

**BIRCO**

DRAINAGE IN  
ITS BEST FORM



**BIRCOprimo®**

First-class sedimentation,  
all along the drainage.



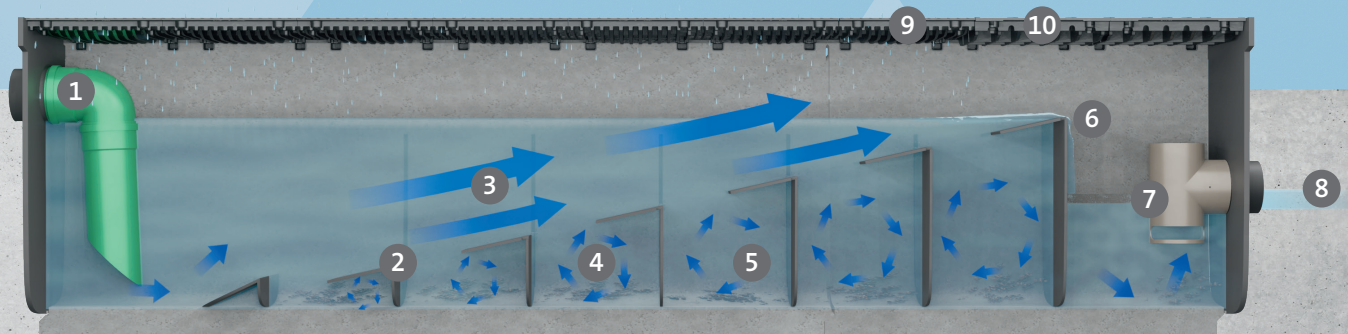


# BIRCOprime®

## Rainwater treatment: Let's settle for sustainability!

Maximum retention. Maximum sedimentation: With BIRCOprime®, BIRCO introduces a rainwater treatment system that cleans the water while it flows off. This particle sedimentation takes place invisibly directly inside the drainage channel system. This is because sedimentation in BIRCOprime® takes place via a weir system that is integrated into the channel – without any chemical or biological treatment at all.

And this is how it works: The water is channelled over rising weirs. In the process, sediments settle between the weir elements in the sedimentation chambers and are effectively retained. Oils and other light liquids are separated from the draining water by the retention unit. Another advantage: Depending on the connection area and the level of surface contamination, maintenance is only required every 1-5 years and is very easy to manage.



1. Inlet

2. Weir 1–6 (base weirs)

3. Laminar flow

4. Min. turbulent flow

5. Sedimentation chamber

6. Overflow weir

7. Retention unit for light liquids

8. Outlet

9. Slotted DI gratings

10. Solid DI gratings

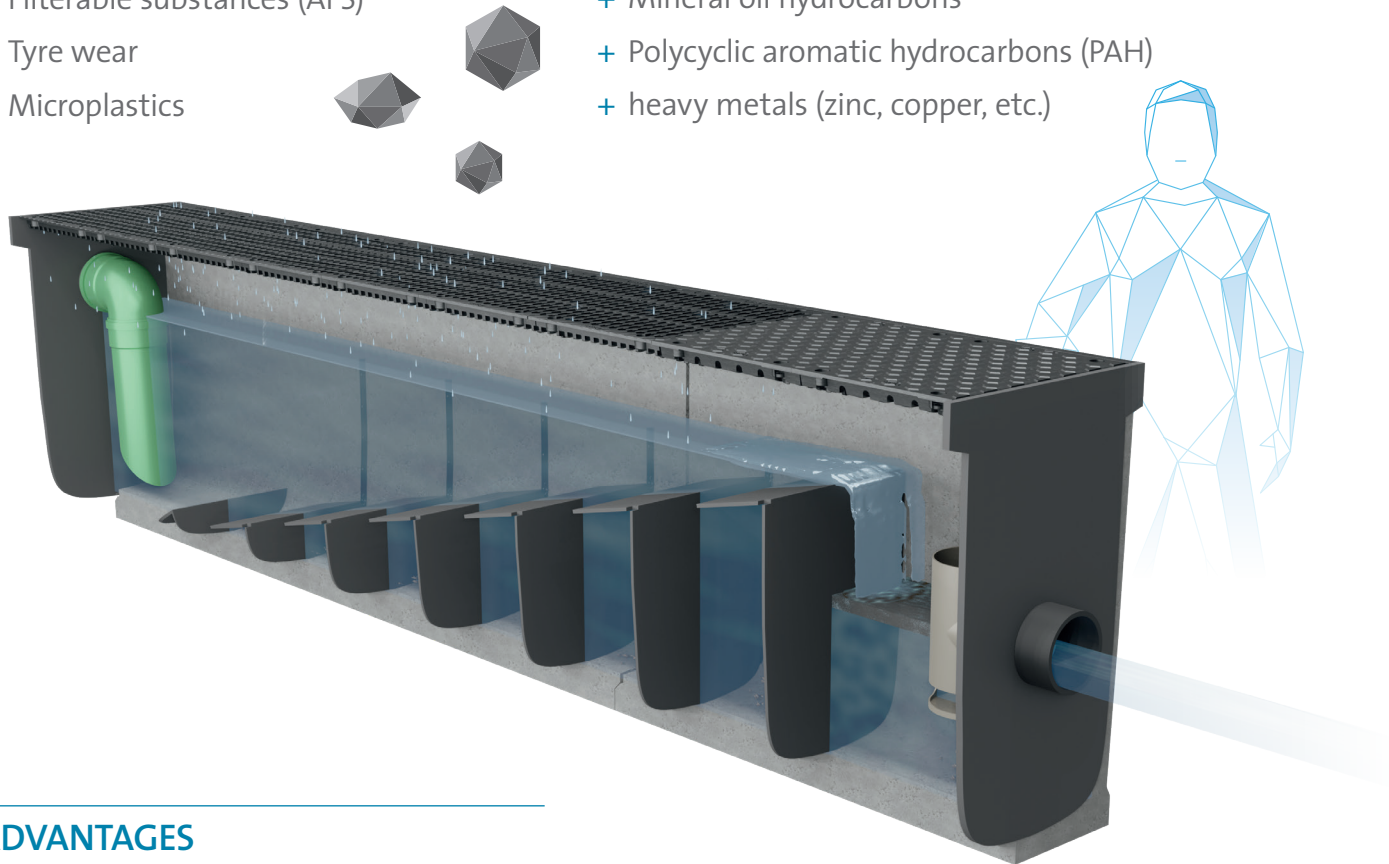


## The simple and effective way to clean water

Rainwater can be contaminated with pollutants that should not enter our reservoirs and groundwater. A large proportion of these pollutants are bound in particles to so-called filterable substances (AFS). In most cases, filtration is not necessary, thanks to BIRCOprime® these substances are consistently separated through effective sedimentation.

### BIRCOprime® relieves central treatment plants of:

- + Filterable substances (AFS)
- + Tyre wear
- + Microplastics
- + Mineral oil hydrocarbons
- + Polycyclic aromatic hydrocarbons (PAH)
- + heavy metals (zinc, copper, etc.)



---

### ADVANTAGES

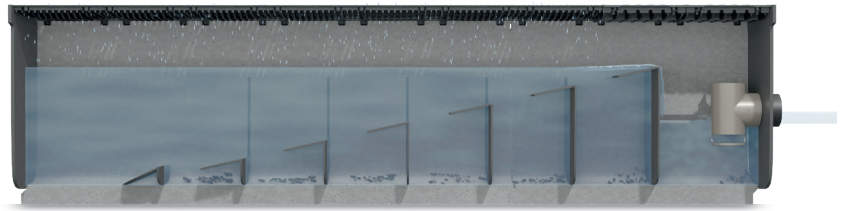
---

- + Solids (AFS) and particle-bound pollutants are removed
  - + Sedimentation chambers with overflow weirs (designed as „1“ shape) effectively retain solids. Only minimal remobilisation even during heavy rainfall events
  - + Retention of light liquids (oils, petrol, etc.)
  - + Maintenance only necessary every 1-5 years (depending on pollutant loads and connected area)
  - + Operator-friendly maintenance and cleaning due to modular system design and access directly from the surface
  - + Quick installation, factory assembly and installation to EN1433 Type I standard
  - + Connected areas between 2000 and 7000 m<sup>2</sup> possible, depending on the type of operation and required flow rate or efficiency
  - + Construction length of the rainwater treatment system: 4500 mm
  - + Proven purification performance based on the DIBt (German technical assessment institute) testing principles and according to DWA-M 153 and DWA-A 102 rainwater treatment recommendations
-

Wherever the water comes from, it is purified.

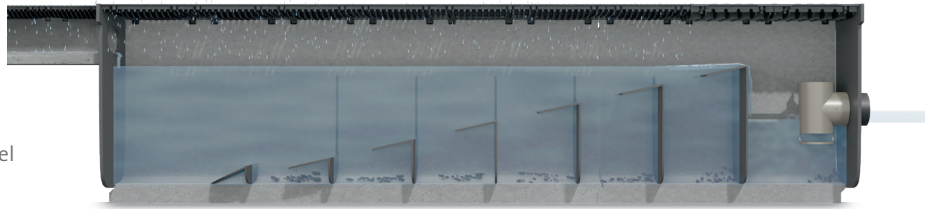
**Decentralised rainwater treatment**

The rainwater flows into the rainwater treatment system on site via the slotted gratings and is then cleaned.



**Semi-centralised rainwater treatment**

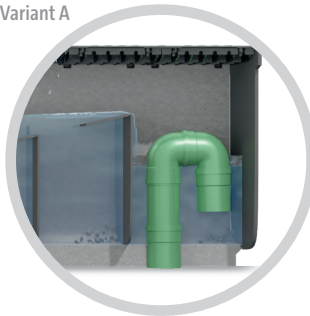
The rainwater that has already been collected is fed into the rainwater treatment system via a pipe or channel and then cleaned.



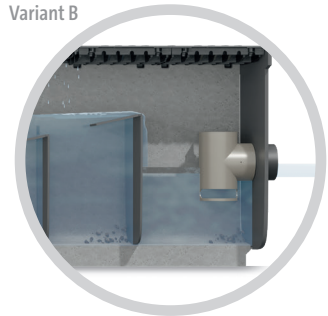
**Vertical and horizontal outlet variants**

In variant A, the cleaned rainwater flows off vertically via a drain connection. Variant B shows the water flowing off horizontally. In both variants, oils and other light liquids are separated.

Variant A



Variant B



**TECHNICAL DATA\***

Inlet	Outlet	Length	Width at top/ at bottom	Height at tongue/ groove	Weight	Connection area	Load class EN 1433	Article number
via gratings	horizontal	4500 mm	701/740 mm	1200/1200 mm	3900 kg	2000 – 7000 m <sup>2</sup>	A 15 – E 600	070010
via gratings	vertical	4500 mm	701/740 mm	1200/1200 mm	3900 kg	2000 – 7000 m <sup>2</sup>	A 15 – E 600	070020
via channel	horizontal	4500 mm	701/740 mm	1200/1200 mm	3900 kg	2000 – 7000 m <sup>2</sup>	A 15 – E 600	070011
via channel	vertical	4500 mm	701/740 mm	1200/1200 mm	3900 kg	2000 – 7000 m <sup>2</sup>	A 15 – E 600	070021
via pipe	horizontal	4500 mm	701/740 mm	1200/1200 mm	3900 kg	2000 – 7000 m <sup>2</sup>	A 15 – E 600	070012
via pipe	vertical	4500 mm	701/740 mm	1200/1200 mm	3900 kg	2000 – 7000 m <sup>2</sup>	A 15 – E 600	070022

\* Also available in F 900 class on demand

**DIMENSIONING OF THE AREA | CLASSIFICATION ACCORDING TO DWA-M 153**

Type acc. to DWA-M 153	Type D24 <sup>(1)</sup>			Type D25 <sup>(2)</sup>			
Abatement rate	35 %	45 %	50 %	20 %	30 %	35 %	65 %
Decentral treatment	4000 m <sup>2</sup>	3100 m <sup>2</sup>	2800 m <sup>2</sup>	7000 m <sup>2</sup>	4600 m <sup>2</sup>	4000 m <sup>2</sup>	2200 m <sup>2</sup>
Semi-central treatment	3900 m <sup>2</sup>	3000 m <sup>2</sup>	2700 m <sup>2</sup>	6800 m <sup>2</sup>	4500 m <sup>2</sup>	3900 m <sup>2</sup>	2100 m <sup>2</sup>

<sup>1)</sup> Rainwater treatment installation for a maximum hydraulic load of 10 m/h

<sup>2)</sup> Rainwater treatment installation for a maximum hydraulic load of 18 m/h





**Innovative linear water treatment plant as a drainage channel** equipped with an intelligent weir system for optimal sedimentation

**Impressively good particle retention of up to 80 %** for filterable substances (AFS)  
– tested in accordance with the DIBt (German technical assessment institute)

**Ready for maximum flow rates** and connection areas of up to 7000 m<sup>2</sup>,  
depending on the operating mode and the required flow rate or efficiency

**Easy installation** due to modular system design  
and the factory pre-assembly

**Clear result** – remobilisation of sedimented particles limited to a minimum  
due to the intelligent weir concept

**Visibility** – easy maintenance and cleaning directly  
from the trafficked surface

**Compatible with the German classification** according to DWA-A 102  
and DWA-M 153 rainwater treatment recommendations



## BIRCO GmbH

International

Herrenpfädel 142

76532 Baden-Baden

GERMANY

Phone +49 (0) 7221 5003-0

Fax +49 (0) 7221 5003-1149

E-mail [info@birco.com](mailto:info@birco.com)

Internet [www.birco.com](http://www.birco.com)

BIRCOprime®

## BIRCO website



[www.birco.com](http://www.birco.com)



© Copyright

All rights reserved. Text, images and graphics are subject to the protection of copyright and other protective laws. Copying, reproduction or imitation, even if no specific proprietary rights exist for this purpose, is only permitted with written approval from BIRCO GmbH.