



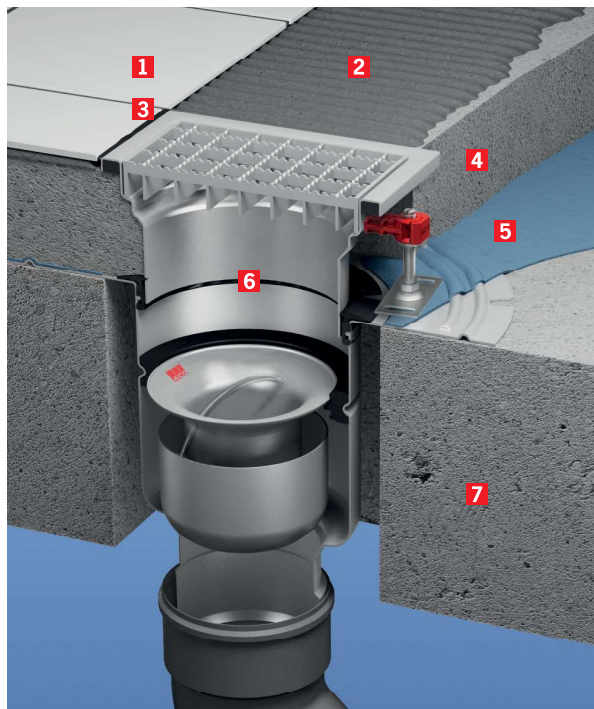


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**ACO hygienic gully**

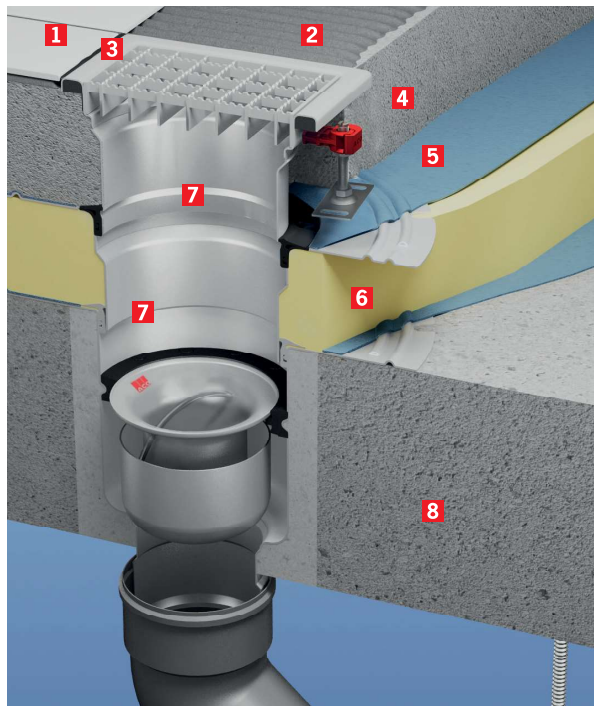
**ACO hygienic gully – telescopic flanged gully installed in suspended concrete slab construction**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Gully
- 7** Suspended concrete slab core-boarded to accept gully body



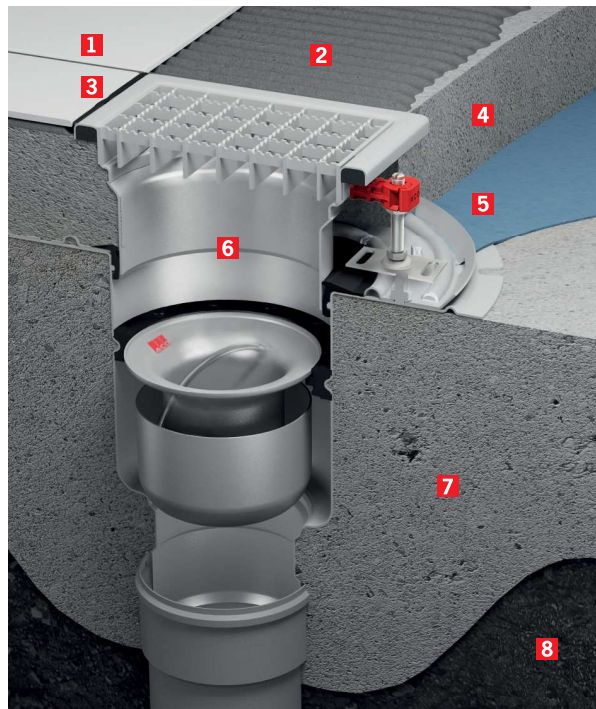
**ACO hygienic gully – telescopic flanged gully and raising flanged piece installed in suspended concrete slab construction**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Insulation
- 7** Double flange gully
- 8** Suspended concrete slab core-boarded to accept gully body



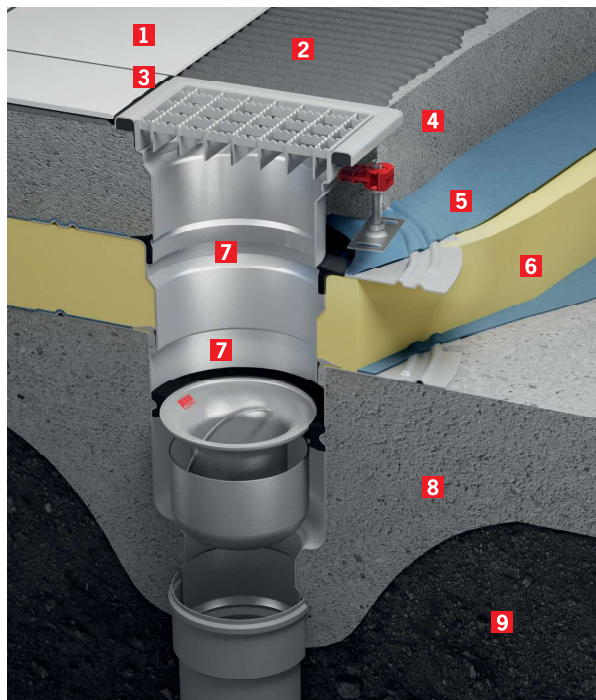
**ACO hygienic gully – telescopic flanged gully installed in solid concrete floor**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Flange gully
- 7** Solid concrete floor slab
- 8** Compacted soil



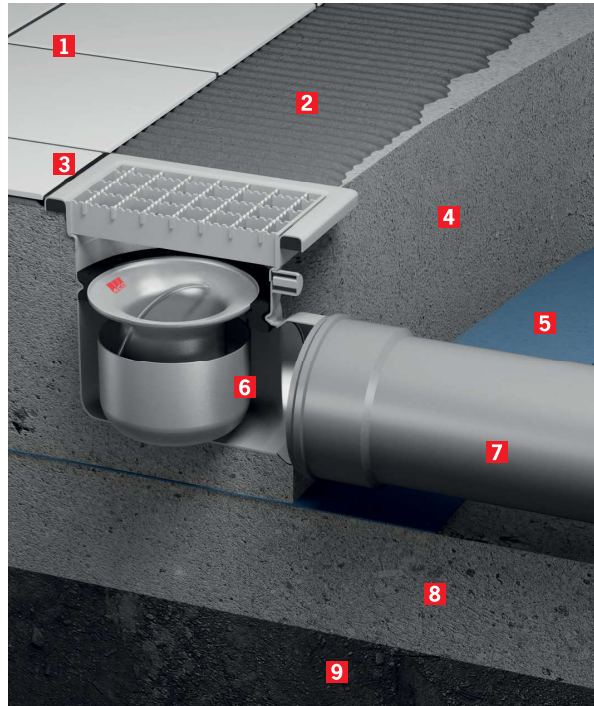
**ACO hygienic gully – telescopic flanged gully and raising piece installed in solid concrete floor**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Insulation
- 7** Double flange gully
- 8** Solid concrete floor slab
- 9** Compacted soil



**ACO hygienic gully – fixed height gully installed in solid concrete floor**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Damp proof membrane (DPM)
- 6** Gully
- 7** Outlet pipe
- 8** Floor slab
- 9** Compacted soil



ACO hygienic box channel

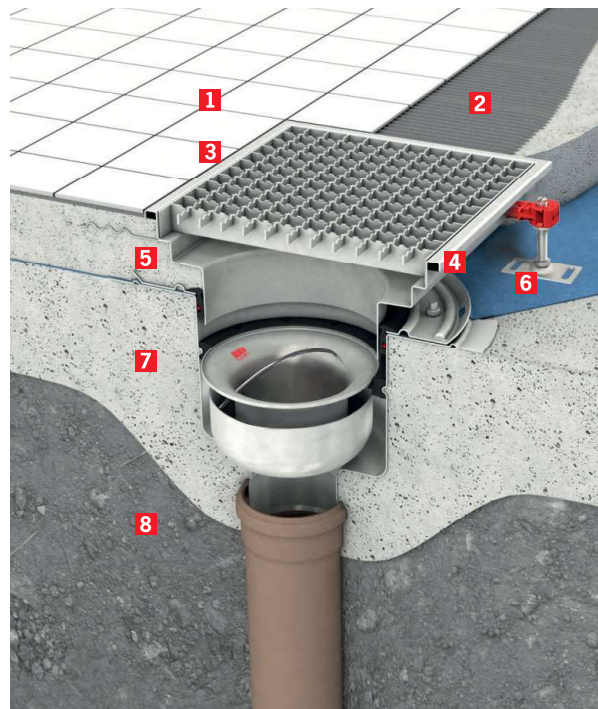
ACO hygienic box channel standard type – ACO hygienic gully with adhesive bonding flange  
(Tiled floor)

- 1 Ceramic tiles
- 2 Tile cement
- 3 Mastic sealant
- 4 Rubber infill
- 5 Floor screed
- 6 Water proof membrane
- 7 Solid concrete floor slab



ACO hygienic box channel standard type – ACO hygienic gully with mechanical clamping flange  
(Tiled floor)

- 1 Ceramic tiles
- 2 Tile cement
- 3 Mastic sealant
- 4 Rubber infill
- 5 Floor screed
- 6 Water proof membrane
- 7 Solid concrete floor slab
- 8 Compacted soil



## Installation recommendation ACO hygienic box channel

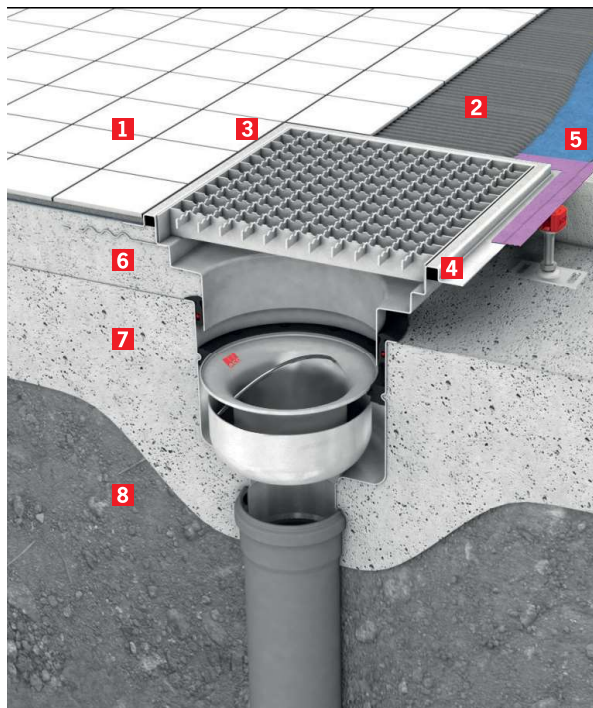
### ACO hygienic box channel standard type – ACO hygienic gully with location flange (Resin floor)

- 1 Epoxy/resin floor
- 2 Floor screed
- 3 Rubber infill
- 4 Solid concrete floor slab
- 5 Compacted soil



### ACO hygienic box channel extendend type – ACO hygienic gully with location flange (Tiled floor)

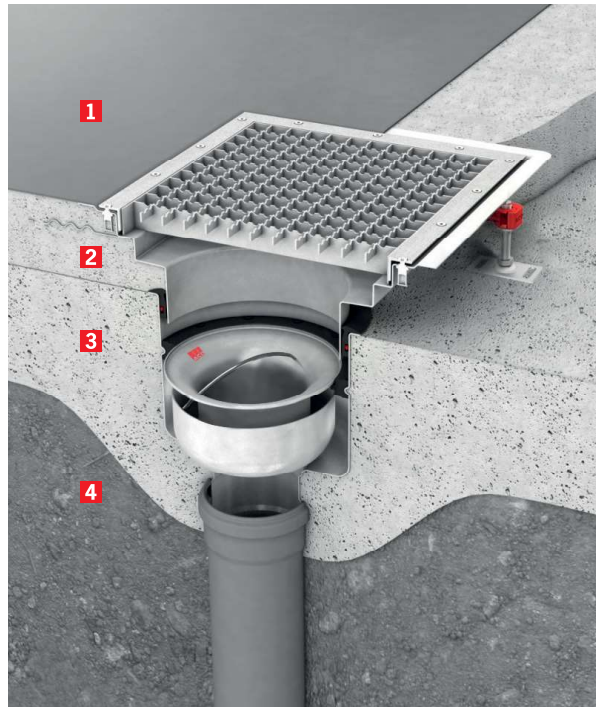
- 1 Ceramic tiles
- 2 Tile cement
- 3 Mastic sealant
- 4 Rubber infill
- 5 Water proof membrane
- 6 Floor screed
- 7 Solid concrete floor slab
- 8 Compacted soil



ACO vinyl box channel

ACO vinyl box channel – ACO hygienic gully with location flange (Vinyl floor)

- 1 Vinyl floor
- 2 Floor screed
- 3 Solid concrete floor slab
- 4 Compacted soil

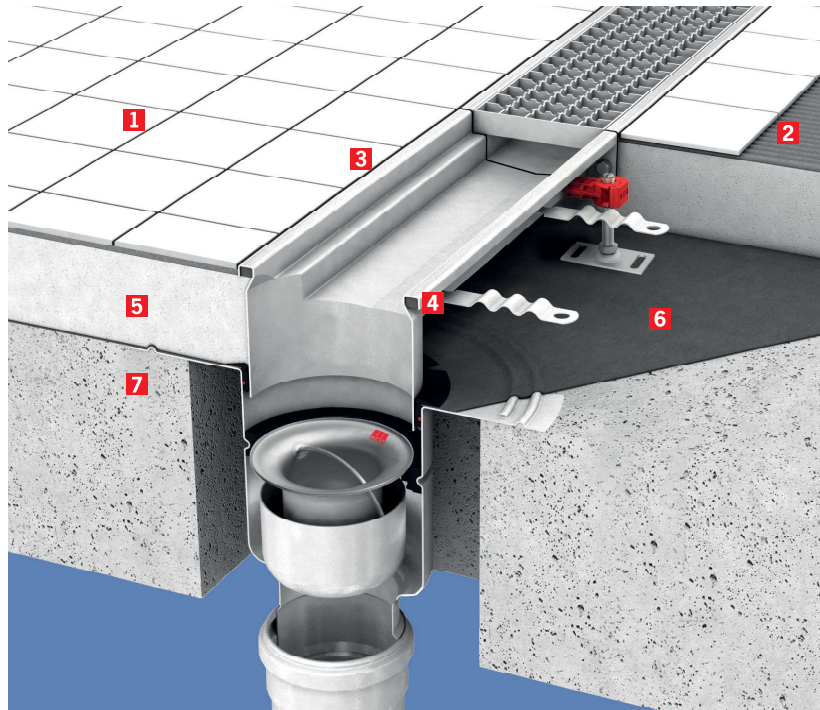




**ACO modular box channel**

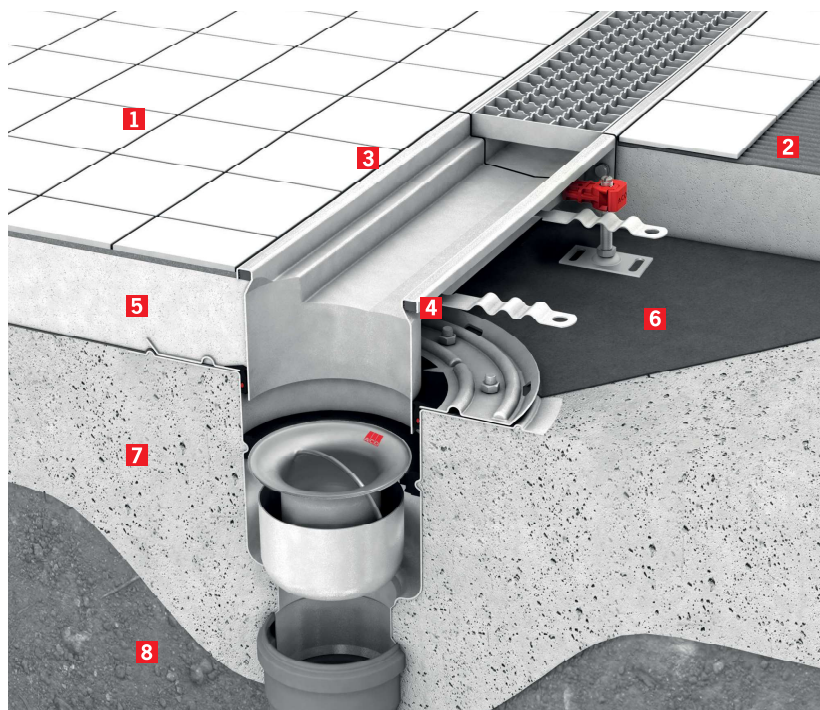
**ACO modular box channel standard type – ACO hygienic gully with adhesive bonding flange  
(Tiled floor)**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab



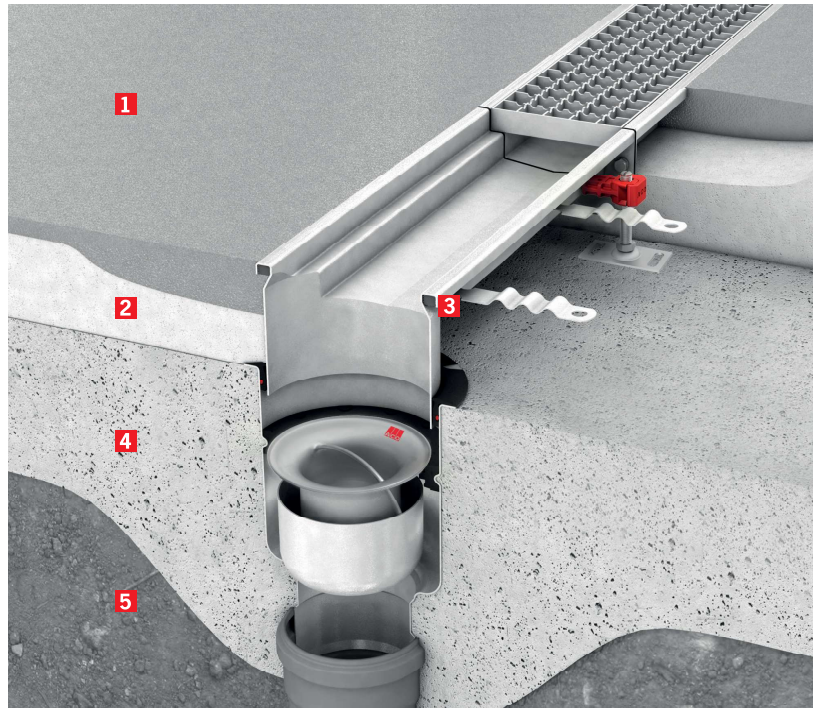
**ACO modular box channel standard type – ACO hygienic gully with mechanical clamping flange  
(Tiled floor)**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab
- 8** Compacted soil



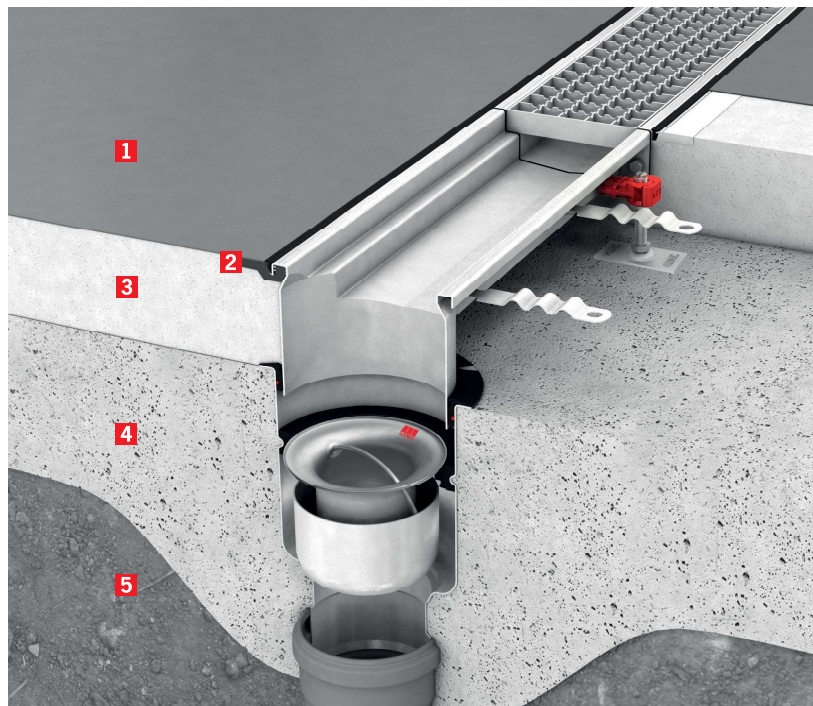
**ACO modular box channel standard type – ACO hygienic gully with location flange (Resin floor)**

- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



**ACO modular box channel vinyl type – ACO hygienic gully with location flange (Vinyl floor)**

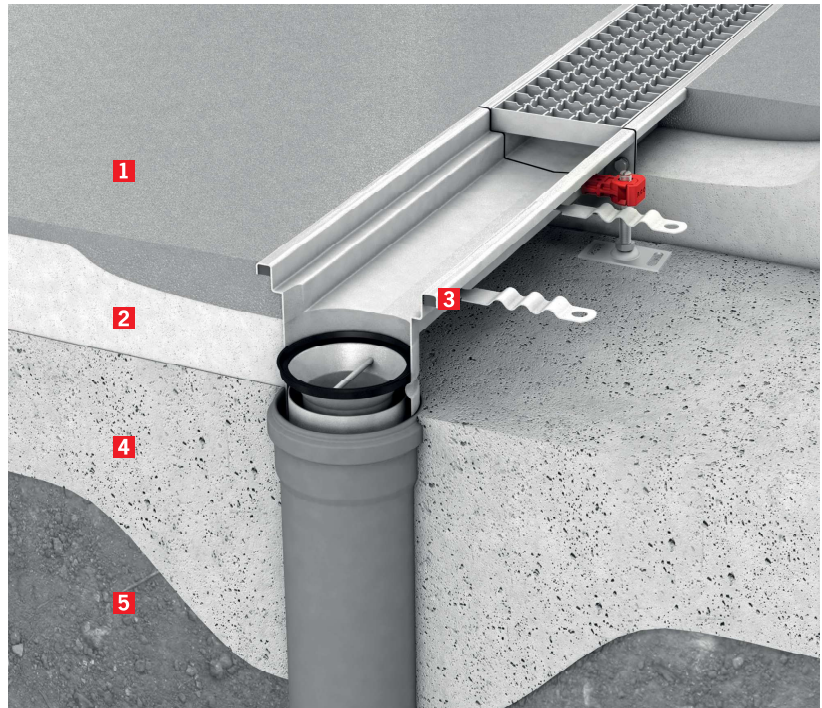
- 1** Vinyl floor
- 2** Vinyl seal
- 3** Floor screed
- 4** Solid concrete floor slab
- 5** Compacted soil



## Installation recommendation ACO modular box channel

### ACO modular box channel standard type – direct connection to sewage pipe system (Resin floor)

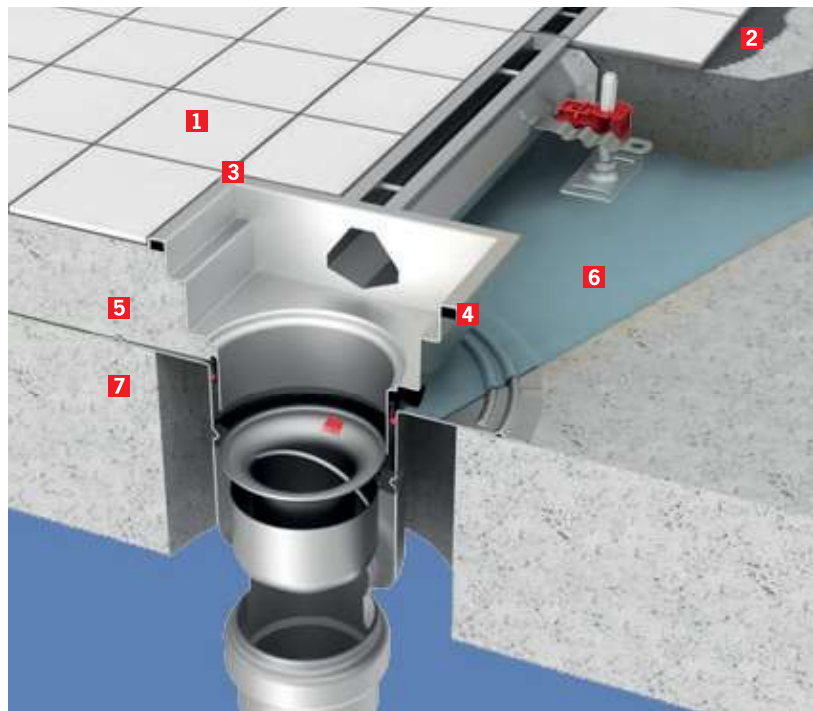
- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



ACO modular slot channel

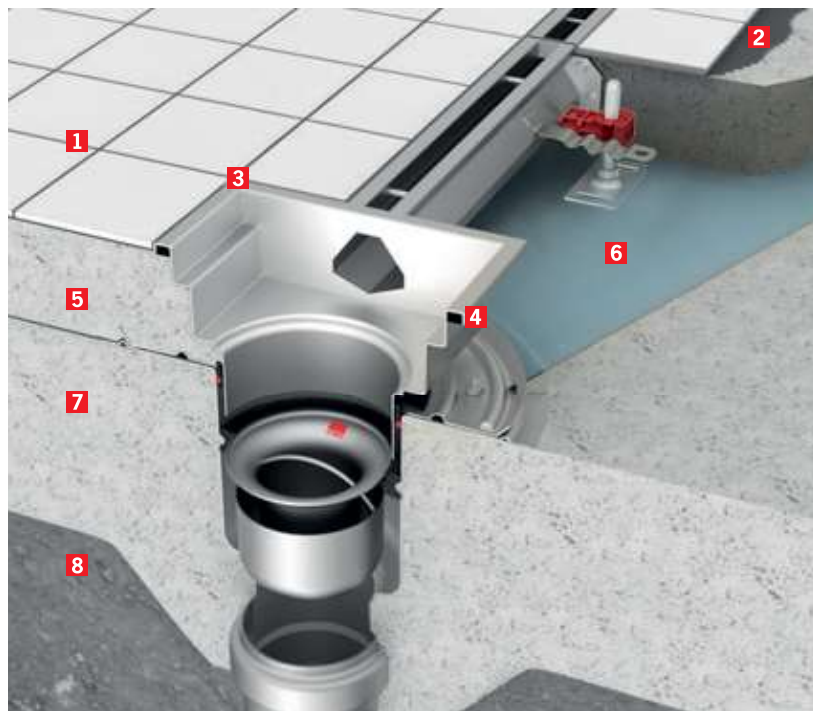
ACO modular slot channel standard type – ACO hygienic gully with adhesive bonding flange (Tiled floor)

- 1 Ceramic tiles
- 2 Tile cement
- 3 Mastic sealant
- 4 Rubber infill
- 5 Floor screed
- 6 Water proof membrane
- 7 Solid concrete floor slab



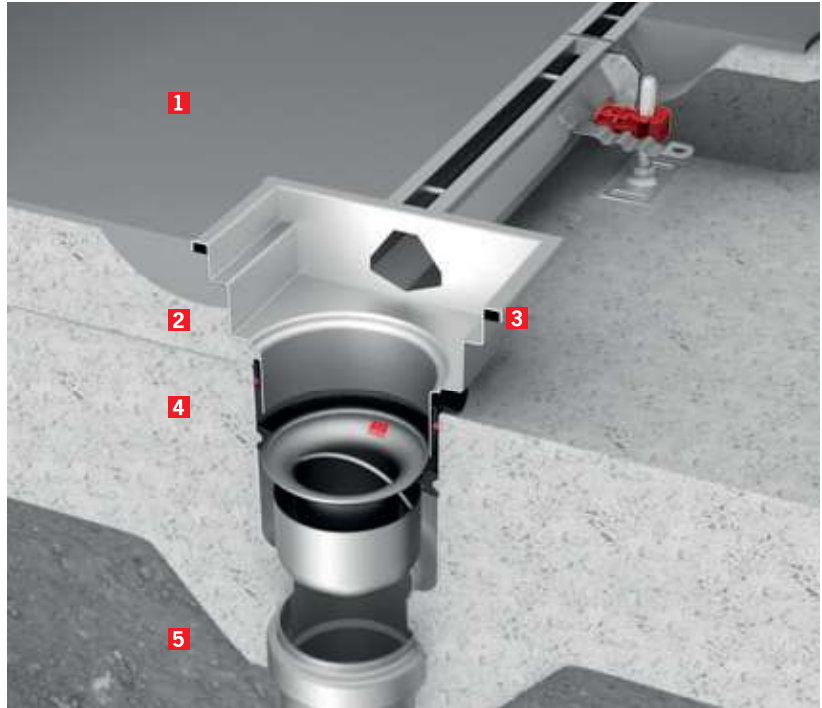
ACO modular slot channel standard type – ACO hygienic gully with mechanical clamping flange (Tiled floor)

- 1 Ceramic tiles
- 2 Tile cement
- 3 Mastic sealant
- 4 Rubber infill
- 5 Floor screed
- 6 Water proof membrane
- 7 Solid concrete floor slab
- 8 Compacted soil



**ACO modular slot channel standard type – ACO hygienic gully with location flange (Resin floor)**

- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



## ACO pipe

### Generally

The following standards will help designers to select the correct size of pipe system for a particular application: EN 12056: gravity drainage systems inside buildings. EN 752: drain and sewer systems outside buildings. Installation should be in accordance with the manufacturer's recommendations as well as with EN 12056-2, EN 12056-3 and EN 752.

#### Pipe cutting

If it is necessary to adapt or shorten pipe lengths where tools are used, the cut must be square, clean and chamfered.

Suitable cutters are available from ACO.

These tools are designed to form the edge bevel on the male spigoted end of the pipe. Carbon steel cutting wheels are not suitable.

#### Pipe jointing

The assembly of pipe joints is quick and straightforward requiring only a light application of lubricant available from ACO to the chamfered pipe end. Ensure that the matching ends of the pipes and fittings are clean and free from contamination. Push-fit the pipe end into the socket, but do not push fully into the socket recess so as to allow for thermal expansion within the system.

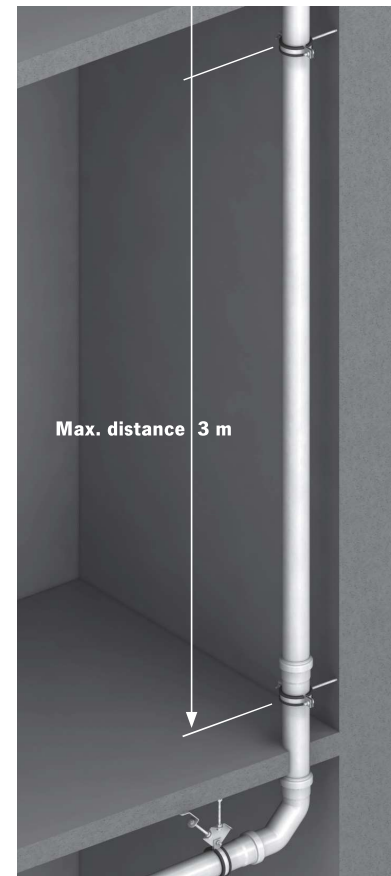


### Vertical pipe stacks

The load applied with a fluid in the pipe is vertically down. Position the highest bracket adjacent to the top inlet of the pipe, then mount brackets at 3 meter spacings. At the bottom of the vertical pipe, use a bracket within 200 mm of the bottom. Fit brackets at each change of pipework is direction or junction points. Pipework should be at least 30 mm from the wall to facilitate maintenance and painting.

#### Pipe weights

Engineers should be aware of minimum and maximum weights when designing vertical stack and horizontal pipe run systems. Generally, when the pipe is completely full of water, then the vertical deflection of the pipe between brackets should not exceed 1.5 mm. The discretion of the installer should be applied in each instance to ensure that the pipe is adequately supported.



## Horizontal pipe runs

As a guide, use the table below for bracket spacing on horizontal pipes.

### Pipe diameter bracket spacing

Pipe ø [mm]	Length [m]
50	2.0
75	2.3
110	2.5
125	3.0
200	3.0
250	3.0

Recommended distances; for installation follow your local standards.



Horizontal pipework should be supported by pipe brackets in 3 meter intervals maximum. One bracket should be within 300 mm of the pipe joint and the other approximately at the midpoint of the pipe length, but not more than 3 metres from the next bracket (depending on the pipe diameter- refer to the upper table).

Additional brackets should be used at changes of direction and at junction points

immediately downstream of the fitting. Horizontal pipe runs may be installed at a fall of 1 in 50 and feeder connections should be achieved using 45° branches. Where long pipe runs occur i.e. greater than 15 meters, a fixing arm should be attached to the bracket to prevent pendulum movement within the system.

## Below ground installation

### Back-filling

Back-filling around the pipe can only start when the position of the pipe has been checked and approved.

### Compression

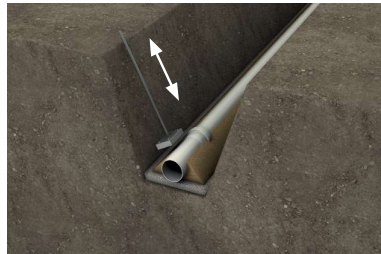
Care should be taken to avoid distortion of both the pipe run and the pipe itself during back-filling and compaction. Avoid tipping backfill material directly onto the pipe system. If mechanical compaction is used, the weight and resultant compressive force must be taken into account to avoid distortion. Back-fill materials should be compacted to a minimum of 93%.

### Filling in the excavation

Soil from the excavation can be used for filling, but larger stones and blocks should not be used. Compression of the filling material outside reinforced areas is not necessary if the settling will not cause problems or damage.

### Local standards

It is recommended to install pipes according to local standards.





**ACO protective covers**

**Features and benefits:**

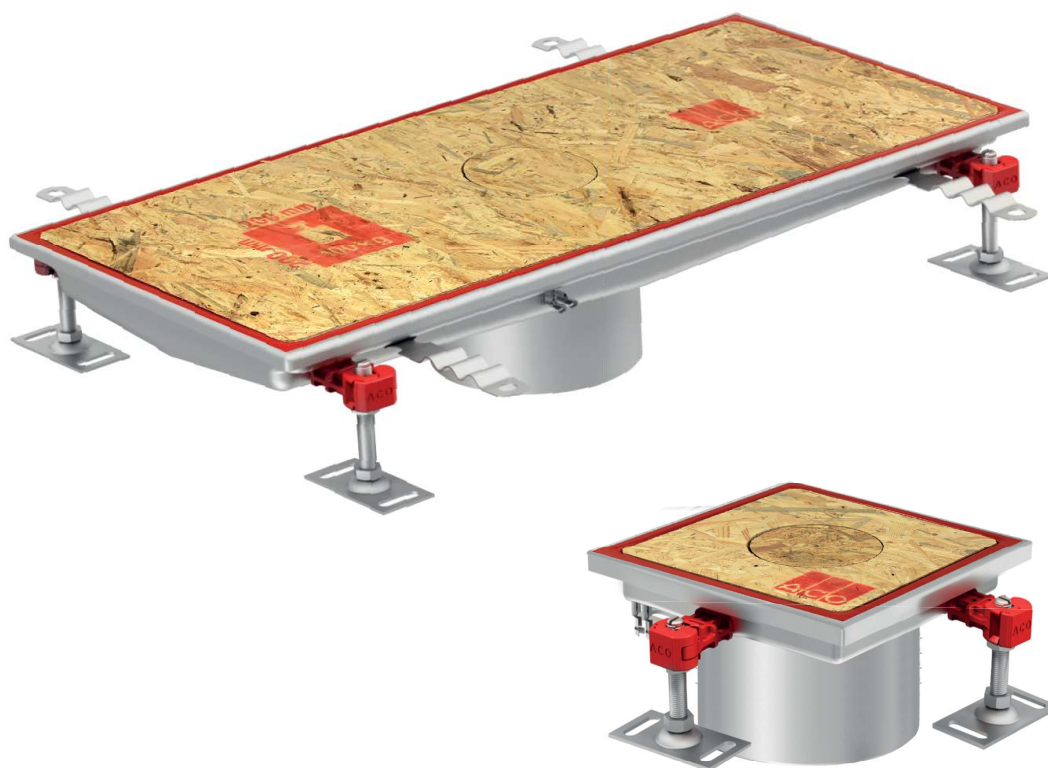
- Protection from building material debris
- Eliminates cleaning of drainage after installation
- Prevents injuries on worksite
- Certified according to EN 12811-1 for scaffolding load class 3
- Eco friendly and easily disposable

**ACO protective covers made from OSB are available for:**

- All ACO hygienic gullies and ACO hygienic box channels, standard, semi-standard and customized
- ACO vinyl box channels, standard, semi-standard and customized
- Gully tops on ACO slot channels, semi-standard and customized

**Ordering:**

- For standard articles, add **\_C** at the end of product article number (example: 111111\_C)
- For semi-standard and customized articles, specify this option in the order process



Load area	Maximum load capacity	Maximum pressure
200 x 200	max. 100 kg	max. 2.5 N/cm <sup>2</sup>
500 x 500	max. 150 kg	max. 0.6 N/cm <sup>2</sup>
1000 x 1000	max. 200 kg	max. 0.2 N/cm <sup>2</sup>

Classification according to EN 12811-1 for scaffolding load class 3

Notes

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A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.