www.jbctools.com

INSTRUCTION MANUAL

JBC
www.jbctools.com
Filter
Saturation 20%
Carbon life 80%
Flow
Aspiration
ON
FILTER
OK
PEDAL
STATION 1
STATION 2
STATION 3
STATION 4

FAE1

Fume Extractor for 1 Workbench

This manual corresponds to the following references:

FAE1-1B (100V/120V))
FAE1-2B (230V)

Packing List

The following items are included:

Fume Extractor for 1 Workbench .... 1 unit

⚠ *Unseal the filter before its first use*

Filter for FAE1 ...... 1 unit
Ref. FAE1-100 *(already assembled)*

Premium Station Cable (RJ12) .... 2 units
Ref. 0019751

Power Cable .... 1 unit
Ref. 0023715 (100V / 120V)
0023714 (230V)

Compact Station Cable (USB A/B) ...... 1 unit
Ref. 0021042

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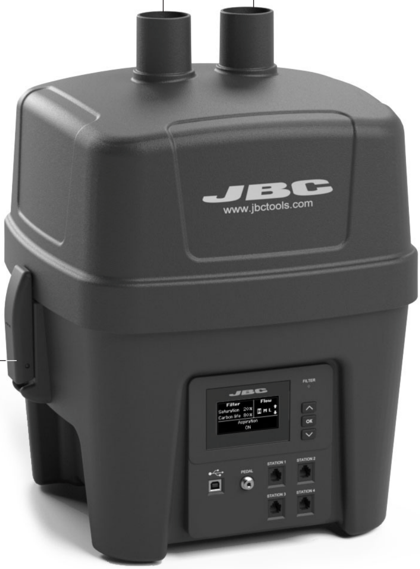
INSTRUCTION MANUAL

FAE1
Fume Extractor for 1 Workbench

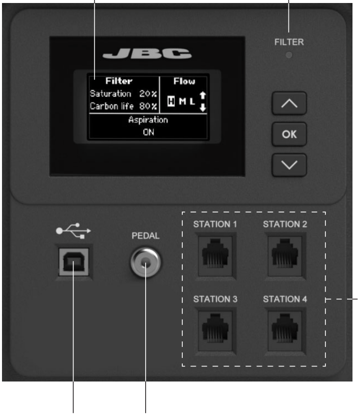
Compact Station Adapter
(RJ12 to USB A) .... 1 unit
Ref. 0023504

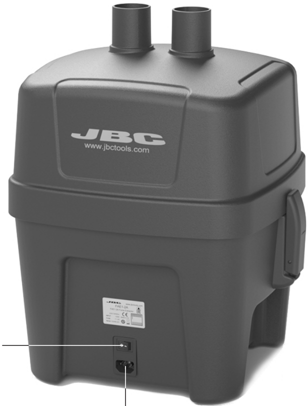
Manual .... 1 unit
Ref. 0027634

Features and Connections


Aspiration Intakes
Quick Release Lever for Filter Replacement

Filter Saturation Indicator
-Green: Filter OK
-Yellow: ≤ 20% carbon lifetime or about to saturate
-Red: End of carbon lifetime or filter saturated


Process Screen
JBC
Filter
Flow
Saturation 20%
Carbon life 80%
H M L
Aspiration
ON
FILTER
OK
PEDAL
STATION 1
STATION 2
STATION 3
STATION 4
RJ12 Premium Station Connections
USB-B Compact Stations Connection
Pedal Connection


Main Switch
Power Socket

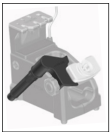
Assembly Options

1 Workbench Configuration *(default)*

Flexible Arm Ø50
Ref. FAE070
Lenght: 1 m / 39.37 in
To be assembled on your workbench with the included clamp

Ref. FAE020
Lenght: 1 m /39.37 in
To be assembled directly on your workbench (hole drilling required)

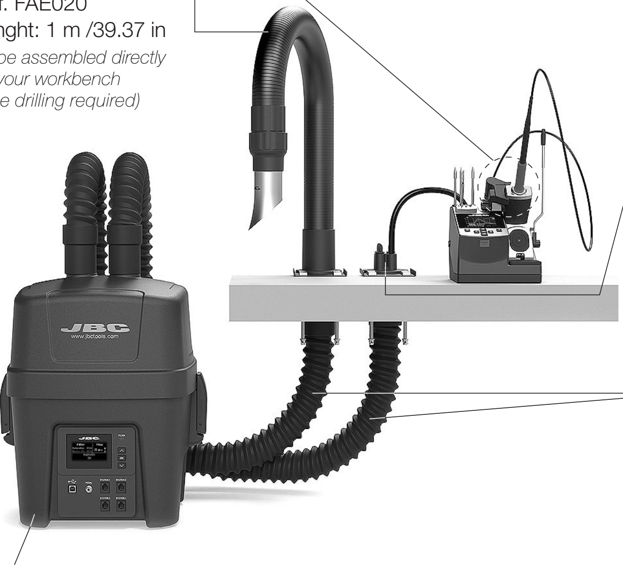
Stand Aspiration Duct
Ref. FAE050
For modular stands (from SD versions onwards)



Ref. FAE060
For compact stations (from B versions onwards)

Accessory for Stand Aspiration
Ref. FAE040
To be assembled on your workbench with the included clamp (for up to 4 stands)

Ref. FAE030
To be assembled directly on your workbench (hole drilling required)



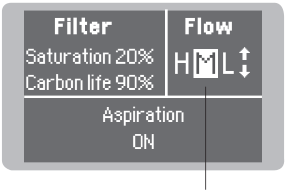
Flexible Hoses Ø50
Ref. FAE010
Lenght: 1,5 m / 59.05 in
Connect the Fume Extractor indifferently to the flexible arm or to the accessory for stand aspiration
Attention
Avoid awkward positions in order to minimize pressure losses

Fume Extractor
Ref. FAE1-1B (100V / 120V)
FAE1-2B (230V)

Main Screen

Access by ⌃ and ⌄ to change the aspiration program.

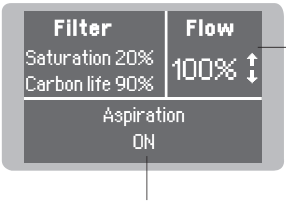
Preset program screen



Filter
Saturation 20%
Carbon life 90%
Flow
H M L ↕
Aspiration
ON

High, medium and low aspiration programs

Custom program screen



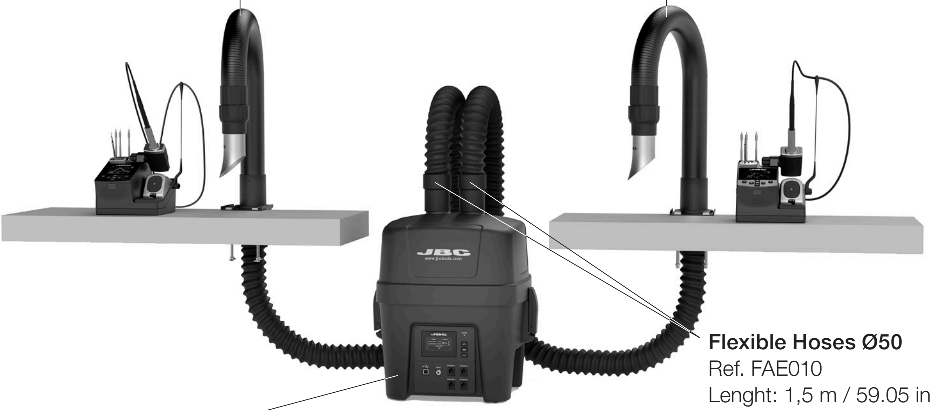
Filter
Saturation 20%
Carbon life 90%
Flow
100% ↕
Aspiration
ON

Flow rate

Aspiration status

2 Workbenches Configuration *(optional)*

This configuration is activated by setting Workbench option to “2” in the FAE1 main menu.



Flexible Arms Ø50

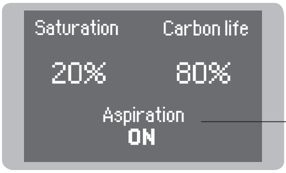
Ref. FAE070
Lenght: 1 m / 39.37 in
To be assembled on your workbench with the included clamp

Ref. FAE020
Lenght: 1 m / 39.37 in
To be assembled directly on your workbench (hole drilling required)

Flexible Hoses Ø50
Ref. FAE010
Lenght: 1,5 m / 59.05 in
Connect the Fume Extractor to the flexible arm
Attention
Avoid awkward positions in order to minimize pressure losses

Fume Extractor
Ref. FAE1-1B (100V / 120V)
FAE1-2B (230V)

Main Screen



Saturation 20%

Carbon life 80%

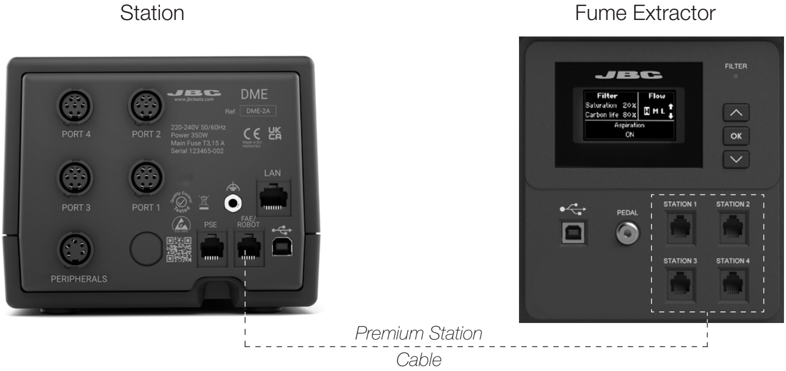
Aspiration ON

Aspiration status

Note: For this configuration stand aspiration is not available and aspiration flow is set “High”. The suction force per intake decreases compared with 1 workbench configuration (see page 14).

Station Connections for Premium Range

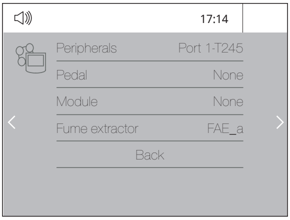
JBC Soldering Stations feature a robot port to the fume extractor in order to automatically activate the extraction when the tools are in use. Use the Premium Station Cable (included) for the connection.


Station
Fume Extractor
PORT 4
PORT 2
PORT 3
PORT 1
PERIPHERALS
DME
Ref. DME-2A
220-240V 50/60Hz
Power 350W
Main Fuse T3,15 A
Serial 123465-002
LAN
PSE
FAE/ROBOT
FILTER
OK
Filter
Flow
Saturation 20%
Carbon life 80%
H M L
Aspiration
ON
PEDAL
STATION 1
STATION 2
STATION 3
STATION 4
Premium Station Cable

Connect up to 4 stations directly to a fume extractor through the soldering station robot port. Every tool connected to a station can control the aspiration system.

Each Station detects the fume extractor as “FAE_a”. The tool that should activate the fume extraction need to be configured through the peripheral menu option on the station menu.

Peripherals Menu



17:14

Peripherals Port 1-T245

Pedal None

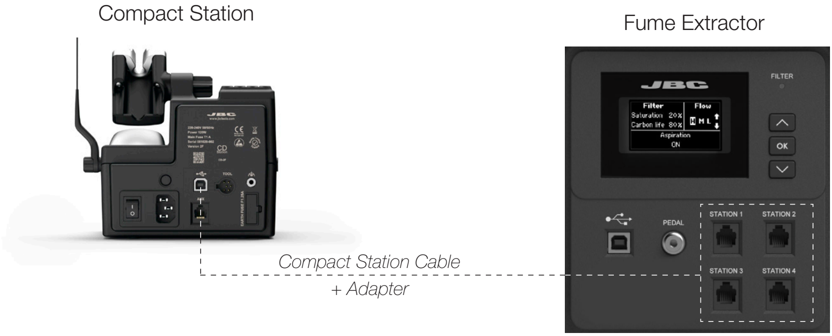
Module None

Fume extractor FAE_a

Note: For a correct operation always update soldering stations with the latest available software version. The minimum required version is 8886160 for DDE, HDE and NAE stations and 8886162 for DME stations.

Station Connections for Compact Range

Use the Compact Station Cable and the Adapter cable to connect JBC Soldering Stations. They feature a USB-B port to the fume extractor in order to automatically activate the extraction when the tools are in use.

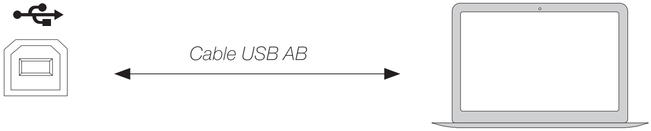

Compact Station
Fume Extractor
Compact Station Cable
+ Adapter
Filter
Flow
Saturation 20%
Carbon life 80%
H M L
Aspiration
ON
FILTER
OK
PEDAL
STATION 1
STATION 2
STATION 3
STATION 4

Equipment Software Update

JBC Updater

The fume extractor can be updated via the USB-B connection by means of JBC Updater software. Download software from: **www.jbctools.com/software.html**.

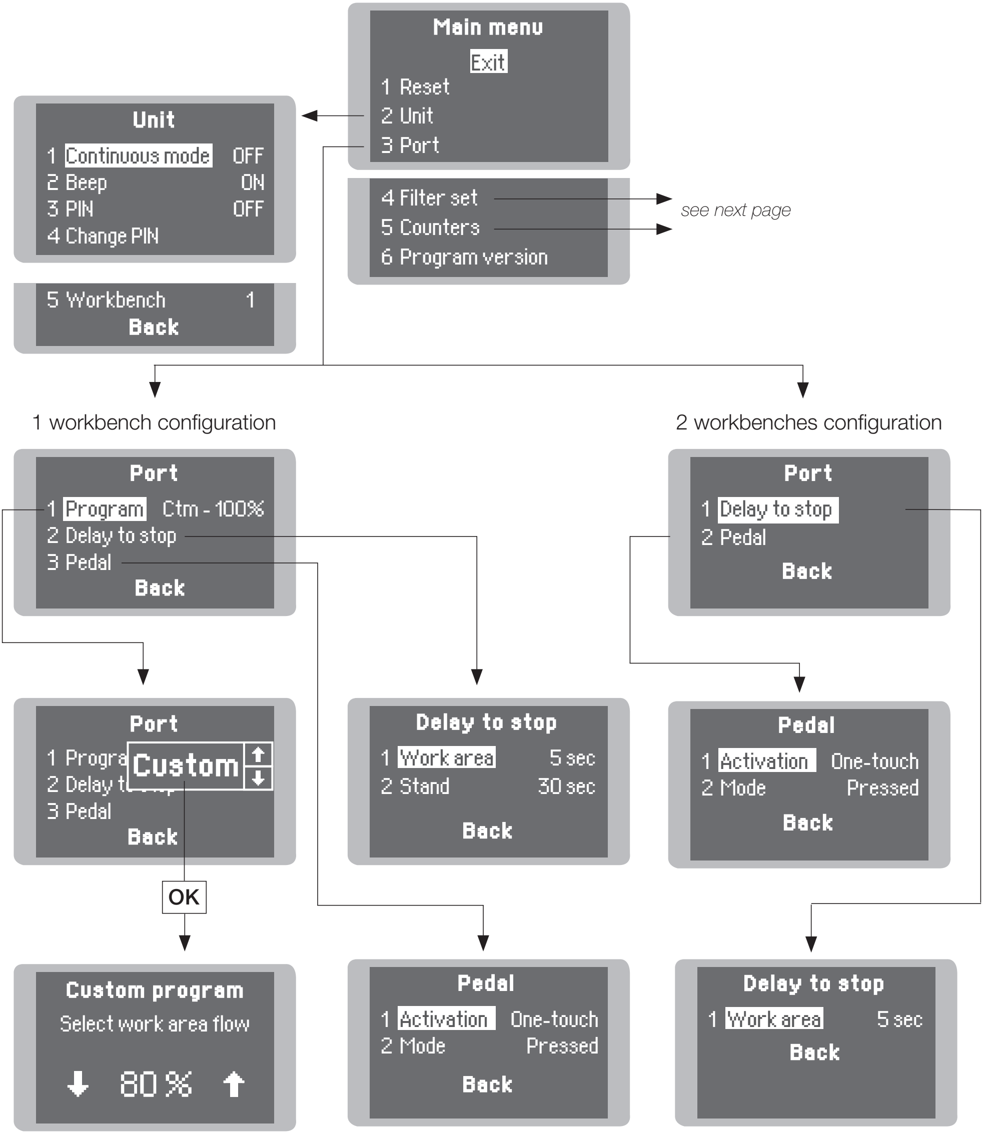
Note: For the updating process the Premium Station Cable (RJ12) has to be disconnected. If a station is connected to RJ12 connector the update process will not start.


Cable USB AB

Menu Interface

Main Menu Parameters

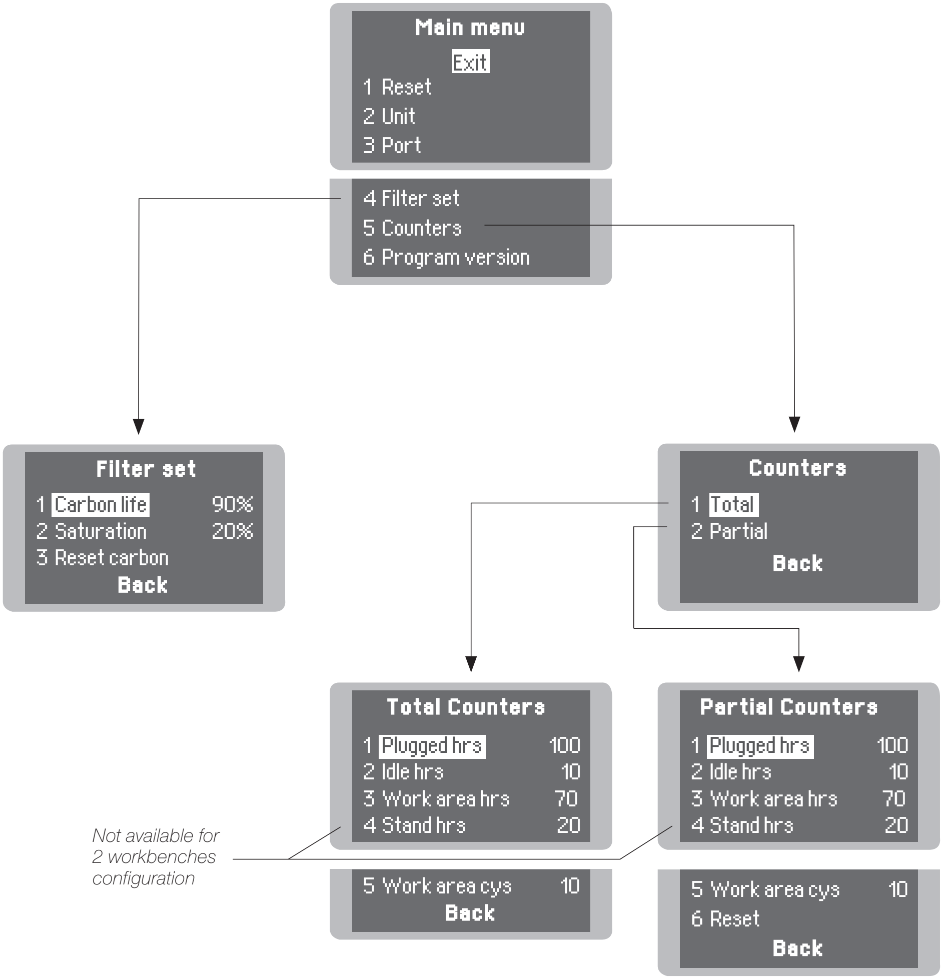
Original PIN: 0105


Main menu
Exit
1 Reset
2 Unit
3 Port
4 Filter set
5 Counters
6 Program version
see next page
Unit
1 Continuous mode OFF
2 Beep ON
3 PIN OFF
4 Change PIN
5 Workbench 1
Back
1 workbench configuration
2 workbenches configuration
Port
1 Program Ctm - 100%
2 Delay to stop
3 Pedal
Back
Port
1 Delay to stop
2 Pedal
Back
Port
1 Progra
2 Delay t
3 Pedal
Back
Custom
OK
Delay to stop
1 Work area 5 sec
2 Stand 30 sec
Back
Pedal
1 Activation One-touch
2 Mode Pressed
Back
Custom program
Select work area flow
80 %
Pedal
1 Activation One-touch
2 Mode Pressed
Back
Delay to stop
1 Work area 5 sec
Back

Menu Interface

Main Menu Parameters

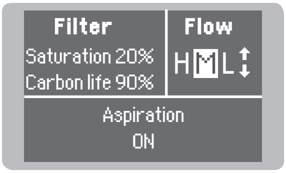
Original PIN: 0105


Main menu
Exit
1 Reset
2 Unit
3 Port
4 Filter set
5 Counters
6 Program version
Filter set
1 Carbon life 90%
2 Saturation 20%
3 Reset carbon
Back
Counters
1 Total
2 Partial
Back
Total Counters
1 Plugged hrs 100
2 Idle hrs 10
3 Work area hrs 70
4 Stand hrs 20
5 Work area cys 10
Back
Partial Counters
1 Plugged hrs 100
2 Idle hrs 10
3 Work area hrs 70
4 Stand hrs 20
5 Work area cys 10
6 Reset
Back

Not available for 2 workbenches configuration

Fume Extractor Activation

Once the fume extractor is turned on, the display shows a similar screen as the following one and the filter saturation indicator is green if the carbon filter lifetime is higher than 20%.



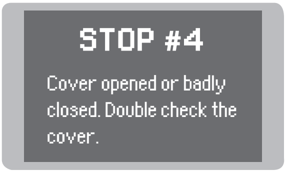
Filter
Saturation 20%
Carbon life 90%

Flow
H M L ↕

Aspiration
ON

- Green: Filter OK
- Yellow: ≤ 20% carbon lifetime or about to saturate
- Red: End of carbon lifetime or filter saturated

If the display shows STOP#4, power off the fume extractor, remove the cover, place it back and secure it by using the quick release levers.



STOP #4

Cover opened or badly closed. Double check the cover.

Troubleshooting

Station troubleshooting available on the product page at **www.jbctools.com**

Parameters

⚠ **Important: Power off soldering stations connected to the fume extractor before modifying any parameter.**

Unit

Parameteter	Description
Continuous mode	Eanable/disable continuous aspiration. Fume extractor aspirations remains active independently from tool or pedal status.
Beep	Enable/disable the sound of the keypad.
PIN	Enable/disable PIN request when modifying parameters.
Change PIN	Change the default security PIN code. Default PIN 0105
Workbench	Select working mode for 1 or 2 workbenches (see page “Menu Interface”).

Port

Parameter	Description
Program	It sets the fume extractor aspiration flow. You can select between preset and custom aspiration programs. H (High), M (Medium) or L (Low) are the three available preset options. Use UP and DOWN keys to switch between them while being on the main screen. Up to ten aspiration levels between H (High) and L (Low) can be selected for custom program (range 10-100%). If a custom aspiration program is selected, the selected aspiration level can be changed on the main screen. By default M (Medium) aspiration program is selected.
Delay to stop / Stand	It sets the time that a fume extractor keeps aspirating fumes at the stand once the tool is returned to it (range 0-999 seconds) By default stand time is 60 seconds.
Delay to stop / Work area	It sets the time that a fume extractor keeps aspirating fumes at the work area once the tool is returned to the stand (range 0-300 seconds).
Pedal / Activation	It sets the pedal activation mode. There are two different modes: “pressed” and “released”. **One-touch:** Press the pedal once to activate aspiration. Press again to stop aspiration. **Pressed:** (Mode function must be pressed) aspiration is active as long as the pedal is kept pressed. By default activation is pressed.
Pedal / Mode	When the activation parameter is set to pressed, the mode parameter can be configured to released mode. In this mode aspiration is always active until the pedal is pressed. By default mode is pressed.

Filter Set

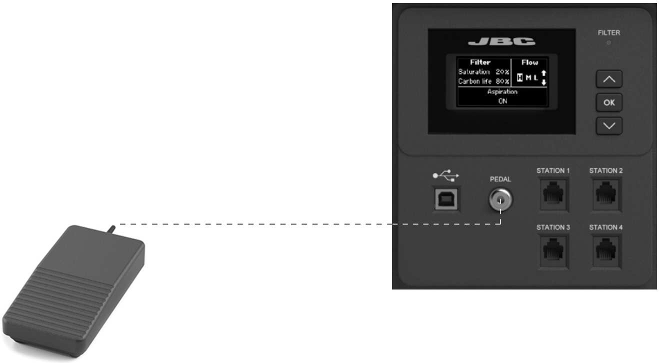
Parameter	Description
Carbon life	It shows remaining activated carbon lifetime expressed in %. It is also displayed on the main screen. When 0% is reached the system will show pop-up message STOP#1 to replace the filter.
Saturation	It shows saturation status of HEPA + carbon filter set, expressed in %. It is also displayed on the main screen. When 100% is reached the system will show pop-up message STOP#2 to replace the filter.
Reset carbon	Perform this action after replacing the HEPA + carbon filter set. The carbon lifetime counter will not start until the filter is detected for the first time. After executing that function carbon filter life will be 100%.

Extraction Control

Fume extractor aspiration may be controlled by:

Pedal Connection

By means of the pedal connection, fume extractor aspiration may be activated/deactivated by P-005 or P-405 pedal. (See pedal activation modes on previous page)


JBC
FILTER
Filter
Flow
Saturation 20%
Carbon life 80%
H M L
Aspiration
ON
OK
PEDAL
STATION 1
STATION 2
STATION 3
STATION 4

Fume Extractor Configurations

Some parameters, features and the performance vary depending on fume extractor configuration, see the following table:

230V 50/60Hz	Mode: 1 Workbench	Mode: 2 Workbenches
Flexible Arm Aspiration Intake	1	2
Stand Aspiration Intake	1	Not available
Flow per Flexible Arm Intake	80 m3 / h (47.08 cfm)	60 m3 / h (35.31 cfm)
Preset Aspiration Programs	3	1
Custom Aspiration Programs	10	Not available
Power consumption	110 W	115 W

120V 50/60Hz	Mode: 1 Workbench	Mode: 2 Workbenches
Flexible Arm Aspiration Intake	1	2
Stand Aspiration Intake	1	Not available
Flow per Flexible Arm Intake	80 m3 / h (47.08 cfm)	60 m3 / h (35.31 cfm)
Preset Aspiration Programs	3	1
Custom Aspiration Programs	10	Not available
Power Consumption	115 W	135 W

100V 50/60Hz	Mode: 1 Workbench	Mode: 2 Workbenches
Flexible Arm Aspiration Intake	1	2
Stand Aspiration Intake	1	Not available
Flow per Flexible Arm Intake	75 m3 / h (44.14 cfm)	55 m3 / h (32.37 cfm)
Preset Aspiration Programs	3	1
Custom Aspiration Programs	10	Not available
Power Cwonsumption	100 W	105 W

Maintenance and Filter Replacement

- The unit notifies through both the display and the LED when filters need maintenance.

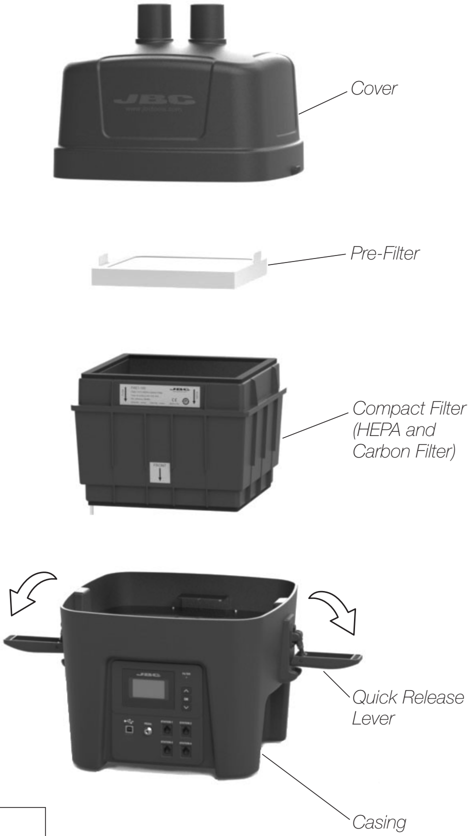
- To replace the filters remove the cover by opening the quick release levers of the casing.

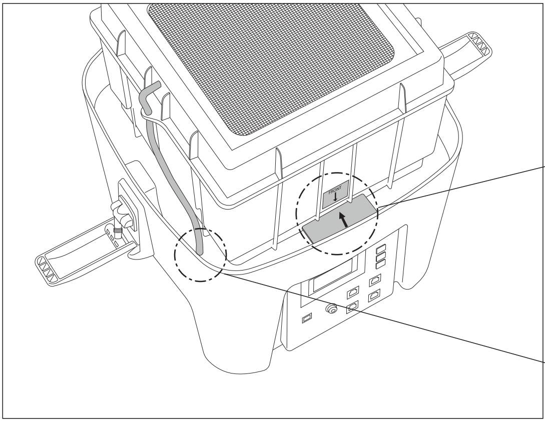
- If the saturation indicator remains in red after changing the pre-filter, it means that HEPA filter is already saturated and must be replaced too (see image below).

- When the HEPA filter has been replaced, the carbon filter counter must be reseted (Main Menu > Filter Set > Reset Carbon).

- The duration of the compact filter is maximum 1 year after its packaging is opened.

- If the filter is changed while the fume extractor is on, the unit starts the filter detection process, activating aspiration for a few seconds.



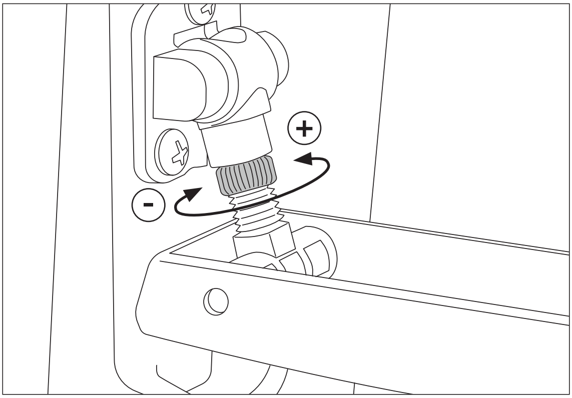


⚠ *The filter has a given position. Make sure the filter ribs mate with the corresponding slots.*

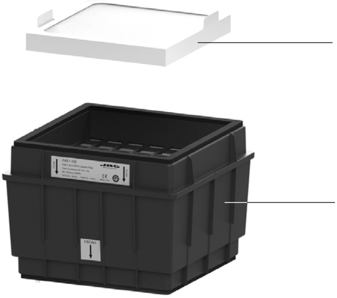
Connect the filter tube to the quick coupling placed on the metal sheet

Quick Release Lever Adjustment

- Turn clockwise to loosen and counterclockwise to tighten, in order to adjust the filter airtightness.



Accessories



Pre-Filter for FAE1
Ref. FAE1-110

Filter for FAE1
Ref. FAE1-100

Compact Filter
(includes: HEPA and Carbon Filter)

⚠ **Read the safety guidelines to do the equipment maintenance safely.**

Safety

⚠ **Follow safety guidelines to prevent electric shock, injury, fire or explosion.**

- The equipment is only designed to filtrate the fumes generated by soldering.

- Do not use the units for the filtration of combustible, explosive or corrosive gasses. Incorrect use may cause fire.

- The power cord must be plugged into approved bases. Be sure that it is properly grounded before use. When unplugging it, hold the plug, not the wire.

- Do not leave the appliance unattended when it is on.

- Do not cover the ventilation grills. Heat can cause inflamable products to ignite.

- This appliance can be used by children over the age of eight and persons with reduced capabilities or lack of experience provided that they have been given adequate supervision or instruction concerning use of the appliance and understand the hazards involved.

- Maintenance must not be carried out by children unless supervised.

- Keep your workplace clean and tidy. Wear appropriate protective mask, glasses and gloves when handling dirt filter or pre-filter.

- Do not use the equipment without the filters.

- Saturated filters can not be cleaned and reused.

- Avoid blowing the filter or the dirty parts of the equipment, if necessary it is advisable to vacuum.

- Avoid losing particles in the filter during handling it.

- Treat the saturated filters as waste depending on the filtered contaminant and the applicable standards in each country. This is the European Waste Catalog classification:
  15 02: Absorbents, filter materials, wiping cloths and protective clothing.
  15 02 02: Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.
  15 02 03: Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02.

- In case of not complying with the filter change recommendations, the maximum particle and gas concentrations established in each country could be exceeded.

Notes

Notes

Specifications

FAE1
Fume Extractor for 1 Workbench
Ref.: **FAE1-1B** 100V 50/60Hz. Input power: 105W. Fuse 2A
120V 50/60Hz. Input power: 135W. Fuse 2A
Ref.: **FAE1-2B** 230V 50/60Hz. Input power: 115W. Fuse 1.25A

- Blower Type:	Brushless
- Blower max. Flow Rate:	180 m^3/h (106 CFM)
- Blower max. Vacuum:	3.2 kPa (0.46 psi)
- Work Areas (Workbenches):	1 or 2
- Noise:	55 dB @ 1m
- Pre-Filter:	Medium dust filter M5 (EN 779)
- Compact Filter:	HEPA filter H13 (EN 1822) Carbon filter
- Connections:	USB-B Pedal connector Station connectors (4x)
- Total Net Weight:	10.50 kg / 23.15 lb
- Total Package Dimensions / Weight: (L x W x H)	425 x 425 x 545 mm / 12.76 kg 16.73 x 16.73 x 21.46 in / 28.13 lb

Complies with CE standards.
ESD safe.

Warranty

JBC's 2 year warranty covers this equipment against all manufacturing defects, including the replacement of defective parts and labour.
Warranty does not cover product wear or misuse.
In order for the warranty to be valid, equipment must be returned, postage paid, to the dealer where it was purchased.
Get 1 extra year JBC warranty by registering here: https://www.jbctools.com/productregistration/ within 30 days of purchase.

This product should not be thrown in the garbage.
In accordance with the European directive 2012/19/EU, electronic equipment at the end of its life must be collected and returned to an authorized recycling facility.

www.jbctools.com