

GRAF Infiltration Tunnel/Tunnel twin

Space-saving and cost-efficient



The GRAF Infiltration Tunnel has been mainly designed for the use in private and rural areas. The system which consists of one or several tunnel modules and two end plates can be extended at will. The laying is realized in one or more lines of the same level. As the weight of one module is only 11 kilos, the handling of the Infiltration Tunnel is excellent.

The surface beyond the tunnels is vehicle loading which offers versatile possibilities for utilisation.

Up to 12000 litres infiltration volume per pallet

Thanks to its special design the GRAF Infiltration Tunnel can be stacked easily. Consequently, the shipment of up to 40 Infiltration Tunnels on one pallet saves considerable transport and storage costs.

Vehicle loading

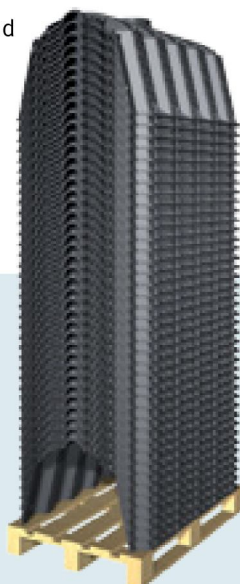
For offering versatile possibilities of utilisation, the surface beyond the Infiltration Tunnels can be loaded permanently up to 3,5 to/m² and thus is also suitable for vehicle loading.

Easy installation

The GRAF Infiltration Tunnels are laid in lines and can be flexibly adapted to specific conditions and to the individual storage volume requested. The installation of the modules is easy, quick and variable. The installation is possible without heavy equipment, as one Infiltration Tunnel only weighs 11 kilos. The tunnel modules are simply stuck together in one line and equipped with 2 end plates per line.

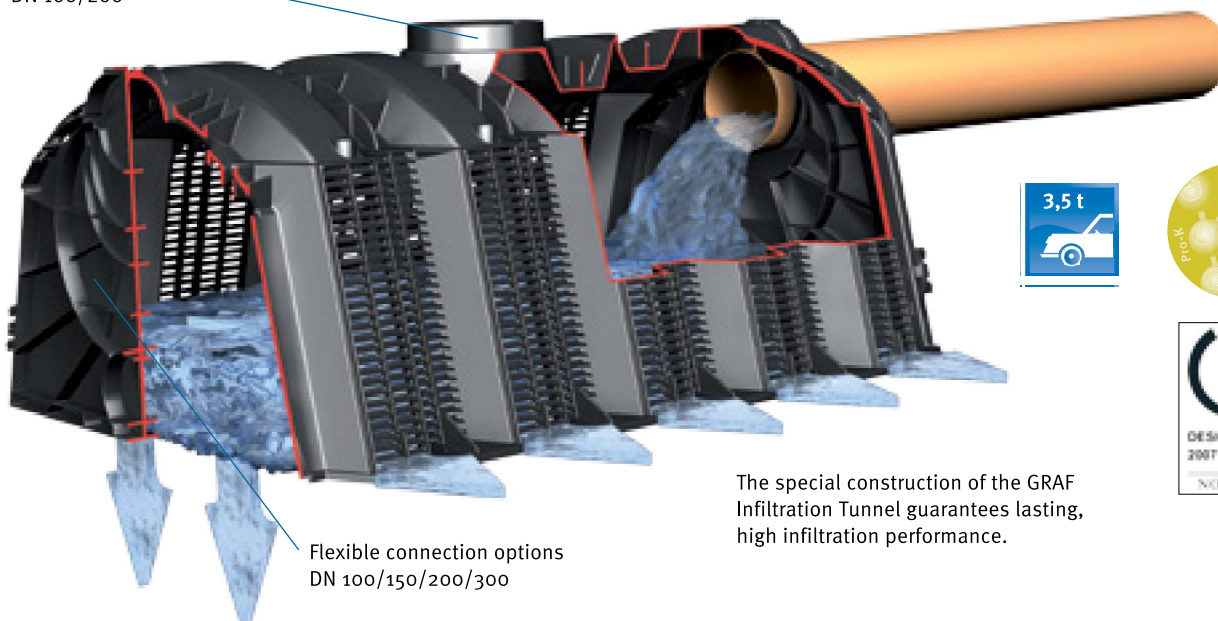


You will find an enquiry form and sizing assistance on our website www.graf.info



Infiltration Tunnel

Flexible connection options
DN 100/200



The special construction of the GRAF Infiltration Tunnel guarantees lasting, high infiltration performance.

Infiltration Tunnel

Capacity [litres]	Length [mm]	Width [mm]	Height [mm]	Colour	Order no.
300	1160	800	510	black	230010

[Webcode G4103](#)

End plate for Infiltration Tunnel

Item	Length [mm]	Colour	Order no.
End plates (Set 2 units)	30	black	231004

Technical data

Volume	300 litres (79 US-gallons)
Length	1160 mm (45.7 inches) 1220 mm (48 inches) (incl. end plates)
Width	800 mm (31.5 inches)
Height	420 mm (16.5 inches)
Connectors	upper side: DN 100, 150 200, 300 lower side: DN 100, 200
Weight	approx. 11 kilos
Material	100 % made of recycling material polypropylene (PP)

Infiltration Tunnel / Infiltration Tunnel twin accessories

Inspection end

DN 200

Order no. 340527



Deaeration end

DN 100

Order no. 369017



GRAF-Tex geotextile

For one Infiltration Tunnel size of 2.50 x 2.50 m

Order no. 231006

Material sold by the metre, roll width 5 m

Order no. 231002



Infiltration Tunnel twin

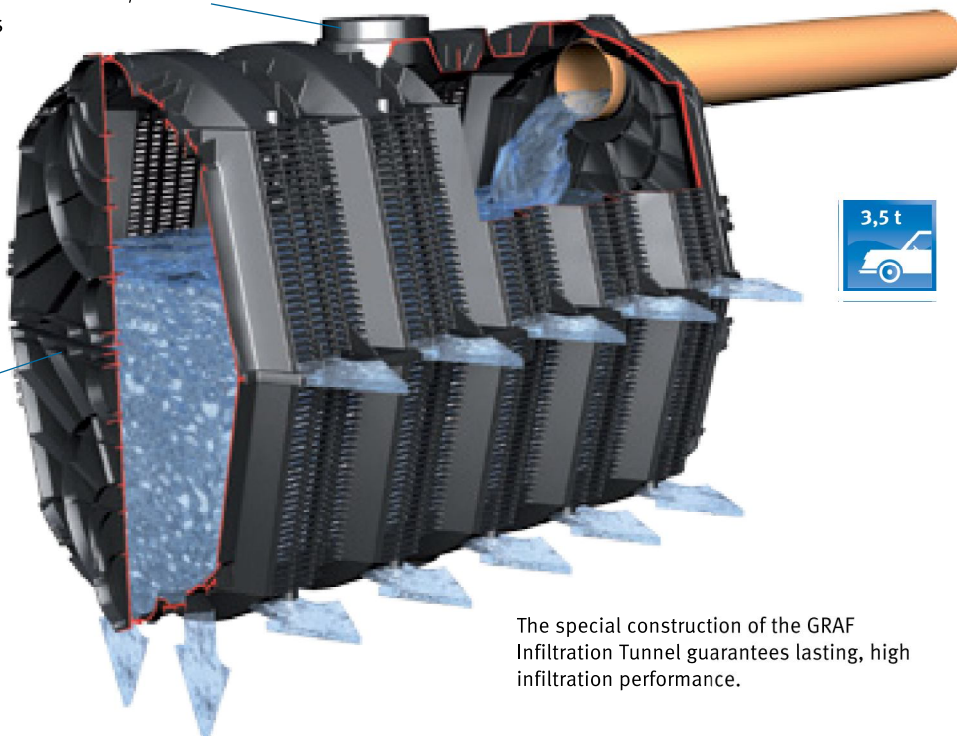


Easy assembly

The Infiltration Tunnel system consists of one or several tunnel modules and end plates at the end of each line. It can be extended as required. Installation is in only one layer. As the weight of one module is only 11 kilos, the handling of the modules is excellent.

Flexible connection options
DN 100/200

Flexible connection options
DN 100/150/200/300



The special construction of the GRAF Infiltration Tunnel guarantees lasting, high infiltration performance.

Infiltration Tunnel twin

Consisting of two Tunnel and 1 set Click-Bolt-Connector

Capacity [litres]	Length [mm]	Width [mm]	Height [mm]	Colour	Order no.
600	1160	800	1020	black	410130

[Webcode G4104](#)

End plate for Infiltration Tunnel twin

Item	Length [mm]	Colour	Order no.
End plates (Set 2 units)	30	black	231004

Technical Data	
Volume	Infiltr.-Tunnel twin 600 litres
Length	1160 mm incl. end plate 1220 mm
Width	800 mm
Height	Infiltr.-Tunnel twin 1020 mm
Connectors	upper side: DN 100, 150 200, 300 lower side: DN 100, 200
Weight	approx. 2 x 11 kilos
Material	100 % made of recycling material polypropylene (PP)

GRAF Click-Bolt-Connector

Connecting elements for
Infiltration Tunnel twin (Set 6 units)

Best.-Nr. 410094

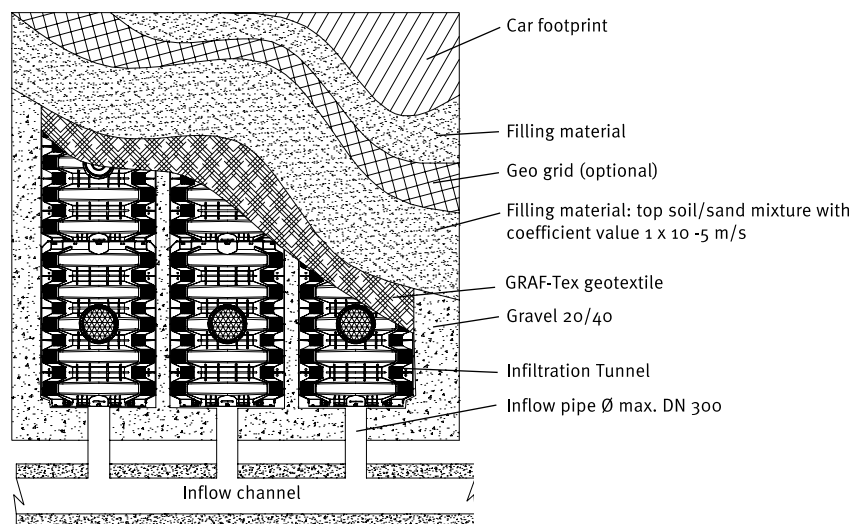


Technical Data Infiltration Tunnel/twin

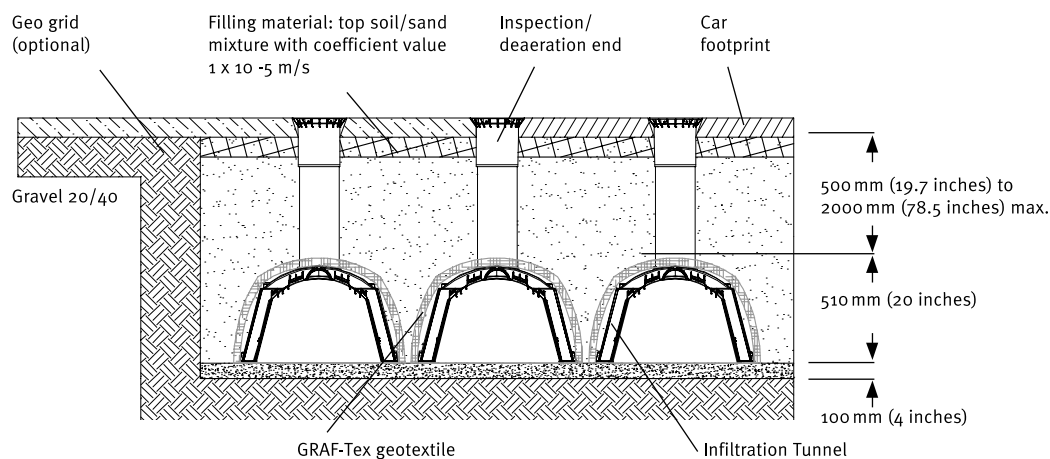
Maximum earth covering and installation depth

	Infiltration Tunnel
Load	Max. 7.5 kN/m ² temporarily Max. 3.5 kN/m ² for long term
Min. earth covering without traffic load	250 mm (9.8 inches)
Min. earth covering with traffic load	500 mm (19.7 inches)
Max. installation depth (lower edge)	2500 mm (98.4 inches)

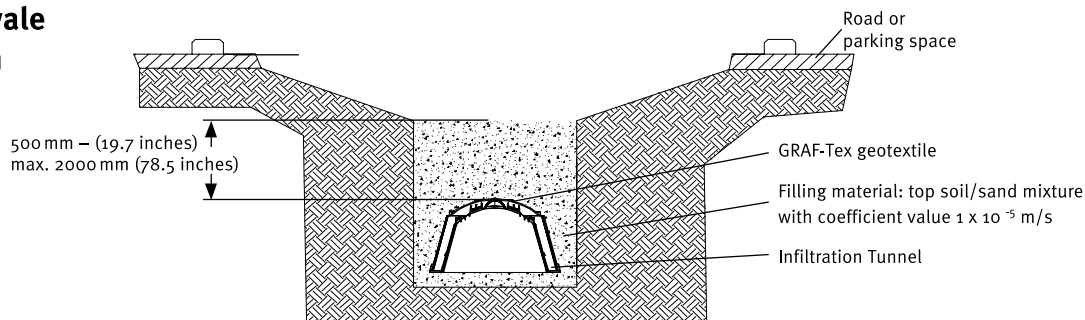
Plan view



Section infiltration system



Section open swale infiltration ditch



Specification Summary

Infiltration Tunnel/twin

Best ratio storage volume/weight

- Polypropylene materials
- Dimensions 1.20 x 0.80 x 0.51 tunnel, 1.20 x 0.80 x 1.02 twin
- Vol. ratio 100%
- Best logistic characteristic – stackable up to 40 tunnels per pallet
- Connection surface DN 100, 150, 200, 300
- Link between two tunnels without equipment
- Link between two twin modules with click-bolt system
- Resistance to vehicle loading
- earth covering between 250 to 1990 mm (Tunnel) and 250 to 1480 mm (Twin Tunnel)

Placement

Earthworks

These are carried out in accordance with the rules of good practice (extra width at the base of the structure and slopes of batters) relating to open-cut earthworks.

Formation level

This is made up of a 100 mm bed of filler materials (gravel or any other non-angular granular material).

Geosynthetic complex (geotextile)

The geosynthetic complex should have sufficient tensile strength to suit the application. Fitting is done as per the rules of good practice. We prefer GRAF geotextile Tex200, with best filtration and hydraulic properties.

Installation - Fitting

Tunnels are placed on the formation level, built up the rows and be covered by the geotextile. Finally, the connection surface will be prepared and pipes can be connected.

Backfilling

The backfilling and compacting should be carried out in accordance with the rules of good practice, in layers with light compaction.

Deaeration

The regulating of the internal pressure of the structure and its ventilation will be done via deaeration ends; it depends on the incoming pipe. Please ask GRAF for more detailed information.

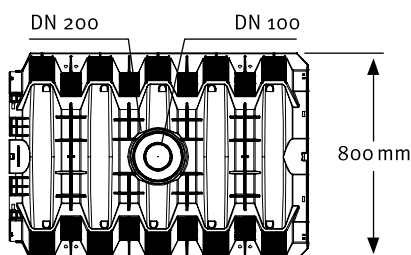
Connection

- DN 100, 150, 200, 300 front plate upper area
- additional DN 100 lower area
- DN 100 & DN 200 on the top for deaeration or inspection

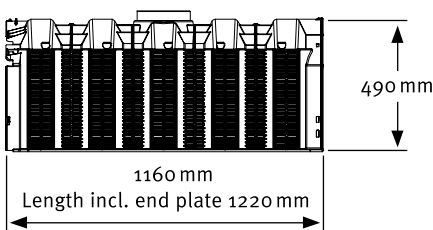
Filtration

Installations of prefilter systems, such as infiltration filter shaft, are necessary to reduce the amount of floating materials to infiltration system.

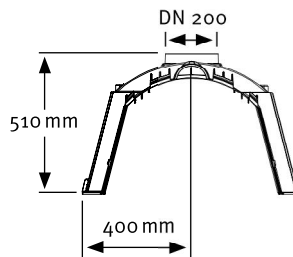
Plan view Infiltration Tunnel/twin



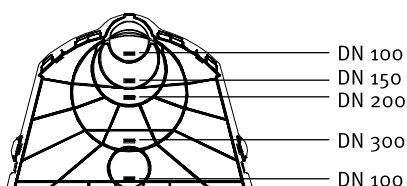
Side view Infiltration Tunnel/twin



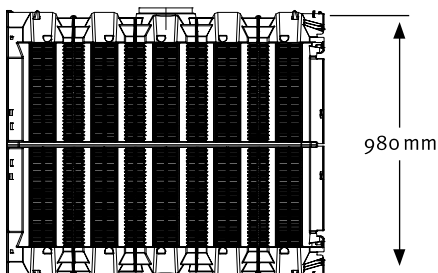
Front view Infiltration Tunnel/twin



End plate Infiltration Tunnel/twin



Side view Infiltration Tunnel/twin



Front view Infiltration Tunnel/twin

