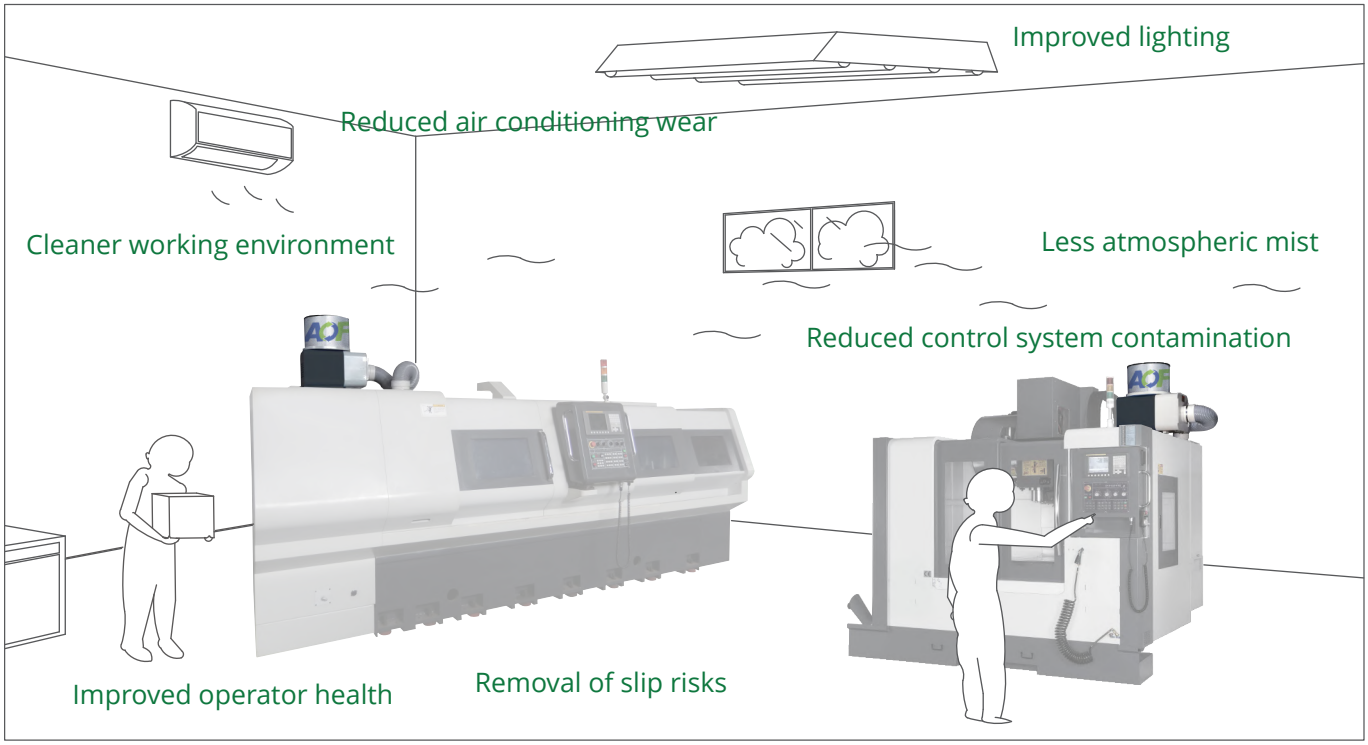
AirBench

OIL MIST EXTRACTION

AOF RANGE

AOF TECHNOLOGY

Control of emissions from manufacturing processes continue to be a key challenge for industry. Emissions from manufacturing, not only impact the environment around us; but also represent a threat to our health - and the health of machine operators. Today, as awareness grows of the need for sustainable production solutions, we are working to create a cleaner, safer, and greener workplace for tomorrow. AOF systems help us achieve that aim by offering a cost-effective, low energy solution; meeting all regulatory requirements and showing that you, as a responsible employer, take your obligations to your team and the environment seriously.



FINE PARTICULATE MATTER (PM2.5)

WHAT IS FINE PARTICULATE MATTER?

“Fine Particulate matter” consists of fine particles that float in the air with a size less than 2.5 μm (Hereafter called PM2.5).

WHERE DOES FINE PARTICULATE MATTER COME FROM?

PM2.5 particles are created by nature and human behaviour. Natural sources include volcanic eruptions and the earth’s crust rocks. Human sources include burning processes, such as petrochemical fuel, industrial discharge and moving waste gases. PM2.5 is composed of various chemical materials. After photoreaction, it may create original organic carbon and regenerate organic carbon, elementary carbon, sulfuric acid, nitrate and other ionic matters.

APPLICATION EXAMPLES

VARIOUS TYPES OF MACHINES AND TOOLS

NC/CNC lathes, multi-purpose lathes, machining centers, NC milling cutters, milling cutters, gear hobbing machines, grinding machines, automatic lathes, drill presses, broaching machines, transfer machines and gun drills.

MOLDING MACHINES

Die-casting machines, injection molding machines (resins) and large presses.

ADDITIONAL APPLICATIONS

Molding equipment, quenching machines, induction shrink fit equipment, rolling mills, rolling machines, header units, nut formers, lens chamfering, lens grinding, ceramic processing, glass processing, washer units, coating equipment, air blowers for food, pharmaceutical and cosmetic products.

THE FUTURE OF OIL MIST FILTRATION IS HERE

AOF is specifically designed for machine tools and developed for the elimination of mist, smoke and odor, typical of wet machining operations in metal cutting applications.

Features

- Patented conical filter technology
- The AOF series has a complete line of dedicated accessories for installation on machine tools
- Requires far less maintenance or filter replacements than existing technology
- Filter clogging monitored by differential pressure gauge
- Filter life can be up to 5 years depending on level of use
- Final HEPA filter with high efficiency eliminates dry smoke, typical of certain applications where straight oil is used.

AOF'S CUTTING-EDGE TECHNOLOGY

PATENTED AIR CLEANING TECHNOLOGIES

AOF has applied advanced air-purified technology to develop the high performance oil mist air cleaner, which is excellent for filtrating oil mist, haze, aerosol and smoke. The oil and air separation design follows the European standard. The oil mist air cleaner integrates many innovative designs and provides the best possible oil mist filtration and collection effect.

99%~99.97% FILTRATING EFFICIENCY SURPASSES EUROPEAN ENVIRONMENTAL PROTECTION STANDARD

AOF oil mist air cleaner features higher air flow rate, greater temperature resistance and better acid/alkali resistance than the closest competitor. Its filtration efficiency reaches 99%~99.97%. In addition, an actual environmental protection compliance test indicates that it can achieve H13, surpassing European standards. AOF oil mist air cleaner is unique in terms of efficiency and zero pollution.

PRE-FILTERING SYSTEM

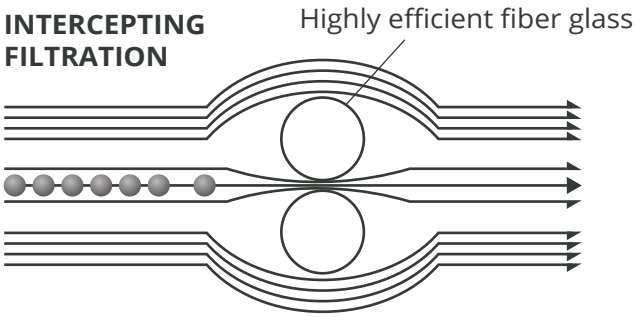
Filtering oil mist / water mist particle ≥ 2 μm

The innovative flyer saucer structure with **70°** design applies the wind shear principle to completely separate oil mist, smoke, haze and toxic aerosol.

8-BLADE DISK

The 8-blade disk catches fine particulate matters and works with the **tornado principle** to condense big particles into oil drops for recycling.

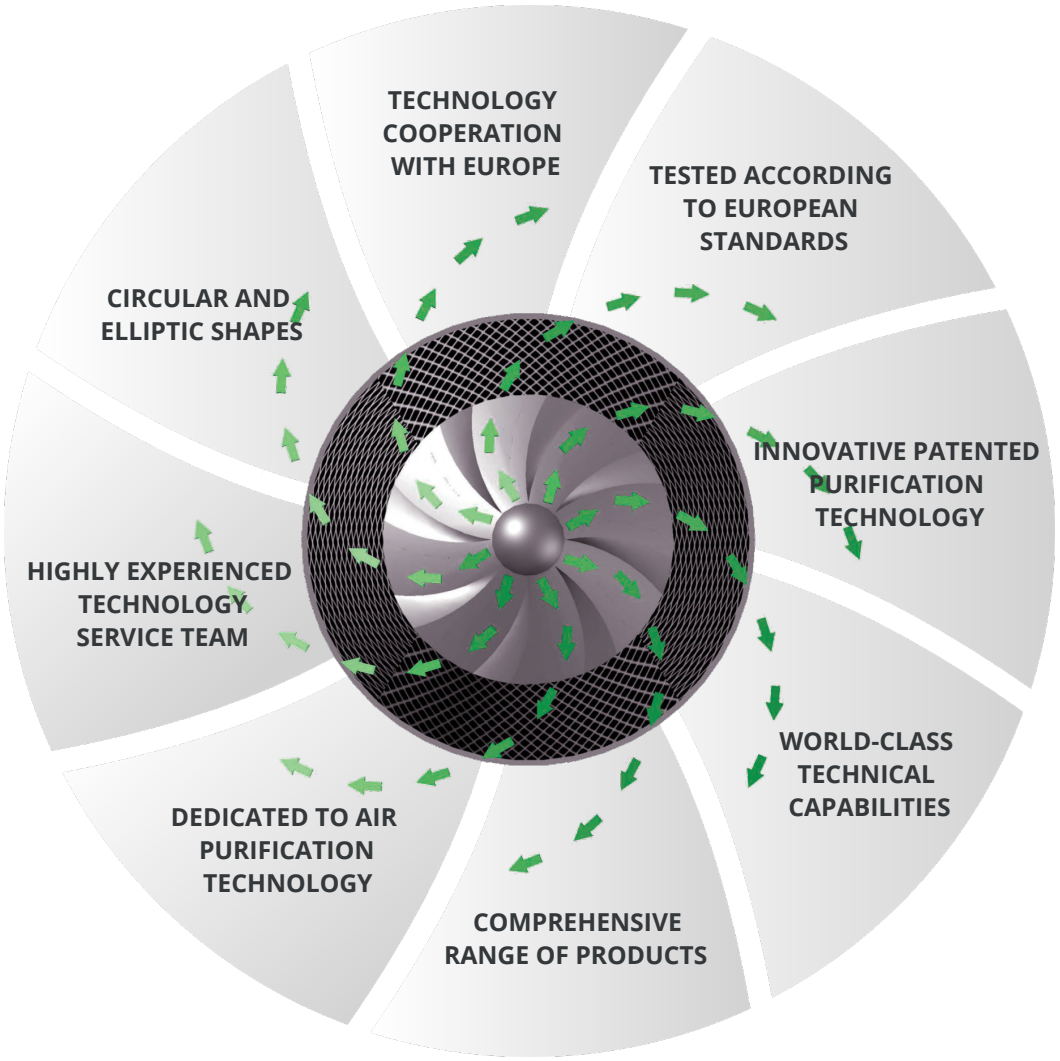
INTERCEPTING FILTRATION

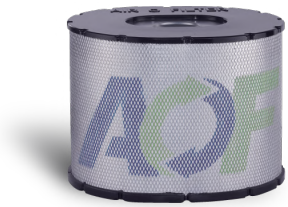


UNIQUE DESIGN

Designed with **multi-layer filtration** to thoroughly capture fine particles. Interception capability is over **0.1μm.**

UNIQUE DESIGNS IN ONE UNIT
EXPERIENCE UNPRECEDENTED PERFORMANCE





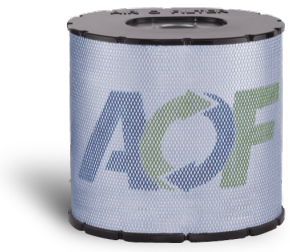
S series (Standard type)

- For soluble coolant
- Filtering water mist, particle≥ 0.5 μm
- 300 mm long

Description of After-Filters

Filtration area increased by 20% (Compared to typical round after-filter)

- Oil capture efficiency: 99~99.97%
- Effective particle size: 0.01μm
- The AOF system operating principle is turbulence>mitigation>filtration. This approach enhances capture of oil mist, smoke and haze, while improving efficiency and enabling the capture of small particle sizes



P series (Practical type)

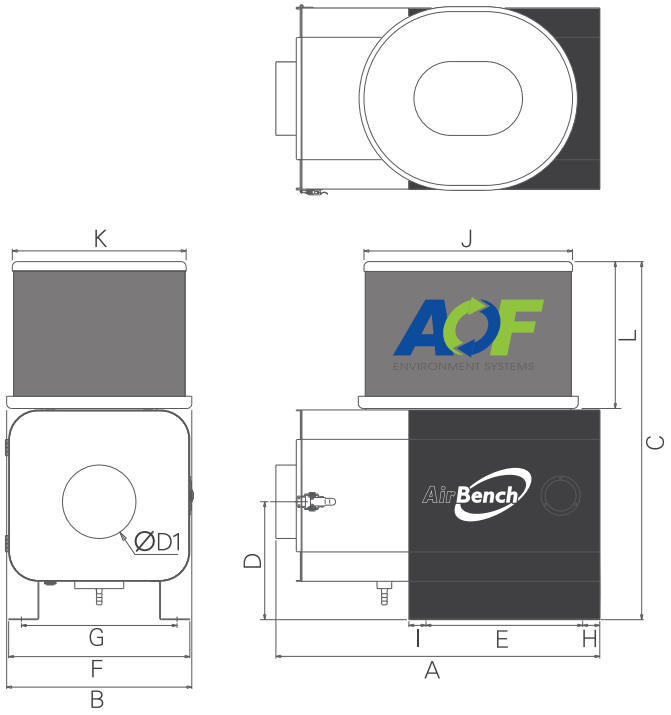
- For oil-based coolant
- Filtering oil mist, particle ≥ 0.03 μm
- 400 mm long

(Custom-made)

PL series (Long-acting type)

- For oil-based coolant
- Filtering oil mist, particle ≥ 0.02 μm
- 600 mm long
- Filtering area increased by 200% (Compared to P series)

SPECIFICATIONS



Model	Power Source	Motor	Air Flow Rate (m³/min)	Static Pressure (kPa)	Noise Value db (A)	Efficiency	Weight (Kg)	Air Inlet Port
AF-10	3 PHASE AC200V or AC415V 50HZ	0.2 KW	11	0.65	65	99 ~ 99.97%	42	Ø150
AF-20		0.4 KW	18	0.88	69		47	Ø150
AF-30		0.75 KW	29	1.15	70		65	Ø200
AF-40		1.15 KW	40	1.45	71		80	Ø250

Model	A	B	C	D	D1	E	F	G	H	I	J	K	L
AF-10	615	379	831	236	148	300	335	283	25	25	426	355	413
AF-20	652	379	851	234	148	320	350	298	25	25	426	355	413
AF-30	765	432	908	299	200	388	420	368	25	25	492	408	413
AF-40	792	490	1153	316	250	388	480	428	33.5	33.5	540	430	613

Above figures are based on the 6th model.

Green, Eco-friendly, Revolutionary AOF Environment Systems

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