



Part of Absolent Air Care Group



Filtermist AW2, AW5 & AW8 - Operating Instructions.

20-209-10-069

AW Series |Rev 0 (Last Updated October 2025)

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If you have any questions which are not covered in these operating instructions, please do not hesitate to contact our customer service team on **(+44) (0) 1952 290500** or email **sales@filtermist.com**.

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1. Welcome

Thank you for choosing a quality product from Filtermist.

Original instructions were written in English, any other version is a translated text of the original operating instructions.

It is recommended that the installer and user of the filter unit read these instructions carefully before installation and use. Follow the safety instructions carefully and use the filter unit only as described in the operating instructions and for the intended purpose.

Keep these operating instructions in a safe and easily accessible place and, if the filter unit changes hands, ensure that the operating instructions accompanies the unit.

1.1. Product description

This filter unit is designed to filter air contaminated by airborne liquid particles (aerosols) from cutting fluids such as synthetic oils, mineral oils or emulsions used in machining processes.

1.2. Construction

The product has been designed and manufactured in accordance with applicable EU mechanical and electrical safety regulations and directives. In order for the product to maintain this status, it is important that installation, repair and maintenance are carried out by trained and qualified personnel. Filtermist only accepts responsibility for safety and function if original parts recommended by Filtermist are used. Contact Filtermist or your local distributor for technical support or assistance with spare parts and accessories.

1.3. Operating instructions

1.3.1. General information

The information provided in this document is intended as guidance and the contents may be changed without prior notice. Copying, translation or other forms of reproduction are only permitted with the written consent of Filtermist.

Models appearing in this manual may not be available in all countries.

1.3.2. Warning symbols

Throughout these operating instructions, information of particular importance is highlighted along with one of these symbols.



Danger! Risk of accident and severe injury to persons. A certain type of behaviour is necessary or must be avoided.



Warning! Risk of injury to persons. A certain type of behaviour prevents possible or probable injuries



Caution! Minor injuries or material damage can be prevented by a certain type of behaviour



Important! Information for better use of the machine in order to avoid possible operating errors

1.3.3. Warranty

Your Filtermist AW Series unit is provided with a one year warranty; however, this warranty is only valid if the product is in its original form and only original spare parts and original consumables have been used in the service and maintenance of the filter unit.

1.3.4. Machine plate and filter cassette label

The filter unit is fitted with a machine plate and the filter cassette with an information label, both of which contain important information about the product. This information is useful when contacting Filtermist or your local Filtermist distributor to order spare parts, consumables or for technical support.

Machine plate

The machine plate shows basic information about the product and is located on the back of the filter unit. Please provide the serial number when contacting Filtermist or your Filtermist distributor.

 FILTERMIST Telford 54 Business Park Nedge Hill, Telford, TF3 3AL UK Phone +44(0)1952 290500 www.filtermist.com 	
Designation AW8-13D-X1S-230-00-GB-000	
Serial number	123456
Year of manufacture	2025
Rated voltage	200-264 VAC
Frequency	50/60 Hz
Max fuse	10 A
Rated current	2,2 A
Weight	35 kg

Filter cassette label

When it is time to replace the filter cassettes, it is essential to use cassettes of the same model. Always refer to the information on the label located on the front of the filter cassette when contacting Filtermist or your distributor. The time for replacement is determined by the pressure drop limit specified in section 5.6. When the pressure drop reaches this limit, the cassette should be replaced.

The filter unit's LED indicator strip will signal this condition: a solid yellow light indicates that the service threshold has been reached, and a solid red light indicates that the replacement is urgent. In addition, the LED indicator can briefly blink to identify which filter stage has reached the threshold. See the LED indicator section for details.

Scanning the QR code on the label will take you to the Filtermist website where you can find more information on ordering new filters.

1.3.5. Manufacturer

Filtermist Limited

Telford 54 Business Park,

Nedge Hill

Telford

Shropshire

TF3 3AL

United Kingdom

2. Safety

2.1. Safety instructions

- Please read these operating instructions thoroughly before starting work with the product
- The safety instructions in this document must be followed without exception when working with the filter unit
- All persons involved in the installation, maintenance and use of the product should be fully aware of the hazardous situations that may occur and the safety precautions specified in this document
- Some tasks require special training and certification, such as hot work, working with dangerous voltages, handling hazardous liquids and lifting heavy objects
- All instructions and safety regulations are to be regarded as part of the product and must accompany it when it is moved or handed over to a third party
- Incorrect use or unsafe handling of the product may result in personal injury and equipment failure. Incorrect use of the product must be avoided completely in order to ensure its proper functioning
- Ensure that the safety regulations in the country where the filter unit is used are followed

2.2. Gas particles

- Do not install the filter unit in areas where explosive gases may be present. The AW filter unit must never be operated in environments that may lead to an explosion hazard inside the unit
- The AW filter unit must never be operated in environments where there is a risk of explosion outside the unit

2.3. Risk of electric shock

- Before performing any electrical work, switch off the power supply and disconnect the power cable
- All electrical work must be carried out by a qualified electrician

2.4. Rotating parts

- The fan in the filter unit has rotating parts. Switch off the power supply before any maintenance commences

2.5. Hazardous liquids

- The filter cassettes may contain liquids that are hazardous to health and equipment, both during and after use. See the product data sheet for the particular liquid or contact the manufacturer for more information
- Wear safety glasses and gloves when replacing or handling filter cassettes

2.6. Handling the filter unit

- The inside of the filter unit may contain sharp edges. Wear protective gloves during maintenance
- Always wear protective glasses and ear protection while servicing and inspecting the filter unit

2.7. Warning signs

The following warning signs can be found on the back of the unit. Below is a brief description of each

	NOTE! Read the operating instructions
	WARNING! Danger, high voltage
	WARNING! Rotating parts
	NOTE! Use protective eyewear
	NOTE! Wear protective gloves

2.8. Recommended use

This product is designed to clean air contaminated with oil mist particles from cutting fluids such as emulsion, synthetic oil and/or mineral oil. Any other use of the filter unit is prohibited unless Filtermist guarantees the function. Use of the product in environments with graphite, wax, silicone, lead or chromium elements may result in more frequent cleaning and filter cassette replacement.

2.9. Unsuitable areas of use

- If toxic gases are present or generated during the process, their concentration must be evaluated before using recirculated air. If you are unsure about the presence of hazardous substances, contact your distributor or Filtermist for guidance
- This unit has a particle filter only and recirculates the air. It is not suitable for applications with hazardous gases
- If the contaminant/particle load is above the recommended level, or if a large amount of liquid is drawn into the filter unit, this may result in shorter service intervals due to overload
- The extraction point should be designed to prevent chips and other large particles from being drawn into the filter unit, as this may shorten the service intervals. If larger particles are present, it is recommended that the filter unit is equipped with coarse pre-filters. Contact your local distributor or Filtermist for more information
- If the contaminated air contains graphite or other solutions that create sticky contamination, Filtermist or the distributor should be consulted as this may significantly affect the service intervals
- The filter unit must not be connected to explosive gases. The product is not designed for use in ATEX-classified environments
- Do not expose the filter unit to substances with a pH value below 4 or above 8

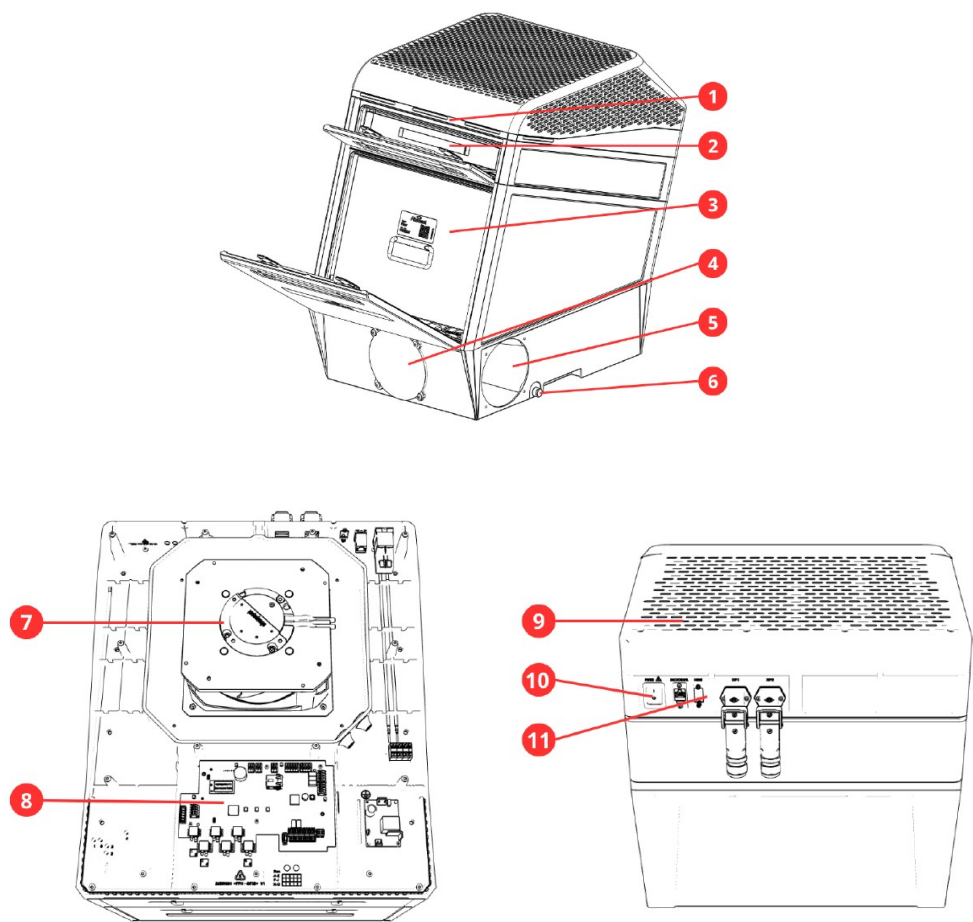
3. Electrical & technical information

The Filtermist AW is a compact, lightweight oil mist filtration unit. The air inlet connects to the process machine where airborne liquid particles are generated. The inlet can be positioned on the right, left, front, or bottom of the unit to suit the installation setup. A built-in fan creates negative pressure in the machine enclosure, ensuring that contaminated air is consistently drawn into the filtration unit.

The air passes through a two-stage filtration system that effectively captures harmful particles. Cleaned air, filtered to HEPA H13 standard, is discharged through the top outlet. The Catch&Release™ system continuously drains liquid from the filter cassettes, preventing saturation and thereby extending filter life. The drained liquid flows to the bottom of the unit, where it can either be returned to the process or collected in a separate container.

The unit is configured at the factory to deliver a predefined airflow. This airflow is automatically maintained by the control system adjusting fan speed in response to the total pressure drop across the filter cassettes. Using the Flow Adjust function in the HMI, the user can select between five pre-set airflow levels to suit different process needs.

Figure 1

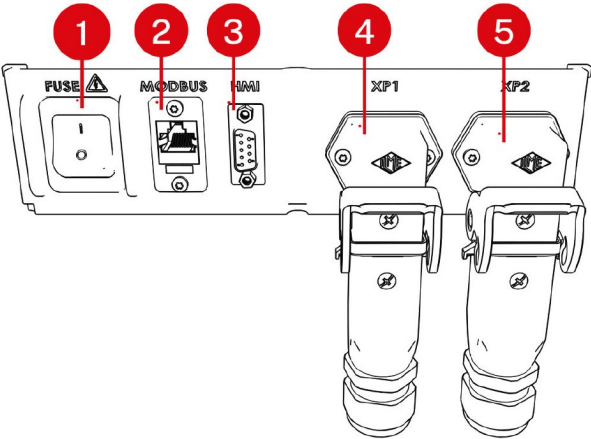


1. LED indicator strip	2. Filter stage 2	3. Filter stage 1	4. Air inlet, Alternative placement	5. Air inlet	6. Drain connection, alternative placement
7. Fan	8. Control unit	9. Air outlet	10. Main switch	11. Electrical & communication interface	

3.1. Connections overview

The unit is available with two connector configurations. Option 1 is the default setup and uses two separate 8-pole connectors: one for power and one for signal. Option 2 combines both power and signal in a single 12-pole connector.

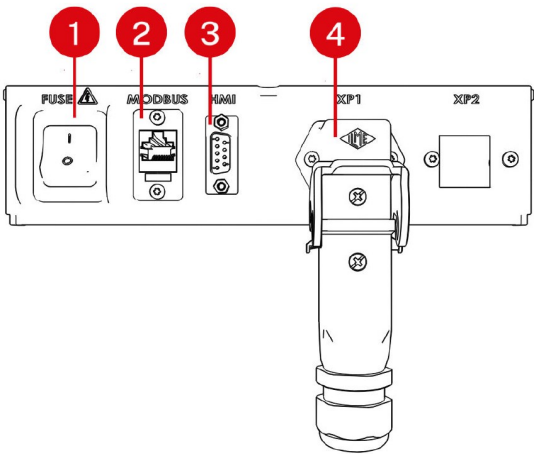
Figure 2. Option 1: Dual Connections



1. On/off Switch with built in fuse	2. Modbus TCP connection	3. D-sub port for optional HMI unit
4. Signal connector	5. Power connector	

Figure 3. Option 2: Single connection

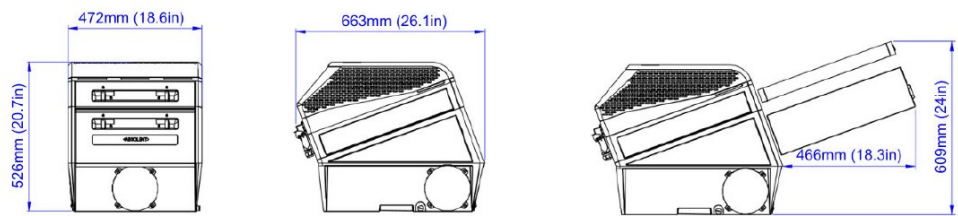
Power and signal are combined in one 12-pole connector. This version is only available with a crimp connection and is delivered with a 5-meter preassembled cable for simplified installation.



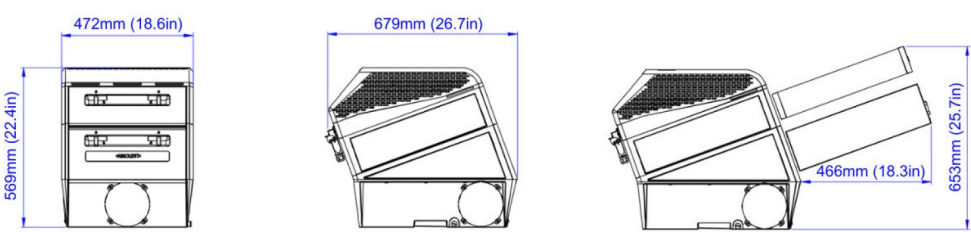
1. On/Off switch with built in fuse	2. Modbus TCP connection	3. Port for optional HMI unit	4. Combined power and signal connector
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Dimensions

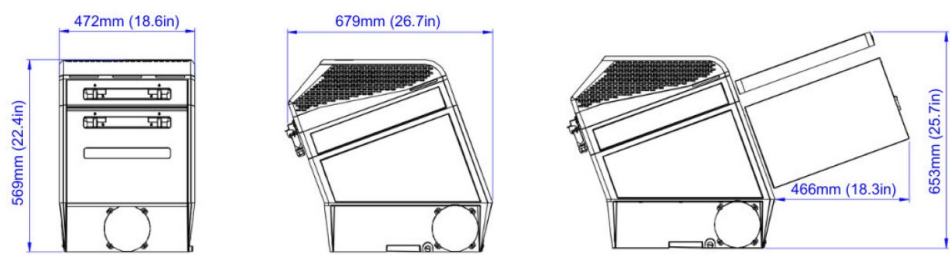
AW2-09



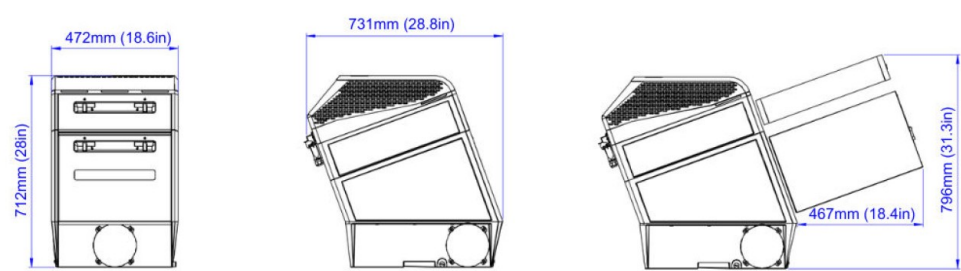
AW2-10



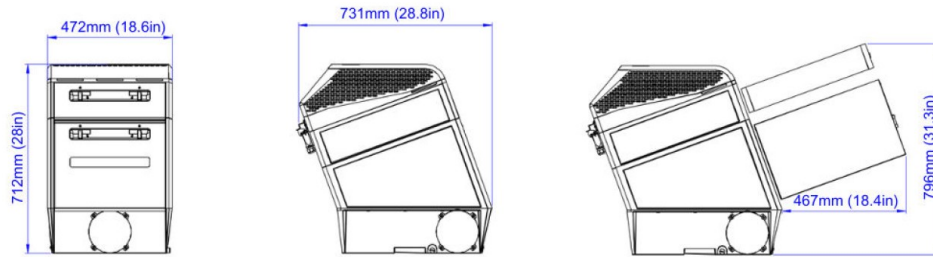
AW5-12



AW5-13



AW8-13



Technical specifications

AW2	AW2-09	AW2-10
Nominal airflow	250 m ³ /h (147 cfm)	250 m ³ /h (147 cfm)
Particle load ¹	15 mg/m ³	30 mg/m ³
Particle load (< 1 µm) ¹		
Standard filter	2 mg/m ³	4 mg/m ³
High-density filter	4 mg/m ³	8 mg/m ³
External pressure drop	100 Pa (0.40 inWC)	100 Pa (0.40 inWC)
Inlet diameter	150 mm (5.91 in)	150 mm (5.91 in)
Outlet diameter	N/A	N/A
Number of filter stages per filter unit	2 pcs	2 pcs
Number of filter cassettes per filter unit	2 pcs	2 pcs
Number of fans	1 pc	1 pc
Fan motor power	170 W	170 W
Width	472 mm (18.6 in)	472 mm (18.6 in)
Height	526 mm (20.7 in)	569 mm (22.4 in)
Depth	663 mm (26.1 in)	679 mm (26.7 in)
Weight with empty filter cassettes	25 kg (55 lb)	27 kg (59 lb)
Weight with full filter cassettes	29 kg (64 lb)	31 kg (68 lb)
Weight without filter cassettes	17kg (37 lb)	18 kg (40 lb)
Noise Level (30%)	47.7 db(A)	47.7 db(A)
Noise Level (60%)	57 db(A)	57 db(A)
Noise Level (100%)	70.5 db(A)	70.5 db(A)

¹ The stated load values are based on continuous operation of 8,760 hours per year. At shorter service intervals, the filter unit can handle higher particle loads.

Sound level measured at a distance of 1 m from the unit, with the microphone positioned 1.2 m above the floor. The unit was placed 2 m above the floor in a semi-anechoic room. Normal operation is estimated to be between 30 and 60%.

AW5	AW5-12	AW5-13
Nominal airflow	500 m³/h (235 cfm)	500 m³/h (235 cfm)
Particle load¹	15 mg/m³	30 mg/m³
Particle load (< 1 µm)¹		
Standard Filter	2 mg/m³	4 mg /m³
High-Density Filter	4 mg /m³	8 mg /m³
External pressure drop	300 Pa (1.21 inWC)	300 Pa (1.21 inWC)
Inlet diameter	150 mm (5.91 in)	150 mm (5.91 in)
Outlet diameter	N/A	N/A
Number of filter stages per filter unit	2 pcs	2 pcs
Number of filter cassettes per filter unit	2 pcs	2 pcs
Number of fans	1 pc	1 pc
Fan motor power	500 W	500 W
Width	472 mm (18.6 in)	472 mm (18.6 in)
Height	667 mm (26.6 in)	712 mm (28.0 in)
Depth	714 mm (28.1 in)	731 mm (28.8 in)
Weight with empty filter cassettes	30 kg (66 lb)	35 kg (77 lb)
Weight with full filter cassettes	36 kg (79lb)	41 kg (90 lb)
Weight without filter cassettes	18 kg (40 lb)	21 kg (46 lb)
Noise Level (40%)	55 db(A)	55 db(A)
Noise Level (60%)	61.8 db(A)	61.8 db(A)
Noise Level (100%)	71.4 db(A)	71.4 db(A)

¹ The stated load values are based on continuous operation of 8,760 hours per year. At shorter service intervals, the filter unit can handle higher particle loads.

Sound level measured at a distance of 1 m from the unit, with the microphone positioned 1.2 m above the floor. The unit was placed 2 m above the floor in a semi-anechoic room. Normal operation is estimated to be between 30 and 60%.

AW8	AW8-13
Nominal airflow	800 m³/h (470 cfm)
Particle load¹	20 mg/m³
Particle load (<1 µm)¹	4 mg/m³
External pressure drop	200 Pa (0.80 inWC)
Inlet diameter	150 mm (5.91 in)
Outlet diameter	N/A
Number of filter stages per filter unit	2 pcs
Number of filter cassettes per filter unit	2 pcs
Number of fans	1 pcs
Fan motor power	500 W

AW8	AW8-13
Width	472 mm (18.6 in)
Height	712 mm (28.0 in)
Depth	731 mm (28.8 in)
Weight with empty filter cassettes	35 kg (77 lb)
Weight with full filter cassettes	42 kg (93 lb)
Weight without filter cassettes	20.8 kg (46 lb)
Noise Level (40%)	55 db(A)
Noise Level (60%)	61.8 db(A)
Noise Level (100%)	71.4 db(A)

¹ The stated load values are based on continuous operation of 8,760 hours per year. At shorter service intervals, the filter unit can handle higher particle loads

Sound level measured at a distance of 1 m from the unit, with the microphone positioned 1.2 m above the floor. The unit was placed 2 m above the floor in a semi-anechoic room. Normal operation is estimated to be between 30 and 60%.

Electrical specifications

AW2

Fan	Number of fans	Voltage	Frequency	Phases	Internal fuse ¹	Largest fuse	Rated Current
170 W	1	200-240 V	50/60 Hz	1-phase	6 A	10 A	1.4 A

¹ All models include a built-in two-pole thermal-magnetic fuse for internal circuit protection.

AW5

Fan	Number of fans	Voltage	Frequency	Phases	Internal fuse ¹	Largest fuse	Rated Current
500 W	1	200-264 V	50/60 Hz	1-phase	6 A	10 A	2.2 A

¹ All models include a built-in two-pole thermal-magnetic fuse for internal circuit protection.

AW8

Fan	Number of fans	Voltage	Frequency	Phases	Internal fuse ¹	Largest fuse	Rated Current
500 W	1	200-264 v	50/60 Hz	1-phase	6 A	10 A	2.2 A

¹ All models include a built-in two-pole thermal-magnetic fuse for internal circuit protection.

4. Receipt & handling

4.1. General delivery information

- The filter unit is delivered in a cardboard box placed on a wooden pallet
- To prevent damage to the filter unit, retain the packaging until installation
- During transport, the filter unit must be securely fastened and transported in an upright position
- Always follow the handling instructions printed on the packaging

4.2. Goods reception

- On receipt of the goods, check that the packaging is undamaged and that the number of packages delivered matches the number on the delivery note. Note any visible damage or deviations on the delivery note before accepting the delivery. If the packaging is damaged, first contact the transport company and then your distributor or Filtermist
- After receipt, a delivery check must be carried out as soon as possible to ensure that the delivery matches the order.

Check that the type and quantity of the goods delivered match the order and the delivery note. If there are any deviations, contact your distributor or Filtermist

4.3. Filter unit storage

- Filter units must be stored in a dry place protected from the weather
- The filter unit must be stored in its original packaging
- Do not stack more than three packed filter boxes on top of each other

5. Installation

5.1. Placing and setup

The lightweight AW filter units are designed for flexible installation and can be mounted directly on the connected machine, on nearby equipment, or used as a stand-alone unit. This saves floor space and enables shorter ducts which generates a low external pressure drop in the duct system.



Important! If the filter unit is placed on a machine that is sensitive to vibrations, we recommend using the optional anti-vibration mounts accessory. This helps minimise vibration transfer from the unit.

- Ensure that the filter unit is placed on a flat, stable surface. Use a spirit level to verify correct alignment
- The unit must be mounted in an upright position
- Ensure that the mounting surface can support the weight of the filter unit, including oil-filled filters
- The filter unit must be securely fastened using screws suitable for the mounting surface
- When installing the filter unit, ducts, pipes, and electrical cables, ensure that both front-mounted filter hatches can be opened fully. The filter cassettes must be easily accessible and removable without obstruction
- The installer must ensure that the installation complies with applicable accessibility directives, with safe and regular access routes for operation, service, and filter replacement
- Adequate space must be provided around the unit to allow safe handling of filter cassettes, oil drains and other service points

5.2. Lifting the filter unit



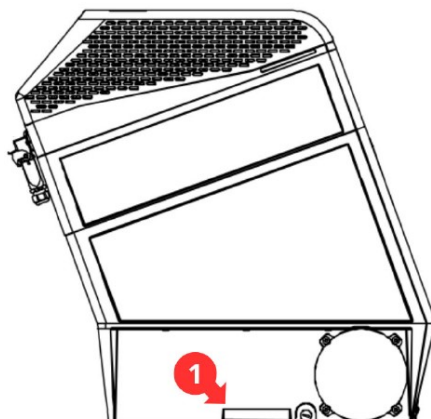
Warning! Incorrect or unsafe handling of the product may cause injury to people and damage to equipment



Caution! Filtermist recommends that two people lift the unit to ensure safe handling and reduce the risk of injury or damage

Lift the filter unit

Before lifting the filter unit, ensure that the filter cartridges are removed, the oil tray is empty, and all cables are disconnected. Use the designated lifting handles to position the unit safely. If the installation point is elevated, place the unit on a pallet first to reduce lifting height, then lift it into place by hand using the lifting handle in the diagram below (1).



5.3. Connecting process air



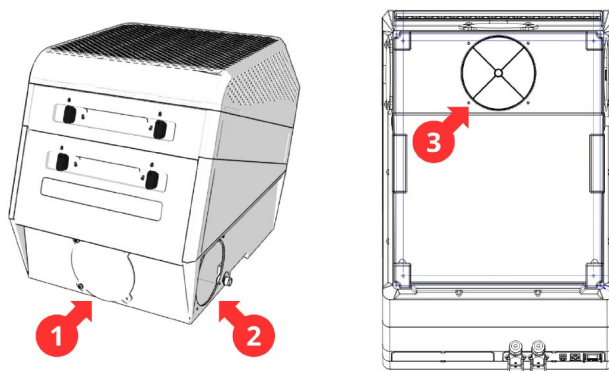
Do not route return oil through the air inlet; this will cause loss of airflow and can damage the unit.

5.3.1. Connection

- To capture the mist particles, the inlet pipes should be sized for an air velocity of 11-18m/s
- We recommend that the ducting does not exceed 80 cm in length
- Avoid routing the ducting with more than one 90° bend. Sharper or multiple bends can reduce airflow efficiency
- Using a flexible hose for the inlet connection can help reduce vibrations and prevent them from transferring to the machine

5.3.2. Change air inlet side

The air inlet of the filter unit can be positioned on the right-hand side, left-hand side, front, or underside. Cover plates are provided for all unused inlet openings. To change the inlet position, remove the appropriate cover plate and install the inlet on the desired side.

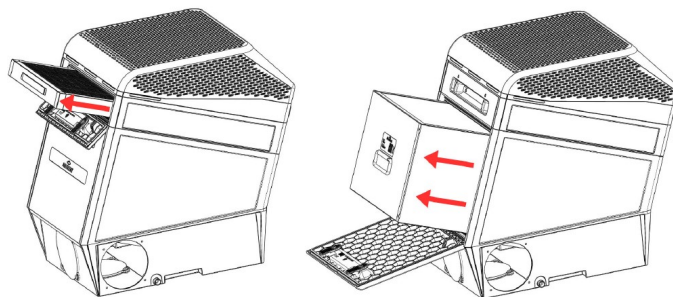


1. Inlet cover
2. Inlet without cover
3. Bottom inlet



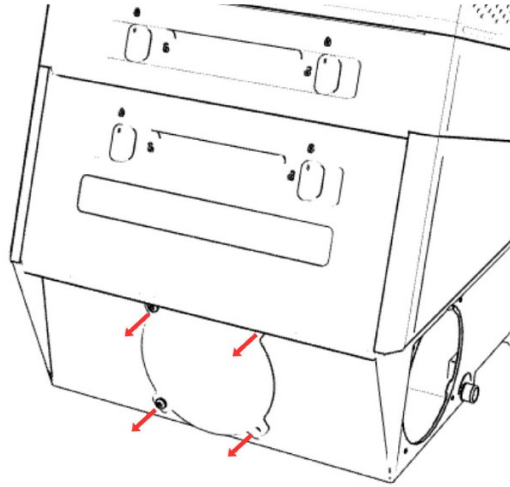
Caution! Ensure that the filter unit is powered off before changing the air inlet side

1. Remove the filter cassettes from the filter unit



2. Disconnect any ducting or accessories connected to the current air inlet

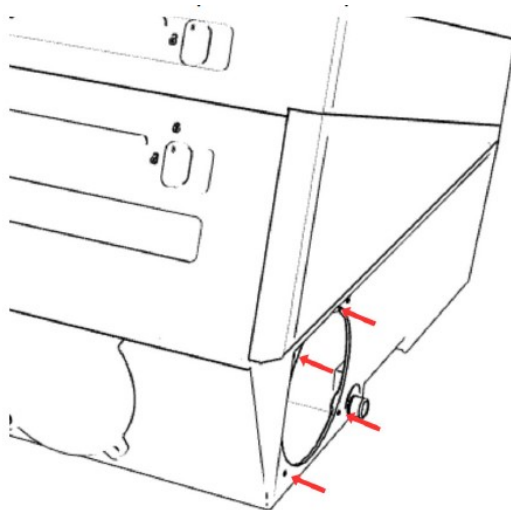
3. Remove the cover plate from the desired new inlet position (right-hand side, left-hand side, front, or bottom)



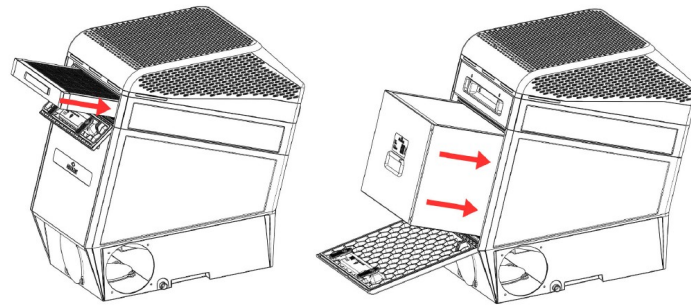
4. Remove the air inlet connection from the current position

5. Install the air inlet connection in the selected position, use thread sealant such as Loctite 577 & secure all fasteners and ensure the seal is tight to prevent leakage

6. Refit the cover plate to the previous inlet opening

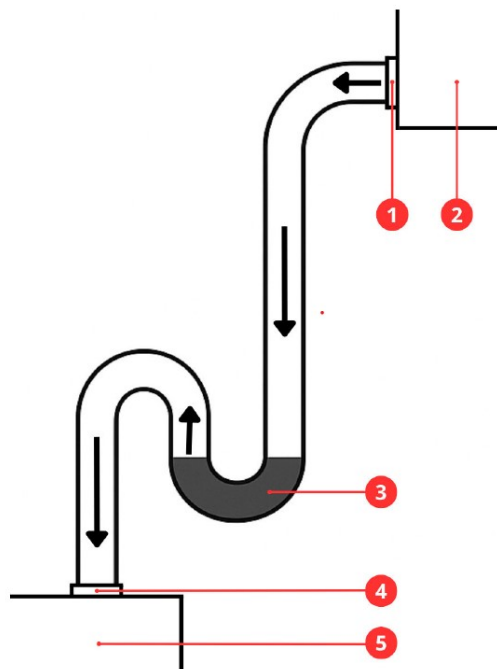


7. Insert the filter cassettes into the filter unit



5.4. Connecting the oil drain

- Connect a hose to the oil drain outlet using a hose clamp. Route the hose down into a suitable container
- When routing the hose, use thread sealant such as Loctite 577 and ensure that the connection at the filter unit is the highest point in the drain system. This guarantees that oil can drain fully from the unit
- Due to the negative pressure inside the filter unit, a siphon or liquid trap must be used to allow proper drainage. This prevents air from being drawn into the unit and ensures that oil flows out as intended. If the siphon effect is not maintained, oil may stop draining or be drawn back into the unit
- Fill the liquid trap manually to create a proper liquid column, as it will not fill automatically while the fan is running
- The drain connection can be repositioned to the left or right side of the unit as needed



1. Connection to the filter unit - the highest point of the drain system
2. Filter unit
3. Liquid trap
4. Connection to the oil waste container - the lowest point of the drain system
5. Oil waste container

5.5. Electrical connection

- The instructions and connection diagrams in these operating instructions apply to standard-design filter units. If the filter unit has non-standard features or modifications, refer to the specific instructions and connection diagrams for that particular filter unit
- All electrical work must be carried out by a qualified electrician
- The power must be switched off before starting any electrical work



Danger! Incorrect electrical work can result in serious injury. All electrical work must be carried out by qualified personnel



Warning! It is essential that phase (L) and neutral (N) are connected correctly when wiring the unit. Incorrect phase/neutral connection may result in malfunction, risk of electric shock, or damage to the equipment

5.5.1. Connector configurations

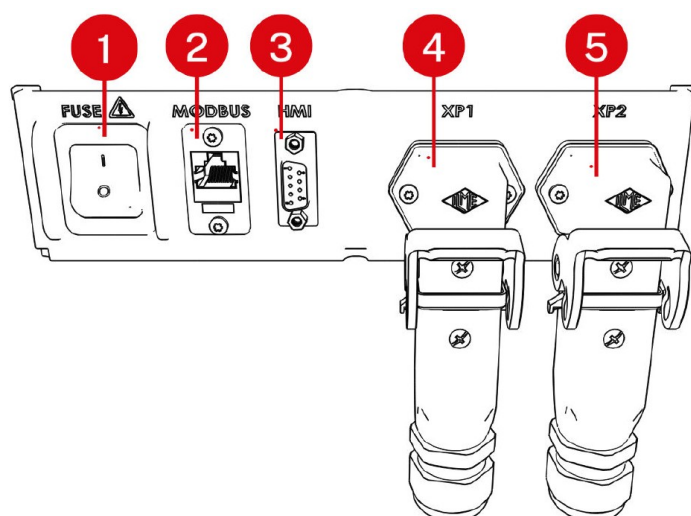
Electrical connection points are located as shown in the Connections overview section. Verify the connector type (dual or single) before installation and use the appropriate cabling and tools as specified in that chapter.

All versions include connection points for HMI, Modbus TCP, and an integrated On/Off switch with a built-in 6 A thermal-magnetic fuse.

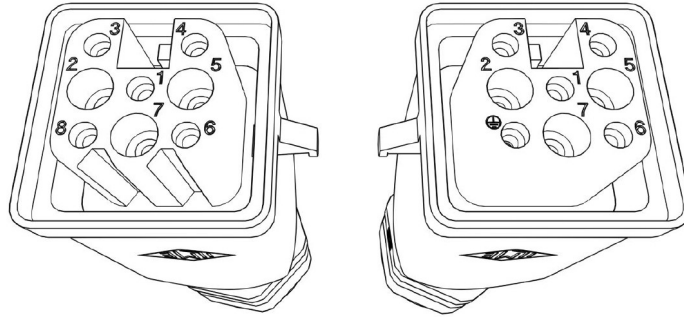
Signal connection

The signal connection handles all control and communication between the filter unit and the process equipment. It enables remote start and stop, triggers boost mode when prompted, and provides output signals for running status, service reminders, and alarms.

Dual connector configuration



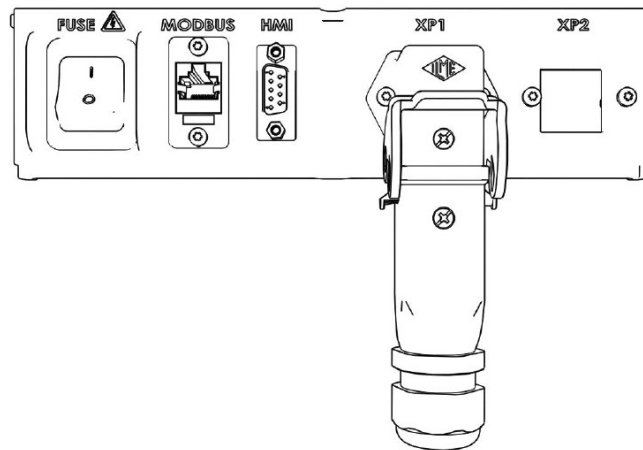
Signal and power are separated into two dedicated connectors (8-pole and 7+PE pole) with push-in connection.



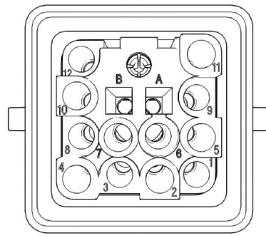
8-pole signal connector (left) & 7 pole power connector (right)

8-pole signal connector		7-pole power connector	
Pin 1	Common relay	Pin 1	L1
Pin 2	Alarm relay	Pin 2	N
Pin 3	Service relay	Pin 3	N/A
Pin 4	Running relay	Pin 4	N/A
Pin 5	Boost	Pin 5	N/A
Pin 6	Gnd	Pin 6	N/A
Pin 7	Start	Pin 7	N/A
Pin 8	Gnd	Pin 8	PE

Single connector configuration



Power and signal exchange are combined in one 12-pole crimp connector. This version is delivered with a 5 meter (16.4 ft) preassembled cable.



12-pole combined power and signal connector.

12-pole combined connector	
Pin 1	Common relay
Pin 2	Alarm relay
Pin 3	Service relay
Pin 4	Running relay
Pin 5	Boost
Pin 6	Gnd
Pin 7	Start
Pin 8	Gnd
Pin 9	N/A
Pin 10	L1
Pin 11	N
Pin 12	N/A
Pin PE	PE

5.6. Pressure drop intervals

Pressure drop intervals - Standard filter cassettes

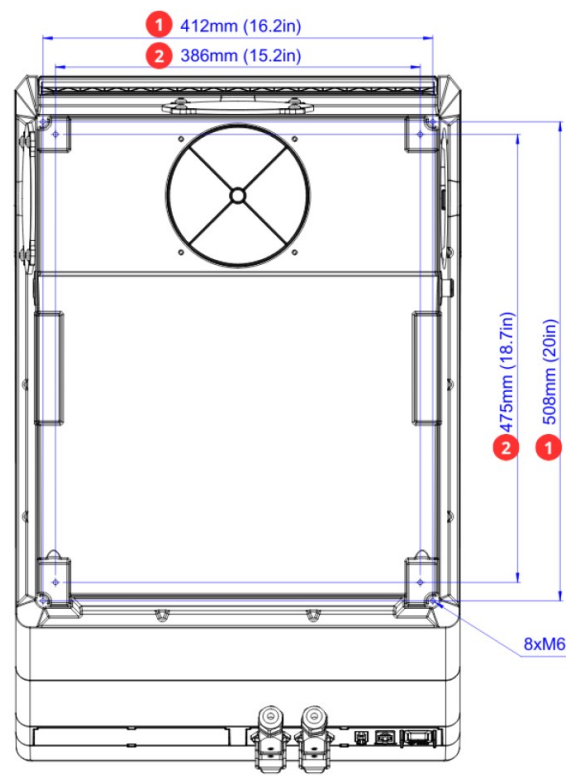
Filter unit	Filter Stage	Filter Cassette	Pressure interval		
			Green	Yellow	Red
AW2-10	2	HEPA H13	0-400	400-500	>500
	2	HEPA H13	0-400	400-500	>500
	1	W4	0-500	500-600	>600
	1	W6	0-500	500-600	>600
AW5-13	2	HEPA H13	0-400	400-500	>500
	2	HEPA H13	0-400	400-500	>500
	1	W8	0-500	500-600	>600
	1	W12	0-500	500-600	>600
AW8-13	2	HEPA H13	0-400	400-500	>500
	1	W12	0-500	500-600	>600

5.7. Before installation

- Make sure the right tools are available to ensure a quick and safe installation
- Make sure that unauthorised personnel do not enter or move around the area around the filter unit during installation
- Make sure that the filter unit's duct connection is compatible with the pipe system of the processing machine
- Make sure that the return oil can be drained or returned to the machine properly

5.8. Assembly

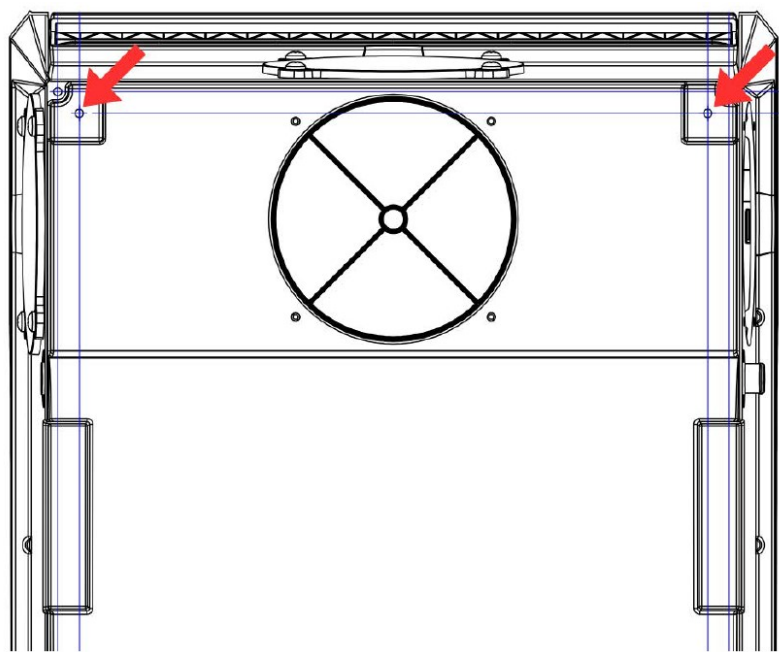
1. Examine the mounting hole pattern in the AW unit's base to identify the attachment points



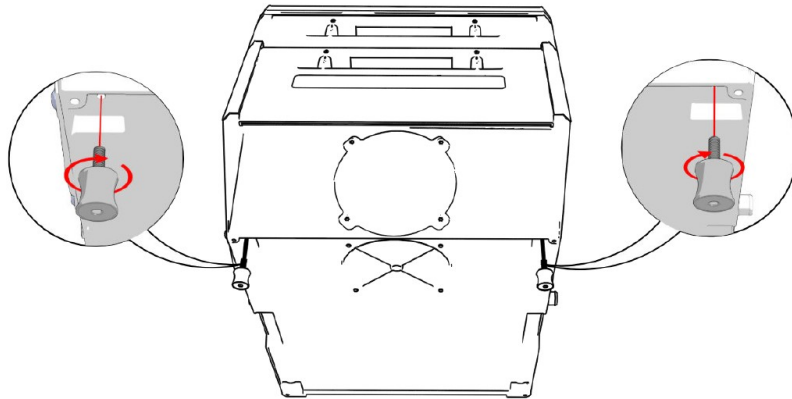
1. Hole pattern for installations without anti-vibration mounts

2. Hole pattern for installations with anti-vibration mounts

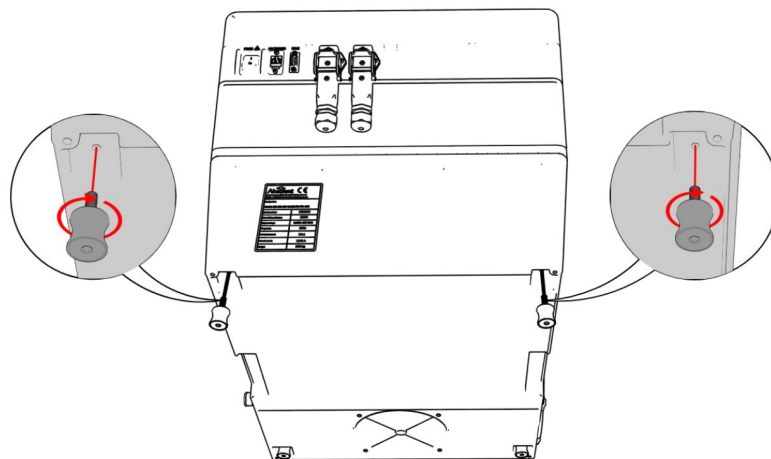
2. If the optional anti-vibration mounts are used, carefully lift the front end of the unit to access the mounting points in the corners



3. Align each anti-vibration mount with its designated recess in the front corners and screw them directly into the mounting points using the pre-installed fasteners in the feet. Lower the unit back into position



4. Carefully lift the rear end of the unit and attach the remaining anti-vibration mounts in the back corners in the same way. Ensure all feet are securely fastened before continuing



5. Position the AW unit on the installation surface, aligning the mounting holes in the base (or in the anti-vibration mounts, if installed) with the corresponding through-holes in the mounting surface

6. From beneath the installation surface, insert the M6 bolts upward into the threaded mounting points in the base of the unit (or into the bottom of the anti-vibration mounts, if installed). Tighten all bolts evenly to ensure the unit sits flush and stable

6. HMI



Important! The HMI is an optional extra and is provided by Filtermist's sister company, Absolent AB; the following information only applies if your unit is supplied with the HMI option fitted

The filter unit is electronically controlled and monitored. Visual status indicators on the filter unit are included as standard and a HMI unit is available as an optional accessory for monitoring and configuration.

6.1. HMI - LED indicators on filter unit

The LED status indicators have the following meanings:

Status	LED indication
Off	No light
Power on, fan off	Solid White
Power on, fan on, initialising	Blinking Green
Power on, fan on, system running ¹	Solid Green
Service Pressure drop threshold reached	Solid Yellow
Alarm Pressure drop threshold reached	Solid Red
Post running activated	Blinking Green (2x)

¹ The filter unit has a 60-second initialisation phase.



Important! When the service (yellow) or alarm (red) threshold is reached, the LED indicator briefly blinks one or two times to show which filter stage has triggered the warning. This blink pattern repeats only twice. To observe it, stop the fan, then restart the filter unit and watch the LED at start up until the threshold indication appears

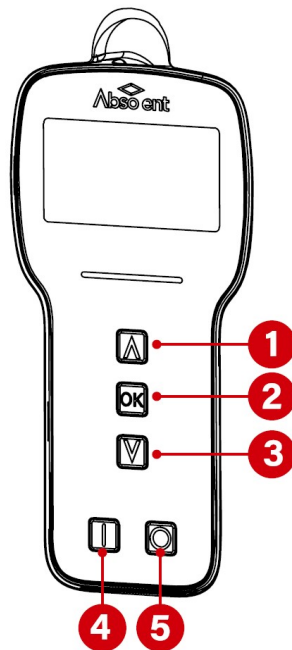
6.2. HMI unit

The HMI unit is an optional accessory used for local control and configuration of the AW unit. It allows the user to view operational status, adjust airflow levels, perform pressure calibration, and access service information.

The HMI kit includes:

- Handheld HMI unit
- 2.5m connection cable
- Self-adhesive magnet
- Metal mounting plate
- Cleaning cloth

Overview HMI unit



1. Navigation button  (Up)
2. Function button 
3. Navigation button  (Down)
4. Function button  (On)
5. Function button  (Off)

6.2.1. Mounting the HMI unit

Attach the self-adhesive magnet to the back of the HMI unit. Clean the surface before mounting, then press the magnet firmly into place. The included metal plate should be installed on the CNC machine or another suitable surface. Once both parts are in place, the HMI can be attached magnetically to the metal plate.



Warning! Do not mount the HMI unit in a location that interferes with the unit's function or obstructs visibility of status indicators or access to service areas



Warning! Make sure the filter unit is powered off before connecting the HMI cable

Connect the HMI cable to the D-sub port2 on the back of the unit. Ensure the cable is routed securely and does not interfere with moving parts or obstruct access to service points.

6.2.2. HMI unit function overview

Item / Function	Description	Navigation HMI unit
Main screen	• Fan speed: Displays current fan speed as % of max. • Filter 1: Displays pressure drop for filter 1 • Filter 2: Displays pressure drop for filter 2 (HEPA)	Start Screen 1
Service screen	• Total hours: Shows total running hours • Remote status: Local/Stop/Run. Shows Local when Start/Stop is set to local, Stop when in remote mode and not running, Run when in remote mode and running • No alarms active / Stopped: Shows current alarm or status	Start Screen 2
Password screen	• Enter password to access the settings menu • The default password is set to 4840	Start Screen 3
Settings screen	• If enabled, 4-digit password is required to enter settings screen • Displays the settings listed below	Password > Settings
Flow adjust	• Sets the air flow adjust from level 1 (lowest) to 5 (highest) • Default level is 4	Password > Settings > Flow adjust
Start/Stop	• Sets the control mode to either Local (controlled from HMI) or Remote (controlled by external signals) • Set to remote by default	Password > Settings > Start/stop
Start Calibration	• Re-calibrates the pressure sensors • LED lights blink blue until the process is completed	Password > Settings > Start calibration
Post fan	• Delays fan shutdown to continue extracting air after a stop signal has been received • The delay time can be set between 0 and 10 minutes, in whole-minute steps • Available only when the unit is set to remote start • Turned off by default	Password > Settings > Post fan
Language	• Sets the language of the HMI unit • By default the unit is set to English	Password > Settings > Language
Unit	• Toggles between metric and imperial units	Password > Settings > Unit
Disable password	• Disables the password from the settings screen	Password > Settings > Disable Password

6.3. AW boost function

The unit includes a Boost feature that temporarily increases airflow to quickly evacuate particles or fumes. It is typically activated by the door switch of the CNC machine when the door is opened.

Activation method is defined during installation and connected through the signal cable. When Boost is triggered, the fan speed increases by 20 percentage points relative to the current operating setting for 30 seconds, then automatically returns to its previous level.

7. Start-up

By default, the filter unit is started and stopped remotely via a potential-free signal connected to a digital input. Alternatively, it can be operated locally using the optional HMI unit.

7.1. Checklist before starting

Follow the checklist below when starting up the filter unit for the first time, after moving the filter unit or after making other major changes to the installation.

1. Make sure that the filter unit is fixed securely to the mounting surface
2. Check that the inlet connection is tight and properly fastened
3. Check that the drain connection is tight and properly fastened, and ensure that the hose is routed so the connection at the filter unit is the highest point of the drain system to prevent oil from pooling in the unit
4. Make sure that the liquid trap is filled or that the drain hose ends below the oil level
5. Make sure that the filter cassettes are in the right position and properly tensioned
6. Ensure that the seals on the service doors are intact and that the doors close tightly
7. Ensure that the electrical connection to the filter unit is safe and correctly installed

7.2. Fan start/stop – remote

By default, the fan is configured for remote start. This is controlled via a potential-free signal connected to pin 7 and pin 8 on the signal connector. As long as the contact is closed, the fan will run. When the contact is opened, the fan stops.

If no HMI unit is installed, the fan operates solely based on the remote start signal connected to pin 7 and pin 8 on the signal connector.



Caution! AW units have a 60-second initialisation time. During the initialisation phase the fan runs at 60% capacity. To achieve correct airflow, it is recommended to wait until the LED lights stop blinking and turn solid green before starting production



Warning! Ensure that the fan has come to a complete stop before disconnecting power to the filter unit

7.3. Fan start/stop - local

For local start/stop, it is required to use the optional HMI unit. Ensure that remote start is turned off in the settings to enable local start/stop. If remote start is not turned off, the On / Off buttons on the HMI unit will be disabled.

Starting the fan

1. Turn on the power to the filter unit by turning the main switch to position 1 (On)
2. Start the fan by pressing the I button on the HMI unit.
3. Ensure that the filter unit generates sufficient negative pressure (airflow) in the manufacturing process/machine to prevent any contaminated air from leaking out.
4. Increase or decrease the Flow Adjust setting if necessary.



Caution! AW units have a 60-second initialisation time. During the initialization phase the fan runs a 60% capacity. To achieve correct airflow, it is recommended to wait until the LED lights stop blinking and turn solid green before starting production.

Stopping the fan

1. Stop the fan by pressing the **○** button on the HMI unit.
2. Wait until the fan has stopped completely
3. Turn off the power to the filter unit by turning the main switch to position **0** (Off).



Warning! Ensure that the fan has come to a complete stop before disconnecting power to the filter unit.

8. Service & maintenance



Warning! Before carrying out any service or maintenance work, disconnect the filter unit from the power supply by unplugging the power connector

Regular servicing and preventive maintenance extend the life of the filter unit. It also ensures a consistently high level of purification.

8.1. General maintenance

Service point Interval	First start	500 hours 1 month	3000 hours 6 months	5000 hours 12 months	Pressure drop Level Yellow	Pressure drop Level Red
Filter cassettes	Check that all filter cassettes are correctly tensioned. Control the pressure drop.	Control the pressure drop			Order new filter cassettes for filter stages in alarm condition.	Replace filter cassettes that are in alarm condition.
Drainage	Check that the drainage is installed correctly.	Check function. Clean if necessary.			-	Check function. Clean if necessary.
HMI unit	Check the function.					
Fan	Check for any noise or vibrations.	-	Check for any noise or vibrations. Do a visual inspection of the fan if noise or vibrations are found ¹		-	-

¹ Check that the fan is undamaged, the fan wheel is clean, and the electrical cables are secure. If the fan or any electrical cables are damaged, they must be replaced. Contact Filtermist or your local Filtermist distributor.

8.2. Cleaning the filter unit

Regular cleaning helps maintain safe operation, prolong component life, and ensure efficient performance.

The area surrounding the machine should be kept clean at all times. We recommend performing cleaning in connection with filter replacement, as residual oil or other liquids may spill during the change process. Maintaining a clean environment reduces the risk of contamination and improves overall safety during maintenance work.



Caution! Do not spray water or cleaning fluid directly onto the unit, and do not use excessive amounts of liquid. Instead, apply cleaning agents sparingly with a soft cloth



Caution! Ensure that moisture does not enter cable connections or control housings



Caution! Avoid abrasive cleaning agents. These can damage the surface or allow moisture to enter electrical components

8.2.1. External cleaning

To keep labels, indicators, and surfaces visible and in good condition, clean the exterior of the unit regularly. Use a dry microfiber cloth or a damp, soft cloth with a mild, non-corrosive cleaning agent.

8.2.2. Internal cleaning

Interior cleaning is typically carried out in connection with filter replacement or routine maintenance. Consult the maintenance schedule for service points.



Warning! Always power off the unit before performing internal cleaning

8.3. Filter cassettes

To order replacement filters, scan the QR code to access the contact form. Please provide the machine's serial number, which is located on the machine identification plate.



Filter cassettes are heavy and should be handled with care, especially after a period of operation when they are filled with liquid. The table below shows the weight of the filter cassettes when empty and full. The type designation is found on a label on the front of the filter cassette.

Table 1. Filter cassettes AW2-09

Filter stage	Type of filter cassette	Item no.	Weight empty	Weight full	Quantity
2	HEPA H13	20-712-10-008	1.3 kg (2.9 lb)	1.6 kg (3.5 lb)	1
1	W4	20-712-10-004	6.3 kg (13.8 lb)	9.9 kg (21.8 lb)	1
1	W6	20-712-10-005	6.1 kg (13.3 lb)	11.5 kg (25.2 lb)	1

Table 2. Filter cassettes AW2-10

Filter stage	Type of filter cassette	Item no.	Weight empty	Weight full	Quantity
2	HEPA H13	20-712-10-009	2.8 kg (7.21 lb)	3.5 kg (7.7 lb)	1
1	W4	20-712-10-004	6.3 kg (13.8 lb)	9.9 kg (21.8 lb)	1
1	W6	20-712-10-005	6.1 kg (13.3 lb)	11.5 kg (25.2 lb)	1

Table 3. Filter cassettes AW5-12

Filter stage	Type of filter cassette	Item no.	Weight empty	Weight full	Quantity
2	HEPA H13	20-712-10-008	1.3 kg (2.9 lb)	1.6 kg (3.5 lb)	1
1	W8	20-712-10-006	11.8 kg (26 lb)	16.8 kg (36.9 lb)	1
1	W12	20-712-10-007	11 kg (24.3 lb)	17.9 kg (39.4 lb)	1

Table 4. Filter cassettes AW5-13

Filter stage	Type of filter cassette	Item no.	Weight empty	Weight full	Quantity
2	HEPA H13	20-712-10-009	2.8 kg (7.21 lb)	3.5 kg (7.7 lb)	1
1	W8	20-712-10-006	11.8 kg (26 lb)	16.8 kg (36.9 lb)	1
1	W12	20-712-10-007	11 kg (24.3 lb)	17.9 kg (39.4 lb)	1

Table 5. Filter cassettes AW8-13

Filter stage	Type of filter cassette	Item no.	Weight empty	Weight full	Quantity
2	HEPA H13	20-712-10-009	2.8 kg (7.21 lb)	3.5 kg (7.7 lb)	1
1	W12	20-712-10-007	11 kg (24.3 lb)	17.9 kg (39.4 lb)	1



Warning! The filter cassettes may contain liquids that are hazardous to health and equipment, both during and after use. See product sheet for the liquid in question and contact its manufacturer for a declaration of ingredients and full risk assessment. The use of protective goggles and gloves when replacing filter cassettes is recommended



Warning! There may be sharp edges inside the filter unit. The use of gloves when replacing filter cassettes is recommended



Caution! The filter cassettes are heavy and should not be carried by hand over long distances. Use proper lifting techniques to avoid strain or injury



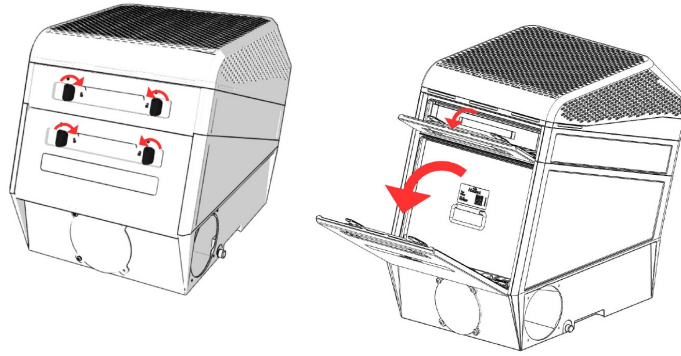
Caution! The filter cassettes are not washable

8.4. Filter cassette replacement

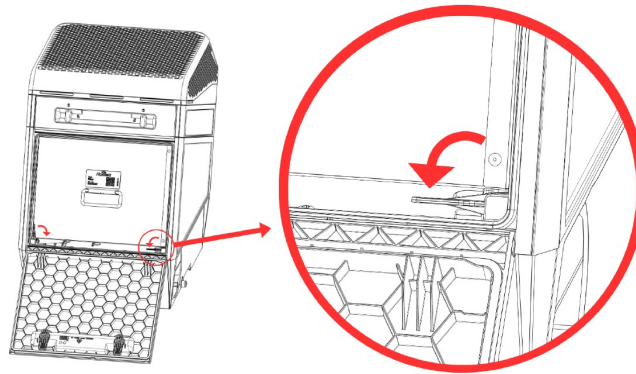


Caution! When replacing one or more filter cassettes, it is important to ensure that each cassette is installed in the correct orientation and position. Follow the airflow direction indicated by the arrow on the cassette, and always place each filter cassette in its designated filter stage. Correct installation is essential for maintaining proper function and preventing operational issues

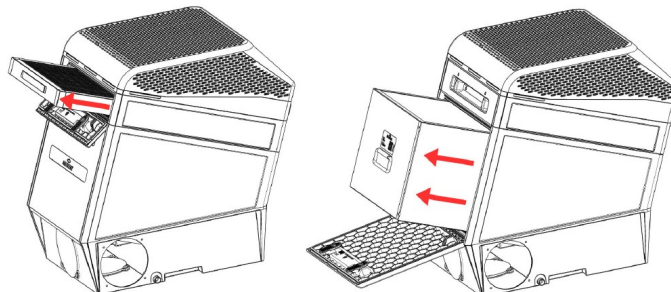
1. Turn the latches to a horizontal position to unlock the filter hatch. Open the filter hatch



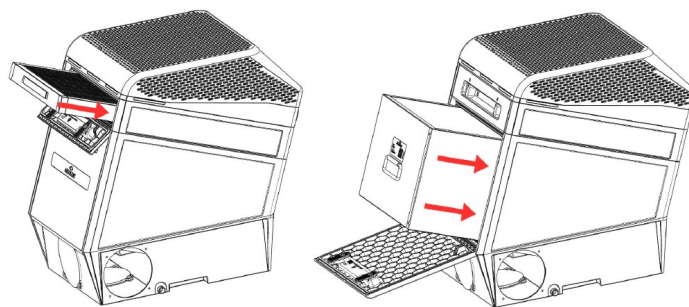
2. Rotate both of the two L-shaped filter arms at the same time to a horizontal position so that the short, bent section points inwards. This releases the filter cassette



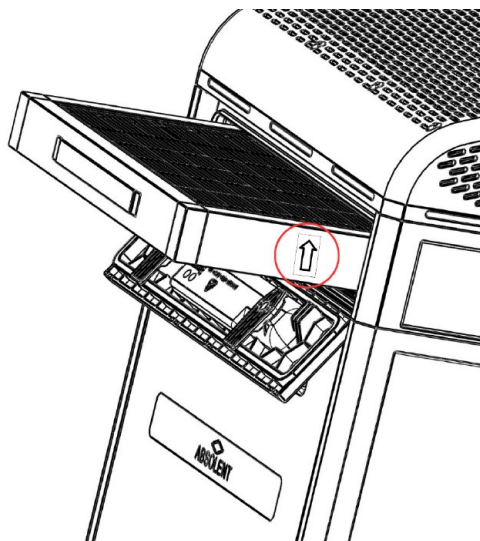
3. Remove the old filter cassette. Left figure shows removal of HEPA filter, right removal of base filter



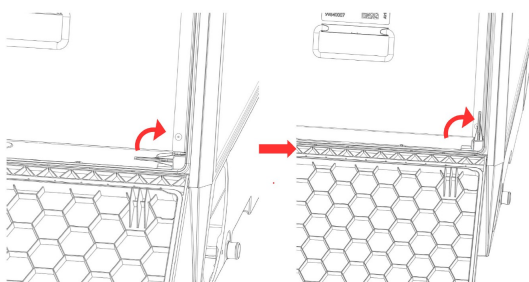
4. Insert the new filter cassette. Left figure shows insertion of HEPA filter, right insertion of base filter



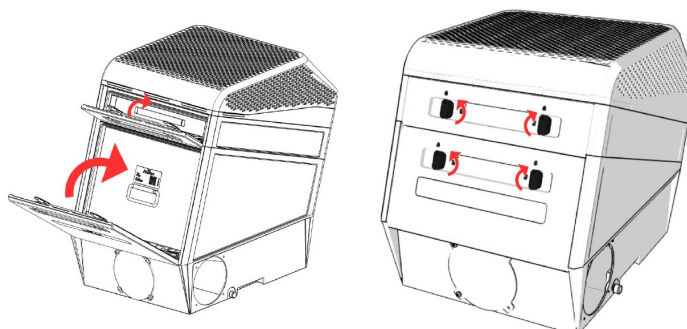
5. Make sure the arrow indicating airflow direction points upwards



6. Rotate both of the filter arms so that the bent section is in a vertical position, pointing upwards. This pushes the filter cassette up and seals it against the top of the housing. Ensure that you rotate both the left and right L-shaped filter arm at the same time to properly seal the filter against the top



7. Close the filter hatch. If it cannot be closed, check that the L-shaped filter arms are correctly positioned in the vertical (locked) position. Turn the latches to a vertical position to lock the filter hatch



8.5. Spare parts and accessories

Filtermist provides a complete range of spare parts and accessories for all filter units. When ordering, state the filter unit's serial number, this information is found on the machine plate. On each filter cartridge, there is a label with information useful for ordering. Spare parts and accessories must be installed according to Filtermist's instructions. The warranty is valid only when original Filtermist parts and accessories are used.

8.6. Handling of used products

WEEE directive



This product is subject to the Waste Electrical and Electronic Equipment Directive (2012/19/EU) and is labelled as such, with the "crossed-out wheeled bin" symbol above. The product must be handled and disposed of in accordance with applicable regulations for separate collection and environmentally sound treatment of electrical and electronic equipment. Local disposal regulations must be followed.

Handling of used filter units

Make sure that local safety regulations are being followed when disposing of a Filtermist filter unit. Contact Filtermist for further information.

Handling of used filter cassettes

Once the filter cassette is spent, it must be washed clean of cutting fluid before destruction or recycling or disposal. The "washing water" from washing must be treated as environmentally hazardous waste or according to local regulations.

After washing, the cassettes can be pressed together and sent for disposal or the cassette can be disassembled. The sheet metal casing and aluminium separators can be recycled and the filter material sent for incineration or disposal depending on local regulations.



Warning! The filter cassettes may contain liquids that pose a risk to health and equipment, both during operation and after use. Refer to the product sheet of the specific liquid and contact its manufacturer for a declaration of contents and a complete risk assessment. The use of protective goggles and gloves is recommended when replacing filter cassettes.

EWC Codes

Component	EWC Code	EWC Definition
AW Series Unit	16 02 14	Discarded equipment (non-hazardous) other than those mentioned in 16 02 09 to 16 02 13
AW Series Filter Cassette (Unwashed)	15 02 02	Absorbents, filter materials, wiping cloths and protective clothing contaminated by hazardous substances
AW Series Filter Cassette (Washed)	15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02

Filtermist Limited is registered under the WEE system in the relevant EU member states. For further information contact your Filtermist distributor or Filtermist Limited for end-of-life information.

9. Troubleshooting

Fault description	Possible cause	Possible solution
The filter unit does not start or stops unexpectedly.	No or interrupted power supply.	Check the connection between terminals and the power source. Check external power supply.
	The circuit breaker has tripped.	Check that the circuit breaker is switched on
	The main switch is switched off.	Check that the main switch is on
Oil mist is leaking from the machine or the fan capacity is insufficient to reach the setpoint.	Incorrect adjustment or configuration of the EcoDrive.	Check if the actual pressure reaches the setpoint. If the fan speed is below 100%, the setpoint can be increased.
		The pressure drop across the filter cassettes is high. EcoDrive needs balancing.
	High pressure drop across the filter cassettes.	One or more filter cassettes may need replacing.
	An excessively long or improperly designed ducting system causing a high pressure drop.	Reduce the length and number of bends in the duct system, or increase the diameter of the ductwork.
		Clean the duct system.
		Check any installed dampers.
	The machine is too large for the filter unit.	The filter unit is designed for a specific maximum air flow. Contact Filtermist or your local distributor.
	Air leakage.	Inspect the duct system and the machine for leaks or unintended openings.
Short service intervals or high pressure drop across filters cassettes.	Filter cassettes have been installed upside down or misplaced.	Open the service door and check that the cassettes are correctly positioned.
	The filter cassettes are not properly tensioned.	Open the service door and check that the filter tensioners are properly securing the cassettes.
	The sealing strips on the filter cassettes may be worn or damaged.	Replace damaged sealing strips.
	Overload.	Incorrect use of the product. Contact Filtermist or local distributor.
	Clogging caused by sticky or solid particles.	Contact Filtermist or local distributor.
	Clogged filters due to high oil level.	Ensure that the hose inlet is positioned at the highest point and the hose outlet at the lowest point.

Fault description	Possible cause	Possible solution
		Check if the drain hose is blocked.
Incorrect pressure value is displayed.	Oil has collected in the hoses connected to the measurement board.	Contact Filtermist or local distributor.

10. EU declaration of conformity

EC DECLARATION OF CONFORMITY



Manufacturer's name:	Filtermist Limited		Machinery covered by this declaration:	
Full address:	Telford 54 Business Park, Nedge Hill, Telford Shropshire TF3 3AL	Description:	Oil Mist Collector Filter Unit	
		Function:	To fit to machinery to extract oil mist & coolant mist & filter to air	
		Type:	AW Series	
		Model:	AW2, AW5 & AW8	
		Serial No.:	See unit	
The machinery conforms to all the requirements of the Machinery Directive 2006/42/EC.				
The following standards have been used:		EN12100:2010, EN 60204-1:2018, EN ISO 14120:2015, EN ISO 13857:2019		
The technical file is compiled in accordance with part A of Annex VII of the Machinery Directive 2006/42/EC.				
Person authorised to compile the technical file (based in the European Community):	Name:	Absolent AB		
	Address:	Staplaregatan 1SE-531 40 LidköpingSweden		
The relevant authorised person undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the machinery. This information will be transmitted by: (email, post)				
Person authorised to make this declaration:	Name:	Mark Newman		
	Position in company:	Operations Director		
	Signature:			
	Place of Declaration:	Filtermist Limited, Telford 54 Business Park, Nedge Hill, Telford, Shropshire, TF3 3AL		
	Date of Declaration:	1 st June 2026		

EU Declaration of Conformity (DOC)

We

Company name: Filtermist Limited
Postal address: Telford 54 Business Park, Nedge Hill
City: Telford
Postcode: TF3 3AL
Telephone number: 01952 290500
E-Mail address: sales@filtermist.com

Declare that this DOC is issued under the sole responsibility of the manufacturer.

Product: Oil Mist Collector Filter Unit
Type: AW2, AW5 & AW8
Batch: N/A
Serial number: See Unit
Brand Name: Filtermist

Object of the declaration

To fit to machinery to extract oil mist & coolant
mist & filter to air

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

EMC Directive 2014/30/EC

RoHS Directive 2015/863/EU

The following harmonised standards and technical specifications have been applied:

Title, Date of standard/specification:

EN 61000-6-2:2019, EN 61000-6-4:2019, EN IEC 63000:2018

Additional information:

The relevant authorised person undertakes to transmit, in response to a reasoned request by the national authorities, relevant information on the machinery. This information will be transmitted by: (email, post).

Person authorised to compile the technical file, based in the European Community is: Absolent AB

Address: Staplaregatan 1, SE-531 40 Lidköping, Sweden

Signed for and on behalf of:

Place of issue

Filtermist Limited,
Telford 54 Business Park,
Nedge Hill, Telford, Shropshire,
TF3 3AL, England

yyyy-mm-dd

2026-06-01

Name, function, signature

Mark Newman
Operations Director



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www.filtermist.com

Supplied by:



Certificate Number 1122
ISO 9001
ISO 14001