



Green, Eco-friendly, Revolutionary  
— AOF Environment Systems

## OIL MIST AIR CLEANER

AF series



**CNC**  
MACHINERY SALES AUSTRALIA

## 2. PRODUCT DESCRIPTION

With the continuous shift in modern technology, environmental pollution caused by intense productivity and complex waste disposal has become a serious concern. The international community has decided to set more stringent standards for fine particle emissions. As metal cutting materials are becoming more and more versatile, especially in high-speed machining, the toxic gases generated are becoming more harmful to human health. Such gases include aluminum, mercury and PCB. We have dedicated our R&D to offer oil mist air cleaners that are capable of removing completely such toxic gases. The air cleaners can also recycle oil mist for reuse by capturing nano powder and other toxic contents. We provide an effective solution for solving air quality problems while creating a comfortable working environment. It also represents our contribution to the earth protection.

Furthermore, we rely on the latest air filter technology to successfully develop a high efficiency oil mist recycling machine, capable of filtering oil mist, fog, aerosols, smoke and so on. The high precision innovative filter design complies with European standards to provide the optimum filtration with great recycling efficiency.

### ◎ TYPICAL APPLICATIONS

◎ Machining factory	◎ EDM machining factory
◎ Punching factory	◎ Petrochemical factory
◎ Glass surface treatment factory	◎ Food processing and production factory
◎ Textile factory	◎ Electronic factory (clean room)

### ◎ 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, gun drills.
◆ Molding machines Die-casting machines, injection molding machines (resins), large presses.
◆ Additional applications Metal welding equipment, 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.

※As we continuously improve the product performance, specifications and design characteristics are subject to change without prior notice. The actual product is based on the new catalog and new quotation sheet.

## 3. EXAMPLES OF INSTALLATION



Standard installation for a single machine



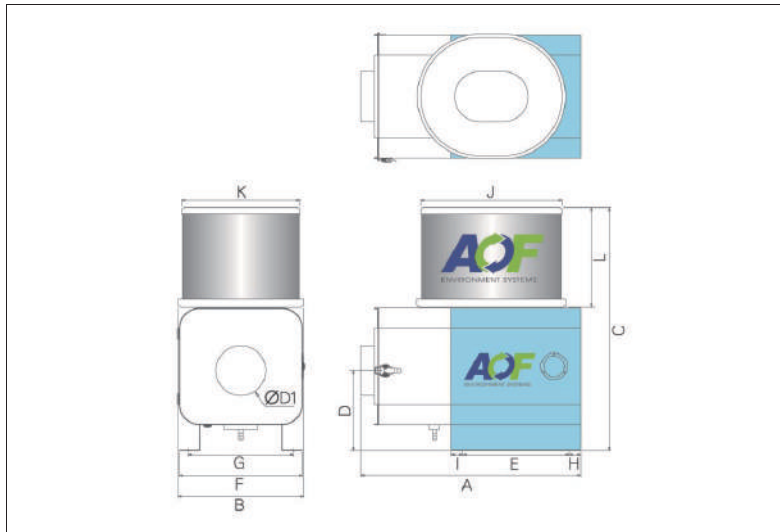
Installation with telescopic stand



Installation for whole plant equipment



## 4. SPECIFICATIONS



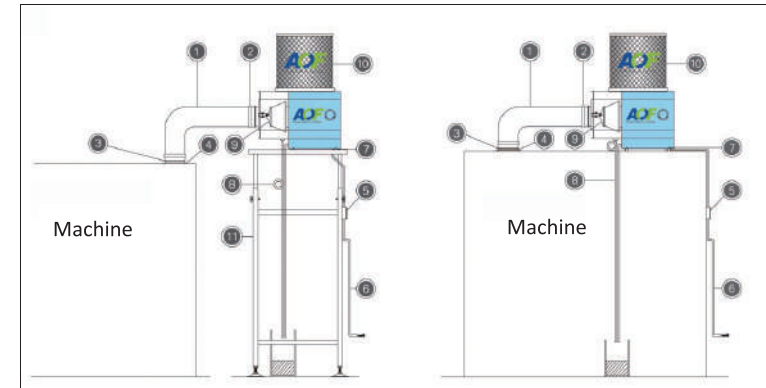
Model	Power Source	Motor	Air Flow Rate (m <sup>3</sup> /min) (50Hz/60Hz)	Static Pressure (kPa) (50Hz/60Hz)	Noise Value db(A) (50Hz/60Hz)	Filtering Effect	Weight (kg)	Air Inlet Port	Effective Filtration
AF-10P	3Ø	0.2 KW	11/13.5	0.65/1.05	65/68	99.97% EU E12 Standard	42	Ø150	<6m <sup>3</sup>
AF-20P	AC380V or AC220V	0.4 KW	18/20.5	0.88/1.38	69/73		47	Ø150	<12m <sup>3</sup>
AF-30P		0.75 KW	29/32.5	1.15/1.65	70/74		65	Ø200	<24m <sup>3</sup>
AF-40PL	50/60 HZ	1.15 KW	40/48.5	1.45/1.95	71/75		80	Ø250	<32m <sup>3</sup>

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

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

## 5. PARTS DIAGRAM & TERMINOLOGY

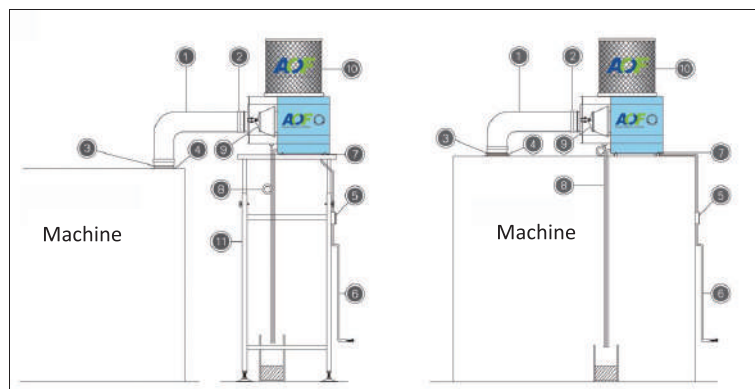
### DESCRIPTION OF PARTS








NO.	Part Description	Model	AF-10	AF-20	AF-30	AF-40	
1	Flexible hose (std. x 1)		Type	TW-H150	TW-H150	TW-H200	TW-H300
			Outside dia.	Ø150	Ø150	Ø200	Ø250
2	Sleeve for flexible hose (std. x 2)		Type	JP-HC-150	JP-HC-150	JP-HC-200	JP-HC-250
			Outside dia.	Ø150	Ø150	Ø200	Ø250
3	Flexible hose clamp (std. x 2)		Type	BP-HB-165	BP-HB-165	BP-HB-215	BP-HB-250
			Outside dia.	Ø150	Ø150	Ø200	Ø250
4	Air inlet adaptor (std. x 1)		Type	PM-150	PM--150	PM--200	PM--250
			Outside dia.	Ø150	Ø150	Ø200	Ø250
5	Power switch (std. x 1)		Type	E0-220/380/415			
			Outside dia.	158x85x105mm			
6	Oil resistant cable (std. 3.3m x 1)		Type	CA-1.25mm <sup>2</sup> x4C			
			Outside dia.	1.25mm <sup>2</sup> x4C x3.3M			

## 5. PARTS DIAGRAM & TERMINOLOGY

### DESCRIPTION OF PARTS



NO.	Part Description		AF-10	AF-20	AF-30	AF-40		
7	Anti-vibration mount (std. x 4)		Type	WL-M8x15L		WL-M10x15L		
			Outside dia.	M8-15L	Ø30x30L	M5-15L	Ø50x50L	
8	Oil drain hose (std. 3m x 1)		Type	OH-R12x300				
			Outside dia.	Ø12x3M				
9	Pre-filtering system (std. x 1)		Type	FC-250-O	FC-250-O	FC-300-O	FC-250-O	
			Outside dia.	Ø250	Ø250	Ø300	Ø300	
10	After-filtering (std. x 1)		Type		S: Standard type, 300mm long P: Practical type, 400mm long		PL: Long-acting type, 600mm long PM: High efficiency type, 600mm long	
11	Telescopic stand (Choice of a stand or castors) (opt.)		Type	PV-SU-1800				
			Height: 1100 mm, extension: 1800mm					

## 6. LIST OF MATERIALS


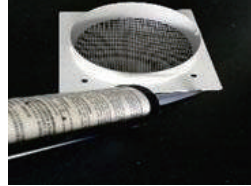



Name		Quantity	
	Air inlet adaptor	AF-10/20 : 6" AF-30 : 8" AF-40 : 10"	1
	Flexible hose clamp	AF-10/20 : 6" AF-30 : 8" AF-40 : 10"	2
	Anti-vibration screw		4
	Flexible hose	AF-10/20/30 : 1.5 meter AF-40 : 2.5 meter	1
	Sleeve for flexible hose	AF-10/20 : 6" AF-30 : 8" AF-40 : 10"	2
	Oil proof cable 3.3M		1
	Oil drain hose 3M		1
	Power switch		1

## 7. INSTALLATION GUIDE

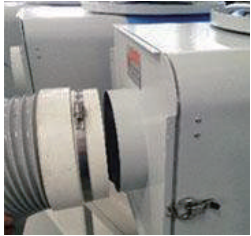

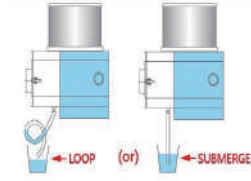


### GENERAL INSTALLATION NOTES:

1. Installation must only be performed by an authorized technician who has carefully read the installation guide. This is to prevent against electric shock or machine damage.
2. To ensure performance, the air cleaner should be properly installed on the machine tool. The installation area must be stable and vibration-resistant such as machine enclosure or electrical cabinet or separate stand.
3. To maintain efficiency, the bending positions of the flexible exhausting hose should be limited.
4. The electric wiring must comply with your local wiring standards, the national electrical regulations and the installation guide.
5. Do not break or use the conventional power wires, as this may lead to fire or electric shock. The air cleaner is wired for three-phase AC power source. For further electrical information, refer to the instruction label attached to the air cleaner.
6. Do not change the power wire length or use extension wire. In addition, do not use a socket together with other electrical devices.
7. After installation, it is necessary to perform running tests to ensure that oil exhaust circuit and electric supply are working normally.

## 7. INSTALLATION GUIDE

	<p>1. First of all, locate a free area on the top of your machine (right above the oil mist). Make a hole according to the hose size(6"/ 8"/10") (If you already have a hole on the top of your machine, you can skip this step)</p>
	<p>2. Place the air inlet adaptor on the hole, fix the four corners and fill the four sides with silicone.</p>
	<p>3. Choose a flat area nearby the hole, drill the screw holes (depending on your model) and fasten the screws.</p>
	<p>4. Install the oil mist collector on the anti-vibration mount and fix them with a tool such as a spanner.</p>
	<p>5. Take the sleeve and hose out, put some silicone in the sleeve and screw it into the hose (according to the thread direction).</p>

## 7. INSTALLATION GUIDE

	<p>6. Attach the sleeve on the air inlet adaptor and fasten it with the hose clamp. Measure the length you need and cut it from the other end. Follow the step 5 to connect the sleeve and hose together.</p>
 <p style="text-align: center;"><b>CAUTION</b></p> 	<p>7. Install the oil drain pipe under the air cleaner (front area). In order to promote good drainage, install the drain pipe as schematic diagram.</p> <ul style="list-style-type: none"> <li>Put the oil pipe straight down the bucket and put the end of oil pipe into cutting fluid.</li> </ul> <p><b>Or,</b></p> <ul style="list-style-type: none"> <li>Make a loop in the middle of the drain pipe and pour cutting fluid into the oil pipe to isolate the air from outside. Leave the end of pipe open to the atmosphere. (It's for the prevention of air getting into the oil mist collector through the oil pipe and reduce the airflow rate).</li> </ul>
	<p>8. Remove the back cover with a screwdriver and install another oil drain hose to the upper right bracket. Put back the cover after completion.</p>
	<p>9. Connect the collector to power switch and set the wires in sequence: R (red), S (white), T (black). After setting the wires, turn the power on and check the motor rotating direction (it should be clockwise rotating). <b>* Make sure to disconnect power before installation *</b> <b>* Make sure the input voltage/phase is the same as this AF unit).</b></p>

## 8. MAINTENANCE

Every AF unit is equipped with an Easy-to-Read gauge, it indicates normal operation and when filter elements need maintenance.

### Description of each color zone





The zone of indicator points	Description of condition	Instruction
Yellow	The Pre-filter is clogged	Take out the pre-filter and clean it
Green	Normal operation	X
Orange	The after-filter is clogged severely (50HZ)	Replace a new after-filter at once
Red	The after-filter is clogged severely (60HZ)	Replace a new after-filter at once

**Remark:** it's recommended to clean the pre-filter every **2~4** weeks. (according to actual operating condition)

### PRE-FILTER CLEANING METHOD:

While the needle of the dial is in the yellow zone, it means the pre-filter has to be cleaned out. The pre-filtering system should be checked and cleaned at least every 2~4 weeks depends on the mist thickness, type, working time and flow rate.

<p>1. Take it out from AF unit and clean it with neutral cleaner.</p> 	<p>2. Use an air gun to blow out the remaining water inside and let it dry for 4 to 6 hours. Then, put it back to its' position.</p> 
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