
ABSAUGWERK
real. better.

The WERK

As a manufacturer of industrial extraction technology, we strive for a clean and healthy working environment. Our strength lies in the in-house development and production of customised extraction systems designed to protect employees, machines and workpieces.

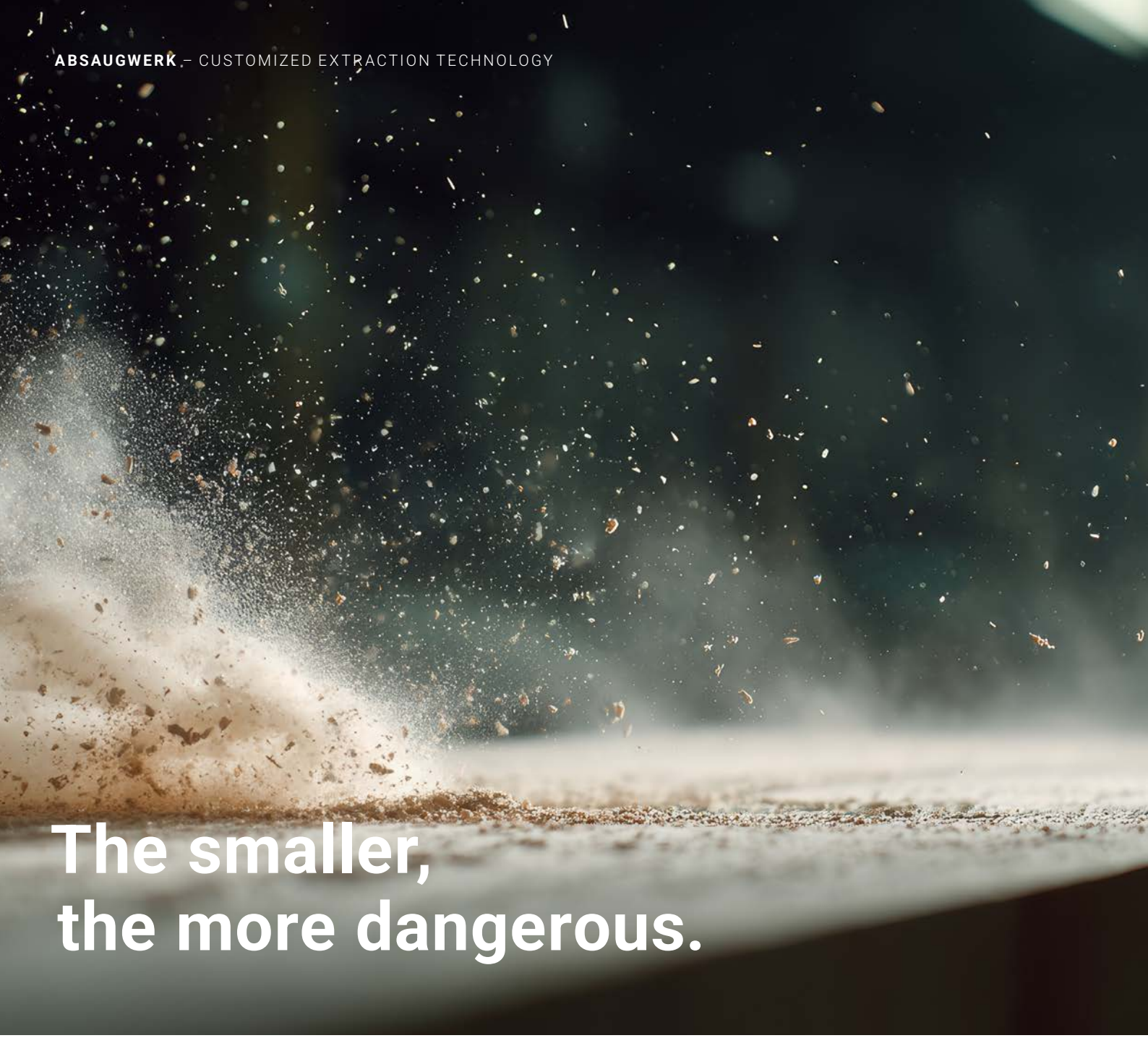
From industrial dedusters and oil mist separators to complete hall extraction systems, we offer a comprehensive portfolio of solutions. We combine capture elements, extraction units and pipe systems into an integrated overall system that sets new standards in terms of energy efficiency and performance. In the field of explosion and fire protection, we are one of the few providers that fully meet all legal requirements and are able to ensure safe operation. With our many years of expertise, we develop special solutions for companies of all sizes and across all industries.

The production of our high-end systems takes place at our own WERK. Here, quality and precision are our top priorities. We support our customers throughout the entire service chain – from initial consultation through to installation and beyond. This ensures that their systems always operate at optimum performance.

Our network is particularly close to our hearts. Built on honesty and trust, we create long-term partnerships that lead to shared success.

»People, as customers, partners or employees, are always at the heart of our company.«

Michael Werz, Managing Director



The smaller, the more dangerous.

PROBLEM

At first glance, the air in the workplace appears clean. Nevertheless, it has been proven to contain particles that are neither visible nor detectable by smell. Depending on the substance, particle size, and concentration, acute irritation, damage to the respiratory tract, and, in the long term, serious illnesses may be promoted. The World Health Organization *(WHO)* points out that airborne dust in the workplace can directly lead to occupational diseases, permanent health damage, and even fatalities.*

Without targeted capture, emissions spread uncontrollably throughout the work area and settle on floors, machines, and products.

The working environment becomes more slippery, the risk of fires or explosions increases, sensitive machine components wear out more quickly, and ultimately product quality suffers. In addition, increased maintenance effort, more frequent cleaning intervals, and unplanned downtime cause additional costs.

Airborne contamination is therefore a decisive factor for the safety of your employees, for stable processes, and for consistent product quality.

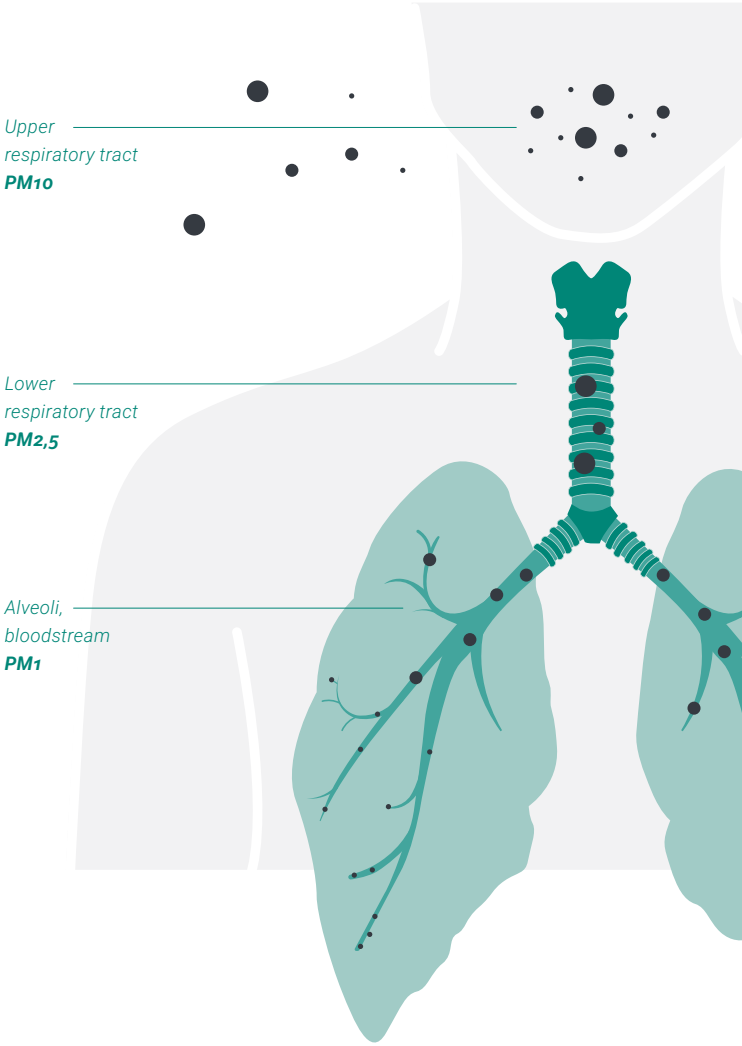
** Source: World Health Organization (WHO): Hazard prevention and control in the work environment: Airborne dust, WHO/SDE/OEH/99.14*

WHAT WE INHALE

Airborne emissions in the workplace are as diverse as the industrial processes from which they originate. They differ not only in their chemical composition, but above all in particle size, flow behavior, and their effect on the human body.

The finer a particle, the deeper it can penetrate into the respiratory tract and the greater the potential danger. Coarse dusts, for example from wood or metal processing, are often visible and settle relatively quickly. Vapors, aerosols, oil mist, and fumes, on the other hand, consist of extremely fine particles that remain suspended in the air for a long time, spread unhindered throughout the workspace, and are inhaled unnoticed.

Dusts with a diameter of up to 10 micrometers *(PM10)* are predominantly deposited in the upper respiratory tract. Fine dust *(PM2.5)* penetrates deeper into the bronchi and can cause health damage there. Ultrafine particles *(PM1)*, such as those generated during welding and soldering or in thermal processes, are so small that they can penetrate into the alveoli, remain there, and place a long-term burden on the body.



HEALTH EFFECTS

Headaches
Nausea
Dizziness
Stroke
Dementia
Inflammation
Thrombosis
High blood pressure
Asthma
Cancer

The finer the particles, the greater the danger and the higher the requirements for extraction systems.

SOLUTION

Industrial extraction technology is a central component of effective occupational health and safety.

Modern industrial extraction technology captures airborne particles and vapors directly at the process before they can spread throughout the room. In this way, people, machines, and products are protected. Contaminated air is converted into clean process air. This reduces health hazards and deposits and ensures safe, stable work processes.

At ABSAUGWERK, we understand extraction technology as a holistic system. Dust exposure depends on two factors: the concentration in the breathing air and the duration of exposure. A correctly designed extraction solution reduces both in a targeted and sustainable manner.

Our portfolio ranges from precise capture to efficient filtration and separation systems through to suitable accessories for your system.

The solution begins at the source.

Find out more at
absaugwerk.de/en

The ABSAUGWERK Principle

A high-performance and energy-efficient extraction system consists of several components that must work in perfect harmony. If elements such as capture systems or the pipe system reduce performance, this can not only impair functionality but also lead to deposits and dangerous fires. As every application is unique, we develop and manufacture customised extraction systems tailored precisely to our customers' requirements. For an optimal extraction solution, we also take care of pipe system design, installation and, optionally, maintenance and after-sales service.

Everything from a single source directly from our WERK.

Capture + **Pipe system** + **Extraction system** + **Custom solution**

Explosion (ATEX) + fire protection + noise protection
Special safety devices prevent fires and explosions proactively. In addition, noise protection measures minimise noise levels in working areas and create a pleasant working environment.

Where standard ends, we begin!

The result is a holistic extraction solution from start to finish. This allows us to increase performance and minimize operating costs in the long term with regard to maintenance and energy, while maintaining consistently high productivity. This makes it a sustainable and economical investment.

Quality from Neu-Ulm!

At our WERK in Neu-Ulm, our WERKER manufacture durable and robust extraction systems designed for continuous industrial use, handcrafted and »Made in Germany«. Each system is built from carefully selected components and thoroughly tested before delivery.

We take full responsibility for the quality of our products, from development to the very last screw. This commitment forms the basis for efficient processes, minimal downtime, and high operational reliability.

We treat our customers' end products with the utmost respect, and our systems play a crucial role in ensuring perfect workpieces.

FuE BSFZ - 2025 -

We continuously invest in training and technology to ensure our ongoing growth in the market. Our innovative strength has once again been recognized with the BSFZ seal — a mark of research-based development and government-supported innovation efforts.

Every WERKER considers themselves part of a responsible society and a healthy environment.

Deeply rooted in the industry

Industrial extraction technology requires a deep understanding of processes and materials. This expertise is deeply rooted at ABSAUGWERK. Our employees are specialists in their fields and see themselves as part of the entire WERK. Together, we contribute decades of experience in extraction technology.

We take a holistic approach. That's why we support our customers throughout the entire service chain: from consulting and planning through manufacturing, installation, and assembly to maintenance, training, and after-sales services. We configure each extraction system individually and offer premium service directly from the WERK. That's what makes our solutions **real. better.**

360° all-round service

Consulting

Free needs analysis and individual quotation by our sales team.

Project planning

Personal support including an on-site inspection and the specification of technical parameters.

Installation

Delivery and installation of the extraction system, including installation of the pipe system.

Commissioning

Mechanical and electrical system briefing covering functionality, safety and control.

Maintenance

Comprehensive service for third-party and in-house systems to ensure smooth operation.

After-Sales

The full range: Spare and wear parts, cleaning, training, repairs and retrofitting.

Training

Introduction to system components and performance of minor service and maintenance tasks.

Marketing

Support in marketing through videos as well as customised design and branding.

Your benefits

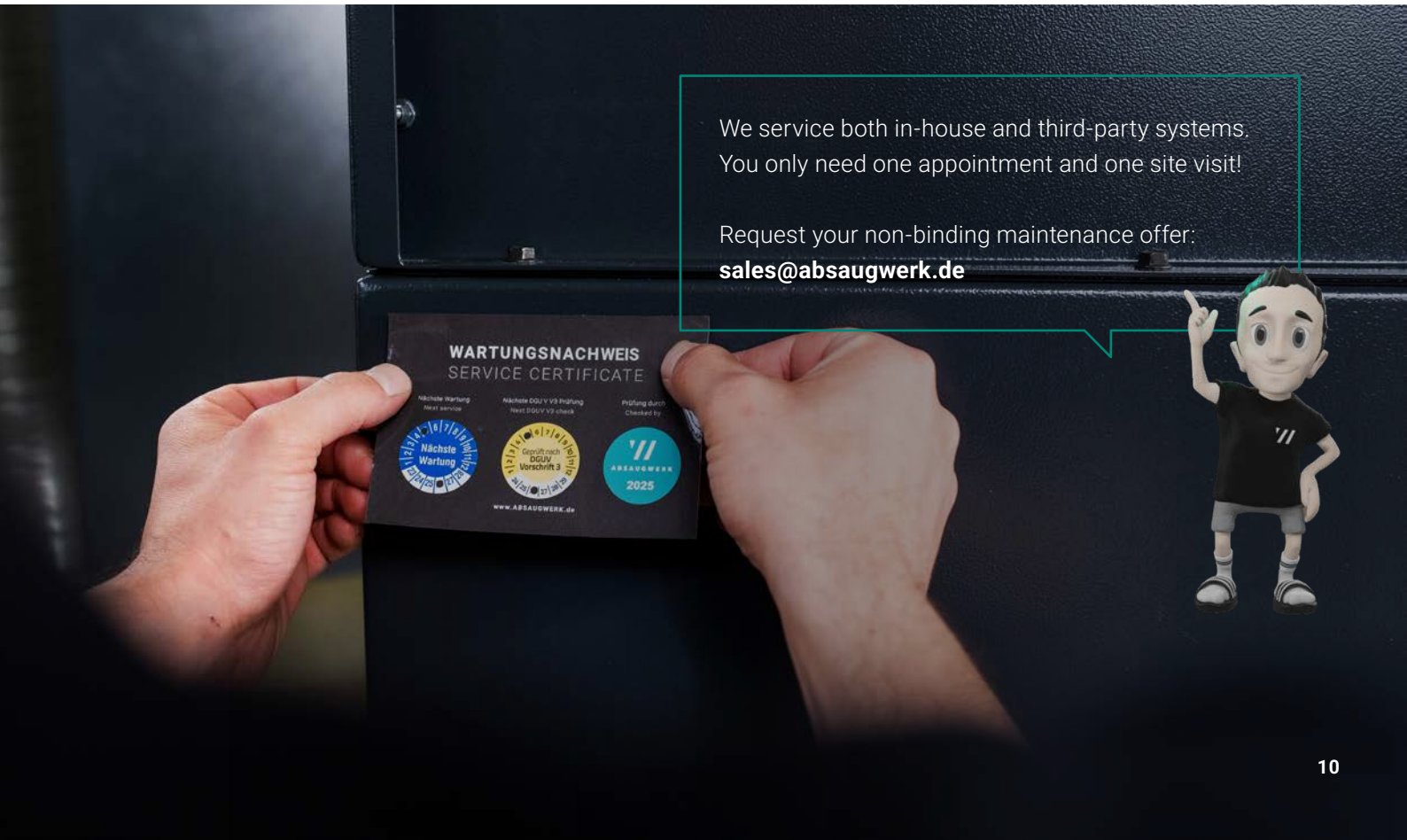
- **Everything from a single source**
- **In-house & third-party maintenance**
- **Free process analysis**
- **Personal on-site appointment**
- **Smooth & safe operation**
- **Avoidance of downtime & follow-up costs**
- **Worldwide support**
- **Remote diagnostics & maintenance**

Maintenance

Unplanned system downtime can not only cause high costs, but also put employee safety at risk. To ensure that your extraction systems operate efficiently and reliably over the long term, ABSAUGWERK offers a comprehensive maintenance service. Regular inspections allow technical deviations to be identified at an early stage, before they develop into costly or safety-critical issues. Our many years of expertise and a well-structured service organisation ensure short response times and rapid fault resolution.

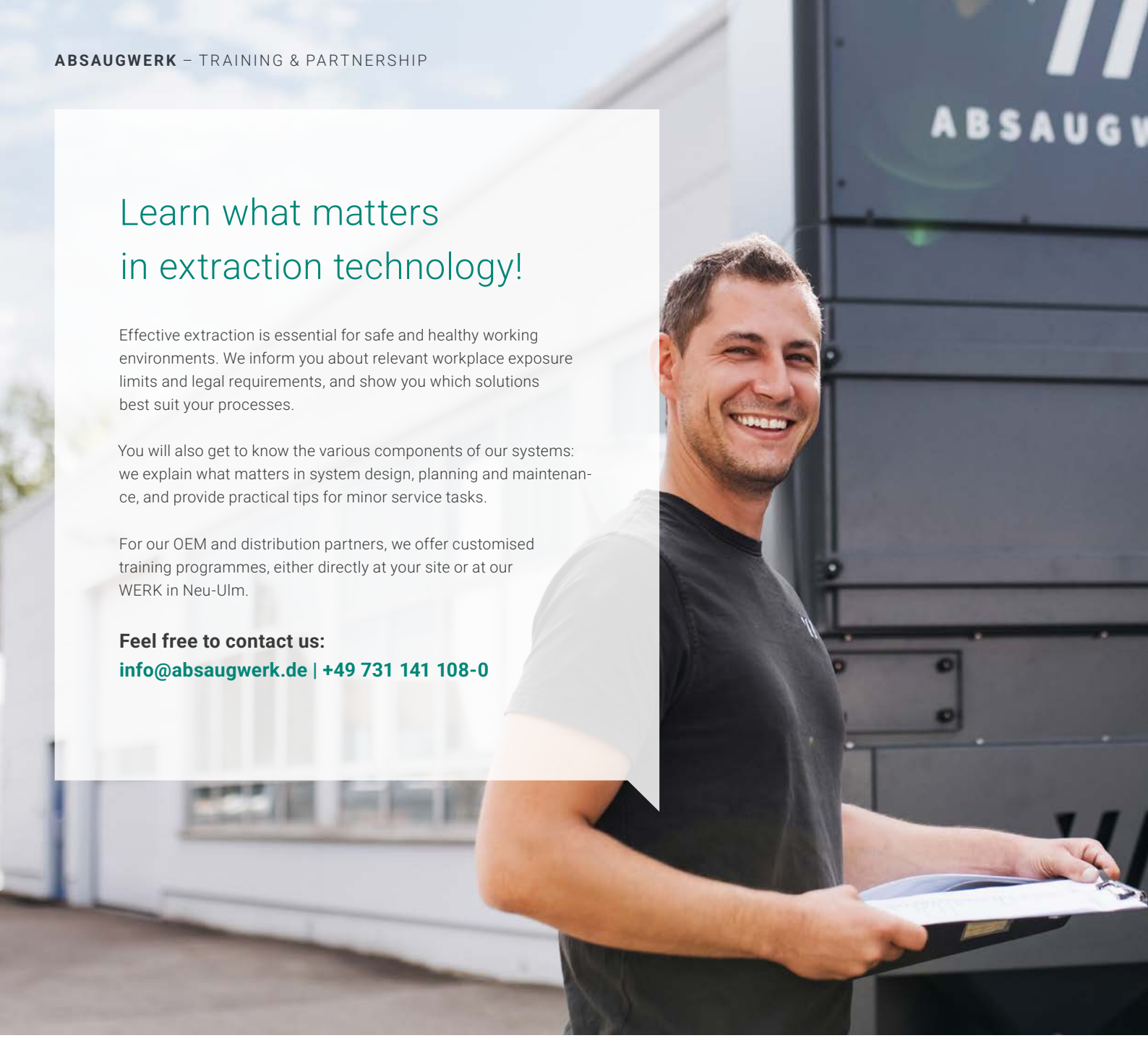
REMOTE MAINTENANCE – WORLD WIDE WERK

In automated production environments, reliability is essential. Our remote maintenance systems monitor system parameters in real time and automatically notify us of critical deviations. This enables our service technicians to respond immediately, regardless of location. Intelligent monitoring, modern alarm functions and secure VPN encryption provide fast support, protect your data and offer maximum flexibility at the same time.



We service both in-house and third-party systems.
You only need one appointment and one site visit!

Request your non-binding maintenance offer:
sales@absaugwerk.de



Learn what matters in extraction technology!

Effective extraction is essential for safe and healthy working environments. We inform you about relevant workplace exposure limits and legal requirements, and show you which solutions best suit your processes.

You will also get to know the various components of our systems: we explain what matters in system design, planning and maintenance, and provide practical tips for minor service tasks.

For our OEM and distribution partners, we offer customised training programmes, either directly at your site or at our WERK in Neu-Ulm.

Feel free to contact us:
info@absaugwerk.de | +49 731 141 108-0

real. personal.

ABSAUGWERK stands for lived values that go far beyond technology. Our employees share not only expertise, but also common values of teamwork, responsibility and trust. This culture forms the foundation of our success and our »Feel-Good-Philosophie«.

Within our network, we also focus on genuine partnerships: open, respectful and on equal footing. We believe in long-term relationships built on reliability and mutual appreciation, because only together can something be created that truly lasts.

Follow us on social media:

@ABSAUGWERK GmbH

Project process

5 steps to your perfect extraction solution!

01

Process analysis

In the first step, your work processes are analysed, pollutant sources are identified and existing extraction systems are reviewed in order to determine the exact extraction requirements.

02

Personal on-site visit

Our experts assess the local conditions directly at your site and take precise measurements to plan the ideal solution for your operation.

03

Individual quotation

Based on the analysis and technical drawings, you will receive a customised quotation within a short time, offering the most economical solution for your needs.

04

Production

Once the technical drawings have been approved and the order placed, we immediately begin procurement, manufacturing and scheduling for installation.

05

Installation

Our installers set up the complete extraction system, including pipe system, and support you during commissioning. Performance and functionality are carefully tested and documented – ensuring a smooth start-up.

Product overview

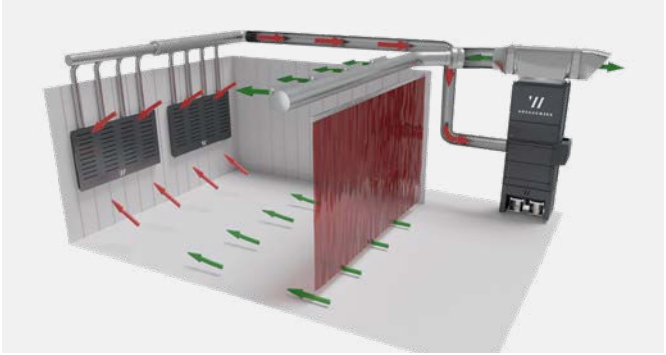
Industrial manufacturing processes place very different demands on extraction and filtration technology. The type and quantity of emissions, spatial conditions, and process-specific procedures determine which solution is technically suitable and economically viable.

Our extraction systems are modular, energy-efficient systems that we design precisely to suit the respective application. This ensures clean processes, safe workplaces, and stable production conditions.

How do we find your solution?
Analysis & configuration, precisely tailored to your process.

Hall extraction systems

Individually configurable systems for large-area air cleaning in production halls or manufacturing areas.



Extraction cabins

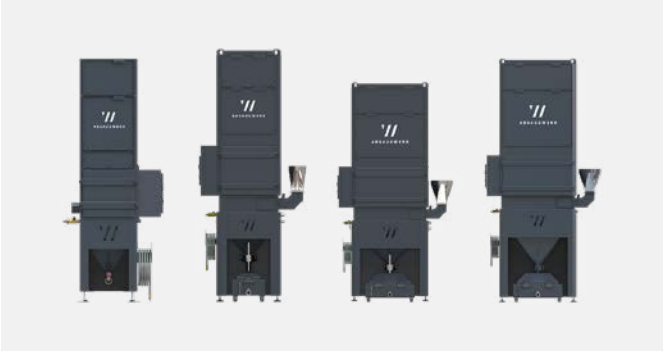
Work cabins with integrated extraction for safe, controlled workstations.

Machine extraction systems

Flexibly adaptable systems for source capture directly at machines and systems.

Accessories & options

Capture-, pipe systems, discharge solutions, and cleaning solutions for optimal integration and performance of your extraction system.



Wet separator B series

Specially for processes with moist or sticky emissions: our wet separator reliably and energy-efficiently bind dusts, chips, and aerosols.

Deduster P/S series

Universally applicable systems for the separation of dry dusts, granulates, fibers, or lint ideal for bulk materials, plastic, and metal processing.

Fume filter R series | **Smart X**

Efficient solution for welding fumes, smoldering fumes, and fine soot particles. Fume filters ensure clean air even in thermal processes.

Oil mist separator O/E series | **Compact**

Developed for the separation of oil and emulsion mists, for example during machining or milling with cooling lubricants.

Filter units S/P/R O/E B series

High-performance, modular filter units with a separate fan for different applications and emission types, suitable for limited ceiling height.

Filter tower FlowX

Flexible hall extraction for welding fumes without permanently installed pipe systems.

WET SEPARATOR
B Series

The wet separator of the B series features innovative flow technology with up to 50% higher suction performance and maximum separation efficiency while simultaneously reducing energy and water consumption.

WORKING IN FLYING SPARKS?

Wherever sparks, embers, and explosive dusts are generated, wet separation offers a particularly high level of safety. Instead of passing the contaminated air through flammable filter media, particles, sparks, and fine dust are captured directly in water. Glowing particles are extinguished immediately, and fine dust is reliably separated. ABSAUGWERK's ATEX-compliant wet separator is designed according to the principle of primary explosion protection and proactively prevents the build-up of explosive atmospheres.

The B Series combines maximum suction performance with minimal energy and water consumption, protecting employees, equipment, and resources. Patented flow technology, sophisticated discharge systems, and customizable configurations combine to create a comprehensive solution: maximum safety in accordance with ATEX standards, efficient separation of hazardous dusts, and more sustainable production.

Wet separation reduces fire and explosion risks as well as wear on conventional filter media. Maintenance requirements and downtime are minimized, while operational safety in daily use increases.

Performance:
2,350 – 22,000 m^3/h*
1.1 – 22 kW

** Systems connected in series have the potential to deliver virtually unlimited performance.*

Compared to conventional extraction systems.

+ 50%
more
extraction power

+ 25%
more
filter area

– 30%
less
energy costs per year

– 20%
less
water use per year

Your benefits

- **High extraction power**
- **Low water & power consumption**
- **Patented flow technology**
- **ATEX-compliant construction**
- **Durable filter components**
- **Easy cleaning & maintenance**
- **Individual configuration & special solutions**
- **Recirculating air for carcinogenic materials**
- **Remote maintenance & remote access**
- **Exclusive design**

Application

During cutting, grinding, separating, or machining metals, sparks, hot particles, and fine dusts are generated that remain suspended in the air inside the production hall. In particular, aluminum, magnesium, or titanium dusts are highly flammable and can form an explosive atmosphere when combined with sparks. At the same time, the fine particles penetrate deep into the respiratory tract and pose a significant health risk.

INDUSTRIES

Automotive, chemical industry, food industry, metal processing, pharmaceutical industry, etc.

PROCESSES

- Polishing
- Grinding
- Cutting
- Separating
- Sawing, etc.

MEDIA

Dust & chips

flammable, explosive, free-flowing, powdery, wet, oily, sticky

Filter:

- Stainless-steel mesh filters

Discharge:

- Container
- Sludge container
- Pinch valve
- Ball valve
- Gate valve
- Continuous discharge
- Individual discharge

Capture:

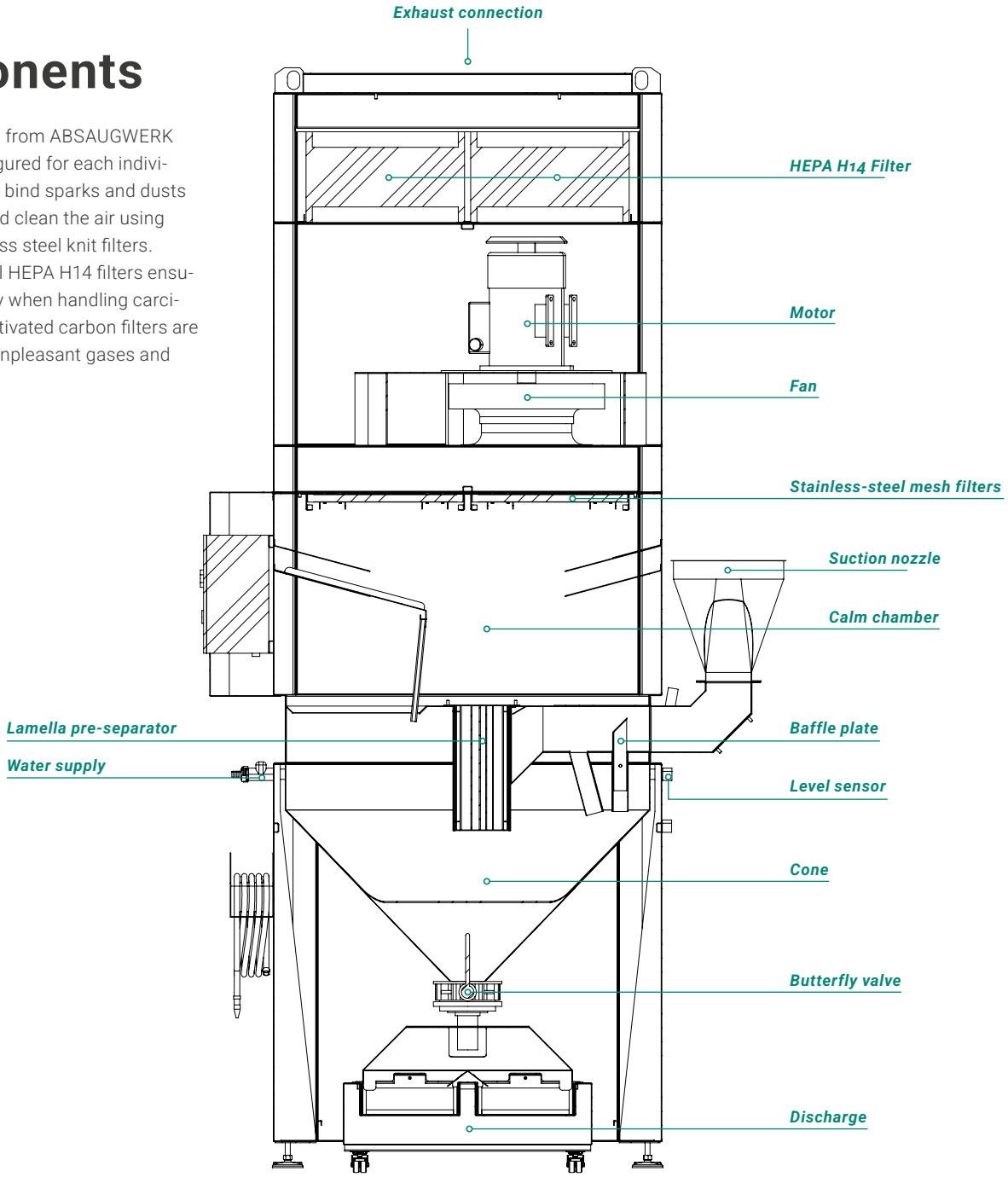
- Extraction arm
- Extraction table
- Extraction hood
- Pipe system
- Machine connection
- Room capture
- Individual capture

Equipment:

- 11 power levels
- Integrated pre-separator
- Multiple filter stages for max. degree of separation
- Cleanable permanent filters
- IE3 to IE5 motors

Components

The wet separators from ABSAUGWERK are precisely configured for each individual process. They bind sparks and dusts directly in water and clean the air using lamella and stainless steel knit filters.
If required, optional HEPA H14 filters ensure maximum safety when handling carcino-genic dusts. Activated carbon filters are used to eliminate unpleasant gases and odors.

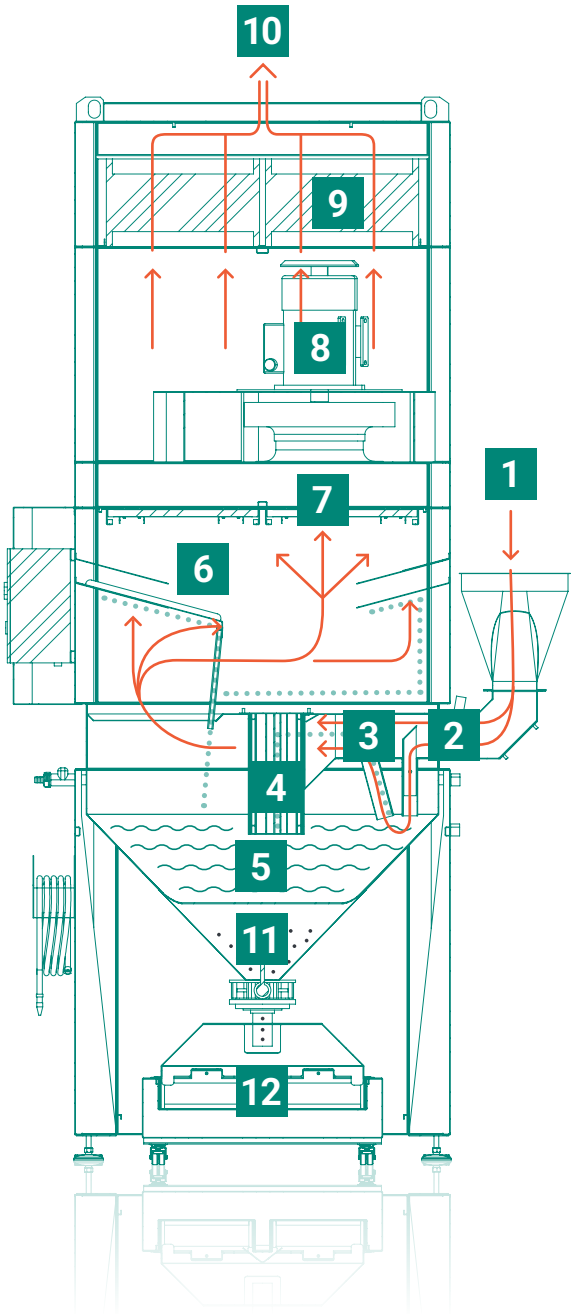


Options:

- HEPA H14 filters for carcinogenic substances in recirculation air operation
- Activated carbon filter for gases and odors
- ATEX / fire protection execution
- Effective noise protection
- Water recirculation
- Versatile intelligent controls
- Individual system colour & branding

ATEX-compliant construction

Market-leading energy efficiency



Functionality

The wet separators clean the air in several stages:
A patented multi-chamber system combined with state-of-the-art filter technology reliably binds sparks and dust.

1. SUCTION
The contaminated air is extracted via a direct machine connection or another capture device.

2. DEFLECTION PLATE
Dust and chips are guided downward into the water via a deflection plate. 25 % of the air flow is directed upward.

3. WATER WALL
Due to the negative pressure, water is drawn upward, forming a water wall that binds the emaining dust.

4. PRE-SEPARATOR
The air then flows through a lamella pre-separator. The special lamella geometry separates the air from the water again.

5. CONE
Substances bound in the water settle at the bottom of the cone. Rounded corners prevent deposits.

6. CALM CHAMBER
Residual water is separated from the air via baffle plates and guided back down into the cone.

7. FILTER STAGE 1
Remaining fine particles and residual moisture are separated using a stainless steel knit filter.

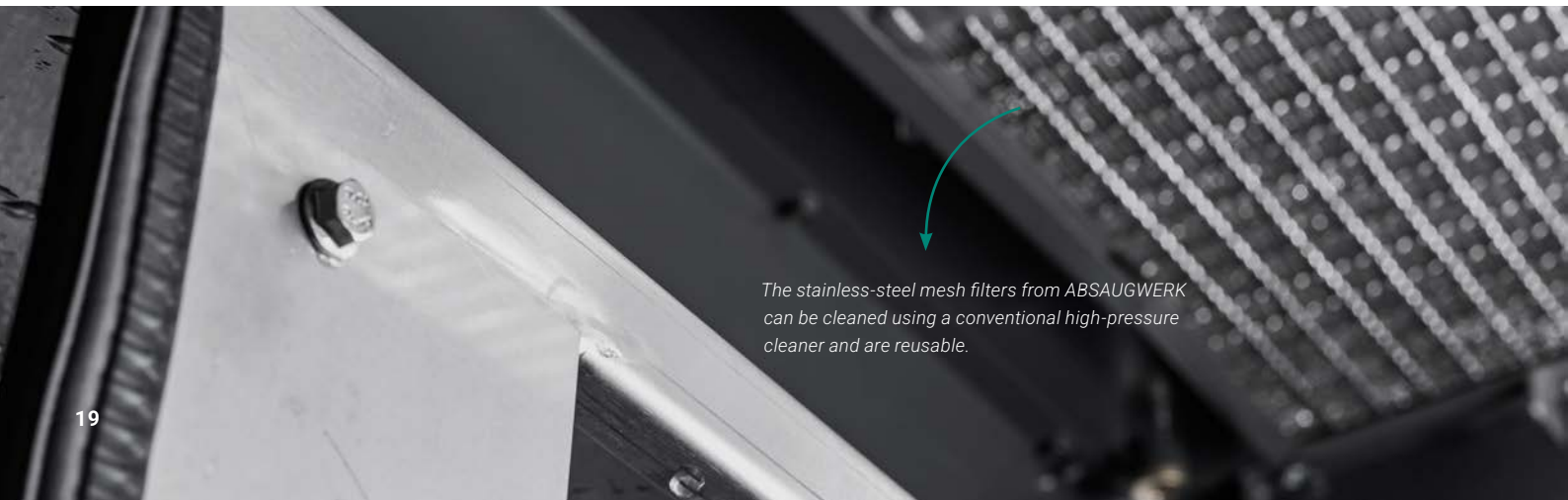
8. FAN
The fan with IE3 technology, optionally available with IE4 or IE5, operates extremely quietly, efficiently, and with high performance.

9. FILTER STAGE 2
For fine dusts, viruses, or carcinogenic stainless steel dusts, an additional HEPA H14 filter is used.

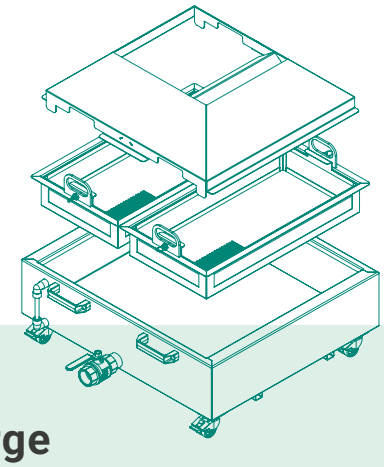
10. EXHAUST
The cleaned air is discharged outdoors or returned to the room in recirculating air operation, reducing heating and energy costs.

11. GATE VALVE
Sludge and water can be quickly drained via a large gate valve *(Ø 100 mm)*.

12. DISCHARGE
The sludge can be easily disposed of via an individual discharge system.



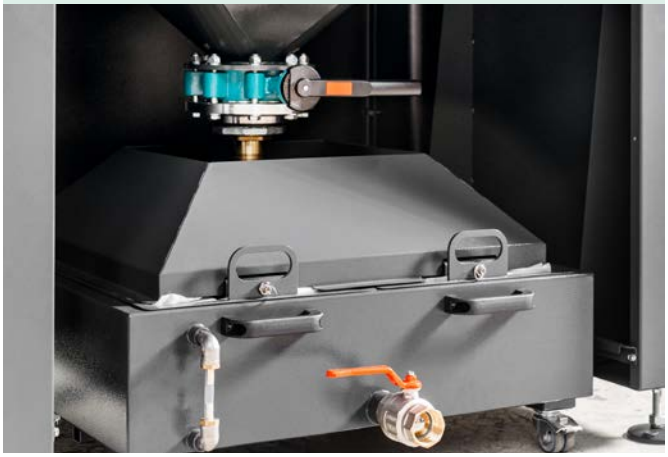
The stainless-steel mesh filters from ABSAUGWERK can be cleaned using a conventional high-pressure cleaner and are reusable.



Discharge

Depending on the production process and material, varying amounts of separated sludge are generated. The innovative design of our discharge containers efficiently separates the water from the sludge, allowing it to be returned directly to the wet separator via an optional conveying pump. This significantly reduces water and disposal costs while simultaneously protecting the environment.

Our sludge containers are available in various sizes and configurations – mobile or stationary, depending on requirements.



Our sludge containers hold up to 220 litres of water and 55 litres of sludge. They save up to 5,200 litres of water per year and significantly reduce disposal costs.

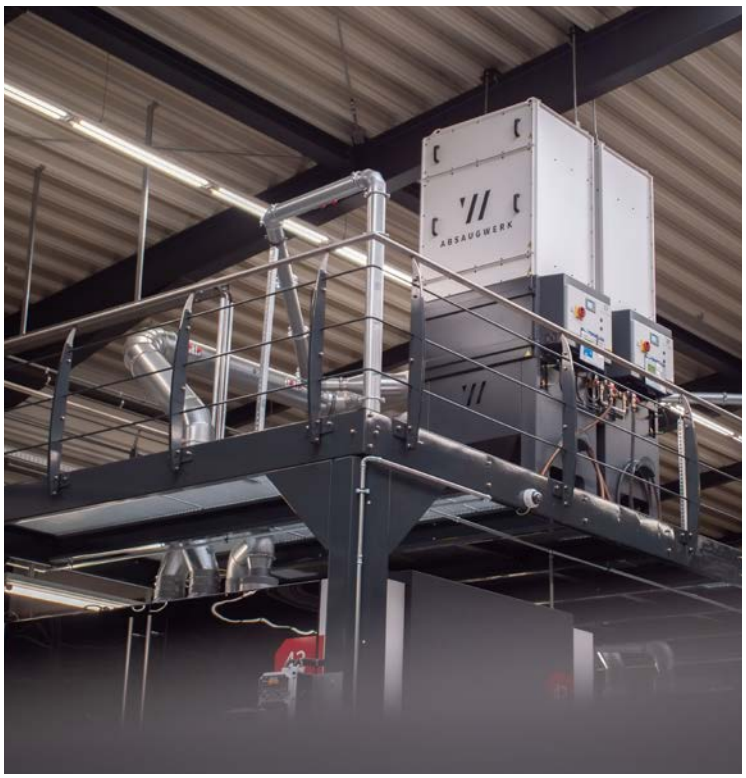
Reference

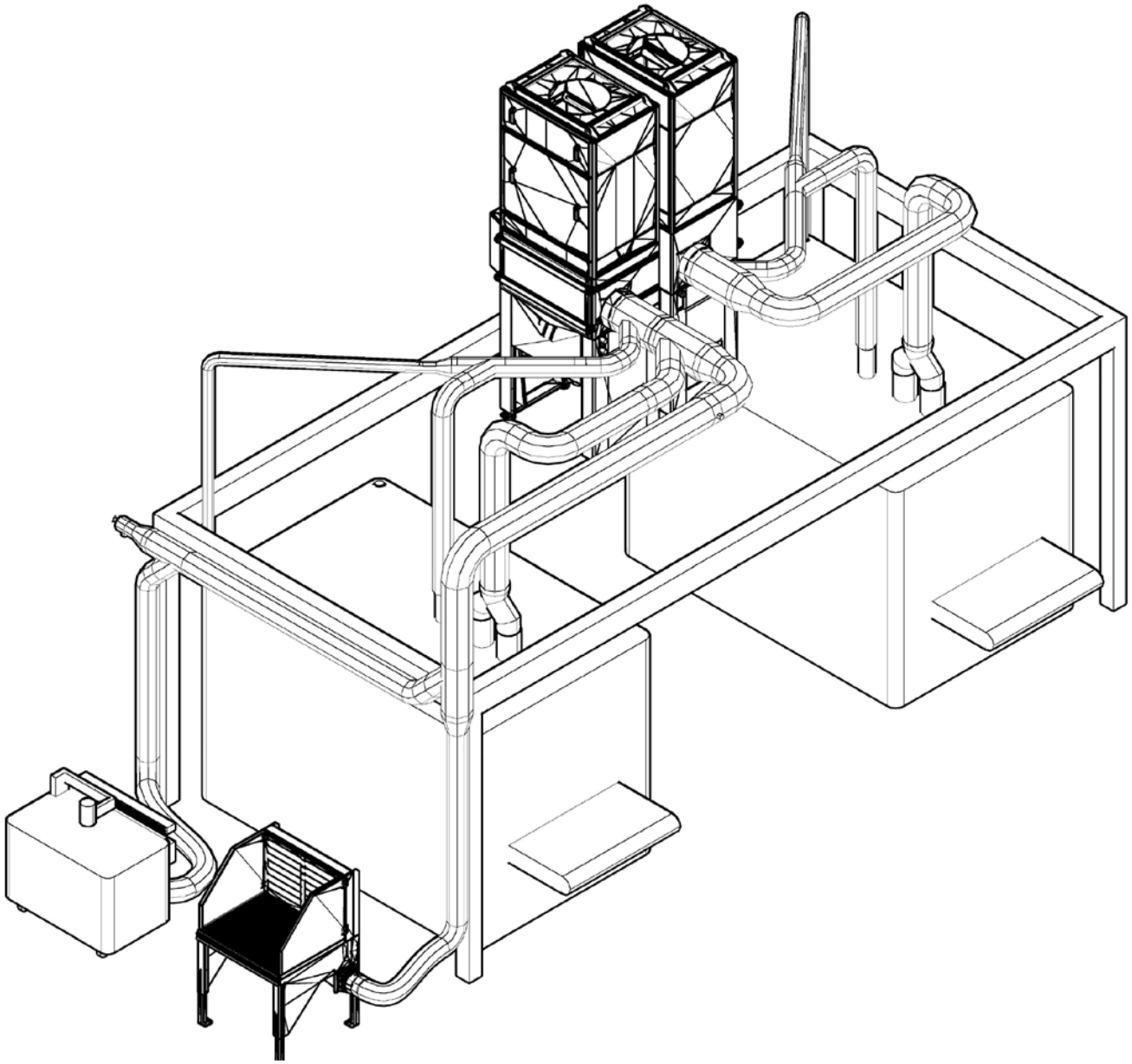
Wet separators in a double configuration for QUADRUS Metalltechnik

Quadrus Metalltechnik GmbH is a family-owned company based in Schmidgaden, specialising in laser technology, forming technology, welding technology and assembly. Up to 1,100 tonnes of steel, stainless steel and aluminium are processed every month. Processes such as welding, laser cutting, forming and deburring generate hazardous and explosive dusts that must be reliably extracted. For the extraction of two Timesavers deburring machines as well as for production at an extraction table, Quadrus relies on our specialised ATEX wet separators.

»ABSAUGWERK stands out due to very high extraction performance and excellent service.«

Hans Maier,
Operations Manager Quadrus Metalltechnik GmbH





CHALLENGE

At Quadrus, two deburring machines and two manual workstations needed to be extracted efficiently and safely while processing a material mix of stainless steel, steel and aluminium. The requirement was a space-saving, low-maintenance solution with simple emptying and low operating costs.

SOLUTION

To ensure safety and efficiency, ABSAUGWERK installed two ATEX wet separators that extract both the deburring machines and two manual workstations. Flammable aluminium dusts are bound in water, while carcinogenic stainless-steel dusts are retained by HEPA H14 filters. The cleaned air is returned to the hall in air recirculation mode, while the separated sludge can be disposed of easily.

An extraction table of the WT series enables flexible processing of small batch sizes. A solution that perfectly combines safety, efficiency and cost-effectiveness.

The QUADRUS reference video at
absaugwerk.de/en/quadrus-metalltechnik

MEDIA	• Stainless-steel dusts *(carcinogenic),* • Aluminium dusts *(explosive)*
PROCESSES	• Deburring, grinding, edge rounding
PERFORMANCE	• Motor power: 2× 11 kW • Max. air volume: 2× 10.000 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support

»It was important to us to create clean, dust-free ambient air with optimal employee protection and manageable operating costs.«

Hans Maier,
Operations Manager QUADRUS Metalltechnik GmbH

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 1
W series 3000, 5,5 kW

Process: Deburring
Material: Aluminium, stainless steel *(ATEX)*
Medium: Dry dust
Capture: Direct connection
Discharge: Sludge container

Fig. 2
W series filter unit 3000, 11 kW

Process: Deburring
Material: Aluminium, stainless steel, carbon steel *(ATEX)*
Medium: Dry dust
Capture: Direct connection
Discharge: Sludge container

Fig. 3
B series 2000, 5,5 kW

Process: Grinding
Material: Aluminium *(ATEX)*
Medium: Dry dust
Capture: Direct connection
Discharge: Sludge container

Fig. 4
B series 3000, 7,5 kW

Process: Deburring
Material: Aluminium, stainless steel, carbon steel *(ATEX)*
Medium: Dry dust
Capture: Direct connection
Discharge: Sludge container

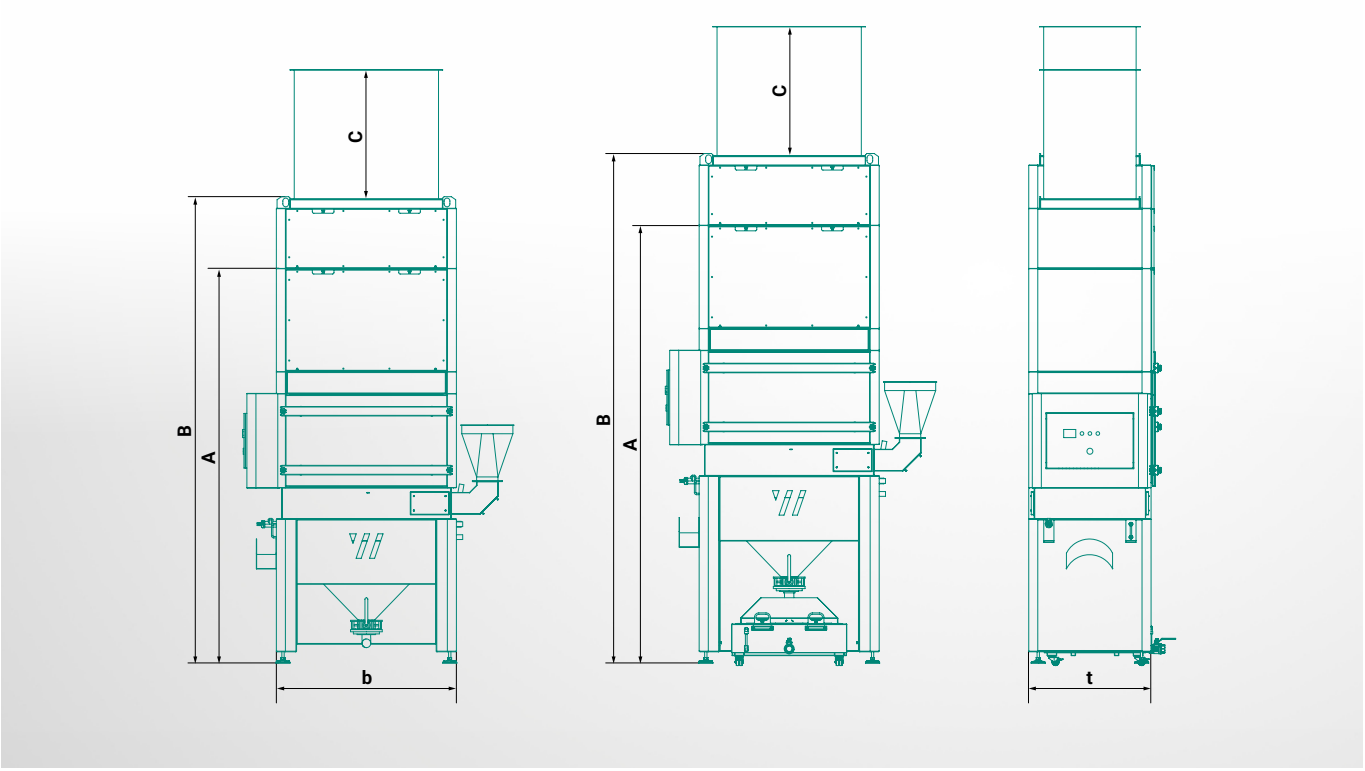
Technical Data

5 different size variants
11 power levels

Serie B 1000–3000

WET SEPARATOR SERIES		B 1000	B 2000	B 2000	B 2000	B 3000	B 3000	B 3000
Motor power	kW	1.1	2.2	3	4	4	5.5	7.5
Max. fan power	m³/h	2,350	3,400	4,200	6,200	6,200	6,900	11,000
Width (b)	mm	650	850	850	850	1,250	1,250	1,250
Depth (t)	mm	650	850	850	850	850	850	850
Height A (cone)	mm	2,700	2,700	2,800	2,800	2,920	3,020	3,120
Height B (cone + H14)	mm	2,915	2,915	3,015	3,015	3,135	3,235	3,235
Height A (cone with elevation)	mm	2,900	3,000	3,100	3,100	3,220	3,220	3,420
Height B (cone with elevation + H14)	mm	3,115	3,215	3,315	3,315	3,535	3,535	3,535
Height C (slotted silencer)	mm	(+800)	(+1,000)	(+1,000)	(+1,000)	(+1,000)	(+1,000)	(+1,000)

Status June 2026 | Subject to change



Serie B 4000–5000

WET SEPARATOR SERIES		B 4000	B 4000	B 5000	B 5000
Motor power	kW	11	15	18.5	22
Max. fan power	m³/h	14,800	18,000	21,000	22,000
Width (b)	mm	1,250	1,250	1,800	1,800
Depth (t)	mm	1,500	1,500	1,500	1,500
Height A (cone)	mm	3,520	3,520	3,880	3,880
Height B (cone + H14)	mm	3,635	3,635	3,995	3,995
Height A (cone with elevation)	mm	3,820	3,820	4,160	4,160
Height B (cone with elevation + H14)	mm	3,935	3,935	4,275	4,275
Height C (slotted silencer)	mm	(+1,000)	(+1,000)	(+1,000)	(+1,000)

Status June 2026 | Subject to change

DEDUSTER
P Series | S Series

THE INVISIBLE DANGER!
Fine dust and airborne particles pose a significant threat to people, machinery, and products. To effectively reduce these emissions, we use our high-performance deduster. They capture the contaminated air directly at the source, filter out even the finest particles, and return the cleaned air in a controlled manner back into the hall or safely to the outside.

The ABSAUGWERK dedusters of the P Series *(cartridge filters)* and S Series *(hose filters)* can be individually configured and are suitable for a wide range of materials – from fine dust to coarse chips. Automatic jet pulse filter cleaning continuously removes dust deposits from the filters, extends their service life and significantly reduces maintenance and operating costs. For processes involving particularly critical substances such as stainless steel or glass, an integrated HEPA H14 filter ensures maximum air purity and reliable occupational safety.

In addition, the deduster from ABSAUGWERK impress with their robust design and suitability for continuous industrial operation. The stable construction, high-quality filter media, and flow-optimized air guidance ensure consistent extraction performance, even with fluctuating dust loads. This keeps processes stable and largely avoids production interruptions.

Performance:
2,400 – 36,500 m^3/h*
1.1 – 45 kW

** Systems connected in series have the potential to deliver virtually unlimited performance.*

The deduster product video at
absaugwerk.de/en/deduster

Your benefits

- **High extraction power**
- **Low energy consumption**
- **Cleanable permanent filters**
- **Durable filter components**
- **Easy cleaning & maintenance**
- **Individual configuration & special solutions**
- **Recirculating air & exhaust air operation**
- **Versatile control functions**
- **Remote maintenance & remote access**
- **Exclusive design**

Application

During grinding, deburring, cutting or polishing, fine dusts, chips and particles are generated and dispersed into the hall air, affecting both employee health and the service life of machines. Especially when processing aluminium, stainless steel or plastics, hazardous fine dusts may be released, some of which are explosive or carcinogenic.

INDUSTRIES

Automotive, chemical industry, food industry, metal processing, pharmaceutical industry, plastics & recycling industry, mechanical engineering, etc.

PROCESSES

- Sawing
- Separating
- Grinding
- Polishing
- Deburring, etc.

MEDIA

- Dust
- Chips
- Granules
- Fibres
- Flakes
- Lint

Filter:

- Cartridge filters
- Hose filters

Discharge:

- Drawer
- Bin
- Bucket
- Container
- Automatic discharge *(rotary valve)*
- Individual discharge

Capture:

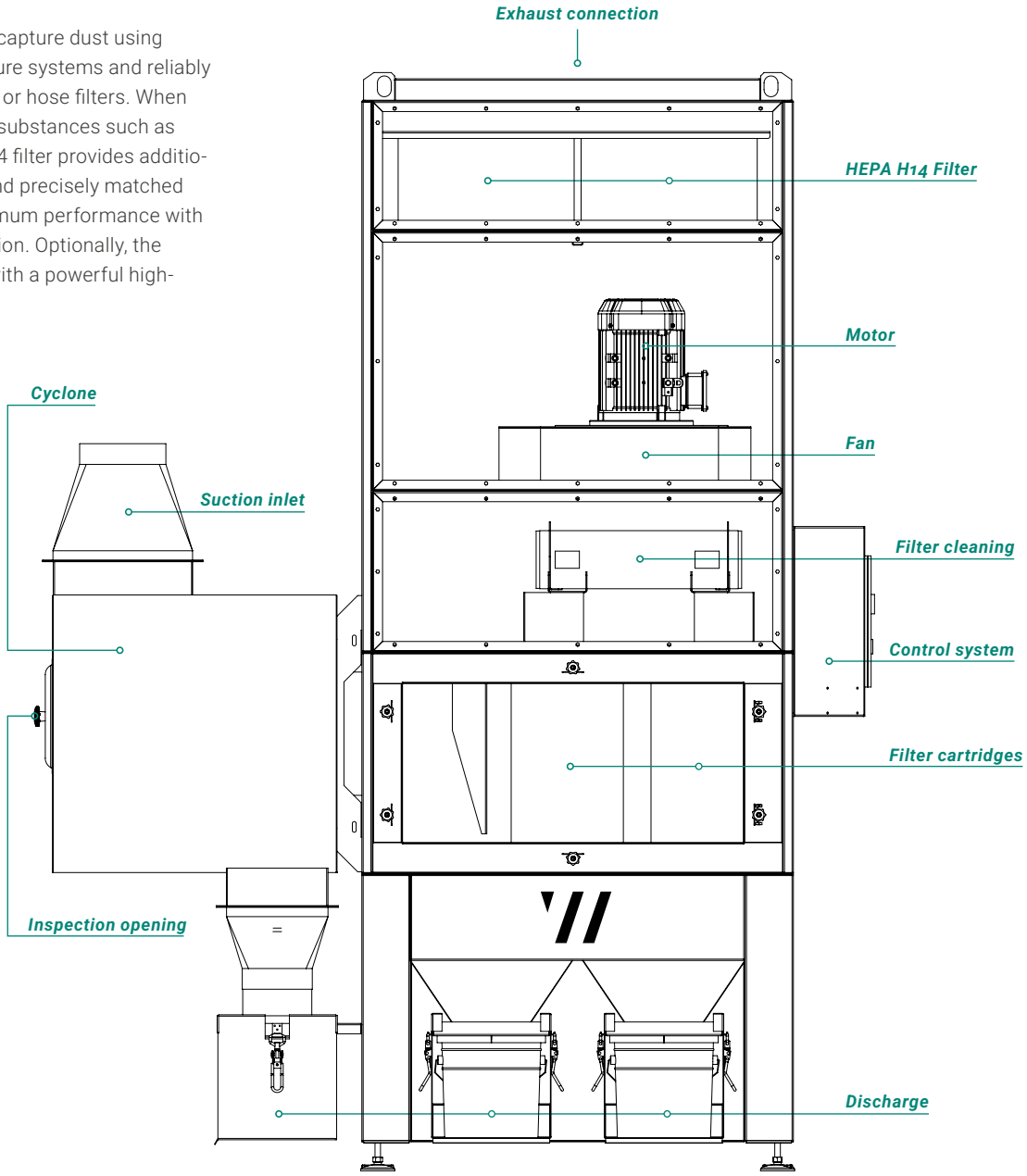
- Extraction arm
- Extraction table
- Extraction hood
- Pipe system
- Machine connection
- Room capture
- Individual capture

Equipment:

- 15 power levels
- Multiple filter stages for max. degree of separation
- Jet pulse filter cleaning
- IE3 to IE5 motors

Components

ABSAUGWERK dedusters capture dust using individually designed capture systems and reliably separate it using cartridge or hose filters. When dealing with carcinogenic substances such as stainless steel, a HEPA H14 filter provides additional safety. Efficient fans and precisely matched components ensure maximum performance with minimal energy consumption. Optionally, the system can be equipped with a powerful high-pressure fan.

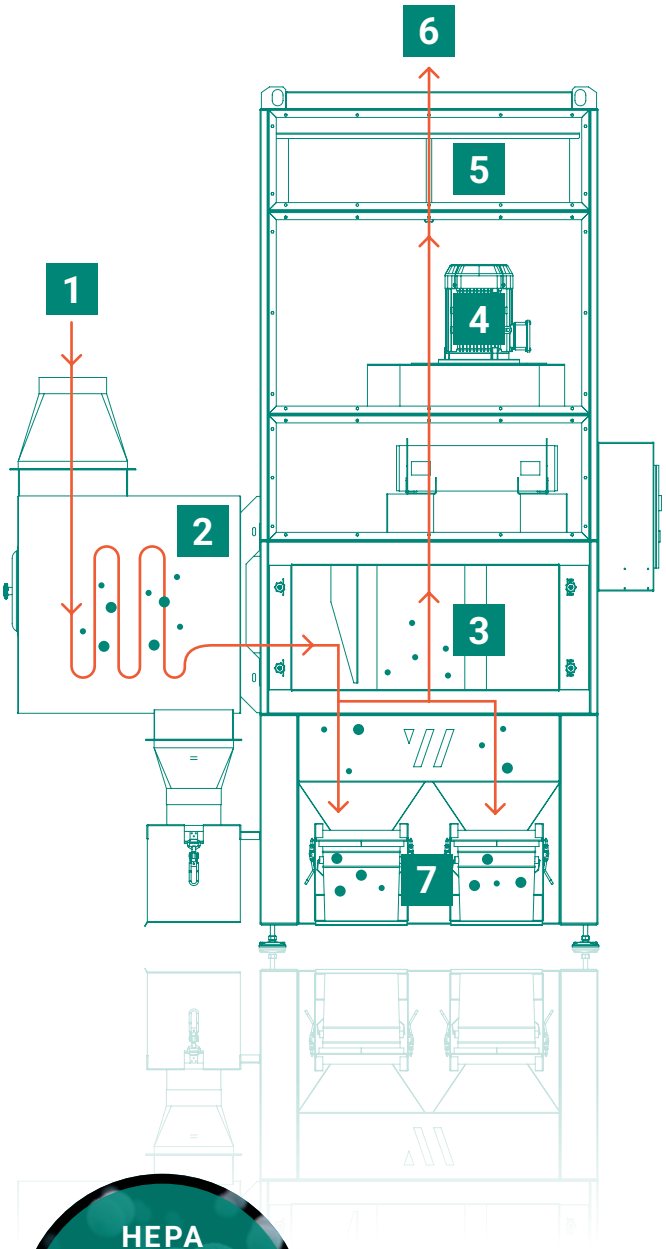


Options:

- HEPA H14 filter for carcinogenic substances in recirculating air operation
- Activated carbon filter for gases and odours
- ATEX / fire protection version
- Pre-separator
- Stainless steel version
- Effective noise protection
- Cross-flow heat exchanger
- Precoat unit
- Various fans *(medium pressure, high pressure)*
- Versatile intelligent controls
- Individual system colour & branding

ATEX

1.4301
1.4401



Functionality

The air is captured directly at the source, filtered in several stages and cleared of dust, chips and fine particles. It can then be safely returned in recirculating air or exhaust air operation.

1. SUCTION
Contaminated air is extracted via a direct machine connection or another capture system.

2. PRE-SEPARATOR
A pre-separator removes a large proportion of medium-sized and coarse particles, chips and sparks at an early stage. This protects the main filters and significantly extends their service life.

3. FILTER STAGE 1
Fine dust is reliably separated using cartridge or hose filters. Filter cleaning is carried out automatically via jet pulse cleaning.

4. FAN
The fan with IE3 technology, optionally available with IE4 or IE5, operates extremely quietly, efficiently and with high performance.

5. FILTER STAGE 2
For particularly fine or carcinogenic substances such as stainless steel, an additional HEPA H14 filter is used to reliably capture even microscopic particles.

6. EXHAUST
The cleaned air is either discharged outside or returned to the room in recirculating air operation, reducing heating and energy costs.

7. DISCHARGE
The separated dust is disposed of individually via drawers, bins, buckets or containers. Alternatively, automatic discharge is carried out via a rotary valve.

HEPA H14 FILTER

Filters **99,995 %** of all fine particles and viruses

With a separation efficiency of 99995 %, HEPA H14 filters remove even ultrafine and carcinogenic particles from the air. They ensure maximum safety in processes involving stainless steel or other hazardous substances.

Relieved filters. Stable processes.

In applications with high volumes of dust or chips, the use of a cyclone pre-separator has proven effective. Coarse and heavy particles are separated from the air stream by centrifugal force before they reach the filter unit. This relieves the filter media, reduces wear, and ensures consistently high extraction performance.

Automatic discharge via a rotary valve enables continuous operation without loss of vacuum. Combined with a cyclone pre-separator and filter unit, this creates a high-performance complete solution for dust-intensive processes.

For more information, see »Accessories & options«

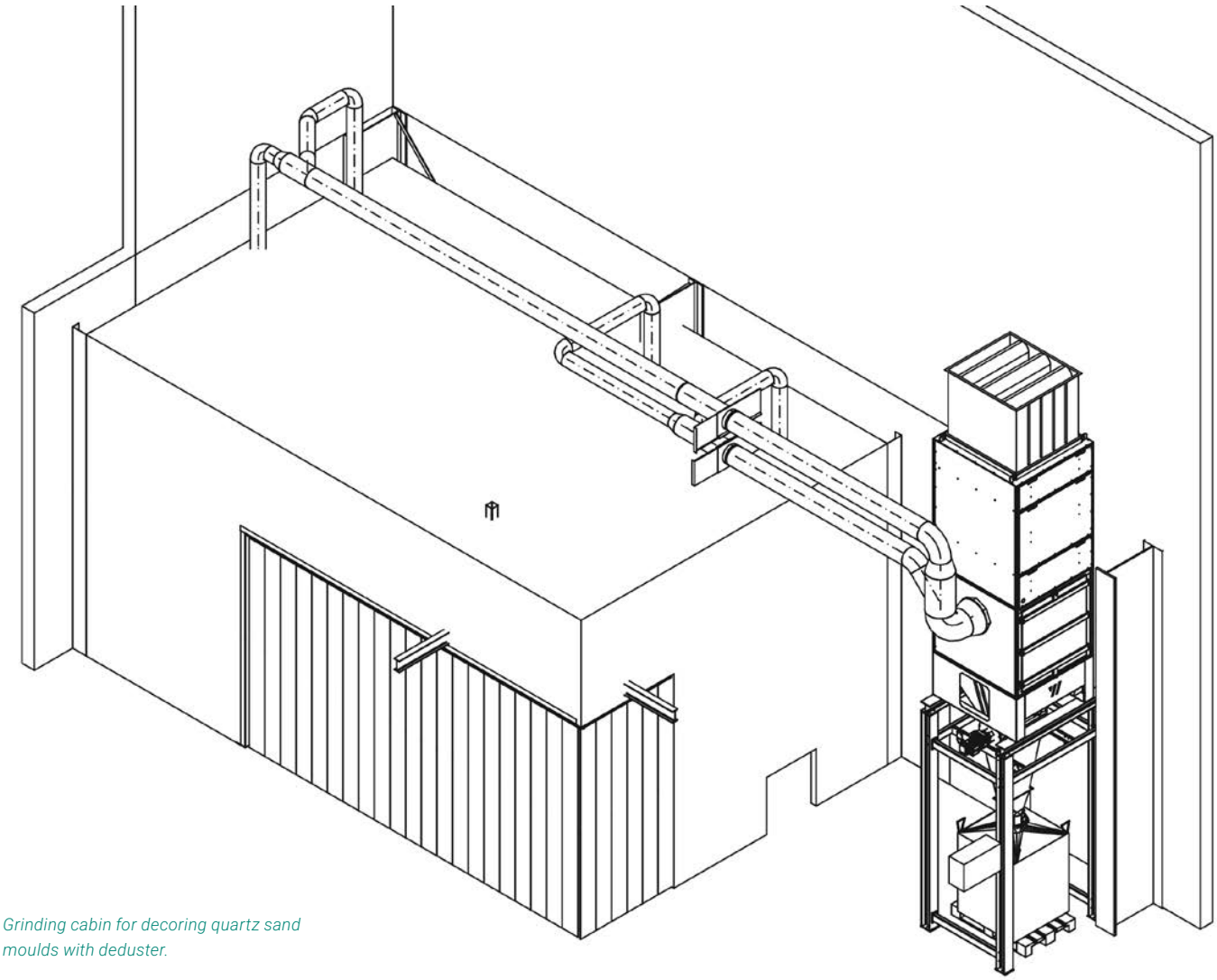
Referenz

ATEX dedusters and grinding cabins for indoor installation at Ohm & Häner

Ohm & Häner Metallwerk GmbH & Co. KG, based in South Westphalia, is one of the leading companies in the foundry industry. With around 650 employees, the family-owned company manufactures high-quality aluminium cast components and supplies customers worldwide with precisely machined raw castings, sand castings and permanent mould castings. During decoring, fettling and grinding processes, hazardous and potentially explosive dusts are generated. For this purpose, Ohm & Häner was looking for a high-performance extraction solution for safe indoor installation directly at the points of origin.

»What we particularly appreciated was how little space the system requires. Indoor installation saves energy and ensures a uniform appearance.«

Dr. Georg Wilhelm Dieckhues,
Managing Director Ohm & Häner Metallwerk GmbH & Co. KG



Grinding cabin for decoring quartz sand moulds with deduster.

CHALLENGE

For two grinding cabins, an extraction solution was required for quartz dust and explosive aluminium dust. The systems needed to be installed indoors in a space-saving manner, operated energy-efficiently and equipped with automatic discharge.

SOLUTION

For the new work area, ABSAUGWERK installed two sound-insulated grinding cabins with side hoods and worktables for precise dust capture. One cabin is used for decoring quartz sand moulds, while the other is used for grinding aluminium cast components. An ATEX deduster captures the aluminium dust, while a second deduster reliably filters quartz dust. The multi-stage filter system with HEPA H14 technology and automatic rotary valves ensures reliable air cleaning and safe material disposal.

Filter performance, fill levels and filter cleaning are automatically monitored via SIEMENS LOGO! 8. As a result, the system operates efficiently, safely and with low maintenance requirements, fully meeting the demands of modern ATEX dry extraction.

The Ohm & Häner reference video at
absaugwerk.de/en/ohm-und-haener

MEDIA	• Quartz dust, aluminium dust *(explosive & combustible)*
PROCESSES	• Decoring, grinding, fettling
PERFORMANCE	• Motor power: 11 kW + 30 kW • Max. airflow: 15.000 m³/h + 31.000 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support

»ABSAUGWERK was the only manufacturer able to truly meet our requirements.«

Dr. Georg Wilhelm Dieckhues,
Managing Director Ohm & Häner Metallwerk GmbH & Co. KG

Fig. 1


Fig. 2


Fig. 3

Fig. 4

Fig. 1
2× P Series 4000, 22 kW
Side cyclone pre-separator

Process: Grinding
Material: Aluminium *(ATEX)*
Medium: Dry dust
Capture: 5× extraction tables
Discharge: Dust collection buckets

Fig. 2
P Series 3000, 11 kW
Side cyclone pre-separator

Process: Deburring
Material: Aluminium, stainless steel, carbon steel *(ATEX)*
Medium: Dry dust
Capture: Direct connection
Discharge: Dust collection buckets

Fig. 3
S Series 4000, 7,5 kW
Side cyclone pre-separator

Process: Grinding, polishing
Material: Lint, polishing compound, glas *(ATEX)*
Medium: Dry dust
Capture: 2× Extraction cabins
Discharge: Dust collection buckets

Fig. 4
R Series 2000, 4 kW
Side cyclone pre-separator

Process: Grinding
Material: Aluminium *(ATEX)*
Medium: Dry dust
Capture: 12× Hopper provided by customer
Discharge: Dust collection buckets

Technical Data

7 different size variants
15 power levels

P/S 2000

P/S 3000

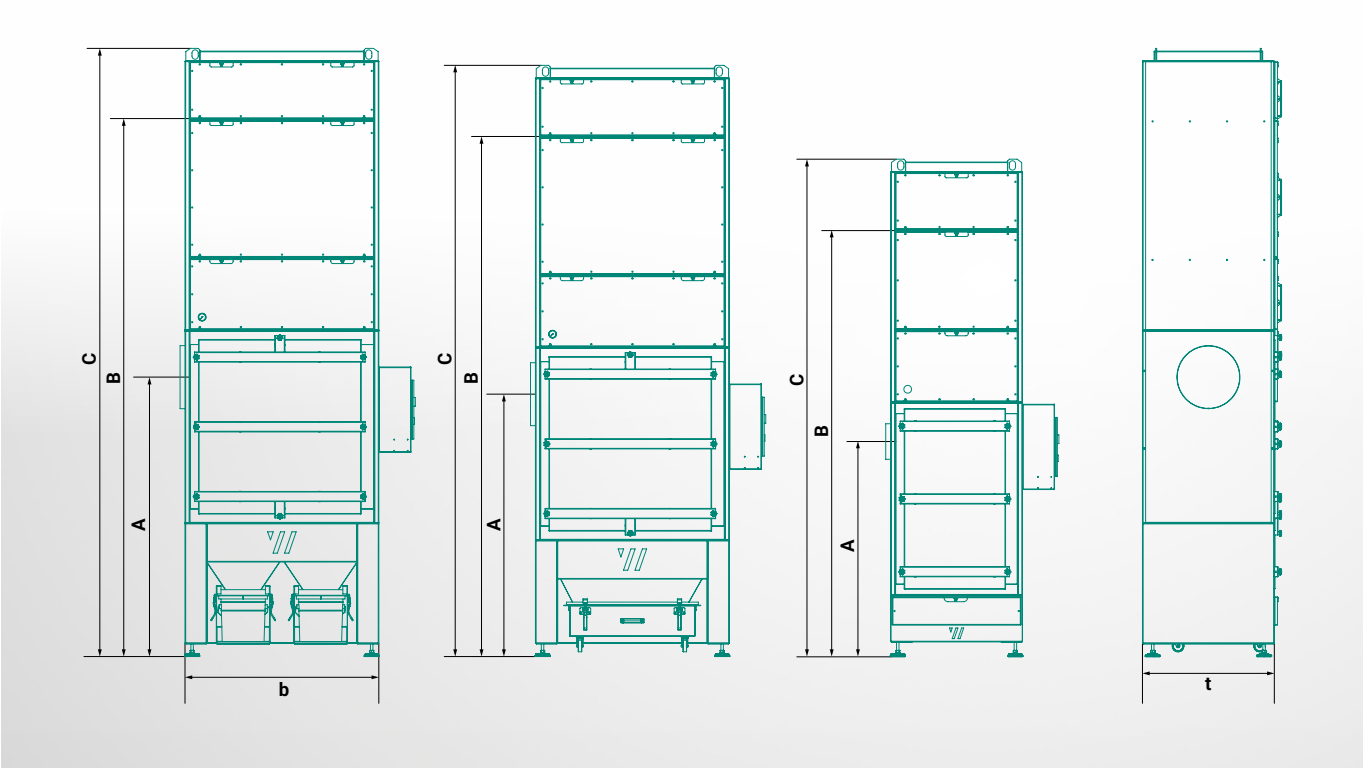
P/S 4000

P/S 5000

Serie P/S 2000–3000

DEDUSTER SERIES		P/S 2000	P/S 2000	P/S 2000	P/S 2000	P/S 3000	P/S 3000	P/S 3000	P/S 3000
Motor power	kW	1,1	2,2	3	4	4	5,5	7,5	11
Max. fan power	m³/h	2,400	3,500	4,500	6,000	6,000	7,000	8,500	15,000
Width (b)	mm	850	850	850	850	1,250	1,250	1,250	1,250
Depth (t)	mm	850	850	850	850	850	850	850	850
Height A (drawer)	mm	860	860	860	1,410	–	–	–	–
Height B (drawer)	mm	2,240	2,240	2,240	2,915	–	–	–	–
Height C (drawer + H14)	mm	2,540	2,540	2,540	3,240	–	–	–	–
Height A (50L bin)	mm	1,165	1,165	1,165	1,715	1,850	1,850	1,850	1,850
Height B (50L bin)	mm	2,560	2,560	2,560	3,220	3,575	3,575	3,575	3,725
Height C (50L bin + H14)	mm	2,895	2,895	2,895	3,535	3,925	3,925	3,925	4,075
Height A (100L bin)	mm	–	–	–	–	2,050	2,050	2,050	2,050
Height B (100L bin)	mm	–	–	–	–	3,775	3,775	3,775	3,925
Height C (100L bin + H14)	mm	–	–	–	–	4,125	4,125	4,125	4,125
Height A (16L bucket)	mm	1,320	1,320	1,320	1,870	1,775	1,775	1,775	1,775
Height B (16L bucket)	mm	2,715	2,715	2,715	3,375	3,500	3,500	3,500	3,650
Height C (16L bucket + H14)	mm	3,050	3,050	3,050	3,690	3,850	3,850	3,850	4,000
Height A (30L bucket)	mm	1,470	1,470	1,470	2,020	1,925	1,925	1,925	1,925
Height B (30L bucket)	mm	2,865	2,865	2,865	3,525	3,650	3,650	3,650	3,800
Height C (30L bucket + H14)	mm	3,200	3,200	3,200	3,840	4,000	4,000	4,000	4,150

Status June 2026 | Subject to change



Serie P/S 4000–8000

DEDUSTER SERIES		P/S 4000	P/S 4000	P/S 4000	P/S 5000	P/S 6000	P/S 7000	P/S 8000
Motor power	kW	15	18,5	22	22	30	37	45
Max. fan power	m³/h	18,000	23,000	23,000	23,000	30,500	32,500	36,500
Width (b)	mm	1,250	1,250	1,250	1,840	1,840	2,260	2,260
Depth (t)	mm	1,350	1,350	1,350	1,420	1,840	1,840	2,260
Height A (drawer)	mm	–	–	–	–	–	–	–
Height B (drawer)	mm	–	–	–	–	–	–	–
Height C (drawer + H14)	mm	–	–	–	–	–	–	–
Height A (50L bin)	mm	1,800	1,800	1,800	–	–	–	–
Height B (50L bin)	mm	3,800	4,050	4,050	–	–	–	–
Height C (50L bin + H14)	mm	4,050	4,400	4,400	–	–	–	–
Height A (100L bin)	mm	2,000	2,000	2,180	2,350	2,350	2,350	2,750
Height B (100L bin)	mm	4,000	4,250	4,250	4,575	4,575	4,575	4,575
Height C (100L bin + H14)	mm	4,250	4,600	4,600	5,175	5,175	5,175	5,175
Height A (16L bucket)	mm	2,000	2,000	2,000	2,180	2,350	2,350	2,750
Height B (16L bucket)	mm	4,000	4,250	4,250	4,575	4,575	4,575	4,575
Height C (16L bucket + H14)	mm	4,250	4,600	4,600	5,175	5,175	5,175	5,175
Height A (30L bucket)	mm	2,150	2,150	2,150	2,330	2,500	2,500	2,900
Height B (30L bucket)	mm	4,150	4,400	4,400	4,725	4,725	4,725	4,725
Height C (30L bucket + H14)	mm	4,400	4,750	5,325	5,325	5,325	5,325	5,325

Status June 2026 | Subject to change

OIL MIST SEPARATOR
O Series | E Series

HOW DANGEROUS IS OIL MIST?

Oil mist from cooling lubricants spreads quickly throughout the working environment, settles on machines and work surfaces, burdens employees, and increases the risk of slip accidents.

Oil mist separator from ABSAUGWERK provide an effective solution to capture oils *(O series)* and emulsions *(E series)* as well as other harmful by-products directly at the machine tools. With a three-stage filtration process and a separation efficiency of up to 99.995%, they offer effective protection. Thanks to their high efficiency, the units require very little maintenance and are characterized by an exceptionally long filter service life. In addition, odors are neutralized, making the working environment more pleasant and protecting both employees and machines.

The cleaned air can be returned to the production hall in recirculation mode to save heating costs. Through automatic performance adjustment, our extraction systems operate according to demand and consume only the energy that is actually needed.

HEPA H14 FILTER

Filters **99,995 %** of all fine particles and viruses

With a separation efficiency of 99995 %, HEPA H14 filters remove even ultrafine and carcinogenic particles from the air. They ensure maximum safety in processes involving stainless steel or other hazardous substances.

Performance:
2,400 – 17,900 m^3/h*
0.5 – 15 kW

** Systems connected in series have the potential to deliver virtually unlimited performance.*

Compact oil mist separator with 0.5 kW power on a machine tool

Your benefits

- **Clean air & healthy workplaces**
- **Continuously high air quality**
- **BG-compliant operation**
- **Compliance with safety standards**
- **Reduced oil and lubricant consumption**
- **Protection of machinery & tools**
- **Low cleaning effort**
- **Fresh air supply & temperature reduction**
- **Quick, tool-free filter change**
- **Attractive cost-benefit ratio**

Application

During machining, forming or casting, the use of metalworking fluids generates fine oil and emulsion mists, aerosols and vapors that remain suspended in the air of the production hall. These liquid particles settle on machines, floors and walls, endangering employees, contaminating production processes and increasing the risk of fires and workplace accidents.

INDUSTRIES

Metal processing, plastics industry, extrusion, cable production, etc.

PROCESSES

- Turning
- Drilling
- Milling
- Grinding
- Sawing
- Cleaning
- Spraying
- Casting, etc.

MEDIA

- Aerosols
- Emulsion mist
- Spray mist
- Oil mist
- Oil vapor
- Oil smoke

Filter:

- Pre-filter: stainless-steel mesh filters
- Main filter: stainless-steel mesh filters
- Secondary filters: cartridge filters F9 / E11 / H14

Discharge:

- Siphon connection
- Individual discharge

Capture:

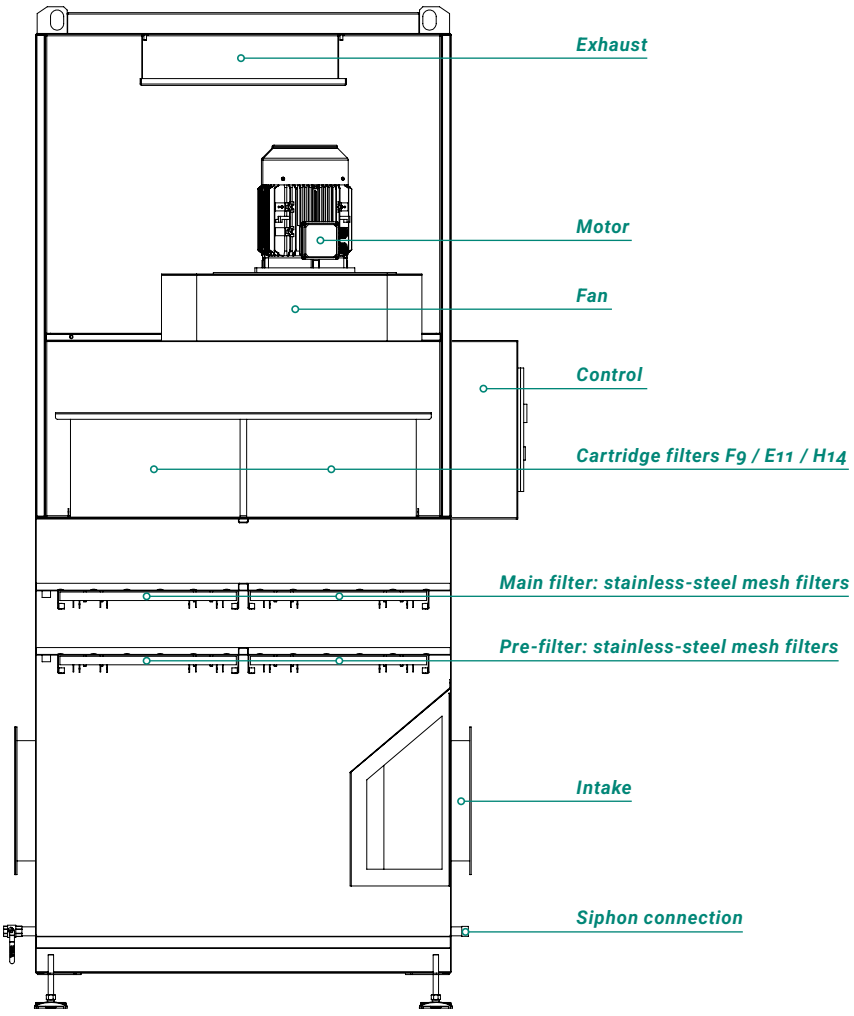
- Extraction arm
- Extraction table
- Extraction hood
- Pipe system
- Machine connection
- Room capturing
- Individual capturing system

Equipment:

- 8 power levels
- Integrated pre-separator
- Multiple filter stages for max. degree of separation
- Washable filters
- IE-3 to IE-5 motors

Components

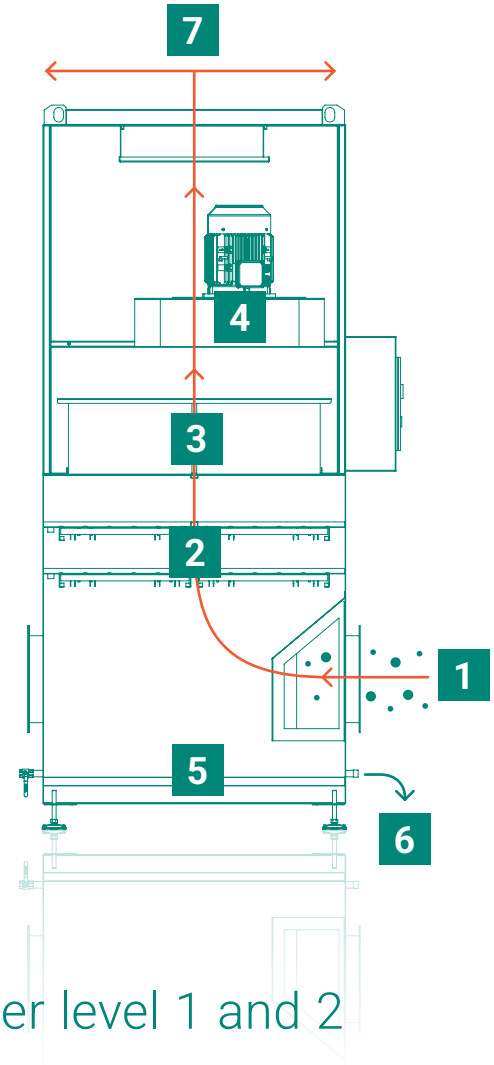
The oil mist separators are individually tailored to our customers' processes and contain several filter stages, including specially developed stainless steel mesh filters as well as optional HEPA H14 secondary filters for carcinogenic particles and activated carbon filters against unpleasant gases and odors.



With an integrated fresh air box, additional fresh air is fed into the hall from outside. This lowers the temperature and ensures a constant supply of oxygen.

Optionen:

- HEPA H14 filters for carcinogenic substances in recirculation mode
- Carbon filter for gases and odors
- ATEX-/fire protection execution
- Stainless steel execution
- Effective noise protection
- Filter monitoring
- Pre-separator
- Fresh air box
- Versatile smart controls
- Individual unit color and branding



Filter level 1 and 2 already remove up to 95 % of emulsions.

Functionality

The air is cleaned using a three-stage mechanical filtration process. The air flow rate automatically adapts to the respective process and ensures minimal energy consumption and costs. The stainless steel mesh filters from ABSAUGWERK can be washed out with a conventional high-pressure cleaner and are reusable.

1. SUCTION
The filter medium is drawn in via a direct machine connection or another capture.

2. FILTER STAGE 1+2
The air then passes through two filter levels made of a special stainless steel mesh.

3. FILTER STAGE 3
For fine dust, viruses, or carcinogenic stainless steel dust, an F9 / E11 / H14 secondary filter is also used.

4. FAN
The fan with IE5 technology is highly efficient, extremely quiet and powerful at the same time.

5. DRIP TAP
Cooling lubricants roll off the stainless steel mesh filters and are collected in a container.

6. DRAIN TAP
The filtered emulsion can be automatically fed back into the machine or drained.

7. EXHAUST
The cleaned air is led outside or back into the room in recirculation mode, which reduces heating and energy costs.

Technical knowledge

MECHANICAL VS. ELECTROSTATIC

There are two common types of oil filtration: mechanical extraction systems use physical barriers such as filter fibers, while electrostats bind oil particles using electrical charges. If the electrostat is clogged, no further particles can be absorbed. With mechanical separators, the particles act as an additional filter barrier and even increase their performance until the filter is changed. Filter cleaning and maintenance also involve less effort and costs with mechanical separators.

MECHANICAL
Optimum, even flow through the horizontal filters
Separation efficiency* up to 99.995 %
Particles > 0.001 µm
Easy filter cleaning *(high-pressure cleaner)*
Cleaning time 5 min.
No formation of harmful ozone
Recirculation and exhaust air

ELEKTROSTATIC
Uneven flow through the vertical filters
Separation efficiency* up to 97.1 %
Particles > 0.3 µm
Complex filter cleaning *(ultrasonic bath)*
Cleaning time 20–60 min.
Formation of harmful ozone
Exhaust air

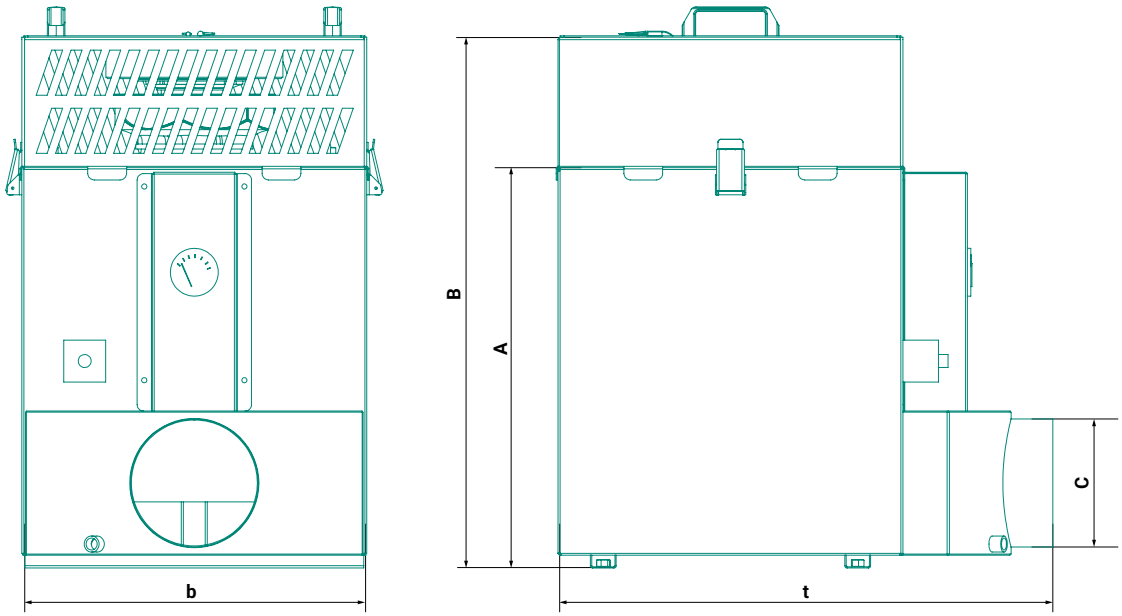
** Air volume 4,000 m³/h*

Lack of space?

Our compact oil mist separator with 0.5 kW is a space-saving alternative. It can be installed directly on the machining center to save valuable production space. Like the larger models the system offers 3 filter levels and an optional H14 filter. Machine lubricants are automatically recirculated and the stainless steel mesh filters are easy to wash out. We also offer a individual color to perfectly match your machine tool.

OIL MIST SEPARATOR		COMPACT
Engine power	kW	0.5
Fan power max.	m³/h	2,100
Width (b)	mm	535
Depth (t)	mm	770
Height A	mm	625
Height B	mm	825
Height C (Intake)	mm	198

Status June 2026 | Subject to change



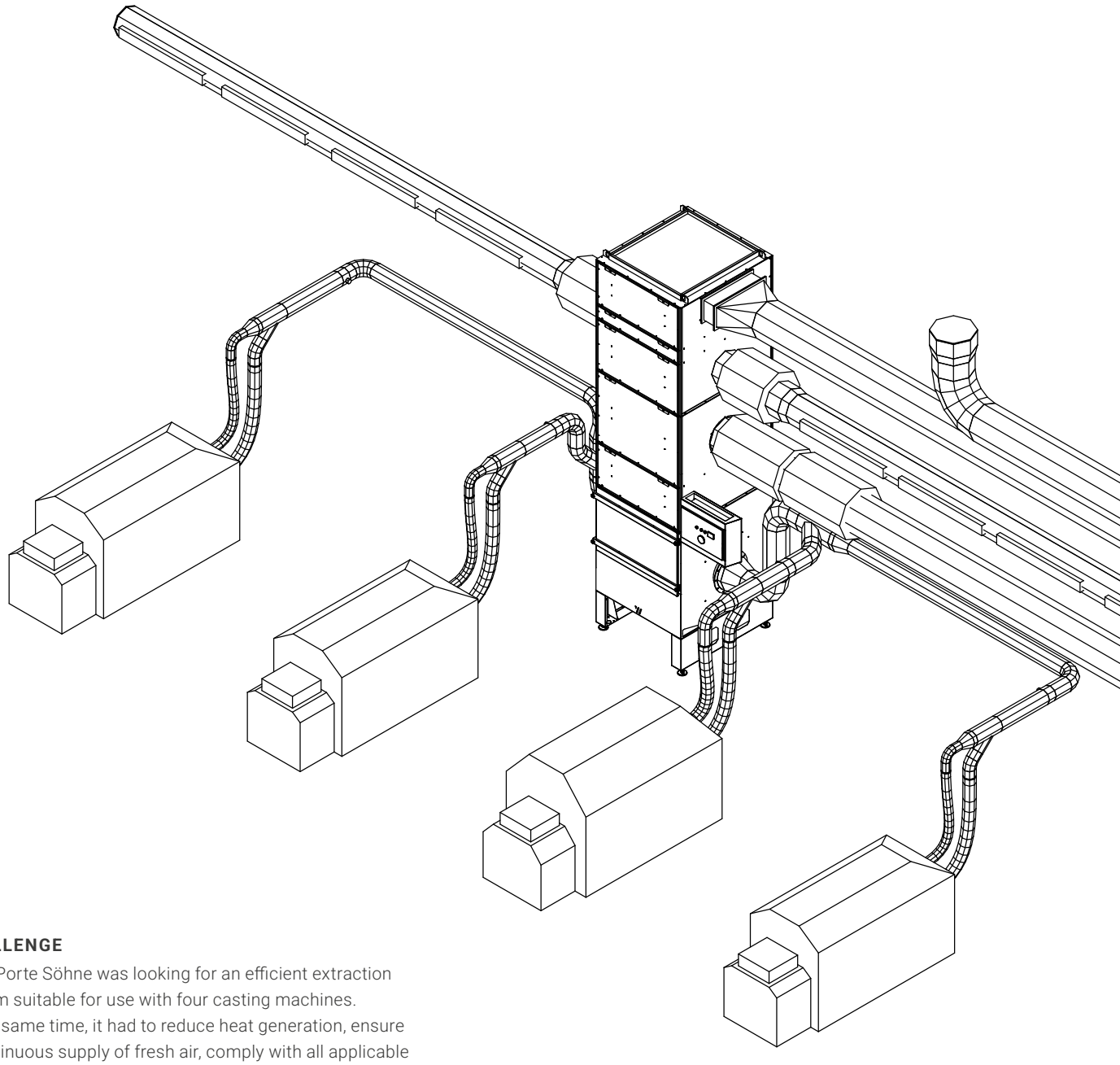
Reference

Clean air & cool breeze at D. La Porte Söhne

D. La Porte Söhne GmbH produces high-precision locks and fittings for the commercial vehicle and automotive industry. In its die-casting foundry, seven casting machines operate simultaneously in two-shift operation. To prevent the parts from sticking, cooling lubricants or release oil are used as a spray mist. The fine aerosols and oil mist in the hall air posed a health hazard to em-ployees and were deposited on surfaces and floors.

»The difference is clearly noticeable! The air quality and temperature in the hall have improved enormously.«

Joachim Pirdzuns,
Operations Manager D. La Porte Söhne GmbH



CHALLENGE

D. La Porte Söhne was looking for an efficient extraction system suitable for use with four casting machines. At the same time, it had to reduce heat generation, ensure a continuous supply of fresh air, comply with all applicable workplace regulations, and offer a long filter service life with minimal cleaning effort.

SOLUTION

We developed an extraction solution consisting of an E Series 4000 oil mist separator with a maximum air volume of 15,000 m³/h, a pipe system and a fresh air box. Fine oil particles are extracted directly at the machines, filtered in the system and fed back into the hall enriched with fresh air. The lubricants used are automatically returned to the machines

After one year of use, the filters show hardly any wear and *the extraction performance has dropped by only 2%.* An alarm is triggered if a filter becomes blocked; however, maintenance requirements and replacement filter costs are low and usually only arise after several years.

MEDIA	• Oil vapor, aerosols
PROCESSES	• Spraying of cooling lubricants and release oil, die casting
PERFORMANCE	• Motor power: 11 kW • Max. air volume: 15,000 m³/h • Operating point: 5,800 – 7,200 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support

»(…) The employers' liability insurance association was also impressed. This was particularly important to us, because our employees are our most important asset.«

Joachim Pirdzuns,
Operations Manager D. La Porte Söhne GmbH

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 1
O Series 3000, 3 kW

Process: Milling with minimum quantity lubrication
Material: Aluminum
Medium: Emulsion mist
Capture: Direct connection

Fig. 2
Compact, 0,5 kW

Process: Milling with emulsion
Material: Aluminum, copper, steel
Medium: Emulsion mist
Capture: Direct connection

Fig. 3
E Series 2000, 3 kW

Process: Turning with emulsion
Material: Steel
Medium: Emulsion mist
Capture: Extraction arm, direct connection, room capture

Fig. 4 (right)
E SeriesE 3000, 7,5 kW

Process: Spraying with weld bead release agent
Material: Steel
Medium: Vapor
Capture: Direct connection

Technical data

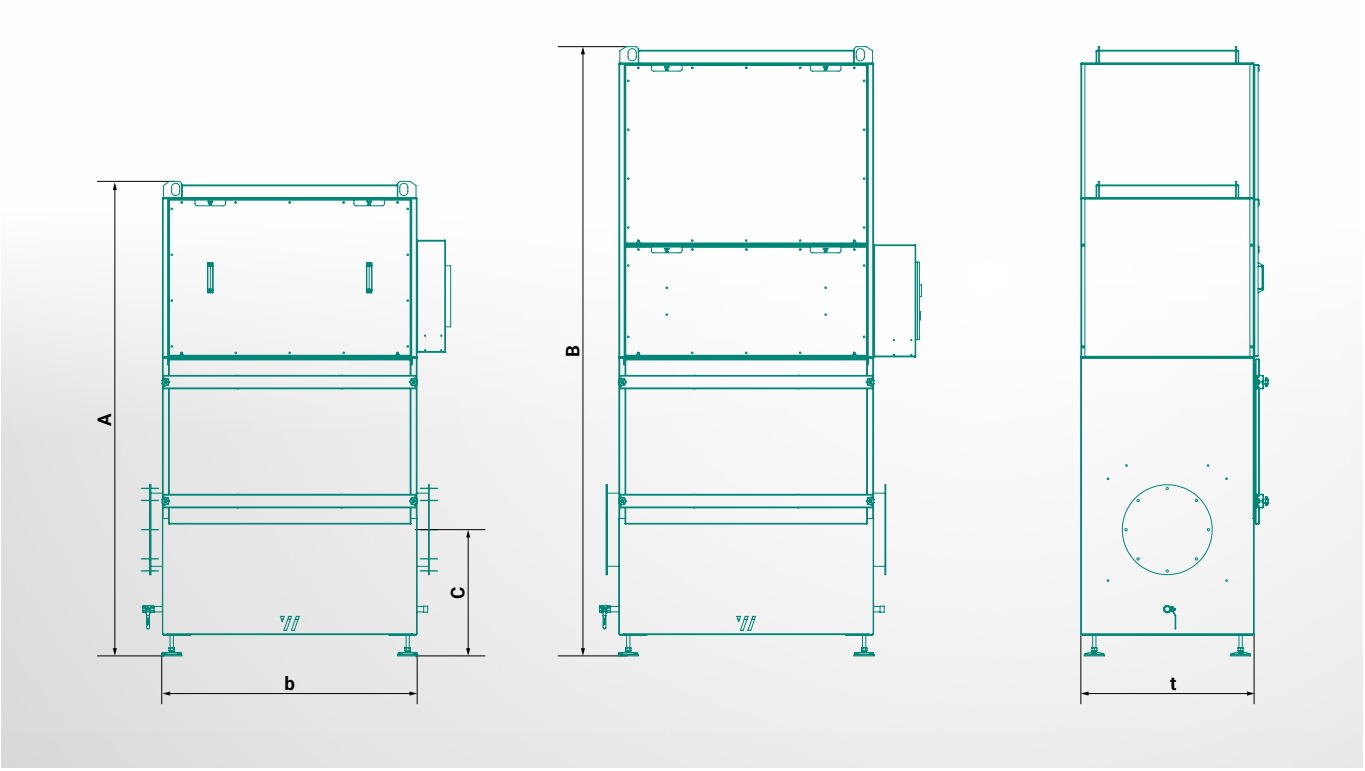
5 different size variants
8 power levels

E Series 1000–5000

OIL MIST SEPARATOR SERIES		E 1000	E 2000	E 2000	E 3000	E 3000	E 4000	E 4000	E 5000
Engine power	kW	1.1	2.2	3	4	5.5	7.5	11	15
Fan power max.	m³/h	2,400	3,500	4,500	6,000	7,000	8,500	14,000	17,900
Width (b)	mm	550	850	850	1,250	1,250	1,250	1,250	1,850
Depth (t)	mm	650	850	850	850	850	1,350	1,350	1,350
Height A (Stainless steel mesh)	mm	1,750	1,940	2,000	2,220	2,340	2,340	2,480	2,480
Height B (H14 Filter)	mm	2,025	2,215	2,275	2,770	2,890	2,890	3,030	3,030
Height C (Intake)	mm	450	550	550	650	650	650	650	650

Status June 2026 | Subject to change

E *E Series oil mist separators are more powerful and can move larger volumes of air through the system.*



O Series 1000–5000

OIL MIST SEPARATOR SERIES		O 1000	O 2000	O 2000	O 3000	O 4000	O 5000
Engine power	kW	1.1	2.2	3	4	5.5	7.5
Fan power max.	m³/h	2,400	3,500	4,500	6,000	7,000	8,500
Width (b)	mm	550	850	850	850	1,250	1,250
Depth (t)	mm	650	850	850	850	850	1,350
Height A (Stainless steel mesh)	mm	1,750	1,940	2,000	2,220	2,340	2,340
Height B (H14 Filter)	mm	2,025	2,215	2,275	2,770	2,890	2,890
Height C (Intake)	mm	450	550	550	550	650	650

Status June 2026 | Subject to change

O *O Series oil mist separators are designed for oils and emulsions with fine particles. The air flows through more slowly in order to achieve maximum separation.*

FUME FILTER
R Series

Fume filters with various options including precoat unit

WELDING FUMES ARE HARMFUL!
Fumes from welding processes and other thermal processes contain extremely fine metal particles. Especially when processing stainless steel, carcinogenic substances such as chromium *(VI)* and nickel are produced, which pose a significant health risk.

Fume filters from ABSAUGWERK capture welding fumes, smoldering fumes, and metallic fine dust directly at the source. Even the finest particles and hazardous emissions are reliably separated through a multi-stage filtration system. For processes involving stainless steel, versions with W3 certification for mobile extraction systems or HEPA H14 filters are used, which safely bind carcinogenic substances.

The cleaned air can optionally be returned to the production hall in recirculation mode or discharged to the outside in exhaust air mode. Thanks to energy-efficient control, optional performance regulation via frequency converters, and low-maintenance design, our fume filters operate particularly economically.

Performance:
2,400–40,000 m^3/h*
1.1–45 kW

** Systems connected in series have the potential to deliver virtually unlimited performance.*

Series 7000 fume filters, 2-pack
each with 37 kW of power

Your benefits

- **High extraction power**
- **Low energy consumption**
- **Cleanable permanent filters**
- **Durable filter components**
- **Easy cleaning & maintenance**
- **Individual configuration & special solutions**
- **Recirculating air & exhaust air operation**
- **Versatile control functions**
- **Remote maintenance & remote access**
- **Exclusive design**

Application

During tack welding, laser processing, cutting or robotic welding, sparks, hot particles and fine dusts are generated. Especially when welding aluminium or stainless steel, toxic fumes containing chromium and nickel compounds are produced, which are highly hazardous to health. Our fume filters are used wherever clean air and safe processes are indispensable – for example in metalworking, the automotive industry, mechanical and plant engineering, or the aerospace industry.

INDUSTRIES

Automotive, chemical industry, food industry, metal processing, pharmaceutical industry, etc.

PROCESSES

- Tack welding
- Soldering
- Laser processing
- Marking
- Cutting
- Robotic welding
- Welding, etc.

MEDIA

- Fumes
- Smoke

Filter:

- Cartridge filters

Discharge:

- Drawer
- Bin
- Bucket
- Container
- Automatic discharge *(rotary valve)*
- Individual discharge

Capture:

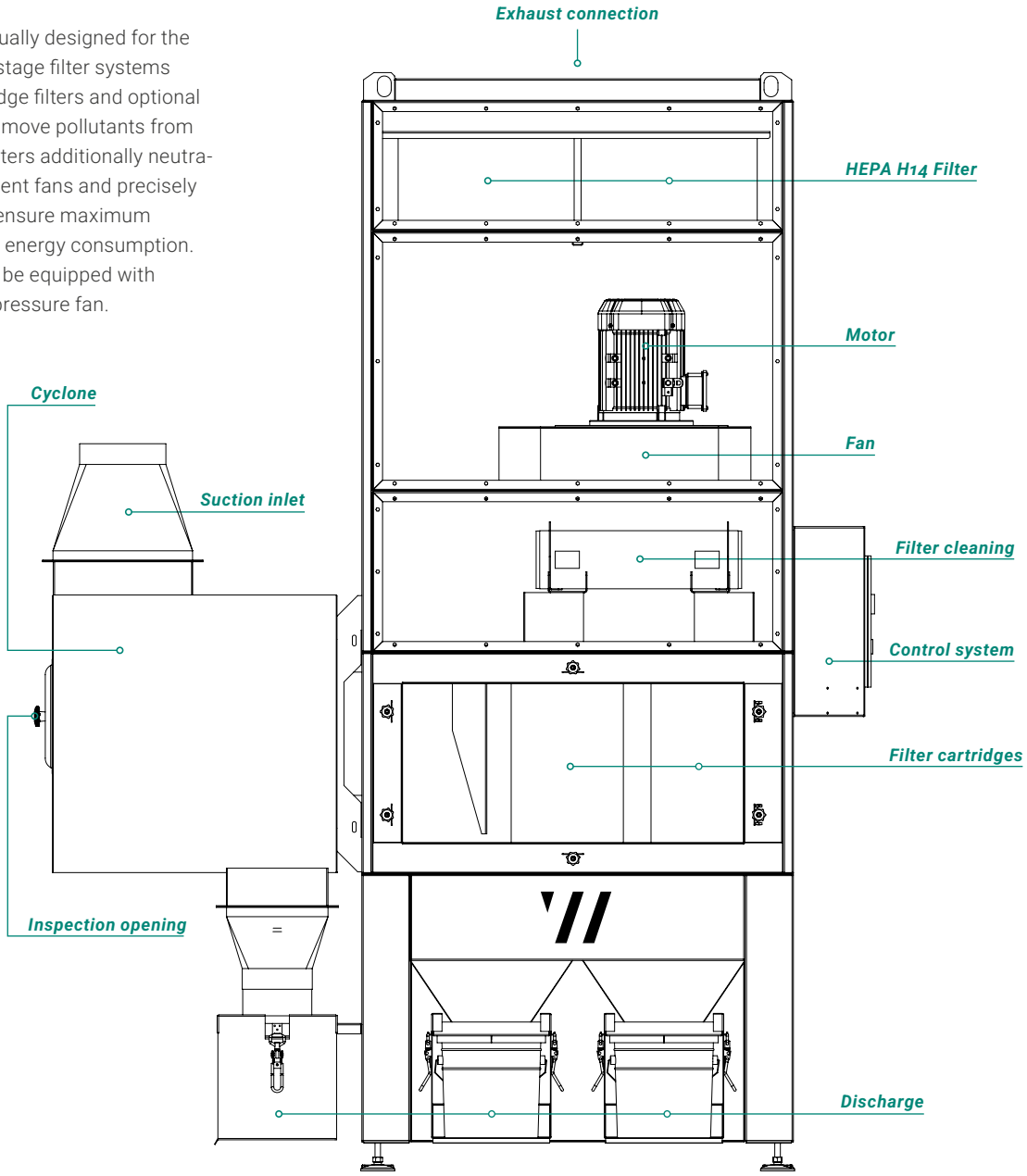
- Extraction arm
- Extraction table
- Extraction hood
- Pipe system
- Machine connection
- Room capture
- Individual capture

Equipment:

- 11 power levels
- Multiple filter stages for max. degree of separation
- Jet pulse filter cleaning
- IE3 to IE5 motors

Components

The fume filters are individually designed for the respective process. Multi-stage filter systems with pre-separators, cartridge filters and optional HEPA H14 filters reliably remove pollutants from the air. Activated carbon filters additionally neutralize gases and odors. Efficient fans and precisely coordinated components ensure maximum performance with minimal energy consumption. Optionally, the system can be equipped with a high-performance high-pressure fan.

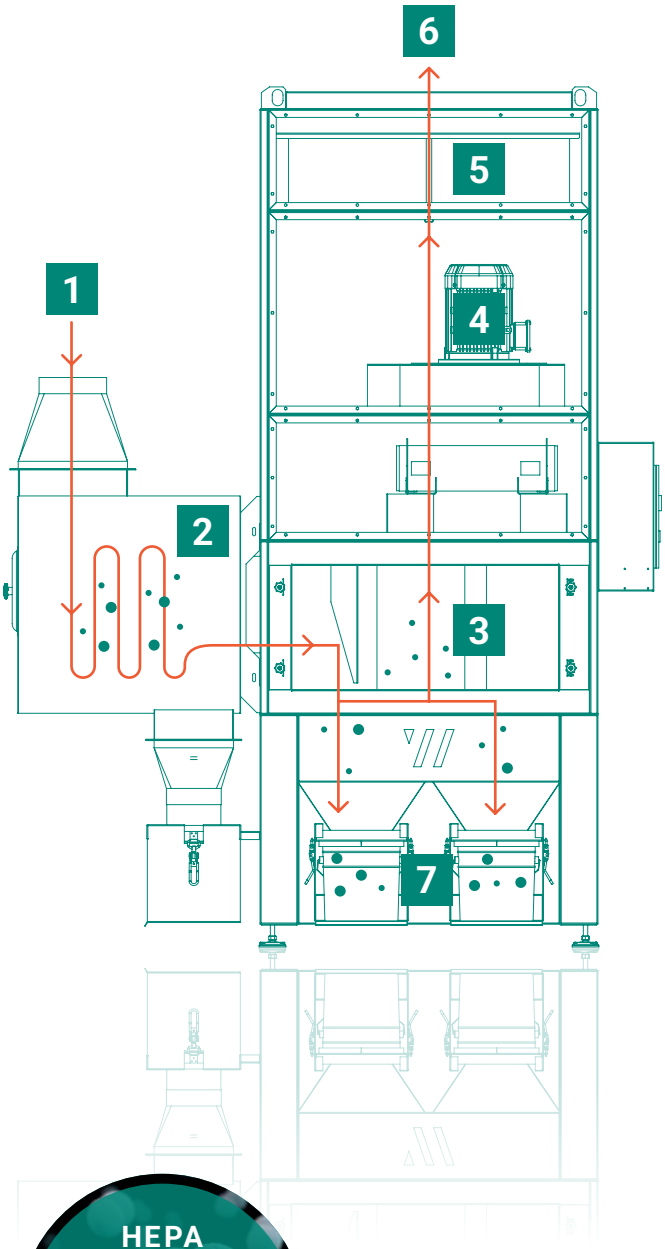


Options:

- HEPA H14 filter for carcinogenic substances in recirculating air operation
- Activated carbon filter for gases and odours
- ATEX / fire protection version
- W3 version for mobile systems
- Pre-separator
- Stainless steel version
- Effective noise protection
- Cross-flow heat exchanger
- Precoat unit
- Various fans *(medium pressure, high pressure)*
- Versatile intelligent controls
- Individual system colour & branding

ATEX

1.4301
1.4401



Functionality

The air is captured directly at the source, filtered in several stages and cleared of smoke and particles. It can then be safely returned in recirculating air or exhaust air operation.

1. SUCTION
Contaminated air is extracted via a direct machine connection or another capture system.

2. PRE-SEPARATOR
A pre-separator removes a large proportion of medium-sized and coarse particles, smoke and sparks. This protects the main filters and significantly extends their service life.

3. FILTER STAGE 1
Fine dust is reliably separated using cartridge or hose filters. Filter cleaning is carried out automatically via jet pulse cleaning.

4. FAN
The fan with IE3 technology, optionally available with IE4 or IE5, operates extremely quietly, efficiently and with high performance.

5. FILTER STAGE 2
For particularly fine or carcinogenic substances such as stainless steel, an additional HEPA H14 filter is used to reliably capture even microscopic particles.

6. EXHAUST
The cleaned air is either discharged outside or returned to the room in recirculating air operation, reducing heating and energy costs.

7. DISCHARGE
The separated dust is disposed of individually via drawers, bins, buckets or containers. Alternatively, automatic discharge is carried out via a rotary valve.

HEPA H14 FILTER

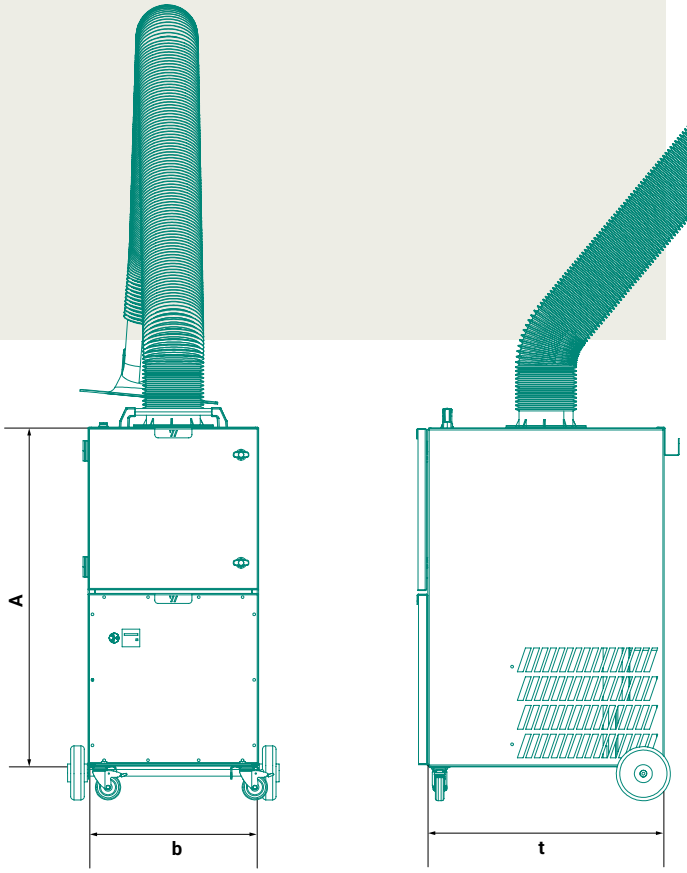
Filters **99,995 %** of all fine particles and viruses

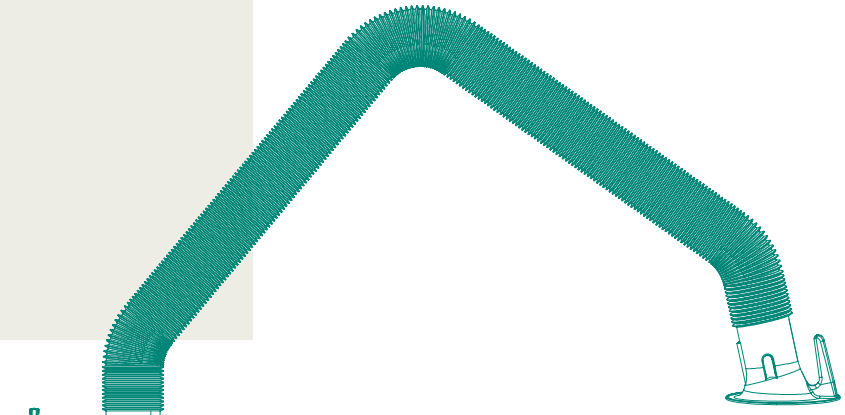
With a separation efficiency of 99.995 %, HEPA H14 filters remove even ultrafine and carcinogenic particles from the air. They ensure maximum safety in processes involving stainless steel or other hazardous substances.

SmartX

The **mobile welding fume filter SmartX** provides precise point-of-use extraction directly at the source. Thanks to its compact, robust, and mobile design, SmartX is ideally suited for changing workstations in workshops and production areas, and impresses with easy handling and minimal maintenance requirements.

- **Separation efficiency of up to 99.9%**
- **Durable nano-grooved filter cartridge**
- **Internal baffle pre-separator**
- **Lateral recirculated air without drafts**
- **Plug & Play with 230 V connection**
- **Mobile & compact: only 0.36 m²**
- **Ergonomic operation & maintenance**
- **Start-stop automatic *(opt.)***
- **Extraction arm with 4 m length *(opt.)***





SMART X		
Motor power	kW	1.1
Max. fan power	m³/h	2,200
Width (b)	mm	505
Depth (t)	mm	720
Height A	mm	1,150
Extraction arm length	mm	3,000
Extraction arm Ø	mm	160

Status June 2026 | Subject to change

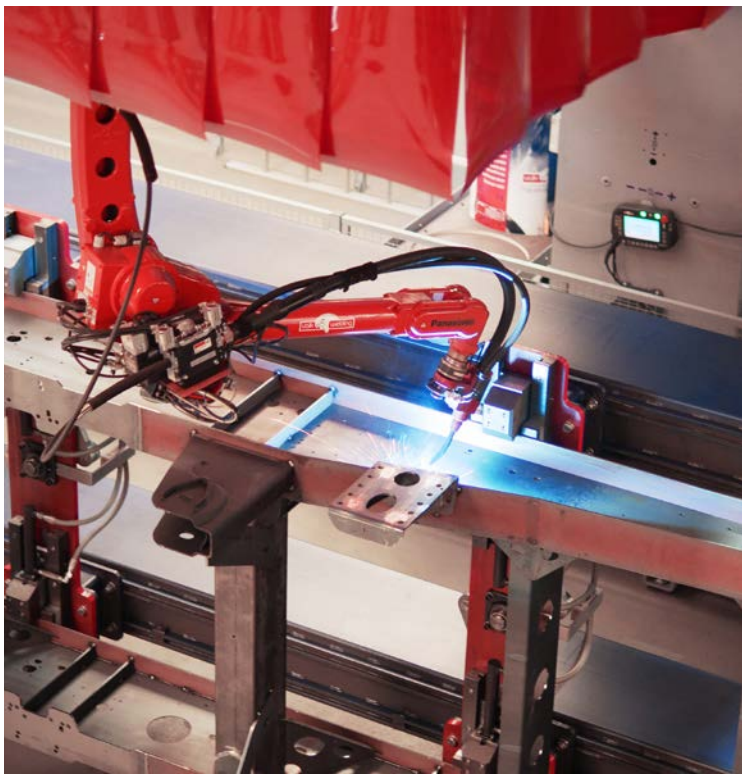
Reference

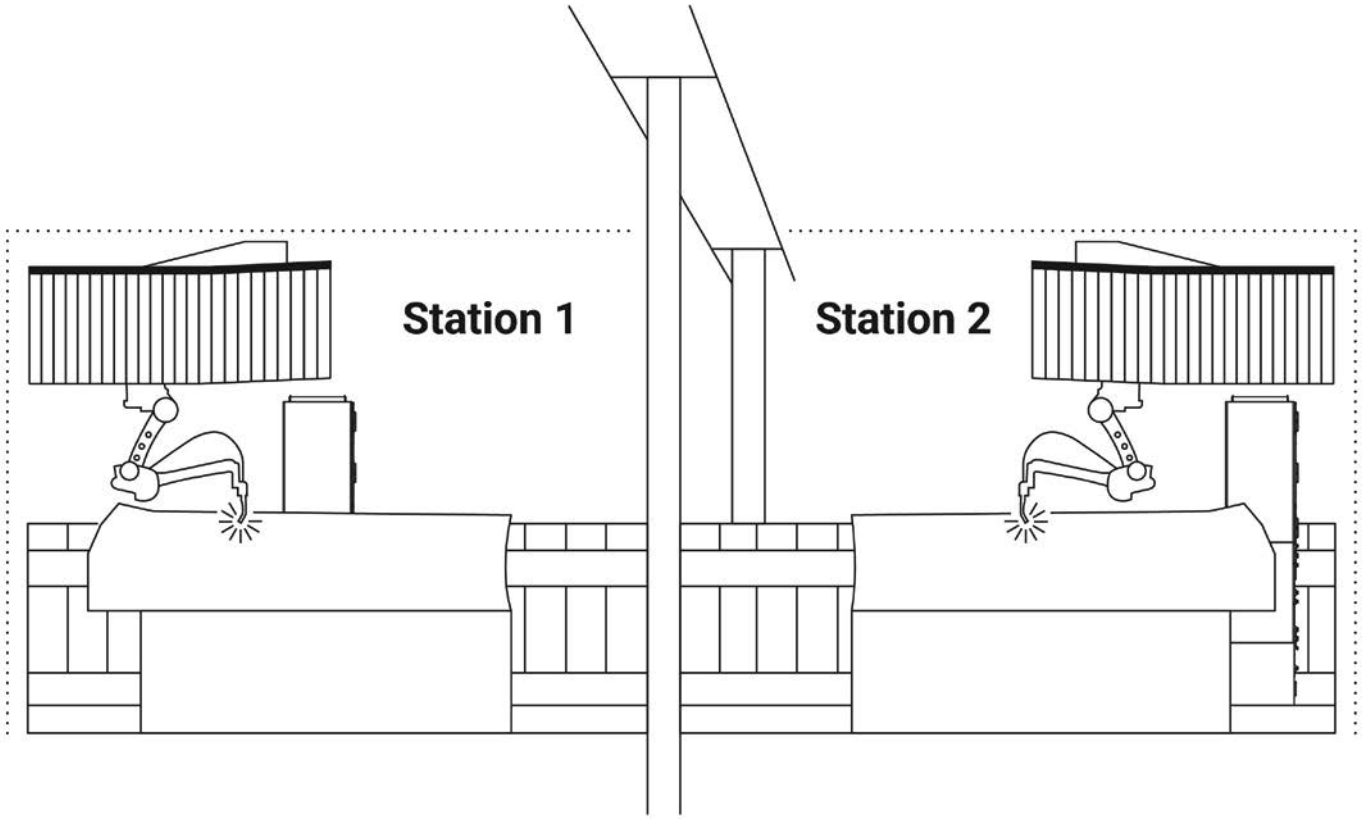
Welding robots and fume filters under a hood at Reisch Fahrzeugbau

Reisch Eliasbrunn GmbH was for many years a leading manufacturer in agricultural and commercial vehicle construction. On a production area of 40,000 m², 250 employees produced up to 168,500 vehicles annually. Reliability and the highest welding quality were always the key focus, particularly for large assemblies in the agricultural and commercial vehicle sector. For a new welding system from Valk Welding, ABSAUGWERK developed a customised extraction solution for two combinable welding robots – despite low ceiling height and high requirements in terms of efficiency and air quality.

»We were surprised at how well the extraction works. The air volume is strong, and the welding fumes are cleanly extracted upwards.«

Marco Beyer,
Former Plant Manager Reisch Eliasbrunn GmbH





CHALLENGE

A high-performance extraction solution was to be integrated on a robot carriage for two combinable welding robots from Valk Welding. Despite the low ceiling height, efficient fume capture via large-area extraction hoods had to be ensured.

SOLUTION

Two welding fume filters capture the hazardous fumes via large-area, height-adjustable extraction hoods from Valk Welding. Both the extraction systems and the welding robots were mounted on mobile carriages to ensure maximum flexibility in the production process. The pipe system was supplemented with flexible hose elements, allowing the system to move freely without any loss of performance.

Despite a high extraction performance of up to 6,000 m³/h, the filters are compact and lightweight in design. This reduces the energy consumption of the carriages and ensures efficient use of space. The result is a powerful, flexible and energy-efficient welding fume extraction solution that is perfectly tailored to the requirements at Reisch.

The Reisch reference video at
absaugwerk.de/en/reisch-fahrzeugbau

MEDIA	• Welding fumes
PROCESSES	• Robotic welding
PERFORMANCE	• Motor power: 2× 4 kW • Max. airflow: 2× 6,000 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support


ABSAUGWERK

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 1
2× R Series 7000, 37 kW

Process: Welding
Material: Carbon steel *(oil-free)*
Medium: Dry fumes
Capture: Hall extraction push-pull plus, 10 × extraction arms
Discharge: Dust collection bucket

Fig. 2
R Series 2000, 4 kW

Process: Spot welding
Material: Carbon steel
Medium: Dry fumes
Capture: Canopy hoods, customer-provided
Discharge: Dust collection bucket

Fig. 3
R Series 4000, 18,5 kW

Process: Welding
Material: Carbon steel *(oil-free)*
Medium: Dry fumes
Capture: Hall extraction push-pull plus, 6 × extraction arms
Discharge: Dust collection bucket

Fig. 4
Filter unit R 7000, 45 kW

Process: Welding
Material: Carbon steel
Medium: Dry fumes
Capture: Canopy hoods, customer-provided
Discharge: Dust collection bucket

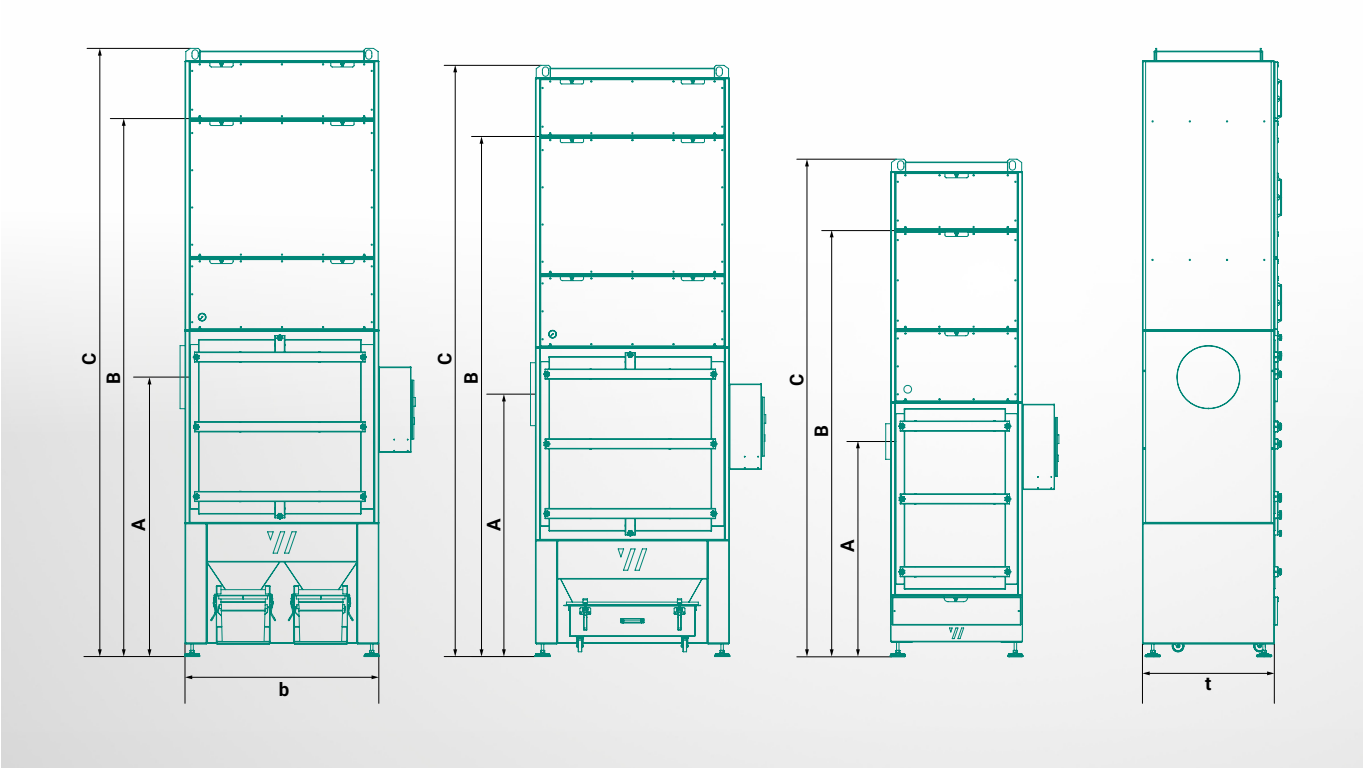
Technical Data

7 different size variants
11 power levels

R Series 2000–3000

FUME FILTER SERIES		R 2000	R 2000	R 2000	R 2000	R 3000	R 3000	R 3000	R 3000
Motor power	kW	1.1	2.2	3	4	4	5.5	7.5	11
Max. fan power	m³/h	2,400	3,500	4,500	6,000	6,000	7,000	8,500	15,000
Width (b)	mm	850	850	850	850	1,250	1,250	1,250	1,250
Depth (t)	mm	850	850	850	850	850	850	850	850
Height A (drawer)	mm	860	860	860	1,410	–	–	–	–
Height B (drawer)	mm	2,240	2,240	2,240	2,915	–	–	–	–
Height C (drawer + H14)	mm	2,540	2,540	2,540	3,240	–	–	–	–
Height A (50L bin)	mm	1,165	1,165	1,165	1,715	1,850	1,850	1,850	1,850
Height B (50L bin)	mm	2,560	2,560	2,560	3,220	3,575	3,575	3,575	3,725
Height C (50L bin + H14)	mm	2,895	2,895	2,895	3,535	3,925	3,925	3,925	4,075
Height A (100L bin)	mm	–	–	–	–	2,050	2,050	2,050	2,050
Height B (100L bin)	mm	–	–	–	–	3,775	3,775	3,775	3,925
Height C (100L bin + H14)	mm	–	–	–	–	4,125	4,125	4,125	4,125
Height A (16L bucket)	mm	1,320	1,320	1,320	1,870	1,775	1,775	1,775	1,775
Height B (16L bucket)	mm	2,715	2,715	2,715	3,375	3,500	3,500	3,500	3,650
Height C (16L bucket + H14)	mm	3,050	3,050	3,050	3,690	3,850	3,850	3,850	4,000
Height A (30L bucket)	mm	1,470	1,470	1,470	2,020	1,925	1,925	1,925	1,925
Height B (30L bucket)	mm	2,865	2,865	2,865	3,525	3,650	3,650	3,650	3,800
Height C (30L bucket + H14)	mm	3,200	3,200	3,200	3,840	4,000	4,000	4,000	4,150

Status June 2026 | Subject to change



R Series 4000–5000

FUME FILTER SERIES		R 4000	R 4000	R 4000	R 5000	R 6000	R 7000	R 8000
Motor power	kW	15	18.5	22	22	30	37	45
Max. fan power	m³/h	18,000	23,000	23,000	23,,000	30,500	32,500	36,500
Width (b)	mm	1,250	1,250	1,250	1,840	1,840	2,260	2,260
Depth (t)	mm	1,350	1,350	1,350	1,420	1,840	1,840	2,260
Height A (drawer)	mm	–	–	–	–	–	–	–
Height B (drawer)	mm	–	–	–	–	–	–	–
Height C (drawer + H14)	mm	–	–	–	–	–	–	–
Height A (50L bin)	mm	1,800	1,800	1,800	–	–	–	–
Height B (50L bin)	mm	3,800	4,050	4,050	–	–	–	–
Height C (50L bin + H14)	mm	4,050	4,400	4,400	–	–	–	–
Height A (100L bin)	mm	2,000	2,000	2,180	2,350	2,350	2,350	2,750
Height B (100L bin)	mm	4,000	4,250	4,250	4,575	4,575	4,575	4,575
Height C (100L bin + H14)	mm	4,250	4,600	4,600	5,175	5,175	5,175	5,175
Height A (16L bucket)	mm	2,000	2,000	2,000	2,180	2,350	2,350	2,750
Height B (16L bucket)	mm	4,000	4,250	4,250	4,575	4,575	4,575	4,575
Height C (16L bucket + H14)	mm	4,250	4,600	4,600	5,175	5,175	5,175	5,175
Height A (30L bucket)	mm	2,150	2,150	2,150	2,330	2,500	2,500	2,900
Height B (30L bucket)	mm	4,150	4,400	4,400	4,725	4,725	4,725	4,725
Height C (30L bucket + H14)	mm	4,400	4,750	5,325	5,325	5,325	5,325	5,325

Status June 2026 | Subject to change

FLOWX
Filter tower

PLUG & PLAY IN JUST 1 MIN

The FlowX filter tower captures contaminated air over a large area and ensures uniform cleaning of the hall area through targeted air guidance. This protects employees and prevents particle deposits on products and machines. Especially in the case of changing workplaces or high-volume processes, it offers a flexible and space-saving solution that can be easily integrated into existing production environments.

With a separation efficiency of up to 99.9%, welding fumes and other fumes are efficiently removed from the ambient air. A single unit cleans areas of up to approx. 460 m². For larger halls or higher loads, multiple filter towers can be used in parallel.

Thanks to the plug & play principle, the FlowX is ready for immediate use without pipe systems or installation effort. The flexible positioning allows for quick and cost-effective retrofitting. Its well-thought-out design and modern appearance make it a versatile solution for industry, trades, and commerce.

Extraction performance:
12,500 m^3/h | 4.3 kW
20,000 m^3/h | 10 kW
31–72 db(A)

Your benefits

- **Plug & play in just 1 min**
- **Healthy & hygienic indoor air**
- **Hall extraction without pipe systems**
- **Compliance with workplace exposure limits**
- **Energy-saving recirculation mode**
- **Low-impulse 360° exhaust**
- **Low noise level at maximum performance**
- **Only 2.66 m² space requirement**
- **Long filter service life**
- **Minimal maintenance effort**

Application

In applications such as welding, tacking, or cutting, pollutants are generated for which source capture is not always sufficient or practical depending on the process conditions. In such cases, the FlowX ensures large-area hall air cleaning. It reliably filters harmful substances such as carcinogenic stainless steel dusts, welding fumes, viruses and bacteria, allergens, and mold spores from the breathing air and supports compliance with statutory dust limit values.

INDUSTRIES

Automotive, chemical industry, food industry, metal processing, pharmaceutical industry, etc

PROCESSES

- Welding
- Stapling
- Separating
- Soldering
- Flame cutting, etc.

MEDIA

- Welding smoke
- Smoke

Filter:

- Cartridge filters
- Grooved nano-coating
- Dust class M
- Automatic Jet-Pulse filter cleaning *(differential pressure controlled)*

Discharge:

- Dust container with 40 / 60 l capacity

Control:

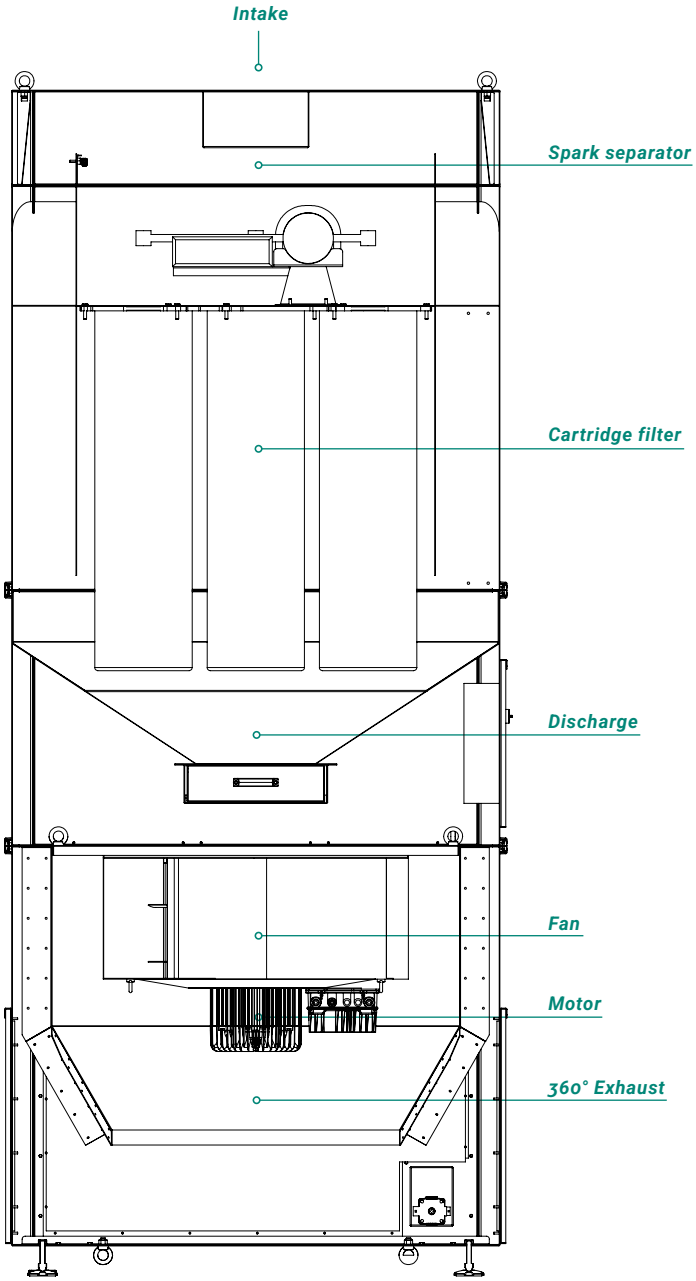
- Timer
- Adjustable air output

Installation:

- Electricity and compressed air connection
- Space-saving with only 2.66 m²
- Ready for use in 1 min
- No piping needed
- Safe installation with crane lugs

Components

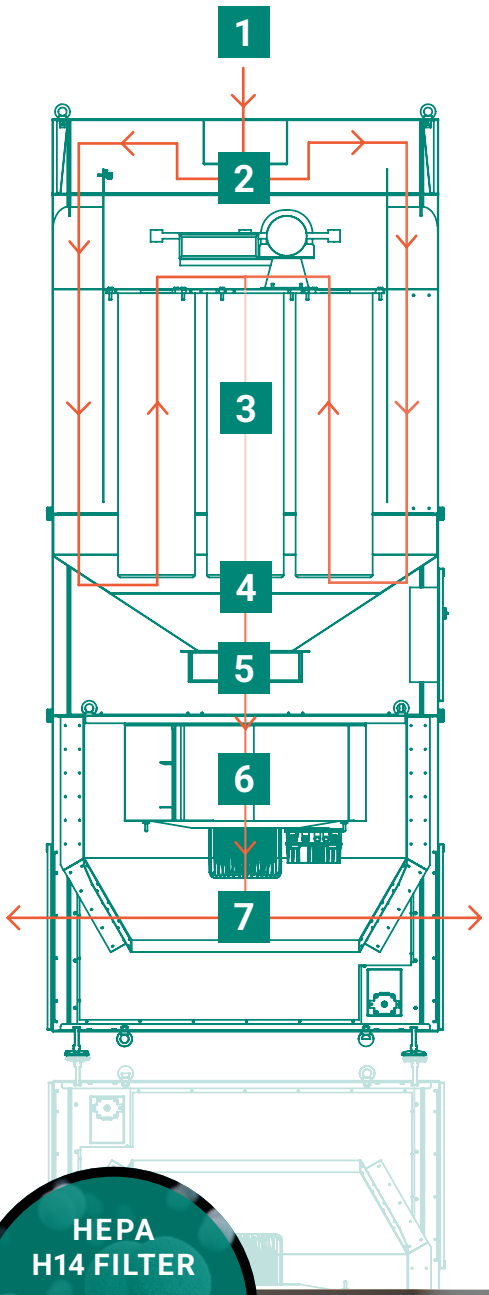
The FlowX filter tower features highly efficient filter material with an integrated pre-separator for a long filter service life. An optional retrofittable HEPA H14 filter enables maximum clean air quality. The fan with IE5 technology ensures maximum performance with minimal energy consumption. The air performance is regulated as required via a frequency converter. The optimally coordinated system thus enables energy savings of up to 50% as well as a reduction in heating costs of up to 70%.



TRGS 528 | Technical Rules for Hazardous Substances:
Welding work generates respirable gases and fumes with harmful health effects that must be safely extracted to protect employees. The relevant and binding limit values can be found in TRGS 528 and ArbStättV § 3a.

Options:

- HEPA H14 Filter against carcinogenic substances, viruses, germs & bacteria
- Mobile version
- Spark pre-separator
- Fire protection version
- Individual color & branding



HEPA H14 FILTER

Filters **99,995 %** of all fine dust and viruses

With a separation efficiency of 99.995%, HEPA H14 filters remove even ultrafine and carcinogenic particles from the air. They ensure maximum safety in processes involving stainless steel or other hazardous substances.

Functionality

A proven system in hall ventilation is layered ventilation according to the IFA recommendation. The warm, polluted air rises due to its thermal properties. There it is extracted and filtered at the extraction area on top of the filter tower. The cleaned air is returned draft-free to the hall near the floor. In the lower area, a protected zone *(fresh air lake)* is created for employees and machines with almost outside air quality.

1. INTAKE

The contaminated air rises due to its thermal properties, where it is extracted.

2. SPARK SEPARATOR

The spark separator serves for fire protection.
It prevents sparks from entering the filter unit.

3. FILTER LEVEL 1

Fine dust particles are reliably separated by cartridge filters. Filter cleaning is carried out automatically via Jet-Pulse.

4. DISCHARGE

The separated materials can be disposed of with low dust emission and conveniently via a drawer.

5. FILTER LEVEL 2

For particularly fine or carcinogenic substances such as stainless steel, an additional HEPA H14 filter is used, which safely captures even microscopically small particles.

6. FAN

The fan with IE5 technology operates extremely quietly, efficiently and powerfully.

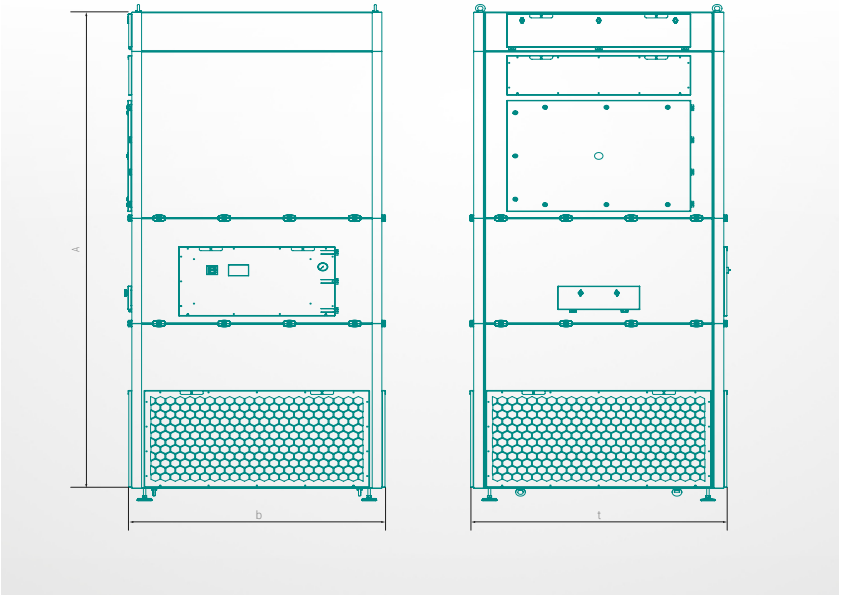
7. EXHAUST

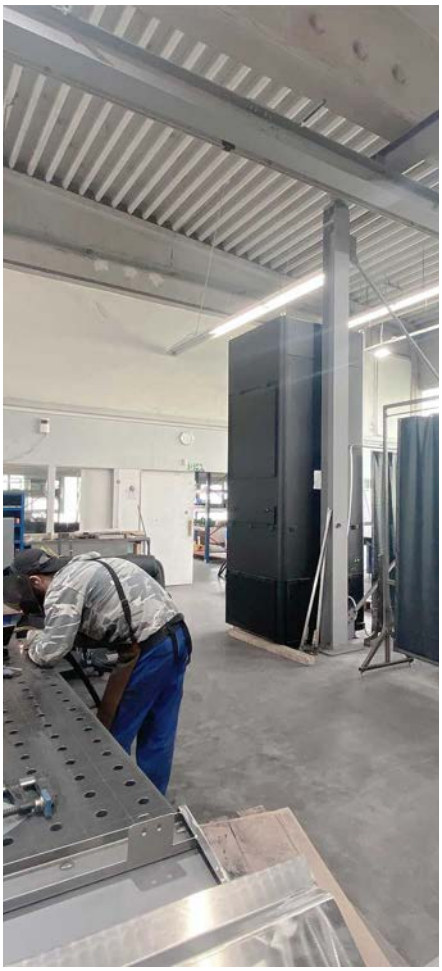
The cleaned air is then returned to the hall draught-free via the floor-level 360° outlet.

Technical Data

FLOW X		4,3 kW	10 kW
Fan performance max.	m³/h	13,500	25,000
Extraction performance approx.	m³/h	12,500	20,000
Width (b)	mm	1,250	1,630
Depth (t)	mm	1,250	1,630
Height A	mm	3,750	3,950
Height B (+ H14)	mm	4,300	4,500
Number of cartridges	–	4	8
Filter area	m²	100	200

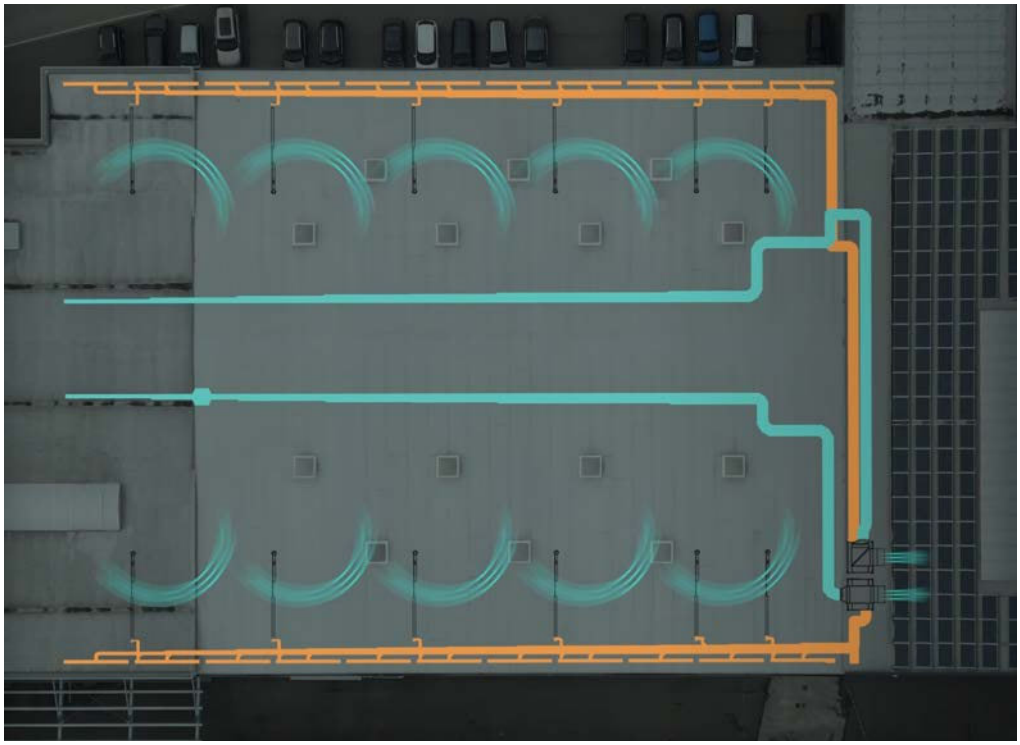
Status June 2026 | Subject to change





FlowX is compact and space-saving with only 2.66 m² footprint

INDUSTRIAL
HALL EXTRACTION



Orange = The contaminated exhaust air is extracted and filtered.

Green = The clean and fresh air-enriched supply air is returned to the hall.

HEALTHY INDOOR AIR WITH A SYSTEM

Clean air is one of the fundamental requirements for safe, efficient, and healthy working. In production halls with high emission loads, hall extraction ensures clean, uniformly filtered air. It complements or replaces source capture when fumes, dust, or aerosols are generated over large areas and spread quickly throughout the space. Through intelligent air guidance, pollutants are continuously captured, filtered, and the cleaned air is returned.

ABSAUGWERK develops holistic hall extraction concepts that are perfectly tailored to the process, room size, and material. Our systems combine maximum occupational safety with efficiency and sustainability: Through uniform air circulation, temperature layers are balanced, heating energy is saved, and energy consumption is reduced.

With state-of-the-art control technology, system performance can be adjusted according to demand. Sensors record air quality and system status in real time, so that extraction performance is only increased when it is actually necessary. This ensures maximum energy efficiency, minimal operating costs, and a consistently pleasant working climate in the production hall.

Direct extraction via extraction arms
in combination with central hall extraction

Your benefits

- **Fully automatic operation**
- **Extraction efficiency up to 99.995%**
- **Energy & heating cost savings**
- **Draft-free & quiet**
- **Flexibly expandable**
- **Compliance with workplace regulations**
- **Individual configuration & special solutions**
- **Recirculation mode for carcinogens**
- **Lower cleaning costs**
- **Less machine wear**
- **Reduced downtime**
- **Higher employee satisfaction**
- **Remote maintenance & remote access**
- **Exclusive design**

Application

Where larger quantities of fumes, dust, and aerosols are generated during welding, grinding, cutting, etc., source capture quickly reaches its limits. Hall extraction ensures consistently clean air by capturing pollutants over a large area, filtering them, and returning the cleaned air in recirculation mode. This creates healthy working conditions and reliable protection for people and machines.

INDUSTRIES

Automotive, welding specialist companies, food industry, pharmaceutical industry, chemical industry, plastics industry, etc.

PROCESSES

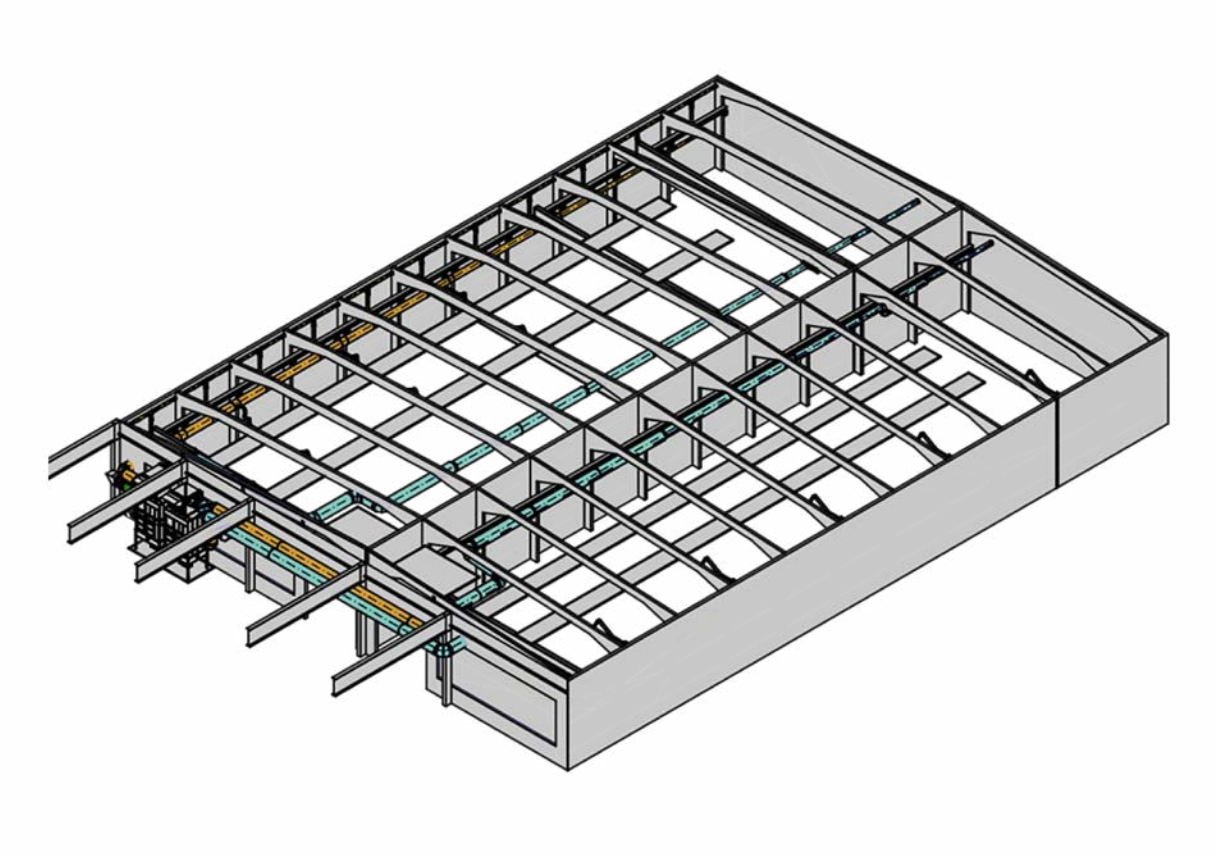
- Welding
- Grinding
- Polishing
- Deburring
- Milling
- Sawing
- Oxy-fuel cutting
- Tacking, etc.

MEDIA

- Dust & fine dust
- Fumes & welding fumes
- Oil mist & emulsions
- Paint mist
- Vapors
- Aerosols
- Chips
- Odors

Components

A hall extraction system consists of several technical components that work together to ensure efficient air cleaning. These include capture of emissions, a suitable pipe system, the extraction system with integrated control, as well as appropriate discharge solutions and air return solutions. Only when these components are properly coordinated does a functioning overall system result.



1 CAPTURE & AIR INTAKE
- Ceiling and wall extraction
- Ambient air and recirculation air intake
- Flow-optimized intake elements

2 AIRFLOW & PIPING
- Pipe and duct systems
- Flow-optimized fittings
- Volume flow controllers
- Shut-off and control dampers

3 EXTRACTION TECHNOLOGY
- Pre-filters *(e.g. coarse/fine filters)*
- Main filters *(e.g. cartridge/hose filters)*
- High-performance or HEPA H14 filters
- Pre-separator for sparks or coarse dust

4 FANS & DRIVE
- Radial or high-performance fans
- Frequency-controlled drives
- Sound-insulated versions

5 AIR DISTRIBUTION & RETURN
- Air exhausts and distribution systems
- Displacement or mixed air concepts
- Temperature and airflow control

6 HEAT RECOVERY
- Heat recovery using highly efficient heat exchangers
- Automatic summer/winter switching
- Recirculation mode with filtered recirculated air

7 CONTROL TECHNOLOGY
- Central control unit *(Siemens LOGO! 8 / Siemens SIMATIC S7)*
- Monitoring sensors for air quality and system status
- Volume flow and pressure control
- Frequency converter

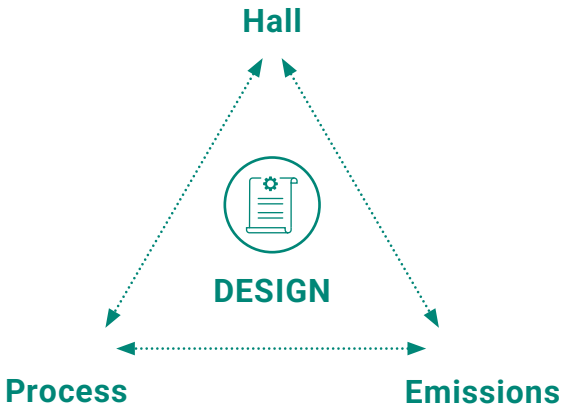
8 SAFETY & PROTECTION
- Fire & explosion protection components
- Non-return dampers
- Spark detection & extinguishing systems
- Silencers

9 MAINTENANCE & SERVICE
- Filter differential pressure monitoring
- Easily accessible maintenance openings
- Filter change and cleaning systems

Technical design

The requirements for hall extraction vary depending on the building, process, and type of emissions. The quantity and type of emissions generated depend directly on the number of workplaces, the process duration, and the material. Each production hall therefore requires an individually planned ventilation and extraction system.

Especially in the case of respirable, carcinogenic, or explosive substances, the correct selection and sizing of the system is crucial. As a professional manufacturer, we take all relevant technical parameters into account in order to develop an efficient and safe overall concept.



RELEVANT PLANNING PARAMETERS:

Hall structure

- Area, room volume, ceiling height
- Type of hall construction
- Installation location & space requirement
- New build or refurbishment

Process & emissions

- Processes: welding, grinding, sawing, etc.
- Material type & quantity *(carcinogenic / explosive / respirable)*
- Emission intensity: high / medium / low
- Source capture available?
- Simultaneity of workplaces

Extraction technology & airflow

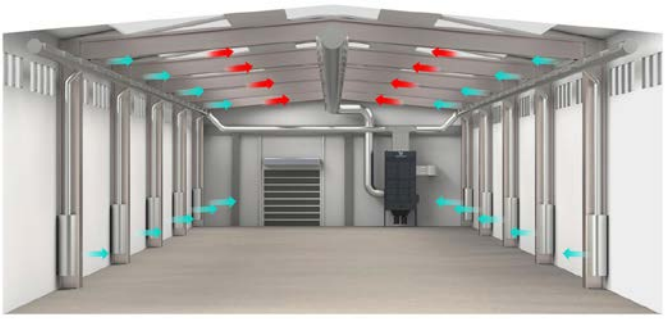
- Recirculation or exhaust air mode
- Course of the pipe system
- Airflow pattern *(hall airflow)*
- Cleaning intervals & times
- Capture elements
- Discharge solutions

4 Hall extraction techniques

ABSAUGWERK develops individual solutions for every hall situation: from source capture to large-area hall extraction. Each system is precisely tailored to the process, room size, and air volume requirements and can be combined as needed with energy-efficient heat recovery or fresh air supply. Depending on the application, different hall extraction techniques are used or combined.

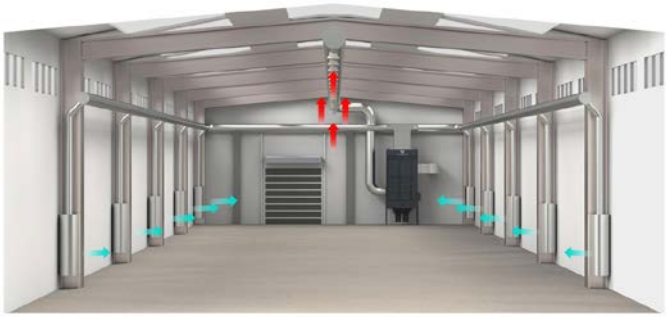
Push-Pull:

In push-pull mixed ventilation, the cleaned air is introduced via long-throw nozzles at the hall ceiling and extracted again on the opposite side. This creates uniform mixing of the warm, contaminated air in the upper third of the hall



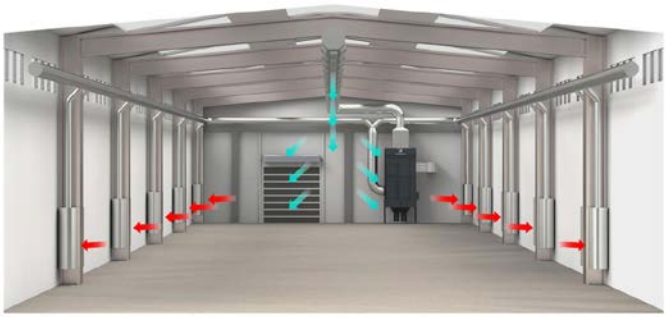
Push-Pull Plus:

In push-pull plus systems, additional floor-mounted air throwers support the natural thermal lift of the fumes. The contaminated air rises in a controlled manner and is efficiently captured and filtered at the ceiling.



Layered ventilation:

In layered ventilation, the fresh, filtered air flows in near the floor via displacement outlets, rises after being heated together with the pollutants, and is extracted there. This method is recommended by recognized occupational health and safety standards.



Inverse layered ventilation:

In inverse layered ventilation, the clean air is blown in from above and the contaminated air is extracted near the floor. This method is particularly suitable for processes with strongly rising heat or fume generation.

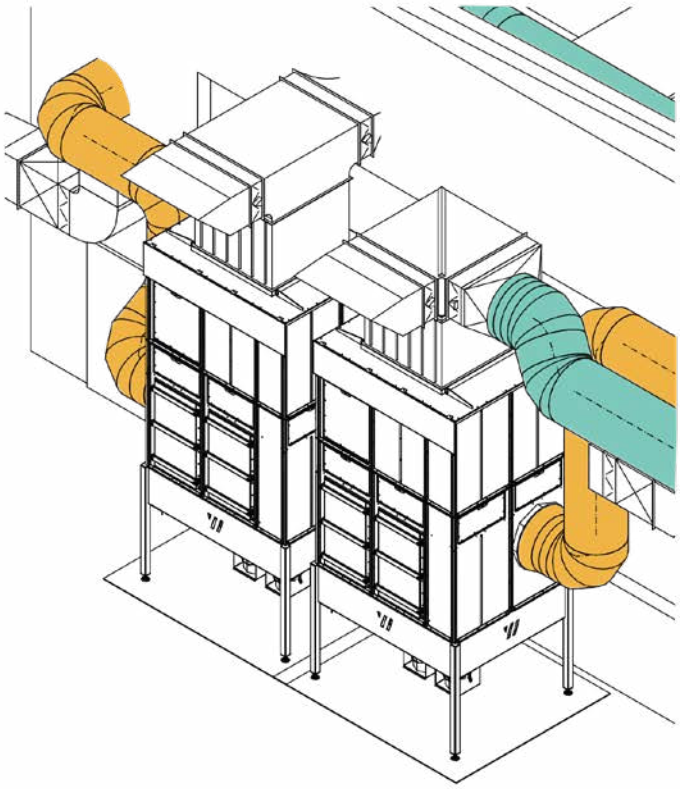
Reference

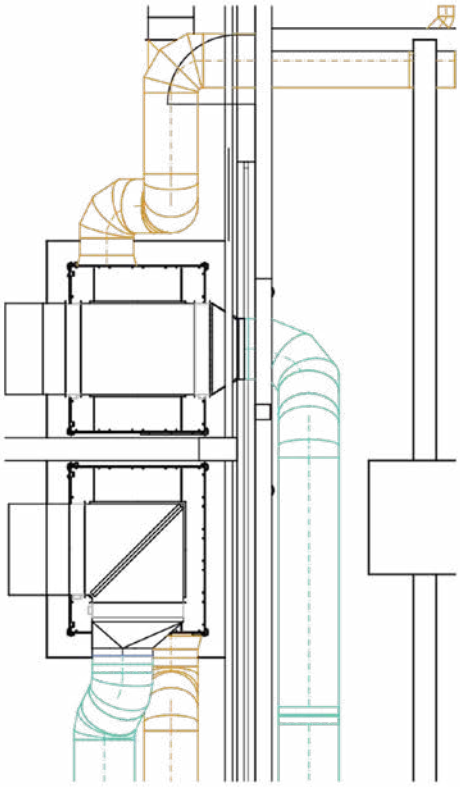
Dual extraction solution for welding fumes at WITRON Stahlfertiger

WITRON Stahlfertiger GmbH & Co. KG processes over 6,000 tonnes of steel annually and manufactures key components for the highly automated logistics systems of the WITRON Group. As part of the production modernization, great importance was placed on clean air and occupational safety. Together with ABSAUGWERK, an efficient concept was developed for an automatic hall extraction system with direct extraction at welding workstations. In addition, two mobile extraction hoods on a welding robot were technically optimized to significantly improve fume capture.

»The solution was so practical and technically simple, it almost sounded too good to be true.«

Gerhard Braun,
WITRON Stahlfertiger GmbH & Co. KG





Orange = The contaminated exhaust air is extracted and filtered.

Green = The clean and fresh air-enriched supply air is returned to the hall.

CHALLENGE

An efficient, low-noise hall extraction system was required with direct capture via extraction arms and central air cleaning, combined with optimized mobile extraction hoods. In addition, the systems were to be installed outdoors, equipped with heat recovery, and operated in an energy-efficient manner with remote maintenance capability.

SOLUTION

ABSAUGWERK implemented an efficient hall extraction concept for WITRON with direct capture via extraction arms and central air cleaning via a ceiling pipe system. The control is simple yet ingenious: via toggle switch directly at the workstation. This allows employees to flexibly switch between extraction arm and hall extraction.

Thanks to integrated noise protection measures, the noise level remains below 65 dB(A). An intelligent ventilation control system regulates fresh air supply, recirculation mode, and heat recovery for clean air, a comfortable climate, and maximum energy efficiency.

The WITRON reference video at ***absaugwerk.de/en/witron***

MEDIA	• Welding fumes
PROCESSES	• Welding *(MAG)*, Robotic welding
PERFORMANCE	• Motor power: 18,5 kW + 37 kW • Max. airflow: 23.000 m³/h + 30.500 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support

»As operations manager, I have practical expertise and wanted a flexible solution that is simple, practical, and effective.«

Gerhard Braun,
WITRON Stahlfertiger GmbH & Co. KG


Fig. 1


Fig. 2


Fig. 3


Fig. 4

Fig. 1
R series 6000, 30 kW

Process: Welding
Material: Steel
Medium: Dry fumes
Capture: Hall extraction Push-pull plus
Discharge: Dust collection bucket

Fig. 2
P series 7000, 37 kW

Process: Welding, grinding
Material: Carbon steel, aluminum
Medium: Fumes, dust
Capture: Hall extraction Push-pull & inverse layered ventilation
Discharge: Dust collection bucket

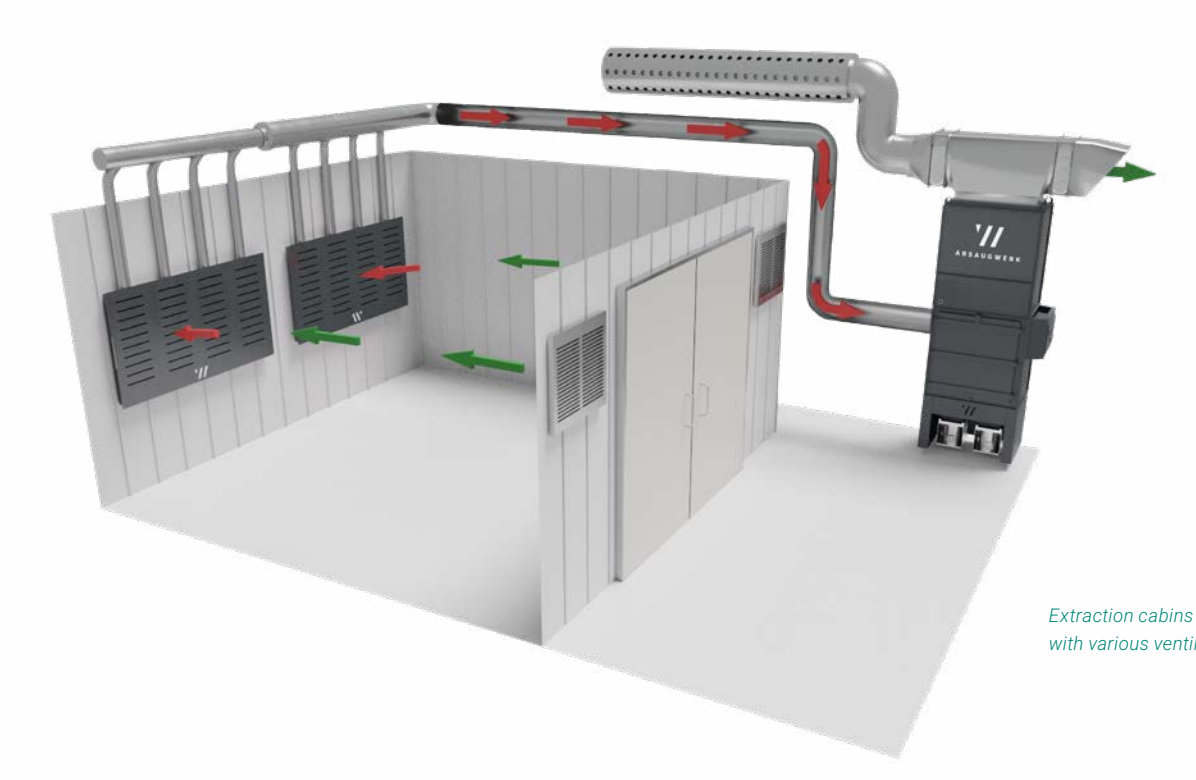
Fig. 3
R series 4000, 22 kW

Process: Welding
Material: Steel
Medium: Dry fumes
Capture: Hall extraction Push-pull
Discharge: Cone downward

Fig. 4
8x S series 4000, 15 kW

Process: Welding
Material: Carbon steel
Medium: Dry fumes
Capture: Hall extraction Push-pull plus
Discharge: Dust collection bucket

INDUSTRIAL
EXTRACTION CABINS



Extraction cabins can be equipped with various ventilation technologies

CONTROL EMISSIONS

The individually configurable extraction cabins from ABSAUGWERK create a controlled, clearly defined working area. Due to the limited air volume, extraction operates particularly efficiently, while the cabin design effectively prevents disruptive crossflows.

Extraction cabins prevent hazardous pollutants from entering the hall. Legal limit values can be complied with easily and economically. Heat and noise remain inside the cabin. The result: noticeably improved air quality, better working conditions for employees, and safe production processes.

Extraction cabins from ABSAUGWERK can be precisely integrated into existing production environments and can be expanded as needed.

Depending on process requirements, the extraction cabins are designed as open, partially enclosed, or fully enclosed. Doors, openings, and viewing windows can be flexibly adapted to the installation size, material flow, and work processes. Different capture systems such as rear wall, floor, or ceiling extraction can be used individually or in combination to achieve optimal airflow guidance and maximum separation efficiency.

In combination with efficient extraction technology, customized solutions are created that combine occupational safety, energy efficiency, and process reliability.

Sound-insulated grinding cabin with integrated extraction tables for safe capture of explosive aluminum dust (ATEX)

Your benefits

- **Compatible with all extraction systems**
- **Optimal dust & welding fume capture**
- **Effective noise protection**
- **Targeted temperature control**
- **Energy & heating cost savings**
- **Compliance with workplace regulations**
- **Individual configuration & special solutions**
- **Recirculation mode for carcinogens**
- **Flexibly expandable**
- **Remote maintenance & remote access**

Application

During welding, grinding, milling, or laser processing, large amounts of emissions are often generated, so that source capture alone is not always sufficient. Large workpieces, changing processing positions, or high noise levels can further complicate open capture.

Extraction cabins create a confined working area in which fumes, dust, and noise are reliably contained and directly captured. This keeps the production hall free of emissions, reduces the burden on employees, and makes the entire working area significantly safer and more efficient.

INDUSTRIES

Automotive, welding specialist companies, food industry, pharmaceutical industry, chemical industry, plastics industry, etc.

PROCESSES

- Welding
- Grinding
- Deburring
- Milling
- Cutting
- Laser processing, etc.

MEDIA

- Dust & fine dust
- Fumes & welding fumes
- Oil mist & emulsions
- Paint mist
- Vapors
- Aerosols
- Chips
- Odors

Components

An extraction cabin consists of several interlocking components that together ensure safe and efficient capture. These include the cabin construction, suitable capture systems, flow-optimized air guidance, the extraction system with integrated control, as well as appropriate discharge solutions and air return solutions. Only their interaction enables a cabin that reliably contains emissions within the working area and safely removes them.

1 STRUCTURE & ENCLOSURE

- Steel or aluminum construction
- Modular wall and ceiling elements
- Partial or full cladding

2 DOORS, OPENINGS & ACCESS

- Sliding, hinged, or roller doors
- Manual or automatic doors
- Large front or side openings
- Safety interlocks

3 SICHTFENSTER & TRANSPARENZ

- Clear or tinted safety glazing
- Welding protection or UV protection windows
- Large-area viewing sections

4 ERGONOMICS & EQUIPMENT

- Integrated lighting systems
- Ergonomic working openings
- Adaptation to operator and process

5 CAPTURE SYSTEMS

- Rear wall extraction
- Floor or floor slot extraction
- Side or ceiling extraction
- Combination of multiple capture systems

6 SYSTEM & CONTROL TECHNOLOGY

- Multi-stage filtration with HEPA H14 and activated carbon
- Energy-efficient radial fans and flow-optimized air guidance
- Intelligent control *(Siemens LOGO! 8 / Siemens SIMATIC S7)* with process integration and air quality monitoring

7 SAFETY & PROTECTION

- Fire & explosion protection components
- Spark monitoring
- Emergency stop devices
- Silencers

8 MAINTENANCE & SERVICE

- Filter differential pressure monitoring
- Easily accessible maintenance openings
- Filter change and cleaning systems

Areas of application

Extraction cabins are used wherever work areas need to be spatially separated or processes must be protected from external influences. Depending on the application, the focus is on clean air, noise protection, or the enclosure of machines and systems.

Working cabin

Working cabins are available in various designs and are used for manual tasks such as welding, grinding, deburring, or assembly. They capture fumes, dust, and noise directly in the working area, ensuring a safe and enclosed working environment.

Sound insulation cabin

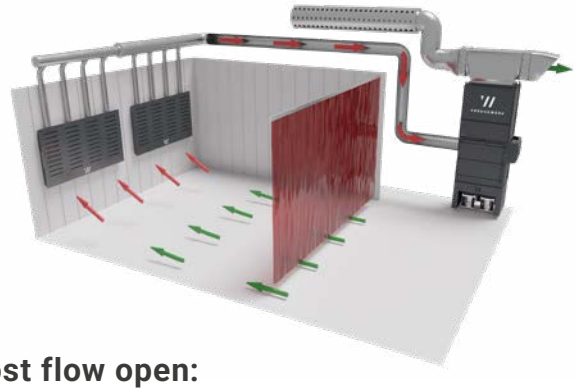
Sound insulation cabins are ideal for work areas with high noise levels, such as loud processing operations or machines. They significantly reduce noise levels and enable focused work. In combination with suitable extraction technology, noise and emissions are safely captured.

Machine enclosure

Machine enclosures are used for automated systems, robots, or processing machines. They prevent the spread of emissions, protect the surroundings, and contribute to increased safety as well as stable, reproducible processes.

4 Techniques for extraction cabins

ABSAUGWERK develops extraction cabins that are precisely tailored to the process, workpiece, and emission behavior. The airflow is designed so that fumes and dust are safely contained within the cabin and captured directly. Depending on the application, different ventilation and capture techniques are used, which can be combined with modern system technology, recirculation or exhaust air mode, and optional heat recovery. This results in a cabin that is efficient, safe, and optimally adapted to the respective process.

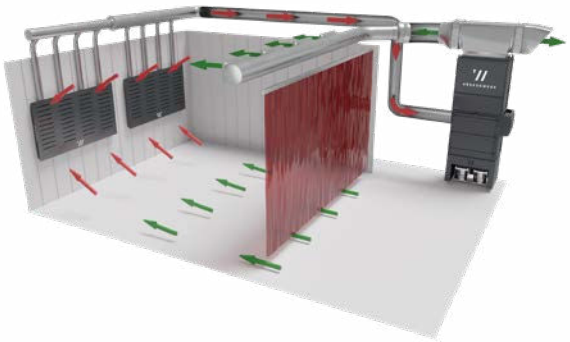


Post flow open:

In open post flow, the cabin is supplied with supply air via a partition curtain. The air flows in freely and supports simple, one-sided capture. This variant is suitable for processes with moderate emission levels and provides a solid basic solution without air recirculation.

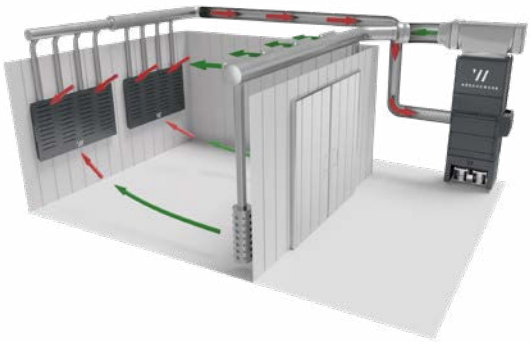
Post flow targeted:

In targeted post flow, the supply air is not introduced openly but guided into the cabin via defined inlets. This creates a constant airflow that directs emissions more effectively toward capture. This technique increases efficiency without requiring complex air duct routing.



Post flow mixed:

Mixed post flow combines a partition curtain with additional displacement outlets or long-throw nozzles. The resulting air guidance is more uniform and controlled. Through air recirculation, energy remains within the system, making this variant particularly efficient.



Post flow closed:

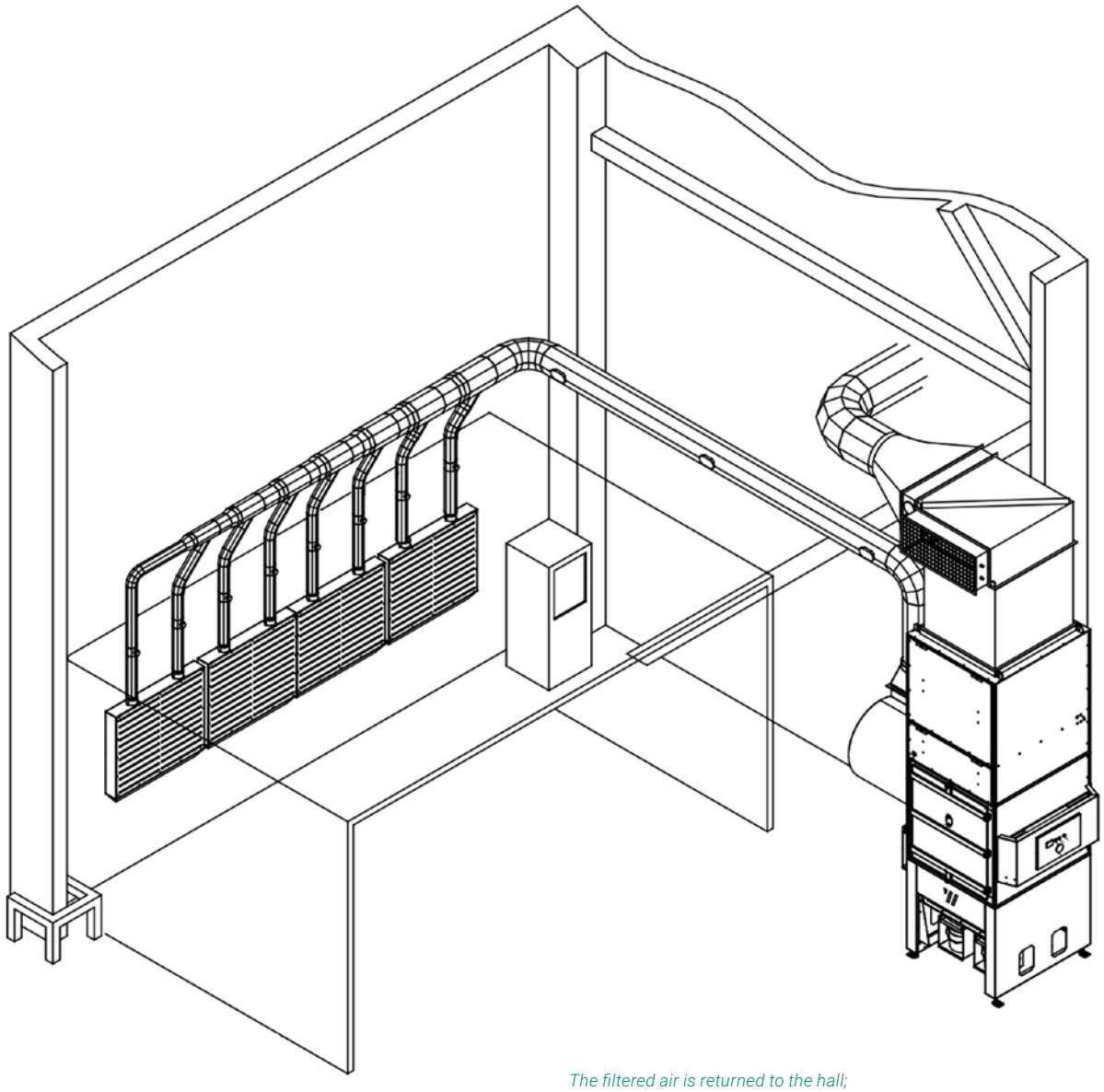
In closed post flow, the supply air enters the cabin exclusively via displacement outlets or long-throw nozzles. The airflow is directed and controlled, and emissions are very reliably moved toward capture. In combination with air recirculation, this technique offers maximum efficiency and the highest process reliability. This method is in line with recognized occupational health and safety best practices.

Reference

Cabin extraction for grinding processes

At a customer in the automotive industry, metal parts and assemblies are developed, designed, and manufactured. During production processes such as grinding, hazardous dusts are generated that must be reliably extracted. As source capture was not practical in this case, a cabin extraction system proved to be the optimal solution. At the same time, particularly dirt-intensive processes could be spatially separated from other production areas. This made it possible to implement a clean and economical solution even under limited space conditions.

Grinding cabin with extraction wall, side hoods, and lamella curtain for safe capture of explosive grinding dusts (ATEX-compliant).



The filtered air is returned to the hall; optionally, it can be discharged outside via a summer/winter switch.

CHALLENGE

The goal was a safe working environment in which the airflow is controlled and generated particles are contained within the working area and specifically captured and filtered via the extraction system.

SOLUTION

The contaminated air is captured on one side in the cabin via extraction walls and fed through a pipe system to the extraction system, where it is filtered. From the opposite side, air can flow in beneath the partition curtain, creating a defined crossflow. This supports the targeted guidance of particles toward capture.

MEDIA	• Aluminum dusts *(explosive)*
PROCESSES	• Grinding of vehicle components
PERFORMANCE	• Motor power: 11 kW • Max. airflow: 10.000 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support


Fig. 1


Fig. 2


Fig. 3


Fig. 4

Fig. 1
P series 3000, 11 kW

Process: Grinding
Material: Aluminum
Medium: Dry dust
Capture: Push-pull cabin extraction with 3x extraction hoods
Discharge: Dust collection bucket

Fig. 2
P series 3000, 11 kW

Process: Grinding
Material: Stainless steel
Medium: Dry dust
Capture: Push-pull cabin extraction with 4x side hoods
Discharge: Dust collection bucket

Fig. 3
R series 3000, 5.5 kW

Process: Flame spraying
Material: Aluminum, copper, steel
Medium: Emulsion mist
Capture: Push-pull cabin extraction with 4x capture columns
Discharge: Dust collection bucket

Fig. 4
P series 4000, 18.5 kW

Process: Grinding
Material: Stainless steel
Medium: Dry dust
Capture: Grinding cabin extraction with 11x capture columns
Discharge: Dust collection bucket

FILTER UNITS
P/R/S O/E B Series

LIMITED HEIGHT, FULL PERFORMANCE!
Filter units are high-performance extraction systems with a separate fan that can be flexibly positioned when space is limited or the room height can only be used to a limited extent.

Depending on the requirements, different versions and designs are available, for example for dry or moist emissions, high dust loads, or specific industrial applications. Filter units can be used individually or in combination and can be precisely adapted to the respective process.

Thanks to their modular design, they can be expanded step by step and adapted to changing production conditions. Depending on the design, installation inside the hall or outdoors is possible.

Performance:
from 2,400 m^3/h*
0,5 – 130 kW

** Systems connected in series have the potential to deliver virtually unlimited performance.*

Filter unit R series 7000 for low ceiling height
with compressor series M – 45 kW performance

Your Benefits

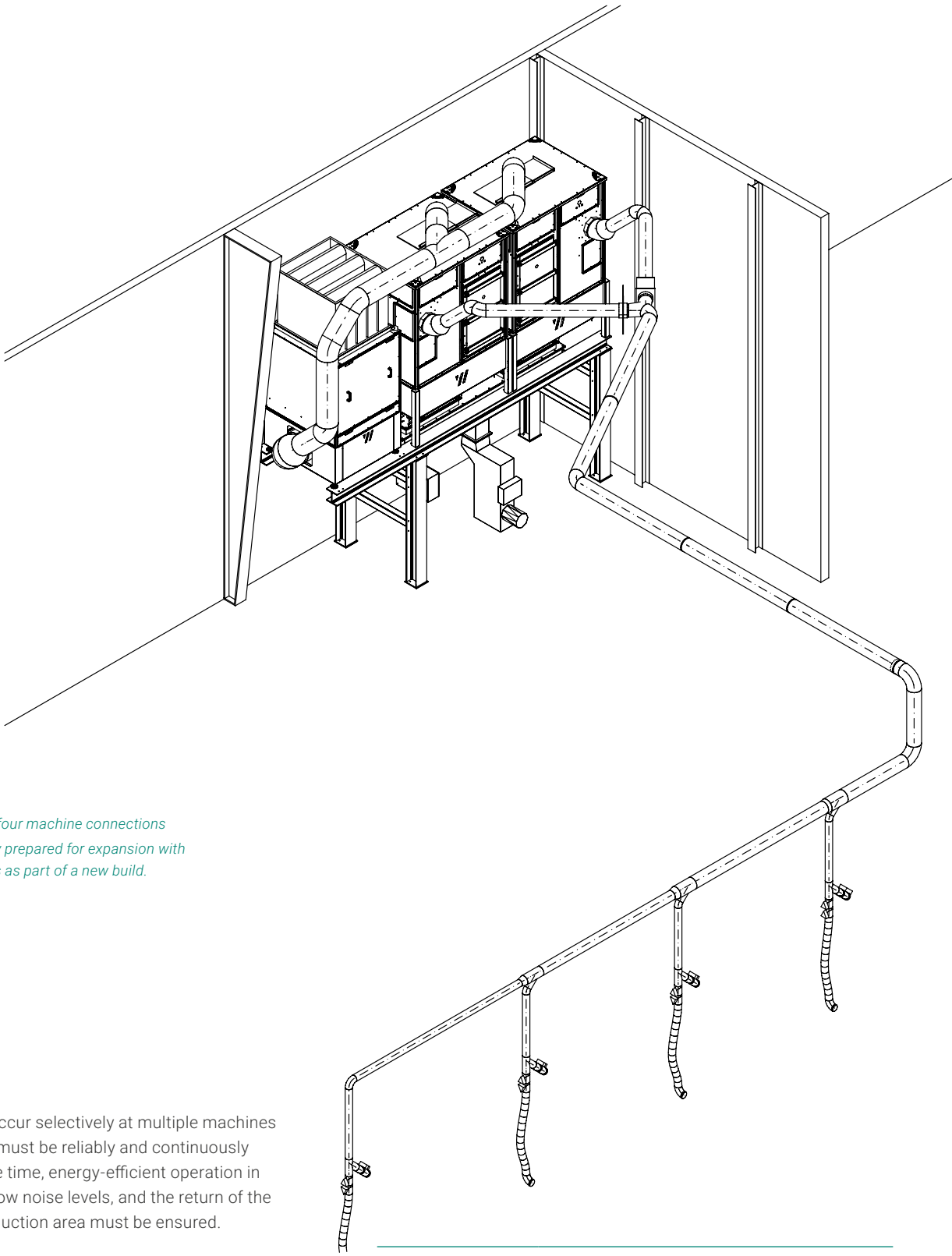
- **Clean air & healthy workplaces**
- **Consistently high air quality**
- **BG-compliant operation**
- **Fulfillment of safety standards**
- **Reduced oil & lubricant consumption**
- **Protection of machinery & tools**
- **Low cleaning effort**
- **Fresh air supply & temperature reduction**
- **Fast, tool-free filter change**
- **Attractive cost-benefit ratio**

Reference

Double filtration performance in one solution

An industrial company in plastics processing manufactures PVC hoses for various applications. During further processing, these hoses are perforated and slit, continuously generating chips. These process steps are essential for product functionality but place increased demands on air and material capture. To ensure smooth production processes as well as clean and safe working conditions, a reliable extraction and filtration solution was required that captures and removes the generated emissions directly within the process.

Filter cleaning is carried out fully automatically: during operation, the filter units are alternately cleaned online, while a complete offline cleaning takes place during system downtime. In this process, one unit is disconnected from the system while the second continues to operate.



Capture is carried out via four machine connections (Ø 100 mm) and is already prepared for expansion with a further four connections as part of a new build.

CHALLENGE

The generated chips occur selectively at multiple machines at the same time and must be reliably and continuously extracted. At the same time, energy-efficient operation in a three-shift system, low noise levels, and the return of the cleaned air to the production area must be ensured.

SOLUTION

A centrally designed extraction system with two filter units was installed, connected via a pipe system with multiple direct connections. Fully automatic filter cleaning in online and offline operation enables uninterrupted operation.

A shared, elevated system frame for filter units and compressor ensures space-saving installation and optimal use of the available space. The system is complemented by sound-insulated components, demand-controlled control, and the return of the cleaned air in recirculation mode.

MEDIA	• Dry chips
PROCESSES	• Perforating, slitting
PERFORMANCE	• Motor power: 18,5 kW • Max. airflow: 15.000 m³/h
SERVICE	Personal consultation, technical design, pipe system planning, production, installation, pipe system, commissioning, maintenance and after-sales support

Accessories & options

To configure the right extraction system for every application, we offer a wide range of accessories and options for our extraction systems. These include capture elements for precise emission extraction, various discharge options for safe material disposal, efficient pipe systems for optimal airflow, precoat units for filter protection as well as pre-separators, to extend filter service life.

This wide range of options provides maximum flexibility and adaptability to meet specific requirements such as process, material and environment, ensuring reliable air cleaning.

Capture systems, discharge solutions, pre-separators, precoat units, pipe systems, etc.

Available in numerous sizes & variants!

Customized solutions

For large or complex components, automated processes, or limited space conditions, special capture concepts are often required. That is why at ABSAUGWERK we develop customized solutions that are precisely tailored to the process, material, and spatial requirements. These include custom-made top, side, and bottom hoods, combined capture systems, adapted table or machine modules, as well as complete enclosures.

Through precise adaptation to the respective process, emissions can be reliably captured and applicable workplace exposure limits can be safely complied with – even where standard solutions reach their limits.

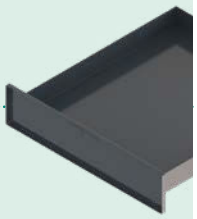
Discharge systems

The captured media are conveyed to the extraction system via a flow-optimized duct system, where they are filtered in multiple stages, while the residual material is safely discharged via a suitable disposal system. Our standard systems can be flexibly expanded with customized solutions tailored to the process, material behavior, and available space.

Depending on the configuration, emptying is either interval-controlled or monitored via level sensors. When the container is full, a notification is automatically issued and the system is safely shut down. This prevents overfilling and ensures long-term operational safety.

ROTARY VALVE

Automatic discharge systems such as rotary valves, double pendulum flaps, screw conveyors, pneumatic conveying systems, discharge slides or shut-off dampers enable time- or quantity-controlled emptying. Discharge can be carried out intermittently or continuously, ensuring reliable continuous operation even with large material volumes.



DRAWER

The drawer discharge is integrated directly into the system, allowing for a particularly compact design. It is ideally suited for very small discharge volumes that can be emptied quickly.

BUCKET

Dust collection buckets with a capacity of 15 or 30 litres offer increased volume and are designed for dust-free disposal thanks to a sealable lid. They are the right choice for small to medium material quantities.

BIN

Bins offer significantly larger capacity and are available in numerous variants – with liner bags, forklift pockets or a tilting mechanism. They are ideally suited for larger material volumes and convenient emptying.

CONTAINER

Containers are designed for very large discharge volumes and are often combined with automatic discharge solutions. They provide efficient and safe disposal, even with high material volumes. Optionally available with oil sieve, tilting device, or rollers for easy transport.

DISCHARGES	R 2000	R 3000	R 4000	R 5000	R 6000	R 7000	R 8000
Drawer 50 L	●						
Dust collection bin 50 L	●	●	●				
Dust collection bin 100 L		●	●	●	●	●	●
Bucket 1 x 15 L	●						
Bucket 2 x 15 L		●	●	●	●	●	●
Bucket 2 x 30 L		●	●	●	●	●	●

Extraction arms

Extraction arms capture emissions directly at the source before fumes or dust can spread throughout the space. They move smoothly with the process and can be precisely positioned with just one hand. The flexible joints provide a large working range, while adjustable hoods reduce repositioning and make capture even more precise. Our modular extraction arms are available in different lengths, diameters, and versions. They can be easily mounted on tables, walls, ceilings, or used as mobile units and integrated into existing extraction and pipe systems. This allows them to adapt optimally to any process and material.

One-handed & easy to operate

Process-adapted capture

High suction performance & low pressure loss

Flow-optimized, no deposits

Various lengths, diameters & ATEX options

Easy installation on wall, ceiling, floor, duct

Compatible with all systems

Lightweight extraction arm with PVC hose and plastic hood with handle

Robust extraction arm with aluminum pipe and energy-saving throttle valve

Robust extraction arm with aluminum pipe in ATEX version

ATEX

Flexibly extendable telescopic extraction arm for maximum reach in minimal space

Processes:

- Welding
- Grinding
- Polishing
- Sawing
- Cutting
- Milling
- Laser processing, etc.

Media:

- Dust
- Fumes
- Vapor
- Oil mist
- Emulsion
- Soldering fumes
- Aerosols

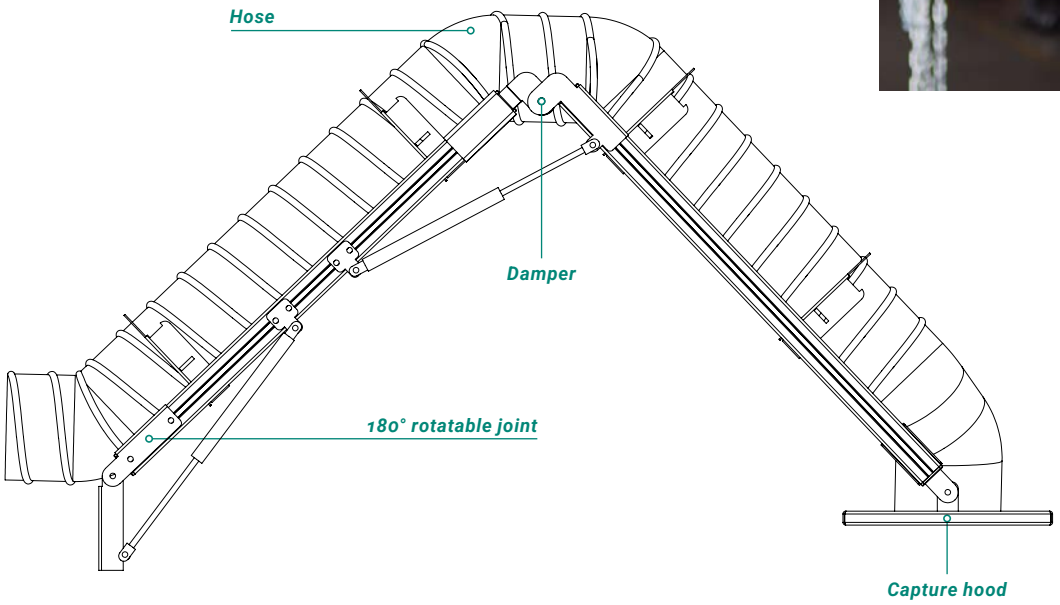
Industries:

- Metal construction
- Mechanical engineering
- Automotive
- Plastics processing
- Trades, etc

Use:

- Single workstation solution
- Multi-workstation solution
- In combination with hall extraction

The joints of the extraction arm enable ergonomic positioning. Inside, the flow-optimized design ensures constant suction performance with minimal pressure loss. This keeps capture consistent even during continuous operation and with changing workpieces or working positions. For applications with explosive dusts or gases, our extraction arms are also available in a fully electrically conductive ATEX version in accordance with Directive 2014/34/EU. All models are tested, delivered ready for installation, and are ready for immediate use.



Options:

- Start button
- LED lighting
- 360° working radius
- PU hose
- Solid pipe
- Explosion protection
- Various designs
- Various capture systems

Positioning note:

The extraction hood should be positioned at an angle approximately 30 cm above the work area. Since the arm does not automatically follow the process, it must be regularly readjusted during operation. Excessive distance or positioning directly above the head reduces extraction performance and poses a risk to health.

Extraction tables

Extraction tables of the WT series combine a stable work surface with integrated source capture. During grinding, sawing, or welding, emissions are continuously generated, rising upward and potentially contaminating the work area.

The extraction table captures the particles directly at the source and directs them downward or via the rear and side walls. This keeps the air at the workplace clean. Coarse chips and sparks are safely collected in the discharge container beneath the table surface, while fine dust is captured via integrated extraction zones and filtered in a connected extraction system. Even large or bulky workpieces can be handled with ease. The flexibly foldable side walls provide additional space without reducing capture efficiency.

Height-adjustable workbench

Ergonomic with ample legroom

Ideal for small series & special parts

Flexibly foldable side walls

Easy discharge & disposal

Individually configurable & expandable

Various work surfaces available

Quality »Made in Germany«

Extraction tables of the WT series in various sizes

Processes:

- Welding
- Grinding
- Soldering
- Cutting
- Polishing
- Cutting
- Deburring, etc.

Media:

- Dust
- Fumes
- Vapor
- Chips

Industries:

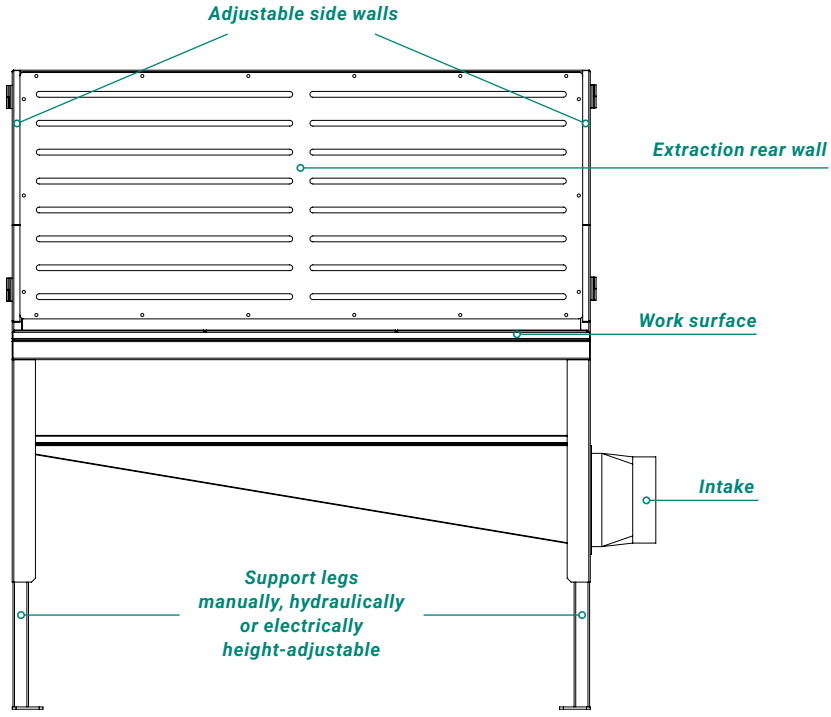
- Metal processing
- Mechanical engineering
- Plastics processing
- Wood/furniture industry
- Painting/coating
- Small-batch production, etc.

Use:

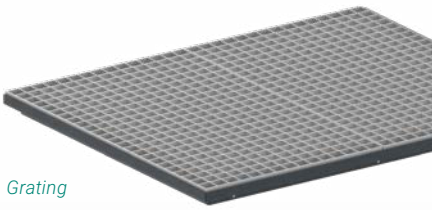
- Single workstation solution
- Multi-workstation solution
- In combination with hall extraction

Whether used as a welding, soldering, bonding, grinding, finishing, or painting table, our extraction tables are versatile and modularly configurable. As a manufacturer, we not only supply the suitable table but also the corresponding extraction system including pipe system for a technically coordinated overall solution.

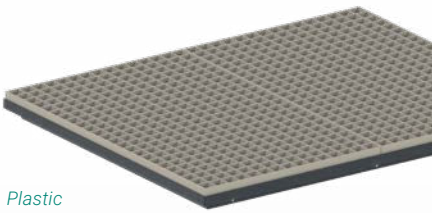
The extraction tables of the WT series are ergonomically designed and available in various sizes. Numerous options such as lighting, wheels, or different work surfaces allow precise adaptation to the respective process. Ample legroom and hydraulic height adjustment also ensure comfortable, clean, and efficient processing of your workpieces.



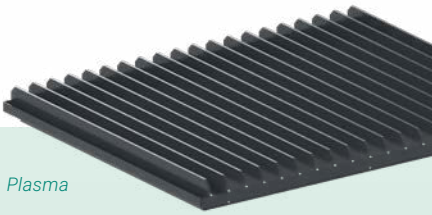
Our extraction tables are available with various surface options:



Grating



Plastic



Plasma

Wood

Options:

- Various work surfaces
- Mobile with wheels
- LED lighting *(also in ATEX version)*
- Vise holder
- Hydraulic height adjustment
- Electric height adjustment
- Extraction via rear or side wall
- Tool holder
- Roo

Extraction hoods

Extraction hoods are used when the area where emissions are generated is spatially limited and does not need to be continuously adjusted. They operate in a stationary and wide-area manner and capture fumes, dust, or vapors directly as they rise, without manual readjustment. In repetitive processes or fixed workpiece positions, the capture area remains consistent. This minimizes false air, ensures efficient extraction, and significantly reduces the workload for employees. At the same time, the workplace remains clean and the process continues under consistent conditions.

Stationary capture without readjustment

Direct capture of emissions

Consistent capture in stationary processes

Less false air, higher efficiency

Consistent extraction performance

Low operating effort

Clean & controlled workflow

From top to bottom: upper hoods, under hoods, and side hoods

Processes:

- Welding
- Soldering
- Grinding
- Polishing
- Sawing & milling
- Painting
- Bonding, etc.

Use:

- Dust
- Fumes
- Vapor
- Aerosols
- Mist

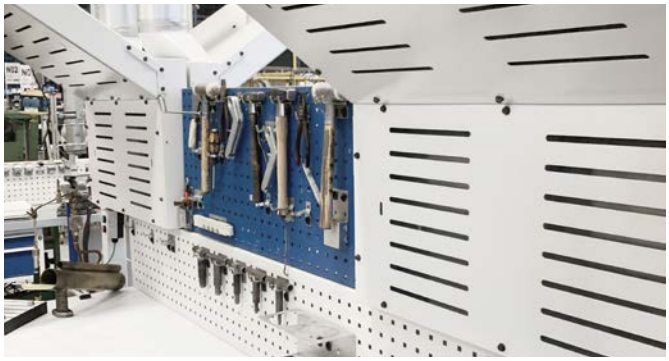
Industries:

- Metal construction
- Mechanical engineering
- Automotive
- Plastics processing
- Chemical industry
- Trades, etc.

Use:

- Single workstation solution
- Multi-workstation solution
- In combination with hall extraction

Extraction hoods are used in different designs depending on the process. **Upper hoods** capture rising media such as fumes, vapors, or fine particles directly above the source. They are available in various sizes and can be equipped with lamellas, baffle plates, or spark pre-separators. **Under hoods** are used where chips or dust fall downward, for example at grinding, sawing, or milling machines, and reliably direct the material to the extraction system. **Side hoods** capture emissions that escape laterally, for example during grinding or finishing processes. They are available in rectangular form and can be designed as open or equipped with protective and baffle plates to specifically guide the particle flow.



Options:

- Lamella curtain *(transparent or red)*
- Combination with push-pull system
- Version as upper, under, or side hoods
- Integration of a cross-jet system
- Individual process extraction hoods
- Customized mounting solutions

Pre-separators

Pre-separators capture sparks and coarse particles upstream of the filter unit and remove a large proportion of medium-sized and coarse dust at an early stage. This significantly relieves the load on the main filter unit, extends filter service life and noticeably reduces follow-up costs.

ABSAUGWERK pre-separators are suitable for all system types, easy to retrofit and available in various designs. They deliver maximum extraction performance with minimal energy consumption, ensuring efficient and safe extraction over the long term.

SIDE-MOUNTED CYCLONE PRE-SEPARATOR

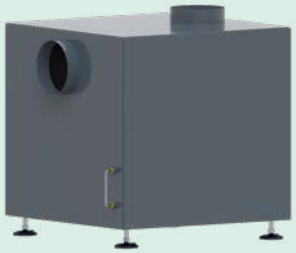
The side-mounted cyclone pre-separator impresses with its compact and robust design and can be installed directly on the system. It reliably separates coarse particles and sparks, protects the filter system and ensures a longer filter service life.

STANDALONE CYCLONE PRE-SEPARATOR

The cyclone pre-separators have been developed using modern flow simulation to achieve optimal airflow velocity and maximum extraction performance. They are available in several versions and can be installed independently next to the system.

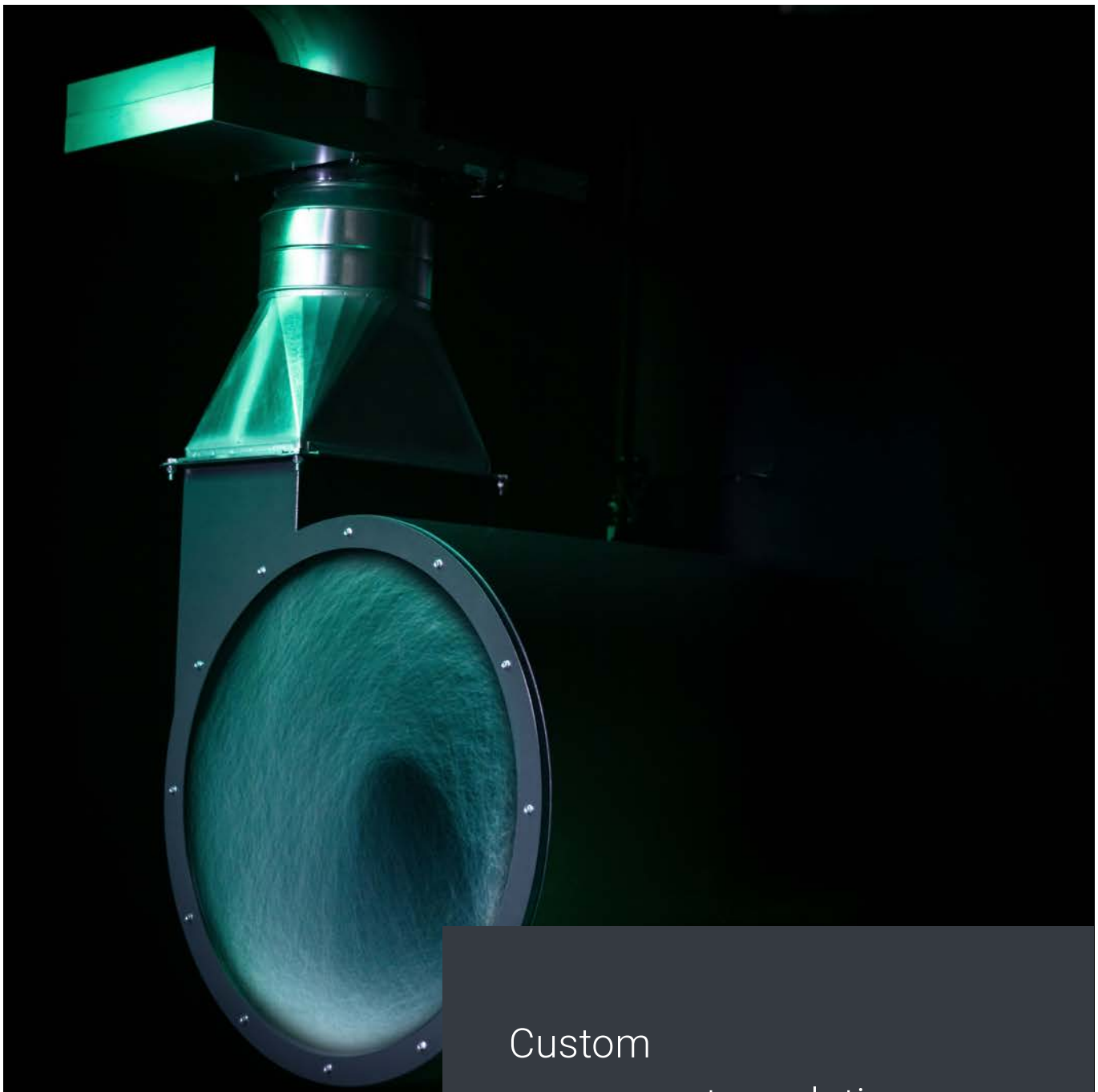
SPARK PRE-SEPARATOR

The spark pre-separator is installed between the capture system and the pipe system. Due to the reduced air velocity, sparks cool down and are extinguished before reaching the filter system. This minimises the risk of fire and increases operational safety.



WET PRE-SEPARATOR

In the wet pre-separator, fumes, dust and sparks are bound in a water bath and almost completely extinguished. This reliably protects the extraction system and ensures a high level of operational safety.



Fume filter with side-mounted cyclone pre-separator

Custom pre-separator solutions

When processes impose special requirements, customised solutions such as zig-zag pre-separators are required. These deflect sparks and particles several times, causing them to lose energy and extinguish.

In addition, non-return dampers can be combined with the filter system. They prevent dust or odours from flowing back during filter cleaning or system shutdown, ensuring smooth and clean operation.

Every system is different! We are happy to advise you and develop your customised solution.

Precoat unit

A precoat unit coats the filter elements with a fine powder, known as a filter aid. This protective layer prevents sticky, oily or very fine particles from clogging or damaging the filter media.

ABSAUGWERK uses health-safe limestone powder, which is particularly effective. Precise dosing is crucial for optimal filter performance. This is monitored via level sensors and an integrated weighing system. As a result, the system remains reliably free from blockages or build-up.

Reliable system operation

Precise dosing

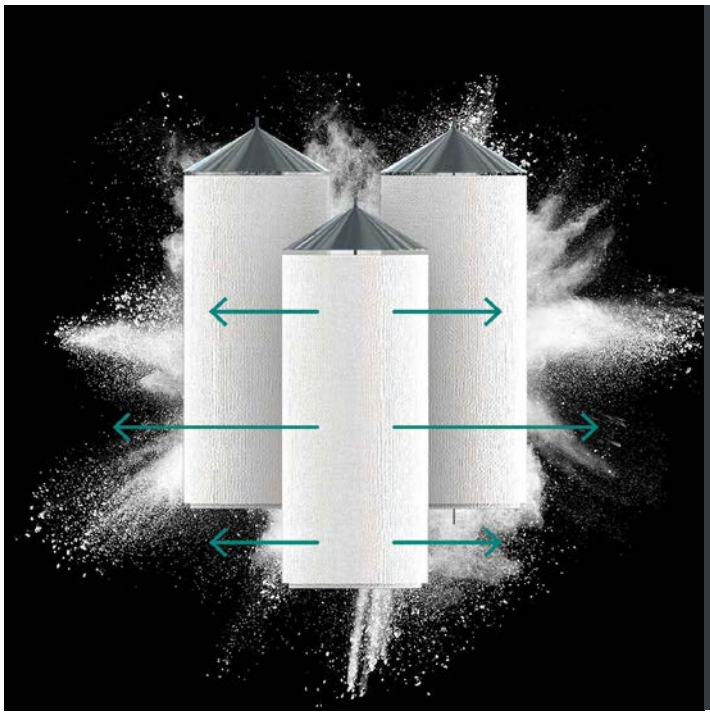
Dust-free filling

Contact switch on the system cover

Monitoring of dosing

No bridging & clogging

The precoat unit is also available in a premium version with an integrated scale and side extraction hoods, which directly capture rising precoat material during the filling of the system.



Automatic filter cleaning

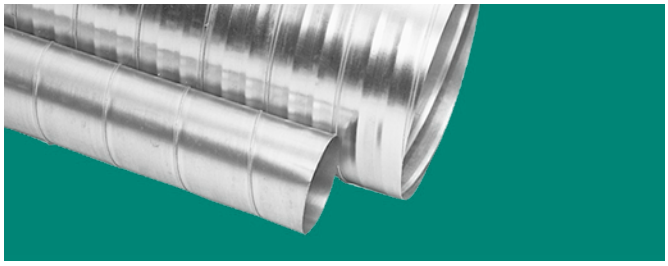
The precoat agent, together with dust and fume particles, is removed from the filters by automatic jet pulse cleaning and conveyed into the extraction system's discharge container.

The short, powerful air pulses keep the filters permanently clean and their performance consistently high. This ensures safe and efficient operation while significantly reducing maintenance requirements.

Pipe systems

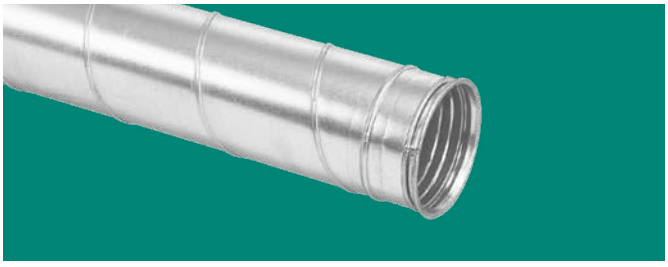
The pipe system plays a dual role in an efficient extraction solution: it not only transports the contaminated air to the filter unit but can also serve as a capture system itself. In hall extraction, for example, the pipe system is used as an air collector, slotted suction duct, or large-area capture line and captures emissions directly from the room volume. At the same time, a flow-optimized pipe system ensures uniform air guidance, low pressure losses, and prevents deposits inside. Proper pipe dimensioning, short duct routes, and smooth bends form the basis of stable and energy-efficient extraction technology for single workstations, multi-workstation solutions, and complete hall extraction systems.

This makes the pipe system a central component of every extraction solution: as a precise capture system or as a reliable connection between the workplace and the extraction system.



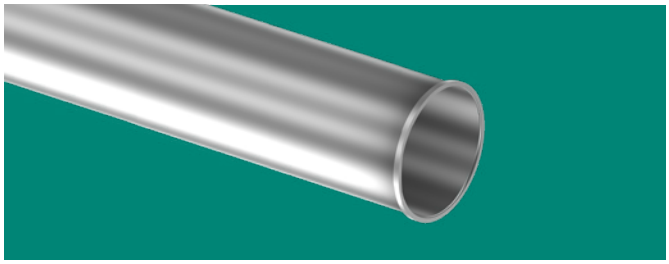
Spiral duct

Robust round pipe with good flow characteristics and low resistance. Temperature-resistant and available in galvanized or stainless steel version *(V1.4301)*.



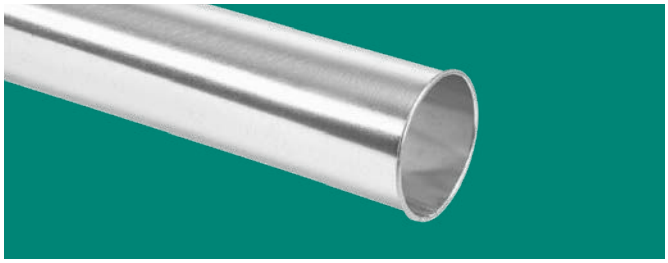
Flanged spiral duct

Spiral duct with flanged seam for particularly tight and stable pipe and fitting connections *(tightness class D)*. Ideal for higher requirements in terms of stability and tightness.



Longitudinally seamed pipe system

Very robust design with smooth inner surface and precise transitions. Suitable for abrasive, chemical, or thermally demanding processes – connection via clamping rings.



Longitudinally welded pipe with rim

Smooth, joint-free inner surface for minimal deposits, low noise levels, and low energy consumption. Fast connection via clamping rings – without screws or rivets.

Ex-Protection

In many industrial processes, combustible or explosive substances such as gases, vapors, mists, or dusts are generated. If they come into contact with oxygen and an ignition source, an explosive atmosphere can quickly form, with devastating consequences for people, machines, and operations.

ABSAUGWERK extraction systems are designed to proactively prevent the formation of explosive atmospheres. With their high separation efficiency, consistent suction performance, optimized air guidance, and ATEX-compliant components, they meet the requirements of **primary explosion protection**. At the same time, the specifications of secondary explosion protection are integrated into the system concept. This makes it possible to produce ATEX systems from ABSAUGWERK up to 50% more economically and to sustainably reduce operating and maintenance costs.

Optionally, additional tertiary explosion protection measures can also be implemented.

Legal requirements

Within the European Union, the ATEX Directives govern all requirements and specific aspects of explosion protection. They distinguish between manufacturers and operators, and compliance by both parties is essential to ensure long-term safety and occupational health protection. When designing our extraction systems, we take all relevant parameters into account, assess them in accordance with legal requirements and manufacture ATEX-compliant systems precisely tailored to the respective application.

EC DIRECTIVE	RESPONSIBILITY
2014/34/EU (ATEX 114)	Manufacturer
1999/92/EG (ATEX 137)	Operator

Your Benefits

- **Savings of up to 50%**
- **Low operating and follow-up costs**
- **Maximum extraction performance**
- **Maximum separation efficiency**
- **Safe operation**
- **Highest quality standards**
- **Suitable for indoor installation**

Our ATEX systems meet the requirements of primary explosion protection!

Through various **ATEX measures** and an innovative design, we ensure the safe operation of our systems:

ATEX COMPONENTS DEDUSTER

- Air velocity in pipe system ≥ 20 m/s
- Secured airflow monitoring
- ATEX-compliant motor or H14 filter upstream of the fan
- Ignition-source-free and conductive design
- Prevention of hazardous zones during operation
- Electrical components in ATEX design
- Control cabinet located outside the system
- Pre-separator
- Spark detection
- Automatic extinguishing systems in accordance with DIN/EN: water, powder, CO_2
- Automatic system shutdown
- Coated impellers
- Precoat unit *(filter coating)*
- Automatic jet-pulse cleaning *(offline)*
- ATEX-compliant compressed air filter cleaning
- ATEX components *(sensors, discharge systems, etc.)*

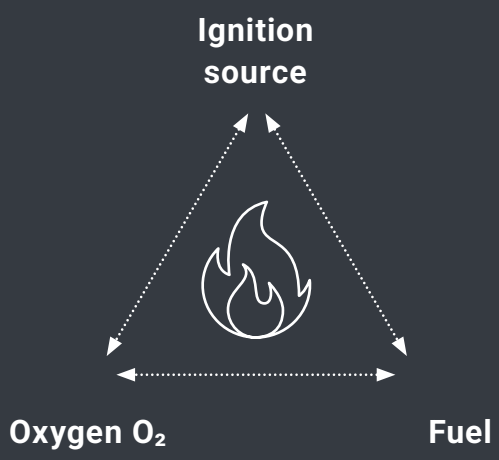
ATEX COMPONENTS WET SEPARATOR

- Air velocity in pipe system ≥ 20 m/s
- Secured airflow monitoring
- ATEX-compliant motor
- Ignition-source-free and conductive design
- Prevention of hazardous zones during operation
- Electrical components in ATEX design
- Control cabinet located outside the system
- Automatic extinguishing systems in accordance
- Coated impellers

Fire protection

An often underestimated risk is not only health-hazardous dust, but also highly combustible dust. Especially when processing aluminium, magnesium, plastics or organic materials such as flour, dust deposits can form in pipe system or filters. If these come into contact with sparks, friction or electrostatic discharge, they can easily ignite.

ABSAUGWERK extraction systems minimise this risk through intelligent airflow design, spark pre-separators and high-quality filter media that prevent ignition sources. Optionally integrated fire protection systems and temperature sensors detect critical conditions at an early stage. This effectively reduces the risk of smouldering, fires or explosions.

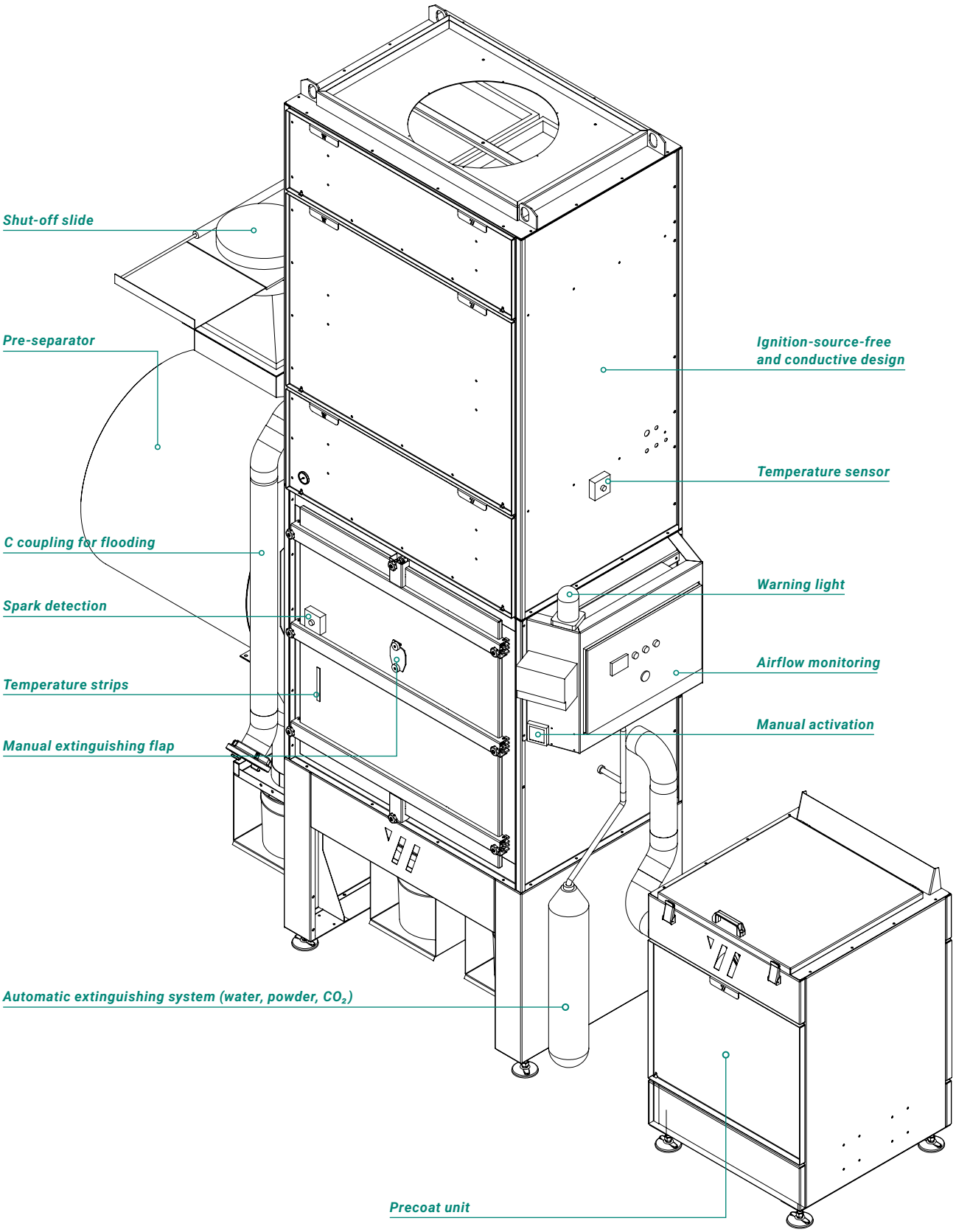


Legal requirements

RESPONSIBILITIES OF OPERATORS & MANUFACTURERS
As part of a risk assessment *(suitability of the machines for the intended process)* and the preparation of an explosion protection document, the operator is required to assess whether there is a potential risk of fires or explosions.

The operator is required, as part of a risk assessment (assessment of the suitability of the machines for the intended process) and the preparation of an explosion protection document, to evaluate whether there is a potential risk of fires or explosions.

The manufacturer takes this information into account when defining an appropriate protection concept for the machine tool and aligns the operating and maintenance instructions accordingly.



Fire protection components

Noise protection

Noise is one of the most common health risks in the workplace. Continuous exposure can lead to hearing damage, stress and impaired concentration. That is why our extraction systems are designed to operate particularly quietly and can be equipped with additional noise protection components – ensuring that noise exposure remains reliably below statutory limit values.

LIMIT VALUES & MEASURES

A daily noise exposure level LEX,8h **of 80 dB(A)** or a peak sound pressure level LpCpeak **of 135 dB(C)** requires:

- Information for employees *(when the action value is reached)*
- Provision of hearing protection *(when the action value is exceeded)*
- Offer of occupational medical health surveillance *(when the action value is exceeded)*

A daily noise exposure level LEX,8h **of 85 dB(A)** or a peak sound pressure level LpCpeak **of 137 dB(C)** requires:

- Mandatory use of hearing protection *(when the action value is reached)*
- Initiation of occupational medical health surveillance *(mandatory surveillance when the action value is reached)*
- Identification and marking of noise areas *(when the action value is exceeded)*
- Implementation of a noise reduction programme *(when the action value is exceeded)*

Legal requirements

Workplace Ordinance
ArbStättV

Noise and Vibration Occupational Safety Ordinance
LärmVibrationsArbSchV

Technical Rules for the Noise and Vibration Occupational Safety Ordinance
TRLV Noise

Your benefits

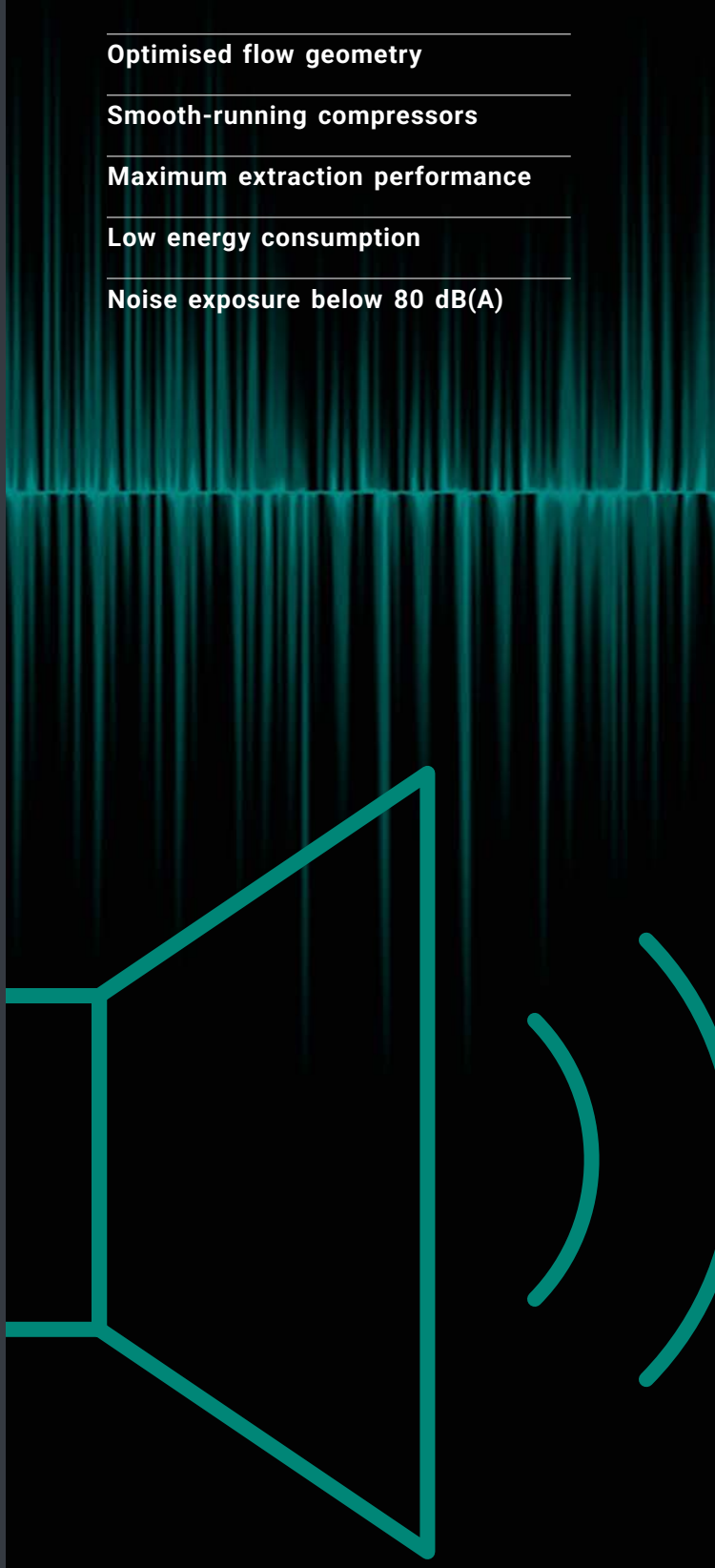
Optimised flow geometry

Smooth-running compressors

Maximum extraction performance

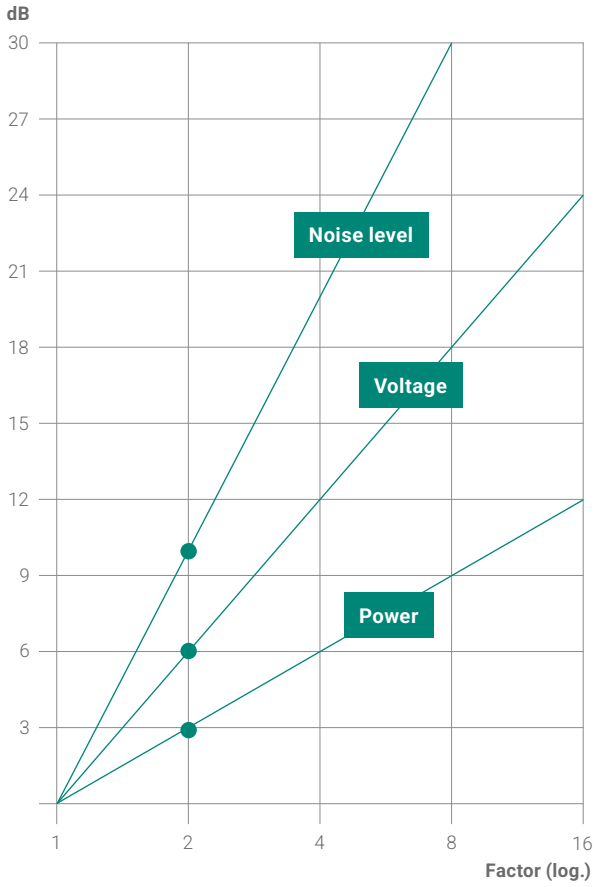
Low energy consumption

Noise exposure below 80 dB(A)



We offer a range of specialised **noise protection components** that can be precisely adapted to the process, room size and system performance, including:

- Baffle silencers
- Duct silencers
- Machine enclosures
- Noise protection cabins



An increase in the noise level of just 3 dB already means a doubling of the sound power and is perceived as significantly louder.

***+3 dB** = double sound power*
***+6 dB** = double sound pressure*
***+10 dB** = double perceived loudness*

real.
sustainable.

SUSTAINABLE EXTRACTION SOLUTIONS

Sustainability begins with efficient technology. Thanks to their high separation efficiency, the extraction solutions from ABSAUGWERK are ideally suited for recirculation mode, even for demanding processes. The cleaned air is returned to the room, reducing heating energy consumption and emissions.

Demand-based performance control via frequency converters ensures that only the energy actually required is consumed. Even in the development phase, we place particular emphasis on minimal flow resistance and efficient air guidance. The result is high-performance systems with very low energy consumption.

Thanks to their durable, low-maintenance design, our extraction solutions make a sustainable contribution to resource-efficient and energy-efficient production.

High-quality & durable

The products from ABSAUGWERK are designed for everyday industrial use. High-quality materials and durable components such as cleanable permanent filters ensure reliable and economical operation.

Low maintenance

The effort required for service and maintenance is reduced to a minimum. This conserves personnel resources and ensures smooth operation in daily production.

Efficient & cost-saving

Energy-efficient operation sustainably reduces energy and operating costs. Demand-based components ensure that only the performance actually required is used.

Maximum flexibility

Flexible system components enable easy adaptation to changing requirements. Optional features such as winter/summer switching, frequency converters, and cross-flow heat exchangers further increase efficiency.

Safe & reliable

Primary explosion protection increases operational safety and contributes to sustainable operation by protecting systems and resources.

RESPONSIBILITY WITHIN THE COMPANY

At ABSAUGWERK, entrepreneurial activity is based on ecological, social, and economic responsibility. Our goal is to develop sustainable extraction solutions that equally protect people, machines, and the environment.

Clean air in production halls makes a significant contribution to the health and safety of employees, prevents work-related illnesses, and creates better working conditions in the long term. At the same time, machines, tools, and workpieces are protected, extending their service life and sustainably increasing the economic efficiency of the entire operation.

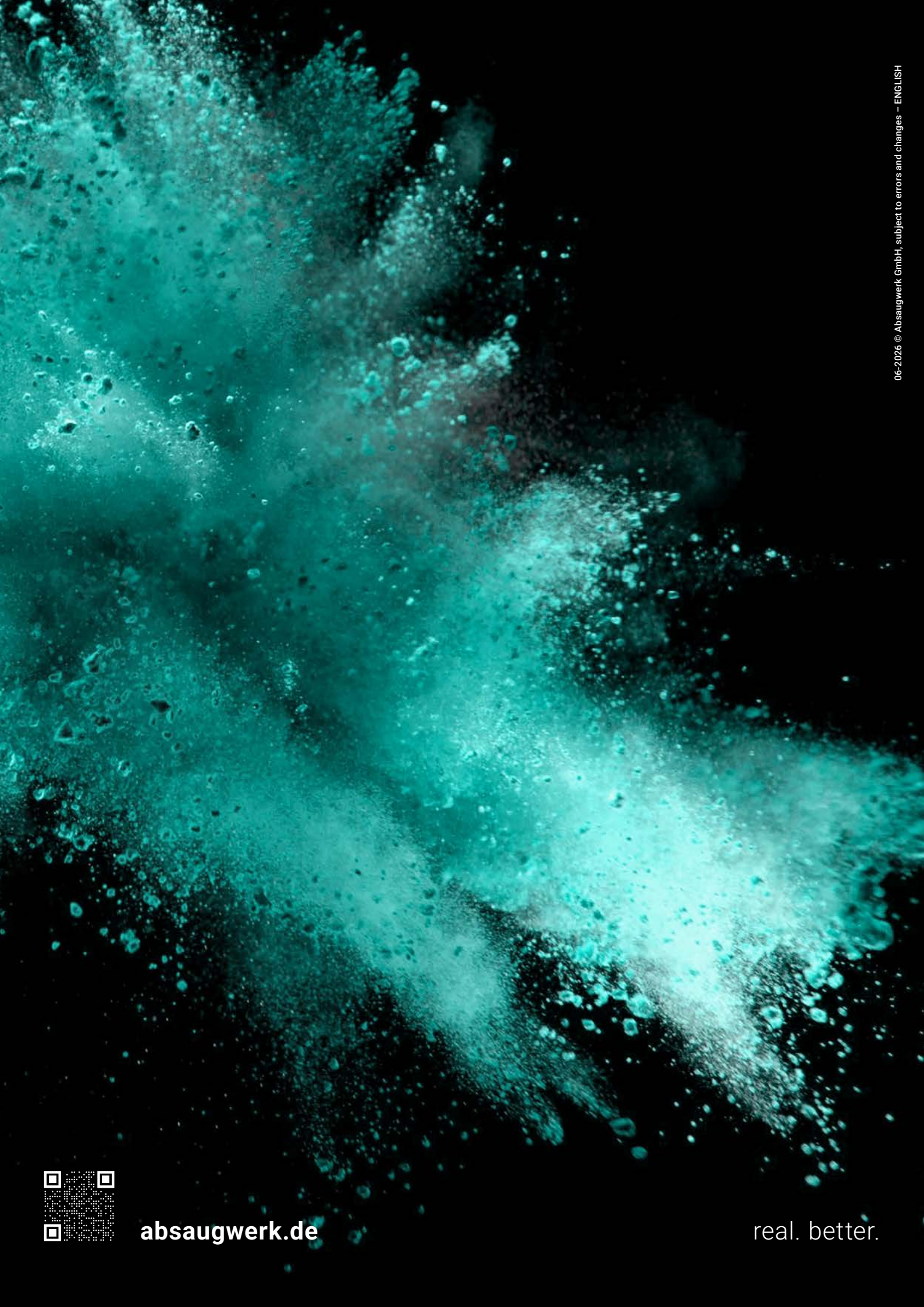
greener.
healthier.
better.

ABSAUGWERK GmbH
Messerschmittstr. 22
DE-89231 Neu-Ulm

+49 731 141 108-0
info@absaugwerk.de
www.absaugwerk.de

Follow us on social media:

@ABSAUGWERK GmbH



absaugwerk.de

real. better.