

FRÄNKISCHE

Competence brochure

Transporting stormwater

1

TRANSPORT

2

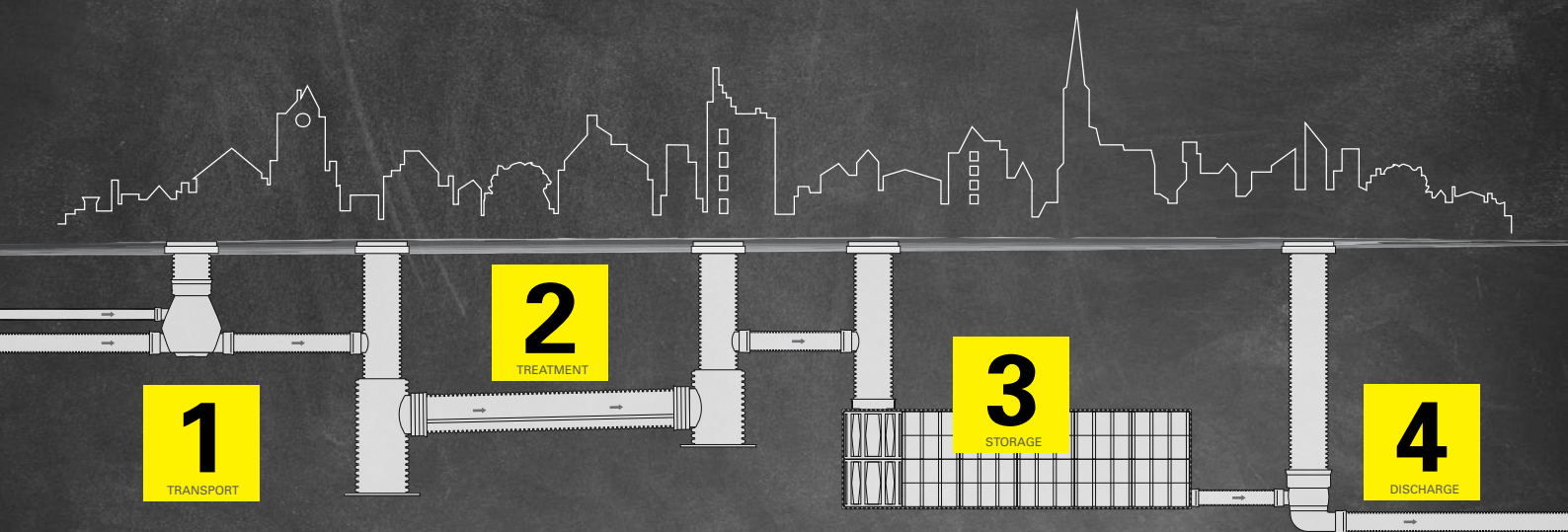
TREATMENT

3

STORAGE

4

DISCHARGE



4 CHALLENGES – 1 SOLUTION
STORMWATER IS OUR COMPETENCE

Table of contents

Collecting and transporting stormwater	5
Infiltration water in road drainage	7
Surface water in road drainage	9
Flushing and inspection shafts for road drainage	11
Overview of flushing and inspection shafts for road drainage	12
Infiltration water in track drainage	15



Collecting and transporting stormwater

1

For more safety and to preserve traffic areas

Where stormwater cannot be discharged naturally, it needs to be reliably collected and then discharged in a controlled way.

For traffic areas water often ...

- is a hindrance and causes danger to road users (e.g., due to aquaplaning, icing in winter);
- causes damage to the pavement (e.g., due to washing-out or frost damage).

Drainage systems help to collect and discharge surface water, water from the soil and/or road superstructure, and water coming from external sources.

Drainage and transport pipes are used to collect, channel or discharge the different types and amounts of water.

Properly functioning drainage is one of the crucial requirements for reliable usability and long service life of roads and tracks.

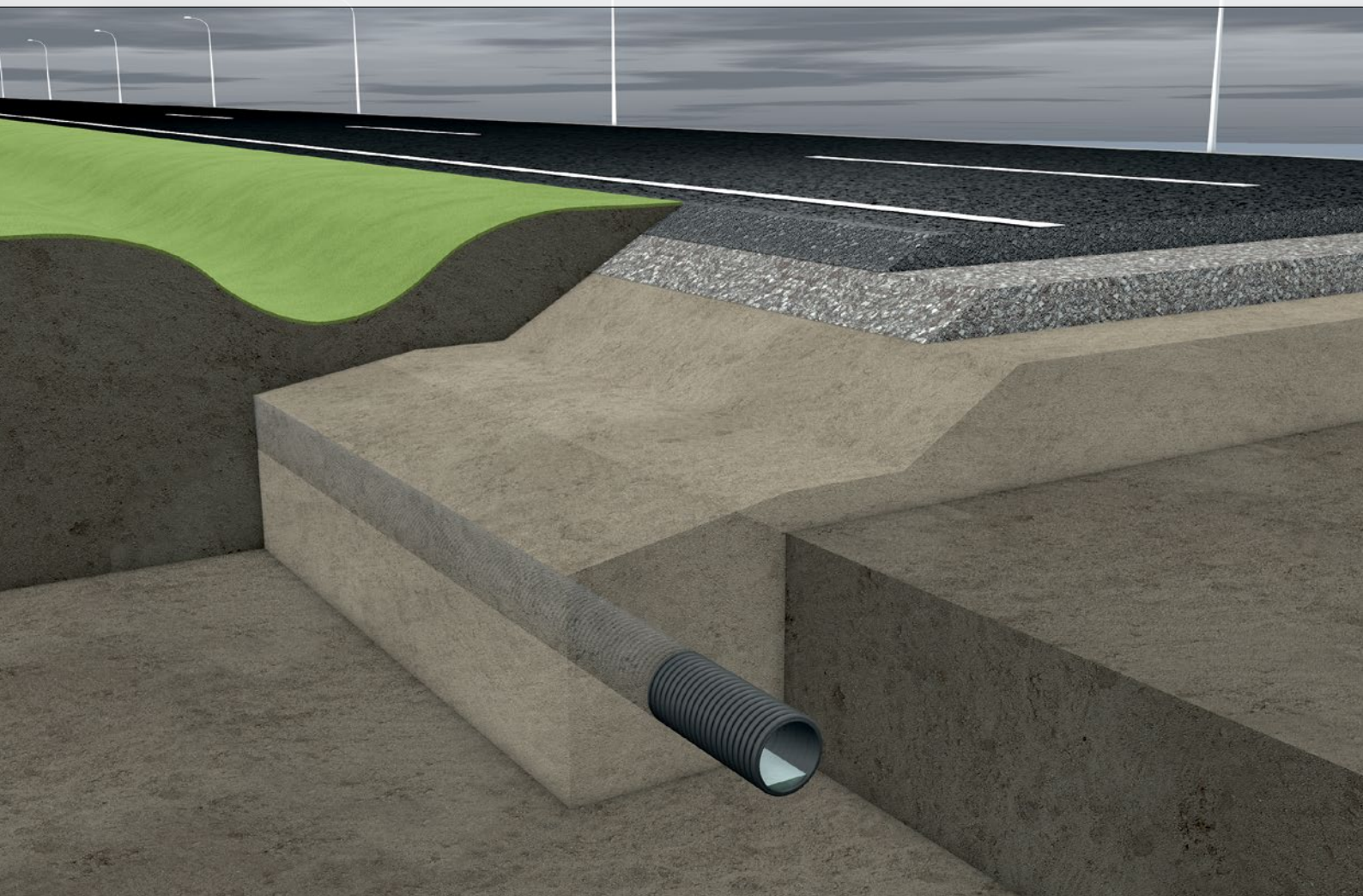
Safety from the very beginning

The approach by FRÄNKISCHE encompasses transport, treatment, storage and discharge of stormwater. These four tasks are reflected in our stormwater management. This is how precipitation water is re-channelled back to natural storage areas – both economically and ecologically.



Note

Collected road surface water is considered wastewater according to the Federal Water Act (*Wasserhaushaltsgesetz – WHG*). As a general rule, wastewater must be transported through leak-tight pipes.



Infiltration water in road drainage

1

FRÄNKISCHE drainage pipe systems

Drainage pipe systems help to collect infiltration water, water from the soil and water from the road surface. For virtually all requirements, FRÄNKISCHE provides suitable pipes that comply with applicable standards and are state of the art:

- Strabusil (PE) SN 4
- Strasil (PVC) SN 4
- StormPipe (PE) SN 8

The optimised pipe length of 6 m and the low weight of these products ensure rapid construction progress. The need for heavy tools can virtually be eliminated.

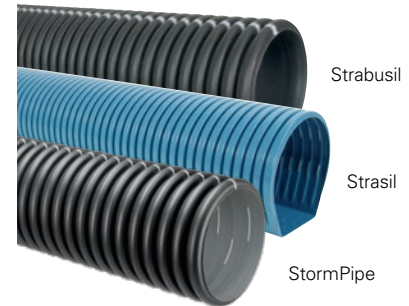
The specific arrangement of the perforations of totally perforated pipes, locally perforated pipes or multi-purpose pipes coupled with a large total perforation area guarantee optimum functionality.

FRÄNKISCHE drainage pipes are extremely impact- and break-resistant. This ensures that they are suitable for the installation conditions in road construction.

Inspection and maintenance of drainage pipes can be done through corresponding flushing and inspection shafts.

Application

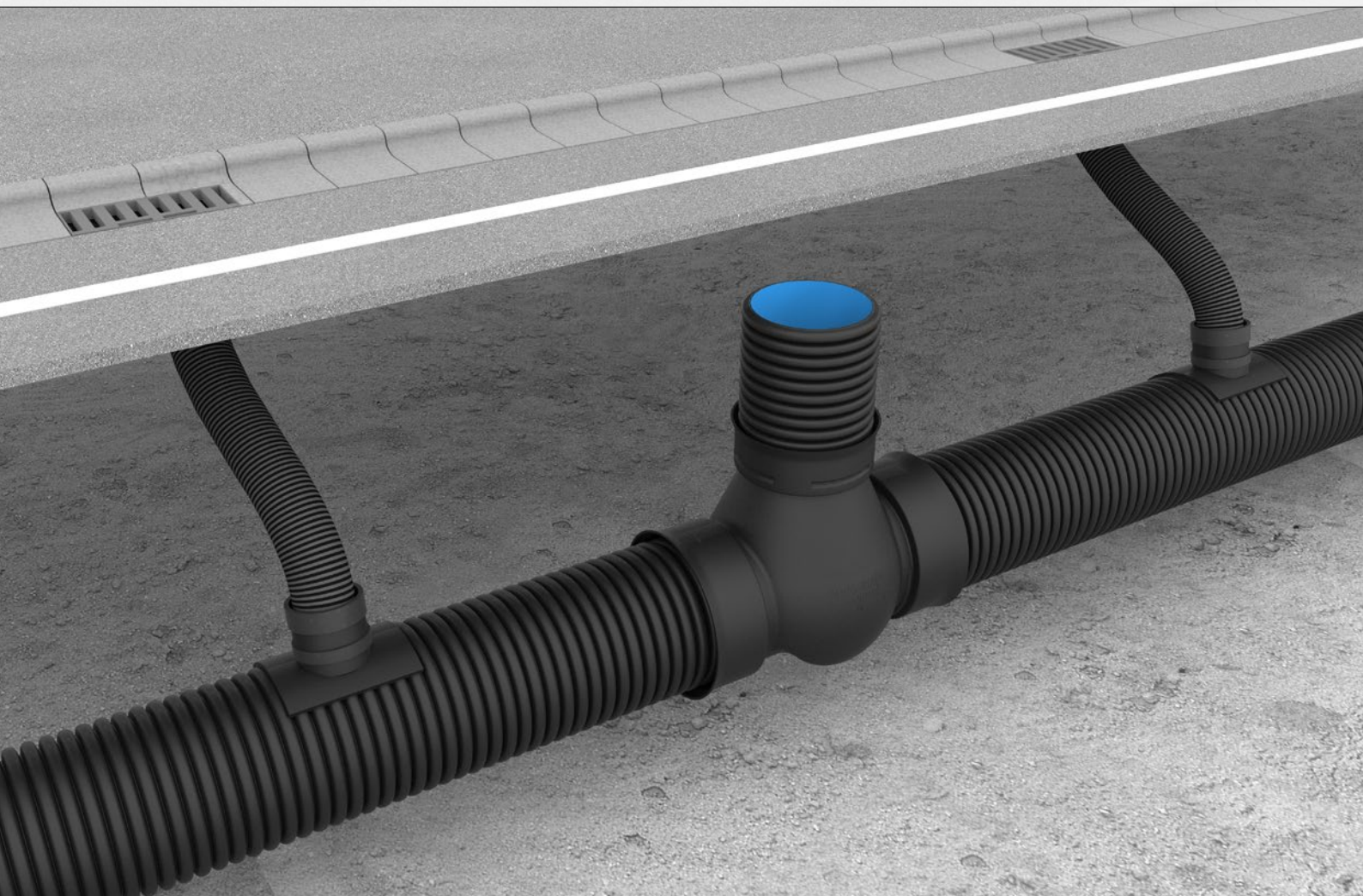
Drainage pipes to reliably collect infiltration water in the field of road drainage



- Extremely robust and resistant
- High infiltration rate thanks to perfectly arranged perforations
- Optimal degree of drainage thanks to smooth inside



Product documentation
www.fraenkische.com



Surface water in road drainage

1

AquaPipe® system: highly durable and efficient

Impervious road surfaces prevent the groundwater that accrues in rainfall events from infiltrating, thus jeopardising road traffic, and must therefore be discharged in a controlled and reliable manner.

The AquaPipe transport pipe system

with its perfectly matched range of shafts is ideally suited for the entire road drainage from the municipal road network to federal highways.

Application

AquaPipe, the stormwater transport pipe system to drain roads and highways, to discharge municipal stormwater runoff and to discharge stormwater into receiving waters

Components

AquaPipe, AquaFlex, AquaDock, shafts and accessories, saddle for retrofit DN 200 connections



- High chemical resistance
- Proof of jetting resistance according to DIN EN 19523
- Monolithic shafts
- High load-bearing capacity (SN 8)



Product documentation
www.fraenkische.com



Flushing and inspection shafts for road drainage

1

Sustainable and future-oriented to meet individual requirements

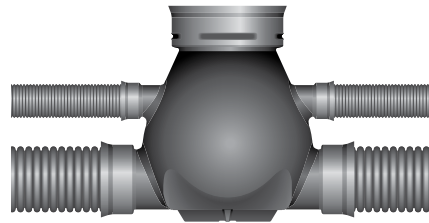
Pipe systems must be inspectable and flushable. FRÄNKISCHE system shafts define what is state of the art and easily meet these requirements.

Always a suitable shaft

Whether to connect a drainage pipe or a transport pipe to classic shafts or wye shafts, or for a piggyback arrangement.

The piggyback shaft combines a tight transport pipe and an overlying drainage pipe in one flushing and inspection shaft through which accumulating water can be reliably discharged.

Thanks to the piggyback arrangement, it can be ensured that no polluted surface water infiltrates into the soil. The tasks of both road drainage and environmental protection are perfectly fulfilled.



A piggyback shaft with a bottom tight transport pipe and top drainage pipe



Shaft



Wye shaft



Piggyback shaft








Product documentation
www.fraenkische.com

Overview of flushing and inspection shafts for road drainage

Product	StrabuControl	StrabuControl 600	StrabuControl 600 V	AquaTrafficControl	AquaTrafficControl V
Illustration					
Inside diameter of base body	> 500 mm	> 600 mm	> 600 mm	> 900 mm	> 900 mm
Extension pipe D _o	400	600	600	600	600
Designs	2/250, 3/250, 4/250, 3/350, 4/350, 2/400	2/250, 2/400, 2/250–150 (90°), 2/400–150 (90°)	Variable shaft angle 90–270 degrees	2/300, 2/400, 2/500, 2/600, 300/400, 400/500, 500/600, 300, 400, 500, 600	Variable shaft angle 90–270 degrees
Connectable types of pipe*	Strasil Strabusil StormPipe	Strasil Strabusil StormPipe AquaPipe	Strasil Strabusil StormPipe AquaPipe	AquaPipe StormPipe	AquaPipe StormPipe
Available nominal connection diameters	DN 100–400	DN 100–400	DN 100–400	DN 300–600	DN 300–600
Cover	FRÄNKISCHE (470 mm)	Standard cover (625 mm), on site	Standard cover (625 mm), on site	Standard cover (625 mm), on site	Standard cover (625 mm), on site

* Other FRÄNKISCHE structured-wall pipes possible

Product	StrabuControl HP	StrabuControl 600 HP	StrabuControl 600 V HP	AquaTrafficControl HP	AquaTrafficControl V HP
Illustration					
Inside diameter of base body	> 500 mm	> 600 mm	> 600 mm	> 900 mm	> 900 mm
Extension pipe D ₀	400	600	600	600	600
Designs	2/250, 3/250, 2/350 2/250–150 (90°) 2/350–150 (90°)	2/250, 2/350 2/250–150 (90°) 2/350–150 (90°)	Variable shaft angle 90–270 degrees	2/300, 2/400, 2/500, 2/600, 300/400, 400/500, 300, 400, 500, 600	Variable shaft angle 90–270 degrees
Transport pipe*	AquaPipe	AquaPipe	AquaPipe	AquaPipe	AquaPipe
Nominal connection diameters of transport pipe	DN 200–350	DN 200–350	DN 200–350	DN 300–600	DN 300–600
Drainage pipe	Strabusil StormPipe	Strabusil StormPipe	Strabusil StormPipe	Strabusil StormPipe	Strabusil StormPipe
Nominal connection diameters of drainage pipe	DN 150	DN 150	DN 150	DN 150	DN 150
Cover	FRÄNKISCHE (470 mm)	Standard cover (625 mm), on site	Standard cover (625 mm), on site	Standard cover (625 mm), on site	Standard cover (625 mm), on site

* Other FRÄNKISCHE structured-wall pipes possible



Manufacturer-related
product qualification

HPQ

outside/external
pressure range

Manufacturer-related
product qualification

HPQ

internal
pressure range

DBS
918064

Last modified 08/2022

Proof of

jetting
resistance



Infiltration water in track drainage

1

RailPipe® system fulfils the highest DBS requirements.

Infiltration water must also be appropriately collected and discharged from railway tracks. The DBS 918064 directive of Deutsche Bahn AG specifies the demands that are placed on drainage systems in detail with a focus on highest safety.

RailPipe exceeds the standards set in the DBS directive and is available as a locally perforated pipe and a totally perforated pipe in various nominal diameters. The ring stiffness of SN 8 stipulated by Deutsche Bahn has been doubled by FRÄNKISCHE to SN 16.

The RailPipe system is complemented by the innovative RailControl flushing and inspection shaft. RailControl is available both as a 180° shaft in two basic designs (each with inlet and outlet in nominal connection diameters of DN 250 and DN 400) and as a 90° wye shaft 3/250.

Both the shaft body and the extremely durable and hard-wearing SN 16 extension pipe have an inside diameter of 600 mm. In addition, standard 625 mm covers can be used. RailPipe and RailControl comply with all standards and requirements of Deutschen Bahn AG and feature the manufacturer-related product qualification (HPQ) for use in all pressure ranges of the roadbed and track.

Note

According to DBS 918064 (08/2022), the manufacturer-related product qualification for the internal pressure range will replace the EBA certification.

Application

The RailPipe system has been specifically designed to collect and transport infiltration water in track drainage.



RailPipe drainage pipe

- PP material, new item
- 3.5 mm inside wall thickness
- 2.5 mm perforation width

RailControl shaft

- Monolithic base body
- Ø 600 mm inside diameter of base body
- Proof of jetting resistance acc. to DIN 19523



Product documentation
www.fraenkische.com

FRÄNKISCHE



1

TRANSPORT

2

TREATMENT

3

STORAGE

4

DISCHARGE

© stock.adobe.com



FRÄNKISCHE Rohrwerke Gebr. Kirchner GmbH & Co. KG | Hellinger Str. 1 | 97486 Königsberg/Germany
Phone +49 9525 88-0 | Fax +49 9525 88-2413 | marketing@fraenkische.de | www.fraenkische.com

EN.90210/2.03.24 | Subject to change without notice | Cat. no. 5000-0900-00 | 03/2024 [DE.90097/4]