

Transporting stormwater

with perfectly matched system components

**1**

TRANSPORT

**2**

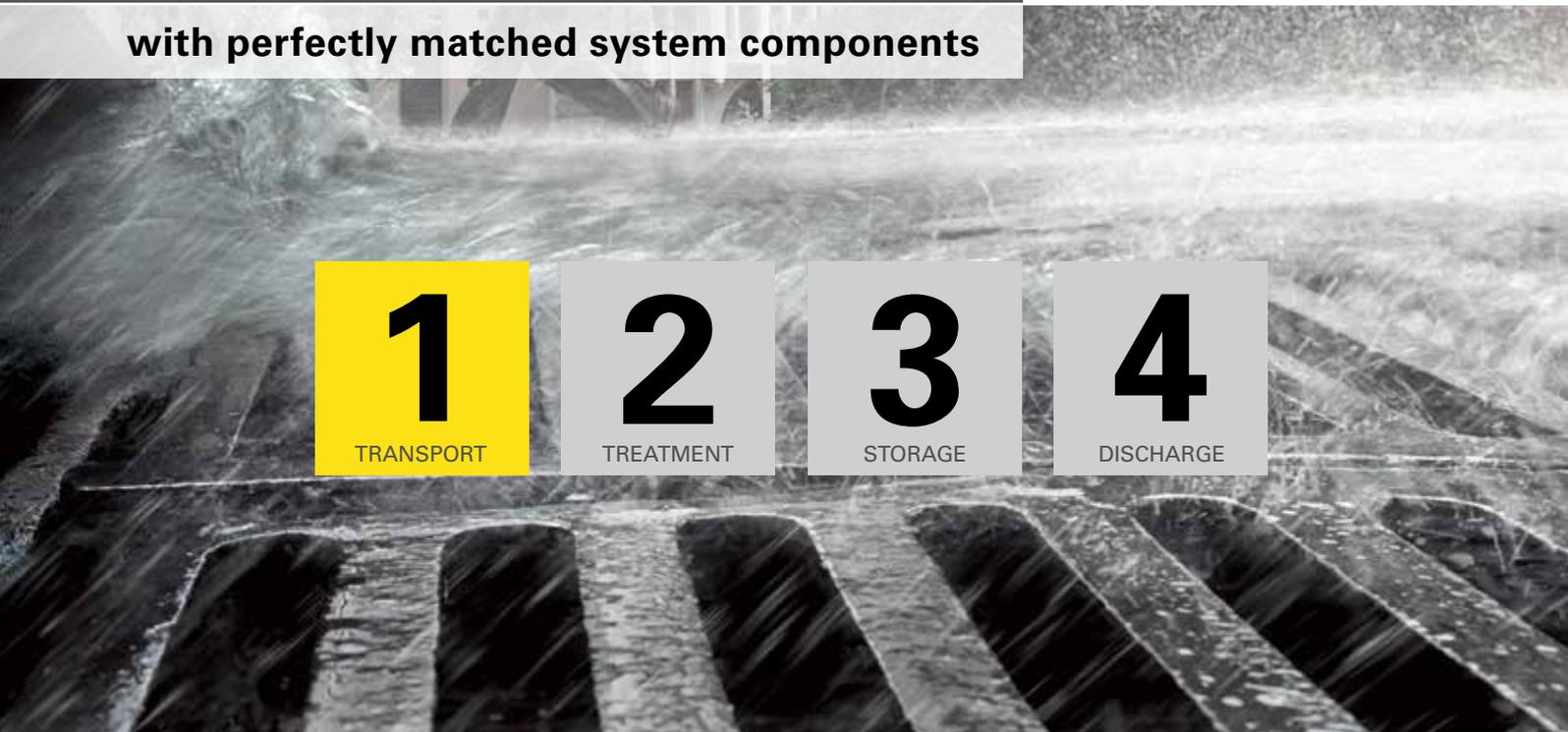
TREATMENT

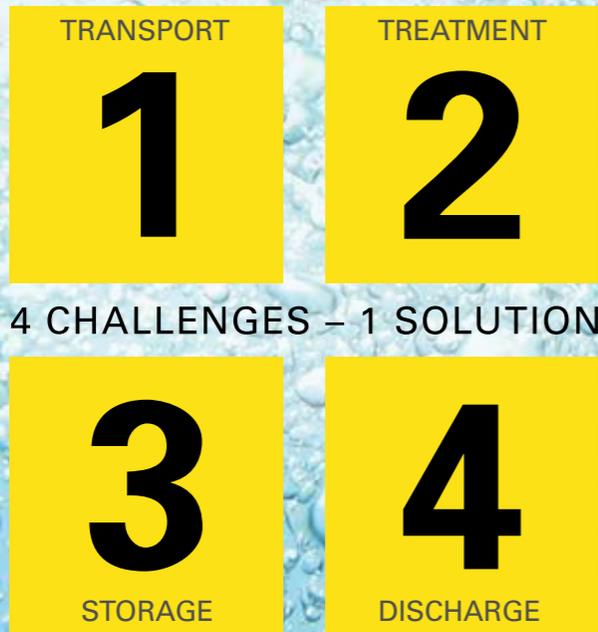
**3**

STORAGE

**4**

DISCHARGE





## Transporting stormwater

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**Collecting and transporting stormwater –  
from whatever collection area:**

- **Strabusil/Strasil/StormPipe**  
drainage pipe systems in road drainage
  - **AquaPipe system**  
stormwater transport pipe system in road drainage
  - **RailPipe system**  
drainage pipe system in track drainage
  - **Robukan SMR system**  
stormwater pipe system in urban drainage
-



## Transporting stormwater

### For more safety and to preserve trafficked areas

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

#### For trafficked 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.



#### By the way:

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



# WHERE IS STORMWATER SUPPOSED TO BE TRANSPORTED?

Infiltration water in  
**road drainage**

Strabusil  
Strasil  
StormPipe

Surface water in  
**road drainage**

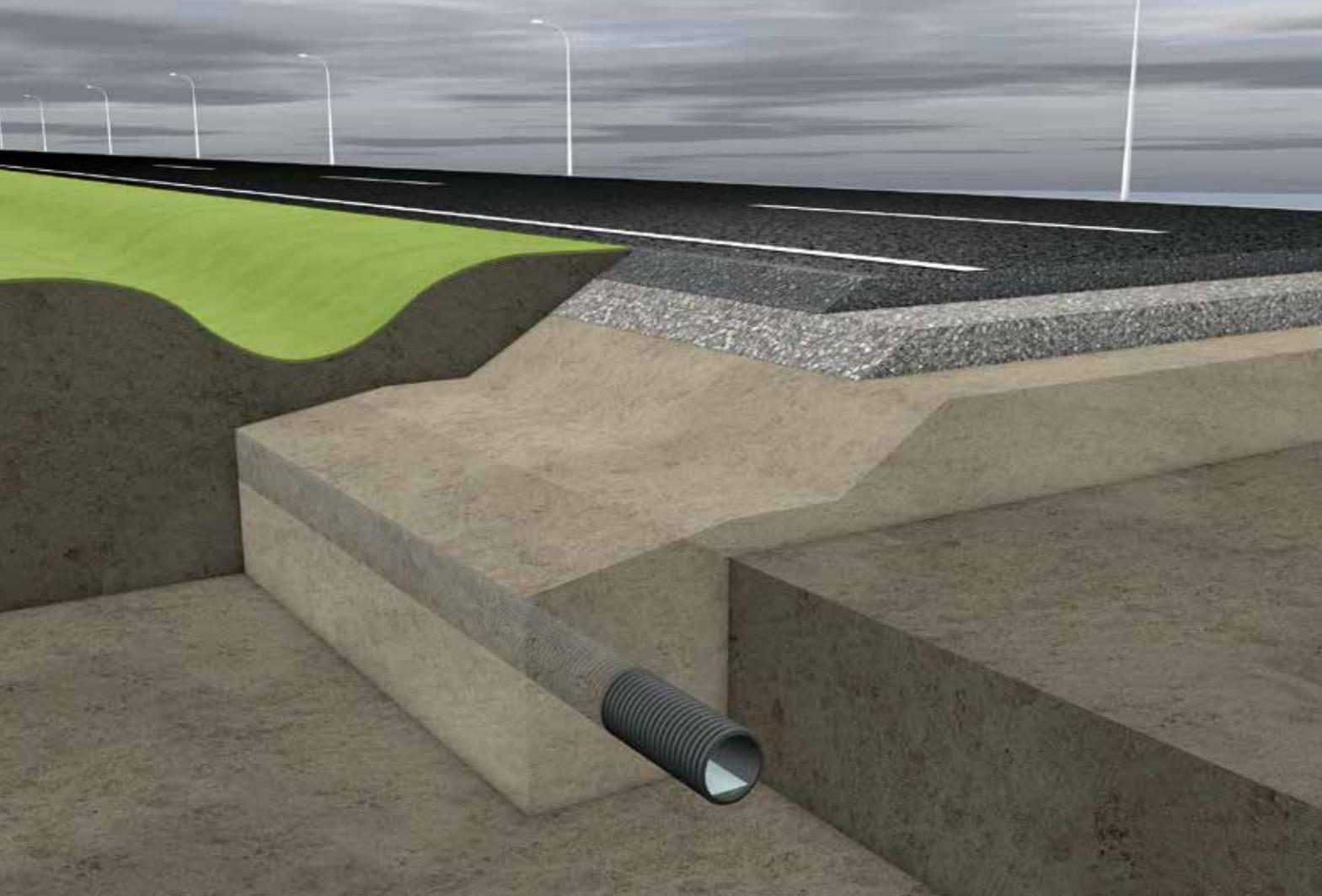
AquaPipe system

Infiltration water in  
**track drainage**

RailPipe system

Surface water in  
**urban drainage**

Robukan SMR system



### 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



Strabusil

Strasil

StormPipe

- extremely robust and resistant
- high infiltration rate due to perfectly arranged perforations
- optimal degree of drainage thanks to smooth inside



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## Surface water in road drainage

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### AquaPipe® system: highly durable and efficient

Impervious road surfaces prevent the groundwater that accrues in rainfall events from infiltrating, thus jeopardising the 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 connection



- high chemical resistance
- certificate of jetting resistance acc. to DIN EN 19523
- monolithic shafts
- high load-bearing capacity (SN 8)



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## Sustainable and future-oriented to meet individual requirements

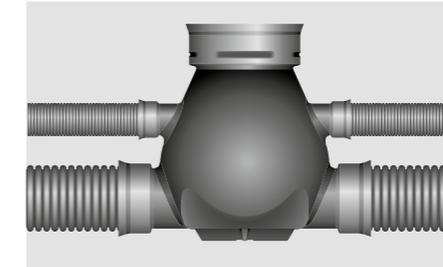
Pipe systems must be inspectable and flushable. FRÄNKISCHE system shafts define what is state of the art and easily meet these requirements.

### Always a suitable shaft

Whether to connect a drainage pipe or a transport pipe to classic shafts or why 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



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# Flushing and inspection shafts for road drainage

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Product	StrabuControl	StrabuControl 600	StrabuControl 600 V <b>NEW</b>	AquaTraffic-Control	AquaTraffic-Control V
Illustration					
Inside diameter of base body	> 500 mm	> 600 mm	> 600 mm	> 900 mm	> 900 mm
D <sub>0</sub> extension pipe	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°)	Shaft angle variable 90 – 270 degrees	2/300 2/400 2/500 2/600	Shaft angle variable 90 – 270 degrees
Connectable types of pipe*	Strasil Strabusil StormPipe	Strasil Strabusil StormPipe	Strasil Strabusil StormPipe	AquaPipe	AquaPipe
Available nominal connection diameters	DN 100 – 400	DN 100 – 400	DN 100 – 400	DN 300 – 600	DN 300 – 600

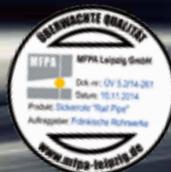
\* Other FRÄNKISCHE twin-wall pipes possible

Product	StrabuControl HP <b>NEW</b>	StrabuControl 600 HP <b>NEW</b>	StrabuControl 600 V HP <b>NEW</b>	AquaTraffic Control HP	AquaTraffic Control V HP
Illustration					
Inside diameter of base body	> 500 mm	> 600 mm	> 600 mm	> 900 mm	> 900 mm
D <sub>0</sub> extension pipe	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°)	Shaft angle variable 90 – 270 degrees	2/300 2/400 2/500 2/600	Shaft angle variable 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				
Nominal connection diameters of drainage pipe	DN 150				

\* Other FRÄNKISCHE twin-wall pipes possible

Manufacturer-related  
product qualification  
**HPQ**  
available

**DBS**  
918064  
Last modified: 12/2013



## Infiltration water in track drainage

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### RailPipe® system fulfils the highest requirements of DBS

Infiltration water must also be appropriately collected and discharged from railway tracks. The DBS 918064 directive of the 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 the Deutsche Bahn has been doubled by FRÄNKISCHE to SN 16.

The RailPipe system is complemented by the new, innovative RailControl flushing and inspection shaft. The shaft with nominal connection diameters of DN 250 and DN 400 is the first modular shaft that

also complies with all requirements of the DBS directive. 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 feature the manufacturer-related product qualification HPQ.

#### Application:

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

#### Components:

RailPipe, RailControl



#### RailPipe drainage pipe

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

#### RailControl shaft

- monolithic base body
- 600 mm inside diameter of base body
- certified jetting resistance acc. to DIN 19523



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## Surface water in urban drainage

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### Reliability and quality

In the field of urban drainage, surface water, e.g. from streets and squares must also be discharged. DIN EN 13476-compliant Robukan SMR provides an optimum and economical solution to the tasks of urban drainage.

#### More reliability due to higher stiffness

The Robukan SMR pipe system is available in two stiffness classes: SN 8 (yellow inside) and SN 16 (orange inside). The actual ring stiffness of SN 8 pipes amounts to as much as  $\geq 10 \text{ kN/m}^2$  („SN10“).

The SN 16 pipe exceeds the requirements of DIN EN 13476 thanks to its continuous inner wall thickness of 3.5 mm. Even extreme soil and traffic loads pose no problem.

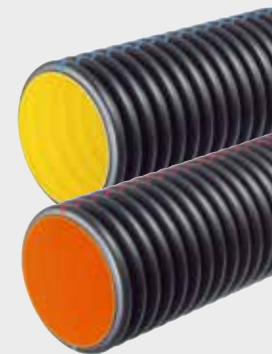
#### Application:

As a stormwater pipe for stormwater runoff from roads, alleys and squares.

#### Components:

Robukan SMR SN 8, SN 16, RobuDock, RobuControl, RainControl

**Robukan SMR SN 8**



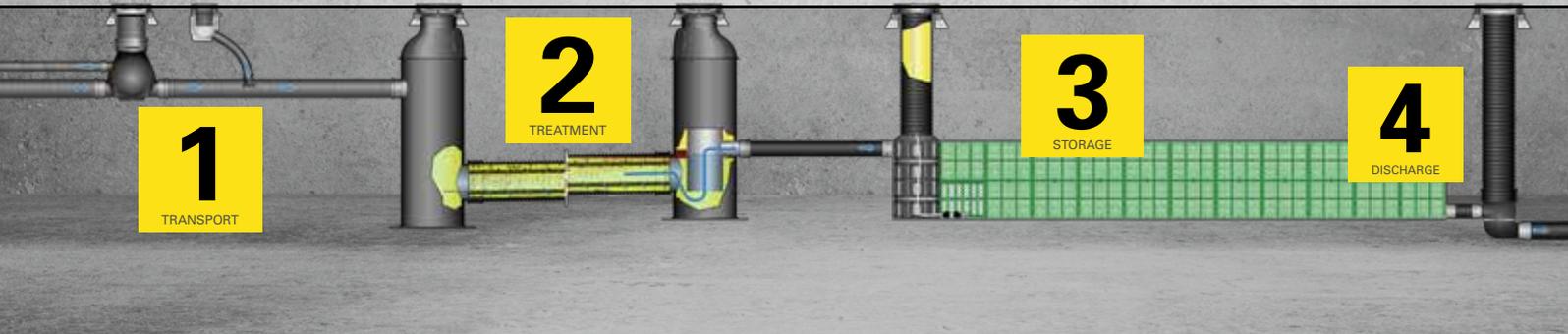
**Robukan SMR SN 16**

- complies with DIN EN 13476
- PP material
- leak tightness of at least 2.4 bar



Product documentation  
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## Stormwater management



**FRÄNKISCHE ROHRWERKE** Gebr. Kirchner GmbH & Co. KG | 97486 Königsberg/Germany  
Phone +49 9525 88-0 | Fax +49 9525 88-2412 | [info.drain@fraenkische.de](mailto:info.drain@fraenkische.de) | [www.fraenkische.com](http://www.fraenkische.com)

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