

# 致力于 雨水控制与综合利用

Specialize In Rainwater Control & Utilization

做全球具有影响力的海绵城市、零碳产业和技术的引领者！  
To be the global influential leader in Sponge City construction & zero energy development technology.



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To be the global influential leader in Sponge City construction & zero energy development technology.



泰尔宁

# 公司简介

## About Tidelion

“泰宁”从2003年开始致力于雨水事业。

“泰宁”在海绵城市、建筑屋面排水、雨水综合利用、水环境治理、农业节水、被动式超低能耗建筑等领域提供定制化系统解决方案。

“泰宁”累计完成4000余项工程，涉及建筑与小区、道路与桥梁、绿地与广场、城市水系、水生态、黑臭水体、设施农业、岛屿等应用领域。

“泰宁”业务覆盖二十多个国家和地区，将雨水事业播撒世界。

“泰宁”承办第十六届国际雨水收集利用大会暨雨水综合利用国际论坛。

“泰宁”是国家科技部火炬计划重点高新技术企业。

“泰宁”参编了雨水领域近100%的国家标准和近40%的地方标准。

“泰宁”拥有国内外专利技术110项，其中发明专利28项。

“泰宁”是《海绵城市建设技术指南》产业化参编企业，率先打造海绵城市全产业链服务商。

“泰宁”是北京海绵城市应用集成产业创新中心发起单位。

*Tidelion started its rainwater harvesting business in 2003.*

*Tidelion is specialized in the field of rainwater, supply customized solutions in the areas of sponge cities, building roof drainage, rainwater comprehensive utilization, water environment treatment, agricultural water saving, low-energy buildings etc.*

*Tidelion has completed more than 4,000 projects, involving Building and residential area, road and bridge, green belt and square, urban water system, water ecology, malodorous black water, facility Agriculture, islands.*

*The rainwater business covers more than 20 countries and regions.*

*Tidelion held The 16th International Rainwater Catchment Systems Conference & International Symposium on Rainwater Utilization.*

*Tidelion is a key high-tech enterprise under the torch program of the Ministry of Science and Technology of RPC.*

*Tidelion participated in nearly 100% of national standards and 40% of local standards in rainwater.*

*Tidelion has over 110 patented technologies, including 28 patents for invention.*

*Tidelion is the industrialized company participating in the 《Sponge City Construction Technical Guide》, be the leading provider of Sponge City construction industry chain.*

*Tidelion is Beijing Sponge City Integrated Application and Innovation Center initiate unit.*

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# About Rainwater Harvesting System

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# 关于雨水综合利用系统

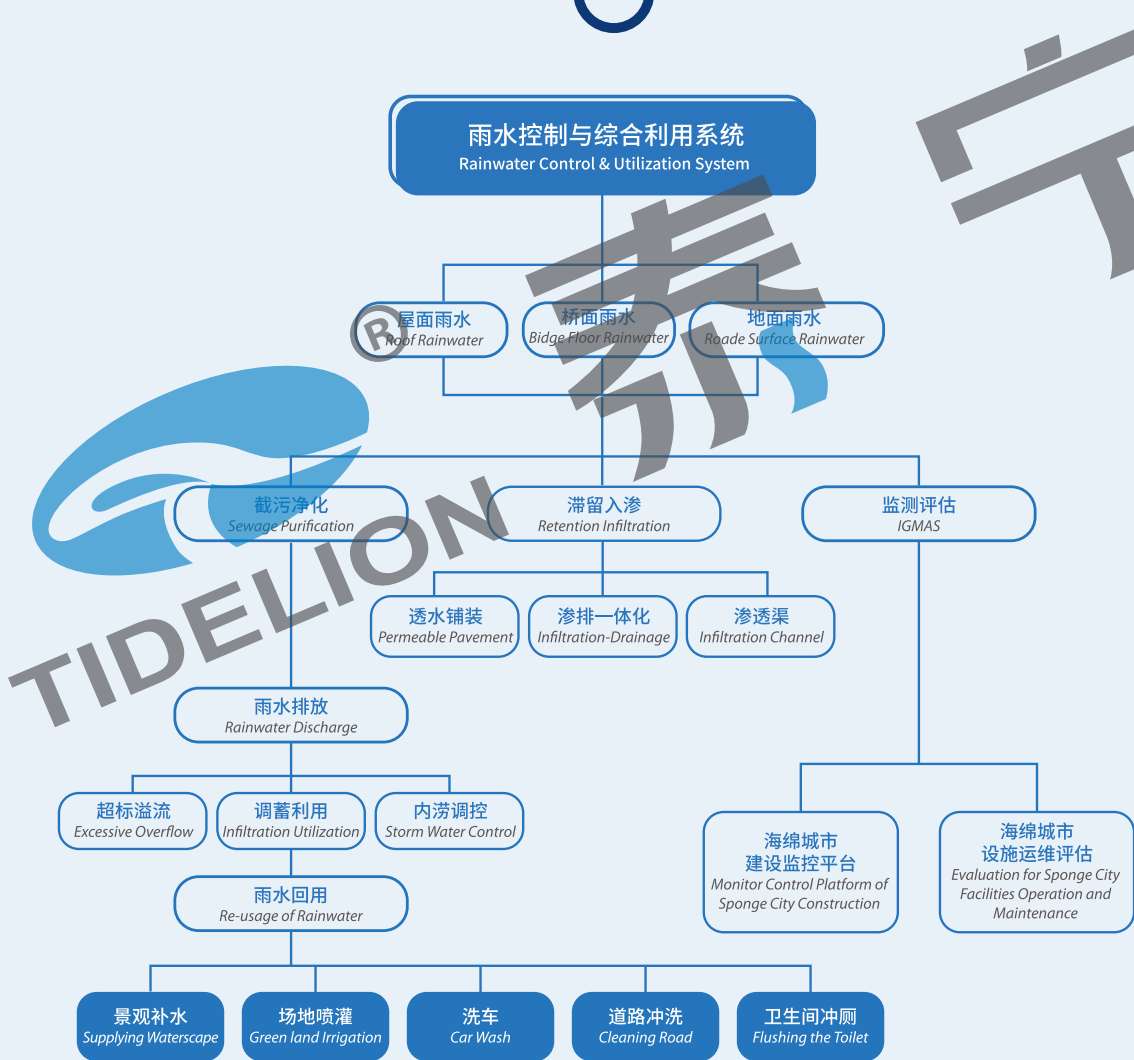


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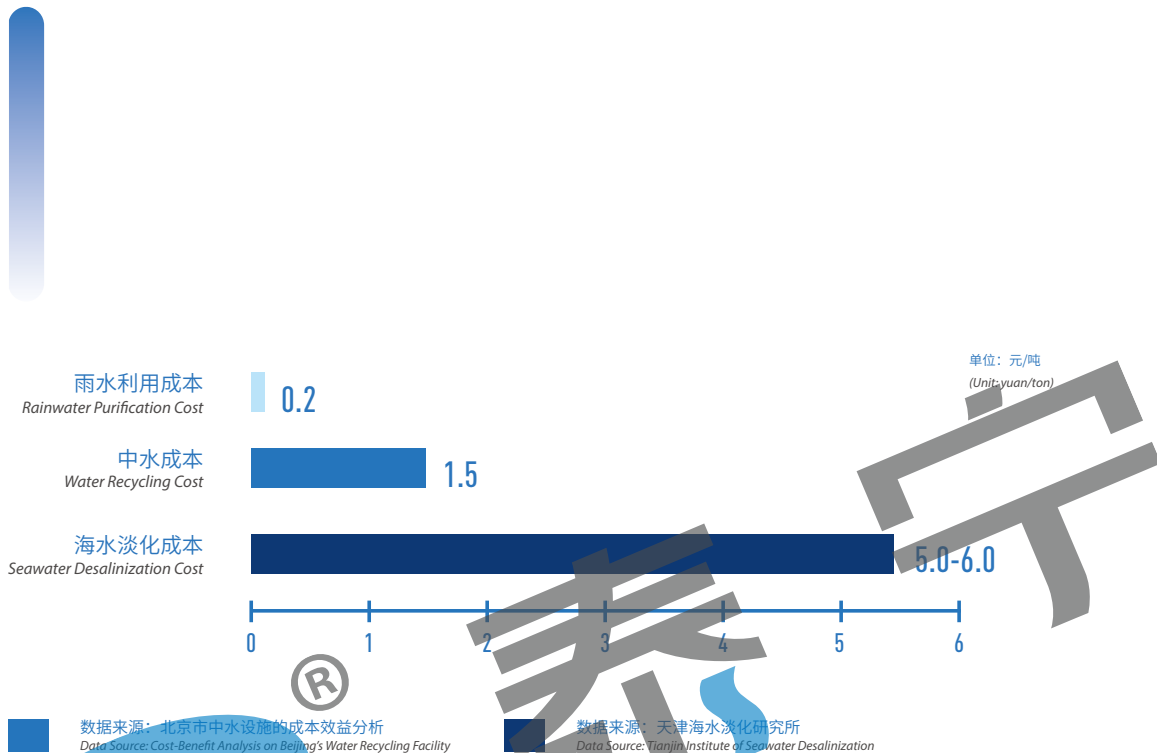
# 雨水综合利用系统简介

About Rainwater Harvesting System



## 雨水 综合利用系统成本 / 意义

Costs/Significance of Rainwater Harvesting System



通过有效的利用和控制雨水我们可以实现:

Through our effective utilization and control of rainwater, we can realize:

- 有效地节约水资源;
- 减少城市内涝;
- 缓解水体的面源污染;
- 缩小城市雨水管网规模, 减少城市污水处理设施的投资;
- 回补地下水, 缓解地面沉降, 减少海水入侵, 改善生态环境。

- *Effective saving of water resources;*
- *Decrease of the urban water-logging;*
- *Relief of the non-point source pollution of inland lakes;*
- *Reduction of the scale of urban rainwater pipe network and decrease of the investment for urban sewage treatment facilities;*
- *Back-supplement to the groundwater and decrease of the seawater intrusion for the improvement of the ecological environment.*

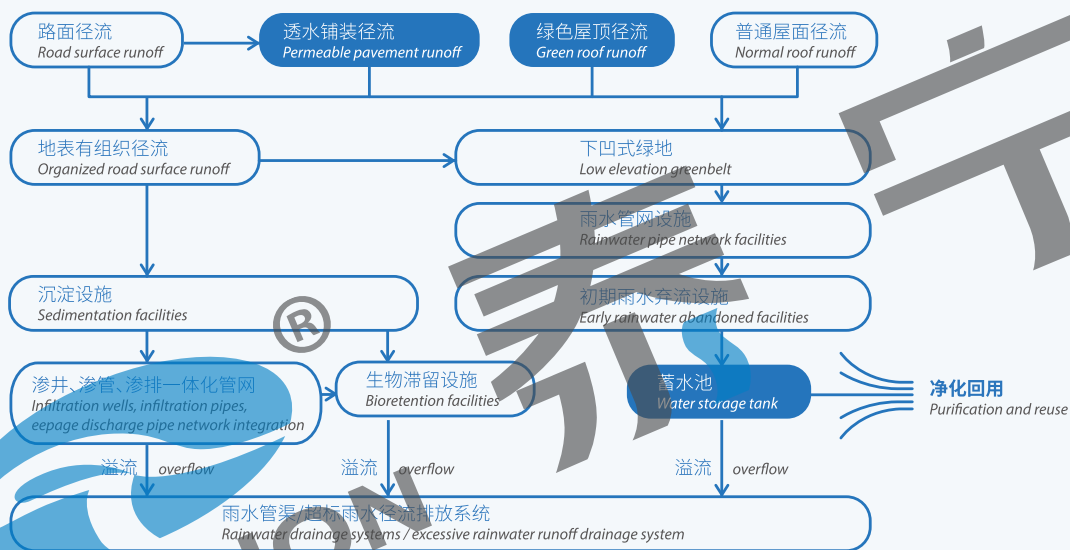
# 雨水综合利用系统应用领域

## Fields of Rainwater Harvesting System



### 建筑与小区

Building and residential area



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### 泰宁重点项目：

北川新县城建设  
通过渗排一体化管网每年可渗透利用雨水170000立方米

Tidellion's Major Project :Construction of Beichuan New County Town  
annual can infiltration-utilization rainwater 170 thousand cubic meters through infiltration-  
drainage integrated pipe network

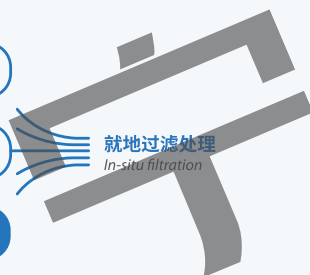


# 雨水综合利用系统应用领域

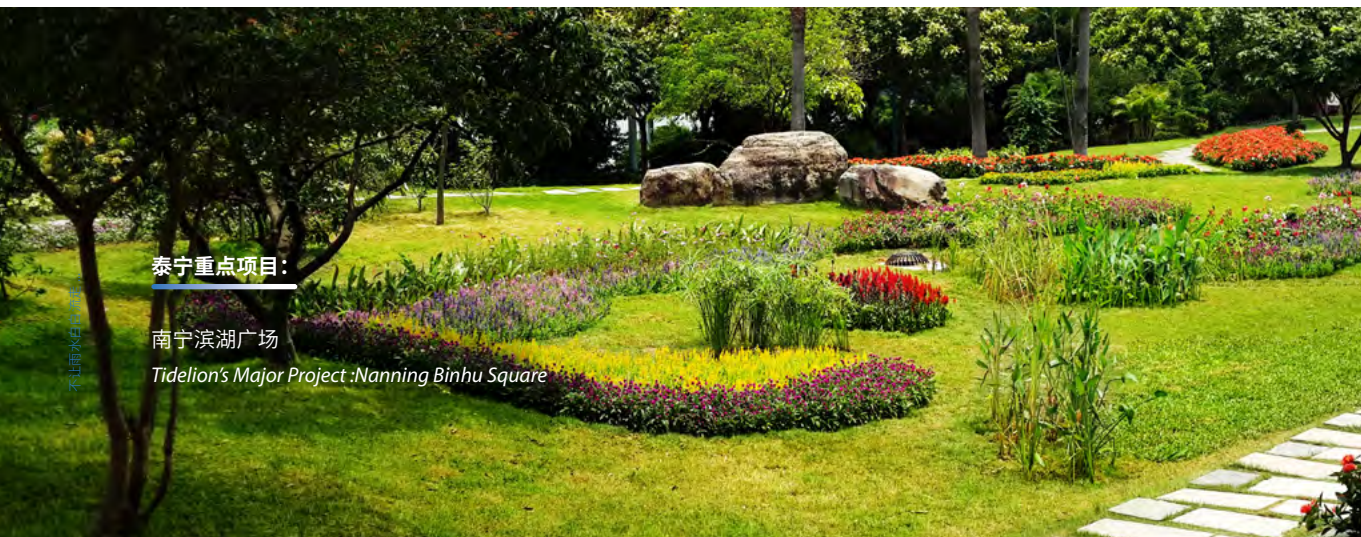
## Fields of Rainwater Harvesting System



绿地与广场  
Green belt and square



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泰宁重点项目：

南宁滨湖广场

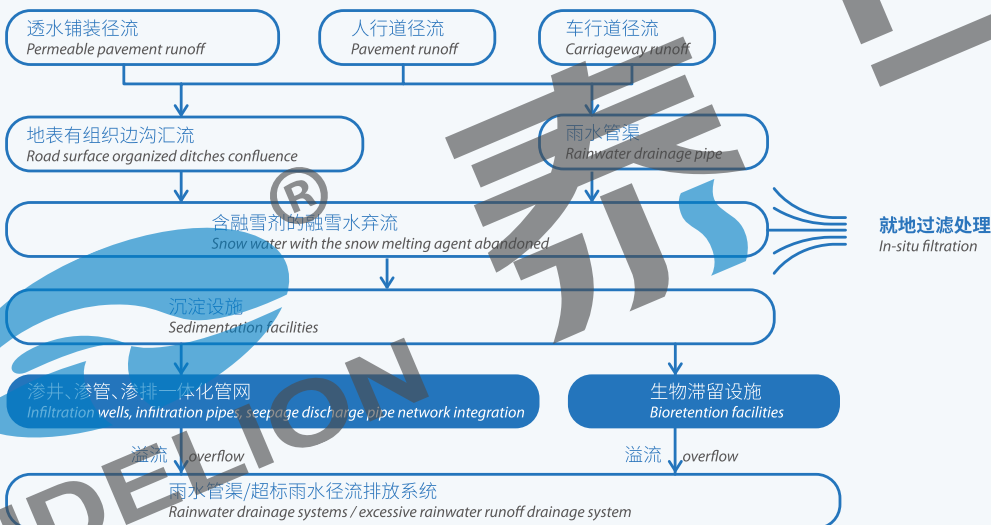
Tidelion's Major Project :Nanning Binhu Square

# 雨水综合利用系统应用领域

## Fields of Rainwater Harvesting System



道路与桥梁  
Road & Bridge



泰宁重点项目：

北京未来科学城

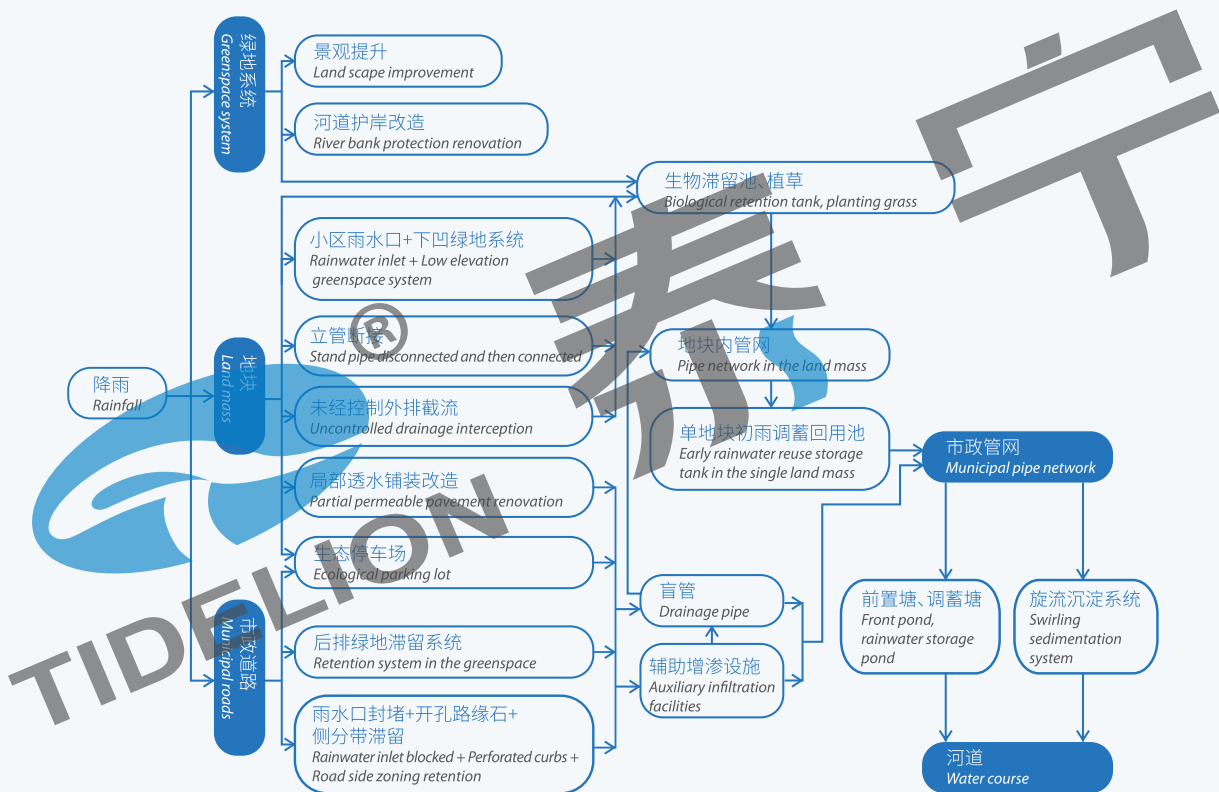
Tidellion's Major Project :Beijing Future Hi-tech City

# 雨水综合利用系统应用领域

## Fields of Rainwater Harvesting System



城市水系  
Urban water system



泰宁重点项目:

嘉兴市长水塘水文化生态长廊

Tidelion's Major Project: Jiaxing Chang Yantang Hydroecological Promenade

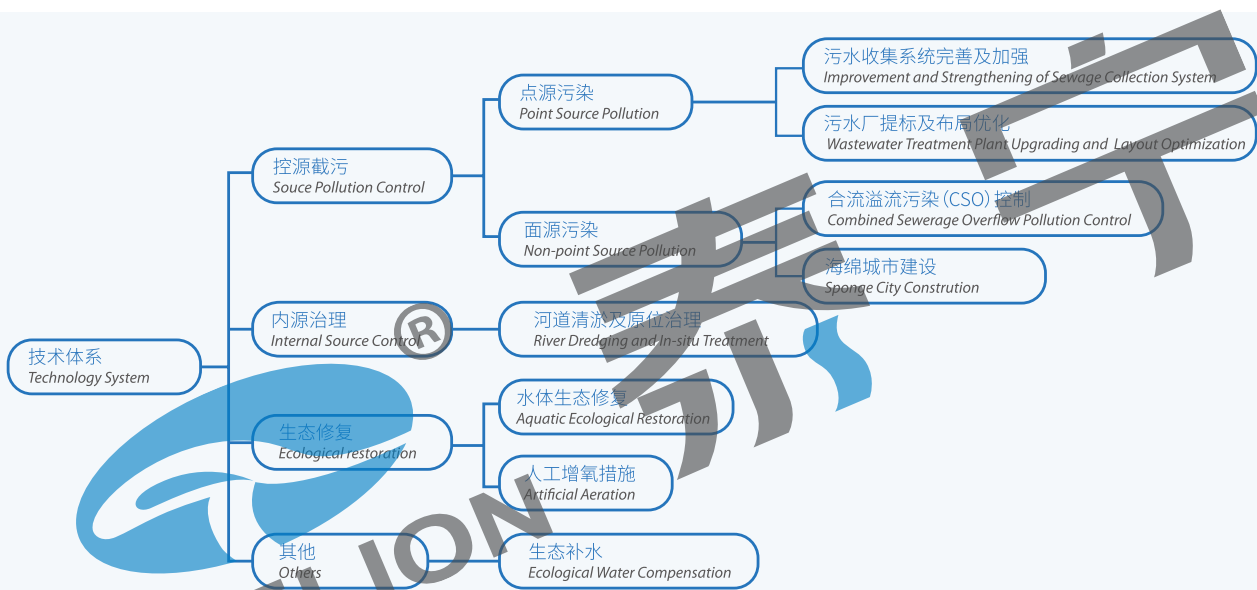


# 雨水综合利用系统应用领域

Fields of Rainwater Harvesting System



水生态  
Water ecology



泰宁重点项目:

长春伊通河流域水生态治理工程

Tidelson's Major Project :Water Ecological Management Project for Yitong River Basin in Changchun



# 雨水综合利用系统应用领域

## Fields of Rainwater Harvesting System



黑臭水体  
Malodorous black water



泰宁重点项目:

回忆岛内黑臭水体治理工程

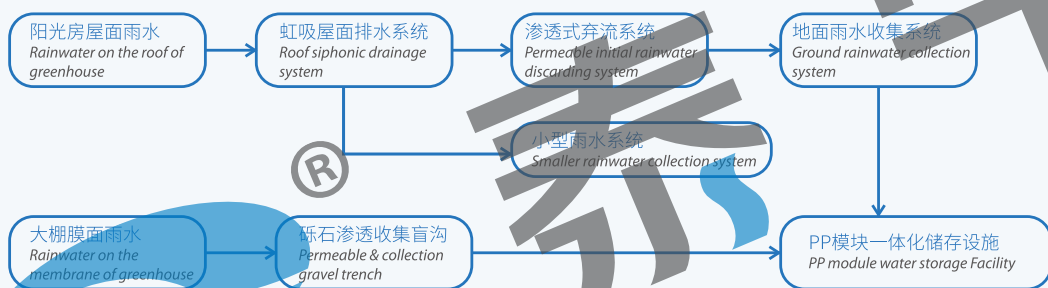
Tidelion's Major Project: Recall Island Black Stinky Water Treatment Project.

# 雨水综合利用系统应用领域

Fields of Rainwater Harvesting System



设施农业  
Facility Agriculture



泰宁重点项目：

北京欧格有机农庄  
Tidelion's Major Project :Beijing Ouge Organic Farm Village

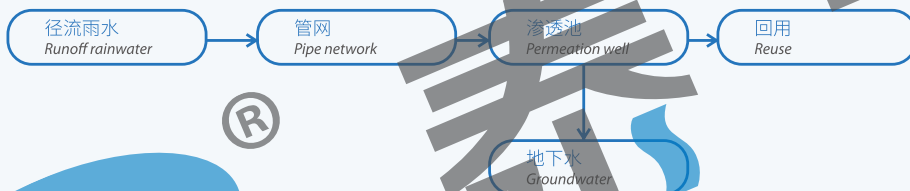


## 雨水 综合利用系统应用领域

Fields of Rainwater Harvesting System



岛屿  
Islands



### 泰宁重点项目：

马尔代夫海岛雨水收集（示意图）

Tidelion's Major Project : Rainwater Project of Maldives Island (Schematic diagram)

# Rainwater Harvesting System Series Products

## 雨水储存系统系列产品

Rainwater storage system series products

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## 雨水处理系统系列产品

Rainwater treatment system series products

02

## 雨水渗排一体化系统系列产品

Rainwater infiltration-drainage integrated system series products

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## 雨水收集排放系统系列产品

Rainwater collection & drainage system series products

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# 雨水综合利用系列产品

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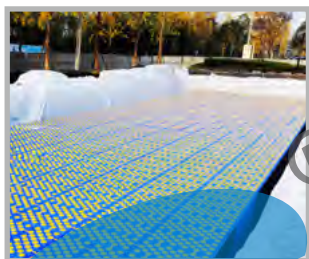


# 雨水储存系统 系列产品

Rainwater storage system series products

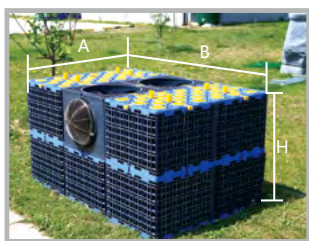
## 塑料模块组合水池

塑料模块组合水池是以聚丙烯塑料单元模块相组合，形成一个地下贮水池，在水池周围根据工程需要包裹防渗土工布或单向渗透土工布，组成贮水池或渗透调洪池两种不同类型。贮水方块安装方便，承载力大，不滋生蚊蝇及藻类，且在临建地区域使用后，可以拆除迁移到其他区域继续使用。该设备适用于大型建筑小区、工业园区、广场及厂房区域的雨水收集利用。



### Storage box

The storage box is made up of polypropylene plastic module cells forming an underground storage pond, according to the requirements of the project, wrap anti-infiltration earthen cloth or one-way infiltration earthen cloth around the pond, forming the two different types of water storage pond and infiltration water regulation pond. The installation of water storage box is convenient, with large bearing capacity. Do not breed mosquitoes and flies and algae to ensure water quality, and after the provisional construction area is put into use, it can be disassembled and removed to other regions for continual use. The equipment applies to the rainwater collection and utilization in large buildings, residential blocks, industrial parks, squares and workshops.



尺寸参考表 Size reference table

编号 No.	A (m)	B (m)	H (m)	体积 (m <sup>3</sup> )	井数量 QTY
1	6	4	2.4	59	1
2	9	5	2.4	110	1
3	13	5	2.4	158	1
4	15	6	2.4	218	1
5	15	9	2.4	327	1
6	20	9	2.4	435	1
7	20	11	2.4	532	2
8	19	12	2.8	643	2
9	20	12	2.8	744	3
10	23	13	2.8	842	3
11	24	14	2.8	946	4
12	26	15	2.8	1098	4

## 雨水储水罐

雨水罐是选用PE材质，可以安放在地面上，自屋面或其他集流场所收集的雨水在罐内经过简单处理后，通过罐内自动化设备将贮水用于浇灌绿地、洗车、补充景观水、道路冲洗等多种用途。罐内设有水位计量装置，达到最低水位时提示引入其他水源。该设备广泛应用于小型建筑、别墅、洗车场及住宅小区等区域，可就地收集利用雨水。

### Rainwater tank

The buried and above-the-ground rainwater tanks use HDPE materials, which can be placed above the ground or buried underground. The rainwater collected from the roof or other places, after simple treatment in the tanks, is used for watering green areas, washing cars, adding landscape water and washing roads through the corresponding automatic equipment in the tanks. The tank is equipped with the devices for measuring water level, and during the dry season, if the lowest level is reached, it will hint to introduce other water sources. The device is widely used in small buildings, villas, car washing station and residential quarters and other regions, which can collect and utilize the rainwater separately.



储水罐选用表 Tall Selection Table

	230L	300L	350L	400L	500L	1000L	3500L	5000L
仿石壁罐 Rocky wall tank	√			√	√			
仿木壁罐 Woody wall tank			√					
仿编织壁罐 Sunda wall tank		√						
细颈椭圆雨水壁罐 Rainwater amphora			√					
双耳细颈椭圆雨水罐 Antique plant amphora			√					
色彩2合1水箱 Color 2in1 water tank		√	√					
柱状壁罐 Column wall tank			√		√			
方形储水罐 Square tank		√			√	√		
圆形储水罐 Round tank						√	√	√

# 雨水处理 系统系列产品

Rainwater treatment system series products

## 雨水初期弃流装置

降雨过程中，初期径流中所含的污染物的量较中、后期的雨水径流大很多，水质较差。为了收集到水质良好的雨水，减少雨水处理的成本，对初期的雨水弃之不用，而把中、后期的雨水收集起来的作法称之为雨水的初期弃流，能够实现这一功能的设备称之为雨水初期弃流装置。

*The initial split-flow device*

*In the process of rainwater collection and utilization, the quality of initial rainwater flow is poor, so the initial rainwater should be ruled out, instead collect the clean rainwater in the middle and later period. The equipment that can achieve this function is called as the initial split-flow device and filters of rainwater.*

### 主要功能

雨水初期弃流装置由降雨水信号采集器、控制器和执行机构组成，自动控制雨水初期弃流量。可以准确地去除初期水质较差的雨水，自动控制执行机构的开、关，使雨水弃流智能化。

适用范围：准确控制雨水初期弃流的雨水利用工程中。

*The initial split-flow device is composed by the rain water flow signal collector, controll panel and the functional structure, which can control the unwanted rain flow automatically. The early dirty rain can be accurately discarded and the automatic control can make rainwater flows intelligent disposed.*

*Application: Functional structure will be placed in an outdoor well and accurately control the flow of rain abandoned in the projects of rainwater utilization.*



雨量型  
雨水弃流智能化控制装置  
*The rainfall-type of  
split-flow automatic control device*

采用新型的数字式雨量计，准确输出数字信号，实现远距离遥控。

*Using the newly-type digital device, exporting the figure signal exactly, realizing the automatic control in a long distance.*

雨水初期弃流装置型号序列表 *Table of type*

弃流管径 <i>The fluid-discarding pipe diameter</i>	型号 Type		
DN	X系列 series	Y系列 series	L系列 series
50	XQL-50 <sup>A</sup> <sub>B</sub>	YQL-50 <sup>A</sup> <sub>B</sub>	LQL-50 <sup>A</sup> <sub>B</sub>
100	XQL-100 <sup>A</sup> <sub>B</sub>	YQL-100 <sup>A</sup> <sub>B</sub>	LQL-100 <sup>A</sup> <sub>B</sub>
150	XQL-150 <sup>A</sup> <sub>B</sub>	YQL-150 <sup>A</sup> <sub>B</sub>	LQL-150 <sup>A</sup> <sub>B</sub>
200	XQL-200 <sup>A</sup> <sub>B</sub>	YQL-200 <sup>A</sup> <sub>B</sub>	LQL-200 <sup>A</sup> <sub>B</sub>
250	XQL-250 <sup>A</sup> <sub>B</sub>	YQL-250 <sup>A</sup> <sub>B</sub>	LQL-250 <sup>A</sup> <sub>B</sub>

>>

X雨量型控制器系列  
*rain-type control series*

Y雨量型控制器系列  
*rainfall control series*

L流量控制系列  
*flow control series*

A主机（控制与执行机构）  
*main device*

B辅机（执行机构）  
*auxiliary device*



## 地上式一体化设备间

规格尺寸为: 1200×1100×1500mm, 内安装全自动自清洗过滤器和紫外线消毒器。全自动自清洗过滤器设计出水精度为100μm。紫外线消毒器选用高效率的UV-C(LL或LH)紫外灯, 选用高透光率、高纯度的石英套管, 保证紫外线透过率在90%以上。

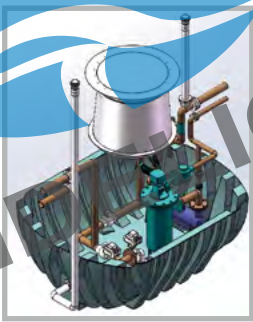


### Integrated Equipment Room

It is made from PP. Dimension is 2280\*1985\*2430. There are automatic clean filter and Ultraviolet disinfection device in the room. The accuracy of automatic clean filter is 100μm. UV-C (LL or LH) ultraviolet lamp of high efficiency is deployed. With high transmittance and high purity quartz tube, ultraviolet transmittance can be more than 90%.

## 埋地式一体化设备间

PP成品设备间, 规格尺寸为: 2280×1985×2430mm, 内安装全自动自清洗过滤器和紫外线消毒器。全自动自清洗过滤器设计出水精度为100μm。紫外线消毒器选用高效率的UV-C(LL或LH)紫外灯, 选用高透光率、高纯度的石英套管, 保证紫外线透过率在90%以上。



### Integrated Equipment Room

It is made from PP. Dimension is 2280\*1985\*2430. There are automatic clean filter and Ultraviolet disinfection device in the room. The accuracy of automatic clean filter is 100μm. UV-C (LL or LH) ultraviolet lamp of high efficiency is deployed. With high transmittance and high purity quartz tube, ultraviolet transmittance can be more than 90%.

## 旋流过滤沉淀井

是一种雨水预处理装置, 主要通过旋流分离雨水中的泥沙等杂物, 净化过程均为水力自动无需外力。一般可应用于小市政进入大市政前、管网末端或蓄水池前端。后期维护简单, 成本低。



### Cyclone sand Sinking Well

This is a rainwater pre-treatment device. By cyclone, sand and other debris can be separated, and purification can be done without external force. This device can be used between small municipal and big municipal, at the end of municipal and front end of reservoir. Maintenance is simple, and cost is low.

# 雨水渗排一体化 系统系列产品

Rainwater infiltration-drainage integrated system series products

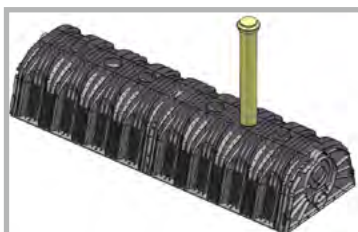


## 弧形渗透渠

渗透渠是模块化的产品，主要用于雨水的滞留和渗透，也可替代塑料模块做渗透渠。产品具有重量轻、储水量大、安装快捷。采用拱形的结构，强度高，侧面设计有较大面积的渗透条缝，能将收集的雨水快速分散。适用于停车场、工业区、住宅区等区域。

### PE infiltration trench

It uses PE materials, and is often placed at the edges of low greenbelt with low requirement for undertaking pressure, the road shoulders, parks and public squares. The rainwater on the roads and in the greenbelt infiltrates to add ground water through the holes in the side wall and at the bottom of the trench, and the construction and maintenance is convenient.



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## 聚乙烯渗透雨水井、雨水口

渗透式雨水井、雨水口选用PE材质，收集道路和绿地雨水，雨水通过井盖进入井体，经过截污筐过滤处理后，将前期降雨入渗地下，中后期较为洁净的雨水对其进行收集与利用。该设备常设置在散水坡下或与重力雨水管道连接，可和雨水弃流井、渗透井、渗透管联合使用组成渗排一体化系统。



Rainfall outlet of infiltration well

The rectangular (round) rainfall outlet of infiltration wells uses PE materials, collecting the rainwater on the roads and in the greenbelt, and the rainwater enter the well through the gaps in the covers, after the filtering treatment of the sewage interception basket, make the initial rainfall infiltrate underground, and collect and utilize the clean rainwater in the middle and latter period. The equipment is often set up under the water dispersing slope or connected with the gravity rainwater pipelines, and build up the network of rainwater infiltration system by the joint use of rainwater split-flow wells, infiltration wells and infiltration pipes.

## 渗透式弃流井

渗透式弃流井选用PE材质，常置于屋面雨水收集系统排水管始端。井体内部结构科学，独特的过滤设计，可去除降雨过程中初期雨水中的杂质，使雨水自然入渗地下。产品安装后，不易损坏，维护方便，只需定期清理即可。



Infiltration split-flow well

Infiltration split-flow wells use PE materials, which are often placed at the beginning of drainage pipes of the roof rainwater collection systems. The scientific internal structure of the wells and the unique filtering design can remove the impurities in the rainfall in the course of raining, in order to make the rainwater infiltrate naturally underground. After the installation of the product, it is not easy to be damaged, easy to maintenance, which only needs regular cleaning.

## 渗透式雨水井

渗透式雨水井选用PE材质，常置于雨水入渗管路的分段连接处，可设置在绿地、人行路面、公园及人行广场内。各区域雨水通过井体自身的渗透孔渗入地下，在减少地面径流的同时补充地下水，该产品常与渗透管配合使用，组成雨水渗透排放一体化系统。



Infiltration rainwater well

Infiltration rainwater wells use PE materials, which are often placed at the connection points of the sections of the rainwater infiltration pipeline

and can be installed in the Greenbelt, sidewalks, parks and public squares. The water in different areas infiltrates underground through the infiltration holes in the well itself, which can reduce the runoff on the road, and at the same time, add the ground water, so the product is often in joint use with infiltration pipes to build up the network of rainwater infiltration system.

## 集水渗透井

集水渗透井选用PE材质，带箅井盖。井壁、井底开孔，井内设有截污筐进行过滤处理，同时具有雨水渗透功能。常置于绿地、人行路面、公园及人行广场内。



Water collection and infiltration well

Water collection and infiltration wells use PE materials, with well covers. Open holes in the walls and at the bottom of the well, and set up the sewage interception basket inside the well for filtering treatment, and at the same time have the function of rainwater infiltration. It is often placed in the greenbelt, on the sidewalks, in the parks and public squares.

## 渗透式溢流井

渗透式溢流井选用PE材质，复合材料井盖。井壁、井底开孔，有雨水渗透功能。常置于绿地、人行路面、公园及人行广场内的雨水排出管末端，将溢流水排入终端储存系统。



Infiltration overflow well

Infiltration overflow well uses PE materials, with the covers made of composite materials. Open holes in the walls and at the bottom of the well, which have the function of rainwater infiltration. It is often placed at the end of rainwater outlet pipes in the greenbelt, on the sidewalks, in the parks and public squares, and the water will overflow into the terminal storage systems.

## 穿孔渗透管

穿孔渗透管选用HDPE材质的穿孔渗透管可以承受较大的荷载，不仅有良好的渗透效果，同时与雨水渗透井、渗透式弃流井的连接方式更加牢固。通常置于绿地下，也可置于人行道下，内壁光滑的特点在入渗的同时，可以更好的将雨水进行收集利用。



Perforated polyethylene infiltration pipe

It uses perforated polyethylene infiltration pipes made of HDPE materials, which can withstand greater load, and it not only has good infiltration effects, but at the same time, the connection way with the rainwater infiltration well, the infiltration split-flow wells is firm. It is usually placed

under the greenbelt, and can also be placed under the sidewalk, and the characteristics of smooth internal wall can help in infiltration, and at the same time can better collect and utilize rainwater.

## U 型线性渗透沟

U型线性渗透沟选用树脂混凝土底座，配以球墨铸铁、镀锌钢板、不锈钢等盖板。在不影响沟体荷载的前提下，侧壁开孔，将沟体内部雨水入渗地下，补充地下水。常置于低势地边缘处，也可置于路肩、公园、人行广场等任何可敷设排水地沟的区域。

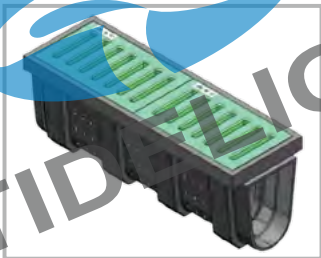


The U-Shaped Linear infiltration trench

The U-Shaped Linear infiltration trench Resin concrete infiltration trench uses resin concrete footings, supported by the covers of ductile iron, galvanized steel and stainless steel and so on. Under the premise of having no effect in the load of the trench, open holes in the side walls, make the rainwater inside the well infiltrate underground to add the ground water. It is often placed at the edges of low areas, but also can be placed at the road shoulders, parks, public squares and any areas where the drainage trench can be laid.

## PE 渗透式地沟

PE渗透式地沟选用PE材质，常置于承压要求较低的低势绿地边缘处、路肩、公园及人行广场。道路及绿地内的雨水可通过沟体侧壁及底部的孔隙进行入渗，补充地下水，且施工维护方便。



PE infiltration trench

It uses PE materials, and is often placed at the edges of low greenbelt with low requirement for undertaking pressure, the road shoulders, parks and public squares. The rainwater on the roads and in the greenbelt infiltrates to add ground water through the holes in the side wall and at the bottom of the trench, and the construction and maintenance is convenient.

## 方（圆）形溢流口

方（圆）形溢流口采用铸铁材质，用于下凹绿地、雨水花园、生物滞留池等下沉式绿地中，作为超标雨水排放使用。溢流口设计科学合理，排水能力随积水深度升高而增大，排水能力是相同平算进水口的两倍，并具有良好的防堵塞功能。产品安装简易，安装后不易损坏，维护方便。



Square(Round) over-flow port

Square(Round) over-flow port is made from cast iron, and Used as excessive rain water discharging in sunken green space, like rainwater

garden, Biological retention pool, etc. The design of overflow port is scientific and reasonable, which the drainage capacity increases with the increase of the depth of the water, and is two times the same flat grate inlet. The port has a good function of anti-blocking. The product is easy to install and maintain, and not easily damaged.

### 植草沟溢流口

植草沟溢流口I由PE材质井身及聚合物材质溢流口组成，植草沟溢流口II采用PP材质，配合渗透管道置于植草沟渗透、转输、排放系统中。其独特的外形设计美观，与植草沟景观匹配度高，且具有排水效果好、防堵塞、材质耐用、安装简易、维护方便的特点。



Over-flow port

Over-flow port I of grassed swales is composed of PE material well and the polymer material over-flow port, Over-flow port II of grassed swales is made from PP material, configured with permeation tube in grass ditch infiltration, transfer, and discharge system. Its unique aesthetic design, high degree of matching with the grass ditch landscape, and has good drainage effect, anti-blocking, durable material, simple installation, convenient maintenance.

### 下凹绿地溢流口






下凹绿地溢流口采用塑料井体，树脂溢流口，结合下凹绿地管道系统设置，对超标雨水进行排放。安装方便，美观大方。适用于植草沟、生物滞留池。小型雨水花园等。



Over-flow port

Over-flow port I of grassed swales is composed of PE material well and the polymer material over-flow port, Over-flow port II of grassed swales is made from PP material, configured with permeation tube in grass ditch infiltration, transfer, and discharge system. Its unique aesthetic design, high degree of matching with the grass ditch landscape, and has good drainage effect, anti-blocking, durable material, simple installation, convenient maintenance.

## 渗透地面系列 Permeable ground series

产品外观 Product Appearance	海绵城市产品 Sponge City Products	规格型号 (参数) Specifications	单位 Unit	技术要求 Technical Requirements	用途 Usage
	陶瓷硅砂透水砖 沙黄色 Ceramic Permeable Silicon Tile Sand Yellow	尺寸可选, 厚度 Thickness 40mm/60mm/80mm	m <sup>2</sup>	同时可提供铁红、咖啡、绿色、蓝色等。 Iron red, coffee, green, blue, etc.	渗透式地面铺装, 可用于人行道、停车场、广场、小型车道等场所。 Sidewalks, parking lots, squares, small lanes, etc.
	生态砂基透水砖 灰色 Ecological sand-based permeable Brick Gray	尺寸可选, 厚度 Thickness 40mm/60mm/80mm	m <sup>2</sup>		
	陶瓷透水砖 Permeable Ceramic Brick	尺寸可选, 厚度 Thickness 40mm/55mm	m <sup>2</sup>		
	结构缝透水砖 Structural Seam Permeable Brick	外观尺寸均可选择, 厚度根据使用场合承载力要求 The appearance size is optional, thickness according to the bearing capacity requirements	m <sup>2</sup>	混凝土、仿石、烧结面等。 Concrete, imitation stone, sintered surface, etc.	适用于人行道、广场等场所。 Sidewalks, squares, etc.
	高强度停车场植草地坪 High Strength Parking Lot grass Floor	现场浇筑 Cast-in-place concrete	m <sup>2</sup>	植草地坪 Planting grass floor	混凝土现场浇筑模具, 解决植草砖停车场整体性差、易破损的问题。 Mold for cast-in-situ concrete

### 陶瓷硅砂透水砖



陶瓷硅砂透水砖具有透水、透气、防滑、减噪等诸多特点。可广泛铺设于人行道、广场、停车场、公园及住宅区等。降雨时, 可迅速渗入地下, 涵养地下水, 并减轻城市热岛效应, 良好的抗冻融性可以承受北方地区的冻融环境。该产品虽为多孔结构, 但材料胶粘后再经过1300°C高温烧制而成后强度很高, 可用于停车场等区域的地面铺装。

#### Ceramic permeable silicon tile

Ceramic permeable silicon tiles have many advantages of being permeable, ventilating, skidproof and reducing noise. It can be widely laid on the sidewalks, squares, car parks, parks and residential areas, etc. When it rains, it can quickly infiltrate into the ground, conserve groundwater, and reduce the heat island effect of cities, and the good anti-freezing and melting feature can also prevent the frozen situation of the ground in winter. Although the product has the porous structure, but after the adhesion of the material, and then produced by firing in the high temperature of 1300 degree, it has a high intensity, and can be used for the pavement in the ground of car parks and other areas.

### 结构缝透水铺装



在欧美, 基本不使用透水面层做法, 绝大部分采用结构缝透水铺装, 既降低成本, 又便于后期维护。结构缝透水: 互锁固定, 拼接成缝, 采用传统混凝土砖、石材等材料, 利用结构设计, 拼装过程形成6~10mm结构缝, 采用瓜子片石子填充。适用于停车场、人行道; 结构稳定, 透水性能好、衰减率低。

### Ceramic permeable silicon tile



Ceramic permeable silicon tiles have many advantages of being permeable, ventilating, skidproof and reducing noise. It can be widely laid on the sidewalks, squares, car parks, parks and residential areas, etc.



## 高强度停车场植草地坪

混凝土现浇植草砖采用塑料模具、混凝土材质，混凝土现场浇筑模具，解决植草砖停车场整体性差，易破损，地面不平，植物生长不佳等问题。适用于停车场；强度高，整体性好，效果美观、透水性能好，施工周期短。

### Heavy-duty Concrete Car-park with Grass

Using special design plastic form work, the car park can be cast on site. Comparing with the planting grass brick car park, it can solve the some problems such as poor integrity, easily damaged, uneven ground, plant growth bad and etc. And also it has some advantage such as High strength, high permeability, Short construction period and etc.



名称 Name	混凝土现浇植草砖 Concrete cast-in-place grass brick
材质 Material	塑料模具、混凝土 Plastic molds, Concrete
模具规格 Specification	<b>AXBXH=600X600X100(mm)</b>
抗压强度 Compression Strength	<b>C30-C60</b>
适用场合及优势 Applicable Occasions and Advantages	适用于停车场；强度高，整体性好，效果美观、透水性能好，施工周期短。 Suitable for parking; high strength, good integrity, aesthetic effect, good water permeability, short construction period.





## 透水混凝土

透水混凝土是由骨料、水泥和水及特制胶粘剂拌制而成的一种多孔轻质混凝土，它由骨料表面包覆一薄层水泥浆相互粘结而形成孔穴均匀分布的蜂窝状结构，具有透气、透水 and 重量轻的特点。其多样的色彩、与其他材质配合的兼容性、极好的雨水渗透能力，使得它经常被用于广场、停车场等公共基础设施的建设中。



### Permeable concrete

Permeable concrete is a kind of porous lightweight concrete, made of aggregate, cement, water and special adhesive. It consists of the aggregate surface which is coated with a thin layer of cement slurry are bonded to each other and the formation of honeycomb structure holes evenly distributed, with a breathable, permeable and light weight characteristics. Its variety of colors, compatibility with other materials, excellent water penetration capacity, make it often being used in the construction of public infrastructure, such as square, parking lot.



透水混凝土整体路面 Permeable Concrete Monolithic Pavement

序号 NO.	检测参数 Test Parameter	单位 Unit	标准值 Standard Value	检测结果 Test results	单项结论 Conclusion	
1	耐磨性(磨坑长度) Wear-resisting Property	mm	≤30	17.8	合格 Qualified	
2	透水系数 Permeability Coefficient	mm/s	≥0.5	3.12	合格 Qualified	
3	强度等级 Strength Grade	抗压强度(28d) Compression Strength (28d)	Mpa	≥20	21.5	合格 Qualified
		弯拉强度(28d) Flexural-Tensile Strength (28d)	Mpa	≥3.5	4.46	合格 Qualified
4	保水性 water-retaining property	g/cm <sup>2</sup>	≥0.6	0.8	合格 Qualified	

生产单位提供透水混凝土配合比 Permeable concrete mix ratio

1	每立方米各材料用量(kg) Usage (kg)	水 Water	胶结剂 Cementing Agent	水泥 Cement	骨料 Aggregate
		1431	53	50	1800
2	重量配合比 Parts by weight	10.2	12	3.33	120

## 雨水收集排放系统系列产品

Rainwater collection & drainage system series products Roof

### 雨水斗、管材、管件

由进水导流罩、整流器、斗体、出水短管组成，是我公司的专利产品，作为国内自主研发、设计、并生产应用的金属雨水斗，其性能优良，全部通过中国计量院测试，各种参数均居于国内领先水平，雨水斗种类齐全，流量范围为6-120L/S。雨水斗独特的截污构造设计可以将初期降雨时屋面较大的杂物进行过滤，并快速将雨水排到屋面收集系统中，减轻屋面荷载。

选用高密度聚乙烯HDPE，不锈钢、涂塑钢管等管材、管件，其中高密度聚乙烯HDPE管材、管件具有更好的耐腐蚀性能、抗老化性、抗压能力，独特的热熔连接能够杜绝系统漏水隐患，使施工时可以应对任何工程变化需求，管材、管件内壁光滑，使屋面雨水可以快速进入屋面收集系统。

#### Roof drain Pipes and fittings

The roof drain consists of inlet grating, flow regulator, drain body and outlet. Which is one of my company's patented products, as the metal roof drain that is developed, designed and put into production and application earliest in China, it has excellent performances, and has passed all the tests of the national metrology institute, with all the parameters in the leading level in China. The unique design of sewage interception and 6-120 L/S flow rate of the roof drain can filter the larger debris of the initial roof rain flow, and make the rainwater quickly enter the roof collection system, reducing the load on the roof.

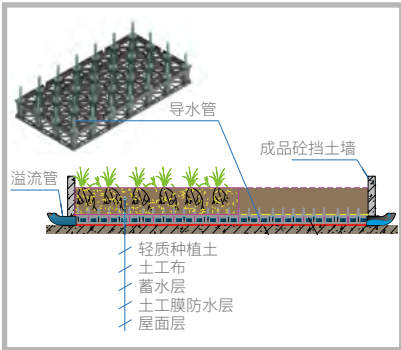
Use HDPE pipes and fittings, Stainless Steel pipes and fittings and Coating Plastic Steel pipes and fittings. HDPE pipes and fittings with better anti-corrosion, anti-aging, and anti-pressure performances, and the unique heating melting connection can eliminate the hidden dangers of water leakage, during the construction, it can meet the demands of any on site changes, easy to installation. The internal walls of the pipes and fittings are smooth, so the rain water from the roof can quickly drainage into the rain water collection system.

### 自浇灌绿化屋面储水水箱

屋顶绿化的载体，建筑物顶部承重能力应不小于2000N/m<sup>2</sup>。设计施工中除考虑屋面静荷载外，还应考虑非固定设施、人员数量流



动、外加力等因素。



防水设施及排水系统：整个屋顶在原基础上采用土工膜进行防水处理，防水层与屋面泛水必须一次做成。防水层施工完毕后，还应进行一次防水试验。蓄水层采用pp储水模块，单体尺寸为700×350×85mm，存水深度最大85mm，并设置溢流管，满足日常排水及暴雨时泄洪的需要。种植土采用轻质混合土壤，土壤中不得含有土块和砾石，在地面进行过筛并拌匀后方可运至屋面。

#### Self-Watering Green Roof

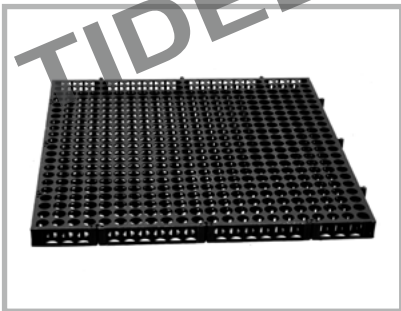
The carrier of green roofs, the top of building's bearing capacity should be not less than 2000N/m<sup>2</sup>. In addition to considering the static load of the roof, the design and construction should also consider the factors, like non-fixed facilities, the number of worker, and the external force.

Waterproof and drainage system: Based on original roof, waterproof is done by geomembrane, waterproof layer and roof waterproof must be made in one time. After the construction of waterproof layer, a waterproof test should be carried out. The storage layer is deployed with PP storage module, which size is 700x350x85mm, maximum depth of water storage is 85mm. Overflow pipe is configured, so the requirement of daily flood drainage and heavy rain can be met.

Without clods and gravel in the soil, and sieved before being transported to the roof, the planting soil use lightweight mixed soil.



#### 渗排水板



渗排水板是由聚丙烯 (PP) 注塑成型，它是一种正方形方块，一个平方由4个方块组成，表面配上一层土工布，从而形成一个组合排水板。它抗压强度高，排水量大。适用于大型广场、车库顶板绿化、高尔夫球场，能够快速疏导雨水，防止地面出现局部积水，还能将收集的雨水用于灌溉，实现雨水的回收利用。

#### The infiltration-drainage board

The infiltration-drainage board is made of polypropylene (PP) by injection molding. It is composed of a kind of foursquare squares, with four squares in one square meter, and covered on the surface with a layer of geotextile, so as to form a combined drainage board. It is of high compressive strength and large water drainage. It is applicable to large squares and golf courses, which could not only fast channelize rainwater and prevent ground from appearance of localized flooding, but also use the collected rainwater for irrigation and realize the recycling use of rainwater.

## 雨水收集 排放系统系列产品

Rainwater collection & drainage system series products Ground

### U 型线性排水沟

U型线性排水沟系统采用U形断面，使用树脂混凝土底座，树脂混凝土由树脂和石英砂填料组成，它具有寿命长、抗腐蚀性能好、表面光滑、强度高、重量轻、耐严寒及融雪盐溶液等优点。配以球墨铸铁、镀锌钢板、不锈钢等盖板，适用于欧标EN1433所规定的A15至D400各种荷载等级，广泛应用于人行道、公共交通路面、公共广场、停车场。



树脂混凝土的技术参数 Technical parameter of the resin concrete

弯曲抗拉强度 Bending and Tensile strength	≥22N/mm <sup>2</sup>
抗压强度 Compressive strength	>90N/mm <sup>2</sup>
弹性模量 Modulus of elasticity	>22KN/mm <sup>2</sup>
密度 Density	2.1~2.3g/cm <sup>3</sup>
渗水深度 Infiltration depth	0mm(DIN4281)标准
粗糙度 Roughness	<25μm

The U-Shaped Linear Drainage trench

The U-shaped linear drainage trench system uses the U-shaped cross section and the resin concrete footings, and the resin concrete is made from resin and quartz sand fillers, which has a long life and good anti-corrosion performances, with the advantages of smooth surface, high strength, light weight, and cold resistance and snowmelt salt solution. Supported by the covers of ductile iron, galvanized steel, stainless steel, etc., it applies to various load levels from A15 to D400 stipulated by European standard EN1433, and is widely used for sidewalks, public transport roads, public squares, car parks, and the areas that allow various types of vehicles to enter.



序号 NO.	型号 Type 外宽×外高 (含护边)(mm) Width×High(mm)	渗透孔 Penetrant Hole	内部尺寸(mm) Inline Dimension (mm)		可配盖板1 Cover Plate 1	可配盖板2 Cover Plate 2	可配盖板3 Cover Plate 3	可配盖板4 Cover Plate 4	0.3%坡度 排水能力(L/s) 0.3% Slope Washing-Out(L/s)
			内宽 Internal width	内高+护边高度 Internal Height+ Edge Protection Height	铸铁算条算子 Cast iron Grate	不锈钢缝隙式 Stainless Gap	不锈钢格栅式 Stainless Steel Grille	镀锌钢格栅 Galvanized Steel Grid Plate	
1	130×200	—	100	175	—	√	—	—	12.30
2	190×220	—	150	200	√	√	√	√	26.00
3	190×300	—	150	270	√	√	—	—	37.00
4	240×200	—	200	180	√	√	—	—	34.30
5	250×300	—	200	270	√	√	—	—	57.40
6	260×320	—	200	290	√	√	√	√	62.40
7	260×285	√	200	260	√	√	—	—	54.90
8	310×250	—	250	220	√	√	—	—	60.30
9	310×285	√	250	260	√	√	—	—	76.00
10	315×330	—	257	300	—	√	√	√	94.00
11	360×430	—	297	395	—	√	√	√	161.00
12	360×530	—	297 <sup>®</sup>	490	—	√	√	√	208.00
13	455×470	—	400	440	—	√	√	√	285.00
14	600×600	√	534	570	√	—	—	—	594.00



## PE 地沟

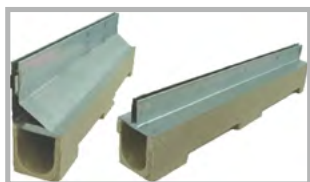
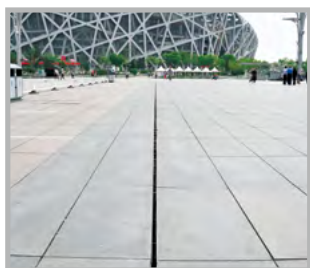
地沟选用PE材质，常置于低势绿地边沿处收集绿地雨水、也可置于路肩收集道路雨水，雨水可通过沟体快速排放，过滤处理后收集到储藏系统内，且沟体清扫方便，适用于公园、工业园区、建筑与小区及人行广场等区域。

### PE Trench



General drainage trenches use PE materials, are often placed at the periphery of the low greenbelt to collect the rainwater in the greenbelt, also can be placed on the road shoulders to collect rainwater on the roads, so the rainwater can be discharged fast through the trenches, after the filtration treatment, collected into the storage system, and the trench is easy to clean, which also applies to parks, industrial parks, buildings and residential blocks and public squares and other areas.

## 缝隙式线性排水地沟

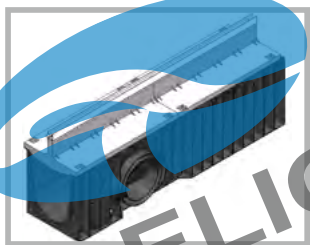


缝隙式线性排水地沟分为地面排水和侧墙排水两种，分别适用于公园、广场、商厦等高档建筑的地面和侧墙排水。地面中缝缝隙式线性排水地沟和侧缝缝隙式线性排水地沟的盖板选用镀锌钢板和不锈钢钢板的材质，与树脂混凝土底座完美结合组成两种不同的缝隙式线性排水地沟，项目完成后在地面和墙角仅留下一条美观的线条。防盗、防堵塞、削减洪峰、时尚美观等诸多问题，伴随着这种全新概念的地面雨水排放收集产品的诞生迎刃而解。

Slot Linear Drainage Trench

Slot drainage trench is divided into the two types of ground drainage and side wall drainage, which respectively apply to senior ground and side wall drainage in parks, squares, commercial buildings and so on. The covers of ground middle slot drainage trench and side slot drainage trench use the materials of galvanized steel and stainless steel, through the perfect combination with resin concrete footings, form two different kinds of slot drainage trench, after the completion of the project, there is only a handsome line left on the ground and in the corner of the wall. The problems of theft and jam prevention, flood peak reduction, being fa shion and beautiful and so on are resolved along with the birth of ground rainwater drainage and collection products under the brand new concept.

## HDPE 缝隙式线性排水沟



地沟沟体选用PE材质，篦子选用不锈钢材质，价格低、相同尺寸，排水能力更强，施工过程要求较高。适用于大型广场、道路等下垫面雨水的排放，排水效果佳、效果美观。

HDPE Slot Linear Drainage Trench

General drainage trenches use PE materials, are often placed at the periphery of the low greenbelt to collect the rainwater in the greenbelt, also can be placed on the road shoulders to collect rainwater on the roads, so the rainwater can be discharged fast through the trenches, after the filtration treatment, collected into the storage system, and the trench is easy to clean, which also applies to parks, industrial parks, buildings and residential blocks and public squares and other areas.

## 环保型 ( 渗透 ) 雨水口

环保型渗透雨水口，是采用注塑工艺生产的整体成型产品，并按照一定的开孔率在雨水口的侧壁和底部加工渗透孔是公司自主研发的替代传统砖混雨水口的新型产品，具有渗透性能好、易于清理维护、施工安装方便、综合性价比高等优点，适用于路面、草地、广场等位置的雨水过滤、收集，有利于提高雨水水质，降低雨水处理成本。这种雨水口不仅可以单独使用，还可以根据现场条件叠加使用。

### Environment-friendly infiltration gutter inlet



The environment-friendly infiltration gutter inlet is an integral molded product made by use of the shooting technique, which is machined with infiltration pores on the side wall and bottom of the gutter inlet according to certain porosity. It is such a new product that has been independently developed by our company to replace the traditional masonry-concrete gutter inlet, which is of such advantages as of perfect water permeability, easy cleaning and maintenance, convenient construction and installation,

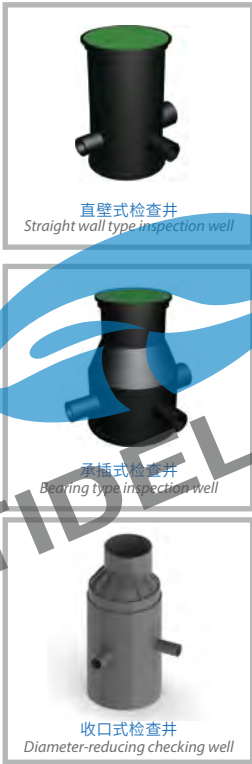
and high comprehensive cost performance. It is applicable to the rainwater filtration and collection at such locations as the pavement, grassland and square, which is beneficial to improving the rainwater quality and reducing the rainwater processing costs. Such a type of gutter inlet can not only be independently used, but also be overlaid for using according to the site conditions.

### 管件焊接组合式雨水检查井

管件焊接组合式雨水检查井由井座、井筒、井圈、井盖组成。井筒为聚乙烯缠绕结构壁管管材加工而成，井座为PE材质，井盖为复合材料材质成品。

#### Rainwater inspection well (Pipe welding)

PE rainwater inspection well is made up of base, wall, enclose and cover. The well base is used PE materials and the well wall is used HDPE materials. The well enclose is made of concrete and the well cover uses compound materials.



类型 Type	井径 Diameter	高度范围 Height Range	接管 Take Over		配套井盖形式 Matching Manhole Covers		环刚度 KN/m <sup>2</sup> Hoop Rigidity
			管径 (DN)	数量 Quantity	井盖 Manhole Covers	算子 Grate	
直壁式 Straight Wall	Φ400	400-600	≤dn200	1	√	—	≤4
	Φ500	500-800	≤dn200	1	√	—	≤4
	Φ600	500-1500	≤dn300	≤2	√	√	≤6
	Φ700	600-2000	≤dn300	≤2	√	√	≤6
	Φ800	600-2500	≤dn400	≤3	√	√	≤6
承压式 Convergent Type	Φ600 / 800	800-2500	≤dn300	≤3	√	√	≤8
	Φ600 / 900	800-2500	≤dn400	≤3	√	√	≤8
	Φ700 / 900	800-3000	≤dn400	≤4	√	√	≤10
	Φ600 / 1000	800-3500	≤dn300	≤5	√	√	≤10
	Φ700 / 1000	800-3500	≤dn400	≤4	√	√	≤10
	Φ700 / 1200	1000-6000	≤dn500	≤5	√	—	≤12
	Φ700 / 1500	1000-8000	≤dn500	≤4	√	—	≤16
阶梯式 Stepped	Φ600 / 1000	500-3500	≤dn500	≤4	√	√	≤10
	Φ700 / 1000	500-3500	≤dn500	≤4	√	√	≤10
	Φ600 / 1200	500-6000	≤dn500	≤4	√	—	≤12
	Φ700 / 1200	500-6000	≤dn500	≤5	√	—	≤12
	Φ600 / 1500	500-8000	≤dn600	≤5	√	—	≤16
承插式 Bell & Spigot	Φ700 / 1000	500-3500	≤dn500	≤4	√	√	≤40
	Φ700 / 1200	500-6000	≤dn500	≤4	√	—	≤12
	Φ700 / 1500	500-8000	≤dn600	≤5	√	—	≤16

## Same Cases of the Rainwater Harvesting System

**奥林匹克中心区**  
Olympic Central Area

**四川北川新县城**  
Beichuan New County Town

**斯里兰卡雨水综合利用**  
Ceylon Rainwater Utilization

**中国国家博物馆**  
China National Museum

**北京未来科学城**  
Beijing Future Science City

**中关村国家自主创新示范区展示中心**  
Zhongguancun Exhibition Center

**北京行政副中心 B3、B4 地块**  
Beijing Administrative Deputy Center B3, B4 plots

**嘉兴长盐塘水文生态长廊**  
Jiaxing Chang Shuitang Hydroecological Promenade

**北京第二国际机场**  
Beijing Second International Airport

**上海虹桥商务区中国博览会会展综合体**  
China Expo exhibition projects in Shanghai Hongqiao business district

**2010 上海世博会澳大利亚馆**  
Australia Pavilion, World Expo 2010

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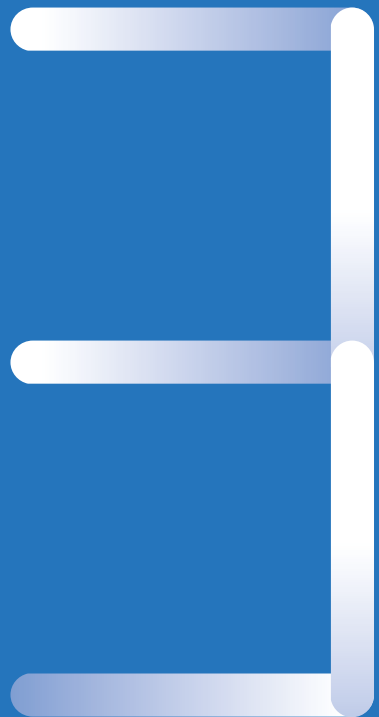


# ● 雨水综合利用系统部分案例



TIDELION®

泰宁



# 雨水综合利用系统 部分案例

Some Cases of the Rainwater Harvesting System



奥林匹克中心区  
*Olympic Central Area*



四川北川新县城  
*Beichuan New County Town*



斯里兰卡雨水综合利用  
*Ceylon Rainwater Utilization*





中国国家博物馆  
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北京行政副中心B3、B4地块  
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嘉兴长盐塘水文生态长廊

*Jiaxing Chang Shuitang Hydroecological Promenade*



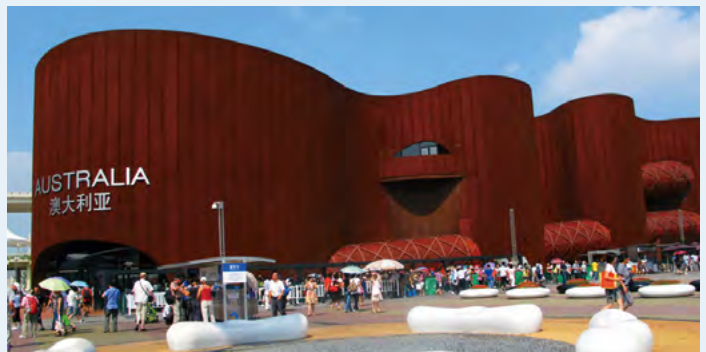
北京第二国际机场

*Beijing Second International Airport*



上海虹桥商务区中国博览会会展综合体

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2010上海世博会澳大利亚馆

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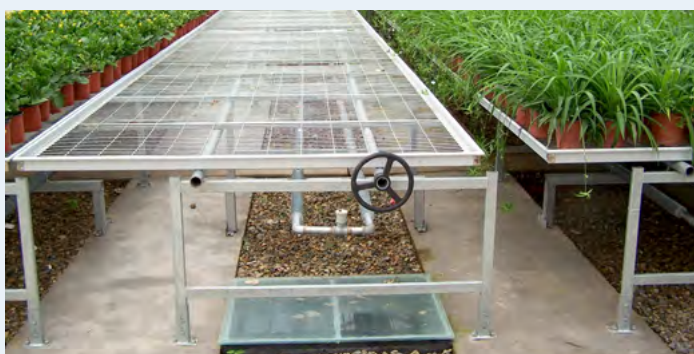
中关村用友软件园  
ERP-NC software park



北京奔驰发动机联合厂房  
New Engine Plant of Beijing Benz



北京蓝色港湾  
Beijing Blue Harbour



北京欧阁有机农庄  
Beijing Ouge Organic Farm Village





# 泰宁在哪?

Where





宇

TIDELION

做全球具有影响力的海绵城市、零碳产业和技术的引领者！  
To be the global influential leader in Sponge City construction & zero energy development technology.



其他业务领域期待您的关注……  
Wish you attention for the other field of business.

- 

虹吸雨水排放收集  
Siphonic Rainwater Drainage System
- 

同层排水  
Same Floor Drainage System
- 

海绵城市  
Sponge City
- 

海绵农业  
Sponge Agriculture
- 

零碳建筑  
Zero-energy Building