



AIR FILTER TER

STRONG PERFORMANCE – CLEAN AIR



Oil and emulsion
mist separator



Central extraction
systems



Ventilation and air-
conditioning systems



Energy saving
measures



Room air
purifiers

INHALT

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STRONG PERFORMANCE – CLEAN AIR

Does this sound familiar? It is (far too) warm and stuffy in your production shop, the level of humidity is high and it smells of cooling lubricant. Airborne pollutants in the form of oil and emulsion mist lead to an oppressive working climate, and temperatures of over 30 °C in the production shop are not uncommon even in spring. It has long since ceased to be the winter that causes problems for many manufacturing facilities in terms of temperature and heat, but rather the summer, since heat can often no longer be adequately dissipated from the workshop.

Air purification and ventilation are complex topics. Many factors, such as the detection of pollutants, the appropriate air purification process, the routing of ducts, the airflow of purified air, the inflow of fresh air and much more, must be taken into account and optimally combined with each other. The aim is to keep operating and investment costs as low as possible.

As a family-run company founded in 1996, AFS Airfilter Systeme GmbH has proven itself with experience and competence in extraction, air purification and ventilation systems. Thanks to our holistic concepts and innovative products, AFS was named „Technology Leader of Baden-Württemberg“ in 2021.

We are one of the leading companies in Germany for air purification and ventilation in manufacturing facilities. Whether for distributed individual units on machine tools or central extraction systems, electrostatic or mechanical filtering units, atmospheric cooling or central workshop and machine cooling – AFS supplies everything from a single source.

We look at the conditions on site and develop the best solution for your needs jointly with you.

In order to stay on top of energy costs, it is important to always consider extraction, air purification, ventilation and cooling together.

Get in touch with us – we will be glad to provide you with advice.

Warm regards,

Dipl.-Ing. Kai Kuppinger
Managing Director

Dr.-Ing. Jan Kuppinger
Managing Director

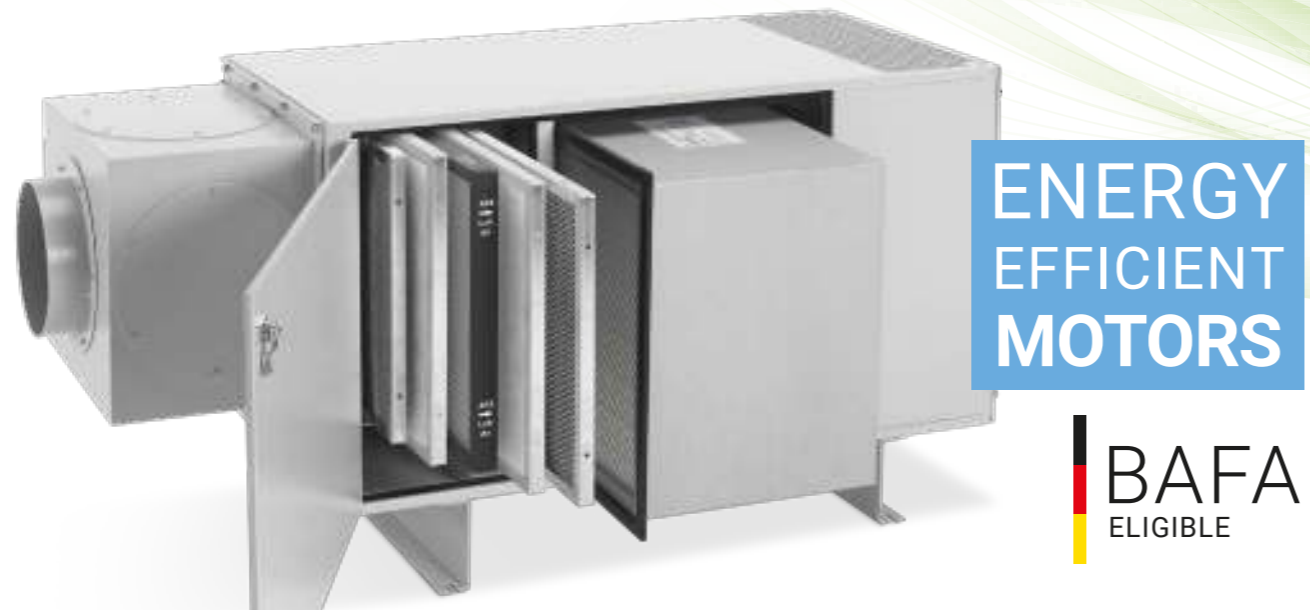
AIR PURIFICATION UNITS

FROM PROPRIETARY DEVELOPMENT & REGIONAL PRODUCTION

MECHANICAL AIR PURIFIERS

FOR EXTRACTING AND REMOVING EMULSION MIST FROM WATER-BASED COOLING LUBRICANTS

Various filters and separators are ideally adapted to the respective application scenario in a 6-stage purification process. All aerosols and particles are almost completely separated in a 5-stage pre-separation process. The centrepiece is our proprietary long-life baffle plate separator, which is maintenance-free. A HEPA H13 class high-efficiency particulate air filter is installed at the final filter stage as a secondary filter, filtering 99.95% of all remaining residual aerosols from the air (based on MPPS, 0.3 µm).



Type	Air volume ¹⁾ [m³/h]	Dimensions [mm]			Weight [kg]	Power consumption [kW] ¹⁾	Electr. connection ²⁾ 3~, ...	Energy efficiency class
		Length	Width	Height				
AFS 600	600	825	400	520	50	0,5 0,86	230/400 V ± 10%, 50/60 Hz 460 V ± 10%, 60 Hz	ErP 2015
AFS 1100	1.100	1.315	470	625	72	0,5	380 ... 480 V, 50/60 Hz ³⁾	ErP 2015
AFS 1600	1.600	1.315	470	625	72	0,95	380 ... 480 V, 50/60 Hz ³⁾	ErP 2015
AFS 3000	3.000	1.635	750	785	150	1,6	380 ... 480 V, 50/60 Hz	ErP 2015
AFS 4000	4.000	1.635	750	785	150	2,7	380 ... 480 V, 50/60 Hz	ErP 2015
AFS 6/8000	8.000	2.080	930	1.115	300	6,0	380 ... 480 V, 50/60 Hz	ErP 2015
AFS 12000	12.000	3.010	1.390	1.455	850	8,6	208 ... 480 V ± 10 %, 50/60 Hz	IE 4 ⁴⁾
AFS 16000	16.000	3.010	1.390	1.455	850	16,8	208 ... 480 V ± 10 %, 50/60 Hz	IE 4 ⁴⁾

¹⁾ Incl. H13 filter and 5-stage pre-separation ²⁾ UL version on request ³⁾ Also available as 200 ... 240 V, 50/60 Hz version
⁴⁾ Incl. frequency converter We reserve the right to make changes

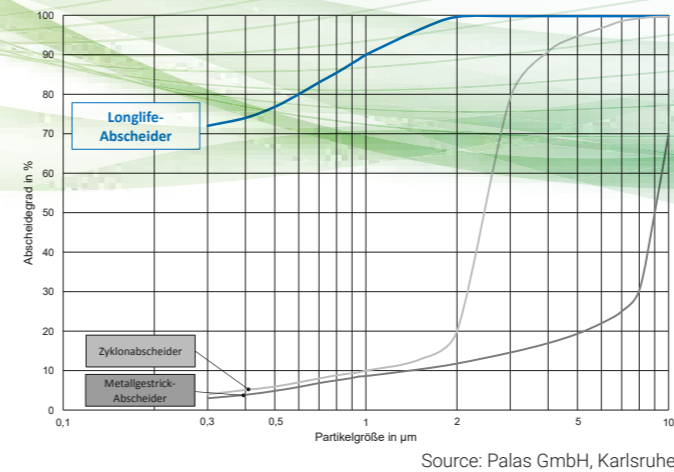
THE LONG-LIFE SEPARATOR

THE CORE ELEMENT OF THE MECHANICAL AFS AIR PURIFICATION UNITS

- self-cleaning
- maintenance-free
- high separation efficiency

The core element in the AFS mechanical air purification units is the long-life separator developed by us. A sophisticated airflow system ensures that all particles > 2.0 µm are almost completely separated from the air stream.

Independent tests confirm the high separation efficiency of the AFS long-life separator:



ELECTROSTATIC UNITS / E-SERIES

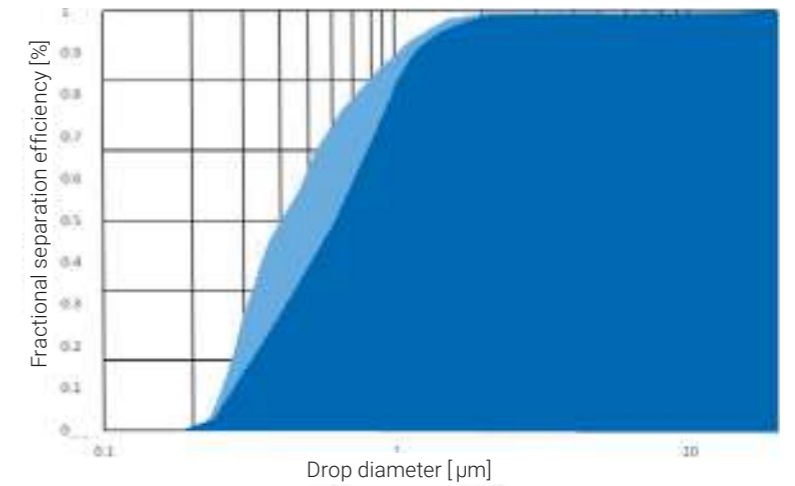
FOR EXTRACTION AND REMOVAL OF OIL MIST AND OIL SMOKE

The AFS E-Series air purification units combine proven and efficient mechanical pre-separation with an electrostatic post-separation module, resulting in significantly higher separation efficiency and longer filter life compared to plain electrostatic separators.

A large part of the oil mist is already separated by filter fleece material specially optimised for oil applications, without any noticeable change in pressure loss and energy consumption. This puts less strain on the electrostatic stage and significantly increases the service life of the unit.

With electrostatic units, high-voltage flashovers or reduced separation efficiency can occur from time to time due to lack of maintenance. Whereas that leaves conventional electrostatic units with almost no cleaning performance, AFS electrostatic units still provide a reliably high level of air cleaning – see diagram.

- Mass-related part separated in the electrostatic stage.
- Mass-related part separated by the pre-separation.



Type	Air volume ¹⁾ [m³/h]	Dimensions [mm]			Weight [kg]	Power consumption ¹⁾ [kW]	Electr. connection ²⁾ 3~, ...	Energy efficiency class
		Length	Width	Height				
AFS 1000 E	500 - 2.000	1.360	485	655	115	0,15 @ 1.000 m³/h 1,18 @ 2.000 m³/h	380 ... 480 V, 50/60 Hz ²⁾	ErP 2015
AFS 4000 E	4.000	1.685	1.060	665	220	1,6	380 ... 480 V, 50/60 Hz	ErP 2015
AFS 8000 E	8.000	2.570	1.100	1.320	300	4,4	380 ... 480 V, 50/60 Hz	ErP 2015
AFS 12000 E	12.000	3.030	1.565	1.510	950	7,9	380 ... 480 V, 50/60 Hz	IE 4 ³⁾

¹⁾ incl. all filters ²⁾ UL version on request ³⁾ incl. frequency converter We reserve the right to make changes

 **GrindTec**
INNOVATION AWARD 2022 by fdpw.de



 **BAFA**
ELIGIBLE





CENTRAL EXTRACTION AND AIR PURIFICATION SYSTEMS

THE ENERGY-EFFICIENT ALTERNATIVE TO INDIVIDUAL UNITS

ONE CONCEPT – ONE SYSTEM

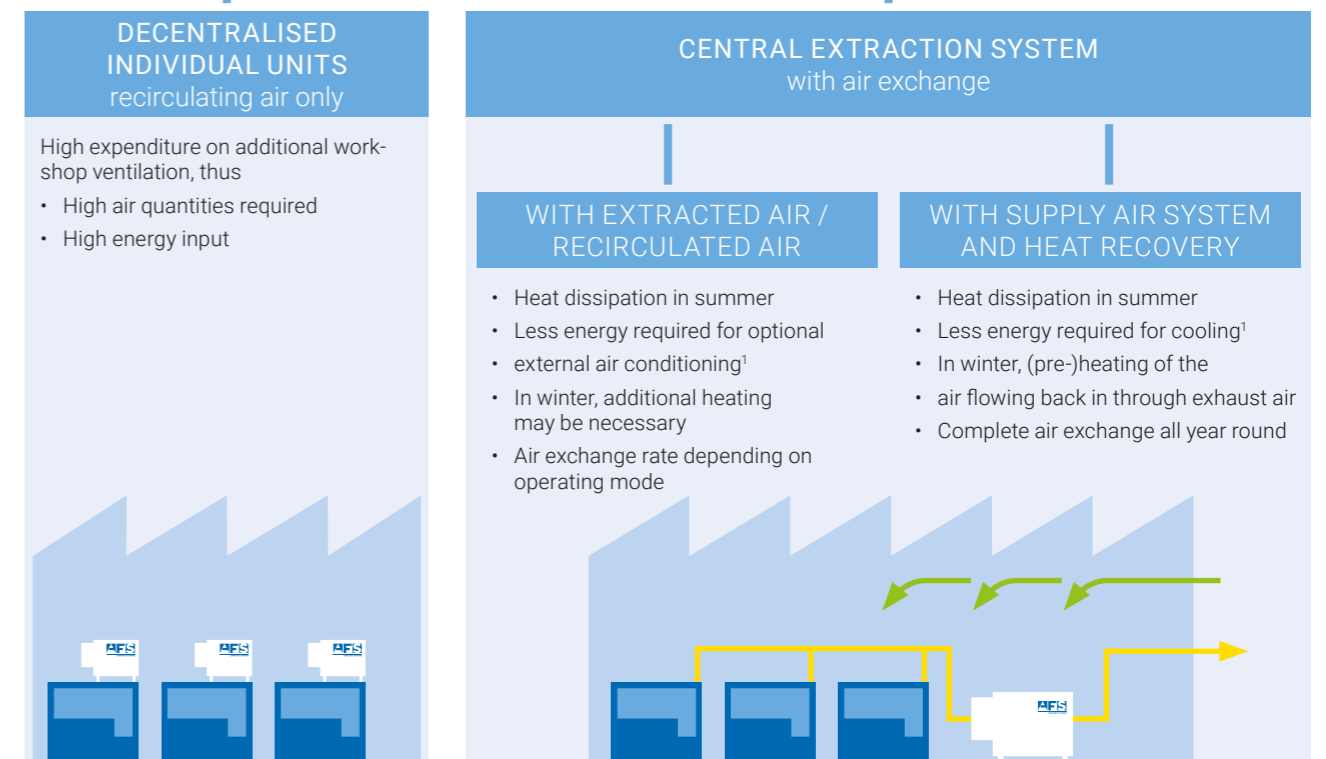
EXTRACTION – AIR PURIFICATION – WORKSHOP VENTILATION

It is essential that air purification and workshop ventilation are considered together and coordinated in a holistic concept. Otherwise, there is a risk of high operating and investment costs. Due to increasingly better insulated workshops and the high heat input from machine tools, hardly any factory has a heat issue in winter. However, many facilities have a problem in summer: the heat in the workshop! There is a risk of dimensional inaccuracies and production losses due to machine breakdowns. Employees are also exposed to high temperatures and high humidity.

AFS has the right solutions for this: central extraction systems. Whether with an extracted air / recirculated air concept or with a supply air system, the air in the workshop is always exchanged simultaneously with the extraction and purification of the machine tool exhaust air.



AIR PURIFICATION



¹⁾ Im Vergleich zu dezentralen Einzelgeräten

CENTRAL EXTRACTION SYSTEM WITH EXTRACTED AIR / RECIRCULATED AIR CONCEPT



- 1 AFS air purification unit
- 2 Recirculated air / extracted air flaps
- 3 Filter box with H13 filter
- Green Outdoor air
- Red Recirculated air
- Brown Exhaust air (purified)
- Orange Extracted air
- Dark Brown Machine exhaust air (non-purified)
- Black Separated cooling lubricant

EXTRACTION – AIR PURIFICATION – WORKSHOP VENTILATION

Whenever there are several machine tools in a workshop, this system is the more sensible alternative to individual units.

- A central air purification unit.
- Lower maintenance costs compared to individual units.
- Purified exhaust air can be discharged into the atmosphere as extracted air or fed back proportionally into the workshop as recirculated air.
- Constant air exchange.
- Reduction of odours and relative humidity.
- Pipework with flared pipe system:
 - Leakproof and oil-tight.
 - Modular principle.
- Can be extended by a supply air system at any time

CENTRAL EXTRACTION SYSTEM

WITH SUPPLY AIR SYSTEM AND HEAT RECOVERY



- ① AFS air purification unit
- ② HVAC system with heat exchanger
- Outdoor air
- Supply air (heating / cooling)
- Exhaust air (purified)
- Extracted air
- Machine exhaust air (non-purified)
- Separated cooling lubricant

EXTRACTION – AIR PURIFICATION – WORKSHOP VENTILATION – HEATING – COOLING (OPTION)

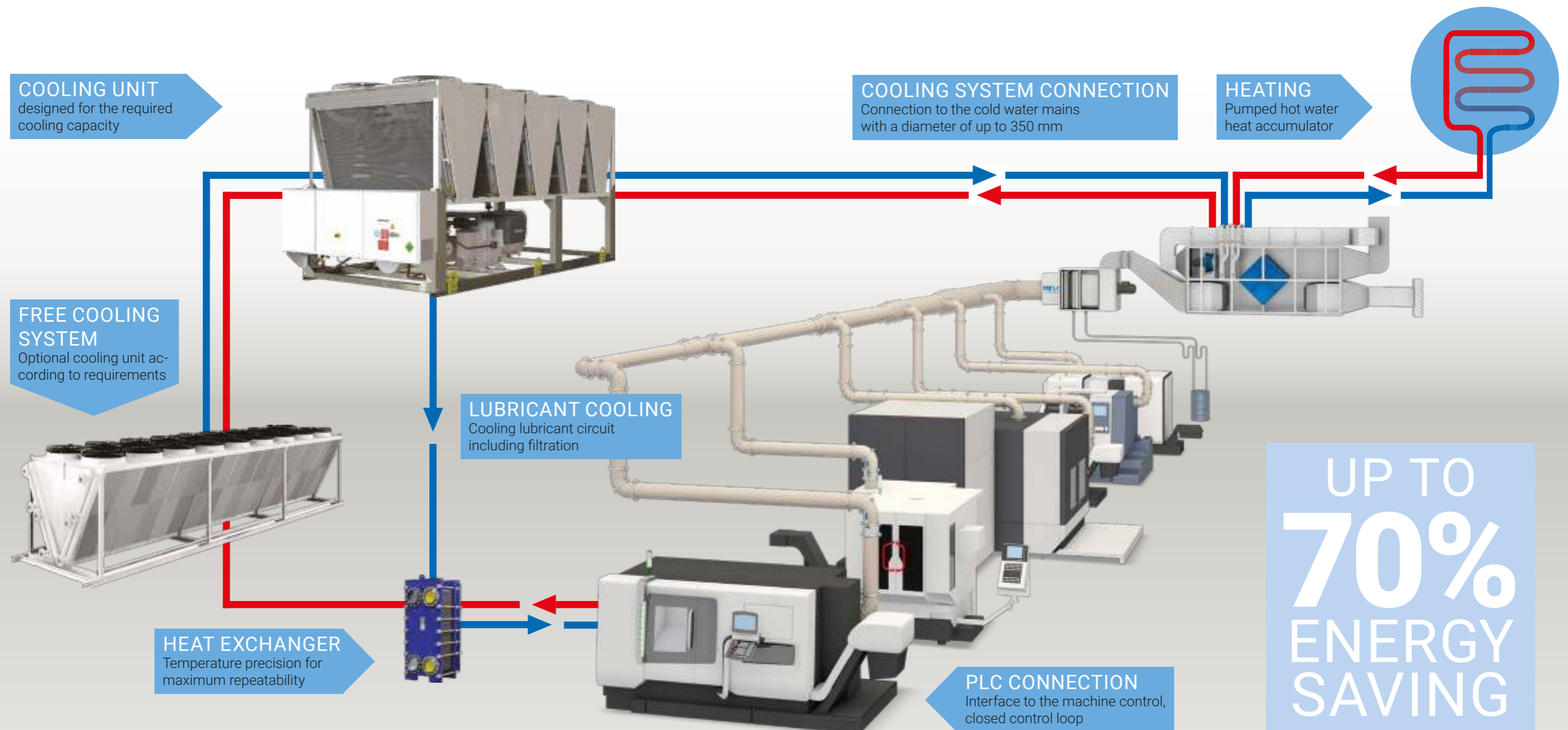
Ideal for new buildings, renovations or as an extension to an AFS extracted air recirculation system.

- Closed loop system.
- A central air purification unit.
- Purified exhaust air is completely discharged into the atmosphere all year round.
- Constant, complete air exchange.
- Reduction of odours and relative humidity.
- Outdoor air can be pre-heated in winter via heat exchangers.
- Recovery of the heat present in the extracted air (in winter).
- Pipework with flared pipe system:
 - Leakproof and oil-tight.
 - Modular principle.
- Atmospheric cooling.

EXTRACTION, WORKSHOP VENTILATION AND MACHINE COOLING

EVERYTHING FROM ONE SOURCE WITH OUR PARTNER HSS GMBH

Together with our partner **HSS Industrietechnik GmbH** Kälte- & Wärmetechnik, we create customised solutions that include air purification, workshop ventilation / air conditioning and machine cooling. They often enable investment and operating costs to be significantly reduced while maintaining constant production conditions.



AFS ROOM AIR PURIFIERS

RELIABLE, QUIET AND EXTREMELY EFFICIENT

WHAT DISTINGUISHES AFS AIR PURIFIERS FROM OTHER UNITS ON THE MARKET?

After Corona, the AFS air purifiers are still in operation, while many other devices have been removed and disposed of.

AFS air purifiers achieve an ideal depth effect in the room and thus clean the entire room air.

This results in a wide range of applications even in the post-Corona period. Whether in university study rooms or in assembly halls. Wherever extensive and/or quiet air circulation and air purification is required, the AFS 2000 RLC-X air purifiers are the right choice.

No drafts & very quiet

Low maintenance and easy operation

Can also be used after Corona

VDI EE 4300-14 compliant

TECHNICAL DATA ¹⁾

- Flow rate up to 2100 m³/h, continuously adjustable
- Post filter: HEPA H13 ²⁾
- Separation efficiency: ≥ 99.95% (for MPPS, particles > 0.3 μm)
- 230 V, 1~, 50 Hz, max. 800 W
- Power consumption 130 W at 1000 m³/h
- L x B x H: 114 x 51 x 189 cm

Volume rate [m ³ /h]	Ventilated room size ³⁾ at an air circulation rate of 4-6 per hour [m ³]	Sound pressure level ⁴⁾ [db(A)]
600	40-60	28
1000	65-100	35
1500	100-150	40
2100	140-210	48

¹⁾ Subject to change / ²⁾ according to ISO29463 and EN1822 / ³⁾ at a (room) height of 2.5 m / ⁴⁾ In front of the device at a distance of 1.0 m and a height of 1.0 m, confirmed by Fraunhofer IBP, Stuttgart, reverberation time T=0.5s



OUR SERVICE

FOR MORE SUSTAINABILITY

CLEAN INSTEAD OF DISPOSING

Filter elements and separators can be cleaned gently and thoroughly in our own washing machine and ultrasonic system. With our innovative cleaning processes the elements are then almost like new again. After a comprehensive quality check, the cleaned elements can be put back into your system.

MAINTENANCE

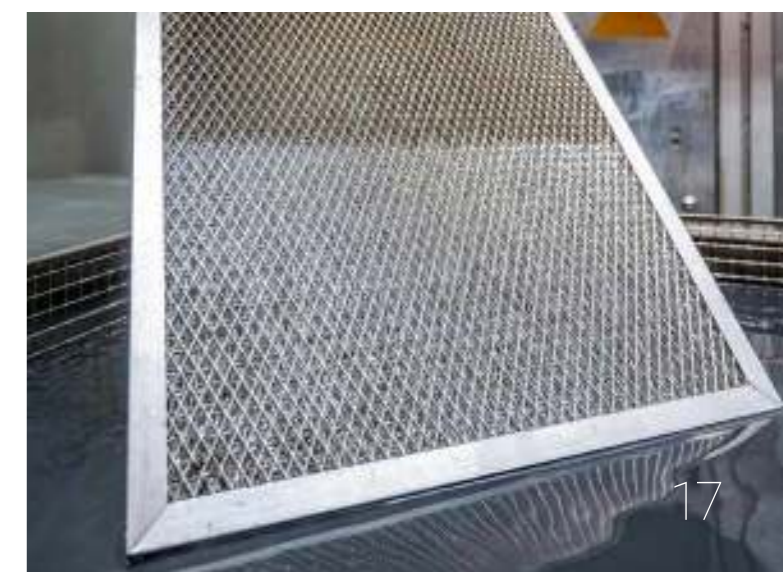
On request, we can offer you complete servicing and maintenance of the AFS air purification devices and systems as well as the HVAC systems. Whether regular maintenance, system overhaul, inspection or cleaning, we will be happy to take care of this for you. If you sign a maintenance contract with us, we will take care of organization, on-schedule maintenance, filter delivery, replacement and cleaning.

REPLACEMENT AND SPARE PARTS

All spare and wear parts for the AFS air purification devices and systems are available directly available to us. Most spare and wear parts are in stock and ready for dispatch within 1 to 2 working days.

ORIGINALS

The service life and functionality of the AFS air cleaning devices can only be guaranteed with AFS original filters guaranteed. Third-party filters are rarely suitable for use in machine tools.



WE TAKE CARE

DISCOVER OUR SOLUTIONS

GET HELP

Good is not good enough for us. We offer you numerous services relating to optimal air purification and air supply as well as specific energy concepts.

With us, you get ideal solutions – beginning from planning, till installation and to service. We organize a lot in the background and coordinate with other companies, so that you can concentrate fully on your day-to-day business. You can rely on us.

QUALITY

We set the highest standards for ourselves and the quality of our products. Resource-saving production with short supply chains by local suppliers and components from the region are top priorities at AFS. All AFS devices are assembled at our site in Übrigshausen and are subject to a 100% outgoing inspection before they leave our premises.

INNOVATION & DEVELOPMENT

With our team and many years of know-how, as well as in close cooperation with our partners, we are constantly working on improving our filters, air purifiers and systems in order to achieve even better separation rates with even lower energy consumption.



PLANNING

From the first inspection to the complete realization of air purification systems: We advise and support you even before the offer is made and develop specific concepts. The consideration of operational requirements, legal guidelines and environmental protection are the basis of every system.

INSTALLATION AND COMMISSIONING

We assemble the AFS air purification devices and systems with our own competent specialists. Customers benefit from professional and quick installation. AFS usually assembles the sys-

tems during ongoing operation without disrupting the production processes. Commissioning takes place immediately after assembly.

AFS AS GENERAL CONTRACTOR

As general contractor for AFS air purification systems, we take care on the entire project management. Our AFS engineers coordinate the construction process, assembly and commissioning and coordinate closely with any other companies involved in the project.

WE ASSUME RESPONSIBILITY

SOCIAL COMMITMENT

As an owner-managed, medium-sized company with local roots, we feel particularly connected to our region and the local people. Thus, supporting social projects outside of premises everyday work is a very important and self-evident factor for us.



Aktion Herzsicherer
Landkreis Schwäbisch Hall



AKI Ambulanter Kinder- und
Jugendhospizdienst Schwäbisch Hall



Kinder- und Sportmannschaften
in der Region

ENERGY AND ENVIRONMENT

Others talk, we act. With our photovoltaic system with over 425 kWp, we make a significant contribution to the energy transition in Germany. In our premises, AFS produces more energy than we consume. The excess energy is fed into the public power grid. We designed the energy saving concept ourselves. Even on cold or not so sunny days, we manage to run our company without wasting fossil energy.





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MADE IN GERMANY