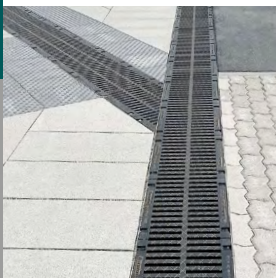
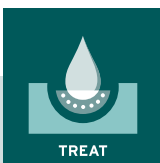




## DRAINFIX CLEAN

Filter substrate channel for effective  
and ecological rainwater treatment



## Requirements for filter substrate channels:

For safe infiltration or discharge into bodies of water, the rainwater must be cleaned and thus freed from dirt and pollutants. The rainwater treatment system must be adapted to the local conditions so that the function and efficiency of the system are not affected:

- **Loads:** The system must also permanently withstand extreme loads such as heavy wheel loads and dynamic stresses.
- **Frequency:** The system must withstand heavy traffic volumes with high vehicle density.
- **Pollution:** Precipitation water from road runoff is contaminated with pollutants such as tyre abrasion, heavy metals, oil or petrol. These must be filtered out of the water.
- **Traffic area:** Due to the high load of ultra-fine particles (TSS63), filtration of the road runoff is the right choice.

## Application areas:

- Car parks
- Logistics areas
- Business parks and industrial areas
- Railway stations
- Streets

# Filter substrate channels for rainwater treatment

Depending on the type of load, different **RECYFIX** and **FASERFIX** variants can be used.

The filter substrate channels are designed for loads up to class F 900.



**DRAINFIX CLEAN FSU**  
300/400/500



**DRAINFIX CLEAN RPR**  
300

Here you can find more information  
on **DRAINFIX CLEAN** filter substrate  
channels:

[hauraton.solutions/drainfixclean\\_int](https://hauraton.solutions/drainfixclean_int)



## Simple and effective surface filtration with CARBOTEC 100

With the carbonate-containing filter substrate and a specially adjusted filter resistance, ultra-fine particles as well as particulate-bound pollutants and dissolved heavy metals can be retained or bound.

The filter substrate is dry-falling and resistant to frost and de-icing salt. This prevents the remobilisation of already bound pollutants.

The system has been tested according to the requirements of the German technical authority DIBt. After applying 10 years of pollutant loads, the retention efficiency was still high:

- TSS (total suspended solids) **94.2 %**
- MOH (Mineral Oil Hydrocarbons) **99.0 %**
- Zn (Zinc) **70.7 %**
- Cu (Copper) **97.6 %**



CARBOTEC 100 filter substrate



Drainage and treatment in one system

# Drainage and treatment in one system

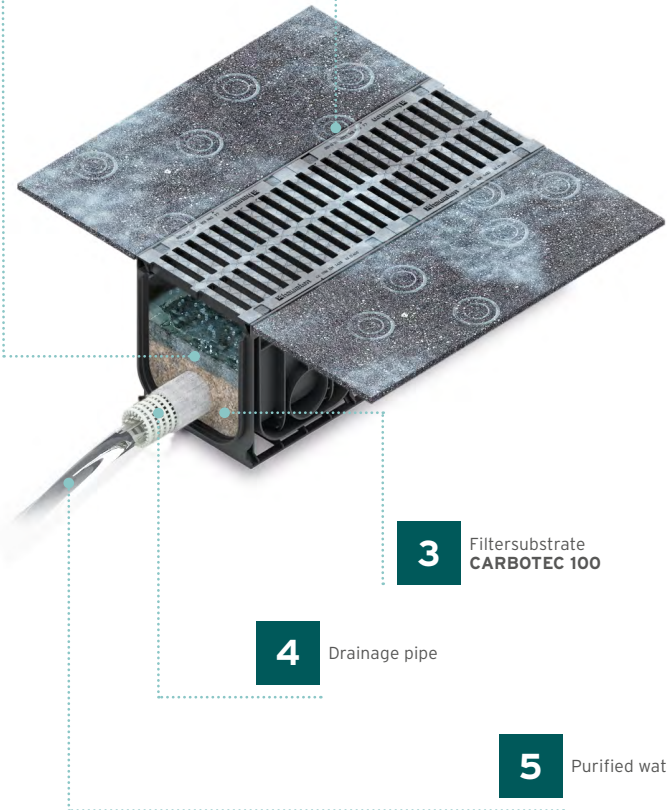
**1** Rainwater  
from traffic areas

**2** Filter cake

**3** Filtersubstrate  
**CARBOTEC 100**

**4** Drainage pipe

**5** Purified water



## Filter efficiency

**DRAINFIX CLEAN** has an **efficiency of minimum 80 %** for the removal of ultra-fine particles (TSS63) according to the DIBt-test procedure.

## Filter cake

As a secondary filter, the filter cake is a crucial part of the principle of surface filtration. It is built up from the dirt loads retained and vegetation introduced on the primary filter. With the help of micro- and macroorganisms, a fine crumbly, humus-rich soil develops over time which promotes the permeability of the filter.



**DRAINFIX CLEAN**  
filter cake after  
2 years of operation  
and a DTV of 24,000  
vehicles - Munich,  
Germany

## Simple and cost-effective operation

### The inspection:

Annual visual inspections for overflow, substrate height and vegetation are recommended. If necessary, overgrowing plants can be mown down. Woody plants should be removed to protect the system.

A technical inspection consists of checking the permeability and pollutant saturation.

**Long inspection intervals:** first technical inspection latest after 10 years (depending on local conditions)

**Maintenance due to permeability constraints:** In case of reduced permeability or missing retention area, the filter cake should be peeled off.

**Maintenance due to saturation:** In case of Zinc-concentration exceeding official requirements, the filter substrate needs to be replaced by new substrate.

## Your Benefits:

### Approved

- The filter substrate channel **DRAINFIX CLEAN** has been in use since 2011
- Tested according to the requirements of the German technical authority DIBt

### Reliable

- **CARBOTEC 100** has an efficiency of 94 % for total suspended solids (TSS)

### Economical

- Long inspection intervals
- Low operating costs
- More usable surface area compared to an infiltration swale

### Durable

- Maximum stability even under extreme loads up to class F 900



Rainwater treatment, tree irrigation with purified rainwater and discharge into surface waters in the city centre of Landau, Germany

## **A selection of our services:**

- Hydraulic calculations, dimensioning of rainwater treatment plants and infiltration systems
- Assistance with drainage applications
- Determination of costs and quantities as well as estimation of operating expenses
- Support with tenders and provision of tender texts
- Creation of installation plans
- BIM and other extensive digital planning documents

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