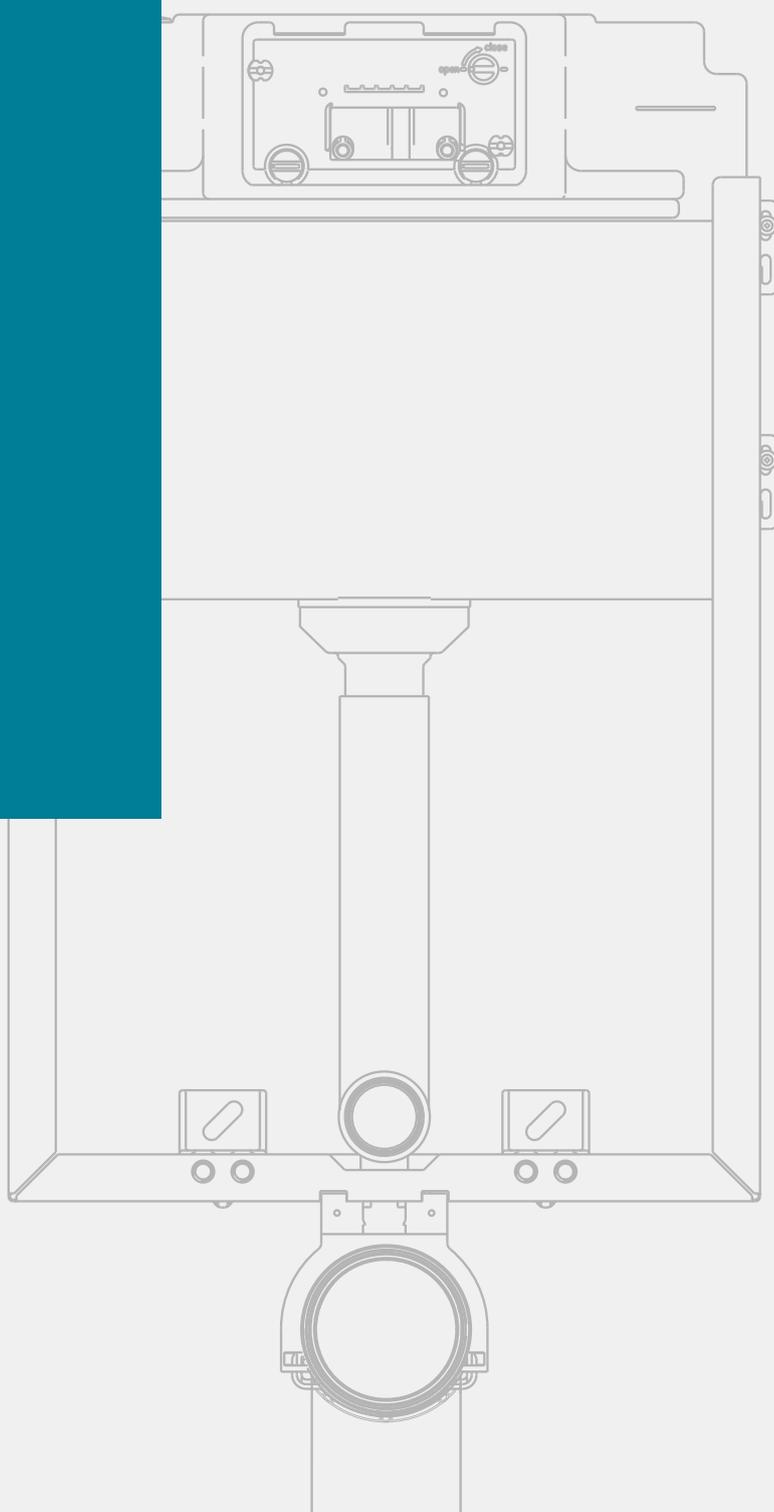




Sanitary systems

# TECEbox

TECHNICAL GUIDELINES





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# TECEbox – System description

## System description

TECE offers modules from the TECEbox series especially for brick-wall construction. In brick-wall constructions, TECEbox modules are bricked in with mortar or concrete. The modules are first installed and connected in front of a solid wall. The fact that sound insulation is not neglected here is demonstrated by sound insulation expert reports carried out at the Fraunhofer Institute in Stuttgart. All brick-wall toilet modules meet DIN 4109 standard sound insulation requirements. As the modules are not self-supporting, they are not suitable for use in dry-wall structures.

## TECEbox

Standard versions of the TECEbox series are available for standard or low installation height, e.g. for installations beneath windows.



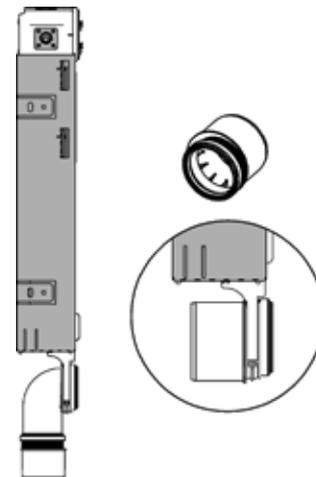
TECEbox brick-wall module, standard height (order number 9370000)



TECEbox brick-wall module, low height (order number 9375000)

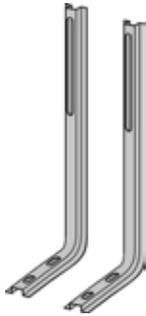
The low installation height enables flush actuation from the top and from the front. The key component of the toilet brick-wall modules is, as always, the TECE cistern. This is characterised, among other things, by its full compatibility with all TECE flush plates.

The surrounding steel frame ensures secure mounting in front of a solid wall. The two-part drain bend enables connection of DN 90 or DN 100 wastewater pipes. The adapter can also be used as a horizontal outlet.



Two-part drain bend – also for horizontal connection

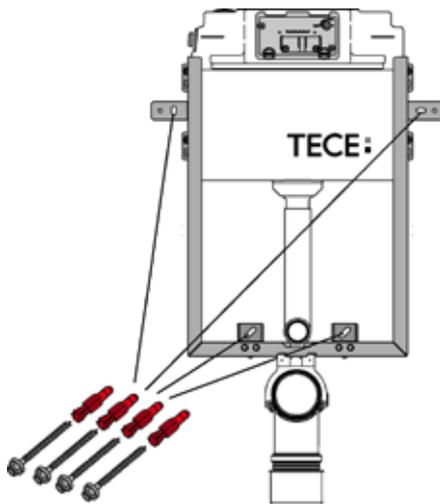
For the TECEbox standard installation height, optional assembly feet are available as a mounting accessory (order no. 9030024).



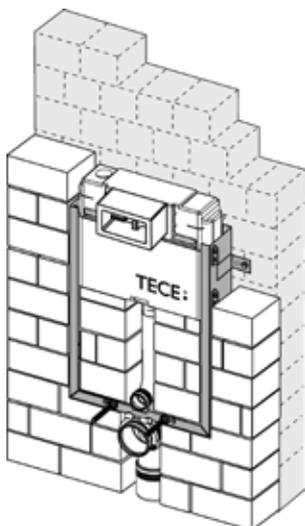
TECEbox assembly feet (order no. 9030024)

### Installing the TECEbox

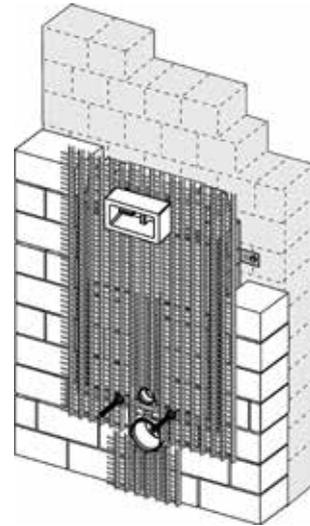
Align the TECEbox in front of the solid wall and screw it onto the brackets (above) or elbow brackets (below) provided for the purpose.



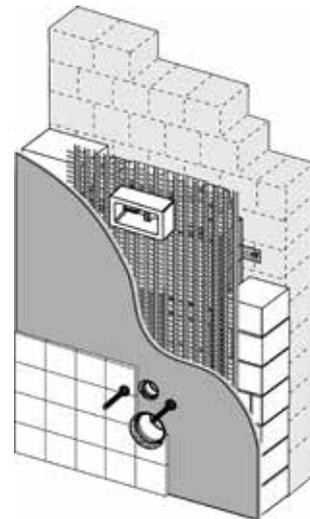
The module must be completely bricked into the wall and all remaining hollow spaces must be filled in. Install the bare-wall protection and the threaded rods.



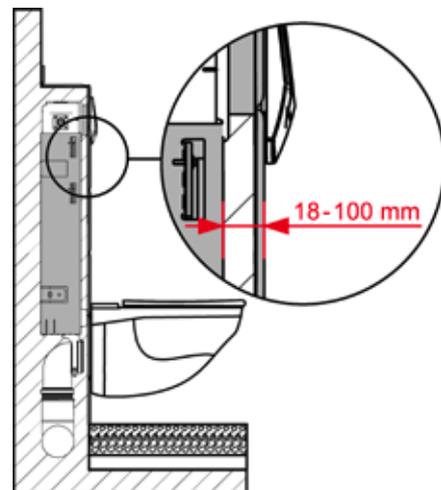
Then attach the expanded metal – see diagram.



You can then apply the plaster and tile the surface.



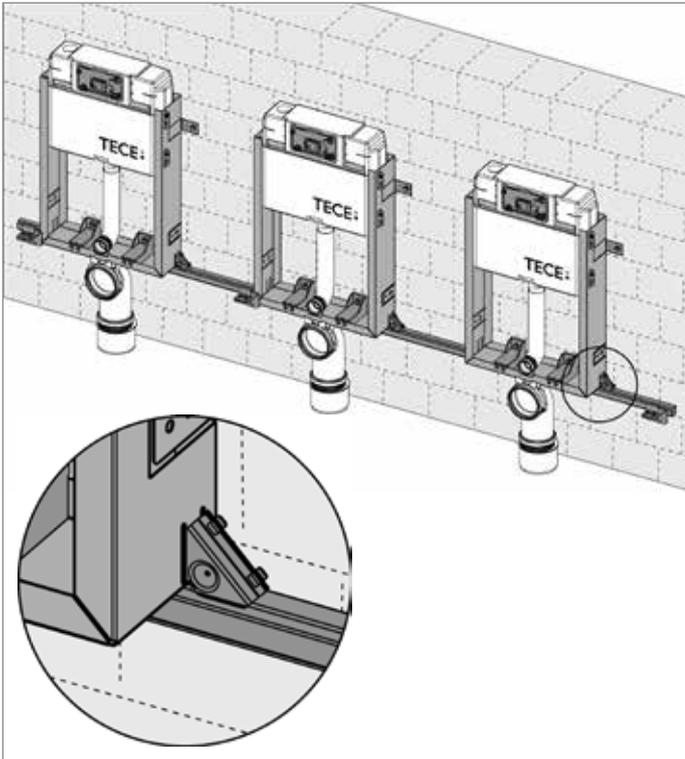
The thickness of the wall must be at least 18 mm but no more than 100 mm. See the section on flush plates for information about the wall structure required for the respective flush plate.



# TECEbox – TECEbox

## TIP:

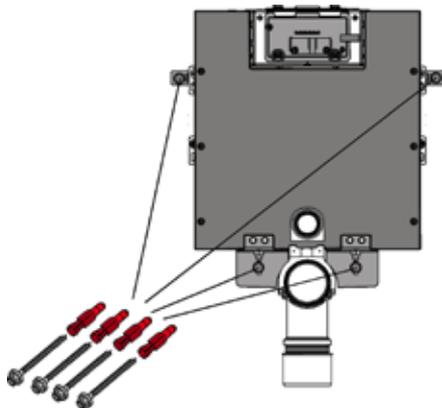
Series installation with the TECEbox is facilitated by means of the TECEprofil tube and corner joints. The brick-wall construction frames can be easily positioned on the TECEprofil tube through the side slot in the steel frame, and fixed using the corner joints. This makes alignment easier. In this case, the modules then only have to be screwed to the wall by means of the two top fastening clips.



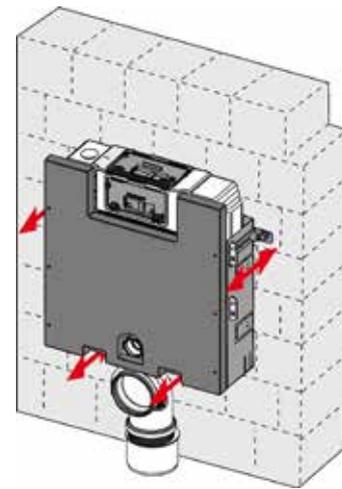
TECEbox series installation – with TECEprofil tube and corner joints

## Mounting the TECEbox – low installation height

The TECEbox for a low installation height must be aligned in front of the solid wall and screwed onto the clips (top) and angle brackets (bottom).

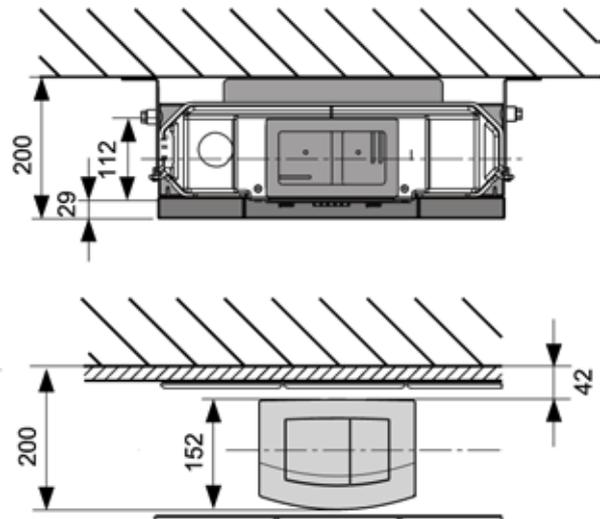


Set the required distance to the wall at the four depth-adjustable positions.



## Top actuation:

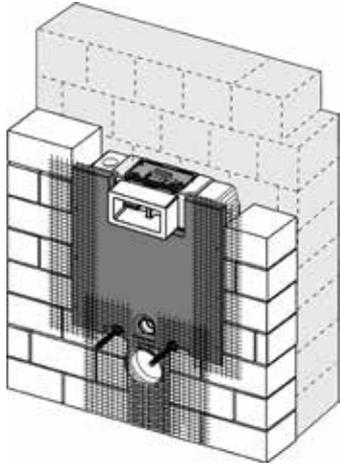
For top actuation, a minimum distance of 200 mm from the wall to the top edge of the module must be ensured. The front structural board serves as the minimum projection and must not be removed, as it prevents the flush plate from protruding at a later stage.



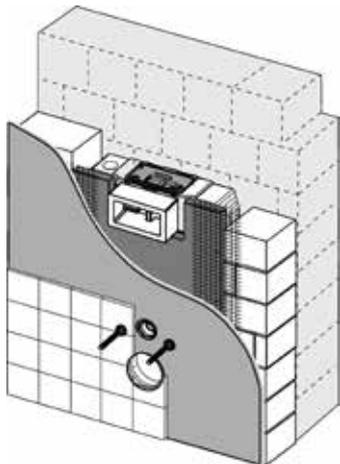
## Front actuation:

For front actuation, the minimum installation depth of the toilet module is 160 mm.

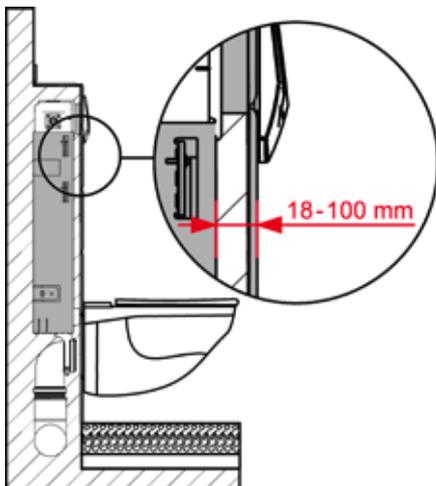
The module must be completely bricked into the wall and all remaining hollow spaces must be filled in. Install the bare-wall protection and the threaded rods. Then attach the expanded metal – see diagram.



You can then apply the plaster and tile the surface.

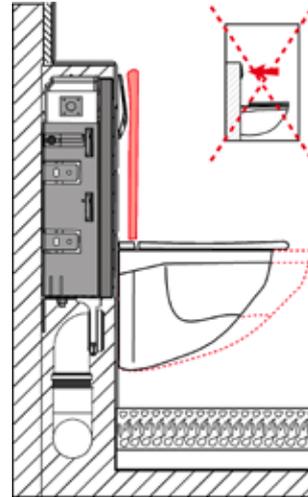


The thickness of the wall must be at least 18 mm but no more than 100 mm. See the section on flush plates for information about the wall structure required for the respective flush plate.



**Note:**

In the case of cisterns with a low installation height, if the flush plate is fitted in front and a compact ceramic system is used, the toilet lid may occasionally drop down unintentionally. Consequently, when a compact ceramic system is used, actuation should only be from the top.



## TECEbox plus



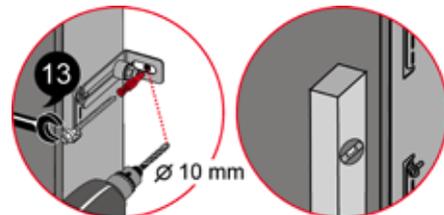
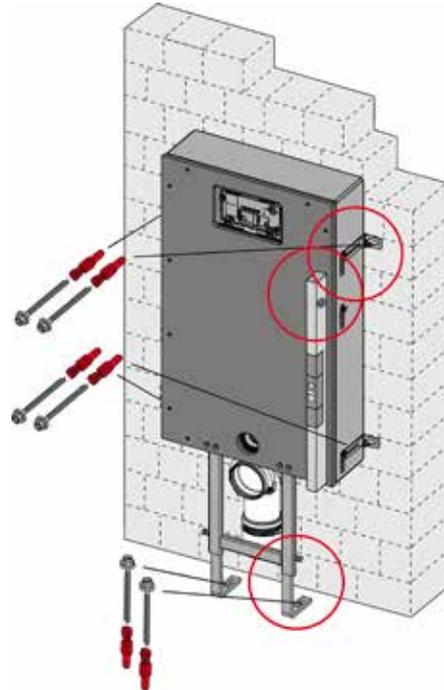
TECEbox plus brick-wall module (order number 9371000)

TECEbox plus is a brick-wall module installed in front of a solid wall. It is characterised by an enclosed surface, which eliminates the need for time-consuming bricking-in of the cistern. With the assembly area cover available as an accessory, the front is covered by a continuous surface of fibreglass lightweight concrete which can be directly tiled.

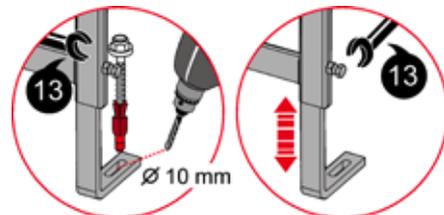
## Installing the TECEbox plus

Thanks to the pre-mounted steel feet, TECEbox plus can be easily set in front of the wall and adjusted to the required height.

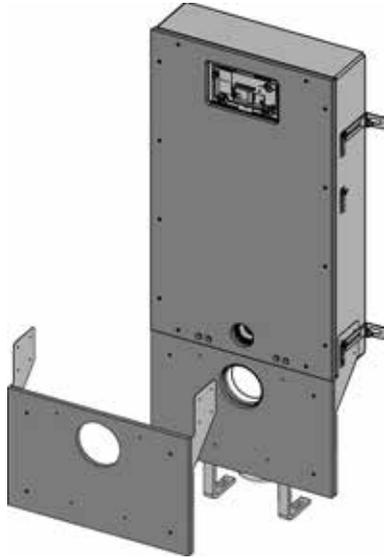
TECEbox plus can be easily aligned and attached with the depth-adjustable wall attachments.



The feet are screwed to the floor.



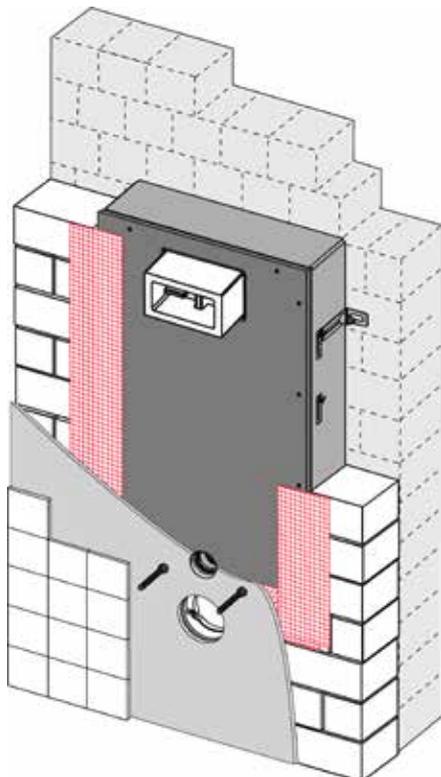
If the optionally available assembly area cover is used, the lower assembly area must not be filled in with bricks. Installation of the lower assembly area cover (order number 9200012) is simple, and a continuous, tileable surface is also immediately produced.



**Note:**

If DIN 4109 sound insulation requirements must be met, the hollow space below the cistern and the drainage area must be filled with mineral wool at the construction site.

Reinforcing tape must be attached to the transition points from the fibreglass lightweight concrete slab to the masonry, to avoid possible tile cracks. The surface can then be tiled.

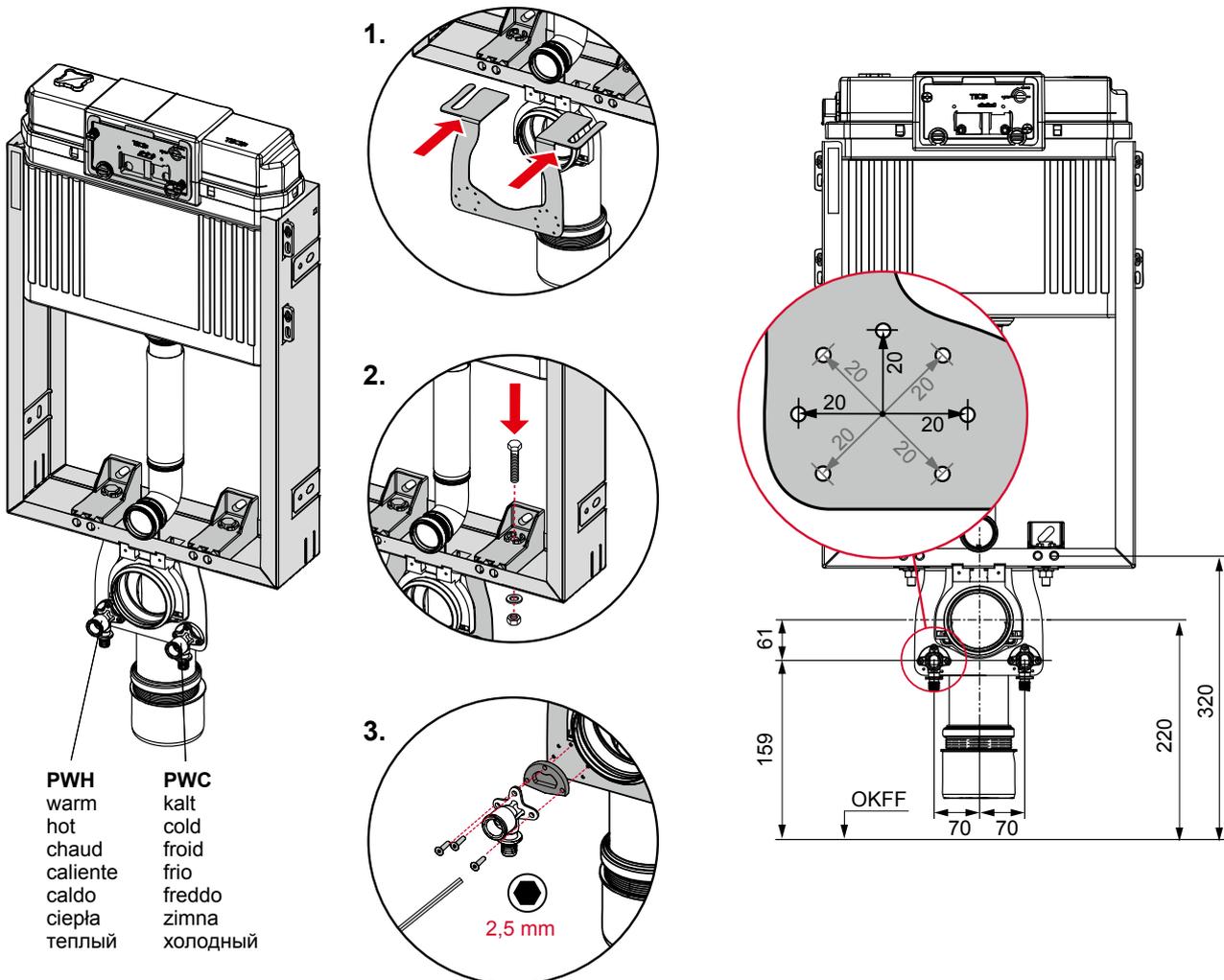
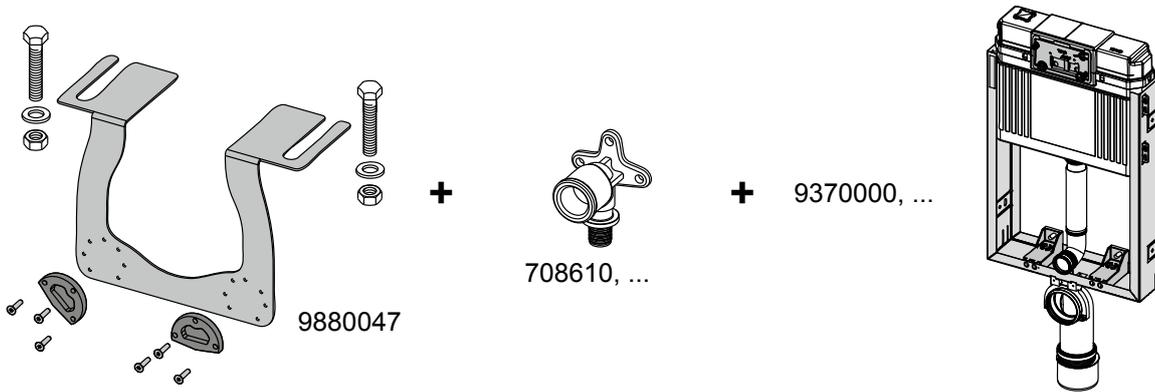


# TECEbox – TECEone upgrade set

## TECEone upgrade set for brick-wall construction

As with dry-wall construction, an upgrade set is also used in brick-wall constructions to connect the TECEone. The upgrade set is attached to the support frame of the TECEbox brick-wall module via two screws. Sound isolators and attachment screws are included in the scope of delivery and are used to attach the wall disks for the hot and cold water connection. Mounting the upgrade set ensures that the wall disks are automatically located in the correct position for connecting a TECEone.

TECEbox



## TECEbox washstand

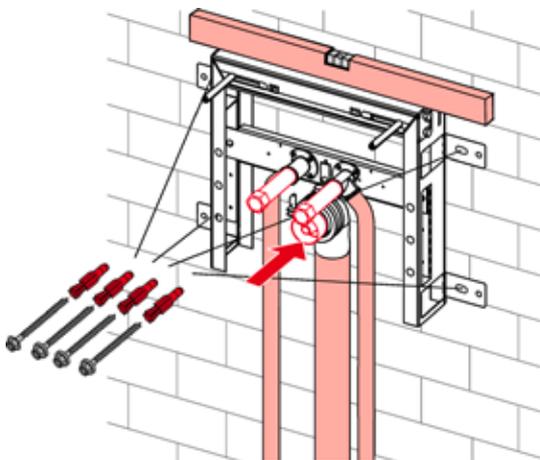


TECEbox washstand (order no. 9370033)

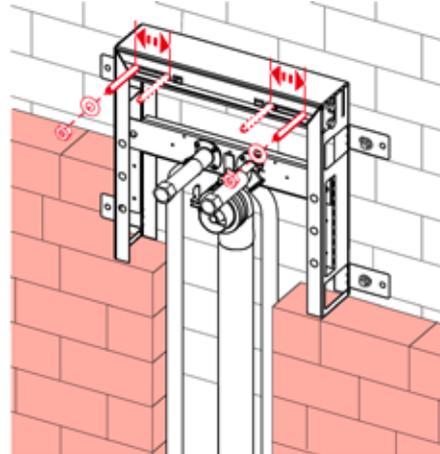
The connections for washstands in a brick-wall construction can be easily installed with the washstand frame. The surrounding 8 cm-deep steel frame with four depth-adjustable wall attachments is simply attached to each solid wall. All connection dimensions must be defined prior to brick-ing-in, and the elements fixed accordingly. A subsequent change to the installation dimensions is not possible.

### Installing the TECEbox washstand

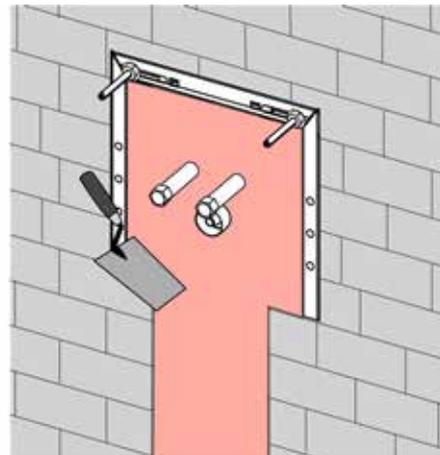
During the first step, the module is attached to the solid wall and aligned horizontally. The appropriate depth is set via the four wall attachments. The height-adjustable drain bend holder and depth-adjustable drain bend can be used for practically every application case. The DN 50 drain bend can also be shortened to a dimension of DN 40.



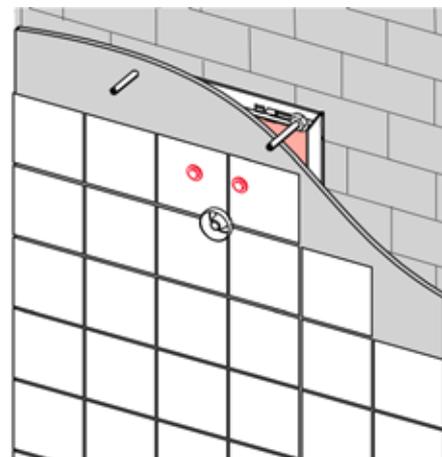
The distance from the threaded rods to the washstand ceramic retainer can range between 170 and 280 mm.



After installation and connection of all connection pipes, the module is bricked in.

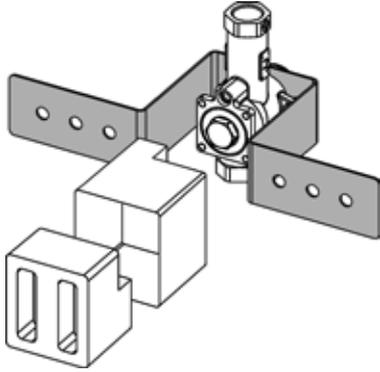


The plaster is then applied and the surface can be tiled.



# TECEbox – U 1 urinal flush valve housing

## TECEbox U 1 urinal flush valve housing



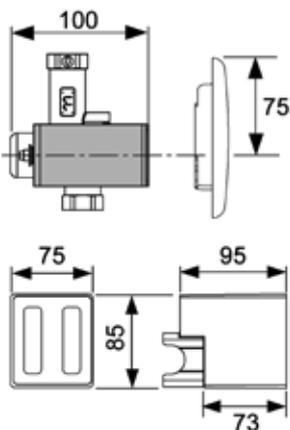
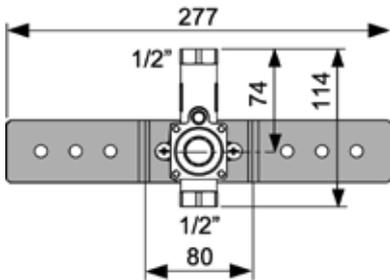
The TECE U 1 flush valve housing is pre-mounted on a retaining plate and therefore can be easily placed in a wall recess.

**Note:**

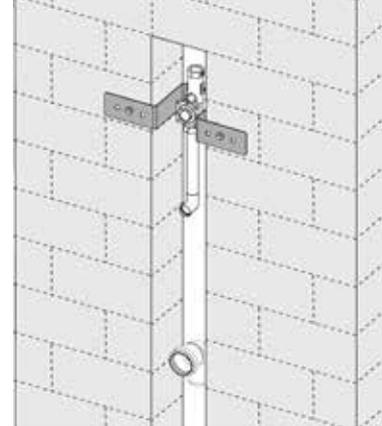
Prior to installation, you must know which urinal ceramic you are going to use. Refer to the latest connection dimensions from the ceramic manufacturer.

### Installing the TECEbox U 1 urinal flush valve housing

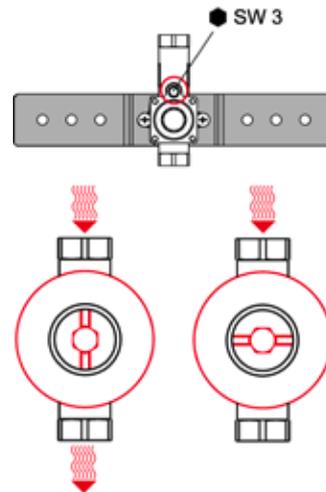
During installation of the urinal flush valve, you must pay attention to the installation depths and heights of the retaining plate, housing and bare-wall protection.



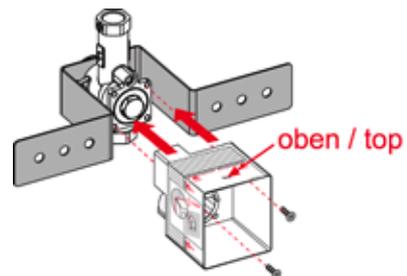
The flush valve housing is placed in a wall recess and attached using the retaining plate. Any approved pipe systems can be used for the water connection and inflow for the urinal ceramic.



In the as-delivered state, the urinal flush valve is locked, so that the required pressure test can be carried out. The inlet flow control is located above the plug. It must not be removed until the fine installation phase.

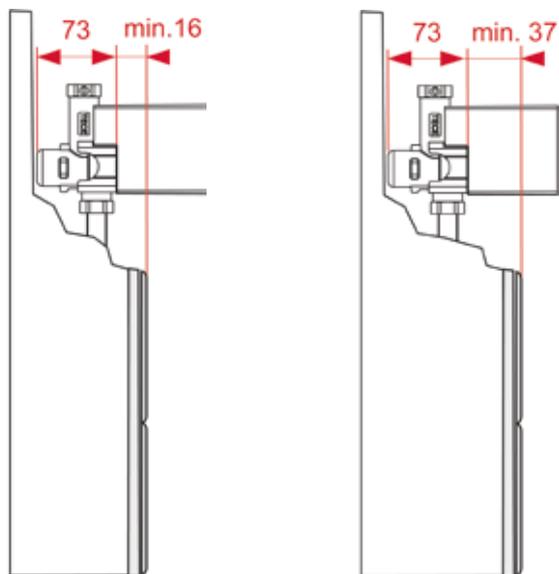


Fit the bare-wall protection and make sure that it is aligned correctly.



The bare-wall protection housing is cut off flush to the wall after tiling.

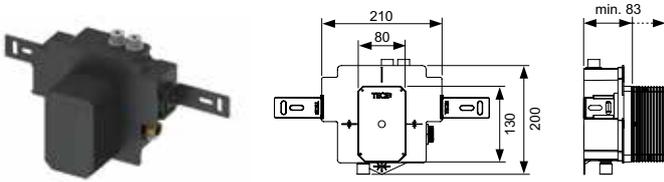
Note the required dimensions of the wall thickness for the respective urinal push plate (see section on flush plates).



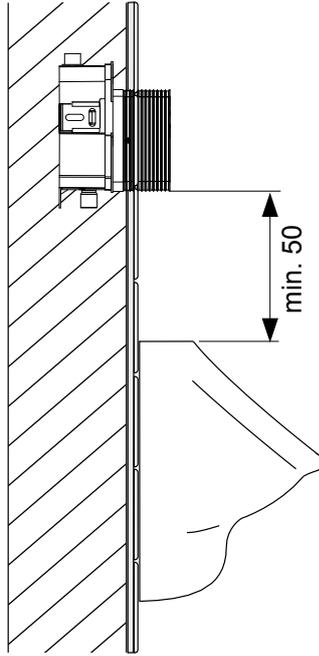
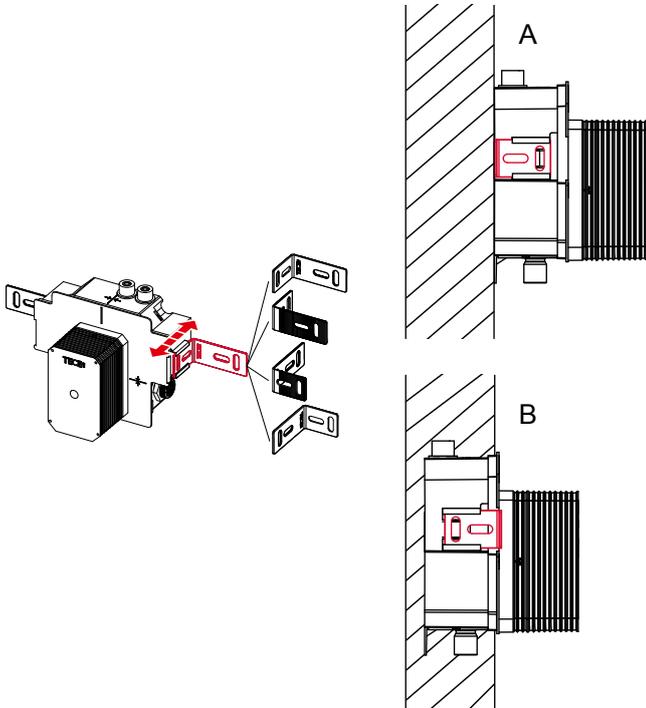
# TECEbox – U 2 urinal flush valve housing

## TECEbox U 2 urinal flush valve housing

The TECE U2 urinal flush valve housing is intended for use in bricked-in brick walls (order no. 9370040).



The U 2 urinal flush valve housing for brick-wall applications can be mounted in front of (A) or in the wall (B) with the mounting elbows supplied.

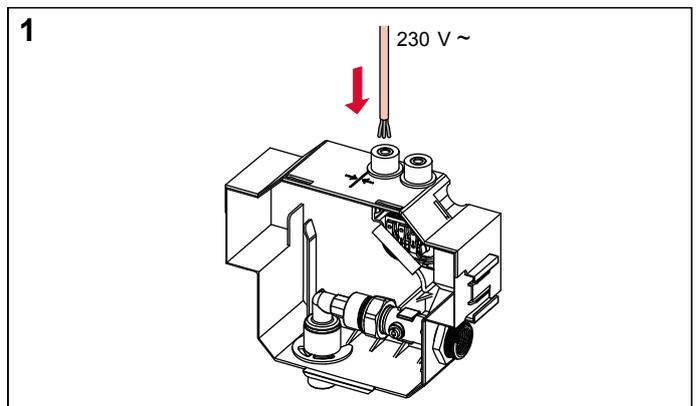


When positioning the cistern, observe the distance to the urinal ceramic. For aesthetic reasons, we recommend that the distance to the cistern is no less than 50 mm.

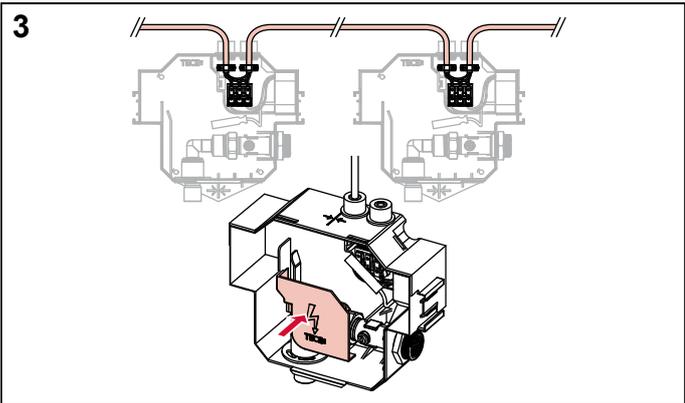
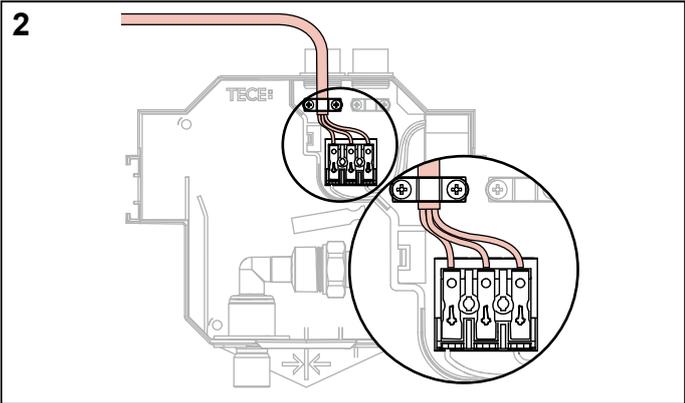
Note:

Prior to installation, you must know which urinal ceramic you are going to use. Refer to the latest connection dimensions from the ceramic manufacturer.

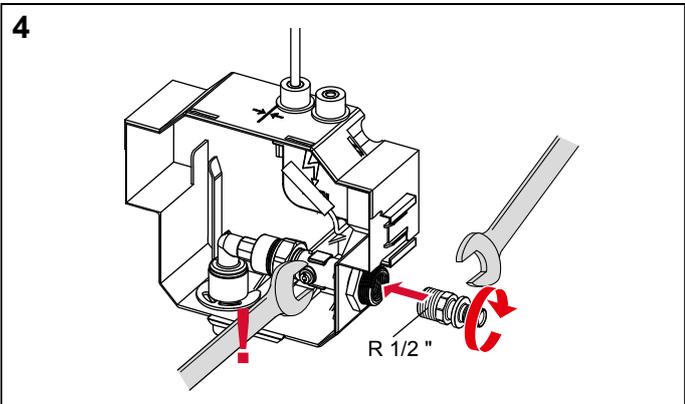
## Installing the TECEbox U 2 urinal flush valve housing



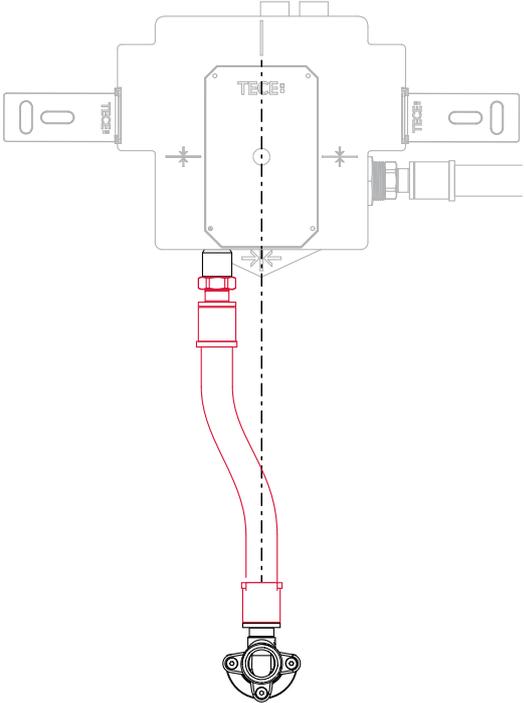
The transformer is already integrated into the flush valve housing to facilitate coordination of the different trades carrying out the assembly work. Therefore, the transformer can be directly connected with a 230 V cable.



It is also possible to loop the connection through (fig. 3).



To connect the pipe, hold the connection housing as shown in fig. 4.



Any approved pipe systems can be used for the water connection and inflow for the urinal ceramic. Make sure that the inflow for the urinal ceramic is positioned centrally beneath the urinal flush valve housing.

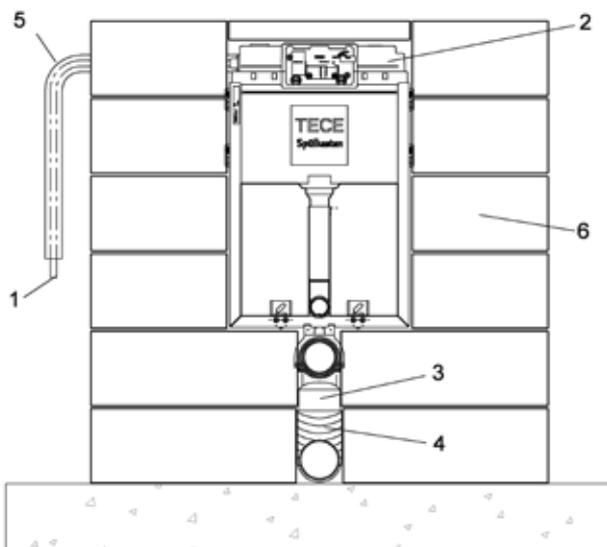
## Sound insulation

### Sound insulation expert opinions for toilet modules of the TECEbox series

The sound measurements of the installation sound level  $L_{in}$  taken by the Fraunhofer Institute in Stuttgart prove that TECE also meets DIN 4109 standard sound insulation requirements – installation sound level  $L_{in}$  30 dB(A). The installation sound level  $L_{in}$  was measured in a room lying diagonally below the installation room. Measurements were taken in front of a solid installation wall with a mass relating to the area of  $m = 220 \text{ kg/m}^2$ . For all measurements, washdown ceramics from TOTO were used along with a sound insulation set for toilet ceramics.

#### Extract from the TECEbox test report:

Installation sound level $L_{in}$ according to DIN 52 219 and DIN 4109 in dB(A)	
Excitation	Measuring room rear lower floor (diagonally below the installation room)
TECEbox with TECE cistern order no. 9370000	<b>29 dB(A)</b>



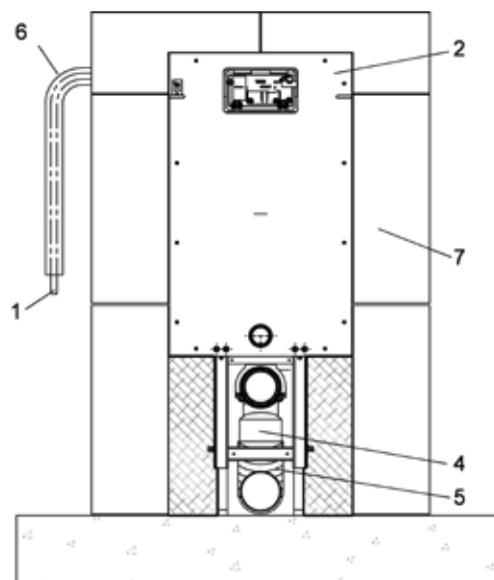
Item	Item name	Item number
Bare-wall installation		
1	TECEflex composite pipe, dim. 16	732016
2	TECEbox brick-wall-mounted cistern	9370000
3	DN 100 HT wastewater pipe	
4	Adhesive felt binding	
5	Pipe insulation	
6	Aerated cement blocks	
Detailed installation		
7	TOTO washdown toilet ceramic	
8	TECE sound insulation set for toilet	9200010
9	TECEambia toilet flush plate	9240200

TECEbox list of components

#### Extract from the TECEbox plus test report:

Installation sound level $L_{in}$ according to DIN 52 219 and DIN 4109 in dB(A)	
Excitation	Measuring room rear lower floor (diagonally below the installation room)
TECEbox plus incl. assembly area cover Order no. 9371000 Order no. 9200012	<b>28 dB(A)*</b>

\* Hollow spaces below the cistern must be filled with commercially available mineral wool at the construction site



Pos.	Item name	Item number
Brick-wall installation		
1	TECEflex composite pipe, dim. 16	732016
2	TECEbox plus brick-wall-mounted cistern	9370000
3	TECEbox plus assembly area cover	9200012
4	DN 100 HT wastewater pipe	
5	Adhesive felt binding	
6	Pipe insulation	
7	Aerated cement blocks	
Detailed installation		
8	TOTO washdown toilet ceramic	
9	TECE sound insulation set for toilet	9200010
10	TECEambia toilet flush plate	9240200

TECEbox plus list of components

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More information on  
[www.tece.com](http://www.tece.com)

**TECE GmbH**  
P +49 25 72 / 9 28 999  
[international-business@tece.com](mailto:international-business@tece.com)  
[www.tece.com](http://www.tece.com)