



# UNI TECHNICS

INNOVATIONS FOR  
YOUR SEWAGE SYSTEM

ODOR | EXTRANEEOUS WATER | ENGINEERING

Products for sewage systems



03/2018

Schwerin ■ Bamberg ■ Stuttgart ■ Cologne ■ Cottbus ■ Gotha

[unitechnics.de](http://unitechnics.de)



# UNITECHNICS KG

## Company information

UNITECHNICS is a company from Germany, which develops strategies and solutions for drainage systems. With highly qualified and dedicated staff, UNITECHNICS supports operators, associations, and the industry as a competent partner. In professional circles UNITECHNICS has made a name for itself with innovative ideas and is known for new and quite unconventional ways. It is crucial that these ideas are purposeful and excel in the result. The focus is on the engineering and the resulting process and product development.

### From the idea to the practical implementation of standard- and customized solutions:

- Engineering with concrete situation assessment based on innovative engineering services
- Project development, accompaniment and settlement
- Product development and manufacturing in the company headquarters in Schwerin
- Support services

**This dealer information contains a selection of UNITECHNICS products and services.**



# Content

## Products for sewage systems

<b>Products against odor and biogenic corrosion .....</b>	<b>4</b>
Odor cushioning system FVA-4 .....	5
Odor cushioning system Uni-AdSorber .....	6
Special attachment clamping ring .....	7
Odor cushioning system Uni-AdSorber DN800 .....	8
Odor trap system GVS-K3 .....	9
Odor trap system GVS-K3-R .....	10
Odor trap system GVS-450-150 .....	11
Odor trap system GVS-D1 .....	12
Odor trap system GVK .....	13
Odor cushioning system GDP .....	14
Odor trap system GVF-100 .....	15
Corrosion-resistant dirt-catch SF-K .....	16
Exhaust air treatment UNI-AIR .....	17

# Products against odor and biogenic corrosion in sewage systems

## Situation and problem:

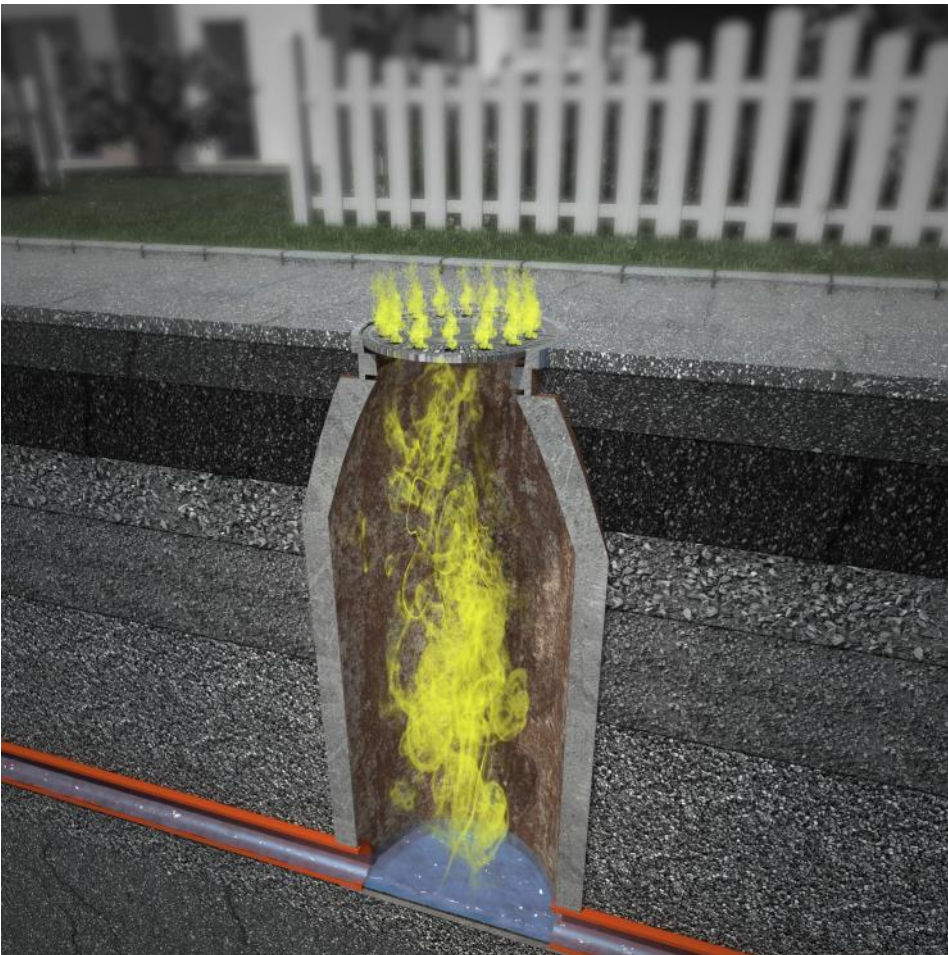
Demographic trends, declining water consumption as well as the centralization of sanitation lead to long residence time of the wastewater in the pipe network. They also increase the concentrations of wastewater constituents, the ideal conditions for the formation of hydrogen sulfide offering at increasing temperatures.

Negative side effects are often unpleasant odors as well as the biogenic corrosion, which endangers the investment portfolio. Operators of waste water conditioning systems increasingly consider the use of appropriate economic methods and systems for planning and redevelopment: odor cushioning systems by UNITECHNICS. Secondly, they must find technically feasible and economically viable solutions for existing installations to solve this problem: odor cushioning systems by UNITECHNICS.

## UNITECHNICS odor cushioning and trap systems

... act where the odors (outgassing stretch) arise and can therefore actually reduce or avoid odors problems from cannel systems. In addition, they can protect manholes, pumping stations and installations against biogenic corrosion.

**Special feature: The developed products do not require any consumables, chemical additives or energy. The function is based on physical and biochemical effects.**

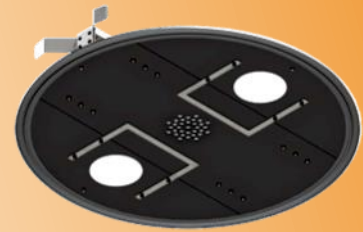
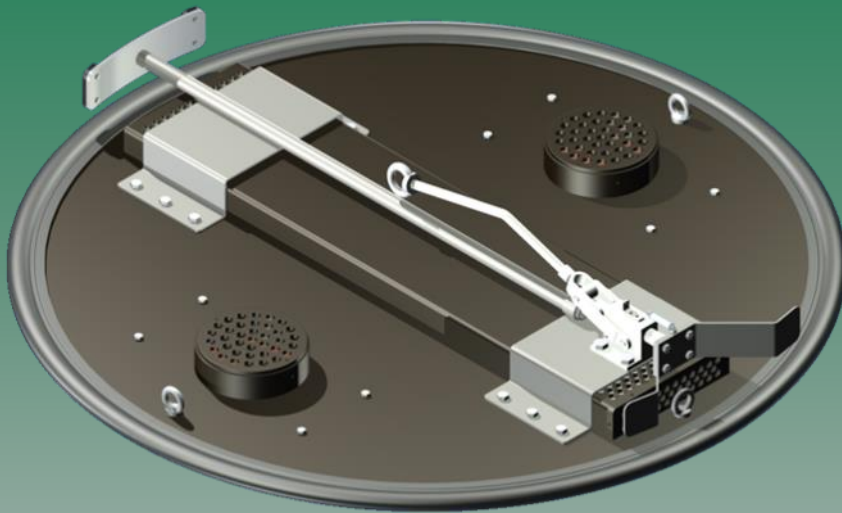




# Odor cushioning system

## FVA-4

for shaft-manholes



View from below

### Areas of application:

- Municipal and industrial waste water facilities
- Shafts to DIN 4034 with manhole cover according to DIN 19584
- Manholes with inner diameter  $D_i = 1000$  mm
- Shaft depth from 1,20 m

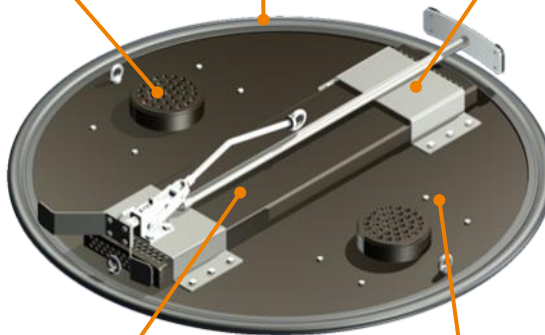
### Features:

- Installation and removal from the outside without an entry into the shaft in a few seconds possible
- Reduces odors
- Protects the shaft against biogenic corrosion over the installation level
- No consumables ("filter material" don't need to be changed)
- Low maintenance, will only be cleaned with water

**Pressure relief valve:**  
Automatically opens when too much inflowing surface water

**Edge seal:**  
Sturdy execution

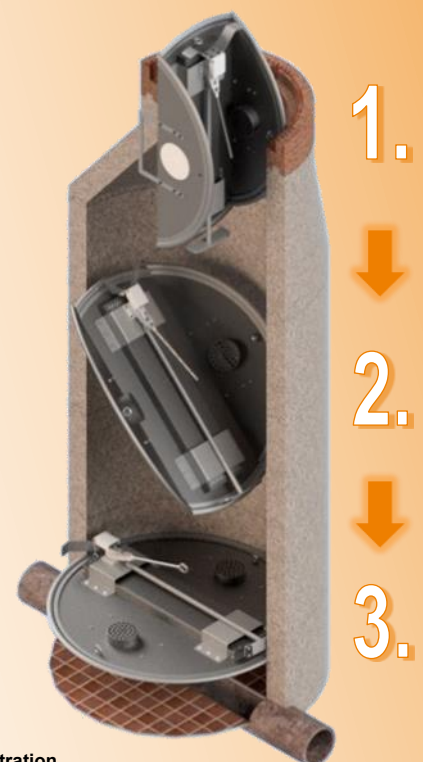
**Clamping system:**  
For easy mounting in any shaft height from outside of the shaft



**Damping box:**  
"Filter material" cleans itself by penetrating surface water, a change is not necessary

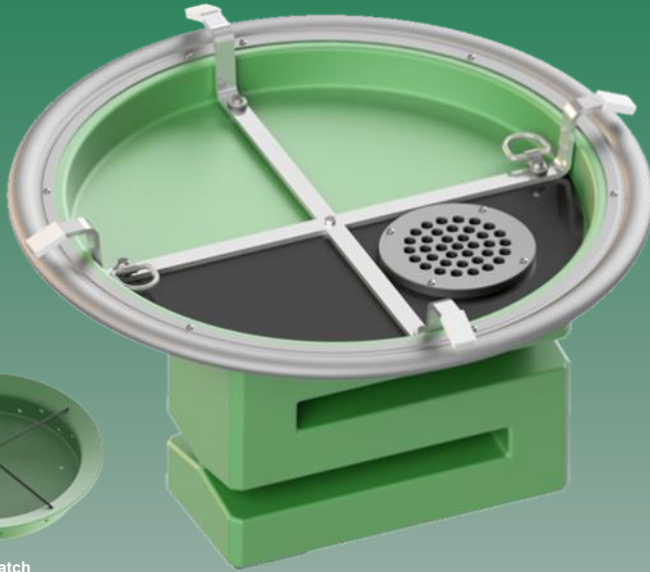
**Folding wing:**

- For the reduction in size for Insertion into 600 mm manholes
- Relaxation function in backwater from the bottom, prevents the floating of the system



Installation illustration

# Odor cushioning system Uni-AdSorber for shaft-manholes



Including dirt-catch

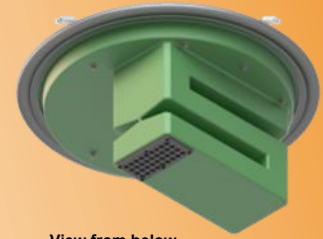
**Mounting cross:**  
Made of stainless steel

**Edge seal:** Sturdy execution

**Perforated plate:**  
Air outlet of the purified air

**Perforated plate:**  
Air inlet of the unpurified air

**Cascade corpus:**  
For the adsorption of odorants



View from below

## Areas of application:

- Municipal and industrial waste water facilities
- **Shafts to DIN 4034 with manhole cover according to DIN 19584 (special hangers possible on request)**
- **Uni-AdSorber-B** (B for Basic, the Base model) for **predominantly medium H<sub>2</sub>S loads**
- **Uni-AdSorber-HD** (HD for Heavy Duty, the high-performance version) for **extreme H<sub>2</sub>S loads**

## Features:

- Reduces odors with **self-regenerating „filter material“** ("filter material" don't need to be changed)
- Additional break down of odorants by colonization of microorganisms in the "filter material"
- **Easy installation and removal**
- Comes with special dirt-catch
- **Low maintenance, will only be cleaned with water**
- Permeable to water
- **Special sizes available on request**



Installation illustration



# Special mounting system Clamping ring

for shaft-manholes in combination with Uni-AdSorber

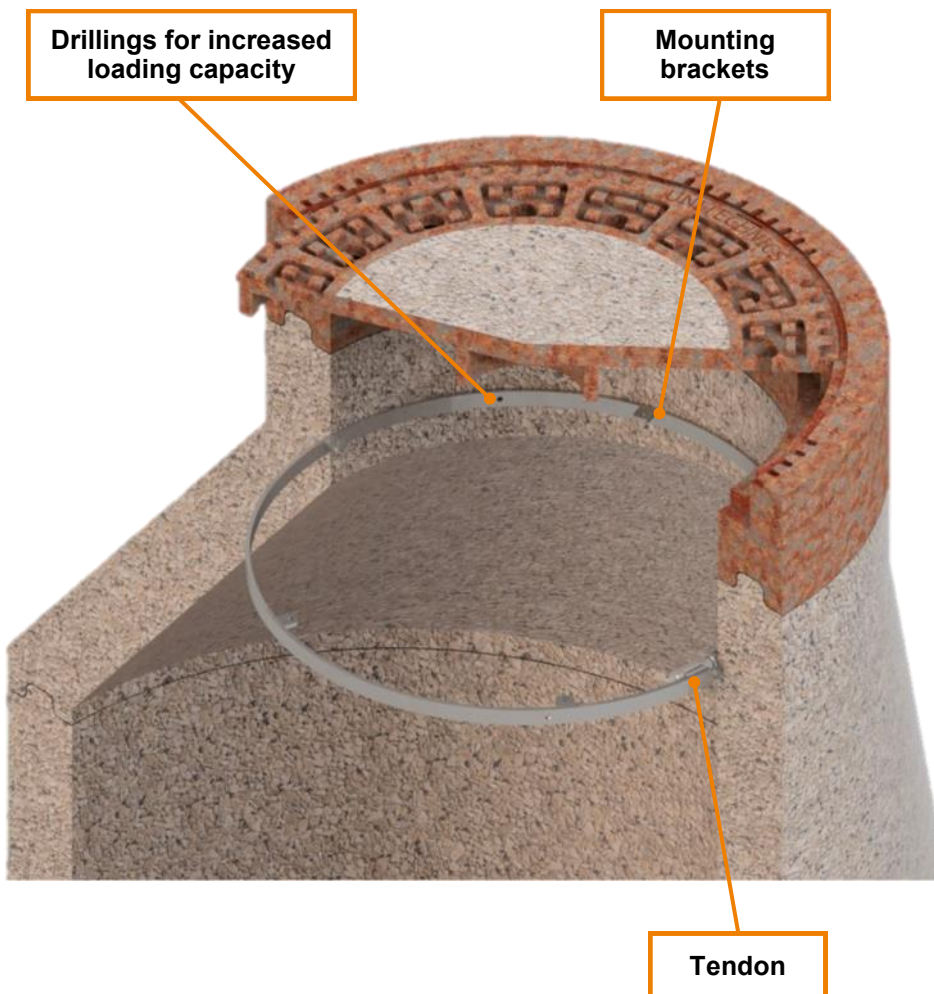


## Areas of application:

- Municipal and industrial waste water facilities
- Shafts to DIN 4034 with manhole cover according to DIN 19584
- Special Mounting if there are no regular hook-in options
- Fits Uni-AdSorber-B, Uni-AdSorber-HD, Uni-FreWa and FRV

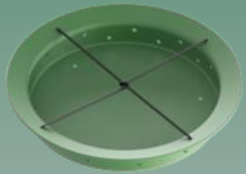
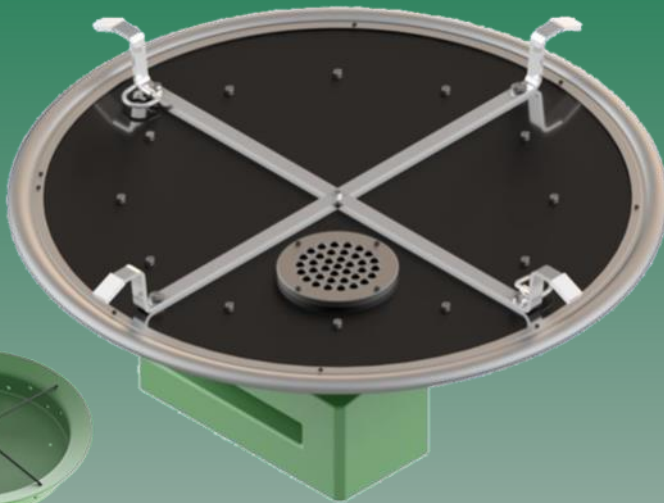
## Advantages:

- Additional fixation at the shaft through drillings possible
- Individual adjustment of depth
- Strong footing untill float heights of 0.5 m
- Easy installation and removal
- Low corrosion risk and longevity due to stainless steel construction



Installation illustration

# Odor cushioning system Uni-AdSorber DN800 für shaft-manholes

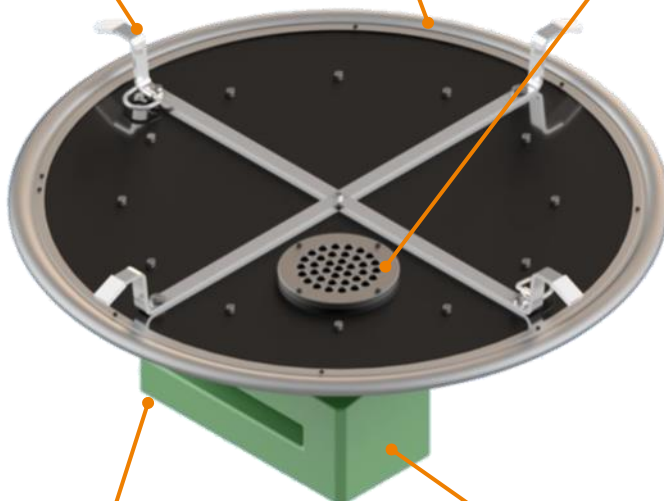


Including dirt-catch

**Mounting cross:**  
Made of stainless steel

**Edge seal:** Sturdy execution

**Perforated plate:**  
Air outlet of the purified air



**Perforated plate:**  
Air inlet of the unpurified air

**Cascade corpus:**  
For the adsorption of odorants



View from below

## Areas of application:

- Municipal and industrial waste water facilities
- **Shafts to DN800 with manhole cover (special hangers possible on request)**
- **Uni-AdSorber-B** (B for Basic, the Base model) for **predominantly medium H<sub>2</sub>S loads**
- **Uni-AdSorber-HD** (HD for Heavy Duty, the high-performance version) for **extreme H<sub>2</sub>S loads**

## Features:

- Reduces odors with **self-regenerating „filter material“** ("filter material" don't need to be changed)
- Additional break down of odorants by colonization of microorganisms in the "filter material"
- **Easy installation and removal**
- Comes with special dirt-catch
- **Low maintenance, will only be cleaned with water**
- Permeable to water
- **Special sizes available on request**



Installation illustration



# Odor trap system GVS-K3 for street gullies



## Areas of application:

- Municipal and industrial waste water facilities
- **Street gullies in accordance with DIN 4052, diameter 450 mm**
- Drain lines of street gullies / gullies DN 150

## Features:

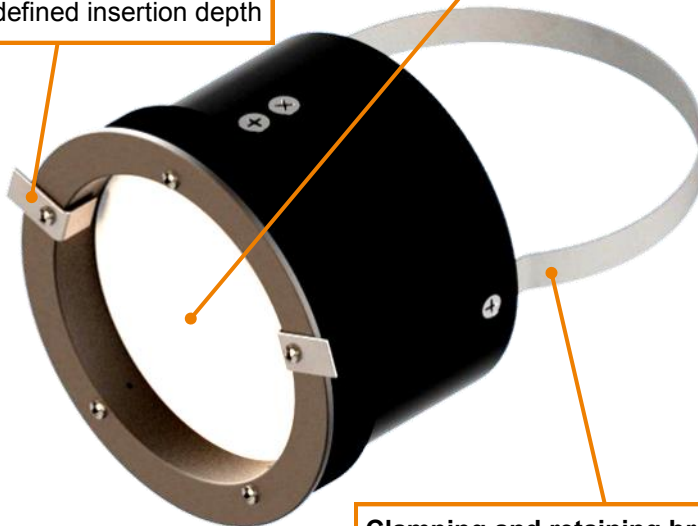
- **Effective prevention of odor by reducing the gas ventilation**
- **Unimpeded rainwater runoff**
- **Virtually maintenance-free**
- Secure fixation by internal stress and safety stop
- High efficiency
- **Low wear**, all materials used for permanent use in the wastewater
- **Easy installation and removal**
- High stability and quality
- **Special sizes available on request**

## Service / Maintenance:

UNITECHNICS recommends regular cleaning of flushed in leaves and sediments. The odor trap system GVS-K3 must be removed (see installation instructions) before channel maintenance.

**Stoppers:**  
For a defined insertion depth

**Odor flap:**  
Low risk of clogging



**Clamping and retaining bracket :**  
Ensures a tight fit of the system

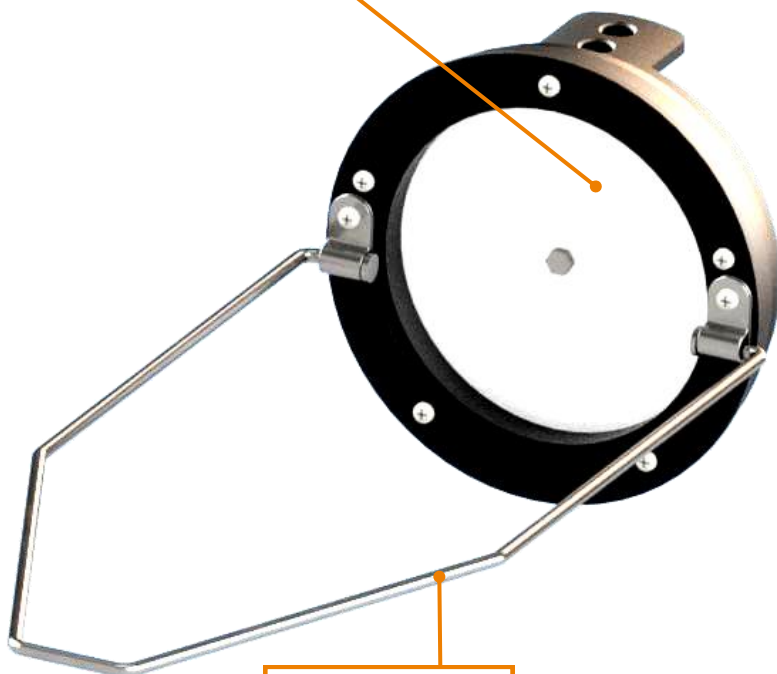


Installation illustration

# Odor trap system GVS-K3-R with backflow protection for street gullies



**Odor flap:**  
Low risk of clogging



**Tensioning bow:**  
Prevents slippage  
in case of backflow

## Areas of application:

- Municipal and industrial waste water facilities
- **Street gullies in accordance with DIN 4052, diameter 450 mm**
- Drain lines of street gullies / gullies DN 150

## Features:

- **Effective prevention of odor by reducing the gas ventilation**
- **Unimpeded rainwater runoff**
- **Virtually maintenance-free**
- Secure fixation by internal stress and safety stop
- **With backflow protection**
- High efficiency
- **Low wear**, all materials used for permanent use in the wastewater
- **Easy installation and removal**
- High stability and quality
- **Special sizes available on request**

## Service / Maintenance:

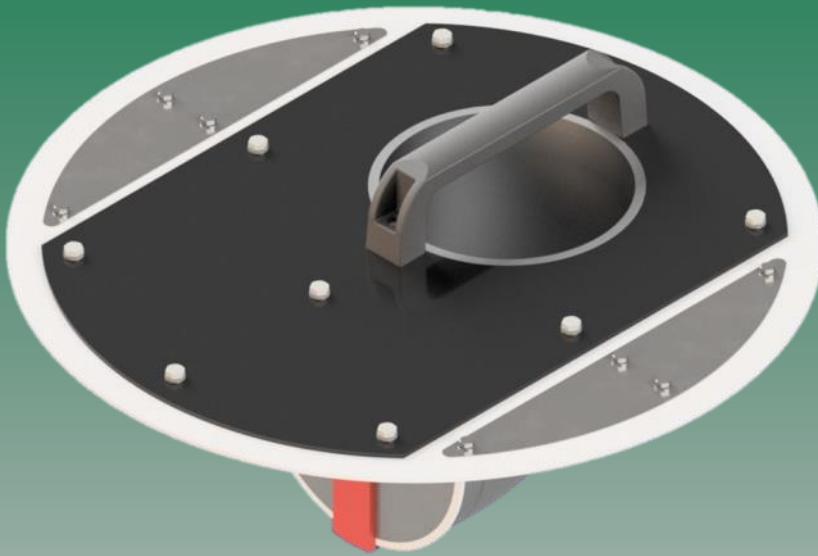
UNITECHNICS recommends regular cleaning of flushed in leaves and sediments. The odor trap system GVS-K3-R must be removed (see installation instructions) before channel maintenance.



Installation illustration



# Odor trap system GVS-450-150 for street gullies



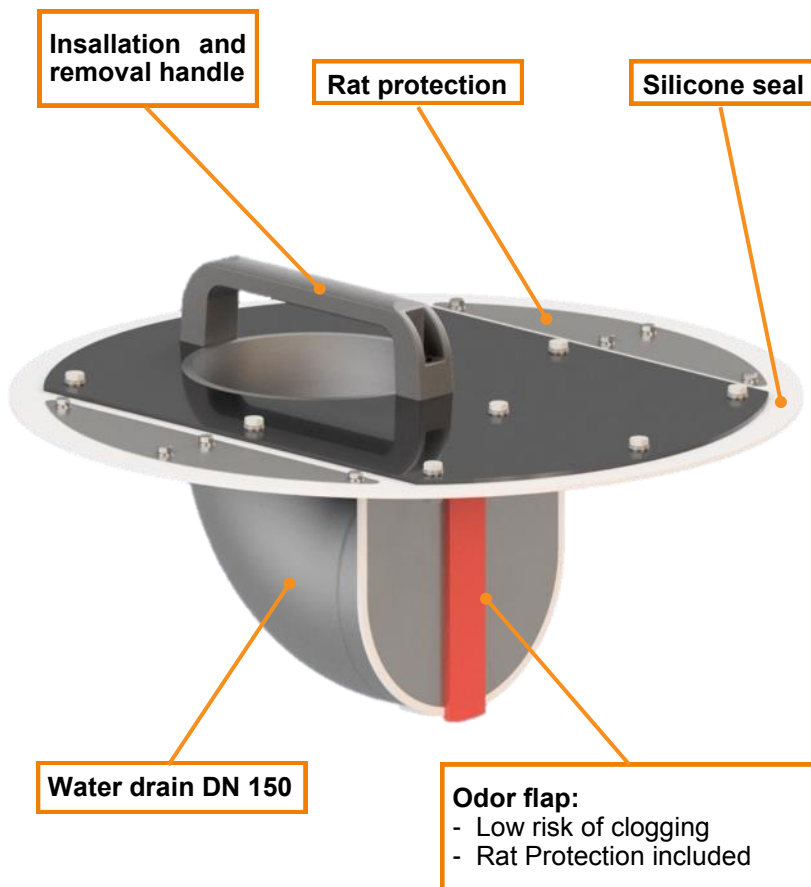
View from below

## Areas of application:

- Municipal and industrial waste water facilities
- Street gullies in accordance with DIN 4052, diameter 450 mm
- Installation directly under the dirt-catch

## Features:

- Effective prevention of odor by reducing the gas ventilation
- Unimpeded rainwater runoff
- Virtually maintenance-free
- Secure fixation by internal stress and safety stop
- High efficiency
- **Low wear**, all materials used for permanent use in the wastewater
- **Easy installation and removal**
- High stability and quality
- **Special sizes available on request**



Installation illustration

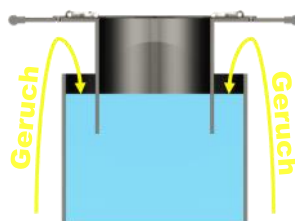
# Odor trap system GVS-D1 for street gullies



**Edge seal:**  
Sturdy execution

**Handle loop**

**Sediment stack space:**  
Large stack space for  
long maintenance inter-  
vals



Function according to the siphon principle.

## Areas of application:

- Municipal and industrial waste water facilities
- **Street gullies in accordance with DIN 4052, diameter 450 mm**
- **Installation directly under the dirt-catch**

## Features:

- **Effective prevention of odor**
- **Unimpeded rainwater runoff**
- Upper sealing plate for different attachments available
- **Virtually maintenance-free**
- High efficiency
- **Low wear**, all materials used for permanent use in the wastewater
- **Easy installation and removal**
- High stability and quality
- **Special sizes available on request**

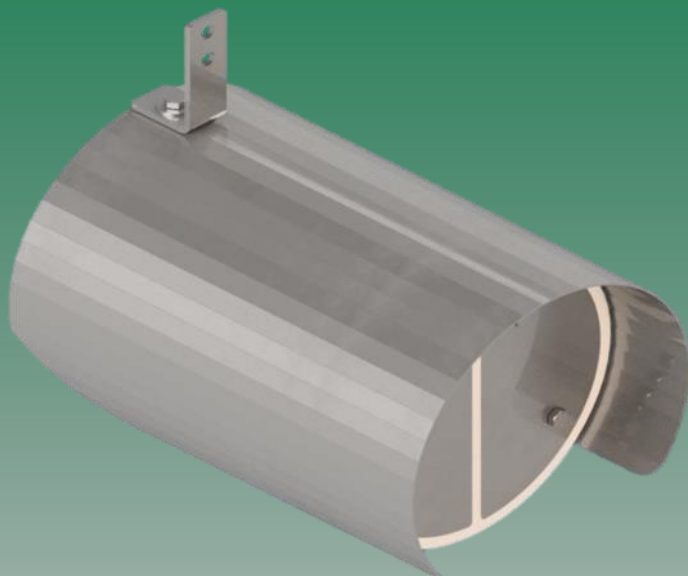


Installation illustration



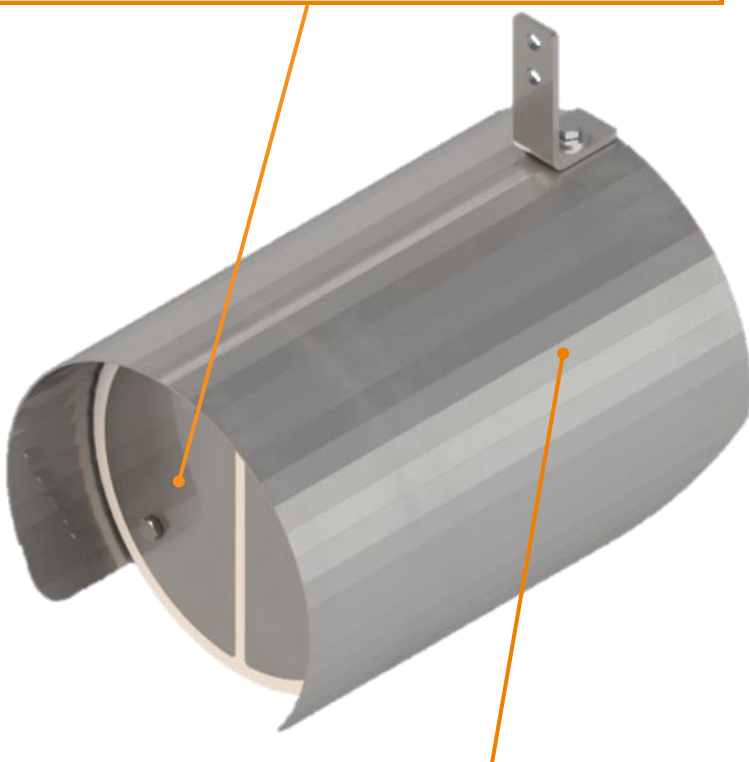
# Odor trap system GVK

for channel pipes and house connections

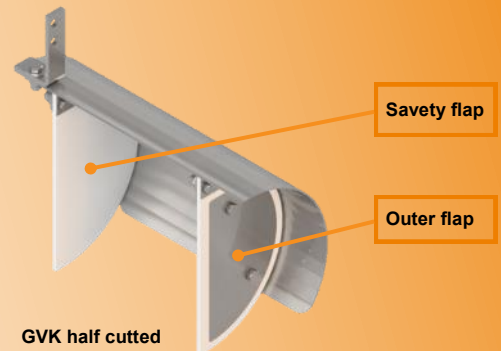


## Outer odor flap with rat protection:

- Opens and closes automatically, even at low flow volumes
- Stainless steel sheet prevents destruction of the flaps by rats
- Low risk of clogging



**Base body:**  
Available in two versions (PP or stainless steel)



## Areas of application:

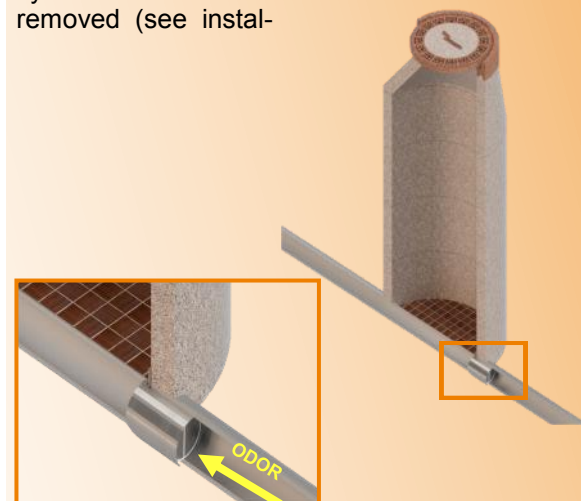
- Municipal and industrial waste water facilities
- **All channel pipes with diameters up to DN 500**
- Installation in outflow side of the channel connection of the manholes and house connection shafts according to DIN 4034
- Installation against the flow direction in a special design

## Features:

- **Effective prevention of odor by reducing the gas ventilation**
- **No hindrance of the wastewater flow**
- Secure fixation by internal stress and safety stop
- High efficiency
- **Low wear**, all materials used for permanent use in the wastewater
- **Easy installation and removal**
- High stability and quality
- **Special sizes available on request**

## Service / Maintenance:

UNITECHNICS recommends regular cleaning of flushed leaves and sediments. The odor trap system GVK must be removed (see instal-



Installation illustration

# Odor cushioning system GDP

for vent pipes of all kinds



**Attachment:**  
prevents slippage of odor  
damping cartridge

**Perforated plate:**  
Air outlet of the  
purified air

**Silicone seal:**  
Prevents the escape  
of untreated air

**Odor damping element:**  
Reduces odors with self-  
regenerating „filter materi-  
al“ („filter material“ don't need  
to be changed)

## Areas of application:

- Municipal and industrial waste water facilities
- Vent pipes of all kinds

## Features:

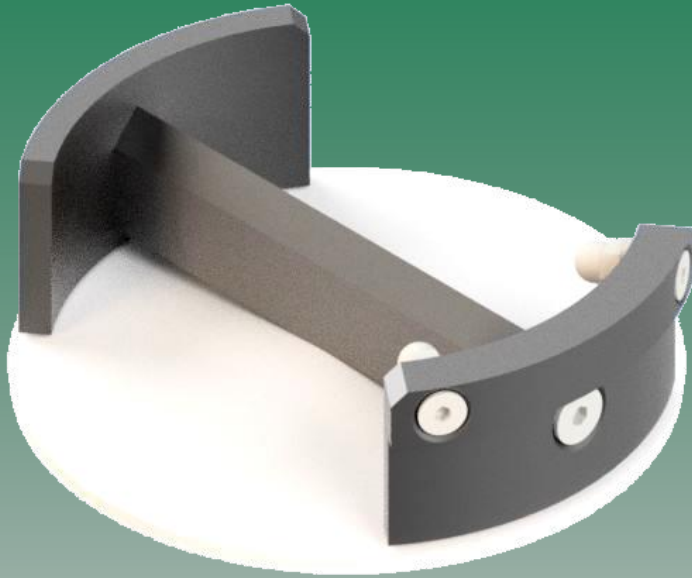
- Reduces odors
- **Adjustable** through various construction lengths
- **Easy installation and removal**
- "Filter material" don't need to be changed
- **Low maintenance**, will only be cleaned with water
- High stability and quality
- **Special sizes available on request**



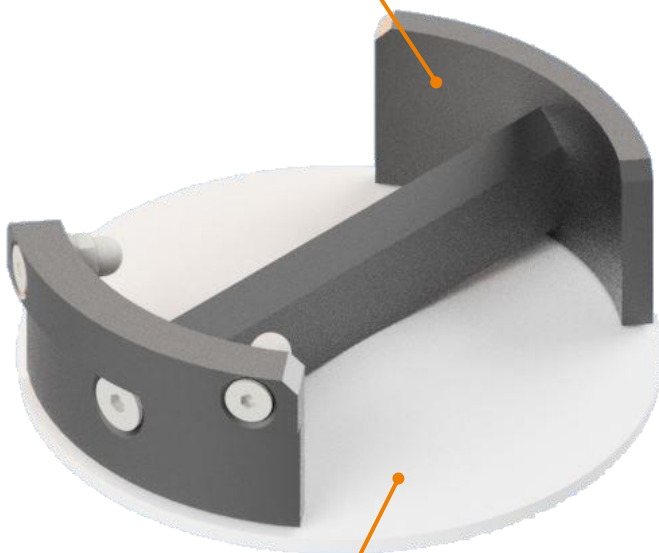
Installation illustration



# Odor cushioning system GVF-100 for rain downpipes



**Base body:**  
Prevents tilting or slipping



**Odor flap:**  
Opens and closes automatically in case of rain event

## Important information when ordering:

- Material of the rain downpipe (metal or plastic)
- Diameter of the rain downpipe (preferably inner diameter)
- Image of the inspection opening (installation location)



View from below

## Areas of application:

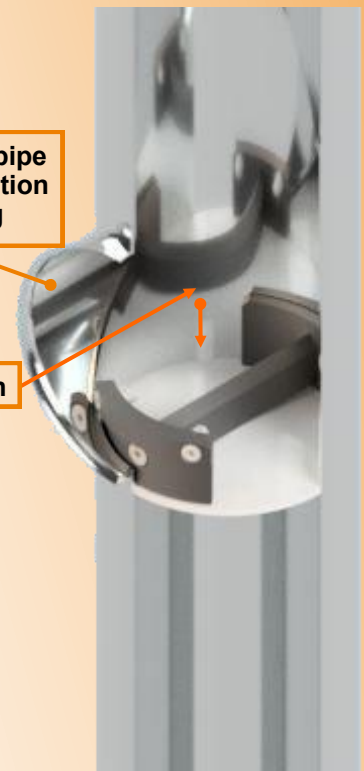
- Municipal and industrial rain downpipes with inner diameter of 100 mm
- Rain downpipes, connected to the mixing system

## Features:

- Reliable closure of the downpipe to rear ventilation of odors
- Low maintenance
- Slip resistant and stable
- Opens automatically when it rains
- High stability and quality
- Special sizes available on request
- Low risk of clogging

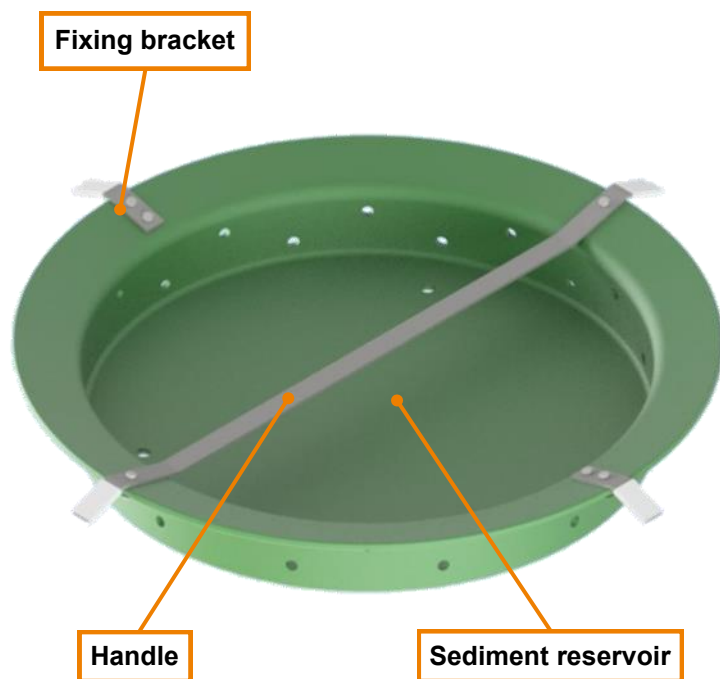
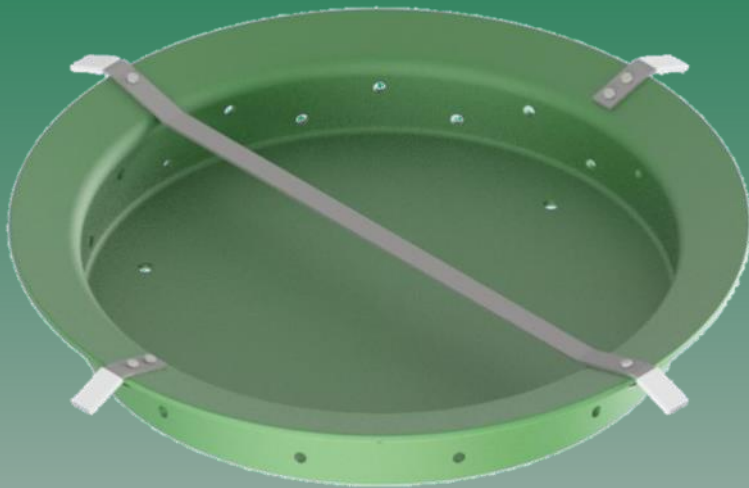
**Rain downpipe with inspection opening**

**Installation**



Installation illustration

# Corrosion resistant dirt catch SF-K for shaft-manholes



View from below

## Areas of application:

- Municipal and industrial waste water facilities
- Shafts to DIN 4034 with manhole cover according to DIN 19584
- Manholes with gatefold cover
- Shaft-manholes with a inner diameter of 625 mm

## Features:

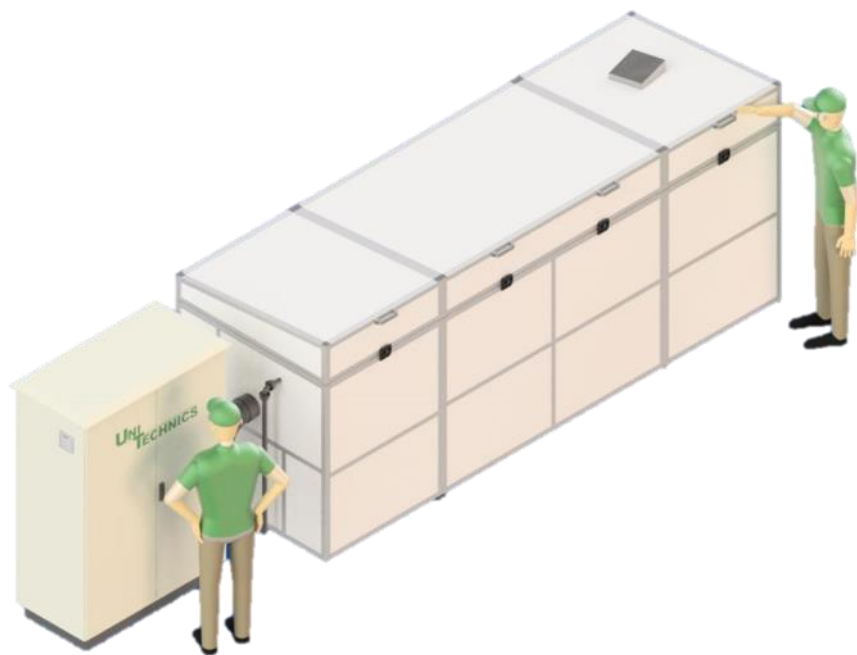
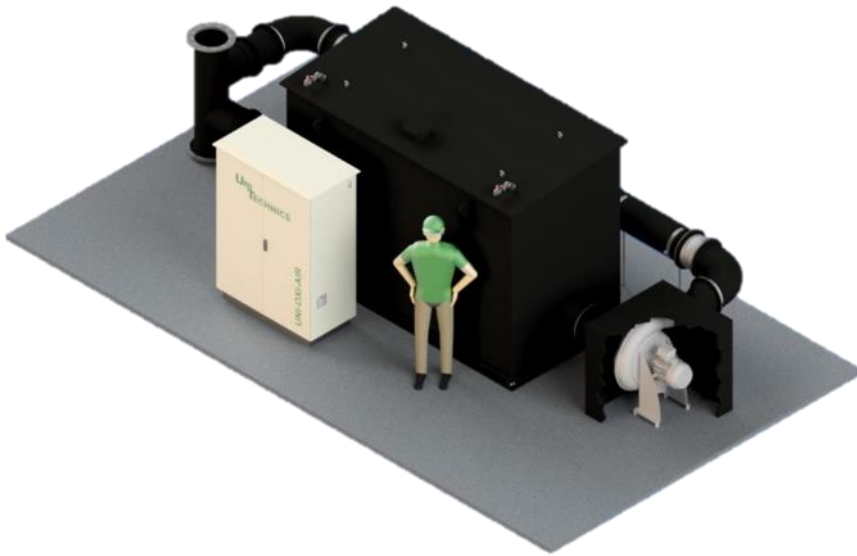
- Reliable seat in the manhole cover frame
- **Fulfills same requirements as conventional galvanized dirt-catches**
- Corrosion-resistant - **withstands chemically aggressive atmospheres**
- **Easy installation and removal**
- High stability and quality
- **Special sizes available on request**



Installation illustration



# exhaust air treatment UNI-AIR

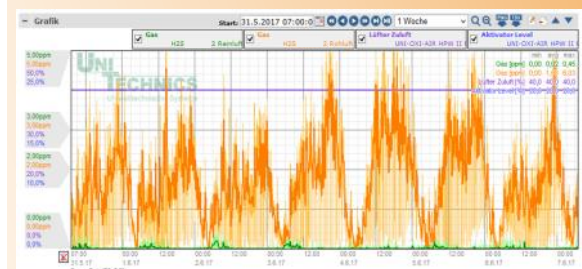


## areas of application:

- **pumping stations** of industrial and municipal wastewater treatment plants

## features:

- **no permanent consumables**
- **use of chemicals and other resources will be significantly reduced or even unnecessary**
- **waste is avoided**
- **low maintenance** necessary
- the highly effective system provides a significant improvement in air quality
- **very low energy consumption**
- **especially designed plant components for your application**
- **prevention of germs and fungi in the clean air**



**clean air**

**raw air**

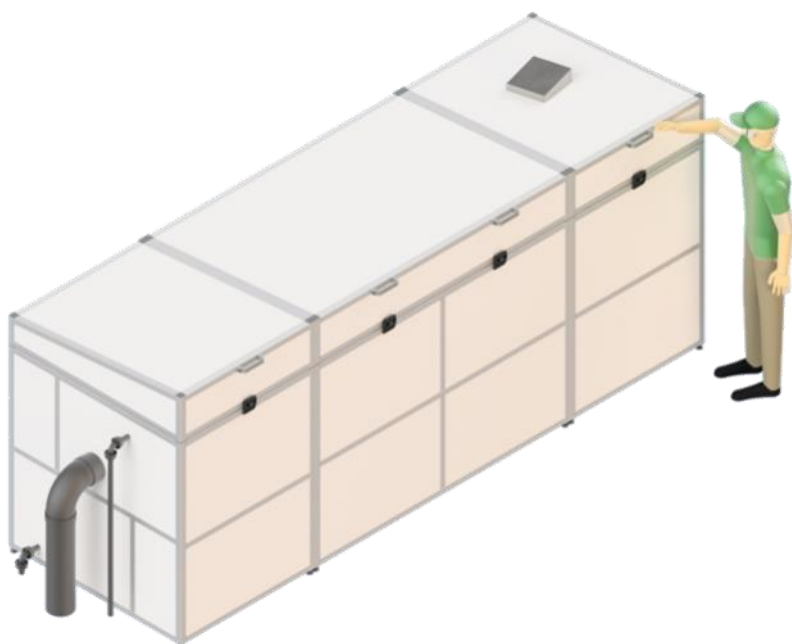
## the modules

### UNI-OXI-AIR the oxidation-module



The oxidation-module  
UNI-OXI-AIR can be used to support  
existing exhaust air treatment  
systems or can work independently  
if a reaction space is present.

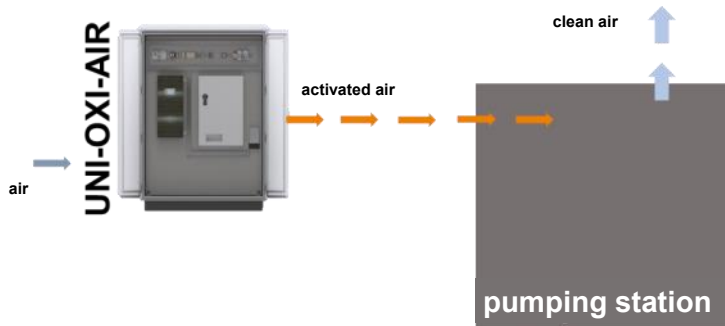
### UNI-ADSORB-AIR the adsorption-module



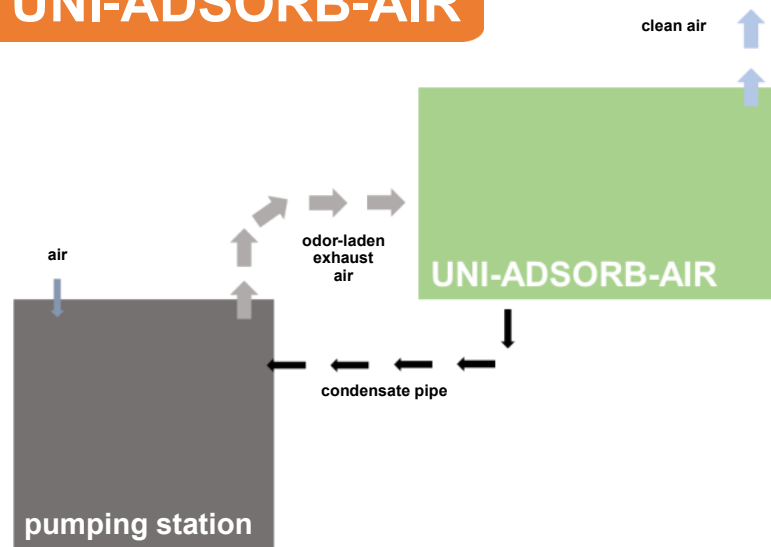
The adsorption-module  
UNI-ADSORB-AIR can be used sepa-  
rately at low loads. For the treatment  
of high loads there is the possibility  
of a combination of the UNI-ADSORB  
-AIR and the UNI-OXI-AIR.

# possible combinations and functional schemas

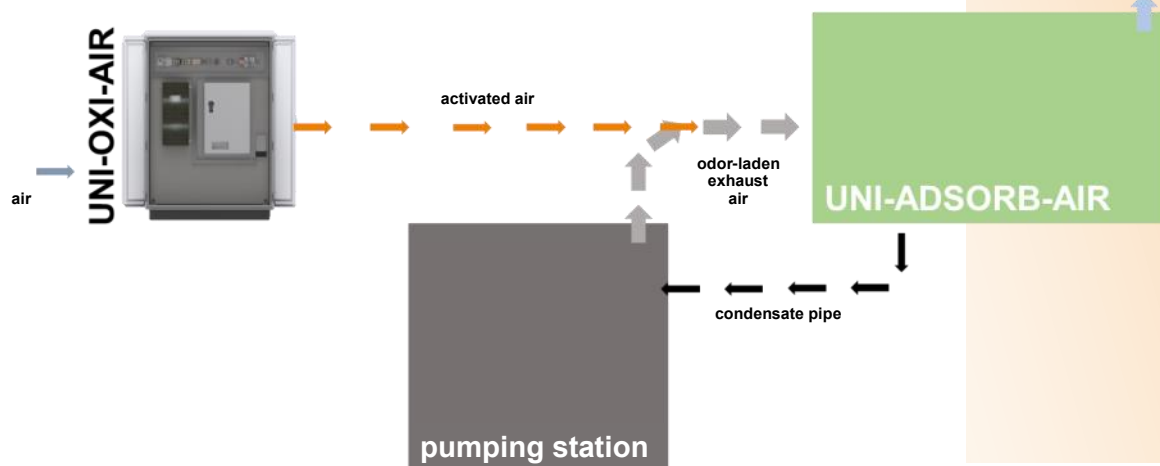
## UNI-OXI-AIR



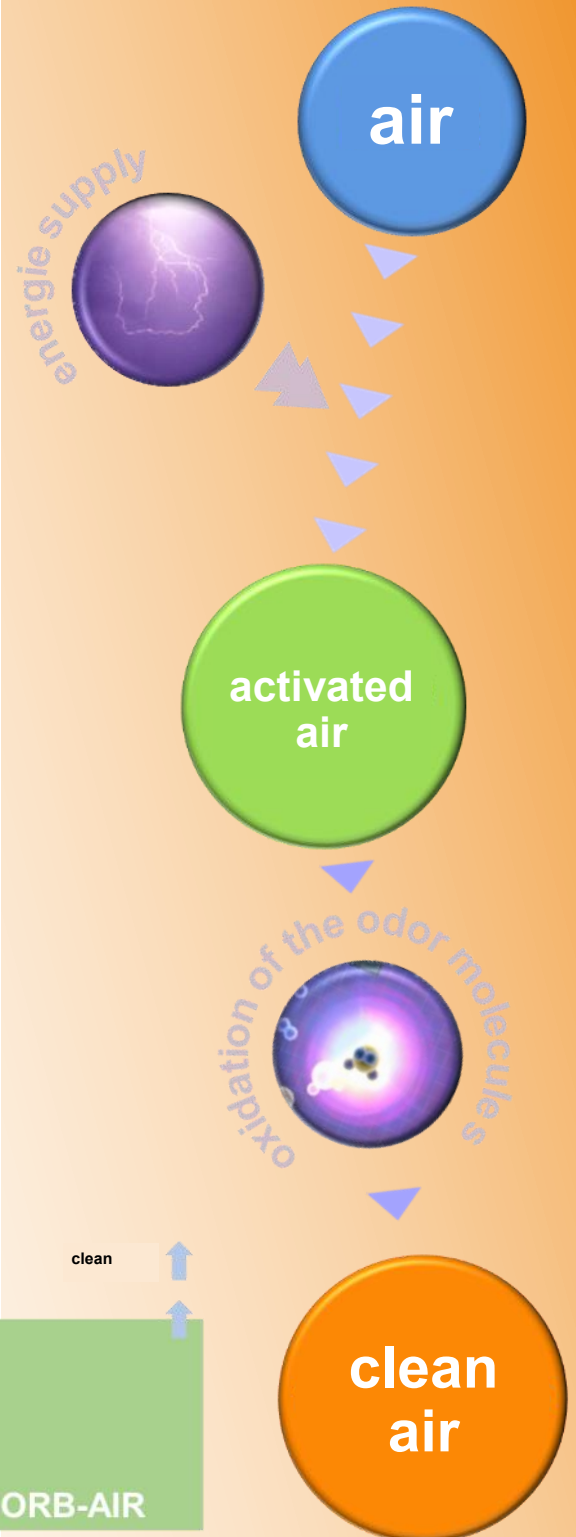
## UNI-ADSORB-AIR



## UNI-OXI-ADSORB-AIR



## mechanism of action



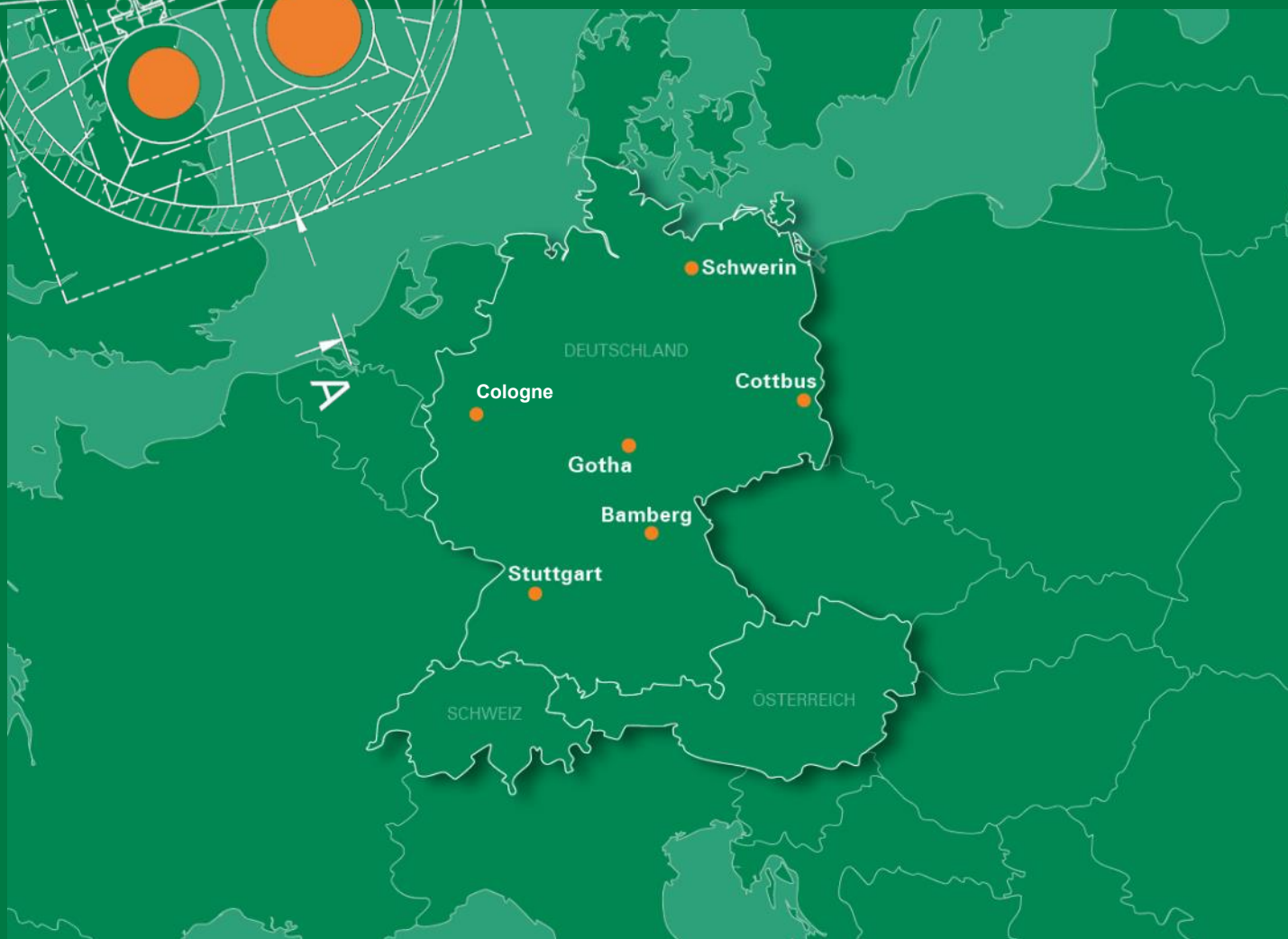




# UNI TECHNICS

INNOVATIONS FOR  
YOUR SEWAGE SYSTEM

ODOR | EXTRANEEOUS WATER | ENGINEERING



## UNITECHNICS KG

Headquarter

Werkstraße 717 • 19061 Schwerin

Phone 0385 343371-20 • Fax 0385 343371-31

info@unitechnics.de • www.unitechnics.de



Join us on YouTube, Facebook und Twitter.