

BOFA

F U M E E L I M I N A T I O N



FOR A CLEANER,
HEALTHIER
WORKING
ENVIRONMENT



ADVANTAGE

Introducing BOFA's new ADVANTAGE Range of Laser fume control technology incorporating our unique deep mini pleat 2 stage pre filtration design. Most companies see laser fume extraction as a necessary evil, required to protect both the laser optics and the health of their operatives.

With this in mind BOFA's design philosophy is: To supply a Reliable, Safe, Easy to Use and cost effective system.

Reliability

The vacuum pump is the heart of the unit and all BOFA extractors are fitted with continuously rated pumps with a minimum life expectancy of 20,000hrs. This enables us to offer a 3 year warranty on all our laser extraction units. This warranty is backed up by our pump suppliers, giving you the added reassurance that BOFA systems are the most reliable on the market. Comprehensive training and support is also offered to both OEM's and end users.

Safety

A full range of unit and filter monitoring options are available to suit your specific requirements (see unit data sheets). Airflow path gives maximum filter life but also ensures that all particulate is held in the filters. The design of the unit is such that the exhausted air is blown into a sealed silencer box. This totally isolates any potentially explosive fumes being blown around the electrics of the pump. This is critical even when gas sensors are used as a foolproof precaution.

Ease of Use

Filter change is simply a case of opening the door at the rear of the unit and replacing the used filters with clean ones. Simple controls or alarms, either visual or direct to the laser indicates the need for filter replacement.

Cost effective

Extraction units

Much of our design criteria focus on our customers need for cost effective equipment. Our standard units offer many options for turnkey solutions. This enables the customer to only pay for the options that they require.

Replacement Filters

Low consumable costs are a big benefit for customers choosing Laser coders over inkjet. Many extraction systems have extremely expensive replacement filters making for very high annual running costs. BOFA have the highest capacity and by far the lowest cost filters available on the market.



ADVANTAGE 2 STAGE PRE-FILTER

All ADVANTAGE units are fitted with the new concept Deep Mini Pleat pre filter as standard. This unique filter gives a staggering 9m² of media surface without compromising the efficiency, which remains at 95%. Contaminated air enters the system through a 50mm inlet and is instantly expanded in the large pre filter chamber causing the velocity of the air to drop. The effect of this causes the larger particulate to rest gently on the surface of the filter, rather than hit it at speed and lodge within the filter media. Once the particulate has built up and got heavier, gravity breaks it away from this filter thus extending its life. Breakaway particulate is captured within the filter box.

HEPA FILTER

All BOFA HEPA filters are manufactured by specialist filter companies to our specification. This ensures that the latest manufacturing and testing techniques are used. Each filter incorporates a series of bonded webbing between the pleats. This feature not only guarantees even spacing between each pleat, but also alleviates the possibility of airflow vibration or collapse. Filters are individually tested and certified to a minimum efficiency of 99.997% down to 0.3 microns and 95% as small as 0.1 microns. Test certificates are available on request for the finished pleated filter, not just the media in flat form before it is folded and potentially ruptured in the pleating process.

CHEMICAL/GAS FILTER

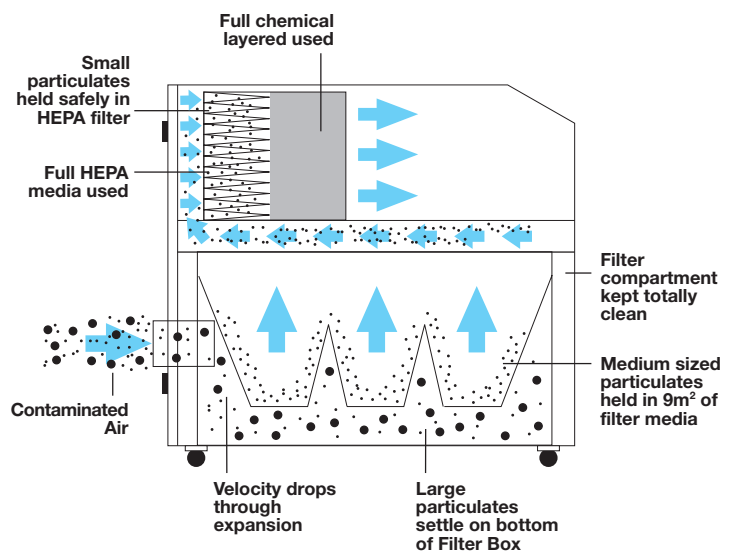
The standard chemical filter is made up of a 50/50 mix of Activated Aluminium Potassium Permanganate and Activated carbon. The media neutralises a broad base of chemicals and VOC (Volatile Organic Compound) pollutants. Where PVC is lasered a third gas media is introduced that is specifically designed to absorb and neutralise harmful and extremely corrosive Hydrogen Chloride (HCL) gas.

PVC LASERING

It is imperative on PVC applications that all internal contact parts are coated in an acid resistant epoxy, and that a specialist HCL sensor is installed to the extractor. This sensor gives an alarm as soon as the absorption media is nearing saturation. The problem of acidic hydrogen chloride getting through filters needs to be resolved long before it has chance to condense, since the gas is a major health hazard with a maximum exposure level of 1ppm (8hr period from HSE EH40/2000 Occupational Exposure Limits).

FILTER REPLACEMENT

Filters can be replaced quickly, with ease and safety. Each new filter comes with a resilient neoprene gasket fitted. This ensures that there is no filter bypass caused through reusing existing potentially torn or perished built in seals.



BOFA International is dedicated to improving existing products. Specifications may change without notice.

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THE ADVANTAGE 20

The Advantage 20 has been designed as an entry level laser fume elimination system. Although an entry level unit the Advantage 20 still incorporates BOFA's unique deep pleat pre filter technology offering 7m² of surface area. This system is ideal for low to medium laser use or slower production lines.

UNIT OPTIONS

24v Stop/Start via Laser - Allows the extractor to start and stop in sequence with laser.

IP56 Enclosure - To be used when the extractor will be located in washdown areas.

VOC Indicator - The VOC indicator will alert you when Volatile Organic Compounds are getting through the gas filter.

Dual Voltage/Frequency - Ideal for OEM's who will be selling extractors with their lasers worldwide.

Corrosion Proof Enclosure - For use when extractor will be purifying acid fumes as a result of PVC processing.

Filter Blocked Signal - Gives signal to laser when filters are blocked and need replacing.

System Failure Signal - Gives signal to laser in the event of a failure within the extractor.

HCl Monitoring - Will give a signal if HCL is getting through filters. To be used on all PVC applications.

UNIT SPECIFICATIONS

Carcass

Main body, central support, lid and base are 304 grade brushed stainless steel

Standard Equipment

3 year warranty

Industrial grade castors, two lockable

Integral silencer with air exhausted through base

Sound level below 60dba

Standard filter set (see below)

50mm/2" diameter inlet

Filter condition light

Weight: 35kg

Electrics

230v 1ph 50hz or 110v 1ph 60hz

2 metres power cable

Fused IEC illuminated switch

Full load current: 6 amps

Blower/Pump

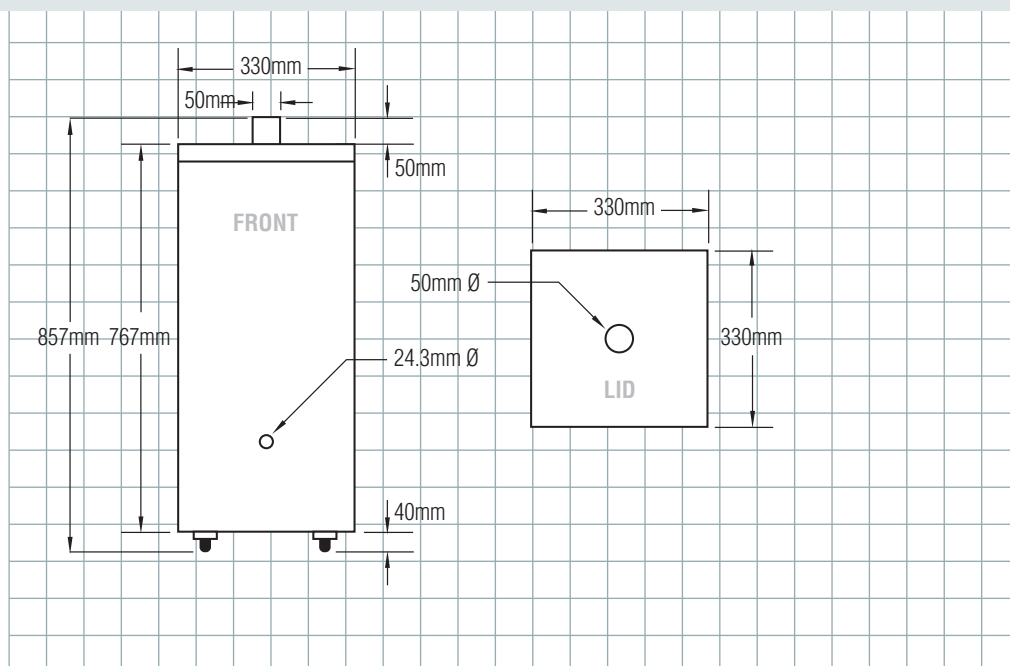
Side channel blower

20,000 hours life

0.8kW output

Airflow 180m³/hr (with filter fitted)

IP54 synchronous (brushless) motor



Standard Filter Set

Deep pleat pre-filter

95% efficiency at 0.8 micron. 7m² of surface area.

Combined filter

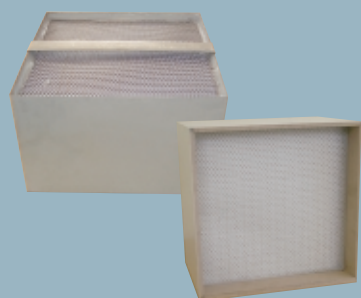
99.997% efficiency at 0.3 micron.

Gas filter media: Activated Carbon impregnated with potassium permanganate.

Guide to Filter Life

	Bag	Combined	Mini Pleat
Glass	9-12 Months	12 Months	Not required
Paper/Wood/Ceramic/Acetate/Cellulose	9-12 Months	9-12 Months	Not required
Metal	9-12 Months	12 Months	Not required
PET/PP/PE/Epoxy/EPDM/Rubber	2-3 Months	6-7 Months	4-6 Months
Ink Printed/Painted	2-3 Months	5-6 Months	6-7 Months
PVC	2-3 Months	Special Filter	4-6 Months

This chart is a guide only, factors such as character height, amount of characters and depth of the mark will have an effect on the life of the filter.



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THE ADVANTAGE 180

Specifically designed for every method of laser marking. The high extraction rate and vacuum coupled with unsurpassed filter capacity and design makes premature filter skinning or blocking, a thing of the past. The unit can be modified for PVC processing with an additional upgrade that incorporates a unique HCL gas monitor.

UNIT OPTIONS

24v Stop/Start via Laser - Allows the extractor to start and stop in sequence with laser.

VOC Indicator - Alerts you when Volatile Organic Compounds are getting through the gas filter.

Dual Voltage/Frequency - Ideal for OEM's who will be selling extractors with their lasers worldwide.

PVC upgrade - To be used when processing PVC. Includes ACID proofing internal contact parts, VOC monitoring and specific HCL monitor.

System Failure Signal - Signals laser in the event of a failure within the extractor.

Filter Condition Gauge

Filter Blocked Signal - Signals laser when filters need replacing.

Particulate Monitoring - Signals if particulate is detected.

UNIT SPECIFICATIONS

Carcass

Main body, central support, lid and base are 304 grade brushed stainless steel

Standard Equipment

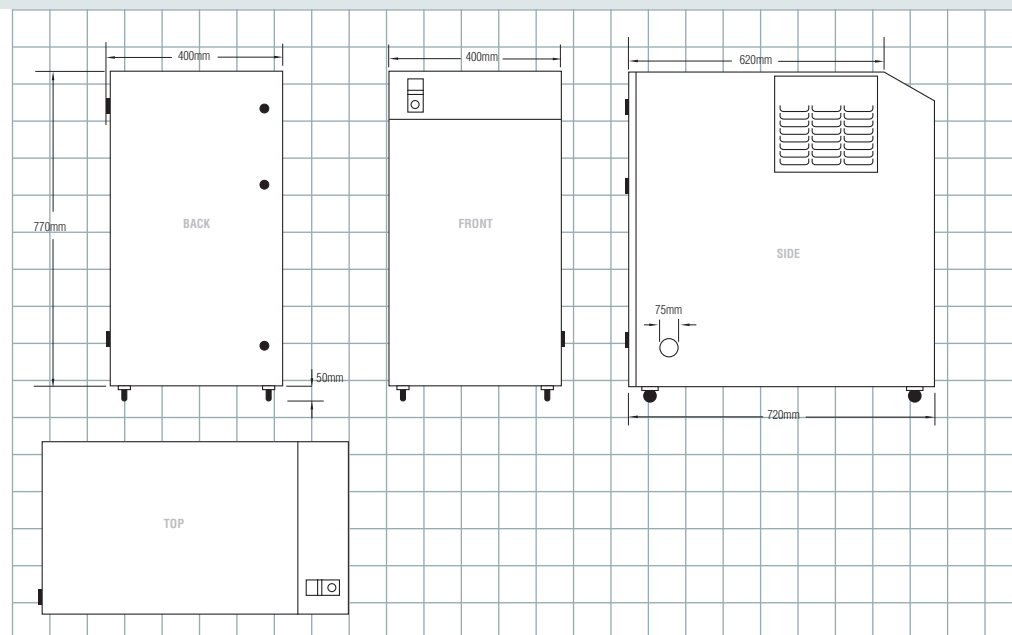
3 year warranty
Industrial grade castors, two lockable
Integral silencer
Filter blocked indicator light
Sound level below 60dba
Standard filter set (see below)
50mm diameter inlet
Corrosion resistant carcass
IP56 enclosure
Weight: 60kg

Electrics

230v 1ph 50/60hz or 110v 60/50hz
3 metres hard wired power cable
Illuminated 8A trip ON/OFF switch
Full load current: 6 amps

Blower/Pump

20,000 hours life
0.8kW output
Airflow 180m³/hr (with filter fitted)
IP54 synchronous (brushless) motor



Standard Filter Set

Mini pleat two stage pre filter

95% efficiency at 0.8 micron, 9m² of surface area.

Combined filter

99.997% efficiency at 0.3 micron HEPA.

Activated Carbon impregnated with potassium permanganate.

Guide to Filter Life

	Mini Pleat	Combined
Glass	9-12 Months	12 Months
Paper/Wood/Ceramic/Acetate/Cellulose	9-12 Months	9-12 Months
Metal	9-12 Months	12 Months
PET/PP/PE/Epoxy/EPDM/Rubber	4-6 Months	6-9 Months
Ink Printed/Painted	4-6 Months	6-9 Months
PVC	4-6 Months	6-9 Months

This chart is a guide only, factors such as character height, amount of characters and depth of the mark will have an effect on the life of the filter.

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THE ADVANTAGE 400

Purpose built for laser engraving, etching and marking cabinets. Offering an airflow of 400m³h along with Bofa's unique deep mini pleat pre filter makes this system ideal for these arduous applications. The advantage 400 can also be used for multiple laser marking heads simultaneously.

UNIT OPTIONS

24v Stop/Start via Laser - Allows the extractor to start and stop in sequence with laser.

VOC Indicator - Alerts you when Volatile Organic Compounds are getting through the gas filter.

PVC upgrade - To be used when processing PVC. Includes ACID proofing internal contact parts, VOC monitoring and specific HCL monitor.

System Failure Signal - Signals laser in the event of a failure within the extractor.

Filter Blocked Signal - Signals laser when filters need replacing.

Particulate Monitoring - Signals if particulate is detected.

UNIT SPECIFICATIONS

Carcass

Main body, central support, lid and base are 304 grade brushed stainless steel

Standard Equipment

3 year warranty

4 x 3" industrial grade castors, two lockable

Integral silencer

Filter blocked indicator light

Filter condition display

Sound level below 60dba (max flow)

Standard filter set (see below)

75mm diameter inlet

Corrosion resistant carcass

IP56 enclosure

Weight: 60kg

Electrics

230v 1ph 50/60hz or 110v 60/50hz

3 metres hard wired power cable

Illuminated ON/OFF switch

Full load current: 9 amps

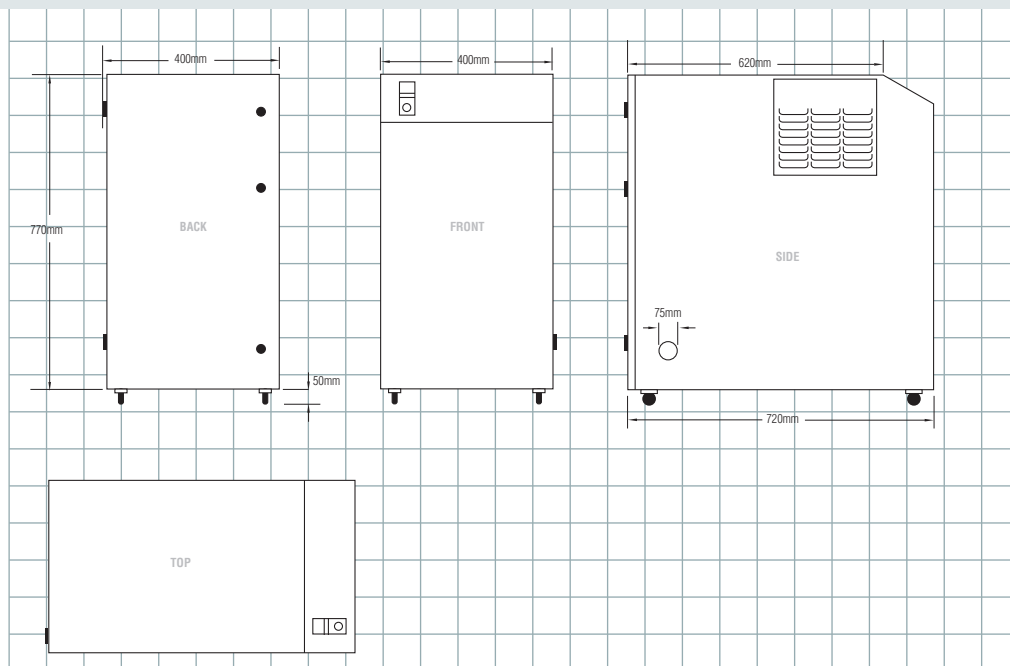
Blower/Pump

20,000 hours life

1.1kW output

Airflow 400m³/hr (with filter fitted)

IP54 synchronous (brushless) motor



Standard Filter Set

Mini pleat two stage pre filter

95% efficiency at 0.8 micron, 9m² of surface area.

Combined filter

99.997% efficiency at 0.3 micron HEPA.

Activated Carbon impregnated with potassium permanganate.

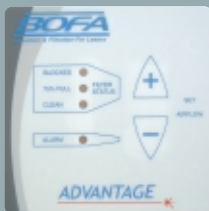
Guide to Filter Life

	Mini Pleat	Combined
Glass	9-12 Months	12 Months
Paper/Wood/Ceramic/Acetate/Cellulose	9-12 Months	9-12 Months
Metal	9-12 Months	12 Months
PET/PP/PE/Epoxy/EPDM/Rubber	4-6 Months	6-9 Months
Ink Printed/Painted	4-6 Months	6-9 Months
PVC	4-6 Months	6-9 Months

This chart is a guide only, factors such as character height, amount of characters and depth of the mark will have an effect on the life of the filter.

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System controls



THE ADVANTAGE 1500 & 4000

The Advantage 1500 & 4000 have been designed to cope with the mass of fume and dust generated during the laser cutting of materials. With huge airflow and massive filter holding capacity, these units are unrivalled in the field of laser cutting. The systems can also be used as centralised extraction units for multiple laser marking heads.

UNIT OPTIONS

24v Stop/Start - Allows the extractor to start and stop in sequence with laser

Filter Blocked Signal - Gives signal to laser when filters are blocked and need replacing

System Failure Signal - Gives signal to laser in the event of a failure within the extractor

Particulate Monitoring - Will give a signal if particulate is detected.

Stainless Steel Carcass - If unit is to be used in food/pharmaceutical areas.

UNIT SPECIFICATIONS

Carcass

Main Body, central support, door and base are manufactured in zintech steel and powder coated

Standard Equipment

3 years warranty

4 x 100mm industrial grade castors, two lockable

Integral silencer

Filter blocked indication graph

Gas detection

Automatic flow control

Standard filter set (see below)

125mm diameter inlet

Electrics

400v 3ph 50hz

Illuminated ON/Off switch

Advantage 1500

Blower/Pump

20,000 hours life

3.5kw

Airflow 1500M³/h (with filter fitted)

IP54 synchronous (brushless) motor

Advantage 4000

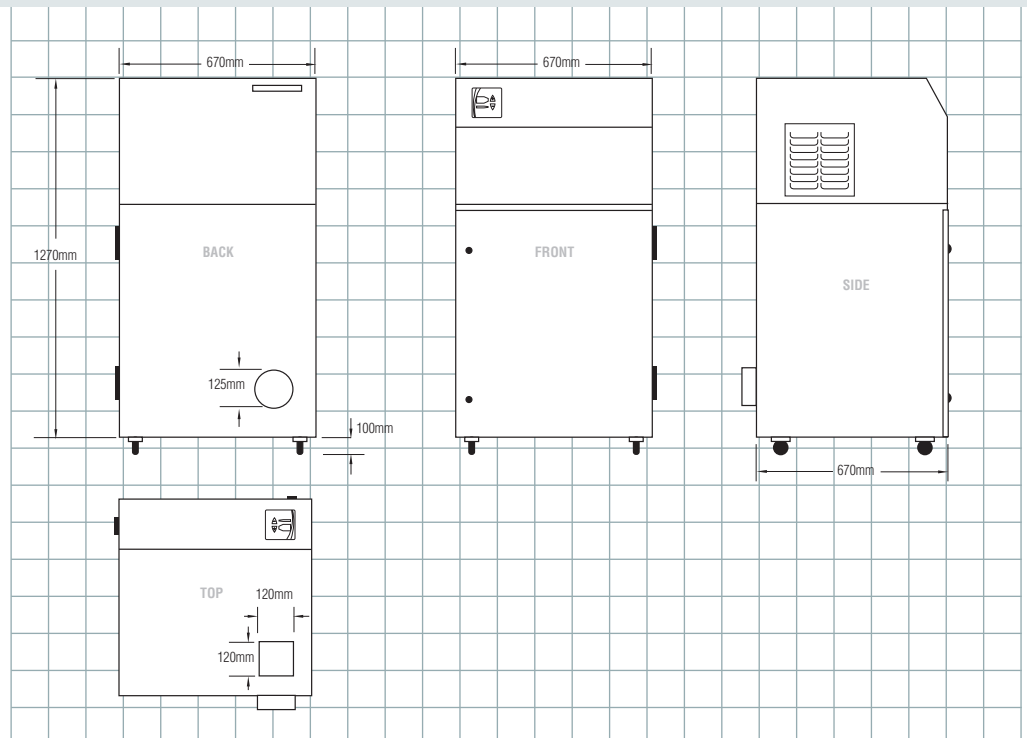
Blower/Pump

20,000 hours life

5kw

Airflow 4000M³/h (with filter fitted)

IP54 synchronous (brushless) motor



Standard Filter Set

Mini pleat two stage pre filter, 95% efficiency at 0.8 micron, 19m² of surface area

HEPA filter 99.997% efficiency at 0.3 micron

Gas filter

Active Carbon impregnated with Potassium Permanganate



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