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WARNING:
Process owners/operators must determine if their process creates a combustible dust, fume, or mist before installing or operating a dust or mist collection product. Process owners/operators are solely responsible for ensuring proper precautions have been taken to prevent and avoid catastrophic damages, injuries and/or deaths related to the operation of this dust collector in a combustible dust, fume, or mist application. At a minimum, process owners/operators should:

- Comply with all applicable local, state, and federal codes and standards.
- Ensure all NFPA standards have been met.
  - Note that current NFPA standards require owners/operators of processes that involve potentially combustible materials to have a current Hazard Analysis.
- Prevent all ignition sources from entering into any dust or mist collection equipment
- Design, select, and implement fire and explosion mitigation, suppression, and isolation strategies that are appropriate for the risks associated with their processes
- Develop, implement, and maintain proper work place maintenance procedures to maintain a safe operating environment that ensures combustible dust, fume, or mist does not accumulate within the work environment

When combustible materials are present, AAF International recommends that all process owners/operators consult with experts to make certain all responsibilities are met.

AAF International can provide assistance in the selection of the filtration technology however, process owners/operators retain all responsibility for the suitability of fire and explosion hazard mitigation, suppression, and isolation strategies. AAF International assumes no responsibility or liability for the suitability of any fire and/or explosion mitigation strategy, or any items incorporated into a collector as part of an owner/operators hazard mitigation strategy.

Improper operation of a dust control system may contribute to conditions in the work area or facility that could result in severe personal injury and product or property damage. Check that all dust and mist collection equipment is properly selected and sized for the intended use.

**DO NOT** operate this equipment until you have read and understand the instruction warnings in the Installation, Operation, and Maintenance Manual.

CAUTION:
This document contains information necessary to receive, install, operate, and maintain the AAF® Weld Fume extractor. Read thoroughly and comply as directed. Failure to do so will void the product warranty. Instruct all personnel on safe use and maintenance procedures and ensure all applicable health, safety, and environmental rules, regulations, and legislation are fully complied with at all times.

For best results, discuss the use and application of this equipment with an AAF International representative.

**For optimal product performance, use only AAF International replacement parts.**

Product Information:

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Number</th>
<th>Installation Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
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1 INTRODUCTION
1.1 General information

This instruction manual is a necessary and important aid for a proper and safe operation of the filtration device for welders, AAF Weld Fume Extractor, hereinafter referred to only as Weld Fume Extractor.

The instruction manual contains important warnings regarding the safe, professional and economical operation of the Weld Fume Extractor device. Their application will help to avoid the risks, costs of repairs and downtimes and increase reliability and service life of the Weld Fume Extractor device. The manual must always be available, each person working on the machine or with the Weld Fume Extractor device must read this manual carefully before performing activities, and must take into account, or respectively apply the data and instructions contained herein.

The works on the Weld Fume Extractor device and with it include especially the following:
- transportation and installation,
- normal use and control of the device in operation,
- maintenance (care, servicing, filter replacement, troubleshooting),
- disposal

1.2 Advice Regarding Copyrights and Protection Rights

This manual shall be kept confidential. It may only be made available to authorized persons. Third parties may only be allowed to use it with the written consent of AAF.

All documents are protected in accordance with the Copyright Act. The distribution and reproduction of documents or parts thereof, as well as the use and disclosure of their contents without express written permission, is prohibited.

Failure to comply with this prohibition is a criminal act and commits to compensation of damages. All rights to the exercise of industrial property rights are reserved for AAF.

1.3 Information for the Operators

This manual is an essential part of the Weld Fume Extractor device. The operator shall ensure that the operating staff have become familiar with the manual.

The operator is obliged to complement the Instruction Manual with operating instructions arising from the national accident prevention and environmental protection regulations, including the information about supervisory and reporting obligations to take account of operational features, e.g. regarding the organization of work, work processes and deployed personnel. In addition to the Instruction Manual and the binding accident prevention regulations applicable in your country and in the place where the device is used it is necessary to take account of the recognized technical rules for safe and proper handling the device.

The operator shall not, without the consent of AAF carry out any changes, additions and alterations on the Weld Fume Extractor device that could affect its safety! The spare parts used shall comply with the technical requirements specified by AAF. This is always ensured when genuine spare parts are used!

Operation, maintenance, repairs and transport of the Weld Fume Extractor device may only be performed by trained and knowledgeable staff. Competence of personnel regarding operation, maintenance and repairs must be clearly defined.
2 SAFETY

2.1 General information

The Weld Fume Extractor device was developed and designed in accordance with the current state of the art and established technical safety guidelines. Operating the Weld Fume Extractor device may be associated with risks to the operator, resp. the risk of damage to the instrument or other property damage if it is:

- operated by untrained or uninformed staff,
- used contrary to its purpose and/or
- Improperly maintained.

2.2 Information about signs and symbols

DANGER

This is a warning of an imminent hazardous situation with an inevitable result of a very severe injury or death if the identified instruction is not strictly adhered to.

CAUTION

Indicates a possible hazard that can lead to a very severe personal injury or death if the identified instruction is not strictly adhered to.

WARNING

This is a warning of a potentially dangerous situation with an inevitable result of moderate or minor injuries and property damage if the indicated instruction is not strictly adhered to.

NOTE

This is a note to provide useful information for safe and proper handling.

- Bullet points in bold indicate working steps and/or actions of the operator. These steps must be performed in the order from top to bottom.
- Lists are indicated by horizontal bullets.

2.3 Signs and labels required to be installed by the operator

The operator is required to attach other potential signs and labels to the Weld Fume Extractor device or in its proximity.

These signs and labels, may - for example - be related to regulations on the use of personal protective equipment.

2.4 Safety instructions for the operating personnel

Before using the Weld Fume Extractor device the user must be informed about handling the device and materials and tools via information, instruction and training.

The Weld Fume Extractor device may only be used in perfect condition, in accordance with its purpose of use, subject to the safety requirements and taking account of all hazards and this manual! Any malfunctions, especially those that may jeopardize safety, must be rectified immediately!

Any person responsible for commissioning, operation or maintenance of the device must be made thoroughly familiar with this instruction manual and must understand its contents - in particular the paragraph 2 Safety. During the operation it is too late. It applies especially to personnel who work with the Weld Fume Extractor device only occasionally.

The Instruction manual must always be at hand near to the Weld Fume Extractor device.

We are not liable for any damages and accidents caused by the failure to comply with this manual.

Observe the accident prevention regulations, as well as other standard occupational and health safety rules.

Competences regarding various aspects of maintenance and repairs must be clearly defined and adhered to. This is the only way to avoid failures – especially in dangerous situations.
The operator shall ensure that the service and maintenance personnel use personal protective equipment. This includes safety footwear, protective glasses and gloves.

The personnel must not have long loose hair, loose clothing or wear jewelry! In principle, your hair may get caught by the device or hit and pulled in by moving parts of the instrument!

In the case of safety-related changes to the Weld Fume Extractor device stop immediately and secure the exhaustion and report the event to the appropriate working place/person!

Work on the Weld Fume Extractor device may only be carried out by reliable and trained staff. Observe the legally permitted minimum age limit!

Trainees, apprentices or other staff being trained or instructed may handle the Weld Fume Extractor device only under constant supervision of an experienced person!

Connection of the welding power supply must be made so that the protective conductor of the Weld Fume Extractor device is not energized by a faulty welding current. It is necessary that the welding current return line between the workpiece and the welding device shows a low resistance and the interconnection of the workpiece and the Weld Fume Extractor device is avoided.

2.5 Safety instructions for maintenance and troubleshooting on the Weld Fume Extractor device

All the activities within the maintenance and troubleshooting must be performed using the appropriate personal protective equipment. Before starting the maintenance works, the unit must be cleaned. This can be achieved using an industrial vacuum cleaner of dust.

Preparation, maintenance and repair works as well as error detection may be performed only in the de-energized state of the Weld Fume Extractor device.

Bolted joints, loosened during the maintenance and repair works, shall always be tightened! If specified, the relevant bolts must be tightened with a torque wrench.

At the beginning of maintenance/repair/care it is particularly necessary to remove the impurities from connections and bolted joints.

**CAUTION**

Skin contact with the smoke originating from cutting, etc. may result in irritation in sensitive individuals!

Repairs and maintenance on the Weld Fume Extractor device may only be performed by trained and authorized professional personnel in compliance with applicable safety instructions and accident prevention regulations!

Risk of severe damage to the respiratory organs and respiratory system!

Use protective clothing, gloves and a breathing apparatus with a fan to prevent contact with dust and its inhalation!

Prevent the release of hazardous dusts during repairs and maintenance to avoid injury to persons not involved in the process.
### 3 GENERAL PRODUCT INFORMATION

The Weld Fume Extractor is a compact filtration device for the welders, used where the welding fumes are generated during welding, close to the place or their origination, are extracted and separated with an efficiency of more than 99%. For this purpose the device is equipped with a flexible extraction arm, the extraction nozzle is flexible and stay in each position in a suspended state. The extracted air is cleaned in a two-stage air filtration and brought back into the workspace.

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exhaust nozzle</td>
</tr>
<tr>
<td>2</td>
<td>Extraction arm</td>
</tr>
<tr>
<td>3</td>
<td>Main Filter</td>
</tr>
<tr>
<td>4</td>
<td>Pre Filter</td>
</tr>
<tr>
<td>5</td>
<td>Swivel Joint</td>
</tr>
<tr>
<td>6</td>
<td>Handle bar</td>
</tr>
<tr>
<td>7</td>
<td>Cable holder</td>
</tr>
<tr>
<td>8.1</td>
<td>Control wheel with brake</td>
</tr>
<tr>
<td>8.2</td>
<td>Rear wheel</td>
</tr>
<tr>
<td>9</td>
<td>Cubicle switchboard with controls</td>
</tr>
</tbody>
</table>

Figure 1, Product description
3.1 Distinguishing features of the device variants

Weld Fume Extractor is produced in one version.

3.2 Use in accordance with the intended purpose

The Weld Fume Extractor device is designed for the extraction of welding fumes generated during welding by electric arc in the place of their origination and their filtering. Hazardous substances released during the work process are captured by the exhaust nozzle. They are then brought into the filtration device together with the exhausted air. Here they are routed through a primary filtration mat for coarse particles, and the main filter, which, with a 99% efficiency, separates also the fine particles of smoke that could get into lungs. The cleaned air is sucked in by the fan and conveyed back into the workspace.

During the process of exhausting the welding fumes containing carcinogenic substances, generated from alloyed steel welding (e.g. stainless steel), in accordance with official regulations, only certified and properly approved devices with "internal air circulation" are permitted for use.

Technical specifications also include dimensions and other data regarding the Weld Fume Extractor device to be taken into account.

NOTE

Observe the data in paragraph 9.1 Technical data. These data must be strictly adhered to. The use in accordance with the intended purpose includes the compliance with instructions regarding
- safety,
- operation and control,
- maintenance and repairs described in this instruction manual.

Other or broader use is deemed contrary to the intended purpose. Such damages fall within the exclusive liability of the Weld Fume Extractor device operator. The same is true for arbitrary changes to the Weld Fume Extractor device.

3.3 Reasonably foreseeable misuse

The Weld Fume Extractor device may not be operated in industries that require compliance with the requirements for explosion protection. The device shall not be used any further for processes that do not comply with its intended purpose according on the above mentioned data and where the intake air:

- contains sparks, e.g. from grinding, which may, depending on size and quantity, damage the suction hose and result in fire of the filter media;
- contains liquid, which lead to the pollution of air stream with vapour containing aerosols and oils;
- contains easily flammable, combustible dust and/or substances which may form explosive mixtures or atmosphere;
- contains other aggressive or abrasive dust that damages the Weld Fume Extractor device and embedded filter elements;
- contains organic, toxic substances/ingredients that are released during material parting.

Waste products, such as separated particles, may contain harmful substances. They must therefore not be disposed of with household waste landfills it is necessary to provide for their environmentally friendly disposal.

The Weld Fume Extractor device is not associated, when used in compliance with its intended purpose, with reasonably foreseeable misuse which could lead to dangerous situations, resulting in damage to health.
3.4 Markings and labels on the Weld Fume Extractor device

Figure 2, Marking and labels
### 3.5 Residual risk

Even in compliance with all safety provisions the operation of the Weld Fume Extractor device is associated with the below-described residual risk.

All persons handling with the Weld Fume Extractor device must be aware of residual risk and follow the instructions to prevent accidents or damage as a result of residual risk.

**CAUTION**

There is a risk of severe damage to the respiratory organs and respiratory system - use the protection of respiratory system, such as a respiratory mask with FFP2 class filter according to EN 149 standard.

Skin contact with welding smoke, etc. can result in irritation in sensitive individuals – wear protective clothing.

Before you proceed with welding ensure proper extraction arm and extraction nozzle setting, make sure all filter elements are complete and undamaged and the unit is in operation! Only if the green ring on the device button is lit, the device guarantees suction of sufficient volume flow to capture welding fumes.

Replacing the filter elements may result in skin contact with the separated dust and the work may be associated with dust swirling. Therefore, it is necessary to use respiratory protection and protective clothing.

Nests of glowing particles in filter elements can result in a luminous fire – turn off the filtration device, close the control valve in the extraction nozzle and let the unit cool under control.

---

<table>
<thead>
<tr>
<th>Label / Sticker</th>
<th>Meaning</th>
<th>Location</th>
</tr>
</thead>
</table>
| Nameplate (1) *1 | - AAF International  
 9920 Corporate Drive,  
Suite 2200  
Louisville, KY 40223  
- Weld Fume Extractor  
- Supply voltage  
- Year of manufacture: 07/2015  
- Unit number: 2600197  
- Weight: 95 kg | 1 |
| Label (2) | N/A | 2 |
| Label (3) | - Specification of the date of the next inspection | 3 |
| Label (4) | - Warning: Before cover opening, pull the plug out | 4 |
| Label (5) | N/A | 5 |
| Label (6) | - Warning: Do not clean the filter cartridge | 6 |
| Label (7) | - Caution: Filter replacement | 7 |

*1 Example of nameplate data.*
4 PRODUCT SHIPMENT

4.1 Transport

DANGER
When loading and transporting the Weld Fume Extractor device there is a risk of life-threatening contusion! Improper lifting and transportation may result in the filtration device tipping over and falling! Do not stand under suspended loads!

The transport of pallet with the filtration device requires suitable hoist or forklift truck.

4.2 Storage
The Weld Fume Extractor device should be stored in the original container at an ambient temperature from - 4 °F to +130 °F in a dry and clean place. Packaging must not be loaded.

5 ASSEMBLY AND INSTALLATION

CAUTION
Severe injury when mounting the exhaust arm due to the pretension of coil springs. Improper handling may result in unexpected movement of the support structure and severe facial injuries or contusions of fingers!

NOTE
The operator may charge with assembly of the Weld Fume Extractor device only the persons who are well familiarized with this activity. The device assembly requires two operators.

5.1 Unpacking and installing wheels
- Take the set of wheels out from packing (of putting on type)
- Now lift the large packaging.
- The Weld Fume Extractor device stands on the cardboard box bottom and is bolted to the pallet by means of two metal brackets. Cut the corners of the cardboard box bottom with a knife to be able to fold the sides. To ensure complete removal of the transport fixtures, loosen the bolts of the metal brackets and remove the two bigger screws.
  - The set of wheels contains all wheels, including all minor components required for installation and a separate pictorial manual for installation of the wheels.
  - Follow this manual when performing the installation.
  - Open the service door and check the status and proper placement of the filter elements. See also the instructions in Section 7.3 Filter replacement.
### Weld Fume Extractor, AAF®

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Designation</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Main Filter</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Plug-in prefilter module</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Exhaust arm</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Grip handle</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Cable holder</td>
<td>1</td>
</tr>
<tr>
<td>8.1</td>
<td>Castor wheel with brake (front wheel)</td>
<td>2</td>
</tr>
<tr>
<td>8.2</td>
<td>Rear wheel</td>
<td>2</td>
</tr>
</tbody>
</table>

**Figure 3, Unpacking and Installing wheels**
5.2 Exhaust arm installation

The exhaust arm consists of three main parts - the swivel ring, supporting structure and exhaust nozzle. These parts are individually packaged in cardboard boxes.

![Diagram of Slewing Ring Assembly](image)

**Figure 3.1, Slewing ring assembly**

- Place the rubber seal (2) onto the flange of the suction opening in the cover plate of the filter unit (4).
- Place the slewing ring (1) onto the rubber seal (2). Make sure that the holes in the cover plate of the filter unit (4), the rubber seal (2) and the slewing ring (1) match.
- Screw the slewing ring (1) with:
  - the round rubber seal (2) and,
  - the eight screws M6 x25 (3),
onto the suction opening in the cover plate of the filter unit (4).
Mount the support frame (5) in folded position onto the round steel bar (6) on the slewing ring.
Position the round steel bar (6) between the joint plates (8)
Insert two screws – M10 x 50 – 8.8 into the bore holes (7)
Fix the mounting screws with nuts M10

Pull the tube over the arm and the slewing ring and tighten the tube clamp.
Cover the tube clamp, tube end and the gap between the socket and the slewing ring with the wide rubber ring.

Figure 3.2, Arm frame assembly
• Install the exhaust hood (9) onto the free end of the extraction arm (10). Position the plate springs (11) x4 and brake disc (12) x4 as shown.
• Tighten the screws only so much that the exhaust hood remains self-supporting in any position.
• Pull the tube end (13) over the sockets and tighten the tube clamp (14).
• Cover the tube clamp, tube end and the gap between the socket and rotary exhaust hood with the wide rubber ring (15).

NOTE
The ease of the joint is preset at the factory. If a readjustment should be required, use the screws in the hinge points with plate rings. When properly adjusted, the position of the extraction arm is held almost exclusively by the force of the spiral springs.
6 STAR-UP & OPERATION

Any person who uses the Weld Fume Extractor device, repairs it or performs its maintenance must be made familiar with this instruction manual in detail and understand its contents.

6.1 Qualification of operating personnel

The operator of the Weld Fume Extractor device may only appoint individuals properly familiarized with using this device to use the unit independently.

Becoming familiar with this device also includes training the relevant individuals concerned by the operations, and the knowledge of this Instruction Manual or other relevant operating instructions.

The Weld Fume Extractor device may only be used by trained and knowledgeable staff. This is the only way to achieve safe operation of the unit with regard to the impending dangers.

6.2 Control elements

On the front side of the Weld Fume Extractor device there are controls and connections:

- **Switch I / O (pos. 1)**
  Press this switch to turn the device on and off. A green signal light in the switch control panel indicates the trouble-free operation of the unit, i.e. its operability when using the optional Start/Stop sensor.

- **LED indicator lamp (pos. 2)**
  If the yellow signal light is on, it may indicate the following failures:
  - Motor protection relay has responded
  - Error of the sequence of phases / missing phase
  - Filter replacement is necessary
  - Recessed hole for the Start/Stop terminal (pos. 3)
  Recessed hole for automatic Start/Stop optional unit
  - Pressure measurement opening (pos. 4)
  Connection for AAF service. Through this connection the AAF service department can perform pressure measurements.
  - N/A (pos. 5)
  - Pressure switch (pos. 6)
  Intended only for AAF service.


21 Weld Fume Extractor GDED-IOM-221
6.3 Adjusting the position of the extraction nozzle

The exhaust arm, or exhaust nozzle respectively, are designed to ensure easy manual adjustment and a closer approach. At the same time, the exhaust nozzle is automatically kept in the set position. Furthermore, both the exhaust nozzle and the exhaust arm rotate by 360 degrees so they can be adjusted to almost any position. To ensure the sufficient suction of welding fumes, it is important for the exhaust nozzle to be in the correct position all the time. The correct position is shown in the following picture.

- Adjust the position of the exhaust arm so that the exhaust nozzle is located at an angle and about 10 in. above the point of welding.
- The exhaust nozzle must be set so that, with regard to the thermally conditioned movement of welding fumes and suction reach, it safely collects all welding fumes.
- Always place the exhaust nozzle close enough to the relevant welding point.

**CAUTION**
The incorrect placement of exhaust nozzle or insufficient suction power do not guarantee the sufficient suction of the air containing hazardous substances via the exhaust nozzle. Hazardous substances can thus reach the user's respiratory system and lead to health injury!

6.4 Putting into operation

- Switch the device using the button identified with "0" and "I" symbols.
- The fan will start-up and the green indicator light on the instrument switch signals trouble-free operation.
- The exhaust nozzle must additionally be adjusted, depending on the stage of the procedure.
7 MAINTENANCE

The guidelines described in this chapter comply with the minimum requirements. Depending on the operating conditions, the Weld Fume Extractor device may be subject to further instructions to keep the instrument in optimal condition.

Maintenance and repair works described in this chapter may only be carried out by the operator's specially trained service personnel.

The spare parts used shall comply with the technical requirements specified by AAF. This is always assured with the original spare parts.

Ensure the safe and environmentally-friendly disposal of operating substances and replacement parts.

During the service and maintenance works observe:

- Chapter 2.4 Safety instructions for the operating personnel
- Chapter 2.5 Safety instructions for maintenance and troubleshooting
- Special safety instructions indicated for individual activities in this chapter.

7.1 Care

Caring for the Weld Fume Extractor device is essentially limited to cleaning of all surfaces from dust and deposits and checking of the filter elements.

Pay attention to warning notices specified in Section 2.5 “Safety Instructions for Maintenance and Troubleshooting.”

NOTE

Do not clean the Weld Fume Extractor device with compressed air! Dust and dirt could get into the ambient air.

Reasonable care will facilitate maintaining the Weld Fume Extractor device in working order.

- Clean the Weld Fume Extractor device thoroughly once a month.
- The Weld Fume Extractor device external surface can be cleaned using a suitable vacuum cleaner of dust class H or alternatively wiped with a damp cloth.
- When cleaning the exhaust arm, also remove the accumulated dust or other deposits on the protective grid (optional accessory), or inside the exhaust nozzle respectively.
- Check the hose of the exhaust arm for damage such as spark holes or worn spots. Note Extensive damage and leaks lead to poor exhaust performance through the extraction nozzle. Replace the damaged hose with a new one in time.

NOTE

Extensive damage and leaks lead to poor exhaust performance through the extraction nozzle. Replace the damaged hose with a new one in time.

7.2 Maintenance

The safe operation of the Weld Fume Extractor device is positively influenced by regular inspections and maintenance that should be performed at least once a year.

Except for occasional additional setting of the extraction arm joints and possibly necessary replacement of the filter, the unit is maintenance-free. Additional joint setting should be performed taking into account the instructions for installation and maintenance attached to the extraction arm.

Pay attention to warning notices specified in Section 2.5 “Safety instructions for maintenance and troubleshooting.”

7.3 Filter replacement

The service life of the filter elements depends on the type and quantity of the separated particles. To optimize the useful life of the main filter and its protection against coarse particles, it is preceded by a pre-filter mat.
We recommend changing the pre-filter mat regularly according to the volume of work, e.g. daily or weekly and not waiting until it is completely covered with dust.

Increasing filter clogging with dust makes the flow resistance grow and hence the unit performance is reduced. In most cases it is sufficient to replace the pre-filter mat. The Main filter should be replaced only after replacing the pre-filter mat several times.

**CAUTION**

Cleaning of filter elements is not allowed. This would inevitably damage the filter medium, hence the filter would lose its function and hazardous substances would pollute the inhaled air. During the below-described activities be particularly careful about the main filter seal. Only undamaged seal allows high separation efficiency level of the unit. Main filter with a damaged seal must therefore be in any case replaced.

- Use only genuine AAF replacement filters in order to maintain suitable performance. Switch off the Weld Fume Extractor device with the switch (Fig. 4, item 1).
- Avoid unintentional reactivation of the unit by unplugging the unit from the socket.
- Open the service door.

a) Pre-filter mat replacement
- Remove the plug-in pre-filter module (Fig. 6, item 3) out of the filter so as to avoid dust whirling and put it on a working bench.
- Now you can easily remove the bracket clamp fixing the pre-filter mat in place.
- Carefully, without stirring up the dust, remove the dirty pre-filter mat from the pre-filter frame and fold it so that the side with the dust particles is located inside.
- Insert the changed filter in a plastic bag and seal it with cable ties.
- Insert a new pre-filter mat into the pre-filter frame and attach it again with the bracket clamp.
- Insert the plug-in module of the pre-filter back into the device.

b) Main filter replacement
- Lift the main filter (Fig. 6, pos. 4) at the front slightly using the lugs to release the seal from the mating surface and remove it from about two-thirds from the filter housing so that the filter pins remain lying on the side guide rails.
- In the rear part the main filter slides with side pins on guide rails and thus it lifts. This will thus prevent damage to the seals in the rear part (Fig. 7).
- Now insert one hand from the side underneath the filter. Then insert your other hand as well. Remove the filter from the device with both hands and place it on a clean, flat workbench.
- Insert the changed filter in a plastic bag and seal it with cable ties.
- From each side from the bottom, use once again one and then the other hand, to lift the new main filter and attach it with the side pins to the guide rails of the filtration device. Then use one and then the other hand to grip the lugs on the front side.
- While lifting the front side, insert the filter back into the device until it clicks audibly at the end.
• Now slide the frame of the pre-filter over the embedded new main filter. After replacing the appropriate filter media perform the following steps:
  • Close the door of the casing until it clicks in place.
  • Slide the mains plug in the socket again and switch on the device. The green operating light on the switch (Fig. 4, item 1) should be lit to indicate a trouble-free operation.
• Dispose of the used filter in accordance with the official regulations. Request the relevant waste codes for these purpose from your local waste processor.
• Finally clean the maintenance premises, for example by industrial vacuum cleaner.

Figure 6, Filter structure
Figure 7, Filter replacement

Follow the instructions for filter replacement mentioned on the filter.
7.4 Troubleshooting

<table>
<thead>
<tr>
<th>Failure</th>
<th>Possible cause</th>
<th>Corrective actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>All fumes cannot be collected.</td>
<td>The distance of the exhaust nozzle from the welding point is too large.</td>
<td>Slide the exhaust nozzle closer.</td>
</tr>
<tr>
<td></td>
<td>The clean air vent is covered.</td>
<td>Uncover the clean air vent.</td>
</tr>
<tr>
<td>Exhaustion power is too low / is not available.</td>
<td>Filter cartridges are clogged.</td>
<td>Replace filter cartridges.</td>
</tr>
<tr>
<td></td>
<td>Error of the sequence of phases / missing phase</td>
<td>Changing two phases in CEE plug by the electrician</td>
</tr>
<tr>
<td></td>
<td>The ventilator is running in the incorrect direction.</td>
<td></td>
</tr>
<tr>
<td>Dust leak on the clean air side.</td>
<td>Filter cartridges are damaged.</td>
<td>Replace filter cartridges.</td>
</tr>
<tr>
<td>Activation of the motor protection relay.</td>
<td>Motor is blocked.</td>
<td>Call in an electrician.</td>
</tr>
<tr>
<td>The device cannot be started.</td>
<td>No voltage.</td>
<td>Call in an electrician.</td>
</tr>
<tr>
<td></td>
<td>Start/Stop sensor (option) is connected, however, it cannot detect current. Welding process has not been started yet.</td>
<td>Start the welding process.</td>
</tr>
</tbody>
</table>

7.5 Emergency measures

In case of fire of the filtration device or its absorptive parts proceed as follows:
- If possible, unplug the Weld Fume Extractor device by pulling the power plug from the power supply.
- Extinguish the fire by conventional powder fire extinguishers.
- Alternatively, notify the local fire department.

**CAUTION**

Do not open the filtration device service door; risk of flame flaring!
In the event of fire do not touch the device in any case without suitable protective gloves. Danger of burns!
8 DISPOSAL

During disposal comply with:
- Chapter 2.4 Safety instructions for the operating personnel
- Chapter 2.5 Safety instructions for maintenance and troubleshooting
- Special safety instructions indicated for individual activities in this chapter.

**WARNING**

In all actions on the Weld Fume Extractor device and therewith observe legal obligations to avoid the generation of waste and provide for proper recycling/disposal!

Disassembly works must be carried out with utmost care to avoid stirring up dust adhering onto the Weld Fume Extractor device and injury to unauthorized personnel. Therefore, it is necessary to disassemble the device in a well-ventilated room with filtered exhaust air or a suitable mobile filtration device. The work area should be separated/marked. Raised dust should be immediately extracted by vacuum cleaner of dust class H.

During the work it is necessary to use personal protective equipment such as protective clothing, gloves and breathing apparatus with incorporated fan, etc., so as to avoid contact with hazardous dust.

Before disassembly the unit must be cleaned and freed of all dust. This should be achieved using an industrial vacuum cleaner of dust class "H".

At the beginning of the disassembly the embedded filters are removed and disposed in an enclosed plastic bag. Then the loose dust is extracted during the disassembly. Individual parts can then be divided by material and disposed by an authorized company.

Finally, it is necessary to clean the work area.
## 9 ANNEX

### 9.1 Technical data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>see nameplate</td>
</tr>
<tr>
<td>Motor output</td>
<td>1.5 HP</td>
</tr>
<tr>
<td>Current input</td>
<td>see nameplate</td>
</tr>
<tr>
<td>Active cycle</td>
<td>100%</td>
</tr>
<tr>
<td>Degree of Protection 880 cfm, without exhaust arm</td>
<td>IP 42</td>
</tr>
<tr>
<td>650 cfm, with exhaust arm</td>
<td></td>
</tr>
<tr>
<td>ISO Class</td>
<td>F</td>
</tr>
<tr>
<td>Permissible ambient temperature</td>
<td>10-100°F/ +100°F</td>
</tr>
<tr>
<td>Max. fan output</td>
<td>1060 cfm</td>
</tr>
<tr>
<td>Max. device output</td>
<td>880 cfm, without exhaust arm</td>
</tr>
<tr>
<td></td>
<td>650 cfm, with exhaust arm</td>
</tr>
<tr>
<td>Pressure, max.</td>
<td>9 in. WG</td>
</tr>
<tr>
<td>Minimum exhaustion power (volume flow monitoring activation threshold)</td>
<td>400 cfm</td>
</tr>
<tr>
<td>Extraction arm</td>
<td>Nominal diameter 6&quot;, length ~ 10'</td>
</tr>
<tr>
<td>Filtration area</td>
<td>Main filter 183 ft²</td>
</tr>
<tr>
<td>Noise level at 1m distance according to DIN EN ISO 3744</td>
<td>72 dB(A)</td>
</tr>
<tr>
<td>Width</td>
<td>25.75&quot;</td>
</tr>
<tr>
<td>Depth</td>
<td>25.75&quot;</td>
</tr>
<tr>
<td>Height</td>
<td>38.5&quot;</td>
</tr>
<tr>
<td>Weight</td>
<td>209 lb, without extraction arm</td>
</tr>
<tr>
<td></td>
<td>230 lb, with extraction arm</td>
</tr>
</tbody>
</table>
9.2 Declaration of conformity

Within the meaning of Directive 2006/42/EC on Machinery

Manufacturer: AAF International
9920 Corporate Campus Drive, Suite 2200
Louisville, KY 40223

We hereby declare that the following machine is in conformity with the relevant provisions of European Directive 2006/42/EC on Machinery.

Serial No. 60 650 (in case of different serial number in different versions of the device)

Designation: AAF Weld Fume Extractor

This machine is also in accordance with the relevant provisions of the following EC Directives:

- 2006/42/EC Machinery Directive
- 2004/108/EC Electromagnetic Compatibility
- 2006/95/EC Directive on Electrical Equipment Designed for Use Within Certain Voltage Limits
- 93/68/EEC Directive on the Use of the CE Conformity Marking

The following harmonized standards (or parts thereof) were applied:

- EN ISO 12100 Part 1+2, EN 294, Safety of Machinery
- EN 349, EN418, EN 983 Safety of Machinery - Principles for Risk Assessment
- EN 1050 Safety of Machinery
- EN 60204-1 Electrical Equipment of Machines
- EMVG The Act on Electromagnetic Compatibility of Machinery
- EN 61000-6 Part 3 Basic Professional Standards for Emitted Interference
- EN 61000-6 Part 2 Basic Professional Standards for Interference Resistance

The following technical specifications (or parts of these standards) were applied:

- VDE 0100 Establishment of Low Voltage Equipment
- VDE 0113 Electrical Equipment of Machines - Glossary to Standard EN 60204-1
- UVV BGV A1 Accident Prevention Regulation: Principles of prevention
- BGR 500 2.26 Welding, Cutting and Related Methods
- DIN 45635 Noise Measurement on Machinery

Annex No. VIII to the Directive 2006/42/EC was observed. Compliance with the requirements under the Directive on electrical equipment designed for use within certain voltage limits was ensured according to Annex I, No. 1.5.1 of Directive 2006/42/EC.

Additional information:
Declaration of Conformity expires in the event of use contrary to the intended purpose or in the event of implementation of structural changes that have not been confirmed by us as the manufacturer.
9.3 Dimensional Drawing

Figure 8, Dimensions
9.4 Wiring Diagrams

The electrical installation must be carried out by an accredited electrician.

The usual local power supply company (PSC) regulations, as well as device-specific electrical regulations must be observed.

In case of non-compliance with the provisions and the instruction manual it can lead to malfunctions with consequential and personal danger.

When connecting devices, components, assemblies and circuit boards with protective conductor danger arises in case of faulty wiring. Before the operation, check all clamps and threaded connections.

The motor protection switch (relay) must be checked for their correct settings before use.

For information:

The circuit diagram is an integral part of the cabinet. It is forbidden to unauthorized persons, to changes the circuit diagram and the wiring. In case of non-compliance the warranty expires. The drawings of the circuit diagram are subject to copyright. Without our prior written agreement no data must be copied, reproduced, modified or made available to third parties.

Supply voltage: 1x 100-120V + N + PE / 60Hz
Motor power: 1.1 kW / 1.5 hp
Pre fuse protection: Line safety switch 1x16 A / min. cat. C
Supply cable: 3 x 2.5 mm² / AWG 13
Nominal current: 13.9 A
Figure 9, Wiring diagram
Figure 10, Star-Stop option
10 RECOMMENDED SPARE PARTS LIST

When ordering any parts, give WFE serial number (see the product nameplate).

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Exhaust Hood</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Exhaust Arm</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Main Filter</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Pre-Filter Mats (10 per set)</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Swivel Joint</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Handle Bar</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Cable Holder</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Wheel Set</td>
<td>1 Set</td>
</tr>
</tbody>
</table>

Figure 11, Spare parts

To obtain replacement parts:
Call: 1-800-477-1214
Or email: AAFEP@AAFINTL.com.
Sales Offices:

**Europe, Middle East & Africa**

**AAF Ltd**
Bassington Lane, Cramlington
Northumberland, NE23 8AF UK
Tel: +44 1670 713 477
Email: redfiltration@aafintl.com

**AAF, S.A.**
C/ Urarteia, 11
Poligono Ali-Gobeo
01010 Vitoria, Spain
Tel: +34 945 214851
Email: redfiltration@aafintl.com

**AAF France**
Rue William Dian
27620 Garsny, France
Tel: +33 2 32 53 60 60
Email: redfiltration@aafintl.com

**AAF Sri**
Via Lario, 1
22070 – Fenegrò (CO), Italy
Tel: +39 031 35 25 311
Email: redfiltration@aafintl.com

**AAF Luftrreinigungssysteme GesmbH**
Campus 21
Europaring F12 401
2345 Brunn am Gebirge, Austria
Tel: +43 (0) 2236 677 628 0
Email: redfiltration@aafintl.com

**AAF – Lufttechnik Gmbh**
Centroalle 263 b
D 46047
Oberhausen, Germany
Tel: +49 208 828423 0
Email: redfiltration@aafintl.com

**AAF – Environmental Control Epe**
1, Ifaistou & Kikladon
15354- Glika Nera, Greece
Tel: +30 2106632015
Email: redfiltration@aafintl.com

**AAF Hava Filtrleleri ve Ticaret AS**
Hürriyet Mahallesi
Yakac1k D-100 Kuzey Yan Yol No: 49/1-2
34876 Kartal, Istanbul, Turkey
Tel: +90 216 4495164/65
Email: redfiltration@aafintl.com

**AAF International – Middle East**
FZS1BC01-BC04, Jebel Ali Dubai, UAE
Tel: 009714 8894886
Email: redfiltration@aafintl.com

**AAF International (Thailand) Co., Ltd.**
100 Moo 4 Soi Namdang – Bangplee 44
Bangkaew Bangplee, Samutprakarn
10540, Thailand
Tel: +66 2738 7788
Email: redfiltration@aafintl.com

**Daikin Australia Pty Ltd**
(AAF Australia & New Zealand Sales Office)
15 Nyadale Road Scoresby Victoria 3179,
Australia
Tel: +61 (0)3 9237 5562
Email: redfiltration@aafintl.com

**North & South America**

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9920 Corporate Campus Drive, Suite 2200
Louisville, KY 40223-5000, USA
Tel: 1 502 637 0011
Toll Free: 1 800 477 1214
Email: redfiltration@aafintl.com

**AAF, S de RL de CV**
Av. Primero de Mayo No. 85,
Col. San Andrés Atenco,
C.P . 54040 Tialnepantla Edo. De Mexico, México
Tel: +52 55 5565 5200
Email: redfiltration@aafintl.com

**American Air Filter Brasil Ltda.**
Rua Doutor Bacelar, 173-CJ. 121
Vila Clementino – São Paulo – Brazil
CEP 04026-000
Tel: +55 11 5567 3000
Email: redfiltration@aafintl.com

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