Green, Eco-friendly, Revolutionary
— AOF Environment Systems

OIL MIST
AIR CLEANER

AF series

AIR FILTRATION SYSTEM
Till this day, manufacturing facilities are pointed out as being the main source of coolant mist, smoke and various air pollutant emissions. It not only impacts the environment around us, but also represents a threat to public health. With today’s collective awareness for sustainable development, we can create a cleaner, safer and greener place for tomorrow. The Air-O-Filter is going to help you in that endeavor. With its easy-to-install design, this system offers a cost-effective and low energy solution for greater working environment, meeting all regulatory and industry standards.

**FEATURES**
- Designed in Europe.
- Manufactured, tested and assembled in Taiwan.
- The guaranteed level of efficiency is 99%~99.97% MPPS according to E12/HEPA.
- Patented conical filter technology.
- Large selection of capacities.
- The AOF series has a complete line of dedicated accessories for installation on machine tools.
- To eliminate odor and VOC, the filter cells can be regenerated simply by replacing the carbon.
- Requires far less maintenance or filter replacements than existing technology.
- Price competitive with foreign manufacturers.
- Its clogging is monitored with a pressure gauge.
- Filter life is about 1 to 5 years.
- Filtration Module: HEPA removal efficiency eliminates dry smoke, typical of certain applications where straight oil is utilized.
- CARBON Filtration Module: activated carbon filtration (Optional).

**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 behavior. 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.

**Quality Guarantee**
- Designed in Europe.
- Manufactured, tested and assembled in Taiwan.
- The guaranteed level of efficiency is 99%~99.97% MPPS according to E12/HEPA.
- Electrical motors meet current efficiency standards EISA 2007 / IE3 and are available in: 220V / 380V. (Special voltages are available upon request)
99%~99.97% Filtrating Efficiency Surpasses European Environmental Protection Standard

AOF oil mist air cleaner features higher air flow rate, greater temperature resistance as well as better acid/alkali resistance. Its filtrating efficiency reaches 99%~99.97%. In addition, an actual environmental protection compliance test indicates that it can achieve E11.E12, surpassing the European standard of F8.F9. It also strengthens the fact that AOF oil mist air cleaner is unique in terms of efficiency and zero pollution.

Integrated with Several Patented 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.

Pre-Filtering System
Filtering oil mist / water mist particle ≥ 2 µm

The innovative flying 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.

Description of After-Filters
Filtrating area increased by 20%
(Compared to general round after-filter)

- Oil capture efficiency: 99~99.97%
- Filtrating accuracy: 0.01 µm
- The AOF purification equipment works with the principle of air excitation → mitigation → filtration. This may effectively enhance the settlement speed of oil mist, smoke and haze, while exhibiting high efficiency and high accuracy features.

S series (Standard type)
- For soluble coolant
- Filtering water mist, particle ≥ 0.5 µm
- 300 mm long

P series (Practical type)
- For oil-based coolant
- Filtering oil mist, particle ≥ 0.03 µm
- 400 mm long

PK 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).

PM series (High efficiency type)
- For toxicant oil-based coolant
- Filtering oil mist, particle ≥ 0.01 µm
- 600 mm long
- With active carbon ingredients.
**SPECIFICATIONS**

Above figures are tested with the models of P / PL series.

**DESCRIPTION OF PARTS**

**Model**

- **AF-10P**
  - Power Source: 3 PHASE
  - Motor: 0.2 kW
  - Air Flow Rate (m³/min) (50Hz / 60Hz): 11 / 13.5
  - Static Pressure (kPa) (50Hz / 60Hz): 0.65 / 1.05
  - Noise Value (dB (A)) (50Hz / 60Hz): 65 / 68
  - Filtering Effect: 99.97% EU E12 Standard
  - Weight (Kg): 42
  - Air Inlet Port: Ø150
  - Applicable Space: <6m³

- **AF-20P**
  - Power Source: AC220V or AC380V
  - Motor: 0.4 kW
  - Air Flow Rate (m³/min) (50Hz / 60Hz): 18 / 20.5
  - Static Pressure (kPa) (50Hz / 60Hz): 0.88 / 1.38
  - Noise Value (dB (A)) (50Hz / 60Hz): 69 / 73
  - Filtering Effect: 99.97% EU E12 Standard
  - Weight (Kg): 47
  - Air Inlet Port: Ø150
  - Applicable Space: <12m³

- **AF-30P**
  - Power Source: 50/60Hz
  - Motor: 0.75 kW
  - Air Flow Rate (m³/min) (50Hz / 60Hz): 28 / 32.5
  - Static Pressure (kPa) (50Hz / 60Hz): 1.15 / 1.65
  - Noise Value (dB (A)) (50Hz / 60Hz): 70 / 74
  - Filtering Effect: 99.97% EU E12 Standard
  - Weight (Kg): 65
  - Air Inlet Port: Ø200
  - Applicable Space: <23m³

- **AF-40PL**
  - Power Source: 3 PHASE
  - Motor: 1.15 kW
  - Air Flow Rate (m³/min) (50Hz / 60Hz): 40 / 48.5
  - Static Pressure (kPa) (50Hz / 60Hz): 1.45 / 1.95
  - Noise Value (dB (A)) (50Hz / 60Hz): 71 / 75
  - Filtering Effect: 99.97% EU E12 Standard
  - Weight (Kg): 80
  - Air Inlet Port: Ø250
  - Applicable Space: <32m³

- **Model**

  - **AF-10P**
    - A: 615
    - B: 379
    - C: 831
    - D: 236
    - D1: 148
    - E: 300
    - F: 335
    - G: 283
    - H: 25
    - I: 25
    - J: 426
    - K: 355
    - L: 413

  - **AF-20P**
    - A: 652
    - B: 379
    - C: 851
    - D: 234
    - D1: 148
    - E: 320
    - F: 350
    - G: 298
    - H: 25
    - I: 25
    - J: 426
    - K: 355
    - L: 413

  - **AF-30P**
    - A: 765
    - B: 432
    - C: 908
    - D: 299
    - D1: 200
    - E: 388
    - F: 420
    - G: 368
    - H: 25
    - I: 25
    - J: 492
    - K: 408
    - L: 413

  - **AF-40PL**
    - A: 792
    - B: 490
    - C: 1153
    - D: 316
    - D1: 250
    - E: 388
    - F: 480
    - G: 428
    - H: 33.5
    - I: 33.5
    - J: 540
    - K: 430
    - L: 613

**Model**

- **AF-10P**
  - No. 1: Flexible hose (Standard accessories x 1)
  - Diameter: Ø150
  - Length: 3m

- **AF-20P**
  - No. 2: Sleeve for flexible hose (Standard accessories x 2)
  - Diameter: Ø150
  - Length: 3m

- **AF-30P**
  - No. 3: Flexible hose clamp (Standard accessories x 2)
  - Diameter: Ø150
  - Length: 3m

- **AF-40PL**
  - No. 4: Air inlet adaptor (Standard accessories x 1)
  - Diameter: Ø150
  - Length: 3m

- **Model**

  - **AF-10P**
    - No. 5: Power switch (Standard accessories x 1)
    - Diameter: Ø150
    - Length: 3m

  - **AF-20P**
    - No. 6: Oil resistant cable (Standard accessories x 1)
    - Diameter: Ø150
    - Length: 3m

  - **AF-30P**
    - No. 7: Anti-vibration mount (Standard accessories x 1)
    - Diameter: Ø150
    - Length: 3m

  - **AF-40PL**
    - No. 8: Oil drain hose (Standard accessories x 1)
    - Diameter: Ø150
    - Length: 3m

- **Model**

  - **AF-10P**
    - No. 9: Pre-filtering system (Standard accessories x 1)
    - Diameter: Ø150
    - Length: 3m

  - **AF-20P**
    - No. 10: After-filter (Standard accessories x 1)
    - Diameter: Ø150
    - Length: 3m

  - **AF-30P**
    - No. 11: Telescopic stand (Choice of a stand or castors)
    - Diameter: Ø150
    - Length: 3m

**Machine**

- **Model**

  - **AF-10P**
    - Height: 1100mm
    - Extension: 1800mm

  - **AF-20P**
    - Height: 1100mm
    - Extension: 1800mm

  - **AF-30P**
    - Height: 1100mm
    - Extension: 1800mm

  - **AF-40PL**
    - Height: 1100mm
    - Extension: 1800mm