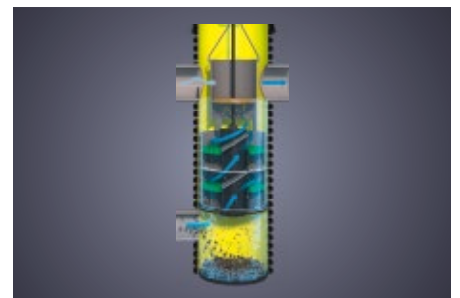
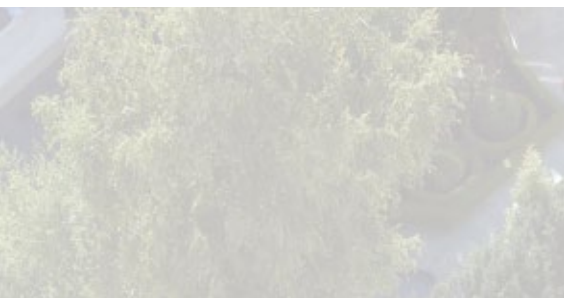
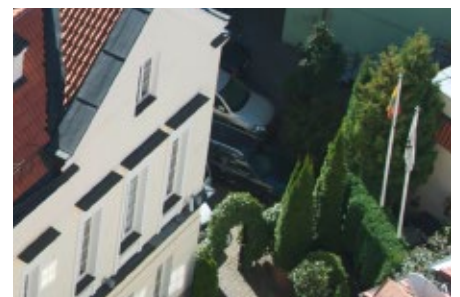
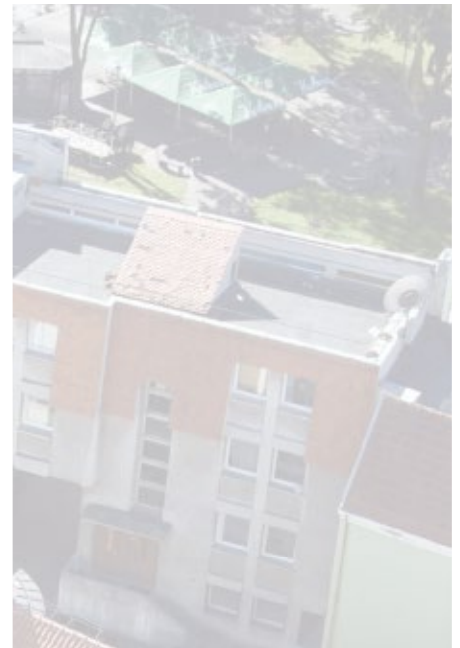


SediPoint® – sedimentation shaft

**Stormwater treatment
straight to the point**



Last modified: March 2016



DRAINAGE SYSTEMS
ELECTRICAL SYSTEMS
BUILDING TECHNOLOGY
INDUSTRIAL PRODUCTS

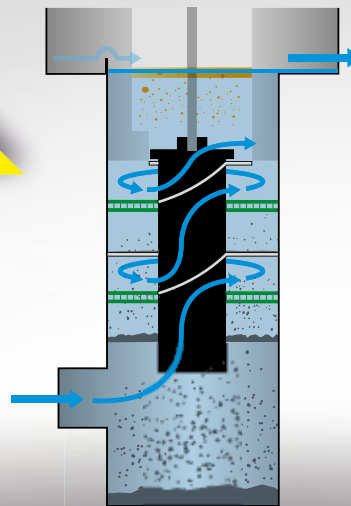
The evolution of stormwater treatment

Rain that falls on impervious surfaces absorbs dirt particles from road traffic and polluted roofs. Stormwater must be treated before it

can be discharged into the groundwater or sewer to protect the environment and downstream structures. FRÄNKISCHE offers the ideal solution

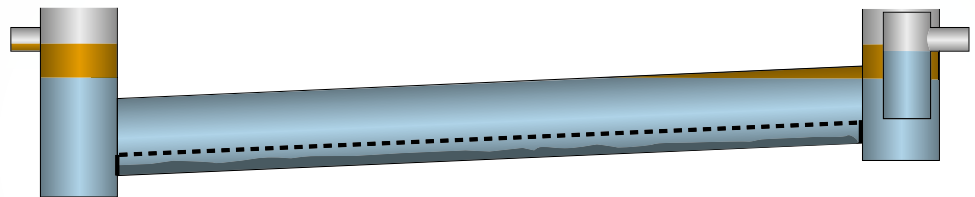
for every installation situation with its innovative flow separator technology and various products for stormwater treatment.

**SediPoint®
for confined
construction
situations**



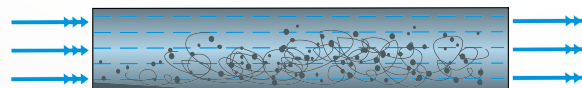
SediPoint removes sediment and even light liquids from stormwater in confined spaces in case of spills in dry weather. Two circular flow separators and the immersion pipe work efficiently and quickly according to the tried and tested SediPipe operating principle.

**SediPipe®
with
flow
separator**



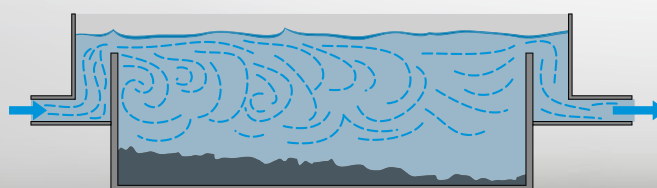
The SediPipe flow separator forms a zone in the lower pipe section where there is little water movement, making sedimentation quicker and preventing sediment re-entrainment – sediment control takes place.

**Systems with
tubular
sedimentation
chamber**

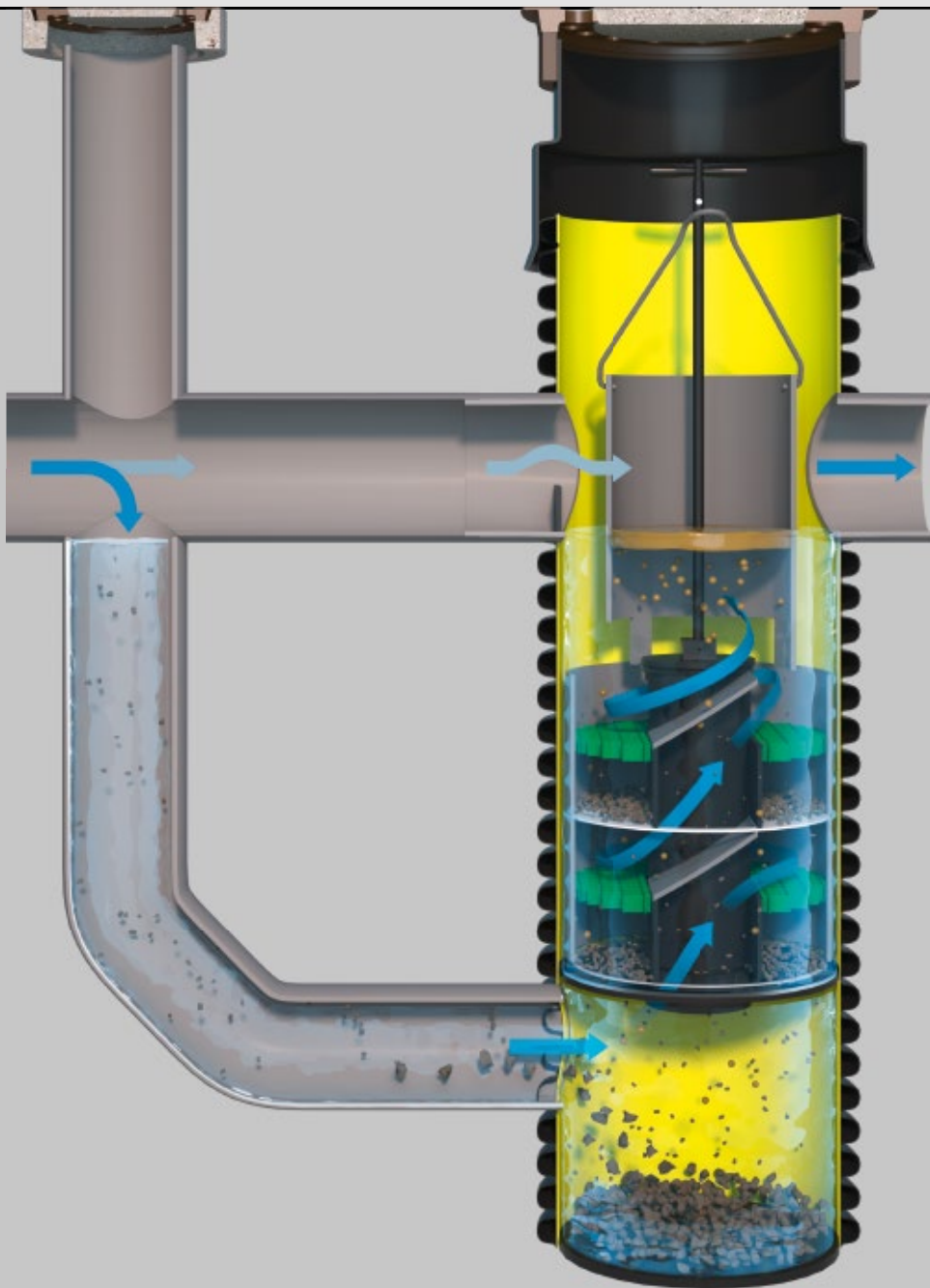


The tubular sedimentation chamber is suited for settling particles. However, without a flow separator the already collected sediment can be re-entrained by the flow (remobilisation).

**Stormwater
sedimentation
tanks with
permanent
water level**



The substantial tank depth and the large system volume of conventional stormwater sedimentation tanks take a lot of land. Hence, this area cannot be used for other purposes, e.g. as a parking lot. Unwanted water turbulence can impede sedimentation.



SediPoint and SediPoint connection set

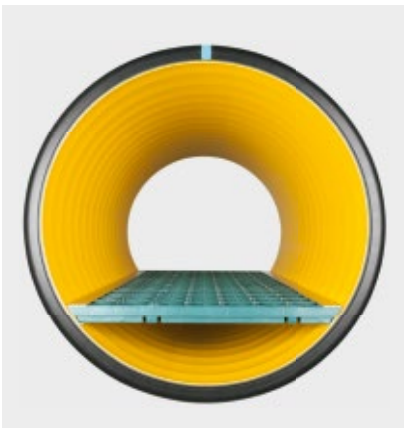
Stormwater treatment – the solution for water protection

The construction industry has developed rapidly over the last couple of years—stormwater treatment needs to provide new concepts for this.

One thing is for sure: Increasing construction volumes and available space becoming more and more scarce lead to increased stormwater management requirements terms of systems and reliability. Collecting, treating, storing and discharging stormwater in a controlled way must become increasingly more systematic with space constantly shrinking. Conventional concrete stormwater sedimentation tanks require lots of space and considerable excavation depths.

It has become almost impossible to implement such large-scale systems in urban areas today. Then again, there cannot be any compromises in terms of protecting the surface and ground-water quality: Coarse dirt particles, mud and light liquids from road traffic or industrial facilities must be removed efficiently. They can cause serious problems in stormwater management systems, such as infiltration swales, and pollute the groundwater. Efficient systems that do not take lots of land must guarantee the most important step of sedimentation – removing pollutants from the water using special sedimentation processes – no matter how unfavourable the surrounding

construction circumstances might be. As a system specialist for storm-water treatment, FRÄNKISCHE offers a comprehensive range of tailored solutions. The principle of guaranteeing the best-possible efficiency of removing dirt particles and pollutants in confined space using state-of-the-art technology – from heavy rainfalls to dry weather – is at the heart of FRÄNKISCHE's sedimentation systems.



The flow separator makes the difference

SediPipe is FRÄNKISCHE's first system to treat stormwater in a tubular sedimentation chamber. Due to the small total volume, this saves an enormous amount of space as compared to conventional concrete stormwater sedimentation tanks. At the same time, sedimentation is much quicker thanks to the short distances for particles to settle. Since the sediment in the lower pipe section can be re-entrained during heavy rain, a zone with little water movement must be created.

This is what the flow separator – a grid specifically developed for this purpose – does. Its extraordinary structure eliminates turbulence and short-circuiting. This prevents the sediment from re-entrainment from the pipe bottom. The flow separator controls the sediment. Without the flow separator, heavy rains swirl up the sediment again and again. This compromises the treatment performance of the entire system – irrespective of the diameter of the sedimentation chamber.

The SediPoint sedimentation shaft is therefore the solution to treat polluted stormwater runoff as a sedimentation system, and to retain light liquids in case of spills in dry weather.

Tailored technology requiring little space.

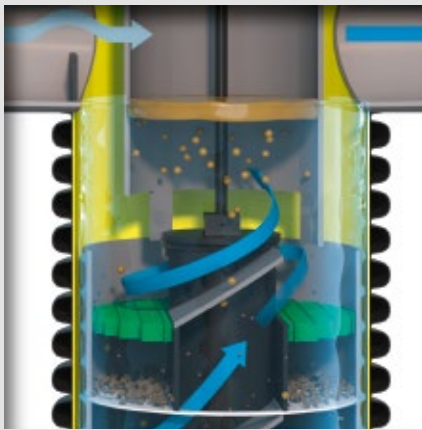
Clear advantage with SediPoint®

Easy cleaning
every two years

Reliable
network
hydraulics

Retrofitting of
existing systems

Proven treatment
performance



Cost-effective
installation of the
plastic shaft

Minimum space
requirement

SediPipe®
operating principle
and retention
of oil spills

Installation under
trafficked areas



SediPoint®: Flow separator technology requiring little space

The innovative flow separator technology by FRÄNKISCHE has proven its worth in stormwater treatment for many years: Be it coarse dirt or oil spills during rainfall.

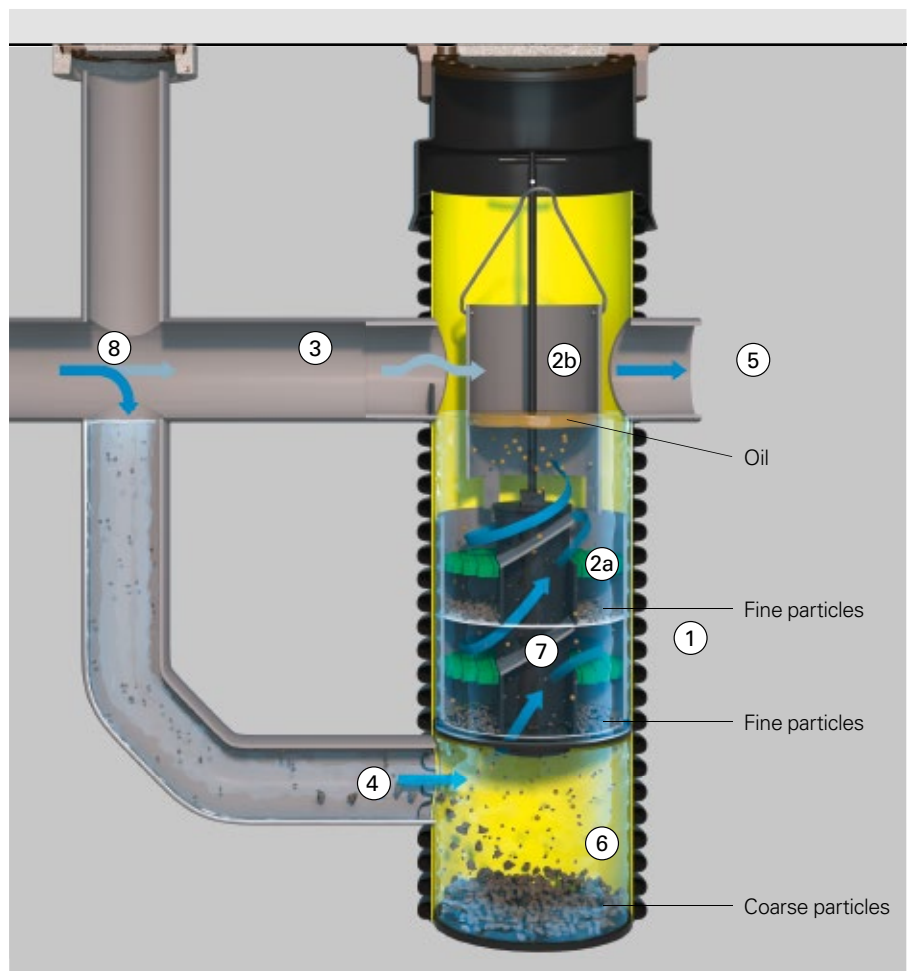
Functionality

SediPoint ① uses the flow separator technology in a unique way and requires little space: The sedimentation collector ②a with spiral water flow adapts the technology to minimum space requirements. Water spirals up from the inlet counterclockwise, fine particles sink to the bottom.

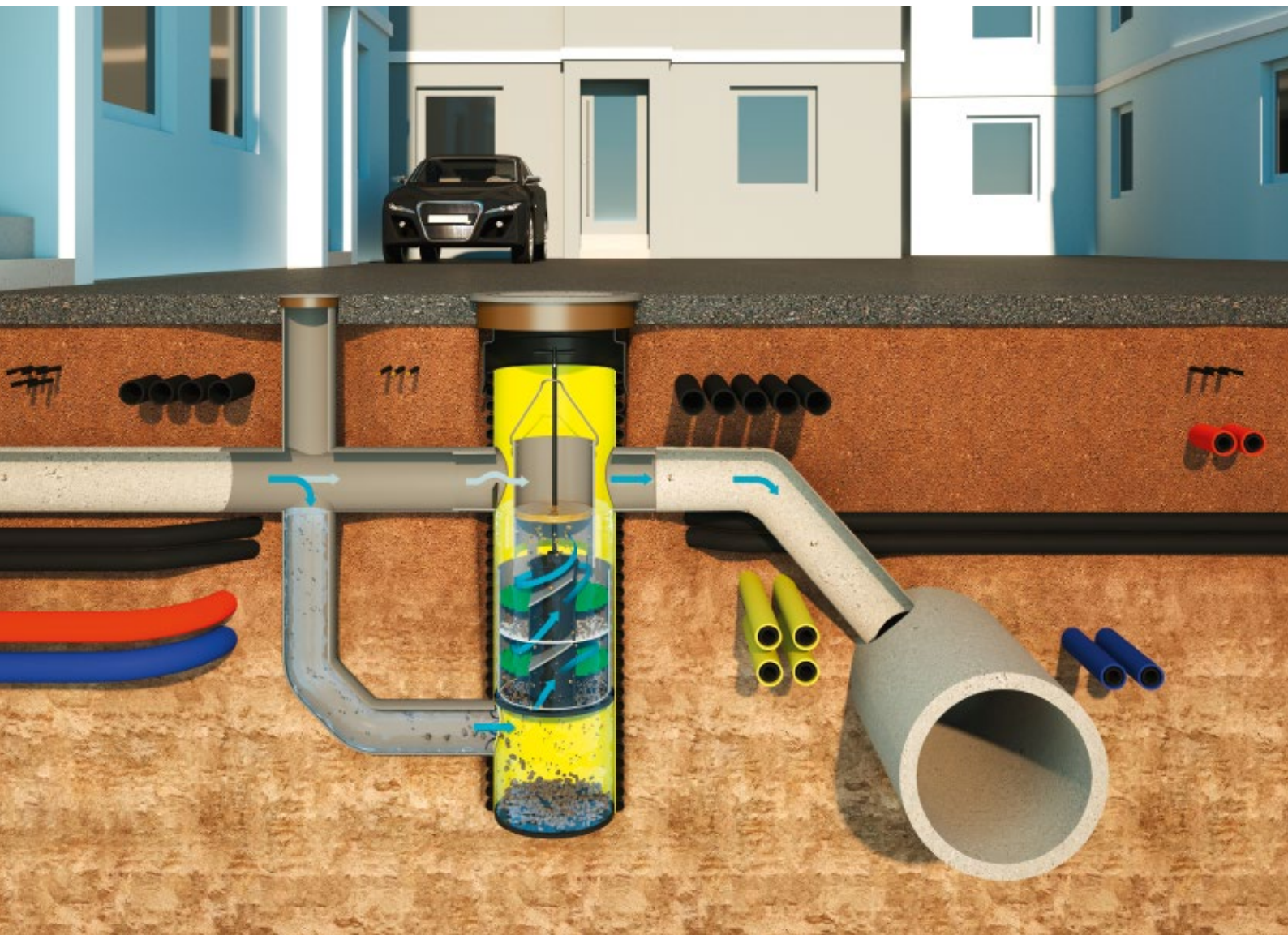
The two patented flow separators create an area with little water movement to control the sediment, and light particles rise up where they are retained by the immersion pipe. The integrated bypass protects the ③ sewer network from flooding during heavy rain.

SediPoint is absolutely reliable even in case of spills: The immersion pipe in the shaft ②b retains light liquids such as oil reliably in the system in dry weather.

The optional connection set ⑧ allows the outside bypass of a drop structure to be accessed for inspection and maintenance. The pre-fabricated set including cover allows quick work at construction sites (no fitting, no selection of accessories).



- ① SediPoint ②a Sedimentation collector with flow separator ②b Immersion pipe
 ③ Integrated bypass incl. backwater threshold ④ Inlet ⑤ Outlet ⑥ Mud chamber
 ⑦ Operating pipe with telescopic rod ⑧ Optional: SediPoint connection set



Treating stormwater perfectly ...

The solution for cities and industrial areas

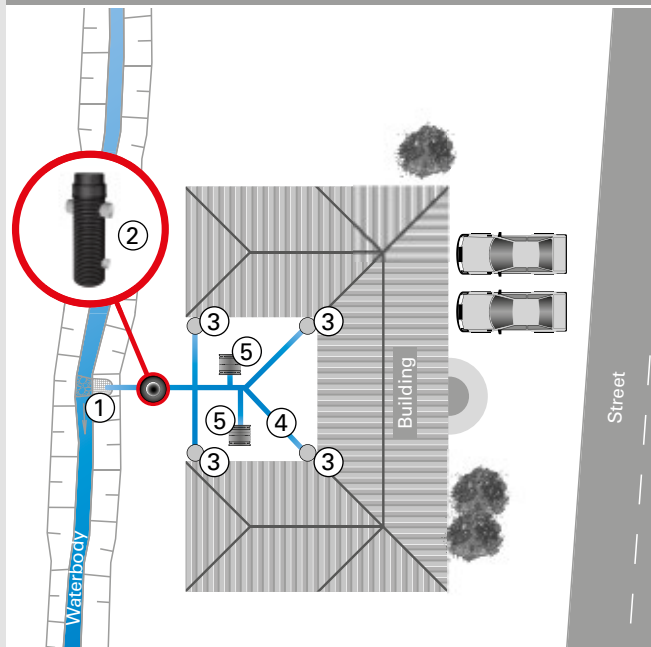
Where one multi-storey building ends and the next begins and there are almost no green spaces between streets, where huge industrial buildings, parking and storage spaces seal surfaces, there is also a lot going on below ground: Water pipes, gas pipes and power lines form a sophisticated network supplying raw materials, data and energy to every building.

The confined space above and below ground makes the reliable discharge of stormwater falling on impervious surfaces difficult – treating this stormwater on site, however, is the key challenge. Air pollution, pollution from road traffic and coarse dirt particles bound by stormwater must not enter the groundwater or sewer system.

With SediPoint, FRÄNKISCHE offers the ideal solution for treating stormwater in confined spaces. An additional advantage for urban and industrial areas: Thanks to the compact design, SediPoint can also easily be retrofitted in existing systems.

The extremely strong design and high-quality materials make SediPoint suitable for traffic loads of up to HGV 60. Therefore, the shaft masters also installation situations in

Confined space: above ground



- ① Discharge point
- ② SediPoint
- ③ Down pipe
- ④ Stormwater sewer
- ⑤ Road gully



... in very confined construction situations



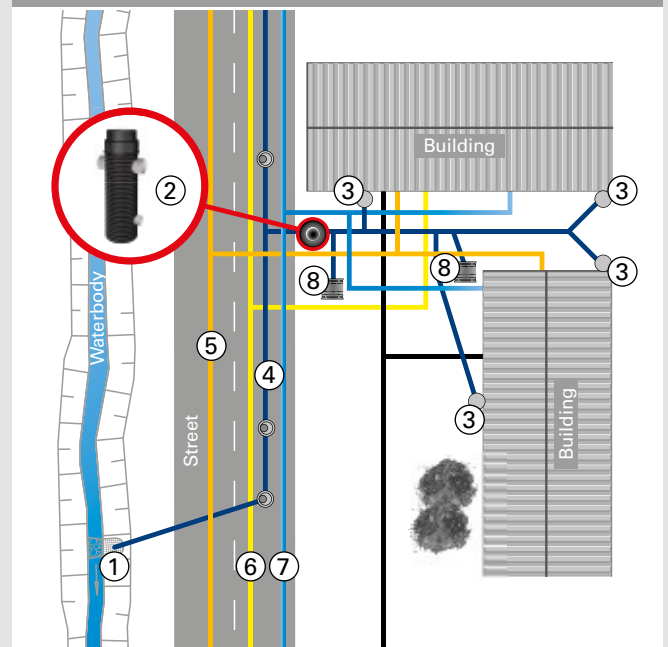
industrial areas and heavy-duty traffic zones. The plastic material makes installing the shaft a breeze.

The patented flow separator technology treats stormwater without the need for large sedimentation tanks. Contaminations such as suspended solids, oil or organic compounds are reliably removed from the water. This makes SediPoint a compact treatment prodigy.

SediPoint also easily handles especially severe pollutions that occur during oil spills. High treatment performance is particularly important in heavily developed areas, because exposure is especially high in confined, heavily used areas.

The variable connection height of SediPoint makes installations particularly flexible in any situation. The integrated bypass reliably protects network hydraulics at any time.

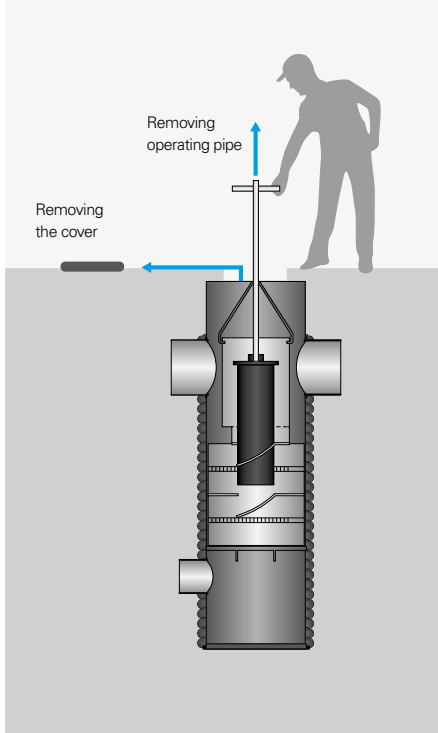
Confined space: below ground



- ① Discharge point ② SediPoint ③ Down pipe
- ④ Stormwater sewer ⑤ Power line ⑥ Gas line
- ⑦ Water line ⑧ Road gully

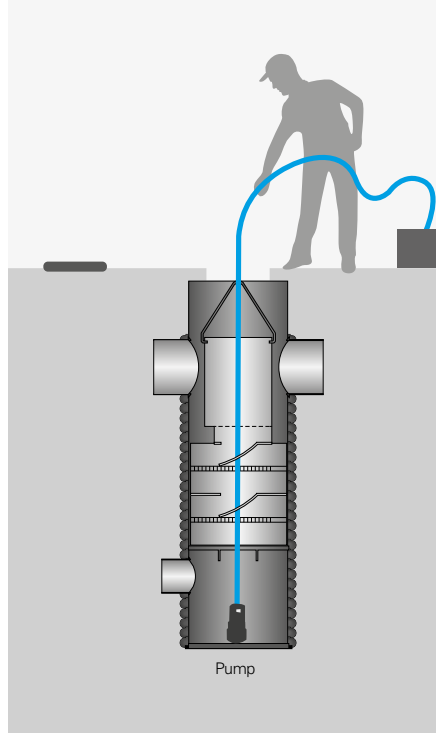
Easy cleaning

1 Removing the operating pipe



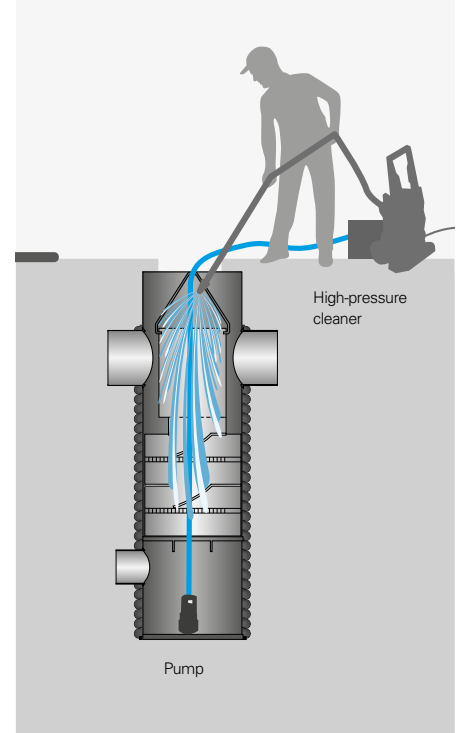
SediPoint's compact design makes cleaning the complete shaft very easy. The cleaning does not require companies providing sewer flushing.

2 Vacuuming with pump or cleaning/vacuum truck



After removing the operating pipe, the mud is easily vacuumed from the mud chamber. Mobile wastewater pumps or cleaning/vacuum trucks are suited for this.

3 High-pressure cleaning and vacuuming



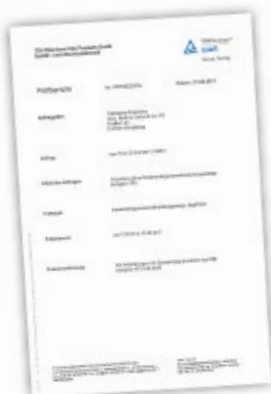
High-pressure cleaners are used to flush the inside of the shaft and afterwards the pollutants are vacuumed.

NB

The recommended cleaning interval is 2 years.

Certified reliability

The independent testing institute TÜV Rheinland LGA Products GmbH confirms the high treatment performance of SediPoint according to the approval



requirements of the German Institute for Building Technology "Deutsches Institut für Bautechnik" (DIBt) relating to filtered substances (suspended solids).

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Convincing performance parameters

Applications for SediPoint® according to DWA-M153 table A. 4c

System type	D25			
Transist value	0.80	0.70	0.65	0.35
$r_{crit} [l/(s \times ha)]$	15	30	45	$r_{(15.1)}^*$
Connectable area $A_U (m^2)$	3,650	1,850	1,200	550

* at $r_{(15.1)} = 100l/s \times ha$

Type D25 sedimentation systems according to DWA-M 153 are sedimentation systems that have been designed with a maximum flow rate of 18 m/h.
Sedimentation systems are used to sediment solids with a grain diameter greater than 0.1 mm.

System type	D24			
Transist value	0.65	0.55	0.50	0.25
$r_{crit} [l/(s \times ha)]$	15	30	45	$r_{(15.1)}^*$
Connectable area $A_U (m^2)$	2,000	1,000	650	300

* at $r_{(15.1)} = 100l/s \times ha$

Type D24 sedimentation systems according to DWA-M 153 are stormwater sedimentation tanks that have been designed with a maximum flow rate of 10 m/h.
These systems have been designed for the separation of finest grain fractions. In addition, the precipitated sediment may not be swirled up, even with high hydraulic loads. SediPoint meets these requirements.

System type	D21																
Transist value	0.2																
$r_{(15.1)} [l/(s \times ha)]$	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170
Connectable area $A_U (m^2)$	307	291	276	263	251	240	230	221	212	204	197	190	184	178	173	167	162

Type D21 sedimentation systems according to DWA-M 153 are systems with a maximum flow rate of 9 m/h at the load case for rain with the rain yield factor $r_{(15.1)}^*$.

These systems have been designed for the separation of finest grain fractions. In addition, the precipitated sediment may not be swirled up, even with high hydraulic loads. SediPoint meets these requirements.

* $r_{(15.1)}$ = rain yield factor with a rainfall duration of 15 min. and annual recurrence

D 25

transist value acc. to
DWA M 153 bulletin

0.80 to 0.35

D 24

transist value acc. to
DWA M 153 bulletin

0.65 to 0.25

NB

Country-specific dimensions, e.g. those of Baden Württemberg (see working aids for handling stormwater in settlement areas "Arbeitshilfen für den Umgang mit Regenwasser in Siedlungsgebieten", table 4b) can be calculated, if necessary.

D 21

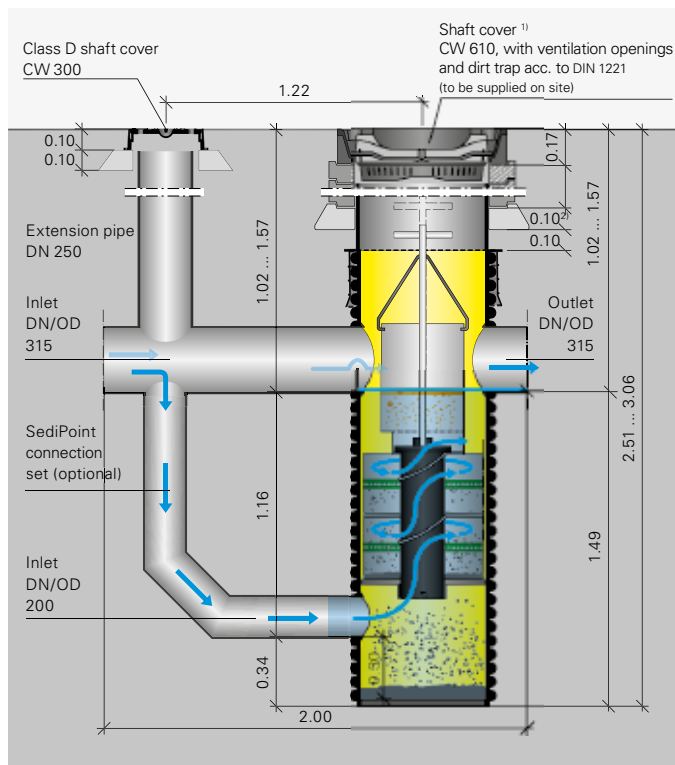
transist value acc. to
DWA M 153 bulletin

0.20

SediPoint® details

SediPoint® without extension pipe

Inlet soil depth 1.02 to 1.57 m

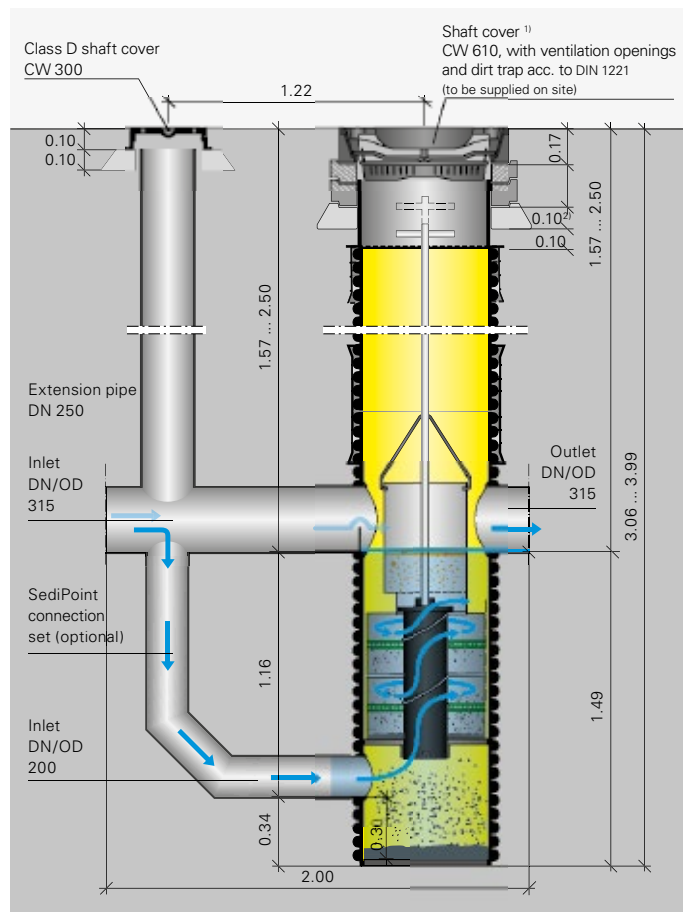


¹⁾ Class D shaft cover, incl. 1 cm mortar joint

²⁾ BARD ring

SediPoint® with extension pipe

Inlet soil depth 1.57 to 2.50 m



SediPoint® sedimentation shaft DN 600



Lightweight and durable PP shaft DN 600, black outside, yellow inside, for optimum inspectability. Designed for standard shaft covers CW 610 to be supplied on site.

Inlet diameter DN 200 KG spigot, outlet diameter DN 315 KG spigot, as reducer on site as required. Integrated bypass DN 315 KG spigot. High-pressure cleaning can be used to clean the shaft.

Application

To treat polluted stormwater runoff as type D25, D24 and D21 sedimentation system according to DWA bulletin M153 and to retain light liquids in case of spills in dry weather. Ideal for new and retrofit installations in confined space. Treatment performance proven by the TÜV Rheinland LGA Products GmbH.

With the following treatment stages:

1. Mud chamber for coarse particles
2. Sedimentation collector for fine particles with highly efficient flow separator technology of the Sedi-Pipe operating principle
3. Immersion wall for floatables and light liquids in case of spills in dry weather

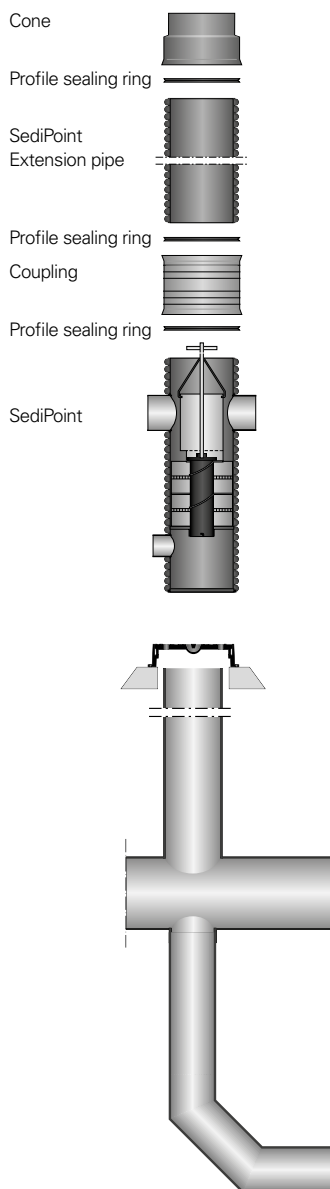
Variable soil connection heights: (when using class D covers)

1. Minimum pipe invert depth: 1.02 m
2. From pipe invert depths of 1.57 m to 2.50 m: use extension pipe

NB

The recommended cleaning interval is 2 years.

Product overview SediPoint® – sedimentation shaft



Shaft for stormwater treatment

Product	Technical data	Cat. no.
SediPoint	shaft DN 600; material PP; inlet DN 200 KG spigot, outlet DN 315 KG spigot, incl. cone, profile sealing ring and lubricant, designed for standard shaft covers CW 610, to be supplied on site	515.95.600

Accessories

Product	Technical data	Cat. no.
SediPoint extension pipe DN 600	117 cm length, coupling and profile sealing rings included	515.95.610
Shaft covers acc. to DIN EN 124	class B or D; CW 610 with ventilation openings	to be ordered/ supplied on site
Support ring acc. to DIN 4034, part 1	height as required D _i = 625 mm	
BARD ring	class D concrete support ring	515.97.021
SediPoint connection set (optional)	complete SediPoint inlet including drop structure: 1. inlet connection DN 315 KG spigot 2. inspection and cleaning access to the outside bypass of a drop structure in DN 250 with class D cast iron cover without ventilation; 2 m length of extension pipe, DN 250 to be cut to length on site 3. connection to SediPoint at the bypass and inlet incl. coupling connection 315 KG and 200 KG	515.95.690

Important note:

General information on using our products and systems:

Information about or assessments of the use and installation of our products and systems is exclusively provided on the basis of the information submitted. We do not assume any liability for damage caused by incomplete information. If the actual situation deviates from the planned situation or if a new situation occurs or if different or new installation techniques are applied, these must be agreed upon with FRÄNKISCHE, since these situations or techniques may lead to different conclusions.

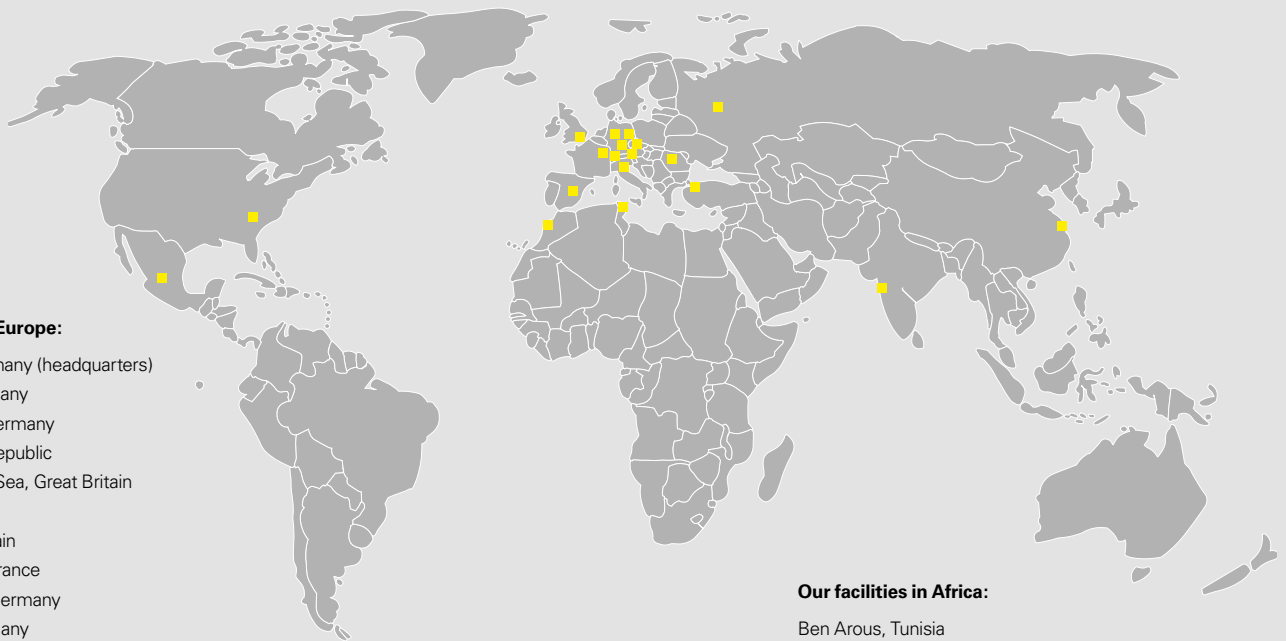
Notwithstanding the above, the customer is solely responsible for verifying the suitability of our products and systems for the intended purpose.

In addition, we do not assume any liability or responsibility for system characteristics and functionalities when third-party products or accessories are used in combination with FRÄNKISCHE systems.

We only assume liability when original FRÄNKISCHE products are used.

For use in other countries than Germany, country-specific standards and regulations must also be observed.

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Bückeburg, Germany
Schwarzheide, Germany
Okříšky, Czech Republic
St.-Leonards-on-Sea, Great Britain
Moscow, Russia
Yeles/Toledo, Spain
Torcy-le-Grand, France
Ebersbach/Fils, Germany
Hermsdorf, Germany
Mönchaltorf, Switzerland
Milan, Italy
Istanbul, Turkey
Cluj, Romania
Wels, Austria

Our facilities in Asia:

Anting/Shanghai, China
Pune, India

Our facilities in Africa:

Ben Arous, Tunisia
Casablanca, Morocco

Our facilities in North America and Mexico:

Anderson, USA
Guanajuato, Mexico

FRÄNKISCHE is an innovative, growth-oriented, medium-sized family-owned enterprise and industry leader in the design, manufacturing and marketing of technically superior corrugated pipe systems for drainage, electrical, building technology and industrial applications.

We currently employ about 2,900 people worldwide. Both our many years of

experience and expertise in plastics processing, our consulting services and the large array of products are highly valued by our customers.

FRÄNKISCHE is a third generation family owned business that was established in 1906 and is now run by Otto Kirchner. Today, we are globally represented with production facilities and sales offices.

The proximity to our customers enables us to develop products and solutions that are perfectly tailored to our customers' needs. Our action and business philosophy focus on our customers and their needs and requirements for our products.

FRÄNKISCHE – Your partner for sophisticated and technologically advanced solutions.