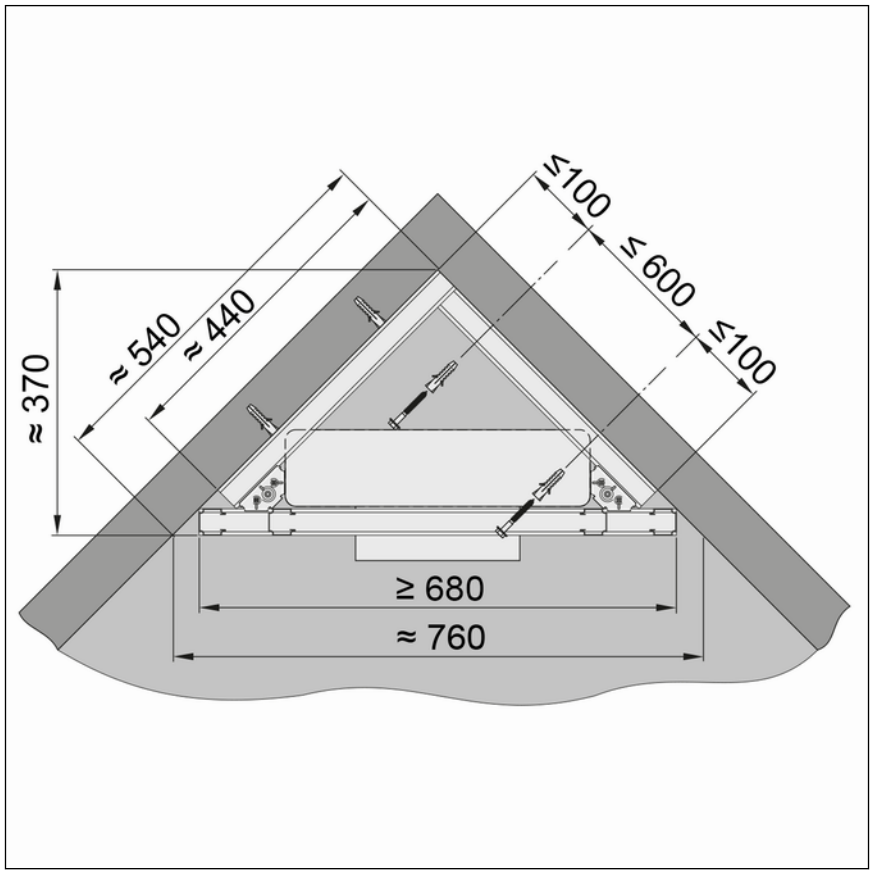


Fig. 6: Installation sizes corner mounting

Barrier-free mounting

When using supporting handles for barrier-free WCs, higher loads are placed upon the pre-wall constructions. For this reason, additional stability must be ensured when barrier-free mounting. Stability is obtained with the help of an additional mounting rail, which is attached directly to the wall.

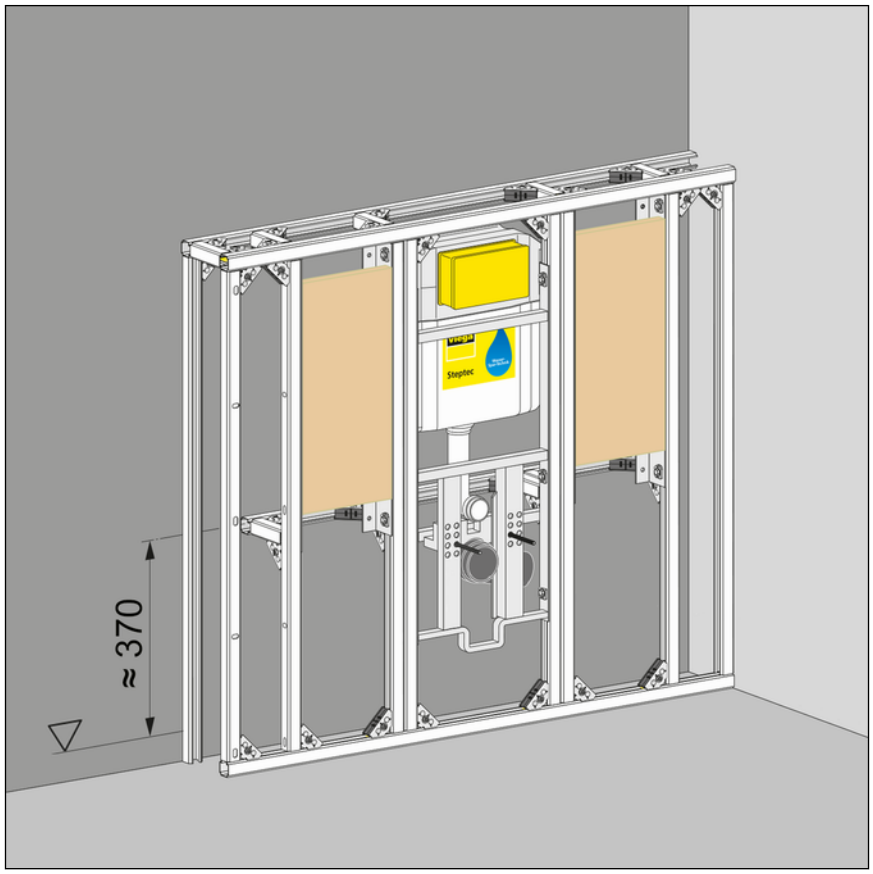


Fig. 7: Barrier-free mounting, version 1

The additional wall rail and the vertical front rail are connected to a short rail. The fixing element is placed between the front rails.

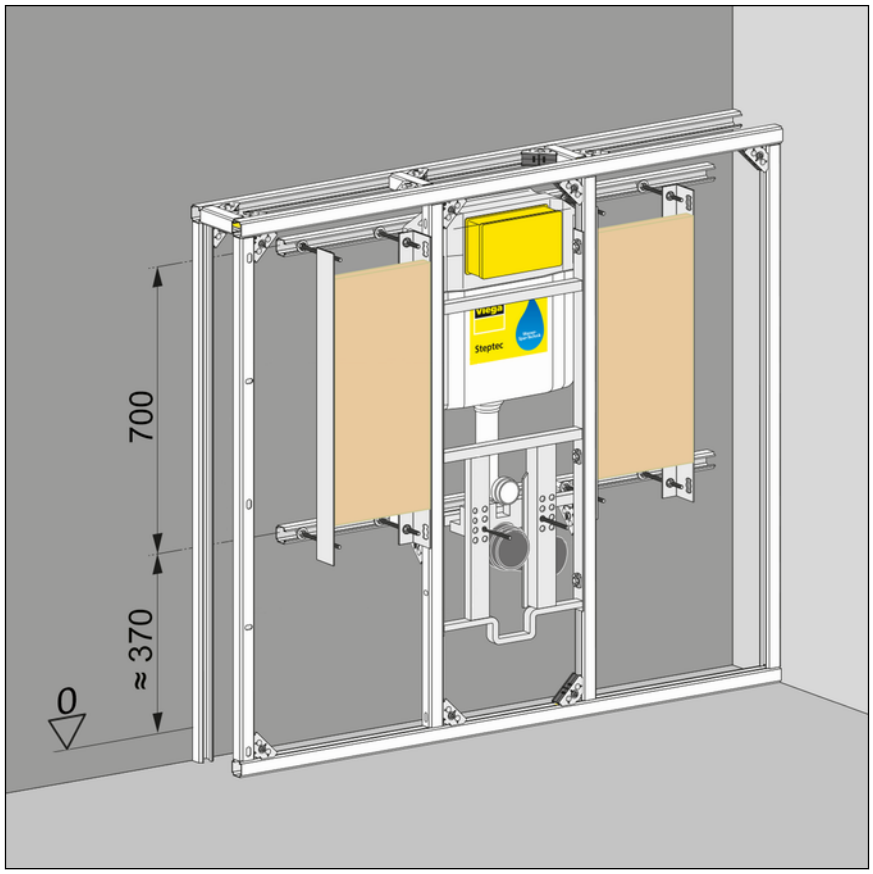


Fig. 8: Barrier-free mounting, version 2

The fixing element has factory-fitted fasteners, which can be mounted directly onto the mounting rail. This version does not require an additional rail at the front. Two additional horizontal rails are placed on the wall.

Half-height, one-sided closed room partition

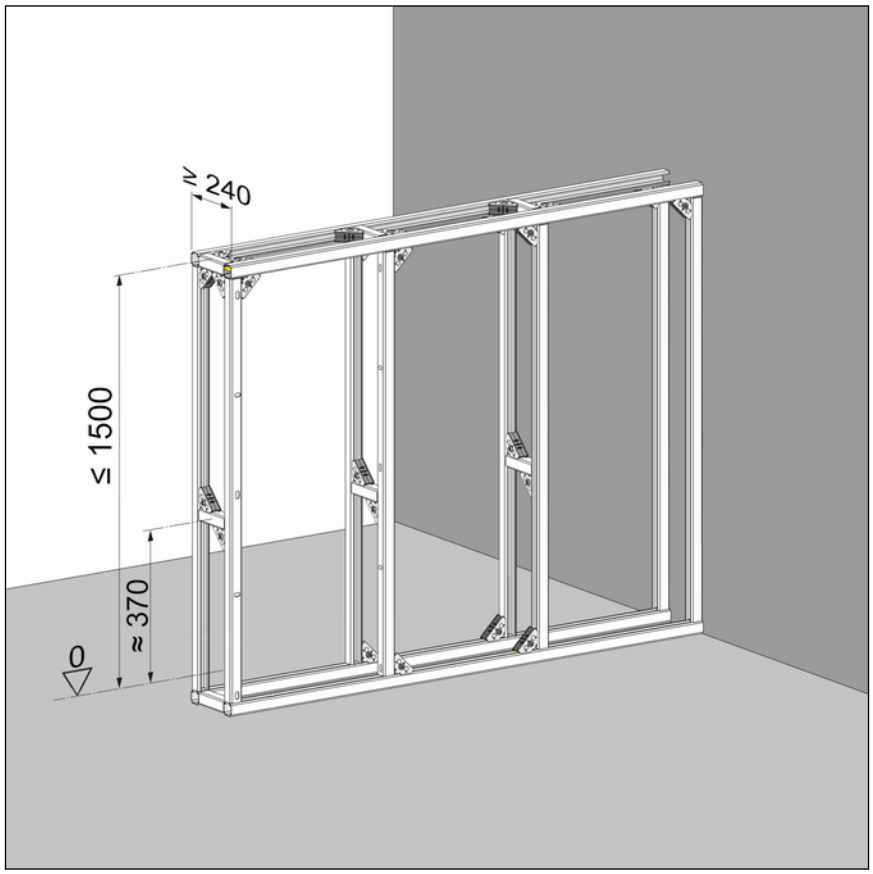


Fig. 9: Installation dimensions half-height room partition (one-sided connected)

Half-height, free-standing room partition

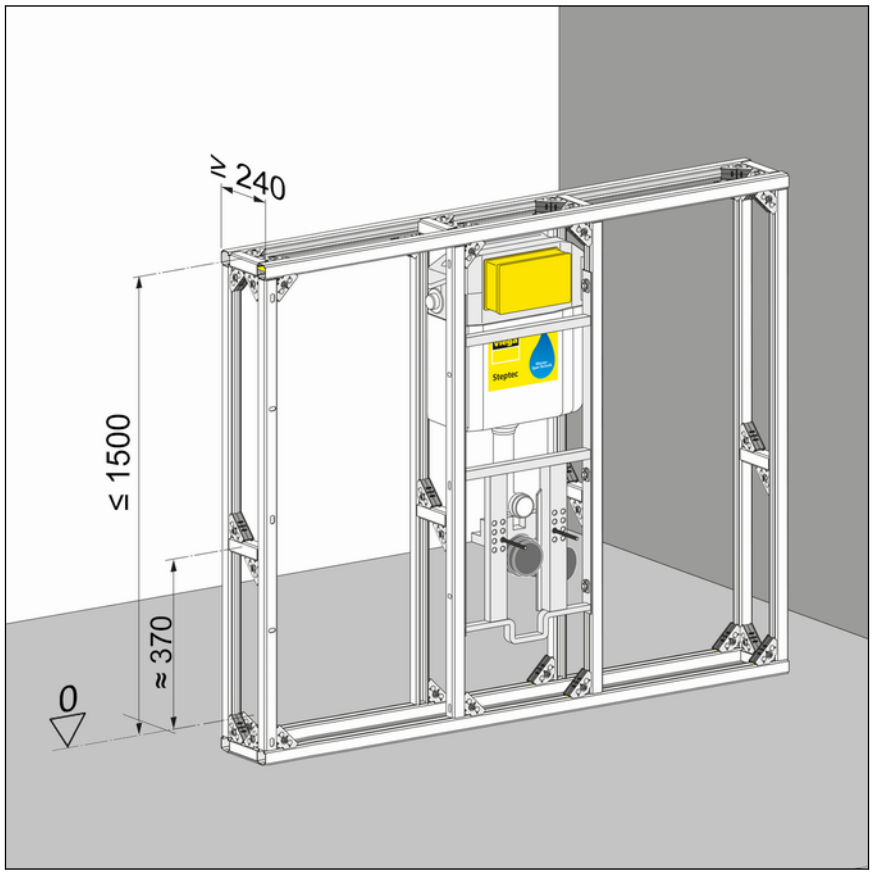


Fig. 10: Installation dimensions half-height room partition (free-standing)

Partition and room-height room partition

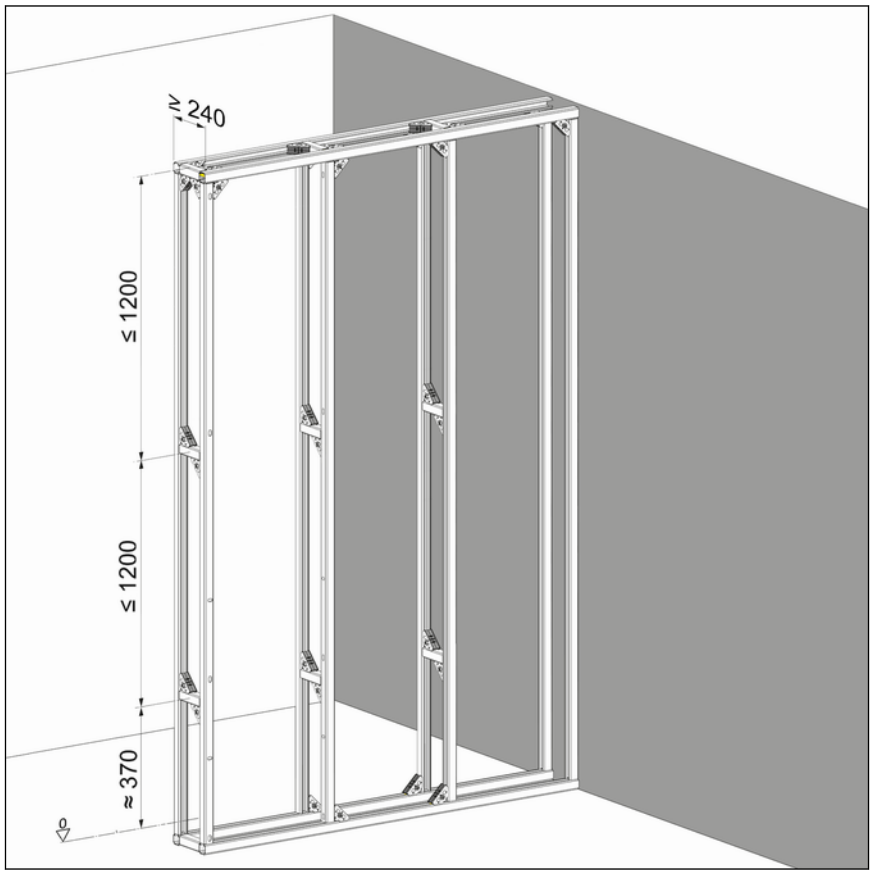


Fig. 11: Installation dimensions partition and room-height room partition

Pre-wall on the roof slope

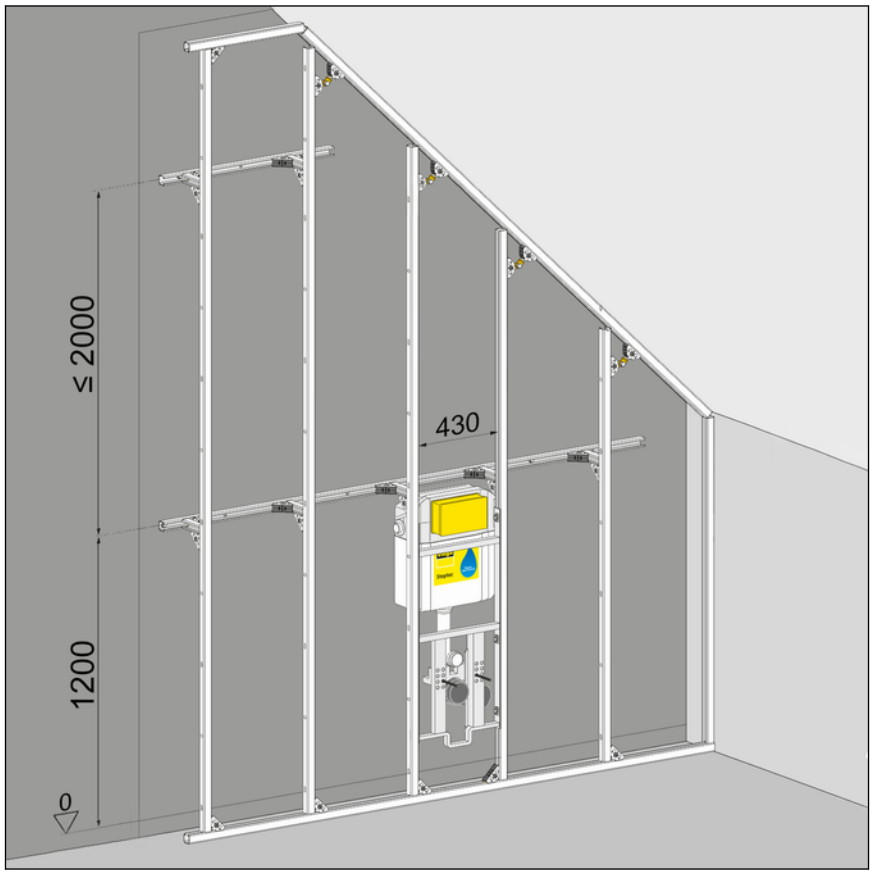


Fig. 12: Installation dimensions pre-wall on the roof slope

Partition and room partition on the roof slope

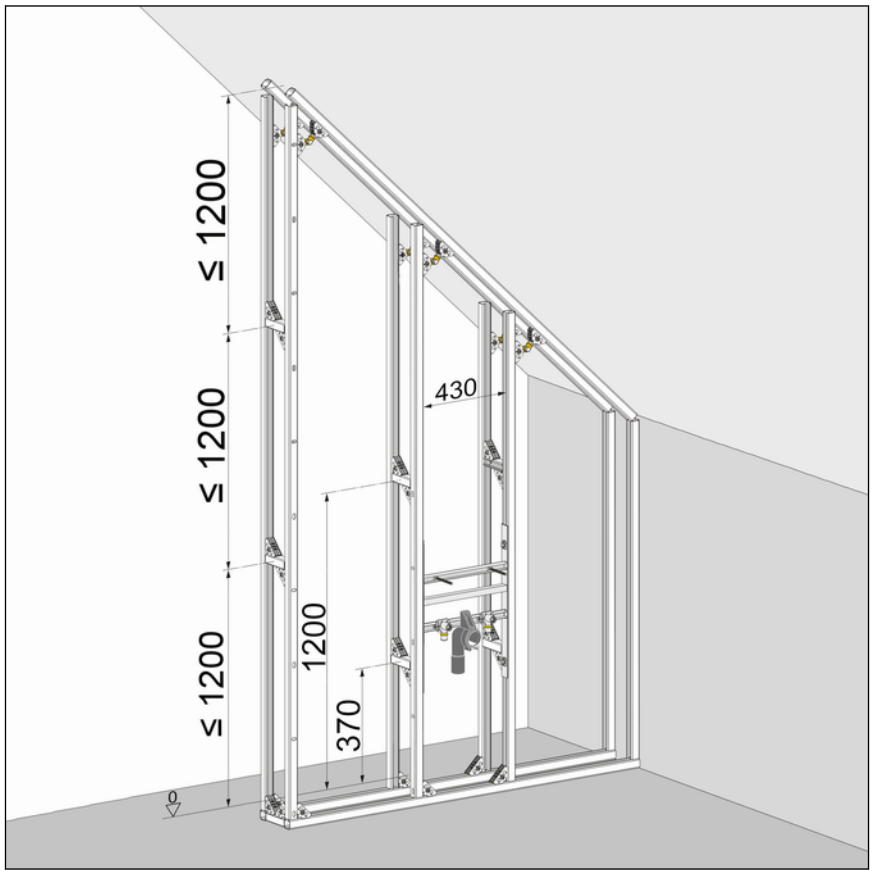


Fig. 13: Installation dimensions partition on the roof slope

2.3 Optional accessories

There are special Viega Steptec modules available for various requirements. They can be supplemented by further modules, fitting holders and other accessories.

- WC modules
- Bidet modules
- Washbasin modules
- Urinal modules
- Accessories for barrier-free mounting
- Covering panels

The following accessories are available for special mounting procedures:

Steptec mounting joint for the continuous angle setting when mounting on roof slopes:

The Steptec joint offers the possibility to connect two rails together in other angles than 45° or 90°. The joint can be mounted as a connection piece between two Steptec connectors, e. g. during the pre-wall installation on wall slopes.

The joint can be set continuously at angle sizes up to 180°.

Fig. 14: Steptec joint

Steptec mounting angle for the wall connection of a pre-fabricated Steptec wall.

Fig. 15: Mounting angle

Further information can be found in the Viega product catalogue.

3 Handling

3.1 Assembly information

3.1.1 Mounting conditions

Suitable walls / surfaces

The Steptec pre-wall system element can be mounted on the following walls:

- masonry walls in acc. with DIN EN 1996-1-1
- concreted walls in acc. with DIN 1045

Construction height

With the construction height, the marked height of the upper edge of the finished floor must be observed.

Minimum intervals

Minimum and maximum intervals for the corresponding variation can be found in chapter *Chapter 2.2.2 'Mounting versions' on page 7*.

The rails, between which a Steptec module or fitting holder should be mounted, must be fitted at an interval of 430 mm from one another.

Observe the ceramic manufacturer's instructions during planning.

Fire protection

The declaration of conformity to the installation shaft must observed for the fire protection requirements.

3.1.2 Processing rules

Intervals between the rails

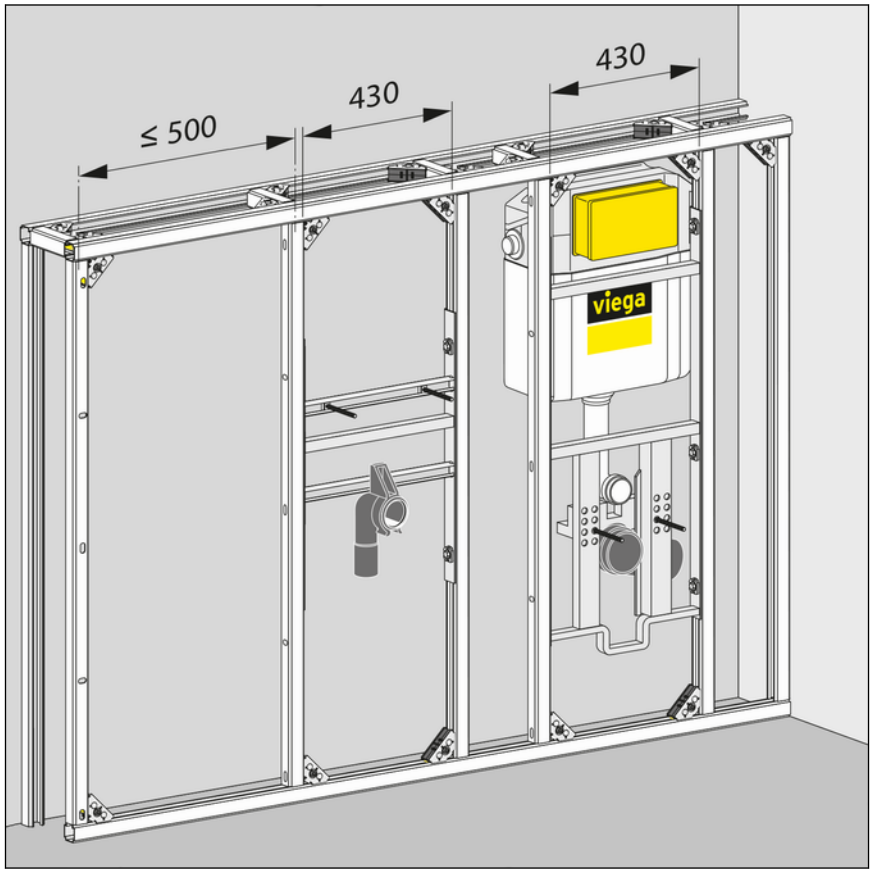


Fig. 16: Interval between vertical rails

Observe following intervals:

- The vertical rails, which will later surround a module, must be at an interval of 430 mm to one another.
- The vertical rails, generally have a maximum interval of 500 mm from one another.
- The minimum interval between two rails, which surround different modules, depends on the fittings that are subsequently fitted.
  Also observe the ceramic manufacturer's instructions.

Fixing rails

Every rail must be secured at the prescribed point. There are two possibilities:

- The rails are mounted securely on the wall.
- The rails are stabilised by at least two connectors.

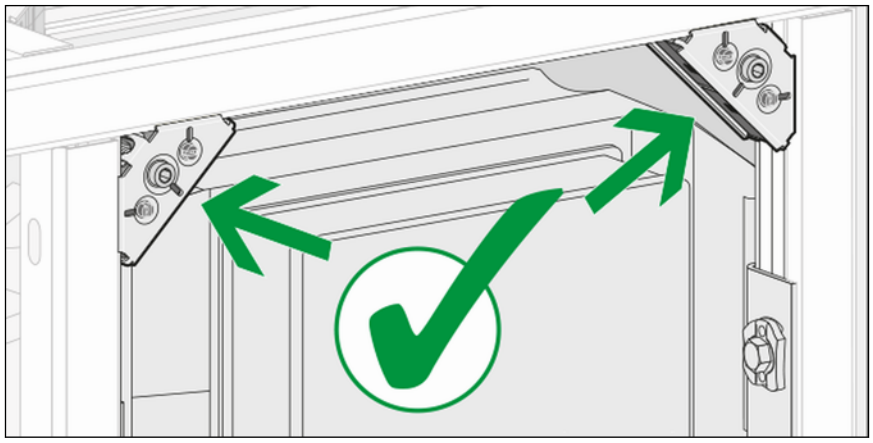


Fig. 17: Connector top

Two vertical and two horizontal rails later surround the desired pre-wall module. The rails face each other with their open side. The two vertical rails must be fitted at an interval of 430 mm to one another. A connector must be fitted in all four corners. The connectors sit on the open side of the rail.

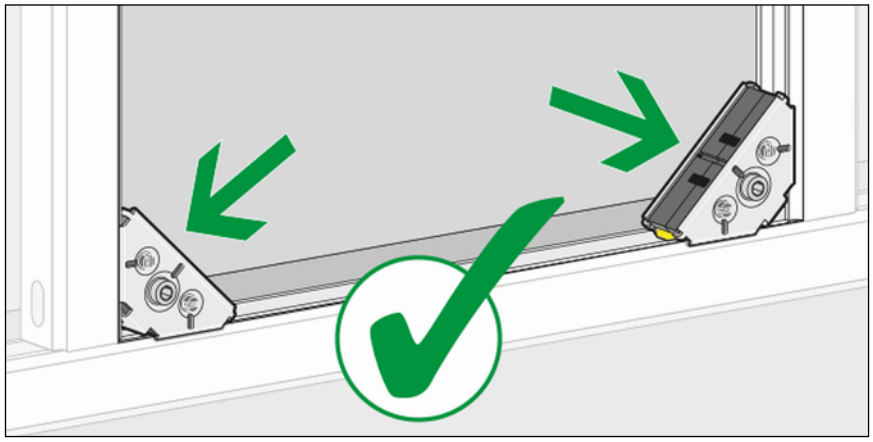


Fig. 18: Connector below

Free-standing pre-wall constructions

Observe the following information about fixing the floor rails:

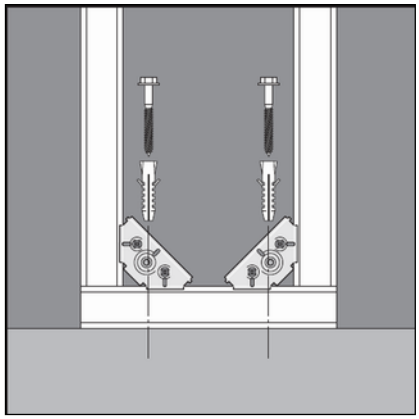


Fig. 19: Floor rail

With free-standing pre-wall constructions, all floor rails must be attached to the floor using the fixing material supplied. Even the small rails must be secured using at least two screws.

Observe the following information about the number of connectors:

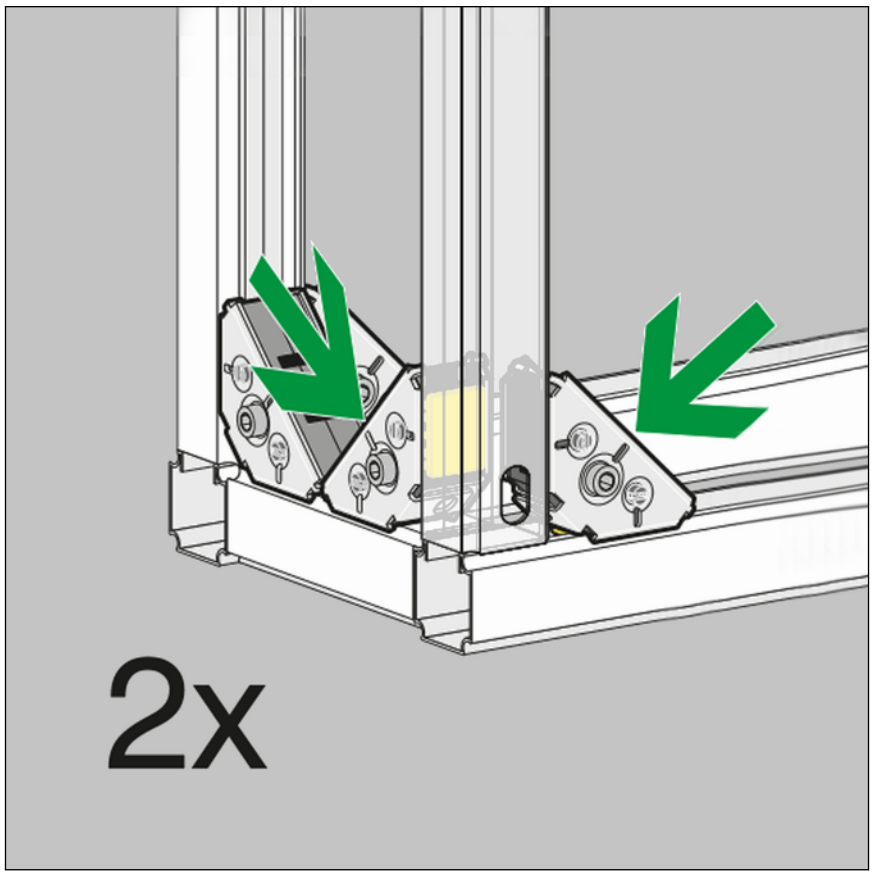


Fig. 20: Connector below

The corners of the floor rails must each be stabilised using two connectors.

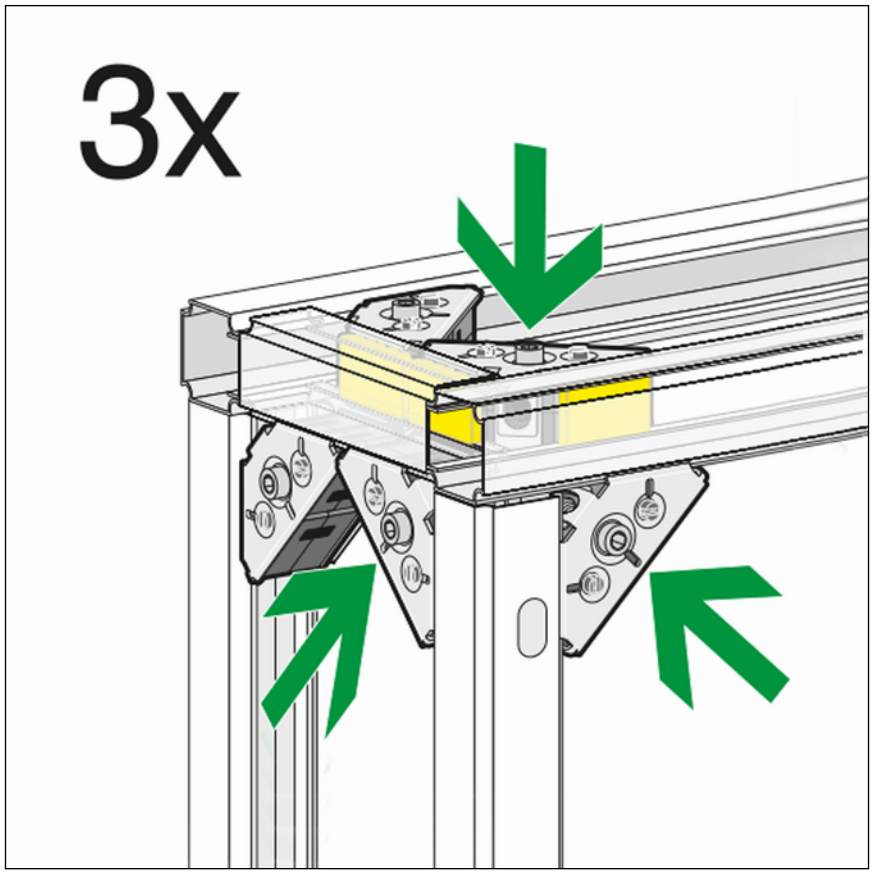


Fig. 21: Connector top

The upper corners of the floor rails must each be stabilised using three connectors.

3.1.3 Required material and tools

Calculation of required material quantities

The determination of the material quantities takes place in two steps via the area of the pre-wall in m^2.

The required rail lengths can be calculated from the area (in m^2) multiplied with the rail factor 5.5. The individual rails are available in lengths of 5 m.

The rest of the required components are available in the complete package, which is available for areas sized 1, 3, 5 or 10 m^2. The complete packages can be combined depending on the area of the pre-wall.

Example 1

Area to be planked = 2.7 m^2

Required material quantities:

- one 3 m^2 complete package
- 3 mounting rails each 5 m in length (2.7 [m^2] x 5.5= 14.85)

Example 2

Area to be clad = 5.5 m^2

Required material quantities:

- one 5 m² complete package and one 1 m² complete package
- 7 mounting rails each 5 m in length (5.5 [m²] x 5.5 = 30.25)

Required tools

A suitable tool is required to cut the rails to length.

Fig. 22: Steptec punch

We recommend the Viega Steptec punch for processing the mounting rails. The rail can be shortened or punched free from burrs at any point using the punch.

Further information on the use of the Steptec punch can be found here ↳ *Chapter 3.2.1 'Cutting rails to length' on page 31* and in the instructions accompanying the punch.

3.1.4 Installation dimensions

- *All measurements are in mm.*
- *All specifications are in regards to installation depths without cladding and tiles.*
- *The article numbers are only explicitly mentioned in the table when various values have to be observed for individual models.*

Half-height and room-height pre-wall

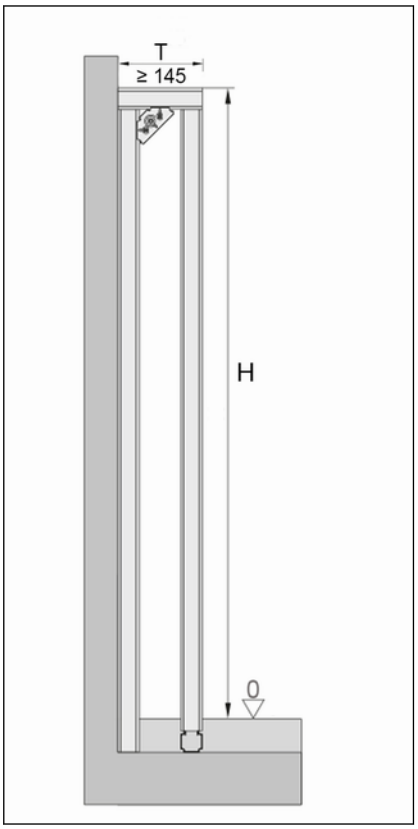


Fig. 23: Attaching to the wall

The following table shows the minimum height (H) as well as the minimum depth (D) depending on the model used.

	Article	Minimum height (H)	Minimum depth[1] (T)
WC	656 102	1130	150
	656 119	980	150
	718 954 700 010 597 214 718 978	840	220
Washbasin	562 618	1130	145 / 85[2]
	655 976 576 998		145 / 100[2]

[1] Collective connection pipeline DN 100

[2] with depth-reduced connection elbow

	Article	Minimum height (H)	Minimum depth[1] (T)
Urinal	656 058 655 983 397 142 656 065 735 722	1130	145 / 100[2]
Bidet	656 140	1130	145 / 100[2]

[1] Collective connection pipeline DN 100

[2] with depth-reduced connection elbow

Half-height room partition

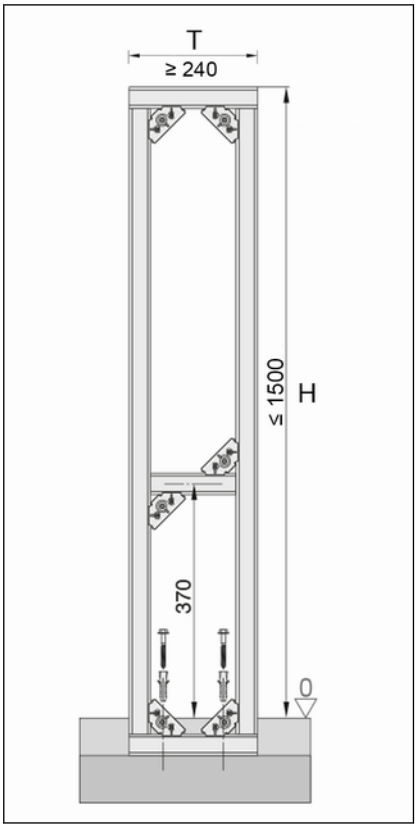


Fig. 24: Room partition, half-height

The following table shows the minimum height (H) as well as the minimum depth (D) of the pre-wall construction by single and dual-sided use. The minimum height depends on the tallest fitting installed. The minimum depth depends on both of the fittings being used.

In the case of the combination with at least one WC element, observe the additional details in the second table.

	Minimum height (H)	Minimum depth (D) WC	Minimum depth (D) Depth Washbasin	Minimum depth (D) Depth Urinal	Minimum depth (D) Bidet	Minimum depth (D) fitting holders
WC	840–130	330 – 400[1)]	280 – 330[1)]	280 – 330[1)]	280 – 330[1)]	240 – 270[1)]
Washbasin	1130	280 – 330[1)]	240	240	240	240
Urinal	1130	280 – 330[1)]	240	240	240	240
Bidet	1130	280 – 330[1)]	240	240	240	240
fitting holders	1130	240 – 270[1)]	240	240	240	240

[1)] Collective connection pipeline DN 100

	Article	WC 656 102	WC 656 119	WC 718 954 700 010 597 214 718 978	Wash-basin	Urinal	Bidet	fitting holders 656 089 461 836 297 770 656 072	fitting holders 297 787 656 096 331 894 331 887
WC	656 102	330[1]	—	—	280[1]	280[1]	280[1]	240[1]	240[1]
	656 119	—	330[1]						
	718 954 700 010 597 214 718 978	—	—	400[1]	330[1]	330[1]	330[1]	240[1]	270[1]

[1)] Collective connection pipeline DN 100

Room-height room partition

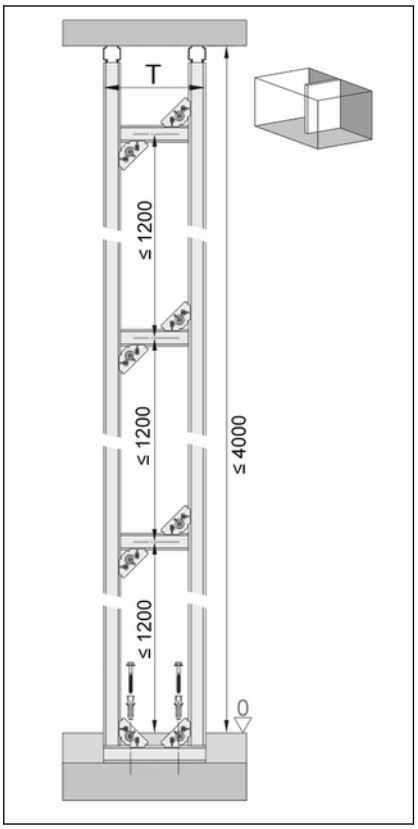


Fig. 25: Room partition, room-high

The following tables show the minimum depth (D) of the pre-wall construction with single or dual-sided use depending on the modules used.

In the case of the combination with at least one fitting holder, observe the additional details in the third table.

Single-sided use

	Minimum depth (D)
WC	210
Washbasin	165
Urinal	165
Bidet	210

Dual-sided use

	WC	Washbasin	Urinal	Bidet
WC	330 – 440[1)]	280[1)]	280[1)]	280[1)]
Washbasin	280[1)]	220	220	220

[1)] Collective connection pipeline DN 100

	WC	Washbasin	Urinal	Bidet
Urinal	280[1)]	220	220	220
Bidet	280[1)]	220	220	220

[1)] Collective connection pipeline DN 100

	Article	WC	Washbasin	Urinal	Bidet	fitting holders
fitting holders	656 089 461 836 297 770 656 072	220[1)]	165	165	165	165
	297 787 656 096 331 894 331 887	240[1)]	180	180	180	

[1)] Collective connection pipeline DN 100

Partition

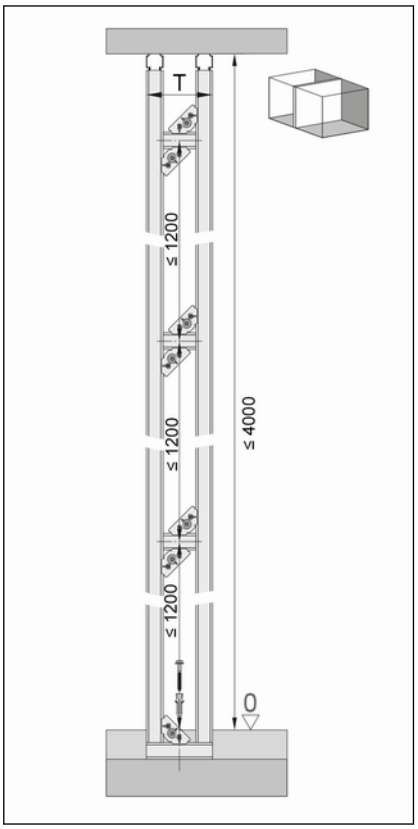


Fig. 26: Partition

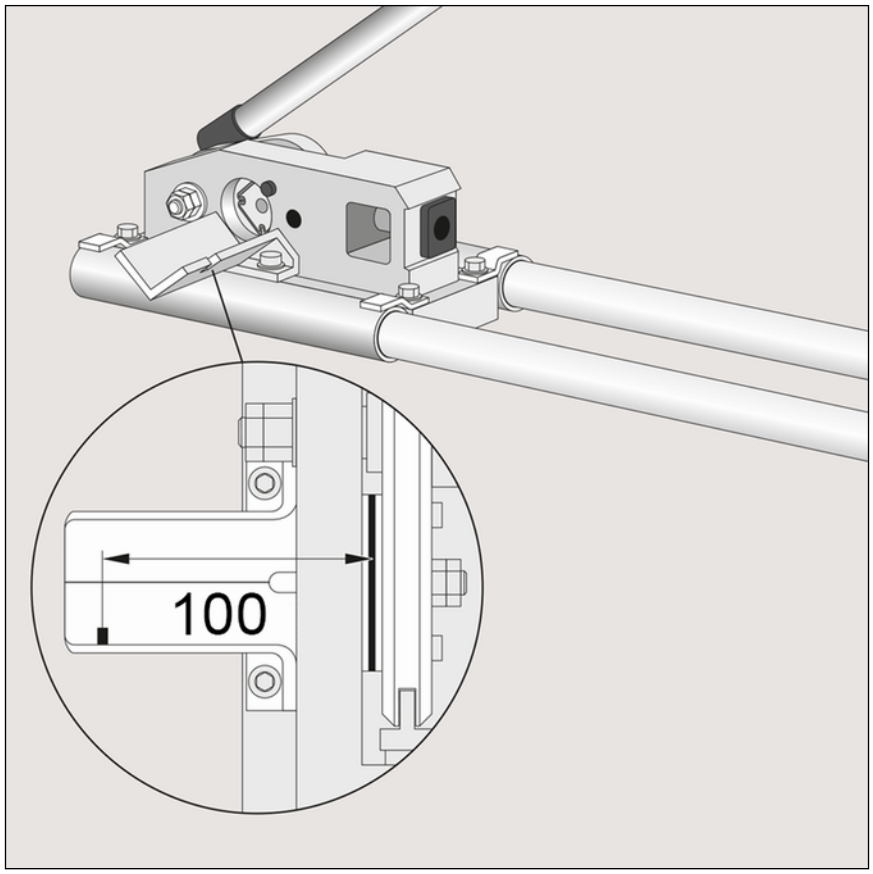
The following table shows the minimum depth (D) of a pre-wall construction by single-sided use.

	Minimum depth (D)
WC	210
Washbasin	145
Urinal	145
Bidet	145

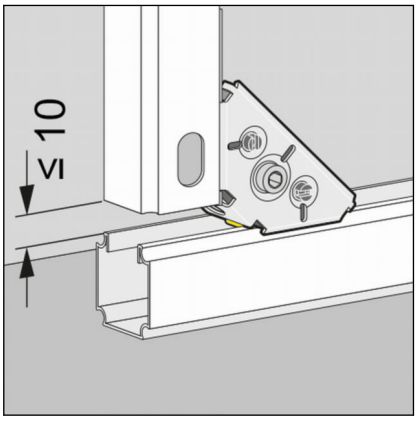
3.2 Assembly

3.2.1 Cutting rails to length

- Calculate the dimensions for floor and wall rails.
- Cut mounting rail to length.



INFO! Observe the additional measuring aid when using the Steptec punch. The length from the marking to the cutting point comes to 100 mm.



⇨ The tolerance range for the rail length is 10 mm. The stability is not compromised.

3.2.2 Attach wall and floor rails

The Steptec rails are pre-punched every 30 cmwith a long hole.

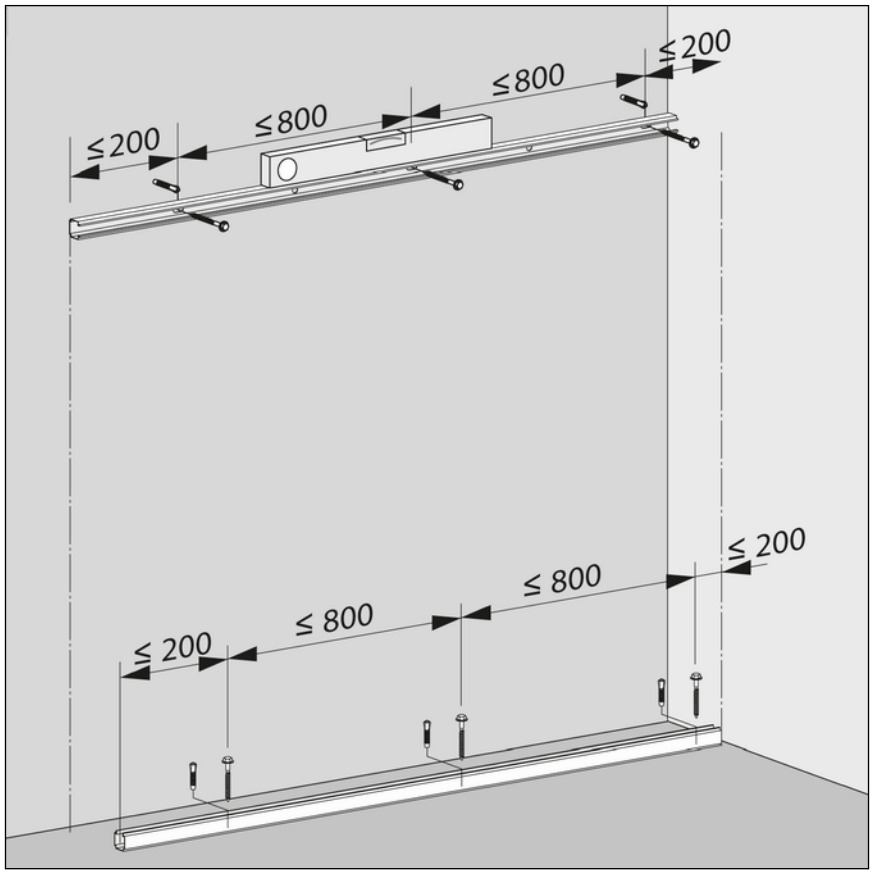


Fig. 27: Rail fixing dimensions

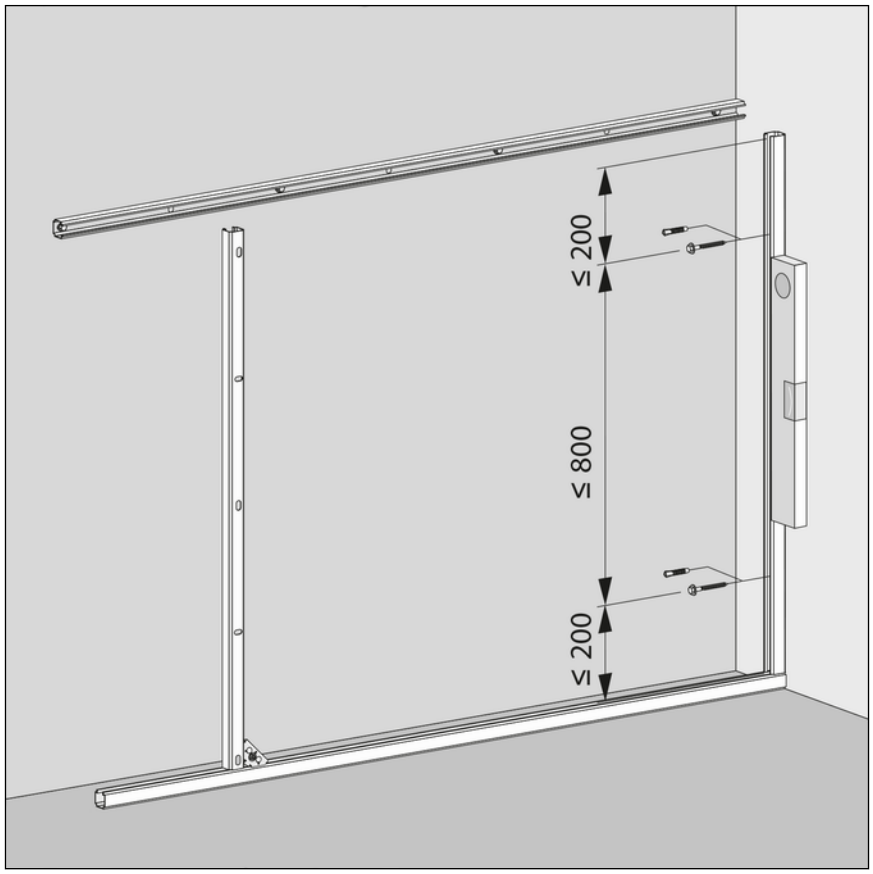
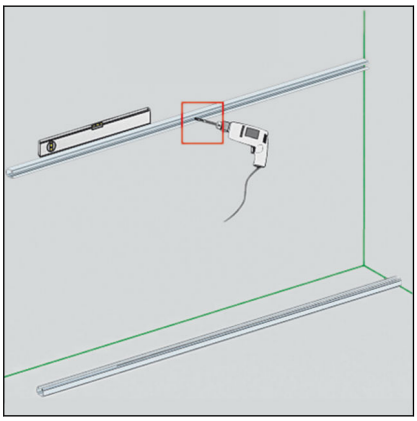


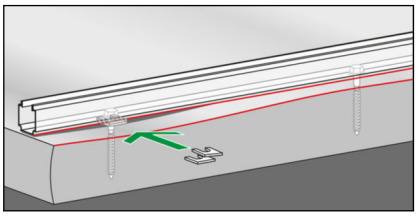
Fig. 28: Rail fixing dimensions

Requirements:

- The distance from the end of the rail until the first fixing must not exceed 200 mm.
- The distance between the fixings must not exceed 800 mm.



- Secure the rails directly onto the installation body with the fixing material supplied. Align the open side of the rail in such a way that it faces away from the installation body.



- Use the equalisation panels in the case of uneven walls or floor coverings.

  Push the equalisation panels below the fixing point. Adapt the number of equalisation panels to the height of the unevenness.

Barrier-free mounting

Additional rails must be attached to the wall when mounting barrier-free. To see the special aspects of this mounting variation, see
↳ *Chapter 2.2.2 'Mounting versions' on page 7*.

- Secure an additional rail approx. 37 cm above FFL.
- Depending on the variation of barrier-free mounting, attach an additional 700 mm wall rail above the first one.

3.2.3 Mounting connectors

- *Observe the alignment of the front rails before and during assembly.*
- *Align the rails, between which a module should be mounted, with the open side facing one another.*
- *If Obtego panels are to be used for cladding, the other rails should be aligned in such a way that they are open facing forward.*
- *Only use the blocking elements on the open rail sides.*
- *Observe the information regarding the minimum number of connectors with various mounting variations. You can find further information in chapter ↳ Chapter 3.1.2 'Processing rules' on page 21.*

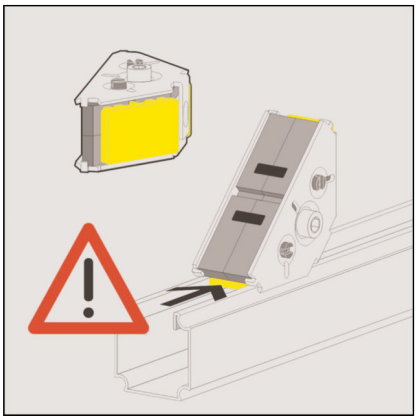
Mounting at various angles

- Only mount the longer rail side in an angle ≠ 90° when connecting two rails.
- With 45° corner installations, attach the long and short connection side to the rails.
- Always attach a connector with the long side in the case of other installation angle, e. g. with roof constructions. Connect the two connectors to one another via a joint.

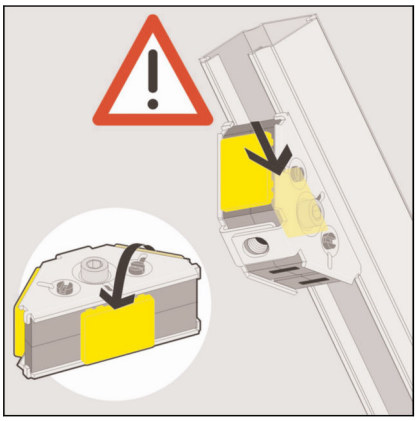
Mounting on the open side of the rail

INFO! The yellow blocking elements are factory-fitted onto the short side of the Steptec connector. The blocking elements prevent that the mounting rail is pressed together at the fixing point when the screw is tightened.

- If the long side of the connector is to be mounted onto the open side of the rail, place a blocking element from the short side onto the long side.



- Place the Steptec connector with blocking element onto the open rail side.
  - ⇨ The connector clicks audibly into place.

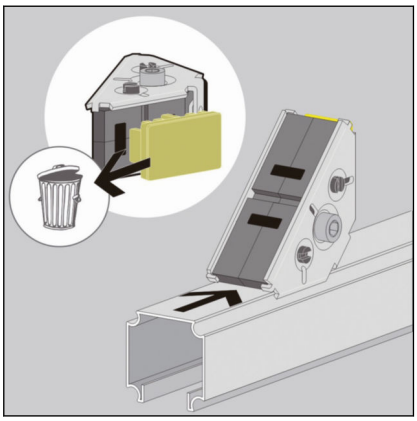


- Remove blocking element from a short side.

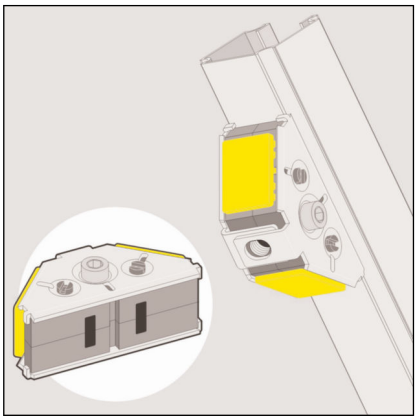
  Place and push blocking element into the intended holes on the long side of the connector.
- Place the Steptec connector with blocking element onto the open rail side.
  - ⇨ The connector clicks audibly into place.

- Move the connector into the desired position on the rail and tighten the fixing screw there with the Allen key provided.

Mounting on the closed side of the rail



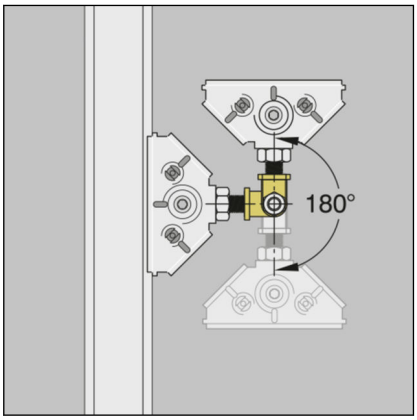
- Remove and dispose of blocking element.
- Place the Steptec connector onto the closed rail side.
  - ⇨ The connector clicks audibly into place.



- Make sure that there is no blocking element on the long side of the connector side.
- Place the Steptec connector onto the closed rail side.
  - ⇨ The connector clicks audibly into place.

- Move the connector into the desired position on the rail and tighten the fixing screw with the Allen key provided.

Connection with Steptec joint



- Screw the joint with the threads onto one connector each.

  Connections with an angle of up to 180° can be made using the joint.

- Place the long side of a connector onto the rail.
- Place the second connector onto the other rail.

  The rail can still be either loose or connected.
- Push the connector into the desired position.
- Tighten the screws on the connectors and the joint at the respective position with the Allen key supplied.

3.2.4 Special mounting variations

Pre-fabrication

When pre-fabricating, pay attention to the arrangement of the rails, which are secured onto the walls or the floor. The open side of the rails must face away from the installation body.

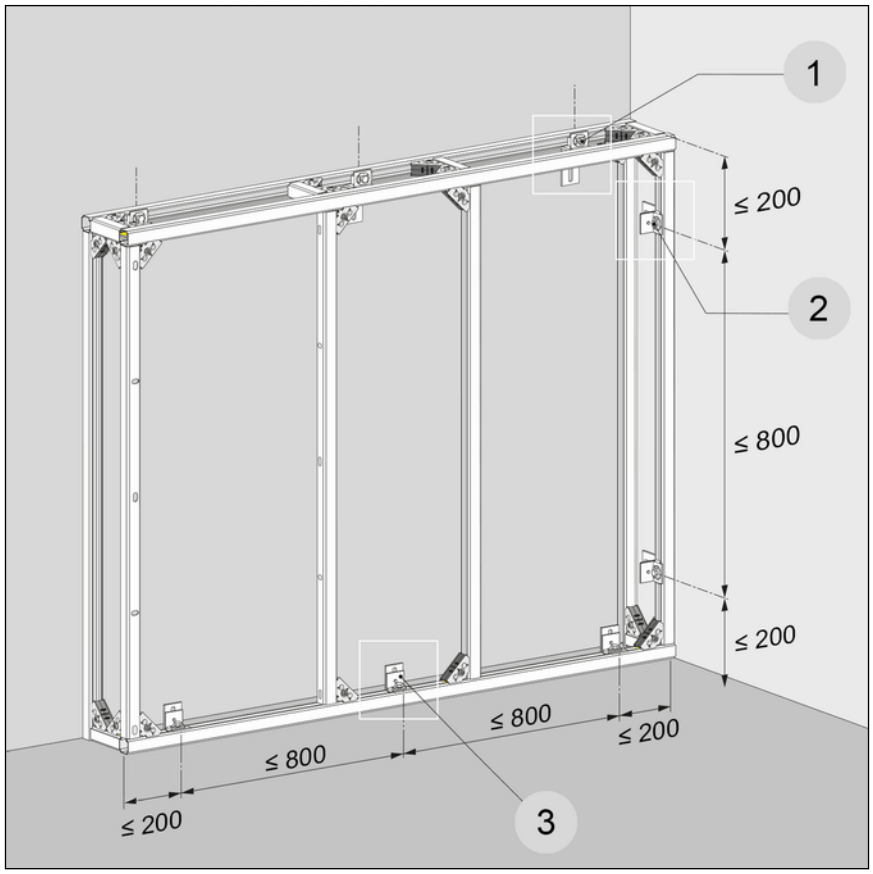
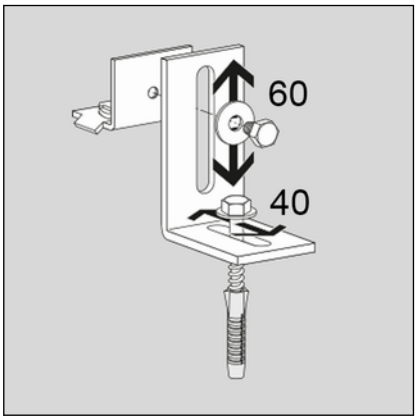
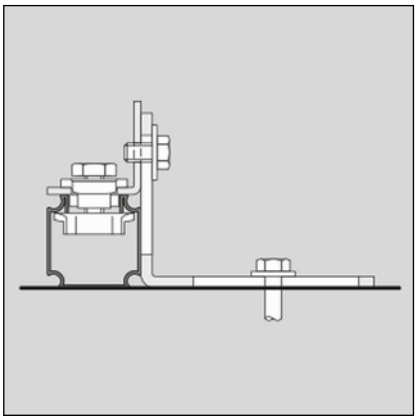


Fig. 29: Attaching pre-fabricated wall

1 - securing the rail to the back wall
2 - securing the rail to the side wall
3 - securing the rail onto the floor

- Fitting the mounting angles at a distance of maximum 800 mm from one another. The distance to the external rails may not exceed 200 mm.
- If necessary, change the long and short side of the angle.





- Attach the slot nut onto the open side of the rail. When doing so, observe the necessary intervals.
- Screw the long side of the angle to the wall.

- Repeat the process at the other points on the wall rails and floor rail.

3.2.5 Rounding off jobs

Mounting modules

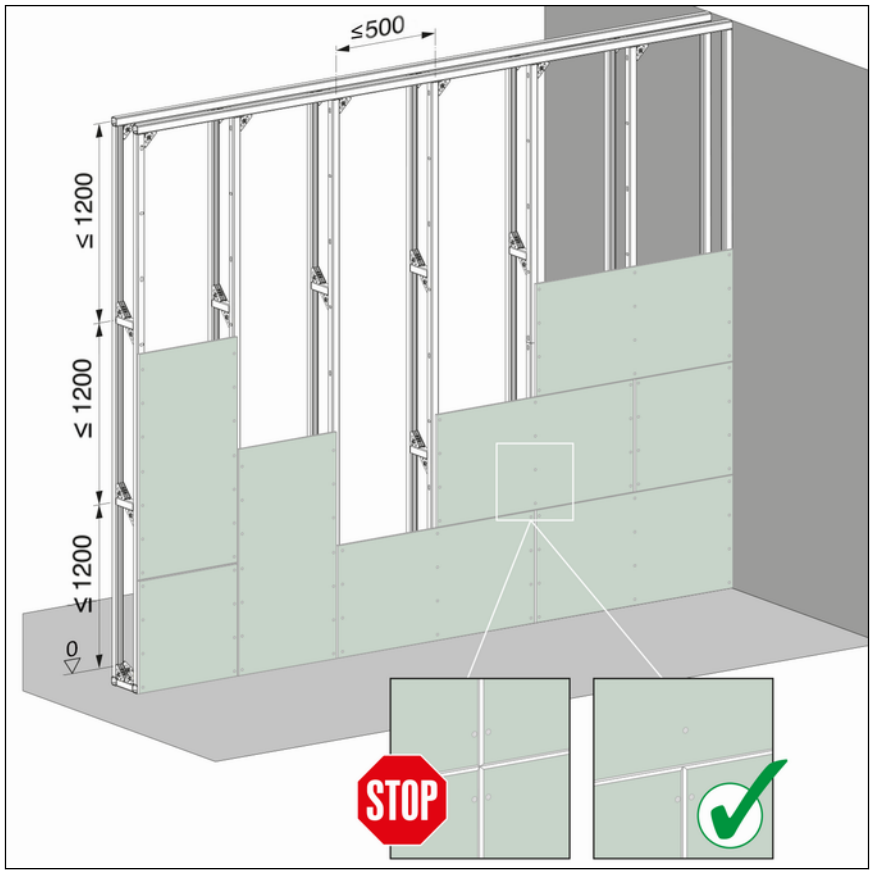
- Attach the pre-wall modules onto the open side of the rail using the slot nuts supplied.

  Secure the slot nuts with a 90° turn.

You will find detailed information about the individual modules and their mounting in the instruction manual of the corresponding models.

Attach cladding

Aqua KS and IFGP covering panels



- Clad with 12.5 mm wide IFGP or 12 mm wide Aqua-KS-covering panels.

  When doing so, make sure that no abutting edge converge.
- Grout the abutting edges and joints with a suitable filler.
- Observe the instruction manual for the covering panels for more information.

Obtego

INFO! Obtego covering panels, from J & L Dekortechnik GbR, are the alternative to IFGP and Aqua-KS-covering panels. The plastic panels are delivered custom-fitted.

- Clip Obtego covering panels onto the Steptec rails open at the front.

3.3 Disposal

Separate the product and packaging materials (e. g. paper, metal, plastic or non-ferrous metals) and dispose of in accordance with valid national legal requirements.