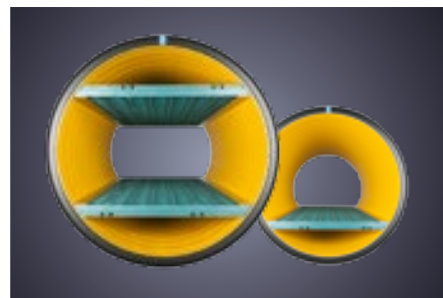


SediPipe® XL | SediPipe® XL plus

**Installation and maintenance manual
Stormwater treatment system**



EN | Last modified: June 2017

DRAINAGE SYSTEMS
ELECTRICAL SYSTEMS
BUILDING TECHNOLOGY
INDUSTRIAL PRODUCTS

1. Safety instructions

ATTENTION

Staff responsible for installation, assembly, operation, maintenance and repair must have appropriate qualifications required for this kind of work.

The builder is responsible for organising in detail authority, responsibility and supervision of staff.

The operational safety of the system components supplied is only guaranteed in case of proper installation and correct use.

Technical threshold values must not be exceeded.

Observe the accident prevention regulations and relevant standards and directives for installation, fitting, operation, maintenance and repair!

This includes (in extracts):

- Accident prevention regulations
 - Construction work BGV C22
 - Technical wastewater systems GUV-V C5
- Safety regulations for working in enclosed spaces of technical wastewater systems GUV-R 126
- Handling biological working materials in technical wastewater systems GUV-R 145
- Directives for working in tanks and narrow spaces BGR 117
- Standards
 - Excavations and trenches - slopes, planking and strutting, breadths of working spaces DIN 4124
 - Construction and testing of drains and sewers DIN EN 1610
- Tool for safety and health protection in technical wastewater systems.

WARNING

- Hazards from gases and vapours such as risk of suffocation, risk of poisoning and risk of explosion
- Risk of falling
- Risk of drowning
- Germ pollution and wastewater with sewage
- High physical and psychic strain during work in deep, narrow and dark spaces
- and others

DANGER

Non-compliance with the operating manual may result in considerable property damage, injury or death.

CAUTION

The system is part of an entire network. During installation, maintenance, service and repair work on one component, always consider the entire system. Avoid work during rain.

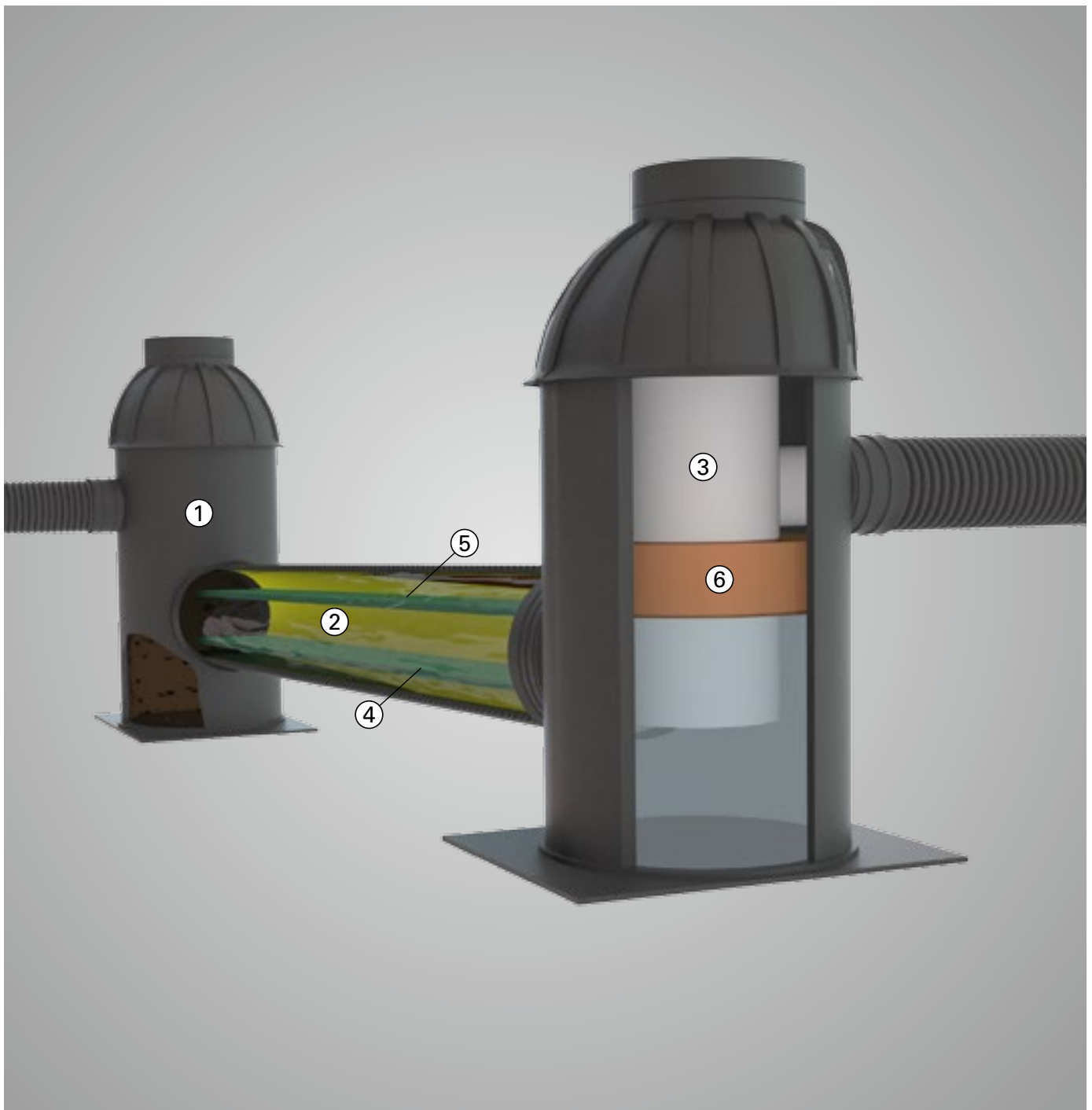
Changes or modifications to the system may only be carried out with the agree-

ment of the manufacturer. For safety reasons, use original spare parts and accessories approved by the manufacturer. The use of other parts voids the liability for any consequences arising therefrom.

Table of contents

1. Safety instructions	2
2. SediPipe® XL and SediPipe® XL plus at a glance	4
3. System description	5 - 8
3.1 Application	5
3.2 Function description	5
3.3 SediPipe XL system description	6
3.3 SediPipe XL plus system description	7
3.4 Technical data	8
4. Installation	9 - 17
4.1 Transport and construction site storage	9
4.2 Temporary construction site cover	9
4.3 Excavating pit and creating embedding	10
4.4 Installing the first shaft	10
4.5 Installing the sedimentation path	11
4.6 Installing the second shaft	11
4.7 Lateral backfilling	12
4.8 Tests before backfilling and impermeability test	12
4.9 Installing shaft covers	13 - 14
4.10 Filling the system	15
4.11 Arrangement of multiple SediPipe XL systems	16
4.12 Commissioning	17
5. Cleaning	18 - 19
5.1 Emptying and cleaning of the system	18 - 19
5.2 Filling the system with water	19
6. Self-inspection, maintenance and examination	20 - 21
6.1 General information	20
6.2 Self-inspection	20
6.3 Maintenance	20
6.4 Disposal	21
6.5 Thorough visual inspection	21
7. Overview - Who does what?	22
8. Contact	23

2. SediPipe® XL and SediPipe® XL plus at a glance



- ① Start shaft
- ② Sedimentation path
- ③ Target shaft with immersion pipe
- ④ Lower flow separator (retention of fine particles)
- ⑤ Upper flow separator (separation of light liquids during rain);
with SediPipe XL plus only
- ⑥ Depot for light liquids in case of spills

3. System description

3.1 Application

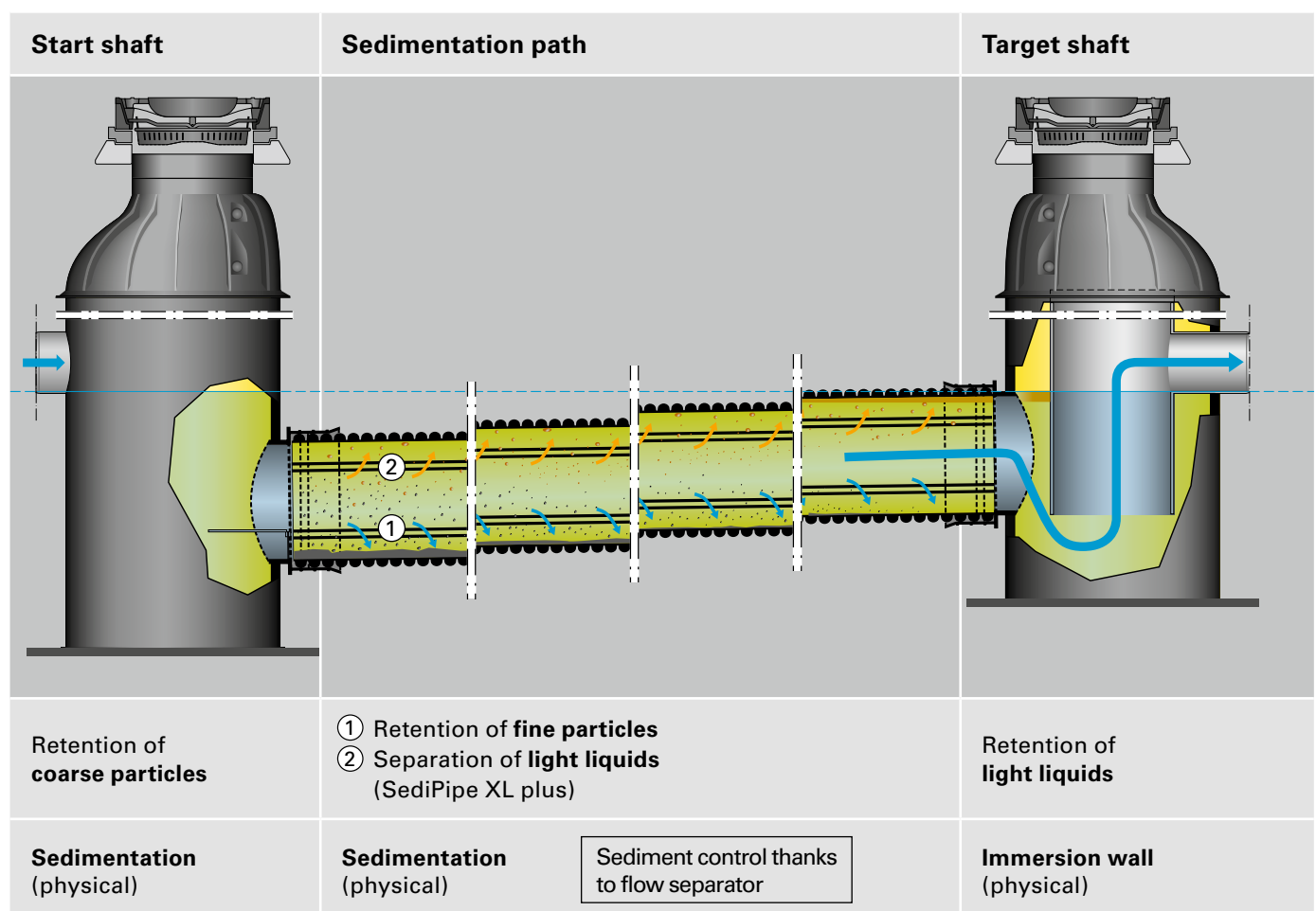
SediPipe XL and SediPipe XL plus are stormwater treatment systems for polluted stormwater runoff, e.g. from trafficked areas. The systems separate washed-up particles and light liquids

(oil) from stormwater and reliably retain these materials in the system, even in case of spills in dry weather.

3.2 Function description

SediPipe XL and SediPipe XL plus are stormwater treatment systems which keep a permanent water level. Sedimentation initially retains the coarse particles in the start shaft. The downstream sedimentation path retains fine particles. The lower flow separator prevents remobilisation and therefore discharge

of sediment also during heavy rain. Systems of the SediPipe XL plus type additionally feature an upper flow separator leading to increased separation performance for light liquids in rainfall events.



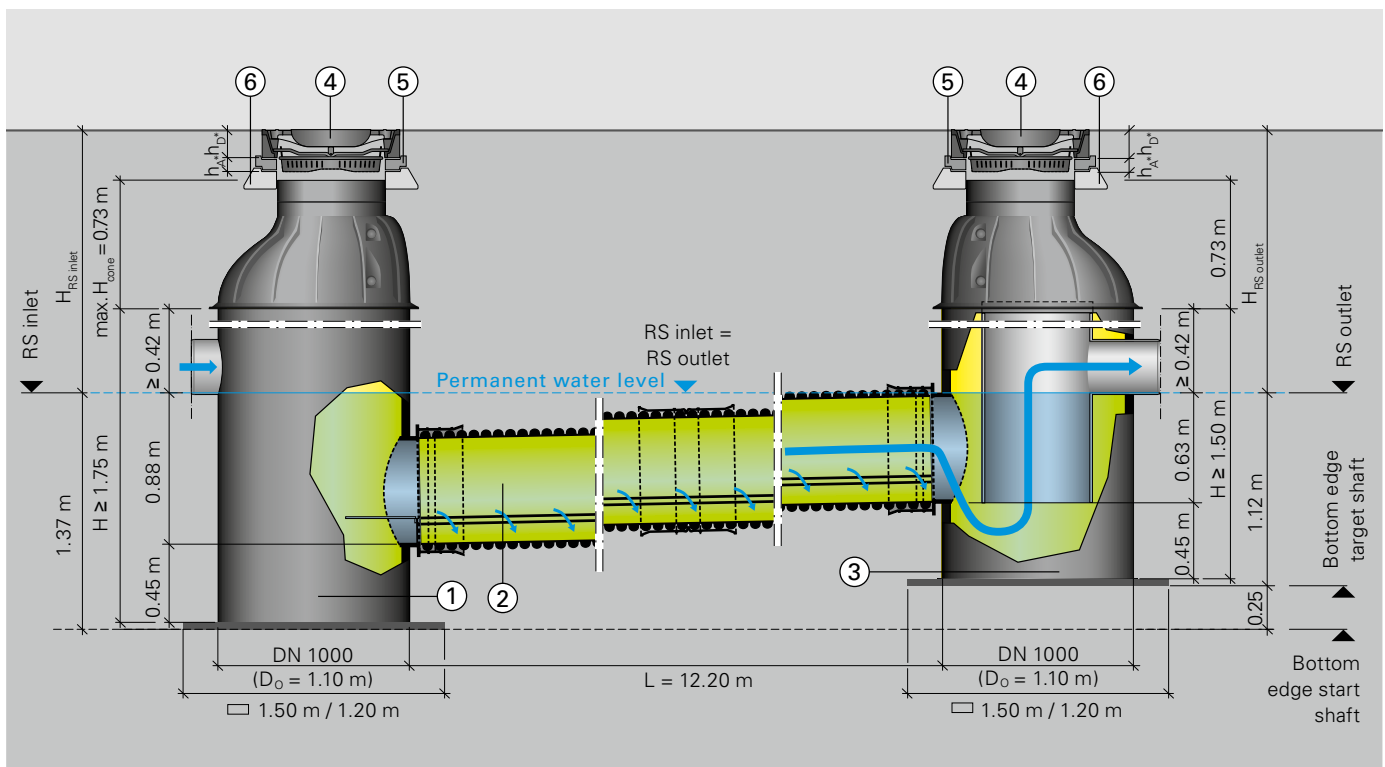
3. System description

3.3 SediPipe XL system description

SediPipe XL systems comprise a start shaft, a target shaft, a sedimentation path and an optionally available concrete support ring. All shafts are manufactured according to each project's needs and delivered ready for installation. The shaft base body (DN 1000) is completely factory-welded and furnished with a square base plate. The

sedimentation path includes one or several main pipes (DN 600) with an installation length of 6 m each. The lower flow separator preventing remobilisation of sediment is located in the sedimentation pipes. The total length of the sedimentation path depends on the system type and varies between 6 m and 24 m. The target shaft features an

immersion pipe ensuring virtually 100 % retention of light liquids in case of spills during dry weather. The sedimentation path features a construction-related slope when installed.



Example: SediPipe XL 600/12

* Adjustable, depending on shaft cover, height and number of support rings

- ① Start shaft DN 1000
- ② Sedimentation pipe DN 600
- ③ Target shaft DN 1000
- ④ Shaft cover CW 610 with ventilation openings, to be supplied on site
- ⑤ Concrete support ring h=10, to be supplied on site
- ⑥ BARD ring

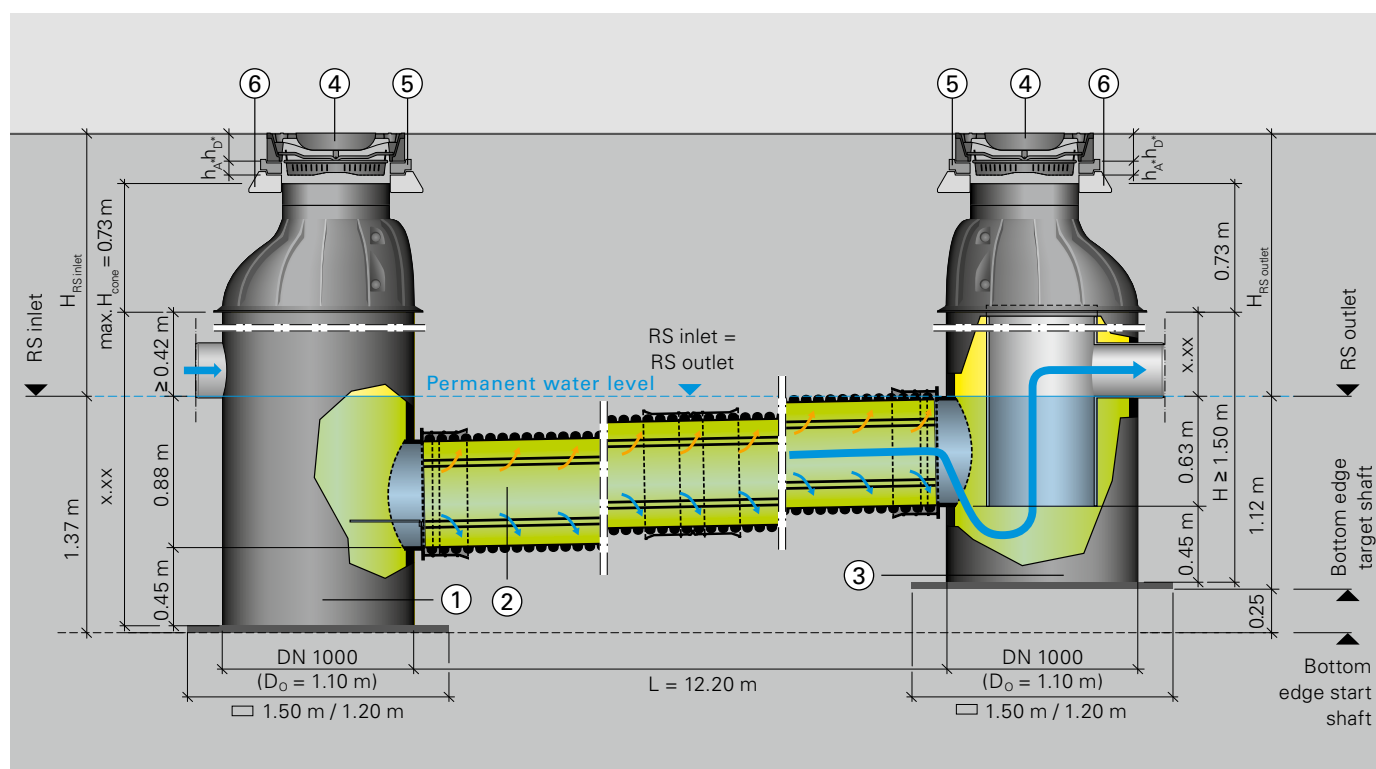
3. System description

3.4 SediPipe XL plus system description

SediPipe XL plus systems comprise a start shaft, a target shaft, a sedimentation path and an optionally available concrete support ring. All shafts are manufactured according to each project's needs and delivered ready for installation. The shaft base body (DN 1000) is completely factory-welded and furnished with a square base plate.

The sedimentation path includes one or several main pipes (DN 600) with an installation length of 6 m each. The sedimentation pipes feature two flow separators. The lower flow separator prevents remobilisation of sediment. The upper flow separator additionally separates and reliably retains light liquids. The total length of the sedimenta-

tion path depends on the system type and varies between 6 m and 24 m. The target shaft features an immersion pipe ensuring virtually 100 % retention of light liquids in case of spills also during rainfall events. The sedimentation path features a construction-related slope when installed.



Example: SediPipe XL plus 600/12

* Adjustable, depending on shaft cover, height and number of support rings

- ① Start shaft DN 1000
- ② Sedimentation pipe DN 600 with lower and upper flow separator
- ③ Target shaft DN 1000
- ④ Shaft cover CW 610 with ventilation openings, to be supplied on site
- ⑤ Concrete support ring h=10, to be supplied on site
- ⑥ BARD ring

3. System description

3.5 Technical data

SediPipe XL / SediPipe XL plus	600/6	600/12	600/18	600/24
Length "L" [m]	6.20	12.20	18.25	24.30
Diameter of the sedimentation path [mm]	600	600	600	600
Length of the sedimentation path [m]	6	12	18	24
Light liquids collecting volume [litres] *	2,120	3,400	4,690	5,980
Collecting volume of the mud chamber [litres]	680	890	1,100	1,300
Max. mud level in the start shaft [cm]	60	60	60	60
Permanent water level volume [litres]	3,620	5,300	6,980	8,670
Material (sedimentation pipe)	PP	PP	PP	PP

* Retention of light liquids in case of spills

4. Installation

4.1 Transport and construction site storage

The shafts (max. 500 kg/pc.) are factory-fitted with two or three lifting eyes (Ø 40 mm) depending on the shaft depth. Equipment for transport and lifting of the shafts must only be fastened to these eyes.

Use appropriate hoisting slings and chain slings to this end. The sedimentation pipes (max. 150 kg/piece) can be suspended between two hoisting slings or round slings for transport.



Store all components on plain ground using sleepers and secure against shifting. Damaged parts must NOT be installed. Do NOT throw components!



Transport using appropriate hoisting slings



Lifting eye



Storage on sleepers

4.2 Temporary construction site cover

Make sure that no dirt, e.g. backfill material, enters the system during construction. Additionally protect shaft openings from earth slides until installation of covers is complete. Systems with intended concrete cover include a factory-provided protective cover DN 1000 which is not accessible or trafficable. An on-site standard temporary construction site cover can be used for systems with shaft cone.



Protective cover for shaft with concrete cover



Shafts must NOT be trafficked before the cover has been installed. If necessary, the required load transfer to the native soil must be ensured using a wide steel plate.

4. Installation

4.3 Excavating pit and creating embedding

In addition to the regulations of DIN EN 1610 also observe the specifications of DIN 18300 "Earthworks" as amended regarding excavating the pit and creating the embedding. The embedding must be 10 cm to 15 cm high and must be created from compactable, stoneless material depending on the in-situ

soil. The minimum widths according to DIN EN 1610 must be strictly adhered to when creating pipe swales. Please observe any deviating minimum widths in the area of the shafts according to local specifications.

ATTENTION

The bearing heights of the start shaft and the target shaft and the required height difference must be created according to design specifications.

4.4 Installing the first shaft

Installation directions:

Depending on on-site conditions, installation of the system can begin either at the start shaft or at the target shaft:

Supply pipe available;
→ begin at start shaft

Drainage pipe or storage/infiltration system available;
→ begin at target shaft

ATTENTION

Crown markings of pipe and coupling must match exactly for all pipe installations!

Place the shaft at the appropriate height on the prepared planum and secure it to prevent shifting. Connect supply pipe and drainage pipe according to design specifications. Make sure no backfill material enters the shaft (do NOT remove temporary construction site cover).



Example:
target shaft with Rigofill storage/infiltration system



4. Installation

4.5 Installation of the sedimentation path

1. Mount profile sealing rings into the first corrugation trough on each side while still outside the excavation pit. The pipe must be clean.
2. Move the sedimentation pipe to the installation position using lifting equipment (see Section 4.1). The crown marking must face upwards!
3. Keep the pipe, the sealing ring and the coupling clean. Apply sufficient

amount of lubricant to sealing ring and coupling. Ensure that the sealing area is free of dirt. In order to prevent the profile sealing ring from resting on the bearing, the pipe end to be installed can rest on square timber.

4. Use a long lever to install the pipe. Place a board or square timber under the unattached pipe end to prevent damage to the pipe. Pipes must be installed horizontally. Mark the inser-

tion depth on the pipe beforehand. Afterwards, create the pipe slope by aligning the pipe.

5. Deepen the embedding in the area of the couplings as required.



Installation of sealing ring onto sedimentation pipe



Sealing ring with lubricant



Installation of sedimentation pipe

4.6 Installing the second shaft



Installation of target shaft

Place the second shaft at the appropriate height on the prepared planum. Afterwards, prepare the coupling connection and mount the shaft onto the sedimentation pipe. Connect supply pipe and drainage pipe according to design specifications (see Section 4.4).

4. Installation

4.7 Lateral backfilling

The specifications of the latest version of DIN EN 1610 must be adhered to when creating lateral backfilling. If country-specific regulations or deviating specifications conflict with this, these must be agreed upon with FRÄNKISCHE if necessary. Only compactable materials which can be compacted by hand in layers are approved for lateral backfilling. Make sure that the bottom side of the sedimentation pipes rests completely

on the compacted foundation. Provide a soil cover of at least 30 cm for the sedimentation path.

The materials for main backfilling must be filled and compacted according to design specifications.

Make sure that shafts and sedimentation pipes do not shift during backfilling of the excavation pit. Protect the upper

shaft end of systems with a concrete cover against deformation when compacting.

ATTENTION

Do NOT remove temporary construction site covers or protective covers before finishing main backfilling!



Compacting of lateral backfilling



Temporary construction site cover



4.8 Tests before backfilling and impermeability test

Before backfilling the excavation pit, check the system for proper installation and leak-tightness.

The following tests must be performed in particular:

1 Height of the shafts according to design specifications.



2 Exact adjustment of the shafts.



3 Check for damage, foreign objects or coarse contamination.



4 Axial direction of the system.



5 Total insertion depths at the couplings.



6 Position and matching of crown markings (top).



7 Impermeability test.



Tip

We recommend having the system approved by the site management before backfilling.

4. Installation

4.9 Installing shaft covers

4.9.1 Design with shaft cone

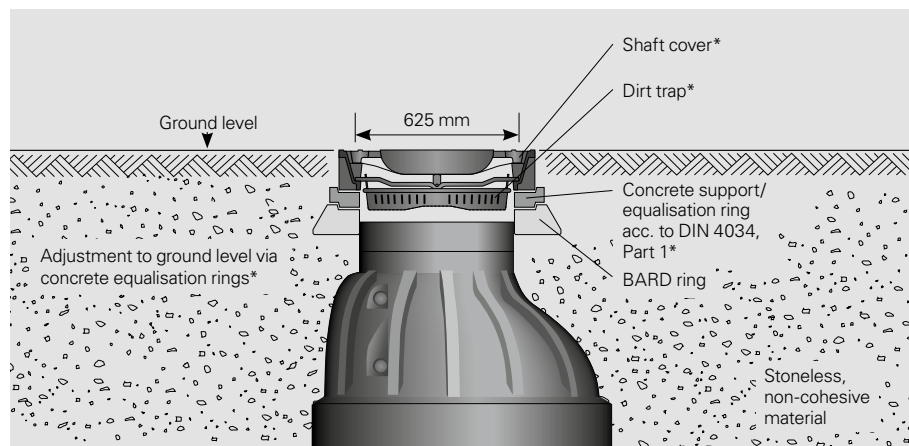
The BARD ring (concrete support ring) transfers traffic loads into the soil. There must be no direct load transfer between BARD ring and shaft/cone. The installation depth of the BARD ring over the cone is 5 cm. The bedding area of the BARD ring must be flat and free from stationary loads, and it must achieve an E_{v2} module of at least 100 MN/m². The BARD ring must be placed centrally without affecting the bearing.

Shaft covers, equalisation rings, gully gutters, bucket handles and buckets are not included in the scope of delivery of FRÄNKISCHE Rohrwerke and must be supplied on site.

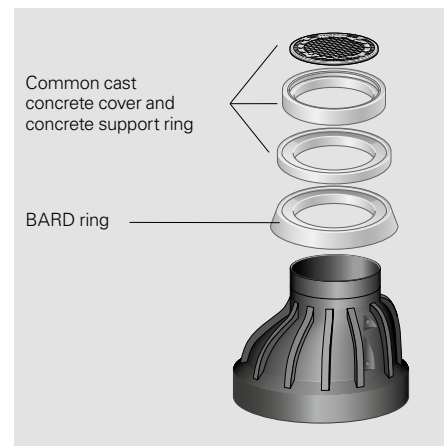
Install shaft covers according to DIN EN 124, CW 610, installation according to design specifications. Optionally, place equalisation rings according to DIN 4034 under the shaft cover / gully gutter on the BARD ring. The shaft cover and/or equalisation ring (equalisation rings) must be placed on a 10-mm-thick mortar joint to prevent stationary loads between the BARD ring, the equalisation ring and the shaft cover.

Use common dirt traps under the shaft covers. If the start shaft must feature a gully gutter according to design specifications, a bucket handle (or feed hopper) and a bucket according to DIN 4052-A4 must be installed.

Top edge of the cone up to the top edge of the cover must be approx. 22 cm in the case of a standard class D shaft cover (without equalisation ring).



Shaft cover on cone
* to be supplied on site



Example of common cast concrete cover* with concrete support ring*. BARD ring.

4. Installation

4.9.2 Design with shaft cover plate

The embedding around the shaft must be designed such that the upper part of the extension pipe is not deformed and the round shape of the extension pipe remains intact. The embedding must extend up to max. 20 cm below the shaft edge.

Create a level concrete C12/15 carrier layer as bearing for the cover plate. The minimum height of the carrier layer is 15 cm, the side length equals the edge length of the cover plus minimum 5 cm.

The spacing between the top edge of the in-situ concrete carrier layer and the top edge of the extension pipe is 5 cm. The distance between the cover and the top edge of the extension pipe is therefore approx. 4 cm.

Use two rope loops, which are connected to the cover plate using threaded sleeves, to lift the cover.

Apply an appropriate amount of lubricant to the sealing of the cover plate and the upper inside wall of the extension pipe before installing the reinforced concrete cover plate. Debur the shaft edge, if required. Place the concrete cover on the level and hardened carrier layer. Check the correct position of the seal afterwards.

Shaft covers, equalisation rings, gully gutter, bucket handle and bucket are not included in the scope of delivery of FRÄNKISCHE Rohrwerke and must be supplied on site.

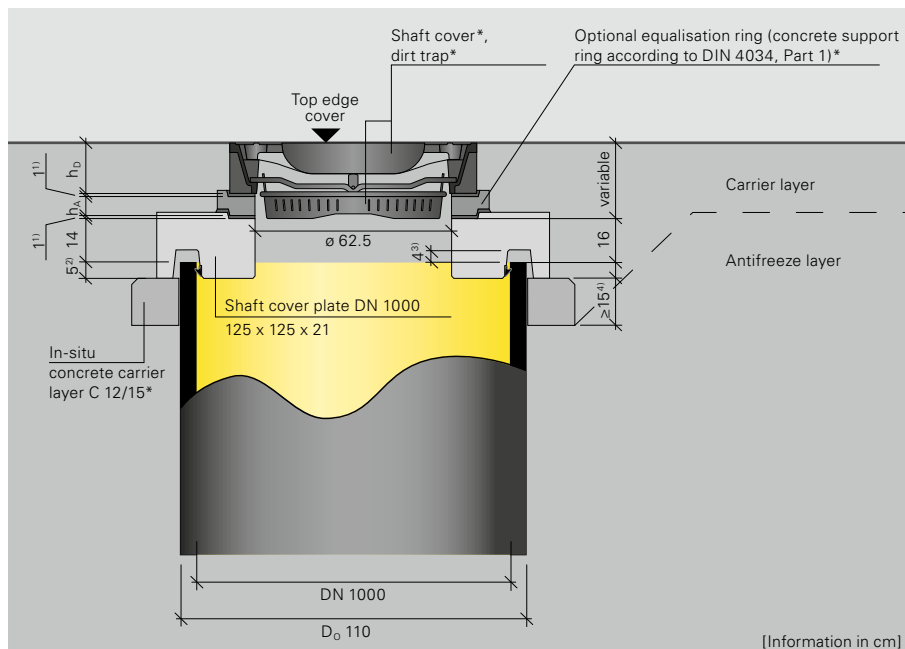
Install shaft covers according to DIN EN 124, CW 610, installation according to design specifications. Optionally, place equalisation rings according to DIN 4034 under the shaft cover / gully gutter on the

reinforced concrete cover plate. The shaft cover and/or equalisation ring (equalisation rings) must be placed on a 10-mm-thick mortar joint to prevent stationary loads between reinforced concrete cover plate, equalisation ring and shaft cover.

Use common dirt traps under the shaft covers. If the start shaft must feature a gully gutter according to design specifications, a bucket handle (or feed hopper) and a bucket according to DIN 4052-A4 must be installed.

ATTENTION

Heights must be checked and ensured. The cover plate must not rest on the extension pipe. The carrier layer must be load-separated from the extension pipe.



Shaft cover on shaft cover plate

*to be supplied on site



Concrete cover (weight: 580 kg)

h_D = height of shaft cover

h_A = height of support or equalisation rings

¹⁾ 1 cm mortar joint to ensure bearing without stationary loads

²⁾ 5 cm insertion depth of extension pipe in shaft cover plate

³⁾ 4 cm compensating area to prevent indirect loads in case of possible settling of the road layout

⁴⁾ In-situ concrete carrier layer C12/15 min. H = 15 cm, min. W = bearing width of cover + 5 cm from outside edge of shaft cover plate (circumferential)

4. Installation

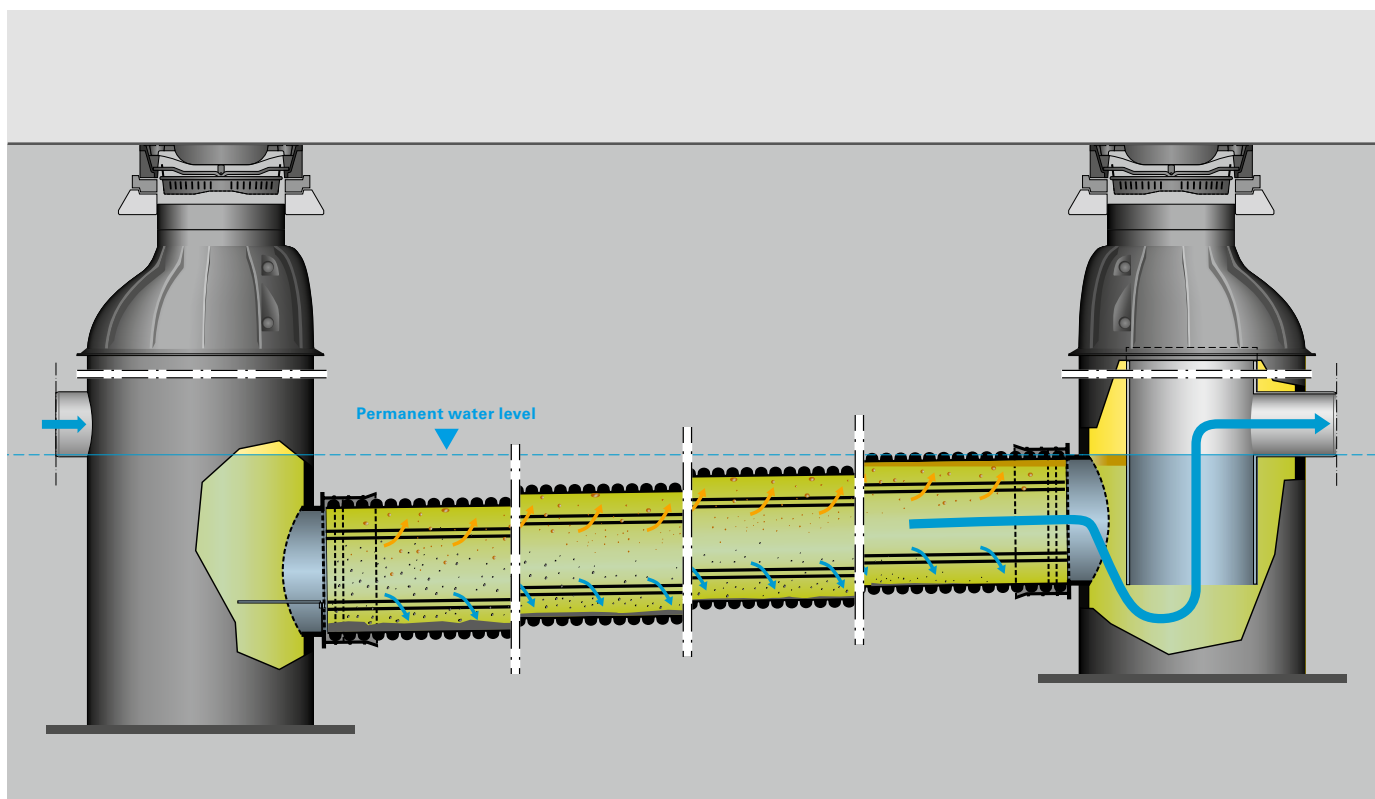
4.10 Filling the system

After the work has been completed, the system must be filled with water up to the permanent water level. This is required to ensure the retention of floatables and light liquids through the immersion wall. The system must be

filled with water (e.g. drinking water, service water, from water recovery or treated wastewater from system cleaning) complying with the local discharge conditions.

NB

For permanent water level volume see Section 3.5 Technical data, page 8



Example: SediPipe XL plus permanent water level

4. Installation

4.11 Arrangement of multiple SediPipe XL and SediPipe XL plus systems

The above sections of the installation manual describe the standard installation as individual system. The following describes the recommendations for the arrangement of multiple systems and the required minimum clearances. These recommendations apply for both systems with standard cone and systems with concrete cover plate.

We draw your attention to the fact that for installation clearances between distribution and combining units and the treatment system, the respective fitting dimensions of the connection pipes and their space requirements must be considered for the installation in addition to the general minimum clearances specified by standards.

ATTENTION

Make sure that the system components are not damaged during backfilling or compacting. Observe the installation instructions for individual systems.

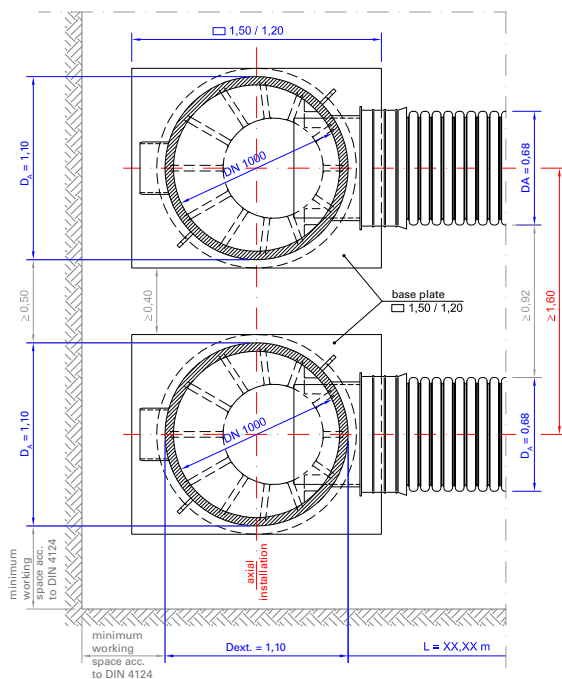


Illustration 12.1 SediPipe XL axial arrangement

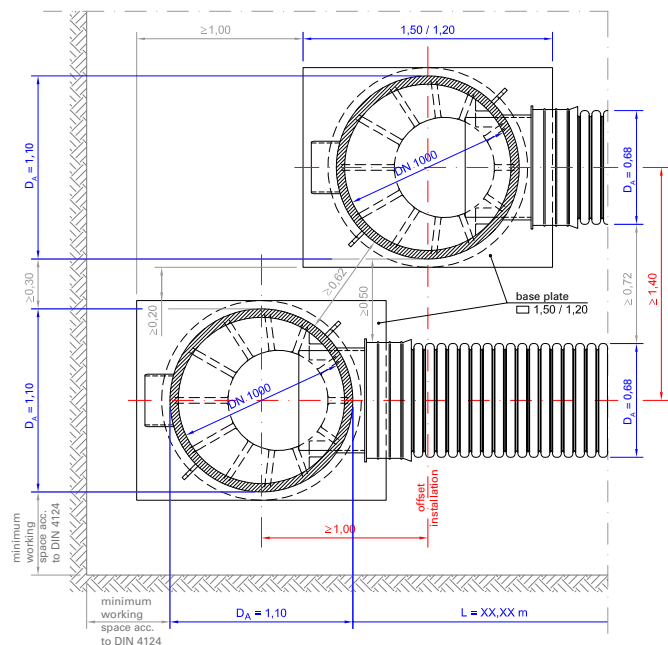
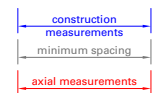


Illustration 12.2 SediPipe XL offset arrangement



We recommend a minimum clearance of 1.60 m or more referring to the shaft centres for axial arrangements (Illustration 12.1). We recommend a minimum spacing between the axes of 1.40 m for offset arrangements of shaft constructions (Illustration 12.2). Additionally pay

attention to the offset arrangement of shaft constructions of 1.0 m or more. If the recommended clearances for the respective installation situations are complied with, there is a breadth of working space of at least 0.5 m between the two shaft constructions or between

the shaft construction and the sedimentation path. This is to ensure professional compaction between the system components using light compacting equipment.

4. Installation

4.12 Commissioning

ATTENTION

Observe the safety instructions (page 2).

1 Making system ready for operation

- Clean system of coarse dirt
- Remove auxiliary constructions
- Fill system with water
- Close shaft covers



2 Instruction

1. The following people should be present during acceptance:

- Persons authorised by the principal to perform the acceptance
- Planner / engineering office
- Construction contractor
- Specialist / expert

We also recommend participation of operating staff.



2. Instruction

- Explain function of system
- Explain maintenance
- Information regarding cleaning and disposal
- Information about FRÄNKISCHE partner companies



3 Documentation / handing over

- Hand over maintenance and installation manuals
- Hand over system documentation including operating log
- Proof of system leak tightness
- Documentation of thorough visual inspection (optional)



5. Cleaning

5.1 Emptying and cleaning of the system

All the emptying and cleaning work of the system described in this section must generally be made from the start shaft.

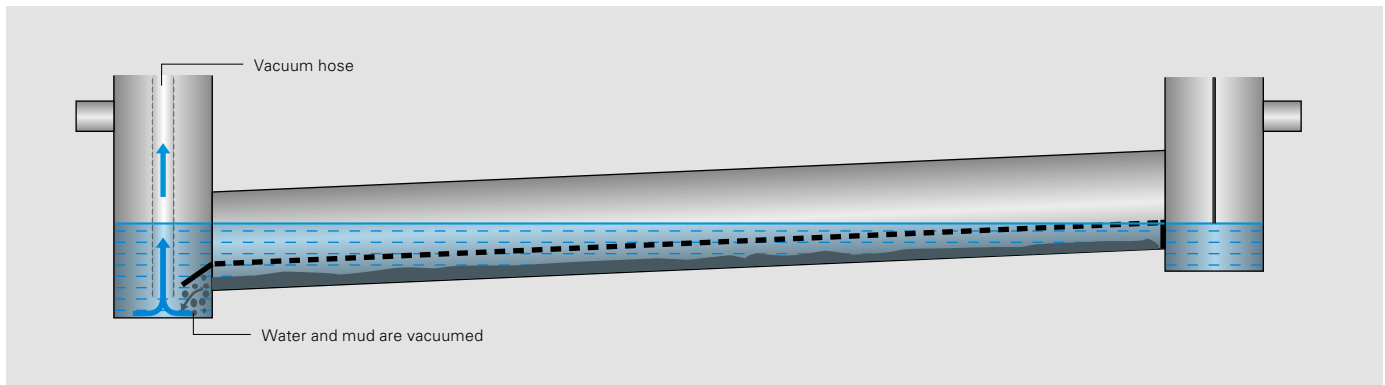
Use a high-pressure cleaning/vacuum vehicle to empty the system and remove the contained water and mud fractions. To do so, initially vacuum the complete contents through the shaft.

The valve flap sealing the mud chamber of the sedimentation pipe can now be moved freely.

Due to the slope of the sedimentation pipe, most of its mud collector will be emptied of its contents into the start shaft.

ATTENTION

In the event of an oil spill, the system must be immediately maintained by a specialist and the washed matter must be disposed of appropriately! Otherwise, subsequent rain may lead to a discharge of light liquids!



Emptying with vacuum hose

5. Cleaning

When empty, the maintenance console mounted at the height of the flow separator is visible in the start shaft. The maintenance console facilitates inserting and guiding the flush hose during high-pressure cleaning.

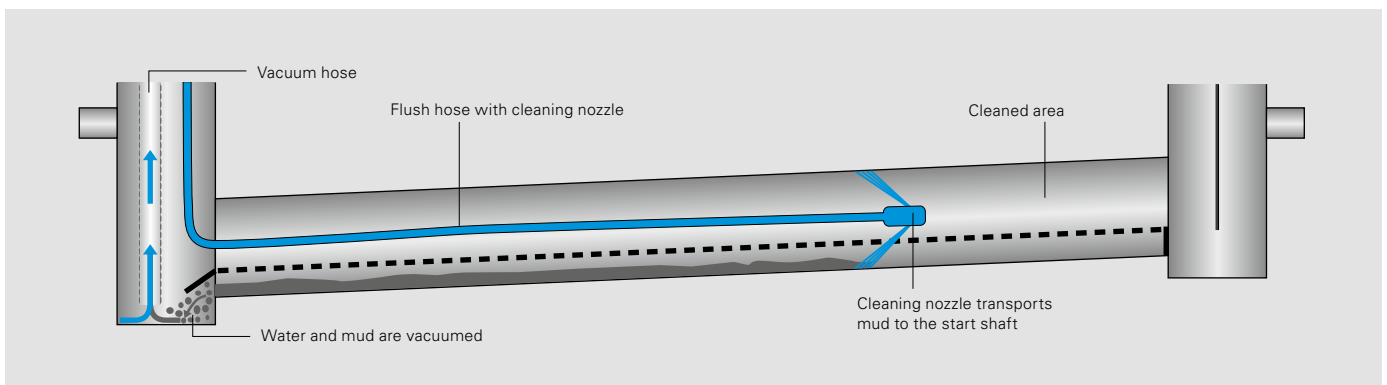
The flush hose is guided through the maintenance console on the flow separator. The cleaning nozzle is guided up to the target shaft during high-pressure

cleaning. Make sure that the nozzle does not enter the target shaft. The efficiency of the vehicle and the cleaning and nozzle parameters must be selected depending on the pipe section, pipe material and degree of pollution to be expected.

Use deflection pulleys to avoid damage to the system.

Tip

Combined cleaning/vacuum vehicles with water recovery should be preferably used. This minimises disposal expenses and the treated water can be used to refill the system.



Cleaning with vacuum and flush hose

5.2 Filling the system with water

After the work has been completed, the system must be filled with water up to the permanent water level. This is required to ensure the retention of floatables and light liquids through the immersion wall.

The system must be filled with water (e.g. drinking water, service water, from water recovery or treated wastewater from system cleaning) complying with the local discharge conditions.

NB

**Drawing see Section 4.10, page 15
For permanent water level volume see
Section 3.5 Technical data, page 8**

6. Self-inspection and maintenance

6.1 General information

To ensure that the SediPipe XL/SediPipe XL plus system works properly, its condition must be ensured through recurring self-inspections and maintenance. All work and findings must be documented in the operating log. We generally recommend entering a maintenance agreement with an expert

(FRÄNKISCHE partner company). Please see www.fraenkische.com/ "Drainage systems" / "Find partner companies" for an overview of partner companies trained by FRÄNKISCHE.

ATTENTION

The respective periods and responsibilities are only a recommendation by FRÄNKISCHE and may differ from authority approvals. In these cases, the authorities' requirements are mandatory and must be observed!

6.2 Self-inspection

The operational capability of the system must be verified by the operator under dry weather conditions at least every three months. To do so, open the covers of the start and target shafts and visually inspect from aboveground without accessing the shafts themselves (simple visual inspection).

Check the following:

- Structural condition of the system
- Height of the permanent water level
- Mud level of the start shaft

ATTENTION

If a relevant deviation from normal conditions occurs which may impair the operational capability of the system, maintenance must be carried out in order to immediately eliminate the detected deficiencies.

6.3 Maintenance

The SediPipe system must be maintained according to the following guiding values, unless there are system-specific empirical values regarding the actual volume of mud.

The following work must be performed:

- Emptying and cleaning of the system (see 5.1, page 18 pp.)
- Refilling the system (see 4.10, page 15)

Tip

Operators can schedule the system-specific maintenance interval as described in the following to reduce operating costs or in case of special areas with increased mud volumes:

Provided that the complete system was cleaned after finishing construction, emptying and cleaning of SediPipe can take place depending on the mud level. To do so, measure the mud level in the start shaft during self-inspection. We recommend emptying when 80 % of the mud storage volume or the maximum mud level in the start shaft have been reached. The storage volume can be obtained from the table (see Section 3.5, page 8).

	Maintenance interval 1 year	Maintenance interval 2 years	Maintenance interval 3 years	Maintenance interval 4 years
Type of system	connectable area [m²]	connectable area [m²]	connectable area [m²]	connectable area [m²]
SediPipe XL / XL plus 600/6	19,100	9,550	6,350	4,750
SediPipe XL / XL plus 600/12	24,850	12,400	8,250	6,200
SediPipe XL / XL plus 600/18	30,650	15,300	10,200	7,650
SediPipe XL / XL plus 600/24	36,450	18,200	12,150	9,100

Basis average volume of pollution 500 kg/ha*a (dry matter)

6. Self-inspection and maintenance

6.4 Disposal

Materials removed from the system such as mud and flushing water used to clean the system may contain hydrocarbons and heavy metals. Therefore, they must be disposed of in compliance with the applicable legal provisions.

Waste fractions occurring after spills with light liquids must be disposed of professionally as "oil/water separator

contents" in compliance with the current waste catalogue. The statutory disposal and acceptance certificates must be included in the operating log together with the entries as evidence of proper disposal.

ATTENTION

Applicable waste disposal regulations must be observed when disposing of the matter extracted from the system.

6.5 Thorough visual inspection

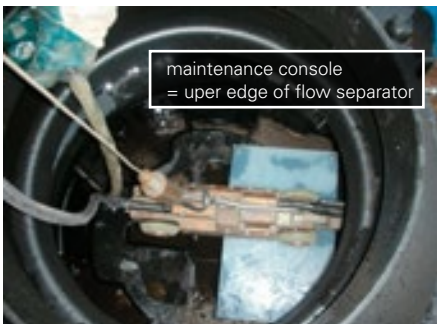
The structural condition of the sedimentation path can be examined by thorough visual inspection using CCTV equipment.

To this end, the upper flow area is accessed with a state-of-the-art pan and tilt camera. The lower sedimentation

chamber can be inspected visually through the flow separator.

Here, the maintenance console facilitates inserting the dolly and guiding the camera cable. Use appropriate deflection pulleys.

Inspection equipment should be selected according to DWA worksheet and bulletin series DWA-A/M 149 "Conditions and Assessment of Drain and Sewer Systems Outside Buildings" and should be adjusted to pipe section and pipe material.



Inspection of flushing results with pan and tilt camera, camera on the maintenance console in the start shaft of a SediPipe XL system



Cleaned, residue-free system, here in the area of the flow separator

7. Overview - Who does what?

	Who	What	When	Documentation
Installation	Specialist	<ul style="list-style-type: none"> - Installation, cleaning and CCTV inspection of the system - Filling of the system with water from water recovery or with water complying with the local discharge conditions 		Operating log
Self-inspection	Operator	Simple visual inspection <ul style="list-style-type: none"> - Structural condition of the system - Height of the permanent water level - Mud level of the start shaft 	At least every 3 months	Operating log
Maintenance	Specialist	<ul style="list-style-type: none"> - Emptying and cleaning of the entire system using sewer cleaning vehicle - Refilling of the system with water from water recovery or with water complying with the local discharge conditions - Disposal of mud and solids - Applicable waste disposal regulations must be observed. 	Immediately after oil spill, otherwise see guiding values in the maintenance documentation	Operating log
Disposal	Specialist / waste disposal company	<ul style="list-style-type: none"> - Disposal of mud and solids - Applicable waste disposal regulations must be observed. 	When the retention volume has been used up	Operating log Disposal certificates
Repairs	Specialist	Only original parts or tailored parts explicitly approved by the manufacturer may be used.	As required	Operating log

8. Your connection to us

Professional advice by FRÄNKISCHE

International Sales Director

Horst Dörr +49 9525 88-2490
horst.doerr@fraenkische.de

International Sales

Dinah Nigrowics +49 9525 88-2103
dinah.nicrowics@fraenkische.de

Technician

Stefan Weiß +49 9525 88-8824
stefan.weiss@fraenkische.de

European Sales Director

Klaus Lichtscheidel +49 9525 88-8066
klaus.lichtscheidel@fraenkische.de

European Sales

Jennifer Gernert +49 9525 88-2569
jennifer.gernert@fraenkische.de

Carolin Rausch +49 9525 88-2229
carolin.rausch@fraenkische.de

Jessica Ursin +49 9525 88-2441
jessica.ursin@fraenkische.de

Fax +49 9525 88-2522



General information on using our products and systems:

Information about or assessments of the use and installation of our products and systems are 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.

All information in this publication generally reflects the state of the art at the time of printing. Furthermore, considerable care was taken when preparing this publication. Nevertheless, typesetting and translation errors cannot be entirely excluded. We also reserve the right to make changes to our products, specifications and other data. Changes may also become necessary as a result of legal, material-related or other technological requirements, which cannot or can no longer be considered in this publication. For this reason, we cannot assume any liability which is based solely on the data provided in this publication. The decisive role with regard to the data on products and services is always played by the order placed, the product actually purchased and the documentation in connection with it, or the information provided by our specialist staff in each specific individual case.

Rooted in Königsberg – globally successful!



Our facilities in Europe:

Königsberg, Germany (headquarters)
 Bückeberg, 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 3,500 people worldwide. Both our many years of experience and expertise in plastics pro-

cessing, 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.