

# STORMBOX II

SYSTEM OF DRAINAGE BOXES STORMBOX II FOR  
INFILTRATION AND ATTENUATION OF STORMWATER

# SYSTEM FOR INFILTRATION AND ATTENUATION OF STORMWATER STORMBOX II

Pipelife's offer includes new **STORMBOX II boxes**, which is a key element of the **Raineo Stormwater management system**. In this system, we have introduced a number of improvements, which ensure much greater functionality. We also offer complex technical and design assistance in the selection, optimization and remote monitoring of the Smart Raineo system.

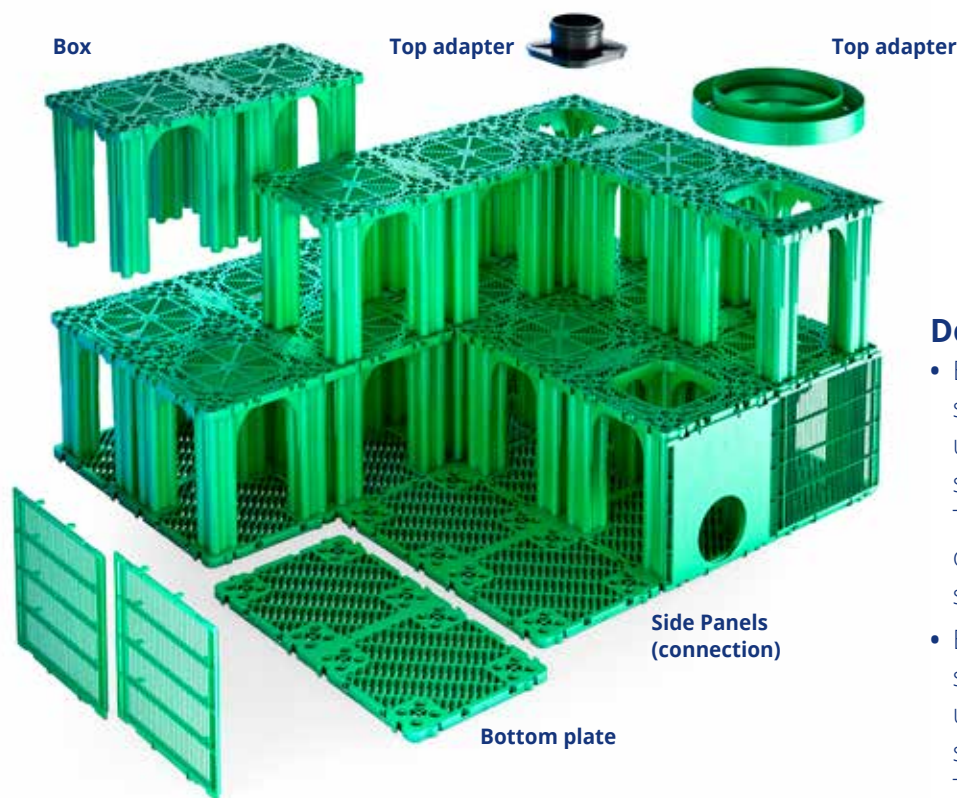
## Main application

- Green areas and vehicles with wheel load SLW 60
- Groups of residential or industrial buildings
- Areas where flood protection is particularly important
- Water tank for further use

## Pro-eco approach

- Maintains a stable level of groundwater
- Effective in fighting flood reduction
- Reduces the cost related to building new rainwater collectors
- The attenuation system keeps rainwater for further use, for example for irrigation
- Made of raw material that can be recycled

## Elements of the STORMBOX II system



Side Panels (cleaning)

### Technical specifications

Material:	Polypropylene PP-B
Dimensions (length x width x height):	1200 x 600 x 600 mm
Number of tunnels:	2 on the long side, 1 on the short side
Volume:	432 l
Net capacity factor:	95,5%
Water net capacity:	412,6 l

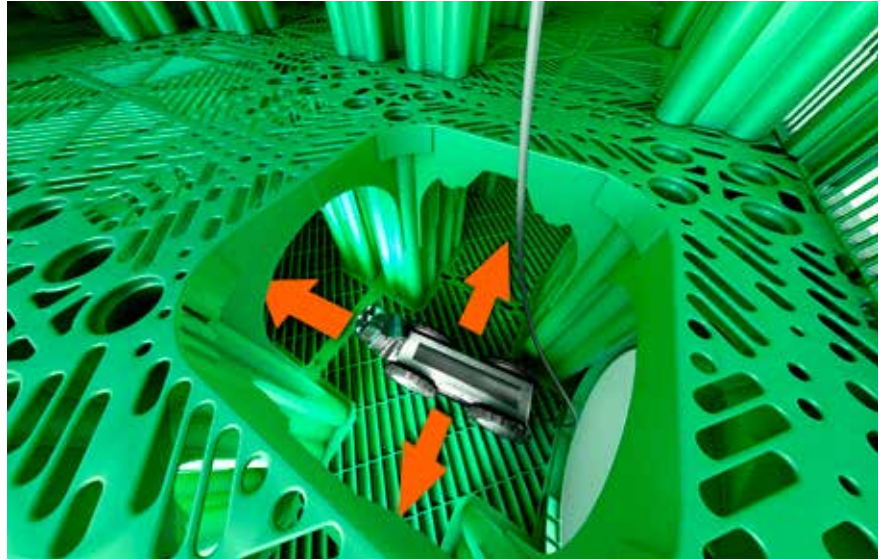
Green STORMBOX II boxes are made of high quality PP-B plastic.

## Documents

- BDS EN 17150 Plastics piping systems for non-pressure underground conveyance and storage of non-potable water - Test method for determination of short-term compression strength of boxes.
- BDS EN 17151 Plastics piping systems for non-pressure underground conveyance and storage of non-potable water - Test method for determination of long-term compression strength of boxes.
- BDS EN 17152-1 Plastics piping systems for non-pressure underground conveyance and storage of non-potable water - Boxes used for infiltration, attenuation and storage systems - Part 1: Specifications for storm water boxes made of PP and PVC-U.

## Main advantages

- One of the most durable boxes on the market with over 50 years exploitation life-time
- Resistance to a maximum vertical load of more than 700 kN/m<sup>2</sup>
- Modular design to facilitate and accelerate the assembly
- Patented and innovative side panels and bottom plates construction that protects the geotextile from damage during high-pressure cleaning, the bottom plate is marked with the direction of cleaning



Wide spaces facilitate the passage of the control camera.



Innovative construction of side panels and bottom plates - inclined ribbing, which during cleaning reverts the pressure water jet and prevents damage to the geotextile.



- Three horizontal tunnels with a width of 295 mm and a height of 500 mm for cleaning and inspection with a CCTV
- The structure of the box is more open, contributing to improved infiltration
- Possibility of variable arrangement (such as bricks)
- Two vertical opens with a maximum width of the hole in the top plate 400 mm
- Two times faster installation of the boxes
- Possibility for horizontal and vertical cleaning and inspection
- Connecting pipes with a diameter of 160-400 mm to the unit
- Innovative PP material adapter, which is located on the upper wall and allows inspection using

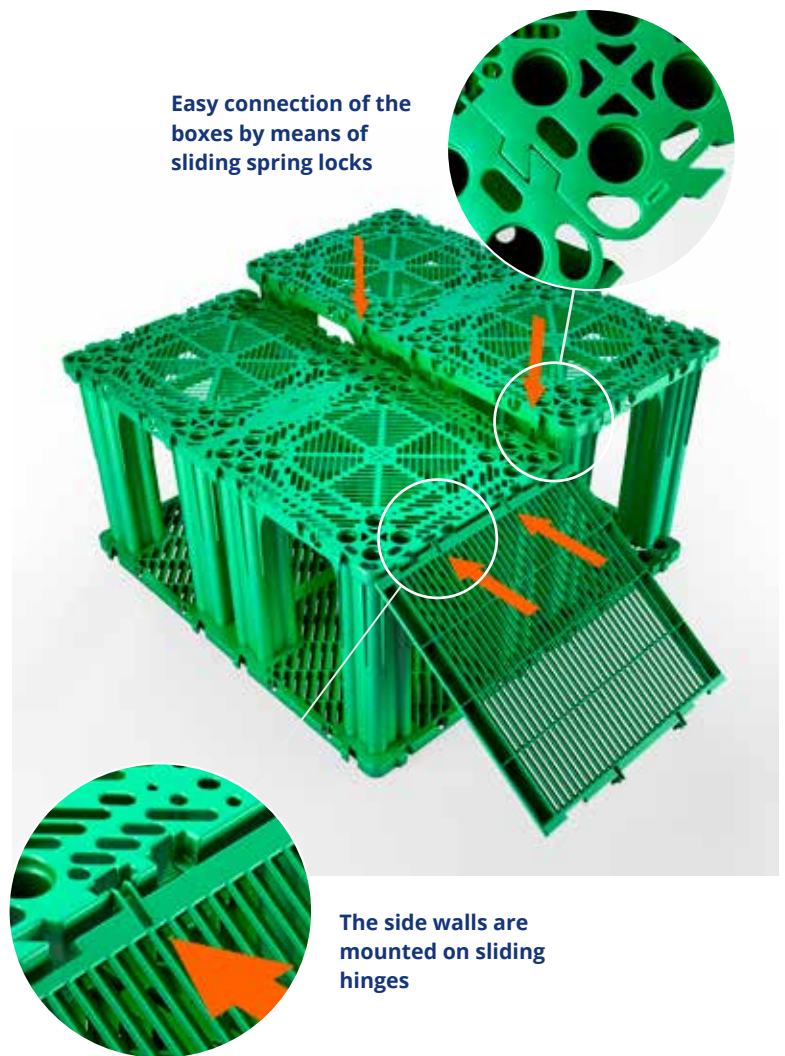
- double-layer pipes PP DN / OD 630 and 400 mm SN 8, SN 4 and single-layer pipes PP DN / ID 425 mm SN 4, SN 2
- High water net capacity 412.6 l, Net capacity coefficient 95.5%
- Patented method of connecting the boxes without clips
- The bottom plate is only used in the lower layer without the use of clips ("push-fit")
- Thicker and stronger bottom plate
- Ability to cut boxes in the middle and variable brick bond stacking
- Suitable for delaying water removal or storage
- Complete delivery with the necessary elements, i.e. geotextile, membranes and top adapters

## Installation

To ensure the correct and stable operation of the STORMBOX II system, follow the instructions below

- All equipment must be installed in accordance with the instructions, CEN TR 17179 and local regulations
- The base of the trench should be flat, smooth and without any ponds, bulges or soft spots. The base should be filled and compacted with a bedding of 10 (15) cm coarse sand

- When installing infiltration system, the groundwater level must be at least 0.5 - 1.0 m below the bottom of the boxes
- Use a suitable geotextile, as material. High-density is recommended, and usage of woven geotextile!
- The sidewalls should be filled with fine gravel
- The traffic area of the wheeled vehicles must be covered with at least 80 cm layer of compacted soil, which has to be covered with asphalt or concrete
- When applying geotextile or foil (in the case of attenuation), they must be overlapped with minimal 15 cm
- Bottom plates are laid on the geotextile and connected by the slide locks
- Mount the vertical columns of the box into the bottom holes
- The side panels are installed only on the outside of the tank in the designated locations
- Do not forget about the correct positioning of the connecting panels
- The entire reservoir must be covered with geotextile and foil (for attenuation tanks)
- On the top of the upper box, the appropriate adapters are installed, depending on the design requirements



### Example assembly diagram for the STORMBOX II box modules

