

Allclear

Operating instructions

Type

CLEARMASTER



ALLCLEAR - Fume & Dust Control

Hamilton Vic 3300 AUSTRALIA

Ph: 1800 633 448

Fax: (03) 5571 1944

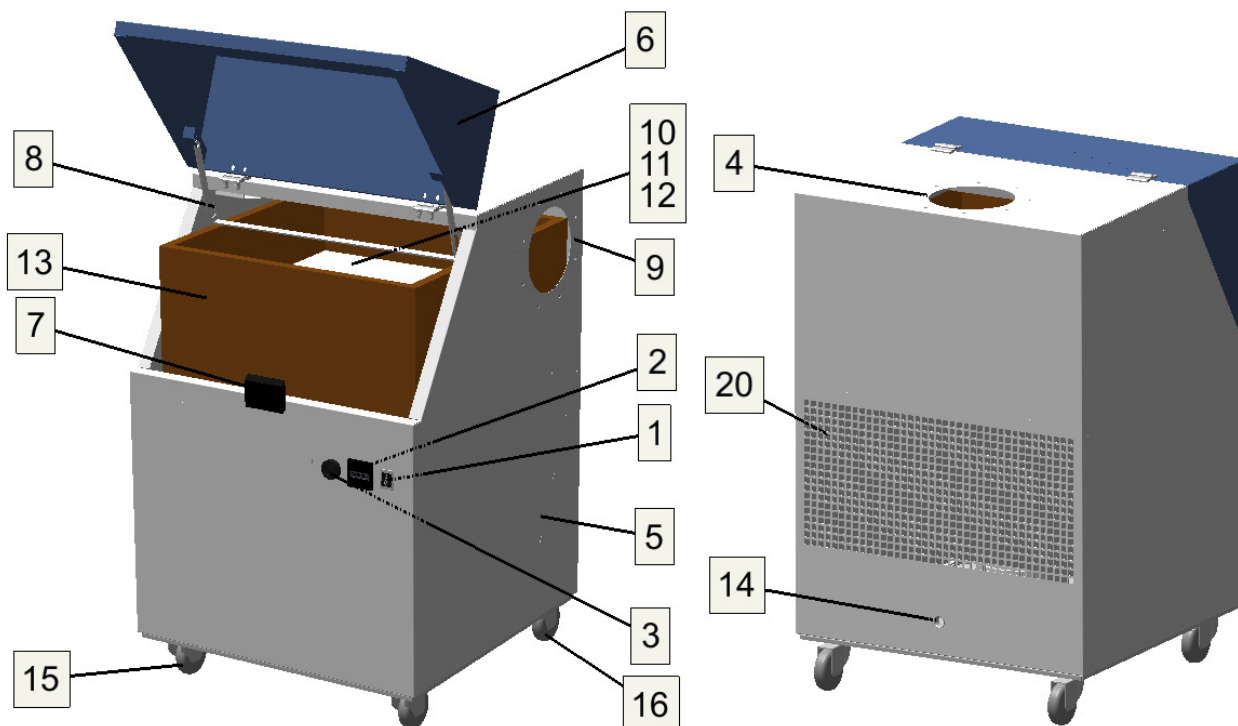
Email: sales@excision.com.au

www.excision.com.au

Table of contents

1	Description of the elements.....	3
2	Preface	4
3	Conventional application of Clearmaster	5
4	Safety instructions.....	5
5	Commissioning.....	7
5.1	Connecting the extraction elements.....	7
5.2	Connecting the device.....	8
6	Explanation of the control elements	8
7	Maintenance	8
7.1	Replacing the gross filter	9
7.2	Replacing the prefilter.....	10
7.3	Replacing the activated carbon filter	10
7.4	Replacing the main filter	11
7.5	Recommended changing intervals of the filter elements.....	11
8	Disassembly / disposal	12
9	Detection of faults and malfunctions.....	12
10	Technical data.....	13
11	Spare parts available on request.....	14

1 Description of the elements



Pos.1	Main switch ON / OFF	Pos.12	Activated carbon filter (placed onto the main filter)
Pos.2	Operating hours meter	Pos.13	Main filter
Pos.3	Alarm horn signalling a necessary filter change	Pos.14	Mains cable including mains plug
Pos.4	Connection for suction arm	Pos.15	Swivel castors with brake
Pos.5	Housing - Filter Unit	Pos.16	Swivel castors without brake
Pos.6	Maintenance flap	Pos.17	Screw for assembly of the suction arm (part provided, not in the picture)
Pos.7	Snap fastener for maintenance flap	Pos.18	Lock washer for assembly of the suction arm provided (not pictured)
Pos.8	Retainer	Pos.19	Rotary flange (not pictured)
Pos.9	Connection for suction hose (delivery including covering plate)	Pos.20	Outlet of the cleaned air
Pos.10	Large particle filter (placed onto prefilter)		
Pos.11	Prefilter (placed onto activated carbon filter)		

2 Preface

During the last years, extraction units have become more and more important, especially the filtration of extracted pollutants and the return of the filtered air into the working space.

This certainly shows that the environmental awareness of the individual has strongly developed in a positive way since the fact that production (e.g. welding) generates pollutants is undoubted for a long time. The types of pollutants however depend on the applied procedure. Generally, you distinguish gases from fumes. Fumes are also known as dusts. If you examine these dusts with a microscope, you will state that they consist of tiny respirable particles of 0,001 mm or even smaller sizes.

The conventional attempt to improve working conditions at polluted work places is general ventilation. This procedure is based on a multiple exchange of the air in the production hall, in other words the complete air is renewed. Nevertheless, this method only reduces the concentration of pollutants in the respiration zone of the user to a minimal extent.

This also applies for the so-called overhead extraction, i.e. the installation of huge extraction hoods above the work places. With this badly realized airflow, the pollutants pass by the breathing zone of the user before they rise up and are captured and taken in. This certainly is not the intended effect. More efficient than room exhausting or overhead extraction is the elimination of pollutants directly where they are generated in using local extraction. The investments as well as the operating expenses are much lower in case of local extraction.

The successful application of this technology implies the technological optimisation of the working procedure as well as especially the respect of measures with regard to environmental protection and occupational safety. In the context of a growing sensitization and stricter legal regulations, potential hazards for the environment and the work place have to be determined prematurely and minimized if necessary.

3 Conventional application of Clearmaster

The filter unit Clearmaster is mainly used for the local extraction of dusts and fumes. To this end, the unit can be equipped with a flexible suction arm or another extraction device suitable for the individual application.

The filter unit is adapted for the extraction and separation of welding fumes according to the welding fume class 'W3'

Prohibited of applications:

Welding fumes containing oil, aluminium dust, explosive dusts and gases and hybrid mixtures, water, etc.
(In case of doubt, please contact Excision or your local supplier)

The polluted air is taken in by the suction hood and enters into the filter unit in passing by the suction arm or the suction hose. In the filter unit, the gross dust particles are separated in the gross filter (pos. 10), while the finer dusts are separated in the prefilter (pos. 11). The activated carbon filter (pos. 12) absorbs disturbing odours. The consecutive main filter (pos. 13) separates the fine dust particles with a separation efficiency of more than 99%. The cleaned air is taken in by the fan and returned to the working space via the outlet grid at the back of the unit.

Attention:

As soon as the resistance of the filter, due to the separated dust particles and smoke, has achieved a maximum value, the integrated monitoring electronics triggers off the alarm of the signal beep (pos. 3) indicating that the filters must be renewed.

(see chapter 7.1: "Replacing the gross filter", chapter 7.2 "Replacing the prefilter", chapter 7.3: "Replacing the activated carbon filter", chapter 7.4: "Replacing the main filter")

4 Safety instructions

When handling electrical appliances, the following general safety measures must be taken for the protection against electric shocks, risk of injury and fire:

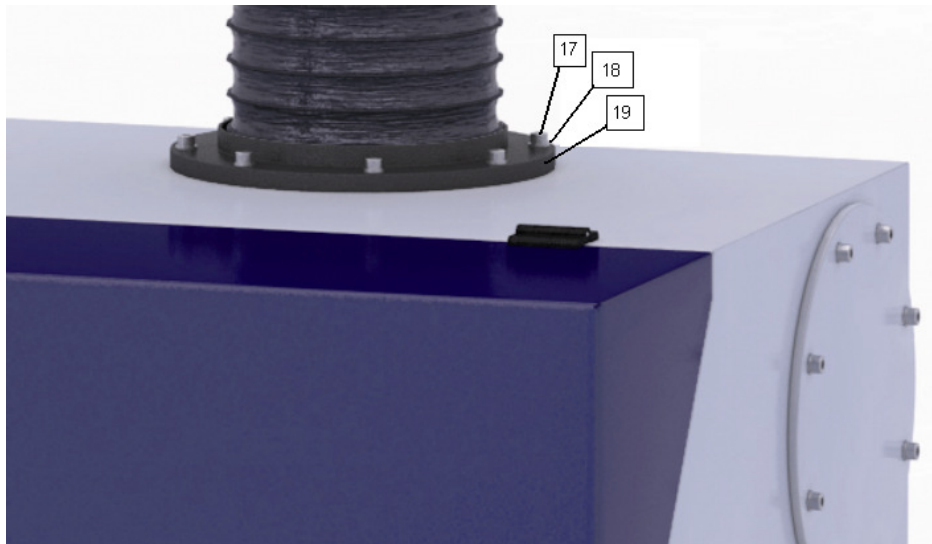
- Read and observe these instructions before using the device.
- Keep this operating and maintenance manual in a safe place.
- Do not use the device to extract easily inflammable or explosive gases.
- Do not use the device in explosive zones, e.g. zone 1, zone 2, zone 20, zone 21, zone 22.
- Do not use the device to extract burning or glowing materials, e.g. cigarettes, matches, metallic dusts, as well as splinters, paper, cleaning cloths etc.
- Do not use the device to extract burning or inflammable materials, e.g. oil or oil mist, greases, release agents (e.g. silicone spray), cleaning agents, etc.
- Do not use the device to extract aggressive media.
- Do not use the device to extract liquids of any kind.
- Do not use the device to extract organic materials without a written authorization of the manufacturer.
- Protect the connecting plug from heat, humidity, oil and sharp edges.

- Ensure the approved supply voltage. (Observe the indications on the nameplate.)
- Only use ALLCLEAR spare parts.
- Do not use the device without filter elements.
- Before opening the device, separate it from the mains supply.
- The outlet holes must not be covered or blocked.
- Always take care that the device is in a safe position and that the brakes at the swivel castors are engaged.
- When cleaning and maintaining the device, replacing parts or when changing to another function, disconnect the filter unit from the mains supply.
- The filter elements must not be reused.
- Dispose of the filter cartridges according to the legal regulations.
- The device must not be used if the mains cable is not in perfect condition.
- The maximum admissible distance between the extraction element and the welding point should not exceed 25 cm.
- Do not use the filter unit if one or more parts of the unit are faulty, missing or damaged. In any of these cases, please contact the ALLCLEAR service department at the phone number 1800 633 448.
- When extracting carcinogenic fumes, e.g. materials containing nickel or chrome, the ventilation requirements have to be observed.

5 Commissioning

The filter unit is delivered assembled, the extraction arm is separately packed. The extraction arm must be connected to the device before commissioning.

5.1 Connecting the extraction elements



If you use a suction arm, fix it with the help of the flange ring (pos. 19), the screws (pos. 17) and the lock washers (pos. 18) to the upper connection of the filter unit housing.

Attention:

Take care that the flange at the base of the arm is able to pivot freely, as required once assembled

5.2 Connecting the device

- Connect the filter unit to the mains supply.
(Observe the specifications on the name plate!)

Attention:

Only electricians are authorized to carry out tasks in the electrical field.
Observe the specifications on the name plate!

6 Explanation of the control elements

Pos.1 The main switch turns the filter unit on or off.

Pos.2 The operating hours meter counts the hours the unit has been on.

Pos.3 The signal alarm indicates if the suction performance is insufficient. If it is triggered off, the filters must be replaced.

7 Maintenance

The filtration of the dust particles increases the saturation degree of the filter cartridge and reduces the extraction performance.

The saturation degree of the filter cartridge is monitored electronically. In order to maintain the extraction performance of the device, the filters must be replaced if the signal alarm (pos.3) is triggered off.

(See chapter 7.1 "Replacing the gross filter", chapter 7.2 "Replacing the prefilter", "chapter 7.3 "Replacing the activated carbon filter", chapter 7.4 "Replacing the main filter")

The mechanical filter element makes sure that 99.997 % of the extracted pollutants remain in the filter. This still applies if the filter element is partly or completely saturated. Nevertheless, the increasing saturation of the filter will reduce the extraction performance of the filter unit.

Gross filter, prefilter and activated carbon filter must be replaced regularly. However, they should be renewed, at the latest, when replacing the main filter.

The lifetime of the filter elements heavily depends on the individual conditions of any application. Therefore, it cannot be defined in advance.

Attention:

The operation of the filter device must be interrupted when the filters are replaced.

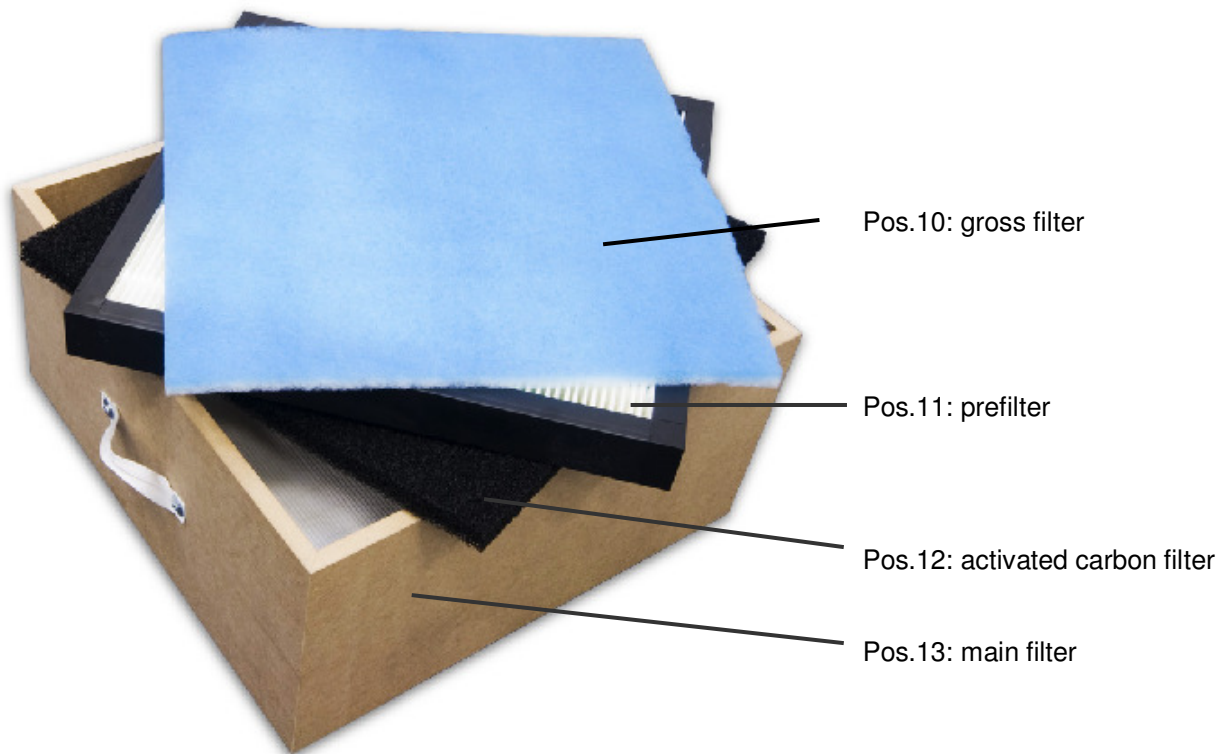
Only replace and dispose of the filters in sufficiently ventilated area and in wearing an appropriate respirator mask!

We recommend a respiration half mask according to DIN EN 141/143 protection level P3.

Dispose of the filter according to the legal regulations!

If the filter is beaten, washed or blown out manually, the filter medium may be destroyed. The pollutants penetrate the ambient air.

The correct fitting of the filter elements corresponds to the following order:



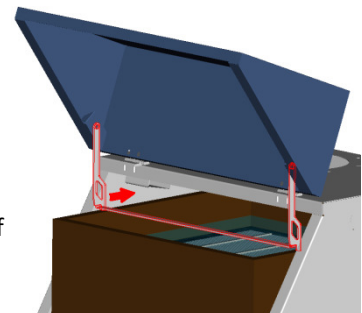
7.1 Replacing the gross filter

- Disconnect the filter unit from the mains supply.
- Release the snap fastener (pos.7) and open the maintenance flap.
- Withdraw the gross filter that is inserted in the main filter. Lift up and pull forward the main filter if necessary.
- Insert the new gross filter.

Attention:

Only use filter elements by ALLCLEAR!

- Put the main filter back into the device and position it correctly.
- Fold down the maintenance flap (pos.6) carefully. When doing this, make sure that the retainer (pos. 8) is placed exactly on the wood frame of the main filter (pos. 13) and that it moves to the back into the filter unit if the maintenance flap is closed further.
- When the maintenance flap is completely closed, secure it with the help of the snap fastener.
- Reconnect the filter unit to the mains supply.



7.2 Replacing the prefilter

- Disconnect the filter unit from the mains supply.
- Release the snap fastener (pos. 7) and open the maintenance flap (pos. 6).
- Replace the old prefilter with the new one. To this end, lift up and take out the main filter if necessary.

Attention:

Only use filter elements by ALLCLEAR!

- Put the main filter back into the unit and position it correctly.
- Fold down the maintenance flap (pos.6) carefully. When doing this, make sure that the retainer (pos. 8) is placed exactly on the wood frame of the main filter (pos. 13) and that it moves to the back into the filter unit if the maintenance flap is closed further. See also the overview below at the section "Replacing the gross filter".
- When the maintenance flap is completely closed, secure it with the help of the snap fastener.
- Reconnect the filter unit to the mains supply.

7.3 Replacing the activated carbon filter

- Disconnect the filter unit from the mains supply.
- Release the snap fastener (pos. 7) and open the maintenance flap (pos. 6).
- Lift up the main filter and take it out.
- Take out the gross filter (pos. 10) and the prefilter (pos. 11) out of the main filter, insert the activated carbon filter (pos. 12), put the prefilter and the gross filter onto the new activated carbon filter.

Attention:

Only use filter elements by ALLCLEAR!

- Put the main filter back into the filter unit and position it correctly.
- Fold down the maintenance flap (pos.6) carefully. When doing this, make sure that the retainer (pos. 8) is placed exactly on the wood frame of the main filter (pos. 13) and that it moves to the back into the filter unit if the maintenance flap is closed further. See also the overview below at the section "Replacing the gross filter".
- When the maintenance flap is completely closed, close it with the help of the snap fastener.
- Reconnect the filter unit to the mains supply.

7.4 Replacing the main filter

- Disconnect the filter unit from the mains supply.
- Release the snap fastener (pos. 7) and open the maintenance flap (pos. 6).
- Lift up the main filter (pos.13) and take it out.
- Take out the gross filter (pos.10), prefilter (pos.11) and activated carbon filter (pos.12).
- Put the new main filter with the gross filter, the prefilter and the activated carbon filter back into the unit.

Attention:

Only use filter elements by ALLCLEAR!

- Fold down the maintenance flap (pos.6) carefully. When doing this, make sure that the retainer (pos. 8) is placed exactly on the wood frame of the main filter (pos. 13) and that it moves to the back into the filter unit if the maintenance flap is closed further. See also the overview below at the section "Replacing the gross filter".
- When the maintenance flap is completely closed, secure it with the help of the snap fastener.
- Reconnect the filter unit to the mains supply.

7.5 Recommended changing intervals of the filter elements

After a certain amount of operating hours, the filter elements must be replaced. The amount depends on the produced amount of dust or gas. Nevertheless, the filters must be replaced if the signal alarm (pos. 3) is triggered off. We recommend the following changing intervals:

Filter element	Recommended operating period
Gross filter	50 operating hours
Prefilter	100 operating hours
Activated carbon filter	100 operating hours
Main filter	200 operating hours

8 Disassembly / disposal

- Only qualified electricians may be charged with the disassembly of the machine, the electrical unit or the electrical supply line. Before disassembling the machine, disconnect it from the mains supply.
- Dispose of the pollutants and the filter media correctly and appropriately.
- Observe the indications of the manufacturer or contact Excision or your local supplier.
- If you have any questions on the correct operation of your filter unit Clearmaster please contact our service department:

Phone: 1800 633 448

Fax: (03) 5571 1944

Email: admin@excision.com.au

9 Detection of faults and malfunctions

Fault	Origin	Repair
Extraction performance is not sufficient (Fumes are not or only hardly extracted)	Filters are saturated	Replace the filters, dispose correctly of the saturated filter!
	Extraction element is damaged	Replace the extraction element
	Suction hose or suction arm is not correctly connected	Check the position of the suction hose or the suction arm and reconnect it if necessary.
	Clean air outlet is narrowed or covered	Check the clean air outlet, repair the fault if necessary
	Suction duct is narrowed	Check the suction duct, repair the fault if necessary
The operation does not start	The plug connection for the mains supply is not connected.	Connect the plug connection for the mains supply
	The power socket is not live	Check the mains supply, repair the fault if necessary

10 Technical data

Attention:

Observe the indications on the name plate!

Filter unit		Clearmaster
Supply voltage	V	240
Type of current	Ph	1
Frequency	Hz	50
Motor	kW	1,1
Current absorption	A	7,0
Volumetric flow max.	m ³ /h	1600
Pressure max.	Pa	1800
IP rating		IP 54
ISO class		F
Control voltage	V	230
Duty cycle	%	100
Width x depth x height (without arm)	mm	580 x 580 x 900
Weight (without arm)	kg	80
Filter elements		gross filter, prefilter, activated carbon filter, main filter
Extraction performance	%	>99
Sound pressure level (measured according to DIN 45635 T1 at a distance of 1m from the surface of the machine in the free field at a maximal volumetric flow)	dB(A)	72

11 Spare parts available on request

Designation:	Art. No.
Gross filter (pos.10), pack of 10	978003
Prefilter (pos.11), 1 piece	978004
Main filter (pos.13), 1 piece	978005
Activated carbon filter (pos.12), 1 piece	978006
Suction arm - 3m Clearmaster complete, diam. 150	978009
Replacement hood for suction arm Clearmaster	978008