

Installation / Assembly Instructions

GRAF percolation tunnel „Sicker-Tunnel“ 300 Litres

Made of polypropylene

(Item no. 410090)

Please carefully read through all the installation / assembly instructions before you start work. For all accessory which you purchase from GRAF you will receive separate installation instructions which will be enclosed in the transport package. In case of missing instructions please contact us for immediate additional supply.

General information:

The GRAF percolation tunnel “Sicker-Tunnel” is a system which has been particularly designed for the percolation of rainwater and retention respectively. The structure of the “Sicker-Tunnel” allows a space-saving installation close to the surface, even under footprints used by cars.

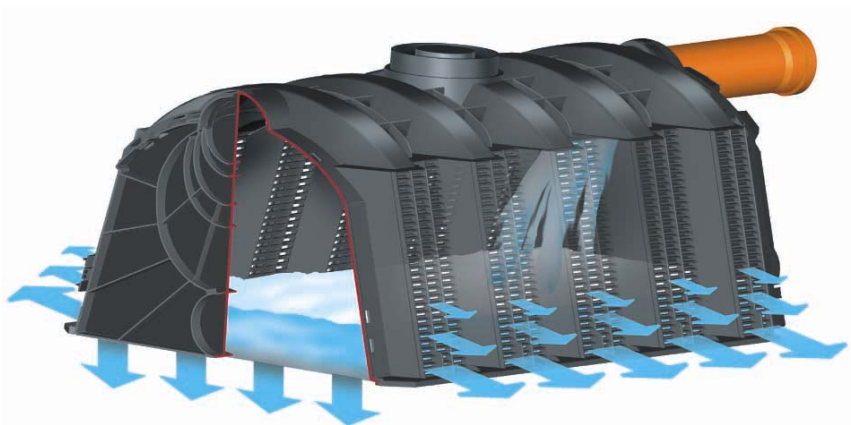
The dimensioning according to ATV – A 138 or corresponding, country-specific technical regulations in force must be followed for larger projects.

In order to avoid mud accumulation a percolation filter must be installed.

The installation has to be realized in a professional manner.

Technical data:

✓ Volume:	300 litres
✓ Length:	1,200 mm (incl. end plates)
✓ Width:	800 mm
✓ Height:	510 mm
✓ Connectors:	upper side: DN 100, DN 150, DN 200 and DN 300 lower side: DN 100
✓ Weight:	approx. 11 kilos
✓ Material Sicker-Bloc 300 car-bearing:	100 % polypropylene (made of recycling material)



1. Choice of position

- ✓ Distance to cellar > 6 metres (for non-sealed up cellars)
- ✓ Distance to groundwater min. 1 metre
- ✓ The distance to existing or planned tree population must correspond at least to the (expected) diameter of the crown.

2. The table indicates the earth covering and the maximum installation depth.

	Sicker-Tunnel
Load	Max. 7,5 to/qm for a short time, max. 3,5 to/qm for long term
Min. earth covering without traffic load	25 cm
Min. earth covering with traffic load	50 cm
Max. installation depth	2.0 m

3. Installation of the feed pipes and deaeration pipes:

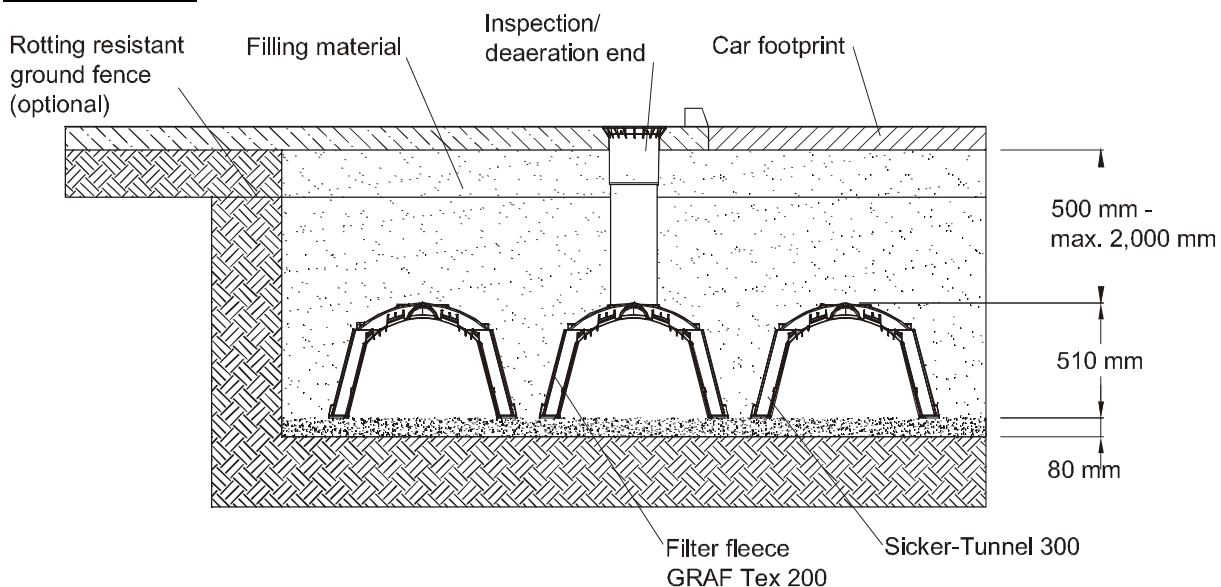
The feed pipes will be connected at the front of the end plates. For this purpose the accordingly perforated and labelled circular cut-outs will be detached. The feed pipes must extend into the tunnel modules approximately 20 cm. For assuring that the water enters into the modules in a steady way, it is essential for extensive module laying that every percolation line is equipped with its own feeding pipe. Use the connection on the upper side of the module for the deaeration / inspection end (1 deaeration / inspection end per line).

4. Installation of the „Sicker-Tunnel“

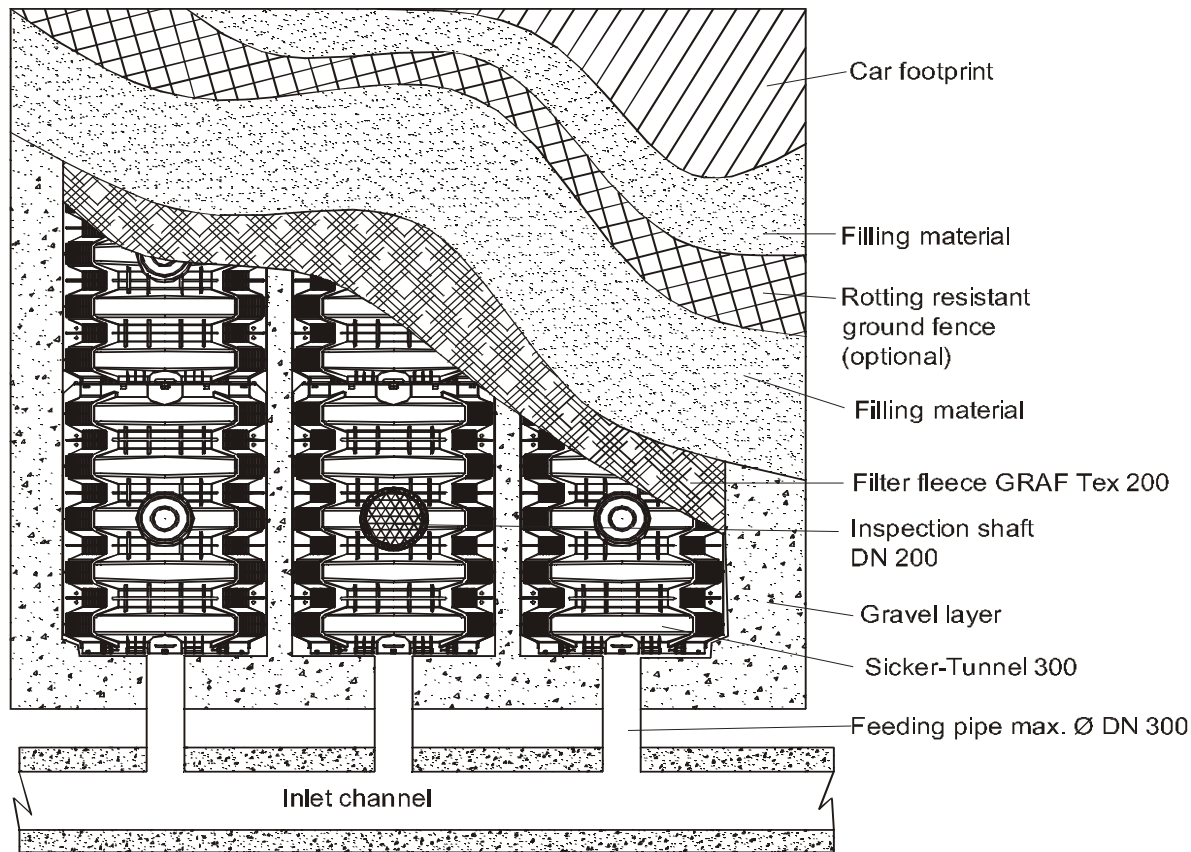
The horizontal, flat footprint of the excavation first has to be filled with a layer of grit (approx. 10 cm, grain size 8/16) which serves as granular sub-grade course. The “Sicker-Tunnels” are put on the gravel pit and connected with each other in lines (lengthwise). In order to protect the percolation modules from dirt etc. they are wrapped round by filter fleece and thus being separated from the filling material. The filter fleece should overlap the end of the modules by at least 30 cm. Afterwards the excavation will be filled steadily and in layers. If a lawn is planted on top of the percolation surface, the system should be covered with a waterproof film or a clay layer of approx. 10 cm, as otherwise the lawn above the percolation system may faster dry up than the rest of the lawn.

The rotting-resistant ground fence can be used as additional load distribution under car-bearing surfaces.

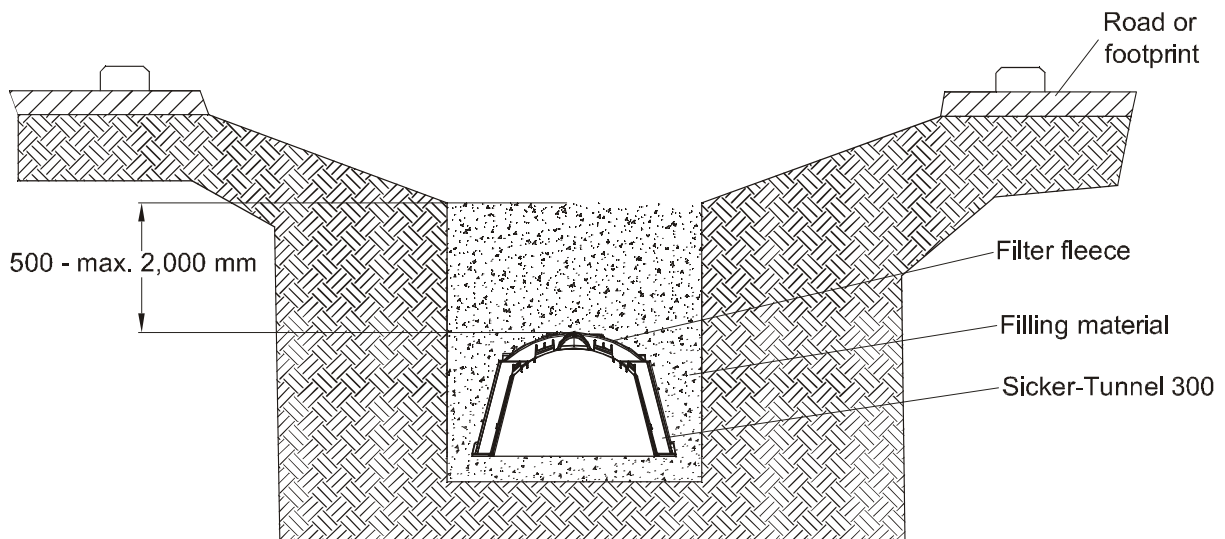
Sectional view:



Top view:



Sectional view of open swale percolation ditch:



info@graf-online.de
www.graf-online.de



www.graf-online.de
info@graf-online.de

Otto Graf GmbH
Carl-Zeiss-Straße 2 – 6
79331 Teningen

Tel.: ++49/7641/589-0
Fax: ++49/7641/589-50

Status: 16.11.05