

## Installation advice

# DRAINFIX CLEAN FSU (KECO)

### General

Our installation advice and installation examples are generally valid suggestions and are based on many years of experience and extensive testing. We reserve the right to make changes in the course of technical progress and operational development. They do not release the planner from specifying the drainage system and the type of installation, taking into account the local conditions. The valid technical regulations and guidelines as well as the state of the art must be taken into account.

The installation advice also apply to the system components of the channels (e.g. sump units), unless explained separately.

The corresponding installation examples on the HAURATON website must be observed.

Further information on the processing of drainage systems can be found on the HAURATON YouTube channel.

### Installation

The sub-structure must be load-bearing, frost-proof and settlement-free in accordance with the planner's specifications.

The installation aids offered by HAURATON must be used to lift the channels. Alternatively, suitable harnesses can be used.

Lifting from the grating or the bolt connection points is not permitted.

Standard channel bodies are installed with drainage pipes to be inserted on site and a filter substrate specially developed for the system to be filled in afterwards.

The laying of the channels begins at the lowest point of the respective channel section or at the transition to the ground pipe (drain element or sump unit) and takes place in the opposite direction of flow.

The individual sections of a channel run can optionally be separated from each other with end caps, so that the sections can be seen from the outside even after filling with filter substrate.

The end caps and separation plates must be installed at the same time as the channel bodies.

The lateral stability of the channels is guaranteed and does not require any additional bracing when installed properly. When working on and compacting the superstructure, bracing (e.g. by inserting the gratings) may be necessary.

The channel runs must be provided with an outlet after 15 m.

The end piece elements have an integrated side outlet with factory-moulded DN110 PVC-U double sockets. These outlets are customised at the factory. HAURATON must be informed in good time of the exact position and configuration of the outlets (e.g. right or left in the direction of flow).

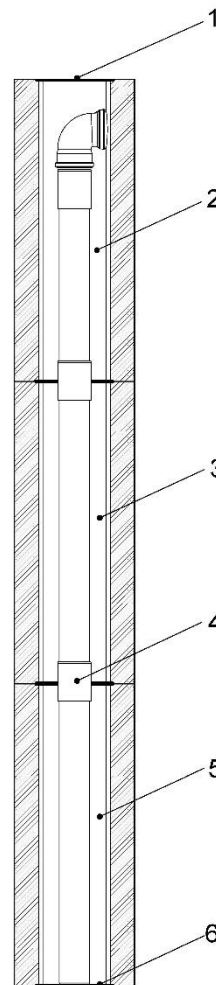


Fig.: Example of a channel run configuration (1: Endcap stainless steel; 2: End element with side outlet; 3: Middle element(s); 4: Connector; 5: Starting element; 6: Endcap stainless steel)

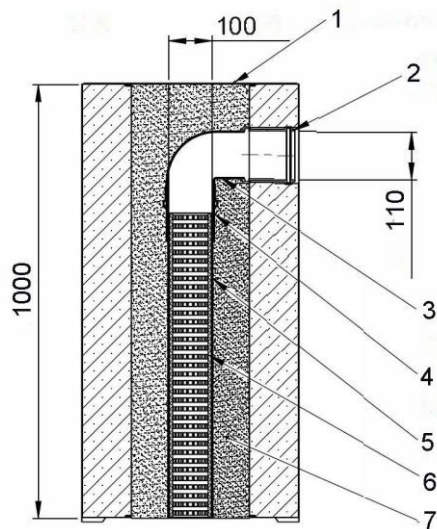


Abb.: End element with outlet on the right in the direction of the flow (1: End cap; 2: Double socket; 3: Pipe bend OD110; 4: Pipe; 5: Geotextile; 6: Drainage pipe; 7: Substrate)

When discharging into groundwater, care must be taken to ensure that all surface water is purified via the filter channel. The sump units serve as collection and control shafts and may only be fed via pipelines from the filter drains.

For optimum filter utilisation, the filter channel is laid at a longitudinal gradient of 0%. Ideally, this will ensure that the precipitation is evenly distributed over the water level gradient. In the case of a longitudinal gradient, the water accumulates more at the lowest point of the channel. As a result, most of the fine particles are deposited at the lowest point. We recommend not exceeding a gradient of 3%.

The maximum distances of the separation plates must be observed:

0 to 0.5% fall: 20 m

Up to 1.5% fall: 10 m

Up to 3%: 5 m

#### **Installation of the drainage pipes:**

Once the channel bodies have been installed, the drainage pipes are laid freely in the centre of the channel base, starting with the end element. To do this, the pipe bend must be pushed into the double socket, which is integrated into the channel wall. Care must be taken to ensure that the outlet is not obstructed by drainage pipes that are inserted too deeply. This is followed by the installation of the centre elements and finally the starting element. If necessary, cut the drainage pipes to the required length.



Fig.: Starting element, tied

#### **Filling with filter substrate:**

The substrate must be filled into the channel with drainage pipe without being compacted and levelled with a strickle or levelling device.



Fig.: Levelling device for peeling off the substrate (here with DRAINFIX CLEAN FSU)

The following quantities of substrate are required for an average effective filter thickness of 15 cm (10 cm above the top edge of the pipe):

DRAINFIX CLEAN FSU 200 type 020: 28 l/m

DRAINFIX CLEAN FSU 400 type 01: 57 l/m

DRAINFIX CLEAN FSU 300 type 01: 44 l/m

DRAINFIX CLEAN FSU 300 type 010 und 020: 47 l/m

DRAINFIX CLEAN FSU 300 type 01H: 30 l/m

DRAINFIX CLEAN FSU 400 type 01H: 58 l/m

DRAINFIX CLEAN FSU 500 type 01: 79 l/m

A maximum settlement of the substrate of approx. 1.5 cm is to be expected.

Walking on the substrate or driving over the channel during the construction phase is not permitted.

It must be ensured that the subsequent surface coverings permanently overhang the upper edge of the channel as per the installation example.

The specified load class is only achieved after installation with inserted gratings has been completed.

On-site debris must be removed before installing the drainage pipes and the substrate. The substrate as well as the drainage pipes must be protected from contamination.

## Joins

To compensate for horizontal forces (e.g. due to thermal expansion), sufficiently dimensioned expansion joints must be arranged in the longitudinal and transverse direction of the channels.

Joints running transversely to the channel run are to be led through a channel joint.

Joints running lengthwise to the channel run are to be arranged at a specified distance from the channel run as shown in the installation example.

Further joints, depending on the surface covering, are specified in the installation examples.

## Sealants and adhesives

The sealant and adhesive recommended by HAURATON with corresponding instructions can be found on the product page under accessories. The use of other brands is at your own risk.

## Locking options

The gratings are snapped into the edge frame by means of the SIDE-LOCK fastening. To do this, position them on the channel according to the markings on the grating (arrow) and edge frame (notch).

To remove the grating, it can be pried open with two slotted screwdrivers on the SIDE-LOCK springs.

When bolting on the gratings, the following maximum torques must not be exceeded:

FASERFIX SUPER steel edge frame with steel bolt: 100 Nm

FASERFIX SUPER steel edge frame with stainless steel bolt: 60 Nm

FASERFIX SUPER ductile iron edge frame: 60 Nm

The screw is to be applied manually, only then can it be tightened with a cordless screwdriver.

Note: Our information corresponds to our current knowledge and experience to the best of our knowledge. We reserve the right to make changes in the course of technical progress and further operational development. The user is not released from a careful examination of the functions or application possibilities of the products by qualified personnel. The mention of trade names is not a recommendation and does not exclude the use of other similarly tested products. Further information can be found in the respective safety data sheet, or in the areas of application, e.g. for elastic spray seals. In the case of new editions, older editions lose their validity.