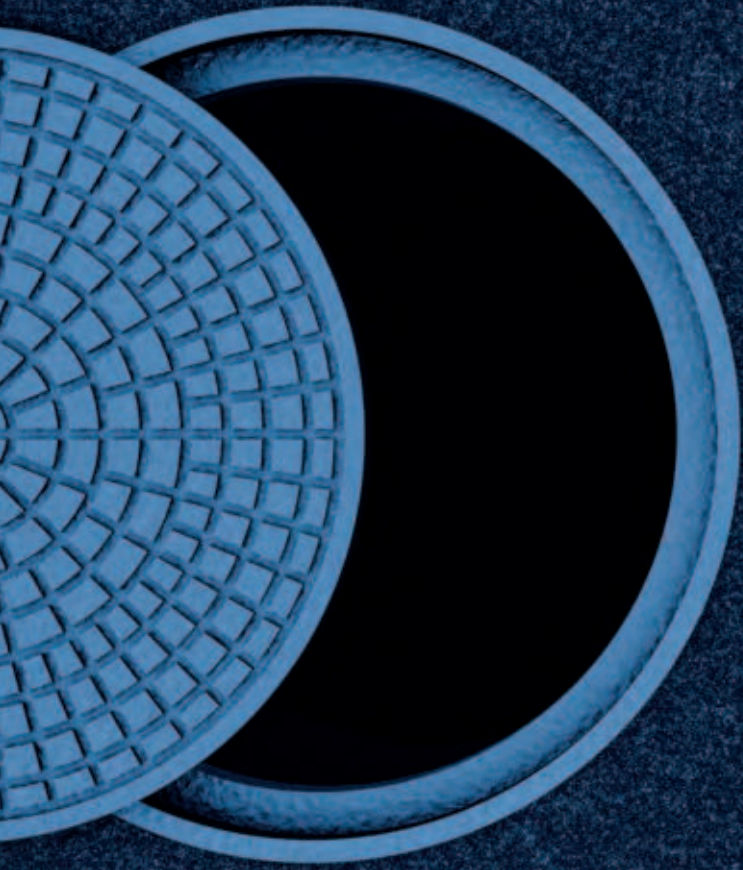


A photograph of a woman with blonde hair in a bun, wearing a blue denim jacket, leaning over to help a young child with a skateboard. The child is wearing a blue denim jacket and dark pants, sitting on the pavement with the skateboard in front of them. The background is a blurred outdoor setting with greenery and buildings.

**Simple, effective
and environmen-
tally friendly**

**SUSTAINABLE SOLUTIONS
FOR ALL ASPECTS OF ODOUR, EXHAUST
AIR AND EXTRANEIOUS WATER SYSTEMS**




For a better quality of life and a livable environment

Oodours have a major impact on the quality of life and work. We offer our customers personal assistance and advise them on an equal footing about sustainable solutions for odour, exhaust air and extraneous water systems. As a manufacturer, we have outstanding expertise in plastics manufacturing, bacterial fermentation and effective filtration technologies.

Working together with strong product and sales partnerships, we provide a response to individual requirements in municipal and industrial settings. For a better quality of life and a livable environment!

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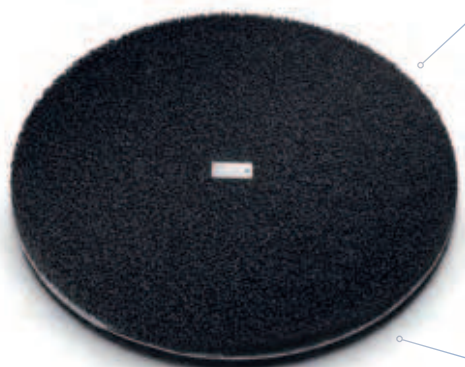
Linking society and the
waste disposal sector, we
can provide the optimum
solution for your needs.

COALSI triple action filtration

Find out
more about our
filters



Biochemical reactions in the sewerage system and in industry result in the release of unpleasant odours from sewers and exhaust air outlets. The environmentally friendly way of combating the stench is to send bacteria to war against other bacteria. COALSI hybrid mats, which are fermented with specific microorganisms, filter the malodorous substances so that the sewer can continue to “breathe”.



1 Biological

Microorganisms from the sewer air settle on the loosely textured PU mat. As it flows through, the exhaust air supplies the microorganisms with nutrients so activating them and allowing them to grow. As a result, hydrogen sulfides are effectively broken down and filter performance considerably boosted.

2 Physical

Certain substances are mechanically filtered and retained.

3 Chemical

Gas molecules are retained in the activated carbon material of the filter where they accumulate. The surfaces have a catalytic action and specific chemical substances have a buffering or absorbent effect.

The microorganisms metabolise the odorants, while the filters also have a chemical and physical action. The incorporated activated carbon plays an important role because this fine-pored carbon has a catalytic effect and so neutralises many odour components.

The hybrid mat, which COALSI fits as standard in its products, cuts contaminated exhaust air emissions by up to 90 per cent. The special filter mats are used for the tough cases, such a strong odours of grease, fish or hydrogen sulfide.

Because the special mats can also be used in series and in parallel, a suitable combination can be found for every odour situation and industry.

A combination of biological, chemical and physical methods is what makes the filters so effective.

UT30009
Activated carbon filter and siphon system



Purification of the exhaust air from the sewer is assisted by immobilised microorganisms.

UT30181 retrofit hybrid mat module
 for street drains



UT30050 hybrid mat
 for all COALSI systems
 Diameter: 443.0 mm



UT30248 special mat
 against hydrogen sulfide
 Diameter: 443.0 mm



UT30249 special mat
 against bases
 Diameter: 443.0 mm



UT30250 special mat
 against acids
 Diameter: 443.0 mm



Street filters

The solution
to street sewer
odours

The unpleasant smells coming from sewers on many days are due to bacteria which break down the organic components in wastewater into compounds such as hydrogen sulfide and ammonia – in other words, the typical wastewater odour. Microbially induced corrosion (MIC) can also cause secondary damage.

COALSI hybrid activated carbon filters put an end to odour emissions from sewer manholes and street drains.

COALSI street inlets are fitted with activated carbon filter mats with a hybrid triple-action filtration.

Natural microorganisms metabolise the most common odorants while simultaneously reducing the wear caused by microbially induced corrosion (MIC). The inserts are available in various versions and also as custom products to tackle every odour challenge.

Applications

The street sewer filter can be individually adapted for use in all common combined and divided systems, especially those without black/grey water and rainwater segregation.

Advantages of street filters

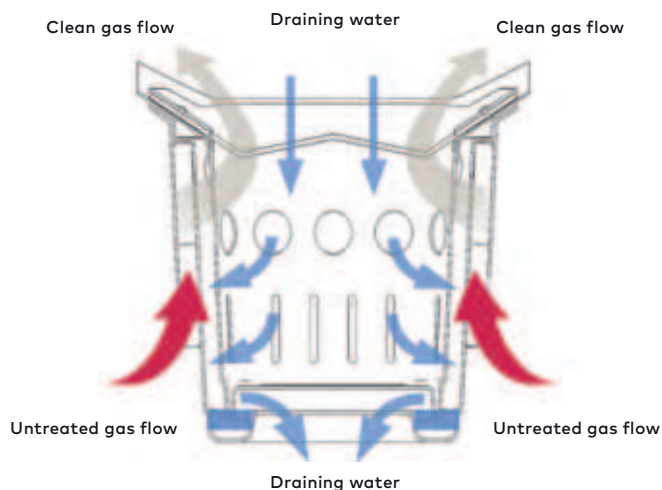
- Low capital costs
- Robust construction (low weight, easy to handle)
- Maximum possible filter area
- Reliable and simple to use
- Maximum service life
- Natural gas exchange
- Highly effective
- Environmentally friendly
- Many variants possible
- Quick to install, easy to handle

Puts an end to odour emissions from sewer manholes and street drains

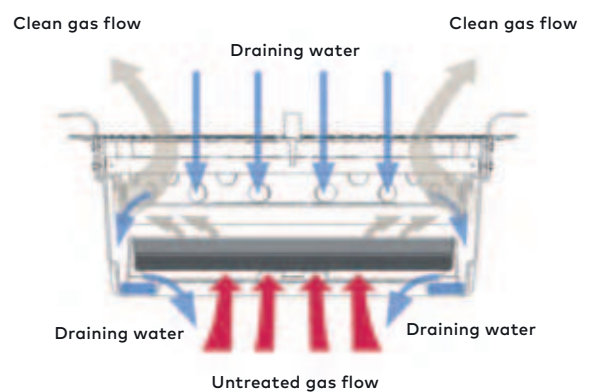
Street sewer filters and street drain filters

The hybrid activated carbon filter with its micro-biological backup puts an end to odour emissions from all common sewer manholes. The siphon system ensures a uniform distribution of the air stream while at the same time allowing water to flow

unimpeded past the filter into the sewer, so resulting in optimum ventilation of the sewer system and reliable, inexpensive and low-maintenance odour removal.

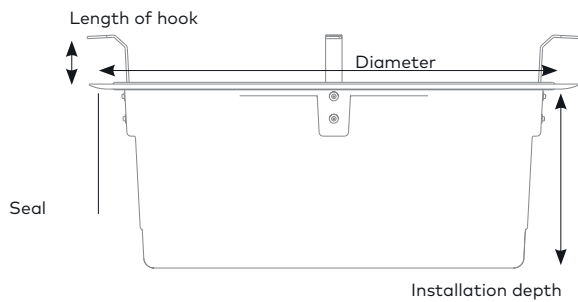


Street drain filter



Street sewer filter

Example structure



UT30145 "OS" street filter

Narrow seal for manholes with smooth concrete walls

Diameter	approx. 628 mm
Max. installation depth	approx. 277 mm
Length of hook	approx. 20 mm



UT30146 "OL" street filter

Wide seal for manholes with set-back concrete walls

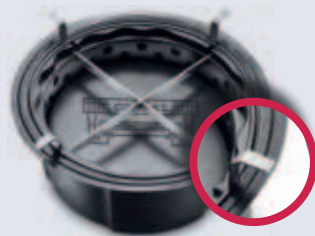
Diameter	approx. 672 mm
Max. installation depth	approx. 277 mm
Length of hook	approx. 30 mm



UT30040 "TL" street filter

Deep version, wide seal

Diameter	approx. 672 mm
Installation depth	approx. 317 mm
Length of hook	approx. 40 mm



UT30039 "TS" street filter

Deep version

Diameter	approx. 654 mm
Max. installation depth	approx. 307 mm
Length of hook	approx. 40 mm



UT30055 "800" street filter

Diameter	approx. 800 mm
Installation depth	approx. 277 mm
Length of hook	approx. 30 mm



UT30148 "20" street drain

Short version, segmented, rectangular
Seal to frame by means of soft rubber skirt

Clearance (LxW):	approx. 395 x 270 mm
Max. installation depth	approx. 313 mm



UT30160 "10" street drain

Short version, round
Seal to frame by means of soft rubber skirt

Dimensions	approx. 500 x 500 mm
Max. installation depth	approx. 247 mm



UT30090 "DK 315" street filter

Diameter	approx. 588 mm
Installation depth	approx. 628 mm



UT30100 "DK 425" street filter

Diameter	approx. 360 mm
Installation depth	approx. 335 mm



UT30131 "CH" street filter

Diameter	approx. 600 mm
Max. installation depth	approx. 286 mm
Length of hook	approx. 45 mm



UT30110 "DK 600" street filter

Diameter	approx. 590 mm
Max. installation depth	approx. 292 mm

Multi-chamber filters

The effective
solution
for severe
odour
nuisances

The COALSI hybrid activated carbon filters with triple action filtration can be used both in series and in parallel, which means that a suitable combination can be found for every odour situation and industry. The COALSI multi-chamber filter can accommodate up to eight mats and so almost completely neutralise

malodorous gases. The modular structure of the filter elements means that the systems can be operated as required in parallel or series, with or without a fan, as a complete multi-chamber filter.

Advantages of multi-chamber filters

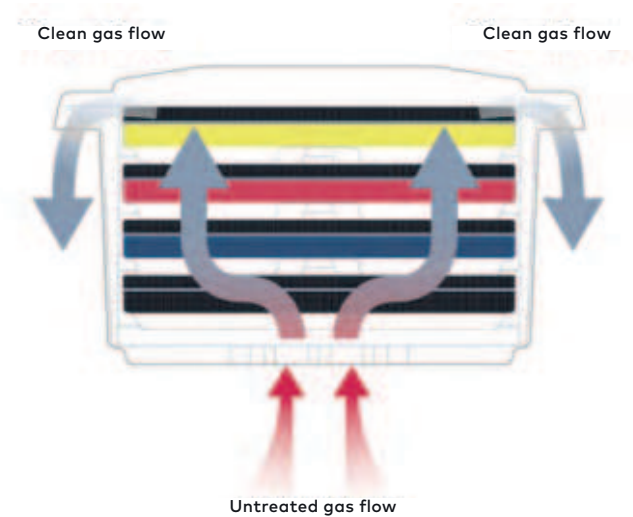

- Low capital costs
- Robust construction (low weight, easy to handle)
- Adaptable to volumetric flow rate
- Reliable and simple to use
- Maximum service life
- Closed system eliminating the need for additional moistening
- Natural gas exchange
- Environmentally friendly
- Many variants possible

- Custom accessories available
- Can be used for both passive and active venting.

Applications

For example pumping and lifting stations, refineries, milk and meat processing, breweries

Some sample applications

UT30120 "EST" multi-chamber filter

Diameter	approx. 616 mm
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UT30122 "MST" multi-chamber filter

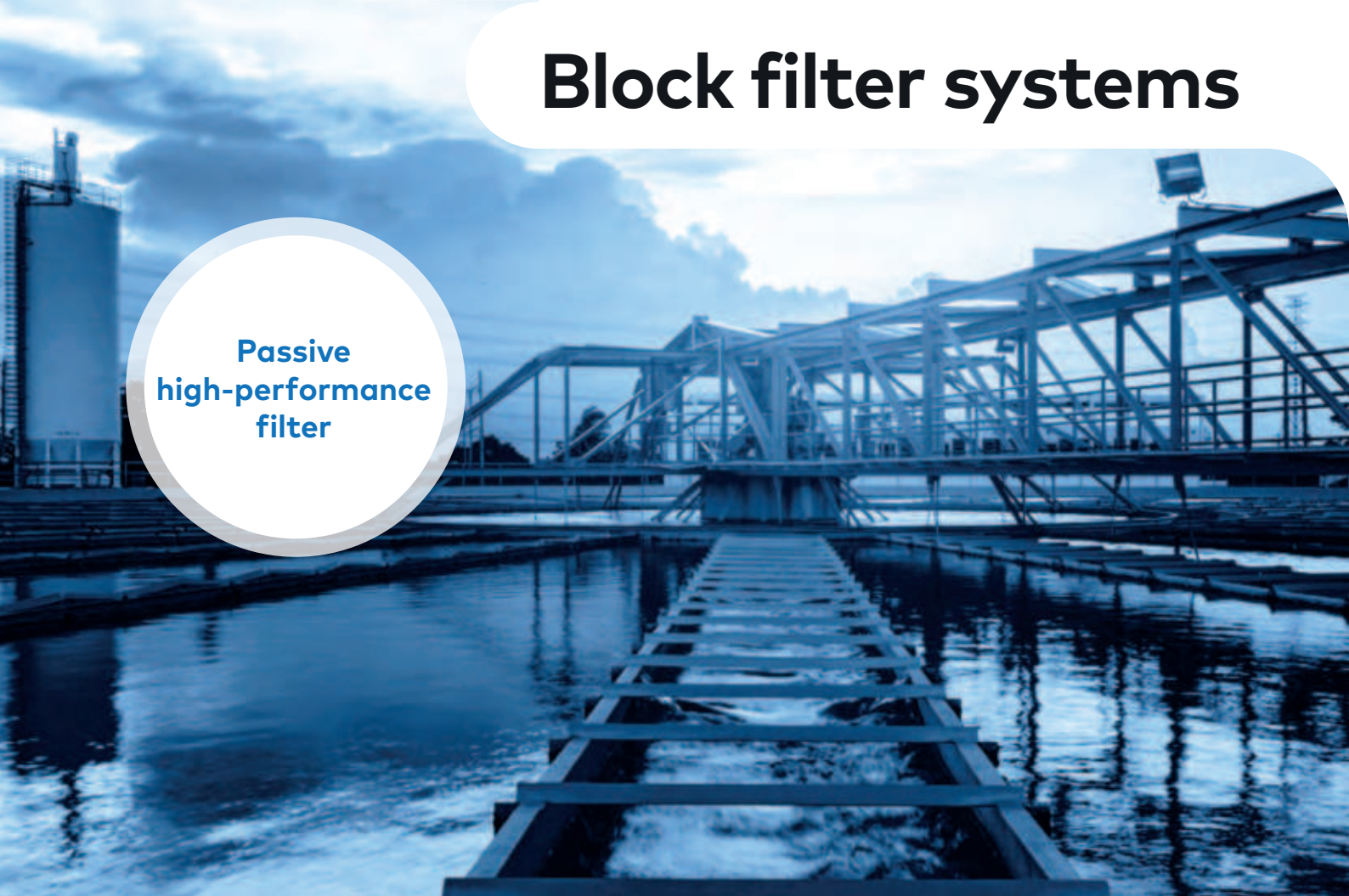
Diameter	approx. 616 mm
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UT30124 "MSTD" multi-chamber filter

Diameter	approx. 586 mm
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Block filter systems



Passive
high-performance
filter

Many waste disposal and agricultural operations, such as sewage treatment plants and biogas plants, have to tackle severe odour nuisances which are not only unpleasant, but above all, harmful to personnel. The principal breakdown products of organic biomass are carbon dioxide and methane.

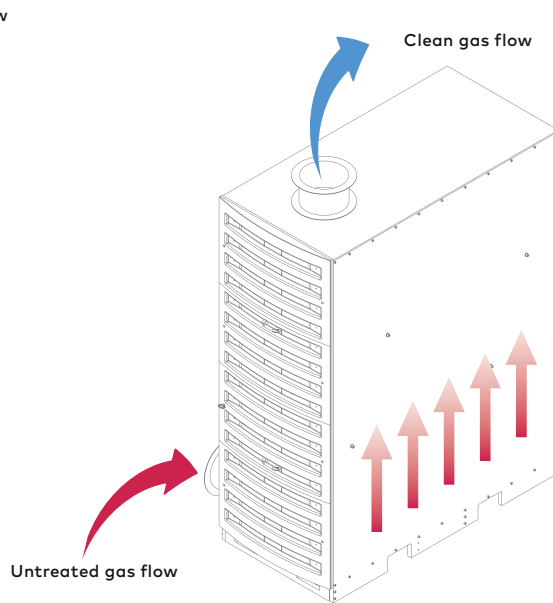
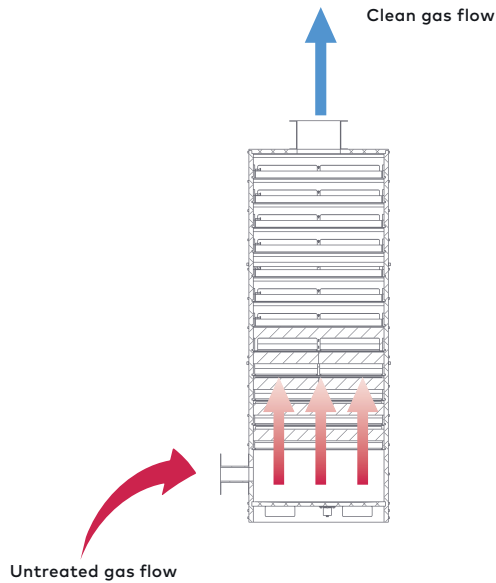
The new COALSI block filter system purifies between 800 m³ and 2,800 m³ of exhaust air per hour and so almost completely neutralises odours. The particular advantage of the block filter system is that it operates passively and so requires neither an electronic controller nor even an electrical connection.

The COALSI activated carbon filters use a triple action filtration system which combines biological, chemical and physical methods. The exhaust air to be purified is passed in parallel through all the filter elements and, once filtered, is discharged through an exhaust air duct. All the filter elements – 12 layers of 4 mats each - have the same flow conditions, so ensuring uniform filter use.

Filters are very simply changed by pulling out the drawers and replacing the mats. The low-maintenance block filter system, which is supplied ready for connection, takes up around 2.3 m² of space.

Advantages of the block filter system

- High filter performance on an area of only approx. 2.3 m²
- No electrical connection required



UT31400

For passive operation, no electronic controller.
Forkliftable.

H × W × D	approx. 2,600 mm × 1,100 mm × 2,100 mm
Weight (operational)	approx. 930 kg
Filter:	12 layers of 4 mats each of dimensions 450 mm × 450 mm × 80 mm
Air inlet:	DN 300
Air outlet:	DN 200

The
powerhouse
for industrial
exhaust air

Odours from industry and waste disposal activities are unpleasant and affect well-being. Depending on their concentration, they can even pose risk to health.

COALSI Volumenmax effectively eliminates particularly severe odour nuisances. A heavy-duty powerhouse, it reliably extracts foul-smelling gases from sewers and largely neutralises malodorous substances.

This high-performance filter is used not only for pumping stations, transfer points or sewer man-holes, but also for untreated contaminated gases in industry. This makes it the ideal solution for malodorous large-scale systems in municipal and industrial settings.

Advantages of Volumenmax

- Capital cost savings by avoidance of corrosion damage
- Reduction in costly additives for supplying oxygen
- Gas throughput up to approx. 3,500 m³/h
- Effective odour retention
- Integrated self-regulating heater
- Long service life and low maintenance
- Small footprint (approx. 2.90 m × 2.90 m)

Applications

Local government	Food processing	Waste disposal	Other industries
Pumping stations	Abattoirs	Residual and bio-waste transfer facilities	Papermaking industry
Sewage treatment plant screening building and sludge treatment	Fish processing industry	Food waste processing and transfer facilities	Leather processing
Large diameter sewers	Breweries	Waste oil processing	and many others
Foul water holding channels and storage basins	Fruit juice production	Carcase rendering	
Culvert vents	Milk processing	Biogas plants	

The Volumenmax is directly connected to the air space from which the air/gas mixture is to be extracted.

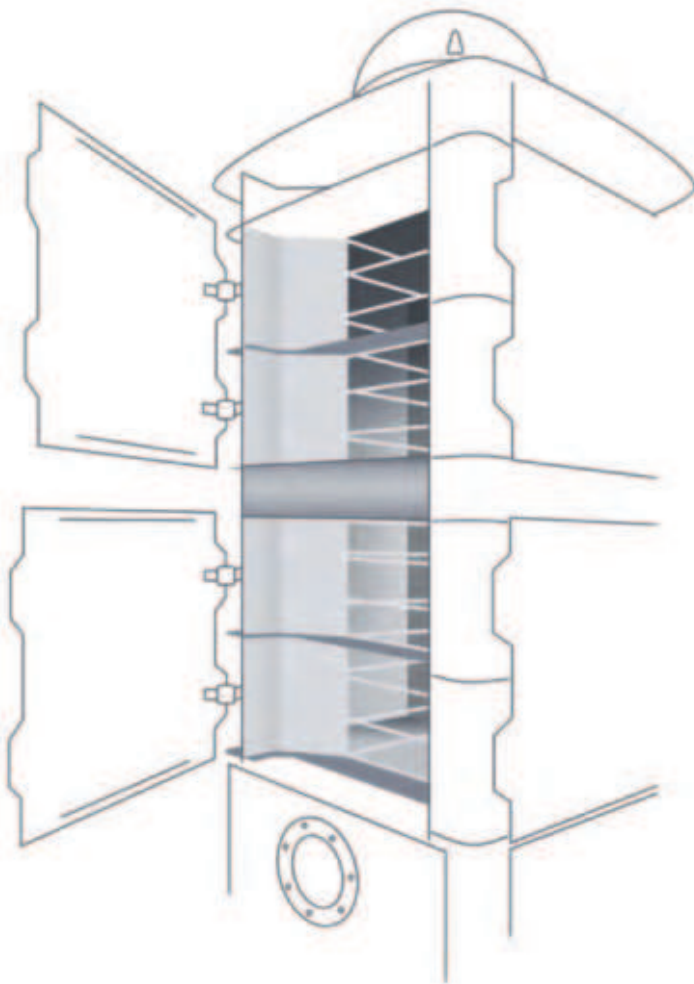


Principle of operation: Volumenmax

The exhaust air to be purified is heated in the heater and drawn through the filter elements by the suction from the fan unit. The resultant purified air is blown out via the top of the device. The H₂S content of the purified air is monitored by sensor.

This level of performance also ideally suits the Volumenmax for applications such as abattoirs, sewage treatment plants and similar malodorous industries.

Effective
and
environmentally
friendly



The activated carbon filter inserts may be accessed via the doors and can be replaced at any time. The purified air/gas mixture passes into the open air via the top of the device.

The Volumenmax is the ideal solution for large-scale municipal and industrial plants.

The COALSI Volumenmax was developed specifically to provide effective protection against unpleasant and harmful odours from sewers, agriculture and industry.

UT31500 COALSI Volumenmax

The Volumenmax is based on tried and trusted COALSI filter technology.

The product has an integrated multistage heating system which stabilises air humidity to ensure optimum system operation.

Air volumes of up to approx. 3,500 cubic metres per hour are filtered.



Height x width x depth of Volumenmax without fan	3210 x 1540 x 1620 mm
Height x width x depth of Volumenmax with fan	3760 x 1540 x 1620 mm
Width x depth of Volumenmax footprint	2840 x 2920 mm
Total weight	1650 kg
Volumenmax set-up	vertical/horizontal
Space around Volumenmax for maintenance work	min. 1300 mm
Operating ambient temperature	+5°C to +40°C
Untreated gas temperature (min./max.)	5–38°C
Clean gas temperature (min./ max.)	5–38°C
Untreated gas composition	atypical, but not biologically toxic air

The system solution for extraneous water

Hheavy rain or flooding can quickly overwhelm the capacity of sewers and sewage treatment plants. The Aquastop street sewer insert prevents excessively rapid and uncontrolled inflow of water into the sewer system. COALSI Aquastop is straightforward to fit underneath the manhole cover in all common manhole frames.

Optional ventilation additionally prevents an anaerobic atmosphere in sewers. This generates considerable savings in treatment costs. In the case of divided systems, an extraneous water seal prevents inflow of rainwater into the foul water sewer.

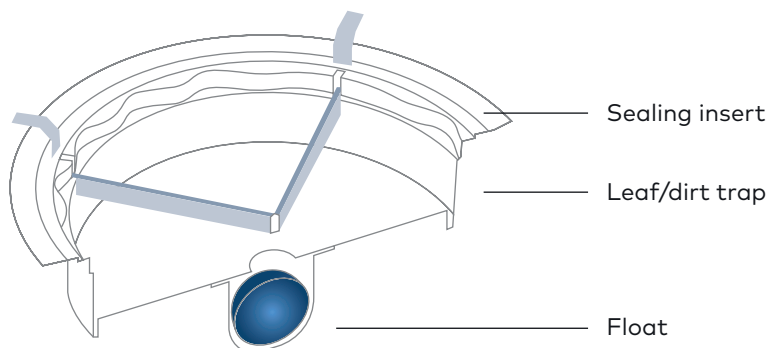
Advantages of Aquastop

- Low capital costs
- Robust construction (low weight, easy to handle)
- Available vented and unvented
- Reliable and simple to use
- Environmentally friendly
- Many variants possible

Applications

Applications include all common combined and divided systems and any underground systems where little or even no water penetration can be tolerated. Custom solutions are available on request.

Example structure of an Aquastop insert



Optional ventilation system



UT30067 Aquastop "mB"
vented

Diameter	approx. 628 mm
Installation depth	approx. 259 mm
Length of hook	approx. 40 mm



UT30070 Aquastop "oB"
unvented

Diameter	approx. 592 mm
Installation depth	approx. 167 mm
Length of hook	approx. 40 mm



UT30075 Aquastop "TmB"
vented, deep version

Diameter	approx. 628 mm
Installation depth	approx. 289 mm
Length of hook	approx. 60 mm



UT30076 Aquastop "ToB"
unvented, deep version

Diameter	approx. 592 mm
Installation depth	approx. 197 mm
Length of hook	approx. 60 mm

The simple
solution for
vent pipes



Polylok filters are end-of-pipe filters installed directly on vent pipes (e.g. for roof vents).

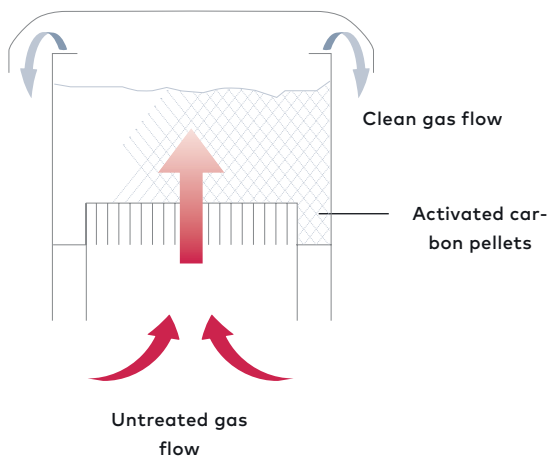
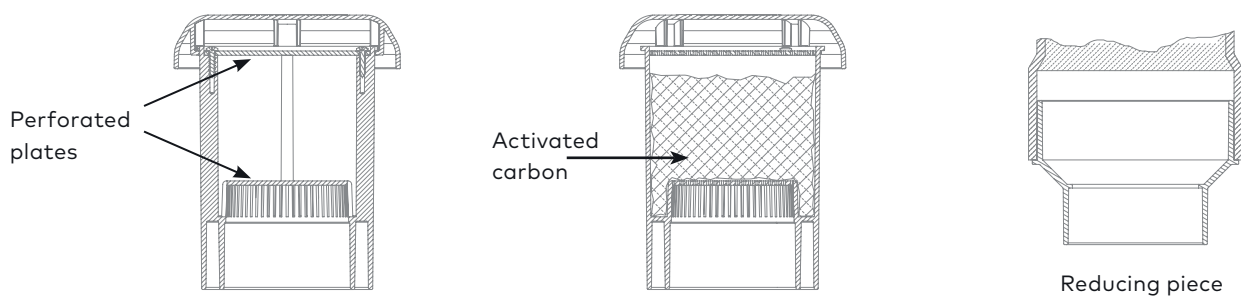
Filtration is provided by a simple bed of activated carbon pellets. These are passive filters which are only exposed to gas pressure.

Applications include any pipe ends (e.g. private sewage treatment plants, settling tanks or roof vents).

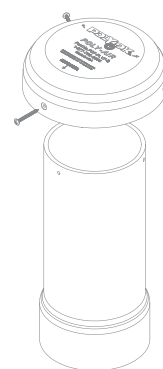
Advantages of the Polylok filter

- Compact size
- Quick to install
- Simple replacement of activated carbon pellets
- Low capital costs

Principle of operation: Polylok



Mesh bag containing activated carbon pellets



Housing

UT30233 Polylok "150" end-of-pipe filter

Diameter	168 mm
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UT30232 Polylok "100" end-of-pipe filter

Diameter	121 mm
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COALSI in use

Citizens in Hockenheim can breathe easy again



When residents of the town of Hockenheim complained about sewer odours, the authorities took swift and decisive action: the civil engineering department drew on its positive experience from previous trials of COALSI activated carbon filters and identified a need for 60 inserts. Municipal staff themselves installed the inserts, a task which took only ten minutes per unit. The easily stored filter mats are even quicker to change. One nice side effect of the filters is that they don't just neutralise odours but they also save costs in terms of preventive maintenance.

"Our experience with sewer filters has been positive and we haven't had any complaints since."

*Reiner Lenz, civil engineering department,
Town of Hockenheim*



Find out more



Volumenmax in Germany, Landstuhl Rammstein Miesenbach

In August 2022, a double system of the Volumenmax from COALSI was installed. Our wastewater treatment plant has a monthly wastewater inflow of 125,000 m³, so a generous design with a wide view and a large filter area were decisive factors for us.

The Volumenmax impressed us with its large filter capacity. The system completely fulfilled our expectations. The Volumenmax runs unobtrusively and correctly, which contributes to our complete satisfaction. I therefore recommend COALSI filter technology without reservation.



Find out more

We promise a sustainable partnership.

We offer local authorities and industrial companies sustainable solutions in all aspects of odour, exhaust air and extraneous water systems.

Integrated COALSI system solutions don't only make life and work easier but also complement one another.

We offer our customers personal and individualised advice and, of course, we can also provide custom products.



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