

Competence brochure

Treating stormwater

1

TRANSPORT

2

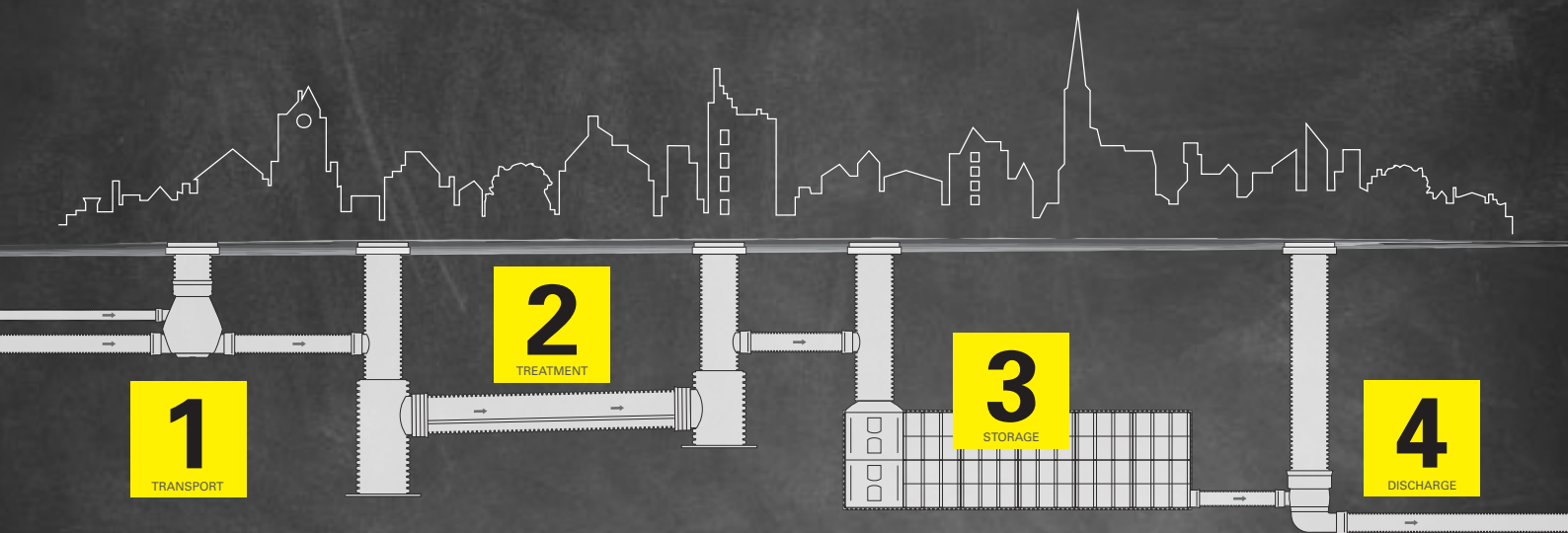
TREATMENT

3

STORAGE

4

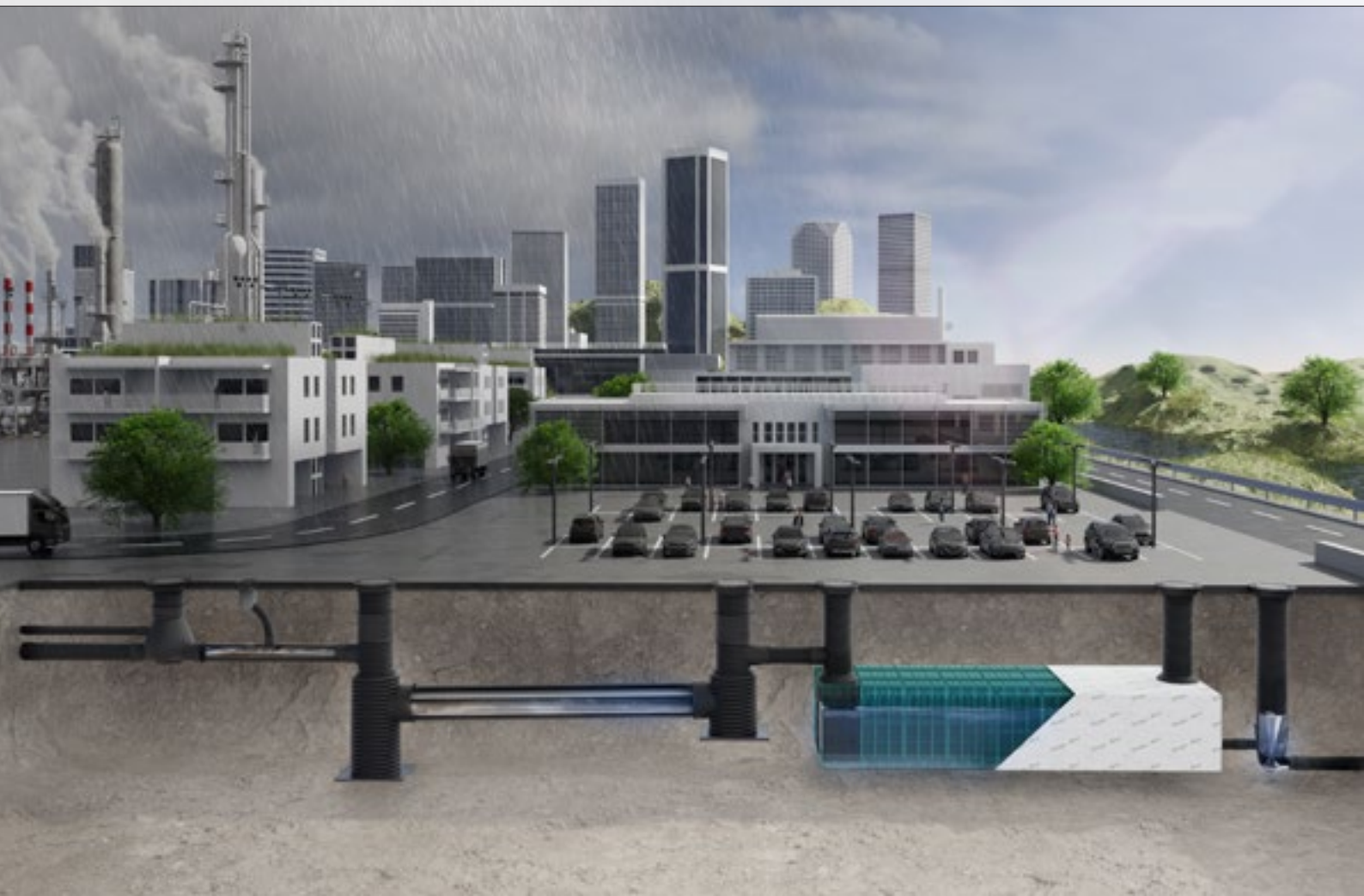
DISCHARGE



4 CHALLENGES – 1 SOLUTION
STORMWATER IS OUR COMPETENCE

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Why do you have to treat stormwater?

2

For clean waterbodies and to protect the storage/infiltration system

Our different system concepts remove dirt and pollutants, e.g., from road traffic or emissions from industrial facilities, from stormwater. Depending on the type and

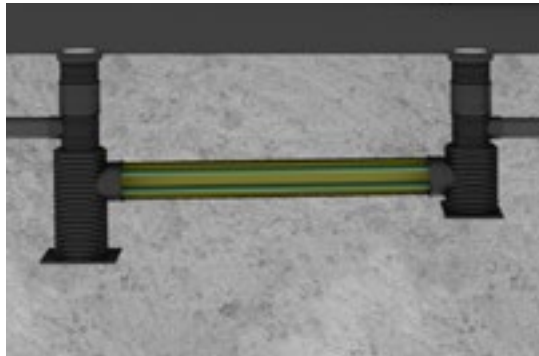
degree of pollution, we offer underground treatment systems which do not affect the use of space and ensure a systematic elimination of

pollutants. The retention of coarse and fine particles also maintains the functionality of downstream storage/infiltration systems.

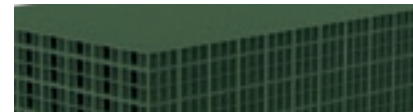
Dirt and pollutants
in stormwater







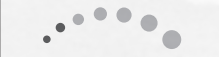



















Treatment using SediPipe L plus 600/6 for instance
(sedimentation and oil separation)























Clean water to protect waterbodies
and the storage/infiltration system



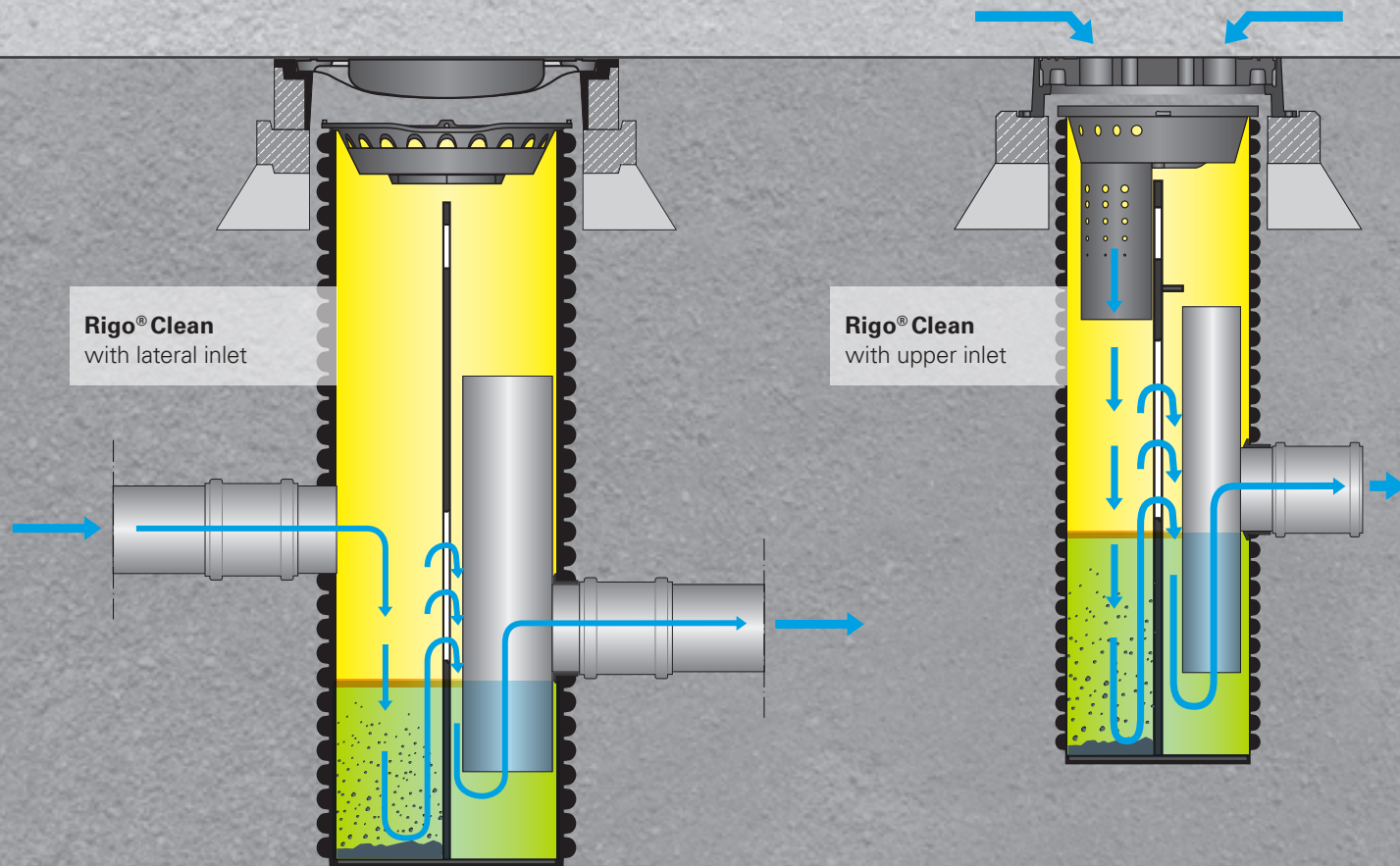
	Shafts		Tubular systems			
Product	RigoClean with strainer	SediPoint with flow separator	SediPipe level with 1 flow separator	SediPipe L with 1 flow separator	SediPipe XL with 1 flow separator	SediPipe 800 with 1 flow separator
Illustration						
Treatment performance						
Working principle	Filtering	Sedimentation	Sedimentation	Sedimentation	Sedimentation	Sedimentation
Application						
Degree of pollution						
Typical characteristics	Protects storage/ infiltration systems against pollution	Flow separator operating principle for confined spaces	Bottom-aligned connections	Freely adjustable angles and installation depths	1000' shafts pre-assembled customer-specifically	Allows angles or changes of direction
Dimensioning acc. to DWA-M 153: max. connectable area	1,000 m ²	3,650 m ²	23,350 m ²	44,450 m ²	44,450 m ²	101,500 m ²
Dimensioning acc. to DWA-A 102-2/ BWK-A 3-2		Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2
Maintenance interval	1 year	2 years	1–4 years (depending on system type and connected area)	1–4 years (depending on system type and connected area)	1–4 years (depending on system type and connected area)	1–4 years (depending on system type and connected area)
Proof		■ LGA Würzburg ■ IKT Gelsenkirchen	■ HTWK Leipzig ■ ifs Hannover ■ LGA Würzburg ■ IKT Gelsenkirchen ■ TAUW / TU Delft	■ HTWK Leipzig ■ ifs Hannover ■ LGA Würzburg ■ IKT Gelsenkirchen ■ TAUW / TU Delft	■ HTWK Leipzig ■ ifs Hannover ■ LGA Würzburg ■ IKT Gelsenkirchen ■ TAUW / TU Delft	■ HTWK Leipzig ■ ifs Hannover ■ LGA Würzburg ■ IKT Gelsenkirchen ■ TAUW / TU Delft

Tubular systems with substrate step

SediPipe L plus with 2 flow separators	SediPipe XL plus with 2 flow separators	SediSubstrator basic with 1 flow separator and substrate filter unit	SediSubstrator L with 1 flow separator and substrate filter unit DIBt-approved	SediSubstrator XL with 1 flow separator and substrate filter unit DIBt-approved
				
				
Sedimentation Oil separation	Sedimentation Oil separation	Sedimentation Oil separation Adsorption	Sedimentation Oil separation Adsorption	Sedimentation Oil separation Adsorption
				
				
Oil separation performance in case of spills during rain	Oil separation performance in case of spills during rain	Outlet can be integrated into the storage/ infiltration system	DIBt-approved stormwater treatment	DIBt-approved stormwater treatment
44,450 m ²	44,450 m ²	940 m ²	3,000 m ²	3,000 m ²
Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2	Performance verification and dimensioning acc. to DWA-A 102-2/ BWK-A 3-2
1–4 years (depending on system type and connected area)	1–4 years (depending on system type and connected area)	4 years	4 years	4 years
<ul style="list-style-type: none"> HTWK Leipzig ifs Hannover LGA Würzburg IKT Gelsenkirchen TAUW / TU Delft 	<ul style="list-style-type: none"> HTWK Leipzig ifs Hannover LGA Würzburg IKT Gelsenkirchen TAUW / TU Delft 	<ul style="list-style-type: none"> ifs Hannover 	<ul style="list-style-type: none"> LGA Würzburg 	<ul style="list-style-type: none"> LGA Würzburg

DWA
A102-2
compliant

**Up-to-date
treatment of
polluted
stormwater**



Rigo® Clean – treatment shaft with strainer

With removable strainer

The RigoClean treatment shaft retains coarse dirt and fine particles and thus guarantees the functionality of the storage/infiltration system. In addition, it retains floatables and light liquids.

Rigo®Clean with upper inlet

also fulfils the purpose of a road gully. The dirt hopper retains coarse dirt and admits the water into the first chamber.

Rigo®Clean with lateral inlet

is connected directly upstream to the system. It is fed through conventional road gullies, gullies in courtyards or from rooftops.

Application

RigoClean is suitable for infiltration of rooftop runoff or slightly polluted runoff from paved surfaces. RigoClean can also be used as a pretreatment upstream of SediPipe or SediSubstrator.

System types

- RigoClean 500 with upper inlet
- RigoClean 500 with lateral inlet
- RigoClean 1000 with lateral inlet

Degree of pollution

moderate



Application

e.g., school yards



Working principle

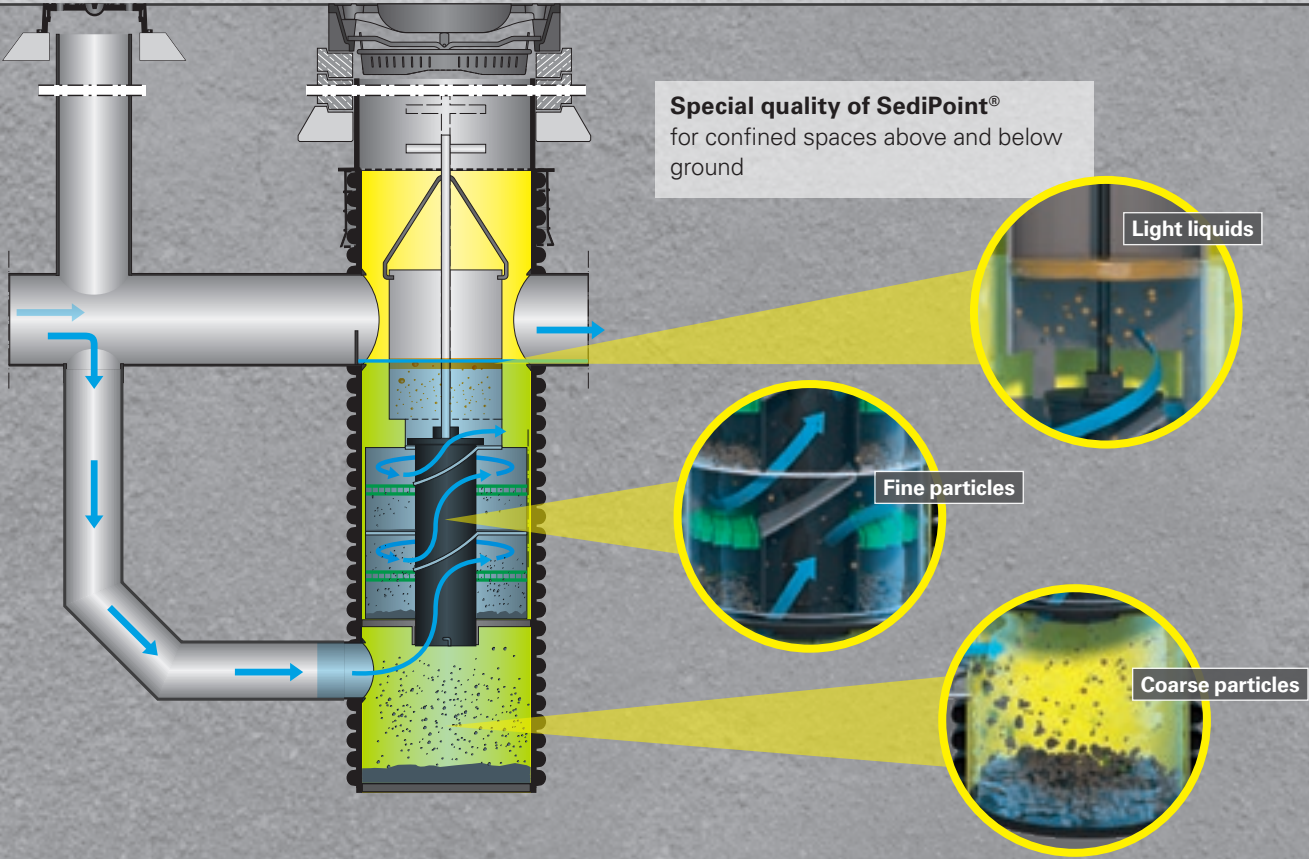
filtering



Max. connectable area

in acc. with
DWA-M 153:
up to 1,000 m²





SediPoint® – treatment shaft with flow separator

Perfect for confined spaces

FRÄNKISCHE's flow separator technology, tried and tested in stormwater treatment for many years, forms the basis for SediPoint's operating principle in confined spaces: The sedimentation collector spirals the water counterclockwise up from the inlet. Fine particles sink to the sediment depot in the areas with little water movement below the two patented flow separators. Light particles that are carried in the water, e.g., oil, rise up where the immersion pipe reliably retains them in the system in case of spills in dry weather. The integrated bypass protects the sewer network from flooding during heavy rain and safeguards network hydraulics.

System types

- SediPoint DN 600

NEW

Performance verification acc. to
DWA-A 102-2/BWK-A 3-2

Application

As type D25, D24 and D21 sedimentation system according to DWA M 153 bulletin for the treatment of polluted stormwater runoff and for the retention of light liquids in case of spills in dry weather. Ideal for new and retrofit installations in existing systems in confined spaces.

NOTE

The independent testing institutes TÜV Rheinland LGA Products GmbH and IKT Gelsenkirchen confirm the high treatment performance of SediPoint.

Degree of pollution

heavy



Application

e.g., traffic areas
with confined spaces



Working principle

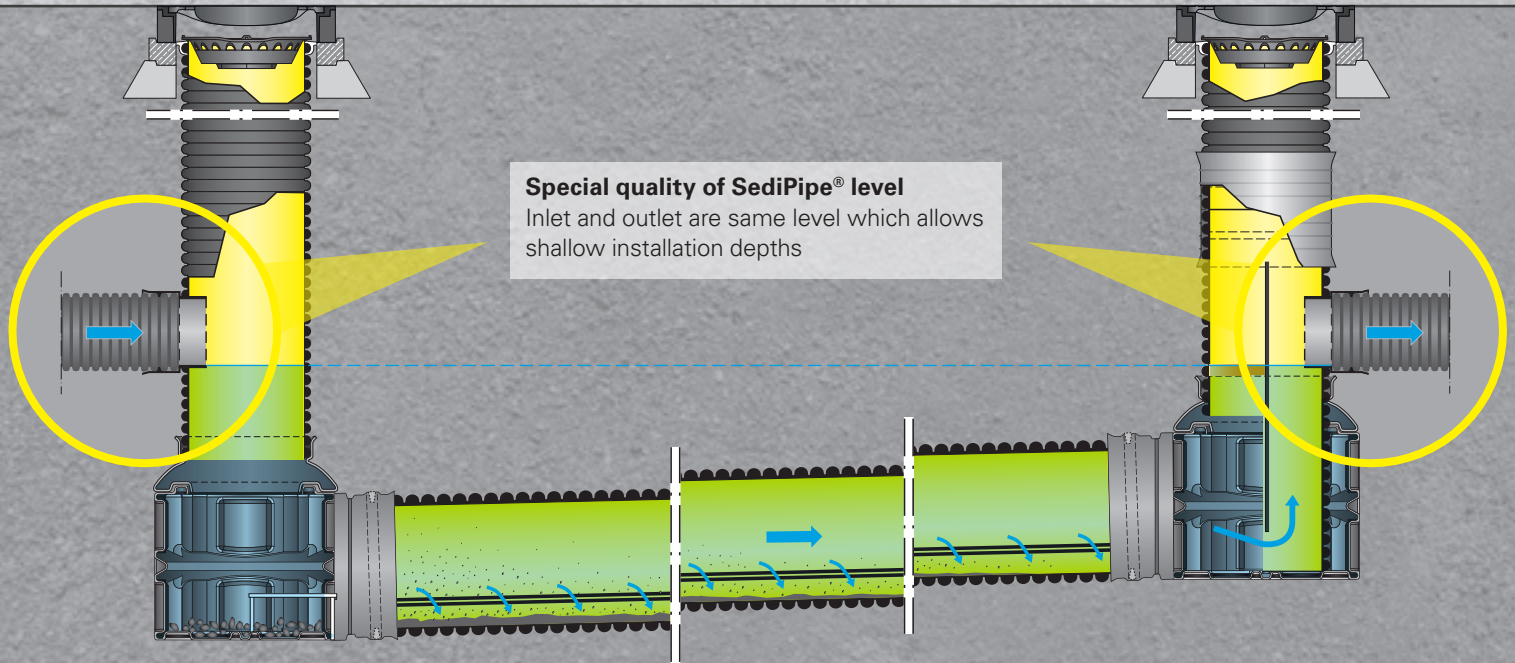
sedimentation



Max. connectable area

in acc. with
DWA-M 153:
up to 3,650 m²





SediPipe® level – treatment system with flow separator

With universal connection and without height loss

In case of SediPipe level systems, inlet and outlet are same level. This allows minimum installation depths of the drainage pipe and/or the downstream systems. SediPipe level can be used universally for a wide range of purposes:

- Discharge into a surface waterbody or the sewer
- Installation upstream of or parallel to a SickuPipe pipe swale
- Installation upstream of or parallel to a Rigofill storage/infiltration system (non-integrated design)

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

Application

Treatment of polluted stormwater runoff with inlet and outlet being same level and universal pipe connection for all downstream installations. The system retains also light liquids in dry weather.

System types

- SediPipe level 400/6
- SediPipe level 500/6
- SediPipe level 600/6
- SediPipe level 500/12
- SediPipe level 600/12

Degree of pollution

heavy



Application

e.g., building and industrial areas



Working principle

sedimentation



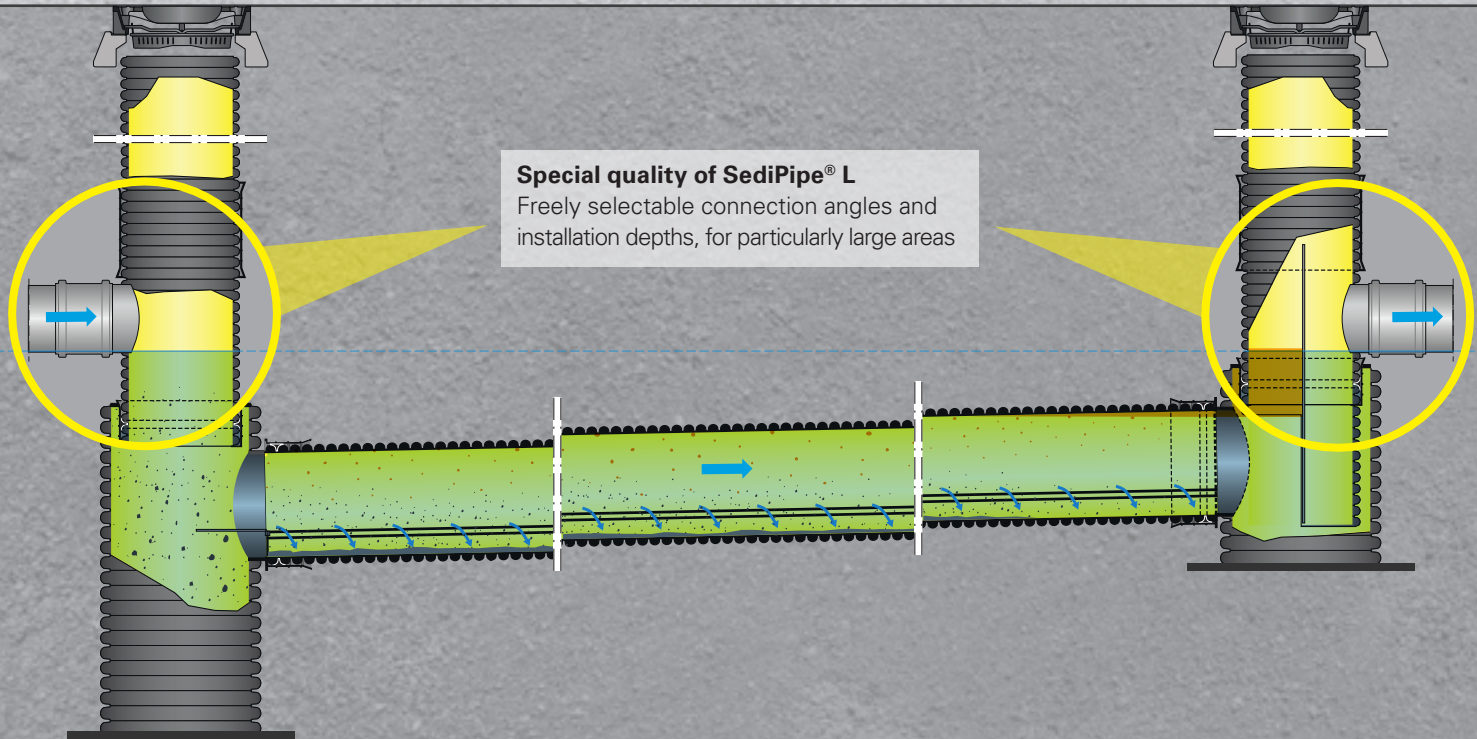
Max. connectable area

in acc. with DWA-M 153:
up to 23,350 m²



PROOF OF EQUALITY

of decentralised stormwater treatment systems as compared to stormwater sedimentation tanks in North Rhine-Westphalia (LANUV list)



SediPipe® L – treatment system with flow separator

2

The revolution for the storm sewer

SediPipe L has been specifically designed for large connectable areas where SediPipe level systems are not sufficient anymore. The large storage volume and installation entirely below ground make SediPipe L the most effective replacement for conventional stormwater sedimentation tanks.

Because connection angles and installation depths can be adjusted, SediPipe L offers greatest flexibility on site.

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

Application

Treatment of polluted stormwater runoff from large connectable areas and retention of light liquids in case of spills in dry weather

System types

- SediPipe L 600/6
- SediPipe L 600/12
- SediPipe L 600/18
- SediPipe L 600/24

Degree of pollution

heavy



Application

e.g., building and industrial areas



Working principle

sedimentation



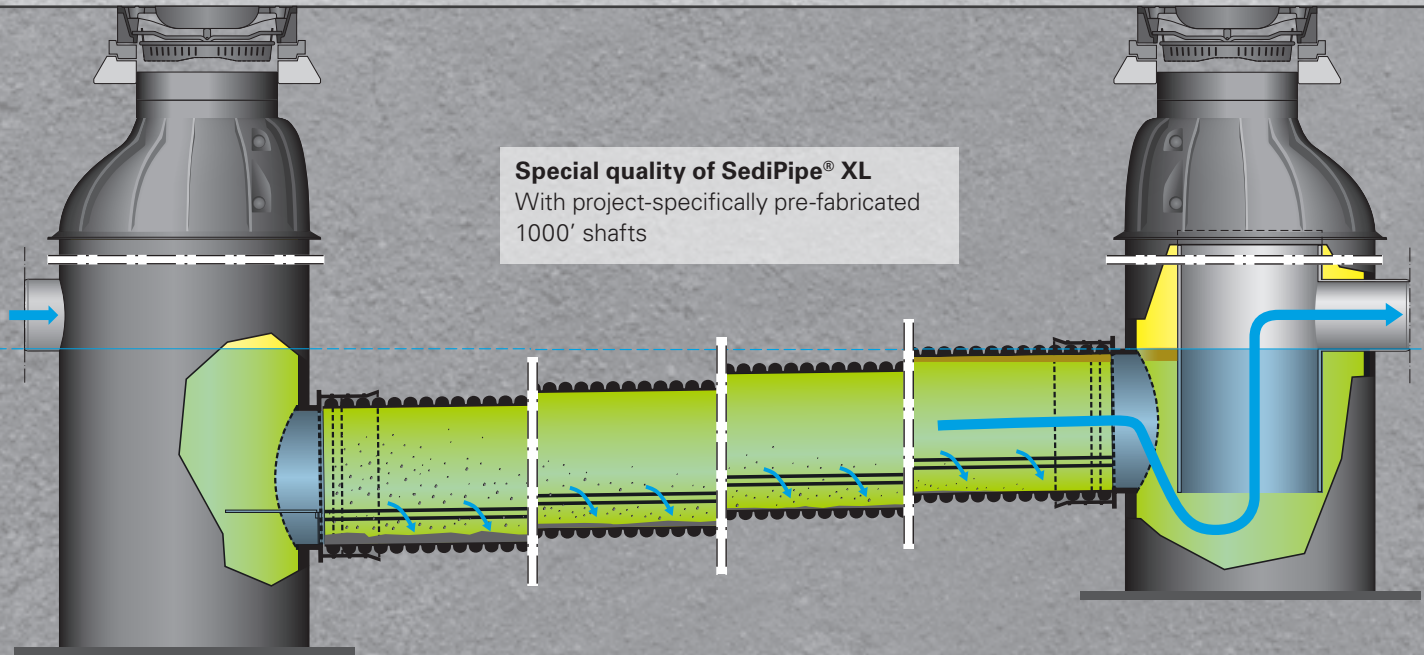
Max. connectable area

in acc. with
DWA-M 153:
up to 44,450 m²



PROOF OF EQUALITY

of decentralised stormwater treatment systems
as compared to stormwater sedimentation tanks
in North Rhine-Westphalia (LANUV list)



SediPipe® XL – treatment system with flow separator

2

The revolution for the storm sewer

SediPipe XL combines the benefits of SediPipe L with the benefits of start shafts and target shafts DN 1000.

Due to its project-specific production, the system has been ideally designed to meet the specific requirements of the individual project.

NEW

Performance verification acc. to
DWA-A102-2/BWK-A 3-2

Application

Treatment of polluted stormwater runoff from large connectable areas and retention of light liquids in case of spills in dry weather

System types

- SediPipe XL 600/6
- SediPipe XL 600/12
- SediPipe XL 600/18
- SediPipe XL 600/24

Degree of pollution

heavy



Application

e.g., large building
and industrial areas



Working principle

sedimentation



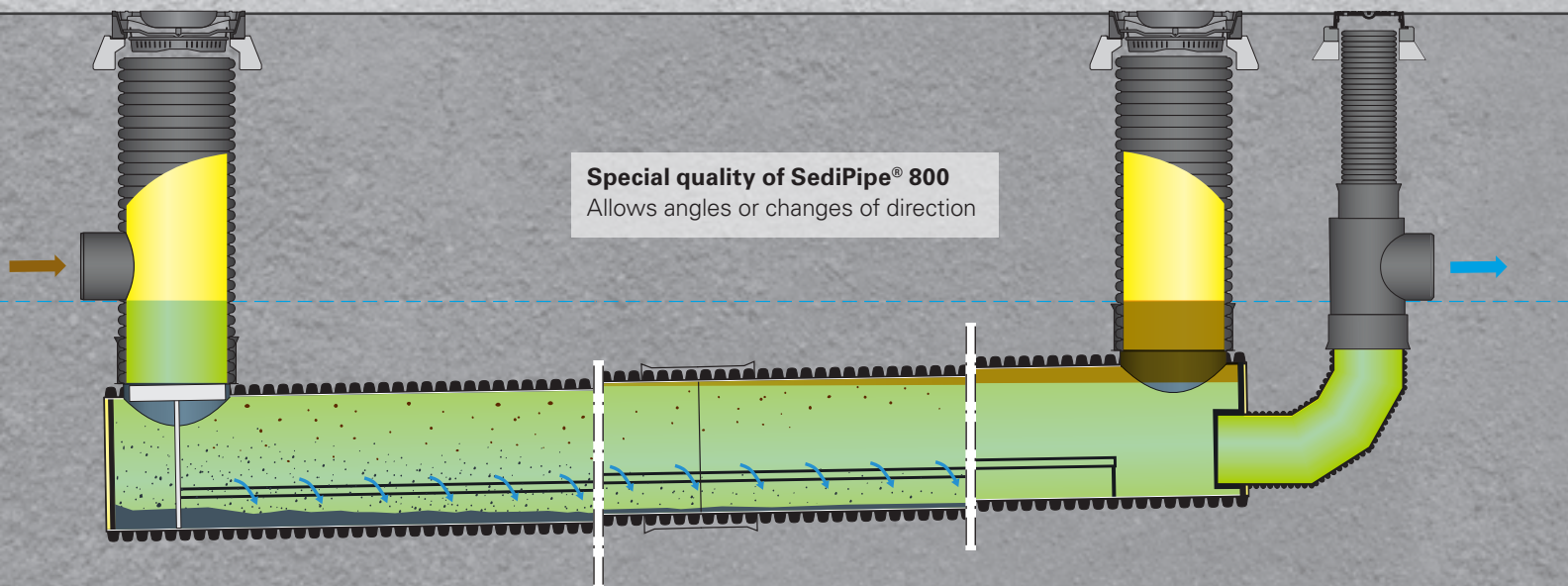
Max. connectable area

in acc. with
DWA-M 153:
up to 44,450 m²



PROOF OF EQUALITY

of decentralised stormwater treatment systems
as compared to stormwater sedimentation tanks
in North Rhine-Westphalia (LANUV list)



SediPipe® 800 – treatment system DN 800 with flow separator

2

Larger systems with regard to the new DWA-A 102 regulations

FRÄNKISCHE is reacting to the increased performance requirements for stormwater treatment systems according to DWA-A 102/BWK-A 3: The new SediPipe 800 system expands its range and will cover large to very large connectable areas in the future.

The modular system offers proven high treatment performance, confirmed by a professionally recognised verification procedure.

The design of the flexible system has been optimised. The large-volume system with sedimentation pipes in DN 800 features our tried-and-tested flow separator technology.

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

Application

Treatment of polluted stormwater runoff from large and very large connectable areas and retention of light liquids in dry weather

System types

- SediPipe 800/12
- SediPipe 800/18
- SediPipe 800/24
- SediPipe 800/30
- SediPipe 800/36
- SediPipe 800/42
- SediPipe 800/48

Degree of pollution

heavy



Application

e.g., large building and industrial areas



Working principle

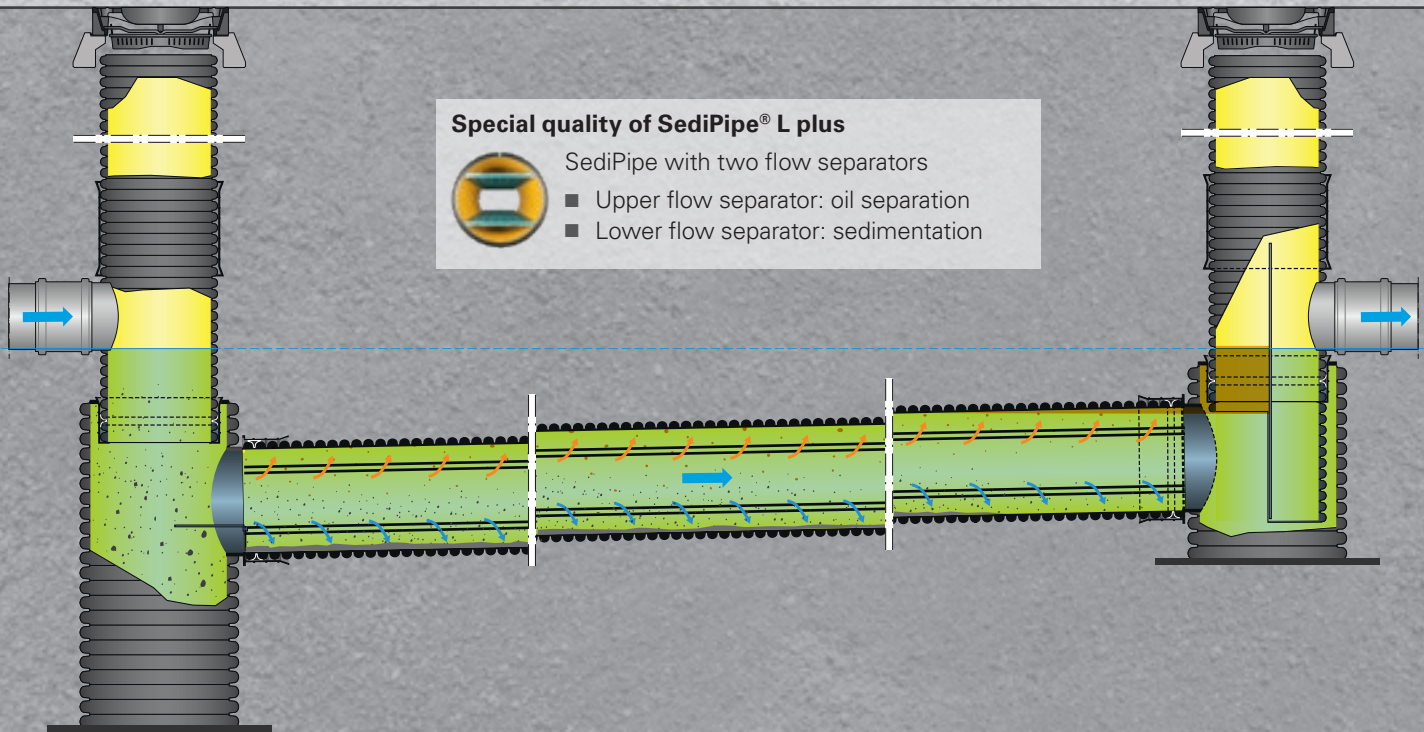
sedimentation



Max. connectable area

in acc. with
DWA-M 153:
up to 101,500 m²





SediPipe® L plus – treatment system with two flow separators

2

Stormwater treatment and oil separation

SediPipe L plus has been equipped with a second upper flow separator for oil separation.

The patented technology allows the system to perfectly imitate the function of an oil separator. This way, the system guarantees preventive water protection in case of oil spills also during heavy rainfalls.

Application

Treatment of polluted stormwater runoff from large connectable areas and retention of light liquids in case of spills in dry weather and during rain

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

System types

- SediPipe L plus 600/6
- SediPipe L plus 600/12
- SediPipe L plus 600/18
- SediPipe L plus 600/24

NOTE

SediPipe L plus systems are no oil separators according to DIN EN 858-1 and may not be used for applications provided therein! SediPipe L plus systems have been exclusively designed for prevention in case of spills! Retention of light liquids during rain tested by TÜV-Rheinland LGA Products GmbH.

Degree of pollution

very heavy



Application

e.g., highly frequented roads and industrial areas



Working principle

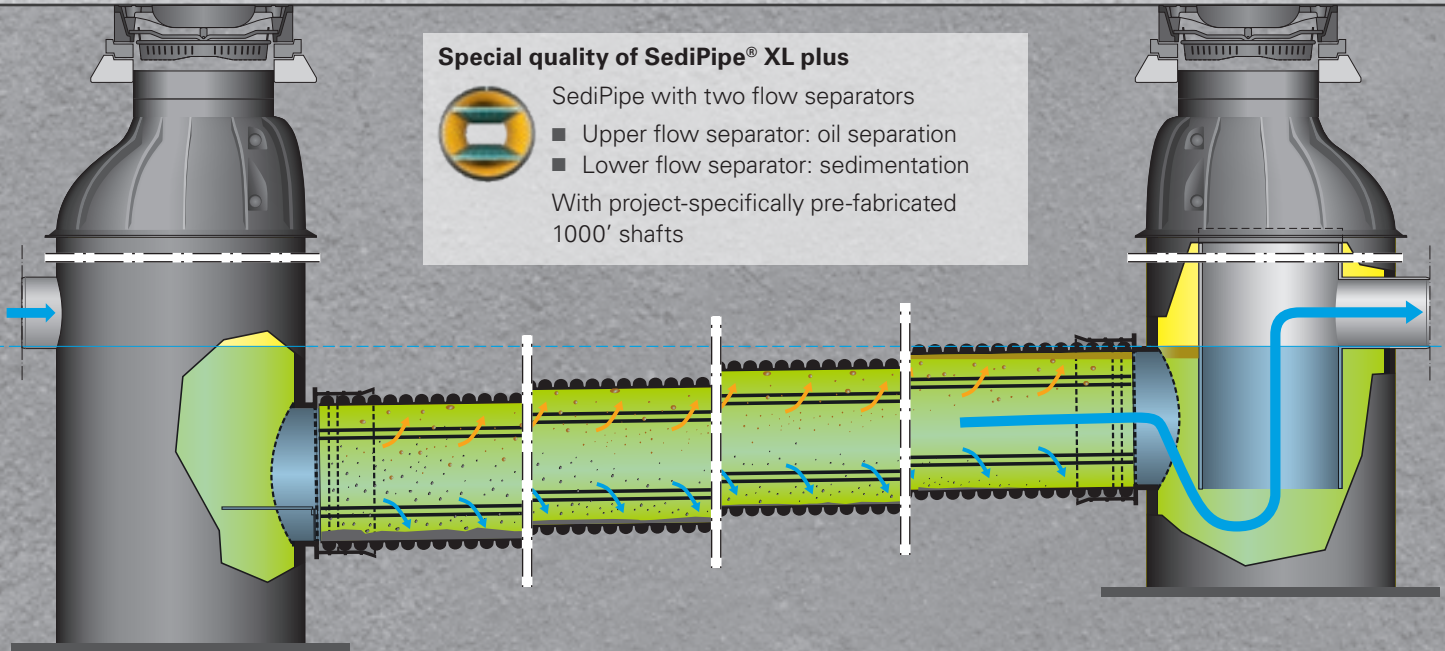
sedimentation
oil separation



Max. connectable area

in acc. with
DWA-M 153:
up to 44,450 m²





SediPipe® XL plus – treatment system with two flow separators

2

Stormwater treatment and oil separation

SediPipe XL plus combines the benefits of SediPipe L plus with the benefits of start shafts and target shafts DN 1000. Due to its project-specific production, the system has been ideally designed to meet the specific requirements of the individual project.

Oil separation is brought to perfection with the patented flow separator in this case as well. Consequently, waterbodies are also protected in case of spills during rain.

Application

Treatment of polluted stormwater runoff from large connectable areas and retention of light liquids in case of spills in dry weather and during rain

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

System types

- SediPipe XL plus 600/6
- SediPipe XL plus 600/12
- SediPipe XL plus 600/18
- SediPipe XL plus 600/24

NOTE

SediPipe XL plus systems are no oil separators according to DIN EN 858-1 and may not be used for applications provided therein! SediPipe XL plus systems have been exclusively designed for prevention in case of spills! Retention of light liquids during rain tested by TÜV-Rheinland LGA Products GmbH.

Degree of pollution

very heavy



Application

e.g., highly frequented roads and industrial areas



Working principle

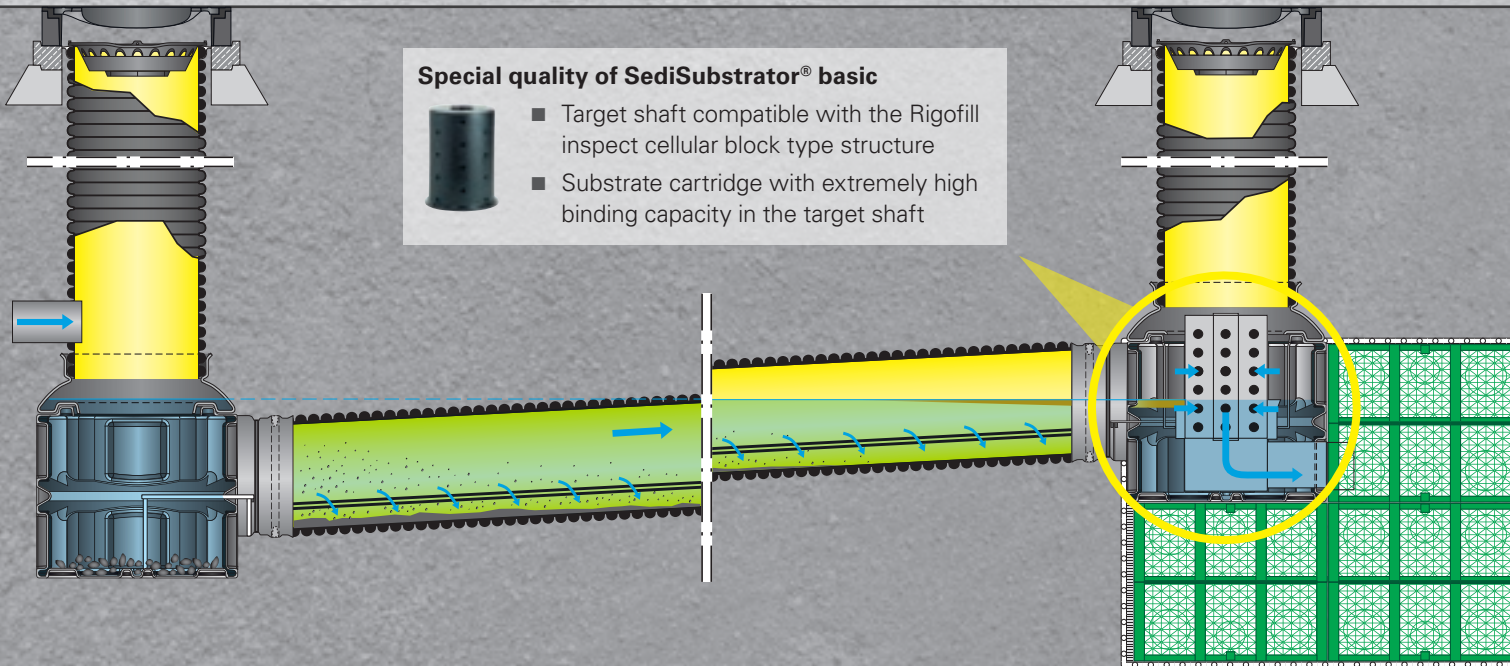
sedimentation
oil separation



Max. connectable area

in acc. with
DWA-M 153:
up to 44,450 m²





SediSubstrator® basic – treatment system with substrate step

Compatible with Rigofill® inspect

SediSubstrator basic systems have been designed to directly connect to Rigofill inspect. This makes SediSubstrator basic an integrated component of the Rigofill storage/infiltration system.

Application

Treatment of extremely polluted stormwater runoff from traffic areas upstream of subsoil infiltration, and retention of light liquids in dry weather

System types

- SediSubstrator basic 400/6
- SediSubstrator basic 500/6
- SediSubstrator basic 500/12

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

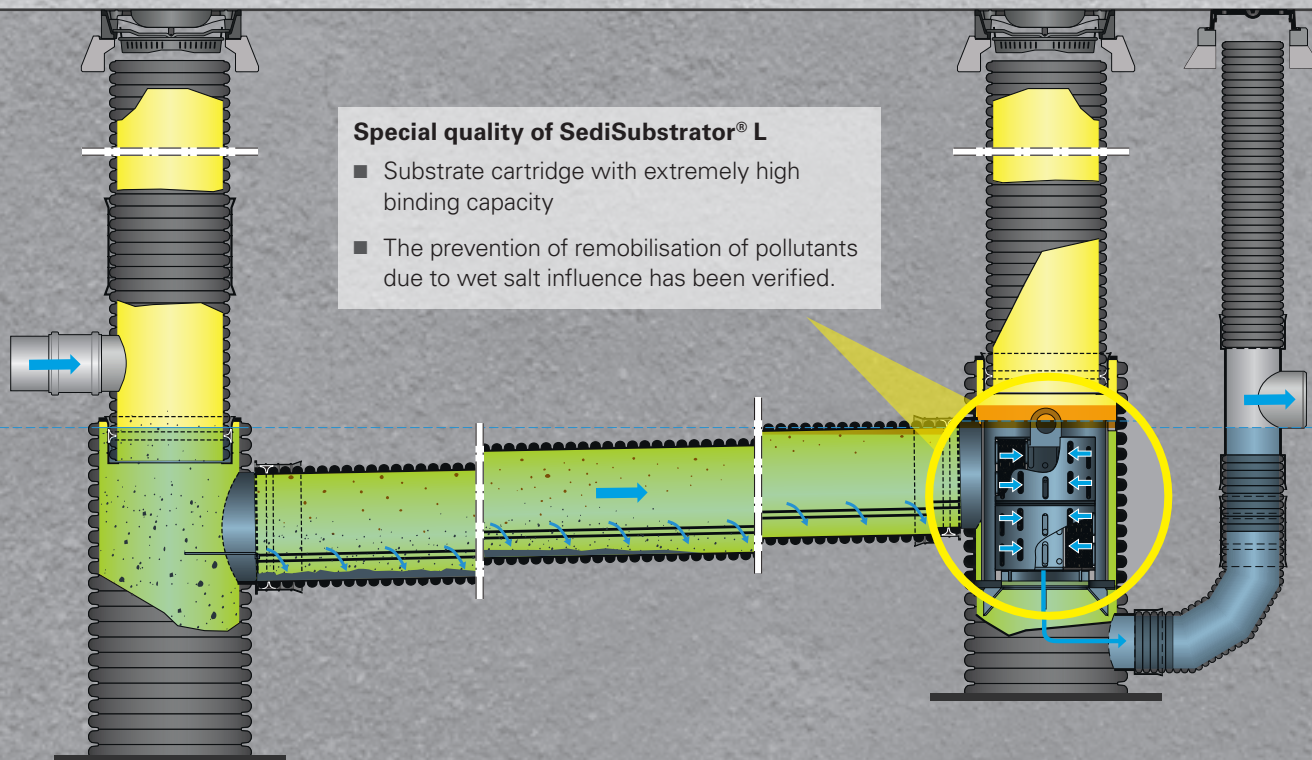
NOTE

The SediSorp plus adsorption substrate is characterised by extremely high binding capacity. When using wet salts as de-icing agents, SediSorp plus verifiably prevents the discharge of already retained heavy metals (verified by TU Munich).



SediSubstrator basic substrate cartridge

Degree of pollution	
extreme	
Application	
e.g., motorway stations	
Working principle	
sedimentation oil separation adsorption	
Max. connectable area	
in acc. with DWA-M 153: up to 940 m²	



SediSubstrator® L – treatment system with substrate step

2

Stormwater treatment according to DIBt standard

Systems of the SediSubstrator L type have been approved by the German Institute for Building Technology (*Deutsches Institut für Bautechnik – DIBt*). They are used to treat very heavily polluted stormwater runoff from traffic areas. The high treatment performance allows for downstream infiltration of stormwater.

Application

Treatment of extremely polluted, oily stormwater runoff from traffic areas upstream of subsoil infiltration

System types

- SediSubstrator L 600/6
- SediSubstrator L 600/12
- SediSubstrator L 600/18
- SediSubstrator L 600/24
- SediSubstrator L 600/12+12

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

NOTE

The SediSorp plus adsorption substrate is characterised by extremely high binding capacity. When using wet salts as de-icing agents, SediSorp plus verifiably prevents the discharge of already retained heavy metals (verified by TU Munich).



SediSubstrator L
substrate cartridge

Degree of pollution

extreme



Application

e.g., stop-and-go areas, highly frequented parking lots



Working principle

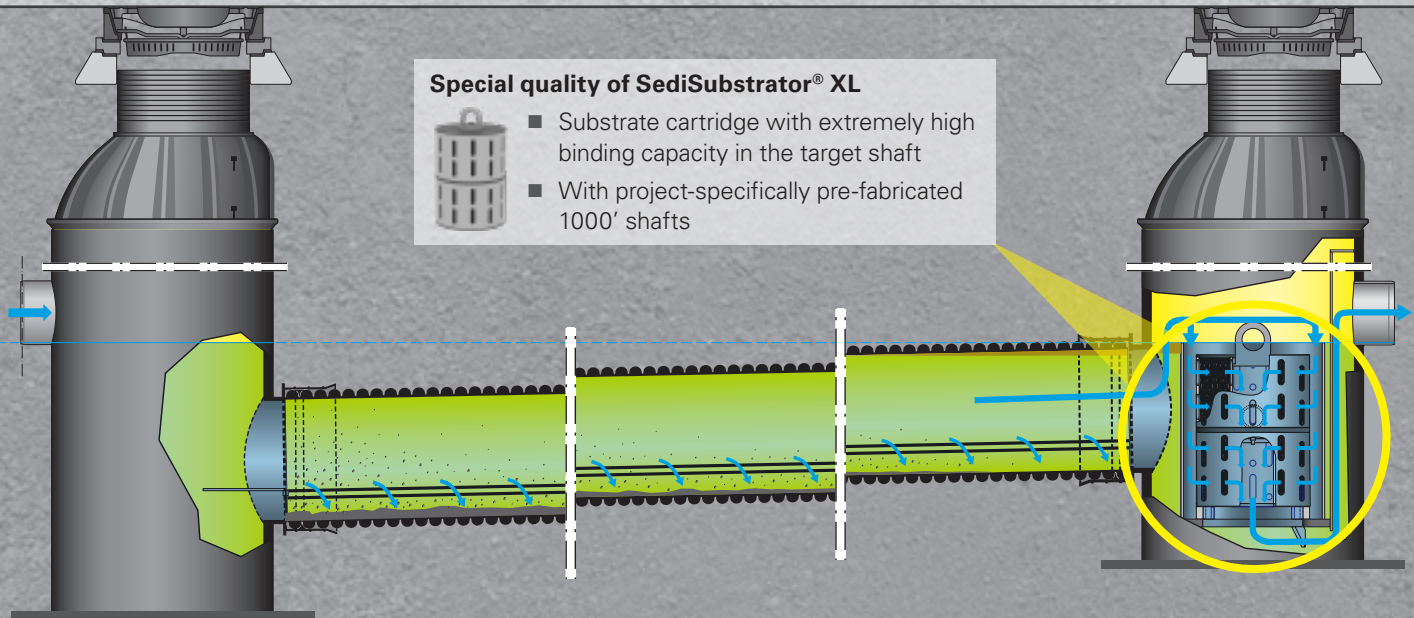
sedimentation
oil separation
adsorption



Max. connectable area

in acc. with
DWA-M 153:
up to 3,000 m²





SediSubstrator® XL – treatment system with substrate step

Stormwater treatment according to DIBt standard

SediSubstrator XL combines the benefits of SediSubstrator L with the benefits of start shafts and target shafts DN 1000. Due to its project-specific production, the system has been ideally designed to meet the specific requirements of the individual project. SediSubstrator XL has been approved by the German Institute for Building Technology (*Deutsches Institut für Bautechnik – DIBt*) as well. This allows treating and afterwards infiltrating very heavily polluted stormwater runoff from traffic areas.

Application

Treatment of extremely polluted, oily stormwater runoff from traffic areas upstream of subsoil infiltration

NEW

Performance verification acc. to DWA-A 102-2/BWK-A 3-2

System types

- SediSubstrator XL 600/12
- SediSubstrator XL 600/18
- SediSubstrator XL 600/24
- SediSubstrator XL 600/12+12

NOTE

The SediSorp plus adsorption substrate is characterised by extremely high binding capacity. When using wet salts as de-icing agents, SediSorp plus verifiably prevents the discharge of already retained heavy metals (verified by TU Munich).



SediSubstrator XL
substrate cartridge

Degree of pollution

extreme



Application

e.g., stop-and-go areas, highly frequented parking lots



Working principle

sedimentation
oil separation
adsorption



Max. connectable area

in acc. with
DWA-M 153:
up to 3,000 m²



Our services

Any task related to handling stormwater presents individual challenges. Framework conditions of individual projects vary significantly.

We have many years of practical experience with all aspects of design and construction of drainage systems.

We provide local technical assistance during all project phases. We design complete systems, dimension components using state-of-the-art technology and help you realise your construction project.

In addition to construction companies and design engineers, our consulting services are particularly interesting for builders/project developers who want to sustainably protect their investment using economic and durable solutions.

Of course, we also provide you with:

- Comprehensive information
- CAD templates
- Tender texts
- Installation, assembly and maintenance manuals
- Static calculations
- Software
- Project questionnaires
- Local workshops and training programmes
- Case studies

**FRÄNKISCHE**

**Clear, intuitive,
versatile and smart.**

We have completely upgraded our dimensioning software and have added new features to RigoPlan 8.0. The software is based on the latest standards and guidelines, such as the DWA-A 102-2 worksheet.

www.rigoplan-software.com

FRÄNKISCHE

1

TRANSPORT

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TREATMENT

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STORAGE

4

DISCHARGE

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EN.90208/2.12.22 | Subject to change without notice | Cat. no. 5000-0901-00X | 12/2022 [DE.90098/3.10.22]