RAINEO®: THE RAINWATER MANAGEMENT SOLUTION
PARKING OR DOCKING?
RAINEO®: FLOODS ARE A CHOICE!

We all experience today's unusual weather conditions due to global climate changes: excessive rain, long periods of drought, heat and flash flooding.

Flash floods and the lack of water management solutions have contributed to erosion, water pollution and even higher taxes. Without a system like the patented Raineo® solution of which Pipelife is now proud to offer, we will never be able to capture, retain and reuse water effectively.

Raineo® will remove or store the excess water and prevent water pollution. The stored, reusable water can then be used for sanitary purposes or irrigation. Whatever way it is applied, Pipelife’s Raineo® takes care of this valuable resource for decades.
1. Application areas
   - Parking lots and roads
   - Urban agglomerations
   - Stadiums and sports grounds
   - Airports
   - Commercial and industrial areas
   - Agriculture

2. Catching and redirecting
   - Line drainage and gullies
   - Inspection chambers
   - Pipes
   - Manifolds

3. Get clean
   - Sand and sediment trap
   - Oil trap
   Or:
   - Combi filter for separation of sand, sediment, oil and gasoline and a chemical filter for removal of heavy metals and other harmful substances

4. Safe place to store water
   - Water buffer lined with geotextile for infiltration
   - Flow control for a controlled discharge of surplus water
   Or:
   - Coated with geomembrane water buffer storage for reuse
   - Surface connections for coupling with pumps
   - Flow control for a controlled discharge of surplus water

5. Inspection and maintenance
   - Access to pipes, filters, distribution and flow control chambers through manholes
   - Access basin through inspection chambers
RAINEO®:
THE ALL IN ONE SOLUTION

The Raineo® solution is designed for underground application. It functions under various circumstances and for different applications. For this reason it allows the designer, the customer and the community to make the choice to harvest rainwater whenever and however they choose. Raineo® is designed not only for today’s needs but also for tomorrow’s world.

Depending on circumstances and objectives all parts of the Raineo® solution are tailor made adaptive: catching, cleaning, and transporting and to choose re-use of the water or a properly discharge offsite.

This brochure only contains a brief summary of the Raineo® system. A comprehensive brochure with detailed information on measures, materials, connections, filters et cetera is available. Please contact us via www.pipelife.com.
1. RAINEO®: PIPELIFE’S SERVICES FOR TODAY AND TOMORROW

Today
Because Raineo® is buried underground there will be no disfiguring elements to be seen. This is important regarding the vast array of situations where Raineo® can be implemented such as highways, parking lots, sporting arenas, airports, industrial parks or agricultural areas.

Tomorrow
For decades, each component of Raineo® must be trusted, that is why all components are developed by Pipelife and manufactured from high-grade plastics. To guarantee excellence only virgin raw materials and no recycled materials are used for the critical construction parts. This process ensures the strength and durability that cannot be proven with recycled materials.

Our services
Rain water management applications all have their own difficult characteristics. As a specialist, Pipelife is familiar with all these applications and can expertly advise the clients, design engineers, architects and contractors. Pipelife has its own design team, equipped with special software programs and onsite experience. On request, our trained Raineo® specialists will design the projects for you or assist your design agency that is responsible for the project.
2. THE RAINEO® CYCLE: CATCHING AND REDIRECTING

Catching the flood under all circumstances
The water has to be collected through a series of entry points depending on the application: road gullies (highways), line drainage (parking lots), gutters (residential or commercial) permeable street pavers and drainage pipes.

Make the connection and redirect
The best practice is to use entry or non-entry manholes and inspection chambers for redirection to the collection areas. Depending on the country and/or the application, the complete system could include one of our excellent pipe systems:
- Pragma® (Pipelife’s patented corrugated pipe system)
- PP Master
- PVC smooth pipe solutions
- Poly-propylene manholes and inspection chambers

Our designers will advise in this matter or work out the best solution in cooperation with other designers. You will find more information about our pipe systems on www.pipelife.com.
3. THE RAINEO® CYCLE: GET CLEAN

Catching the flood makes you responsible for the water and its quality. When discharging offsite the water will circulate in the environment again and must be as clean as rain water. In case of harvesting for reuse it should be as clean as fresh water as possible. After filtering for reuse the purified water will be suitable for sanitary, cleaning or irrigation purposes.

An advanced filter and cleaning technique is part of the Raineo® solution. The required cleaning level is determined by the extent of pollution of the water, the vulnerability of the immediate surroundings and whether or not to reuse the accumulated water.

**Determine the method of filtering and cleaning**

Depending on circumstances and purposes the water will be purified by special developed, hi-end filters or filter systems:
1. Leaf filter (large particles and sludge)
2. Oil separators or sedimentation tanks (gravity filtration)
3. Chemical filters (eliminate heavy metals and PAHs)
4. Combination of any system

Filtering the water will create Pipelife water: safe to discharge and/or safe to reuse.
4. THE RAINEO® CYCLE: SAFE PLACE TO STORE WATER

**Stormbox**
The Stormbox is an open modular crate system from which easily small or large underground water storage facilities can be build. Thanks to Pipelife’s Stormbox easy click and stack system the water buffer can be stacked in brick bond formations, which means very fast installation. It means also that the buffer becomes an exceptional strong unit. It will be resistant to high vertical and lateral soil pressure and withstands heavy traffic.

**Pipe systems**
Pipe infiltration systems placed horizontally or vertically complete Pipelife’s range to store water safely.

Flooding becomes fiction, but what do you want to do with the water? The complete Raineo® solution allows the following options as each application within every country has its own specific needs:

- Infiltration of the water (groundwater control, discharging sewage systems, preventing flash flooding)
- Attenuation (controlled evacuation of the water collected)
- Reuse of the water (purify for human use or for irrigation)
- Storage of the water (for future use)
While the complete Raineo® solution is low maintenance, a regular inspection of the system should be performed. The advantages that Raineo® can give to the system manager are what make the difference.

Unlike other systems Raineo® allows inspection camera viewing from any direction in any part of the system. Thanks to the open cage construction of the stormbox you can inspect the interior of the whole box and even that of the one next to it... no hidden surprises! And when inspection learns that cleaning is advisable: the Stormbox can withstand high pressure washing, with resistance up to 180 bar water pressure.

All these features of the Raineo® Stormbox are the result of the patented Pipelife Stormbox construction.

5. RAINEO®: LOOK INSIDE