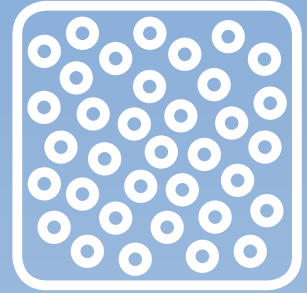




ASD



Extraction and Filtration Technology for Dust and Smoke

Extraction. Filtration. Persistence.





Many production processes release dust and smoke. In most cases, functional extraction and filtration technology is required.

Stirring up Dust is allowed. Inhaling is not.

When handling powdery materials during production processes, e.g. during grinding or filling, dust will inevitably be released. The same applies, when wood, stone or metal material get sawn, milled or abraded. In addition, often smoke and gases are released. Modern techniques, such as rapid prototyping by laser sintering, release blends of extra fine air pollutants.

Dust and Smoke

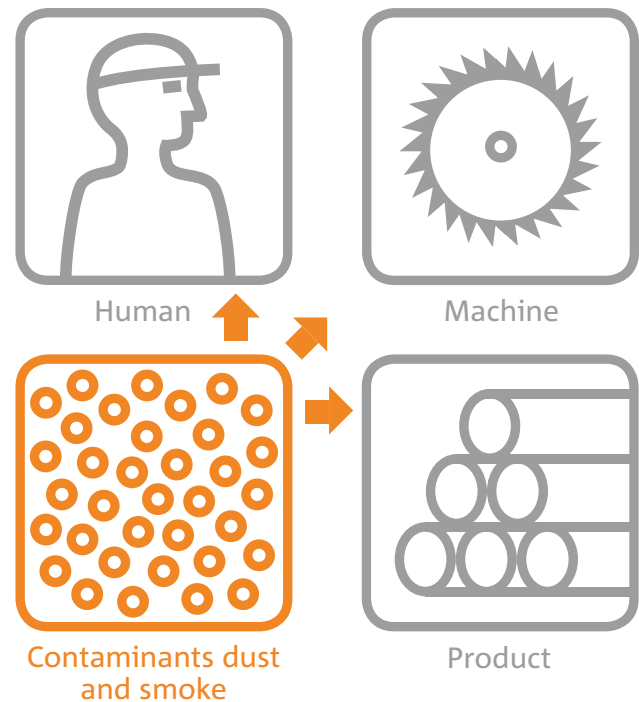
Dust can cause respiratory and eye disease. The finer its granularity, the more harmful are its effects, as those particles can overcome the lung-blood barrier and penetrate into pulmonary alveoli.

Therefore, legal regulations on the removal of dust and smoke from the air at workplaces are strict. In addition, those airborne pollutants compromise machinery and products, as they create firmly attached dirt layers.

Extraction and Filtration Technology

ASD extraction and filtration technology from ULT reliably removes dust, smoke and gases of the most varied type and origin from the air within the workplace. Available are units for individual workstations, where low footprint and freedom of movement are of great importance. In addition, ULT offers solutions for automated plants, where it is about long service life and highest availability.

The threefold damaging effect of dust and smoke



Typical fields of application

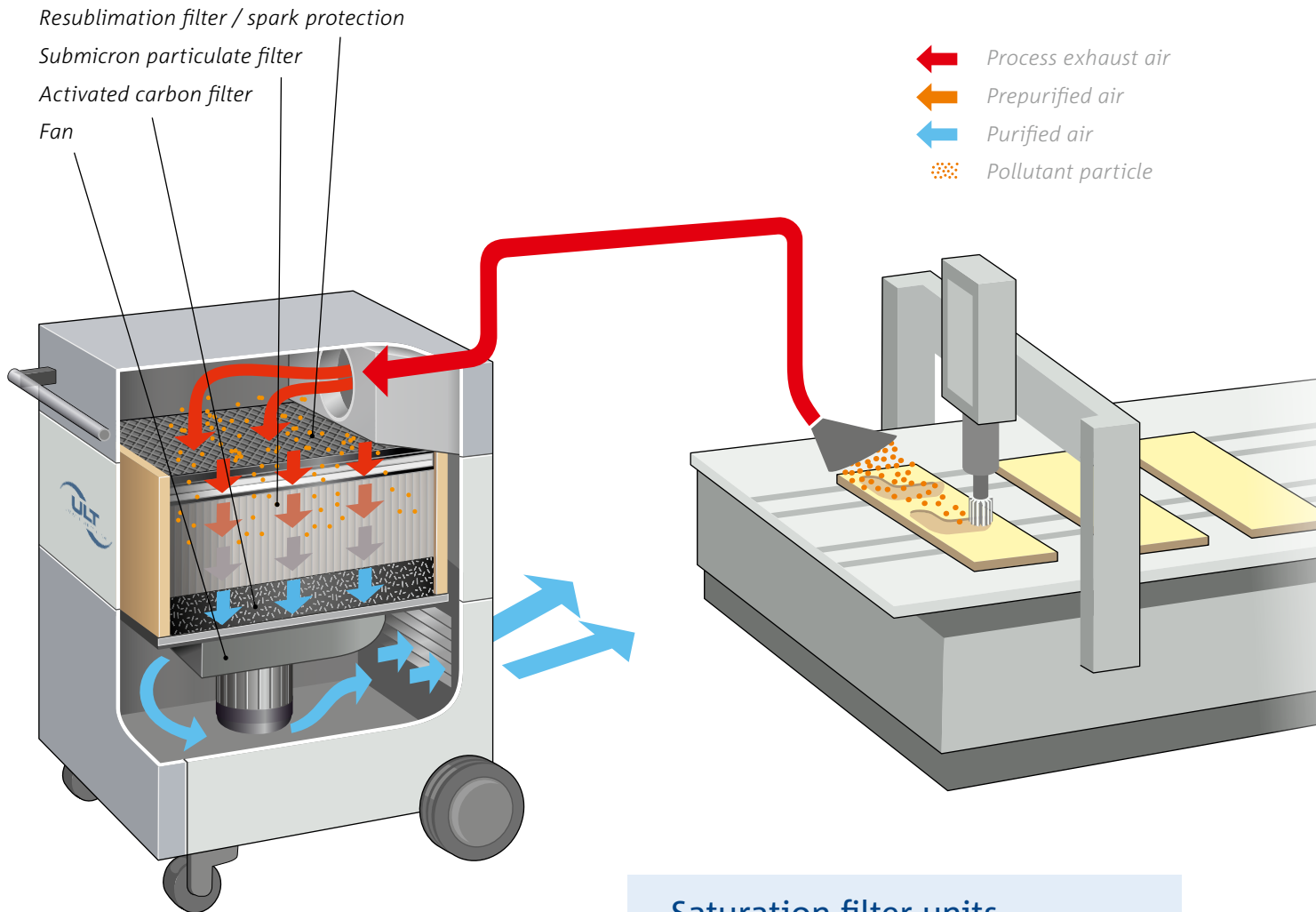
- » Grinding processes
- » Filling and dosing processes
- » Abrading, cutting, sawing and milling
- » Rapid prototyping
- » Restoration work

Dust and Smoke do not equal Dust and Smoke. Two Filtration Systems.

With operating processes, extraction precedes filtration. When selecting extraction and filtration technology, however, the reverse order applies. The first question calls for an adequate filtration system. ASD systems offer users the choice between two alternatives.

Saturation Filter Units

Saturation filter units are primarily used, where the amount of dust and fume is comparably small, for removal of sticky contaminants and for odorous emissions. Dusts and gaseous pollutants are retained by the filtration systems; the purified air is fed back in the work area. At the end of their service life, saturation filters shall be replaced.



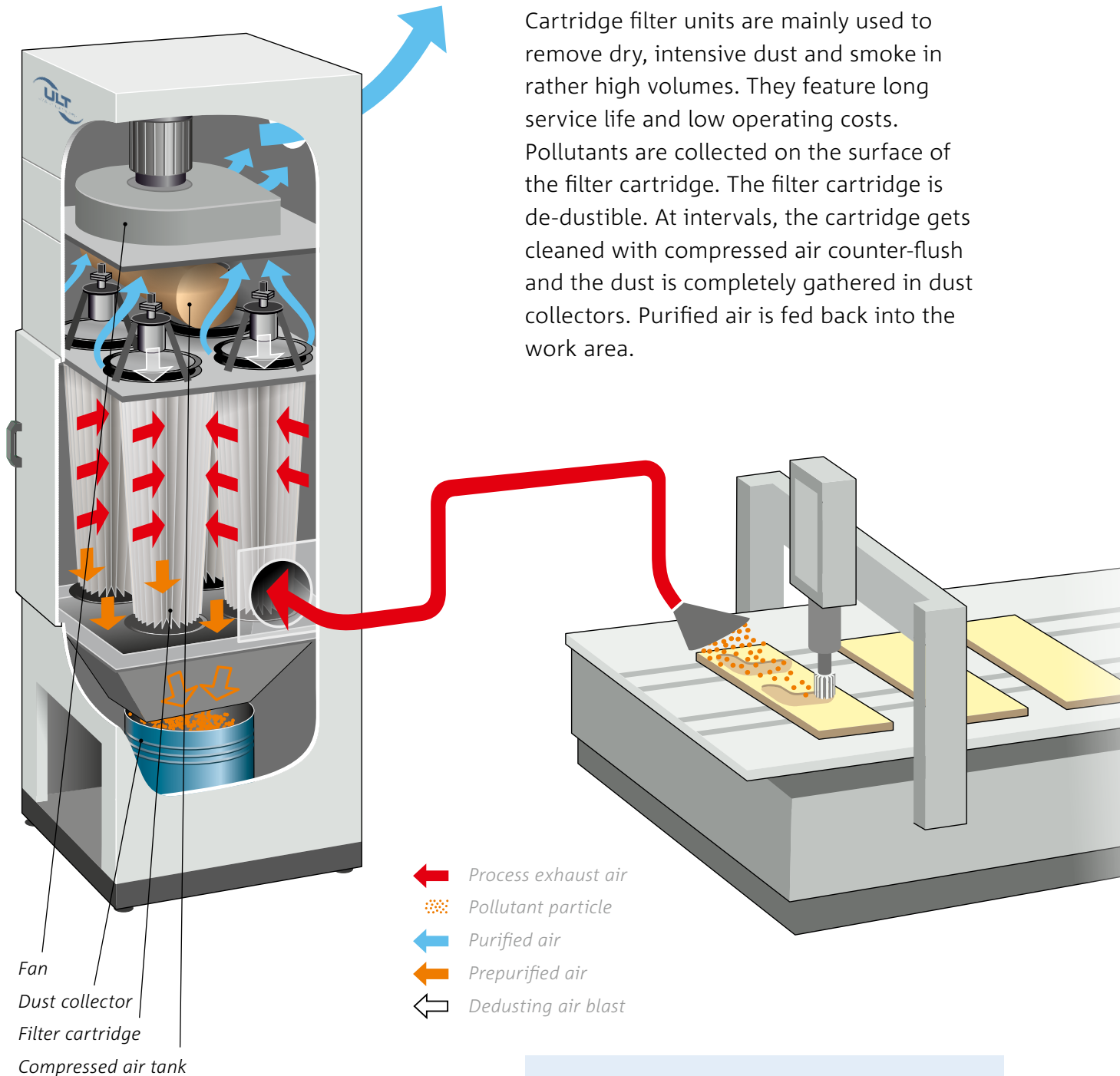
Functional principle of an ASD saturation filter unit

Saturation filter units

- » For low dust and smoke concentration
- » For sticky dust and smoke
- » For additional odour pollution

Cartridge Filter Units

Cartridge filter units are mainly used to remove dry, intensive dust and smoke in rather high volumes. They feature long service life and low operating costs. Pollutants are collected on the surface of the filter cartridge. The filter cartridge is de-dustible. At intervals, the cartridge gets cleaned with compressed air counter-flush and the dust is completely gathered in dust collectors. Purified air is fed back into the work area.



Functional principle of an ASD cartridge filter unit

Cartridge filter units

- » For high dust and smoke concentration
- » For dry dust and fume
- » For high demands on service life

Additionally Important: Extraction Capacity.

Type and volume of dust and smoke are not the sole criterion when selecting the adequate filter system. The required extraction capacity is also of key importance. Work place and suction environment are essential here:

How close can I get to the point of pollution generation? What volume capacity shall be extracted? How far must the exhaust air be transported?

ASD saturation filter units are primarily designed for low to medium dust and smoke intensity. They are suitable for numerous single-user workstations in labs, manufacturing or industry. The normally small footprint of saturation filter units brings some advantages into play: compact and mobile solutions.

Examples for saturation filter systems:

*ASD 160 (left),
ASD 300 (middle) and
ASD 1200 (right)*



Saturation filter units ASD

ASD series	Volume flow max. [m³/h]	Vacuum max. [Pa]	Nominal capacity [m³/h at Pa]
JUMBO Filterrolley	170	2,800	80/1,900
160 MD.11	190	3,200	80/1,900
200 HD.10	210	20,700	120/13,000
200 HD.12	220	22,000	120/12,000
200 MD.14	640	3,200	250/2,000
300 HD.12	220	22,000	20/12,000
300 HD.13	400	12,000	200/7,500
300 MD.14	635	3,200	250/2,000
300 MD.16	900	3,650	250/3,000
400-2	1,500	3,250	600/2,500
1200 MD.18	1,500	3,250	1,000/1,700
1200 MD.45	1,700	2,600	1,000/1,800
1200 MD.47	2,100	2,880	1,000/2,500
1200 MD.81	1,660	2,400	1,000/1,800

Cartridge filter units ASD

ASD series	Volume flow max. [m³/h]	Vacuum max. [Pa]	Nominal capacity [m³/h at Pa]
300 HD.12	300	22,000	120/12,000
300 HD.13	400	12,000	200/7,500
300 HD.14	635	3,200	250/2,000
300 HD.16	900	3,650	250/3,000
300 Ex FQ	450	2,600	200/2,000
300 Ex EC	220	22,800	180/6,000
500-4	2,100	2,880	750/2,750
1200 MD.18	1,500	3,250	1,000/1,700
1200 MD.45	1,700	2,600	1,000/1,800
1500 MD.60	2,160	3,200	800/2,500
1500 MD.61	3,240	3,450	1,200/2,500
2500 MD.63	3,250	5,000	2,000/3,000 3,000/2,750
PN 60	3,600	2,900	3,600/2,900
PN 100	6,000	3,500	6,000/2,800

For high dust and smoke intensity, ASD cartridge filter units are the devices of choice. Due to integrated dust collectors they require slightly more space than saturation filter units.

The highest-performing units are stationary devices. They are perfectly suited for extraction at large or central systems and efficiently remove high volumes of dust and smoke.

*Examples for cartridge filter systems:
ASD 300 (left),
ASD 300 Ex (middle) and
ASD 500 (right)*

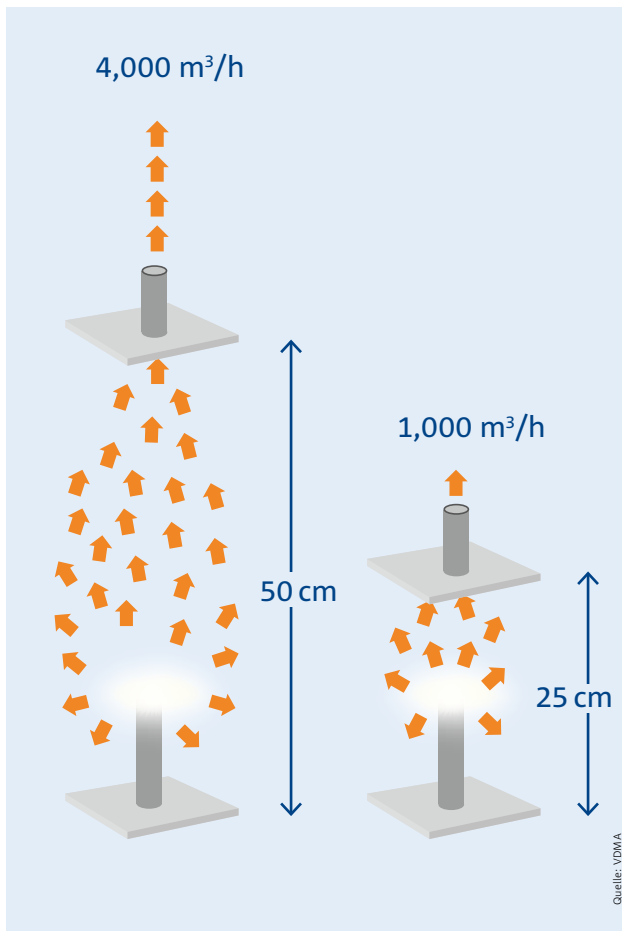


Individual Pollutant Capturing.

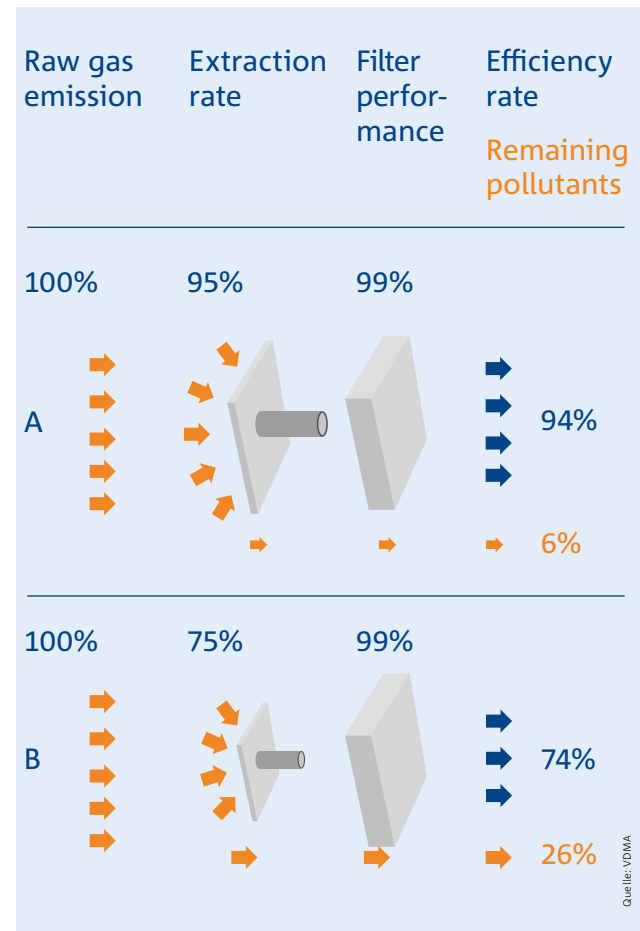
Critical: Proximity, Geometry

Quality of pollutant collection is the linchpin of extraction and filtration technology. In particular, closest proximity to the source of pollution is of critical importance: Doubling the distance, for example means a fourfold increase in required suction capacity and an exponential increase in energy

consumption, to collect the corresponding amount of particles. In general, the type of capturing element used must best suit the selective extraction situation at each respective work place. This is a question of both geometry and dimensions.



Impact of the distance of the capturing element on the required air capacity

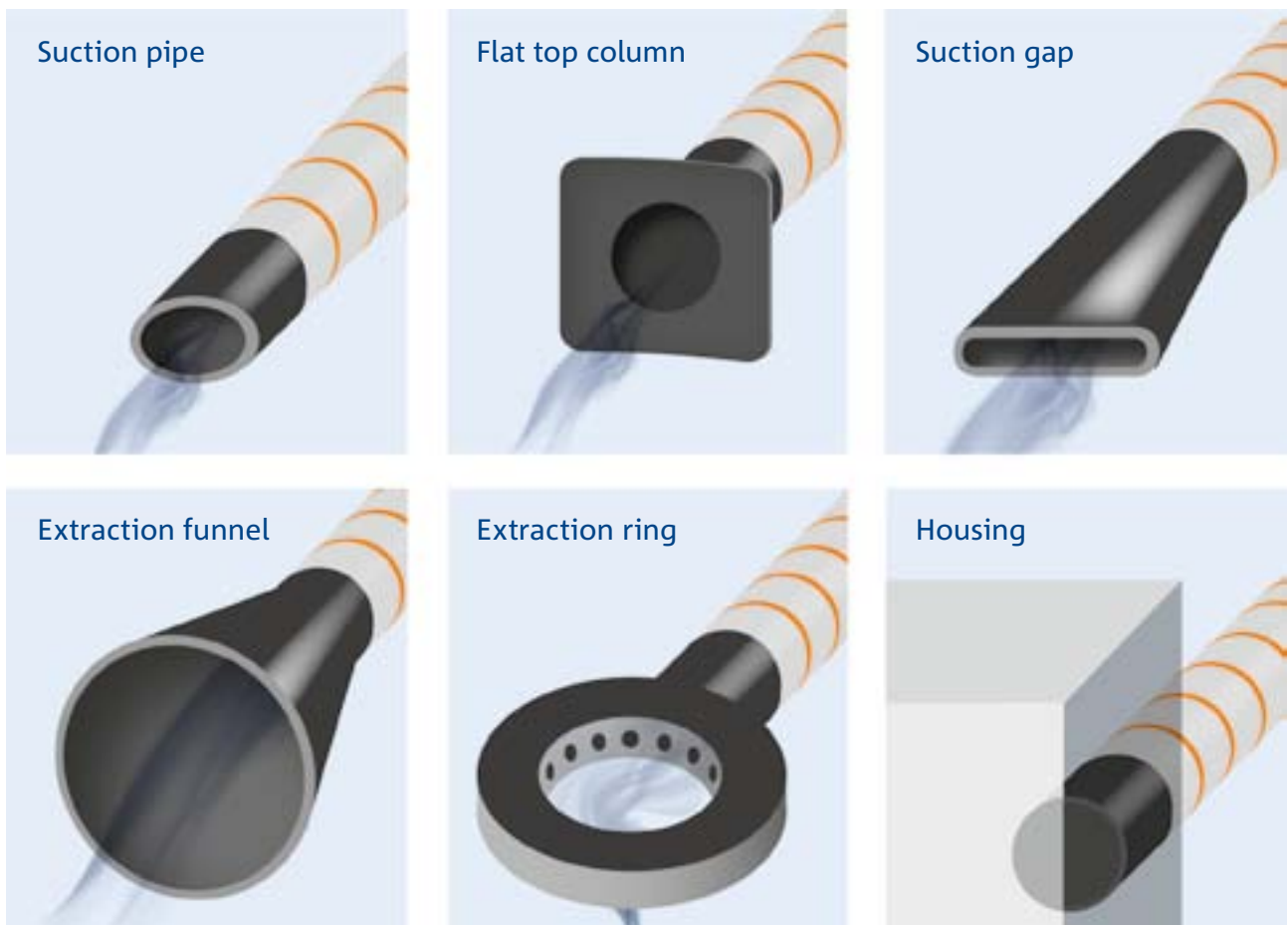


Impact of the extraction rate on efficiency

Individual Capturing Elements

ULT selects the type of capturing element that best suits the selective extraction situation at the respective work place from the portfolios of leading suppliers. Often, the design will be adapted, to come to grips with the discharge impulse of pollution particles.

Adaptations cover a variety of solutions, ranging from extraction tips and hoods to complete housing of the source of pollution. Naturally, total solutions include suitable extraction arms.



Selection of capturing elements

ASD: Perfect Serial Products. Built on Sophisticated Engineering.

ASD stands for sophisticated production devices of extraction and filtration units for dust and smoke – organised in modules according to user requirements. If needed, they allow for an optimised adaptation to respective operating conditions and become an integral part of the production plants.

From compact to large

ULT's solutions range from mobile equipment for individual work places to complete solutions for entire production halls. Also for environments with a lack of space.

Particularly user friendly

Low noise level and low energy consumption. Simple operation and maintenance. Recirculation operation possible. Easy and contamination low filter exchange.

Individual extraction solutions

The design of the extraction point gets adapted to the individual work place condition.

Safety for automated production lines

The filter systems' long service life significantly reduces down time and maintenance costs.



ASD extraction and filtration technology can be a centralised solution for complete manufacturing halls.

Open to special requirements

Systems can be configured suitable for ESD or with explosion protection. They are also available with stainless steel housing, for corrosive gases, with special supply voltage and frequency, digital control for pressure stabilisation, timer function, filter analysis and interfaces for external control.

Exceptional service

On-site installation and commissioning by ULT. Functional warranty included.

ULT AG

ULT AG provides extraction and filtration technology that really works: in-house developed excellent series units, adapted to individual requirements by sophisticated engineering.

From single work places to hall solutions. Permanent research ensures that even the latest production processes are safely served.



LASER
FUMES



DUST
AND
SMOKE



SOLDERING
FUMES



ODOURS,
GASES, AND
VAPOURS



CLEANING
INDUSTRIAL
GASES



PROCESS AIR
DRYING



WELDING
FUMES



OIL AND
EMULSION
MISTS



COMPLETE
SOLUTIONS



Based on sophisticated series devices ULT AG provides adapted solutions for extraction and filtration technology.

ULT AG

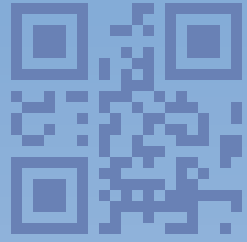
Am Göpelteich 1, 02708 Löbau, Germany

Phone: +49 (0) 3585 4128-0

Fax: +49 (0) 3585 4128-11

Hotline: +49 (0) 800 8582400

E-mail: ult@ult.de



www.ult.de/en

ULT is certified according to ISO 9001:2008. The plants are designed meeting international standards. If required, they will be certified according to ATEX and W3 and tested to meet H requirements.

In addition, the plants always comply with current EC directives on energy efficiency (ErP directive: Total energy efficiency of ready-to-use ventilation systems or minimum energy efficiency of electric motors).

Detailed technical information can be found on device specific data sheets or on our website. All technical data is general and not binding and does not guarantee the suitability of a product for a specific application.



Webshop:
Extraction arms
and accessories

ULT_ASD_01/16/EN



Made in Germany

www.ult.de