

# LASER FUME EXTRACTION ADVANTAGE RANGE



# BOFA INTERNATIONAL IS THE MULTI AWARD-WINNING WORLD LEADER IN FUME EXTRACTION AND FILTRATION TECHNOLOGY.

We design, develop and manufacture systems for a wide range of industrial sectors and applications.

Our products ensure operator safety by capturing harmful dust and fumes which are generated during industrial processes while minimising disruption to production.

#### **WHY BOFA**

- ✓ Over 30 years' **experience**
- ✓ Market leader
- ✓ **Unrivalled** expertise in fume and dust extraction and filtration
- Innovative world-class solutions
- ✓ High **quality**, affordable systems
- ✓ Developed by **experts**

- **Dedicated** in house capabilities
- Offices in the **UK, USA** and **Germany**
- Global network of distributors
- Keeping the world working **safely**
- ✓ Continual **investment**
- **✓ Environmental** policy





# MARKET LEADING TECHNOLOGY

# We are recognised as the market leader, delivering great value, high quality products.

Many years of designing and manufacturing fume extraction and filtration systems for a wide range of industries has given BOFA the experience and expertise to ensure that our product solutions are the best available on the market. We have applied our in-depth understanding of industrial processes and applications into the design and manufacture of our products.

# THE FUTURE FOR FUME EXTRACTION IS TRULY GLOBAL

The need for fume extraction continues to be inherently linked with Health and Safety laws and compliance. Within the developed western markets such legislation is well defined and in the main compliance levels are high.

Most encouraging is the growing trend for improved employee welfare and environmental responsibility in regions where historically there has been less regard for either. This is a welcome and significant step change for our planet, and one that at the macro level will drive an even greater demand for fume extraction.

### **EXPERTISE**

### AND INNOVATION

Our dedicated team has a wealth of industry knowledge and unrivalled expertise which is established and trusted by all sizes of business: from global market leaders to niche producers in a wide cross section of industries.

Our programme of ongoing investment in research and development allows us to continuously improve products and pioneer new cutting-edge technologies, bringing the best and latest developments to our portfolio.

# QUALITY MANUFACTURING IN THE UK

Our philosophy is to maintain control of supply and quality standards throughout the entire manufacturing process of our products. We have an extensive range of proven fume extraction solutions to satisfy a broad range of applications - from single user systems to units that pack a heavyweight punch with unsurpassed filter capacity, high performance and everything inbetween. All made to the highest international manufacturing standards.

# iQ

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION

### AWARD WINNING

### **TECHNOLOGY**

# BOFA is awarded the Queen's Award for Enterprise 2017 for Innovation!

This highly prestigious accolade celebrates UK businesses who demonstrate excellence in their field. BOFA has been recognised for the development of the revolutionary Intelligent (iQ) Operating System, which is transforming the way that organisations around the world are able to protect the health of employees and improve production processes. The unique iQ system takes performance and safety parameters to a new level and ensures that maintenance downtime and ownership costs are kept to a minimum.

We also won the Queen's Award for International Trade in 2012, recognising that over 90% of our sales are now exported overseas.



# INTELLIGENT (iQ) OPERATING SYSTEM



### Pioneering the future of fume extraction.

Our award-winning Intelligent (iQ) Operating System brings multiple performance enhancements for higher efficiency of extraction, individual filter status monitoring and integral design features that combine to deliver a lower cost of ownership.

Most importantly, the iQ addresses the issue dreaded by most production teams - downtime - by minimising the potential for interrupting production for unplanned filter changes.

Sophisticated and advanced technology is inbuilt, providing a user-friendly and intuitive experience with the data being easy to access and analyse locally or remotely (from data downloaded via USB). It means that filter changes can be planned at a time to minimise or eliminate interruptions to production so business can continue as usual, as well as helping to avoid any costly or time-consuming service call-outs.

The iQ Operating System incorporates a method for monitoring the status of both the pre filter and combined (main) filter. Pre blockage warnings provide operators with ample time to prepare for a change by identifying which filter needs replacing and when so the uncertainty and guesswork is removed.

A user-friendly design is consistent across all iQ products for a more uniform look in environments where multiple units are in use. The operating 'easy read' control panel is on the top of each unit on a sloping fascia front so the data is easy to view.



# **DEEPPLEAT DUO**

# PRE FILTER



### Save filter life and money.

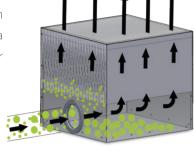
The DeepPleat DUO is the longest lasting pre filter available on the market, extending the life of your main filter and reducing the overall cost of ownership of your unit.



BOFA's unique patent-protected DeepPleat DUO pre filter technology is designed to maximise filter life. It incorporates a massive capacity drop-out chamber within the filter, along with an impressive surface area above the chamber to deal with a high volume and variety of particulate, ensuring optimised performance and filter life. Within the housing there is a sealed 200mm deep pleat layer of F8 media giving a surface area in excess of 6;12; and 30 sq metres.







| Product             | Inlet<br>size | Dropout<br>chamber<br>size   | Surface<br>media<br>area | Filter media<br>pleat size |
|---------------------|---------------|------------------------------|--------------------------|----------------------------|
| AD Nano (+)         | 50mm          | 7.44 litres                  | 6m²                      | 150mm                      |
| AD Oracle iQ        | 75mm          | 16.2 litres                  | 12m²                     | 200mm                      |
| AD 500/1000/1500 iQ | 125mm         | 58 litres                    | 30m²                     | 200mm                      |
| AD 2000 iQ          | 125mm         | 58 litres<br>x2 (116 litres) | 30m²<br>x2 (60m²)        | 200mm<br>x2 (400mm)        |
| AD 4000 iQ          | 125mm         | 58 litres<br>x3 (174 litres) | 30m²<br>x3 (90m²)        | 200mm<br>x3 (600mm)        |



# LASER FUME EXTRACTION

#### ADVANTAGE range

By maintaining a dust-free operating area, our systems help to protect valuable equipment, maintain a higher quality mark and reduce the number of rejects and contaminants.

#### **Applications**

Traceability and date codes
Deep laser engraving
Laser coding

Laser drilling
Laser cutting
Laser welding
Laser etching

Laser engraving

Laser micro-machining

Web scoring

Laser perforating

Laser cleaning
Laser kiss cutting
Laser pairing





#### Throughout this brochure you will see icons next to products to show their key features:



#### Intelligent (iQ) Operating System

Our patent-protected award-winning Intelligent (iQ) Operating System performs at two distinct levels: operators benefit from the ease of operation and clarity of real time information and the system provides a cache of analytical data, enabling users to download performance and operating parameters for evaluation purposes.

Find out more: bofa.co.uk/ig



#### DeepPleat pre filter

The DeepPleat pre filter consists of a pleated filter of 100mm depth or greater, allowing for increased surface area within a smaller area. This means BOFA filters last a long time and do not take up a large footprint.

Find out more: bofa.co.uk/deeppleat



#### DeepPleat DUO pre filter

Our patent-protected DeepPleat DUO pre filter technology is designed to maximise filter life. It incorporates a large capacity drop-out chamber within the filter. Above this chamber is an impressive surface area to deal with high volumes and variety of particulate, ensuring optimised perfomance and filter life.

The DeepPleat DUO is designed for easy and safe installation and replacement, which is particularly important as often harmful contaminents are captured within the filter.

Find out more: bofa.co.uk/deeppleatduo



#### HEPA filter

Removes 99.997% of particles at 0.3 micron in size.

Find out more: bofa.co.uk/hepa



#### AFC: Automatic flow control

AFC allows the operator to preset correct airflow rates for the specific application, subsequently maintaining this airflow. This generates lower noise levels and ensures further protection of HEPA filters.

Find out more: bofa.co.uk/afc



#### RFA: Reverse flow air technology

RFA enhances filter performance and ensures longer filter life. It causes a fall in velocity and air direction change. Larger particulate falls out of the airstream into the filter's drop out chamber. With less particulate entering the filter media the filter life is significantly increased. Contaminated air entering the drop out chamber is pulled vertically through the filters.

Find out more: bofa.co.uk/rfa



#### ACF: Advanced carbon filter

ACF assures safe capture and removal of hazardous fumes. Contaminated air must remain in contact with the carbon bed for a period of time sufficient to ensure that no contaminents or odours are emitted ('dwell time'). Our design considers the balance between airflow rates and the type, depth and surface area of the carbon used to ensure suitability for the contaminents associated with the application and to ensure appropriate dwell times are achieved.

Our filters have been developed to capture all contaminents and odours, eliminating the risk of bypass and/or tunnelling.

Find out more: bofa.co.uk/acf



#### MVS: Multi voltage sensing unit

Our MVS units automatically sense local voltage and adjust accordingly, between 90-257V, for global operation.



#### PATENTED technology

We invest in innovation and our products have a heritage of being tried, tested and trusted. We take great care in protecting our intellectual property and our integrity. Our product range includes aspects which are protected under patent copyright, design copyright, registered design and trade mark laws.



#### ProTECT

Our ProTECT service plan gives you peace of mind that your LEV systems are being expertly maintained throughout their working life.

Find out more: bofa.co.uk/protect



#### SureCHECK quality standard

In recognition of the importance of quality, health and safety and environmental management, we have created our SureCHECK quality standard, applied to every product we make.

Find out more: bofa.co.uk/surecheck





#### **AD ACCESS**

A compact system for light duty laser marking, coding and engraving applications. The AD Access combines economic ownership with performance to match the small laser user, ensuring safe operator working conditions and product quality.

A three-stage filter condition indicator is included as a standard feature.

Dimensions 512 x 320 x 310mm

20.1 x 12.6 x 12.2"

Airflow/Pressure 180m<sup>3</sup>/hr / 30mbar

106cfm / 30mbar

Technology













**Datasheet download** bofa.co.uk/ad-access





#### **AD 250**

The AD 250 provides a cost effective solution for light duty applications. This compact and extremely quiet system is ideal for use in schools, sign making workshops, small scale industrial environments and light laser coding applications.

Dimensions

570 x 380 x 380mm 22.4 x 14.9 x 14.9"

Airflow/Pressure

180m<sup>3</sup>/hr / 30mbar 106cfm / 30mbar

Technology



























#### **AD 350**

The quiet and compact AD 350 effectively removes potentially harmful fumes and particulate created during light duty laser marking, coding and engraving applications making it ideal for use in schools, sign making workshops and small scale industrial environments.

**Dimensions** 

590 x 375 x 375mm

23.2 x 14.8 x 14.8"

Airflow/Pressure 380m³/hr / 96mbar 223cfm / 96mbar

Technology















**Datasheet download** bofa.co.uk/ad-350















#### **AD NANO**

The AD Nano is ideal for small scale industrial environments and light to medium laser coding applications, whilst the reverse flow air technology enhances filter performance and ensures longer filter life, with its DeepPleat DUO filter technology.

**Dimensions** 

743 x 360 x 400mm

29.2 x 14.2 x 15.7"

Airflow/Pressure

170m<sup>3</sup>/hr / 30mbar 100cfm / 30mbar

Technology































#### **AD NANO+**

The compact 'go anywhere' fume extraction system is feature-packed for big performance in small scale industrial sites and light laser coding applications. Incorporating many of the features found on our larger systems, the AD Nano+ is a cost effective solution for light to medium duty applications, making it the ideal choice for installations where floor space is limited.

The use of an auto-voltage sensing turbine means that this unit can be used anywhere in the world.

743 x 360 x 360mm Dimensions

29.2 x 14.2 x 14.2"

Airflow/Pressure 300m³/hr / 96mbar

176cfm / 96mbar

Technology

































#### **AD UNIVERSAL**

This compact system is ideal for light to medium small scale industrial environments.



Dimensions

625 x 355 x 520mm 24.6 x 14 x 20.5"

380m<sup>3</sup>/hr / 96mbar

223cfm / 96mbar

Technology





Airflow/Pressure









**Datasheet download** bofa.co.uk/ad-universal















#### AD ORACLE SA iQ

This is our most technically advanced laser fume extractor, incorporating a powerful range of unique features into one compact unit.

It uses a smaller pre filter to the AD Oracle iQ making it ideal for lighter use applications.



**Dimensions** 

730 x 430 x 515mm

28.7 x 17 x 20.3"

Airflow/Pressure

380m<sup>3</sup>/hr / 96mbar

223cfm / 96mbar

Technology























bofa.co.uk/ad-oracle-sa-iq















NOW AVAILABLE W3 CERTIFIED

#### **AD ORACLE IQ**

The AD Oracle iQ is our most technically advanced laser fume extractor, combining a powerful range of unique features into one compact unit.

This versatile unit can be used across a range of laser applications and the revolutionary auto-voltage sensing blower automatically self adjusts to run on any voltage worldwide.

Our inline AD Cyclone has been designed to separate lower particle sizes during laser marking process.

Also fits the FireBOX.

See page 31 for further information.

980 x 430 x 430mm Dimensions

38.5 x 17 x 17"

Airflow/Pressure 380m3/hr / 96mbar

223cfm / 96mbar

Technology



















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bofa.co.uk/ad-oracle-iq

















### AD 500 iQ | 1000 iQ | 1500 iQ

The AD 500 iQ, AD 1000 iQ and AD 1500 iQ mid to high end laser fume extraction system combine extremely large filter capacity with high air flow and pressure rates, making them the ideal choice for heavy duty applications that generate large amounts of particulate and gaseous organic compounds.

AD 500 iQ Dimensions

1197 x 600 x 790mm

47.1 x 23.6 x 31.1"

Airflow/Pressure

550m<sup>3</sup>/hr / 100mbar

324cfm / 100mbar

AD 1000 iQ Dimensions

1197 x 600 x 790mm 47.1 x 23.6 x 31.1"

Airflow/Pressure

850m<sup>3</sup>/hr / 100mbar 500cfm / 100mbar

AD 1500 iQ Dimensions

1197 x 600 x 790mm

47.1 x 23.6 x 31.1"

Airflow/Pressure

1250m<sup>3</sup>/hr / 100mbar 735cfm / 100mbar

Technology



















#### **Datasheet download**

bofa.co.uk/ad-500-iq bofa.co.uk/ad-1500-iq

bofa.co.uk/ad-1000-iq



See page 33 for our AD Storm self cleaning inline filter system and AD DU1 powder dosing module.















#### **AD 2000 iQ**

The AD 2000 iQ's technology delivers superior and measurable performance, ensuring airflow and filtration is maintained even when particulates start to build up. The dual filter system creates maximum capacity while the three-stage filtration process ensures peak performance. This makes it suitable for the most demanding and complex installations, so you can rely on extended filter life, together with effective removal of fumes and particulates.

The AD 2000 iQ's design also permits greater flexibility of different exhaust installations and different configurations allowing recirculation via the rear panel or externally vented hose connection systems.

1277 x 1318 x 1013mm Dimensions

50.3 x 51.9 x 39.9"

Airflow/Pressure 2200m<sup>3</sup>/hr / 96mbar

1295cfm / 96mbar

Technology



















**Datasheet download** bofa.co.uk/ad-2000-ig

















#### **AD 4000**

BOFA's AD 4000 laser fume extraction unit combines. large filter capacity with high airflows. This combination makes the AD 4000 ideal for large laser engravers, laser cutters as well as multiple laser coding installations.

Easily accessible filters are accommodated by the uniquely styled gas spring assisted 'gull winged' doors, which allow for maximum space and ease when changing filters.

Unit interfaces such as stop/start and system failure are available as options.

1475 x 1450 x 1500mm **Dimensions** 

50.2 x 76.7 x 43.3"

Airflow/Pressure 4000m<sup>3</sup>/hr / 30mbar

2354cfm / 30mbar

Technology













**Datasheet download** bofa.co.uk/ad-4000

















#### Coming soon...

#### **AD 4000 iO**

The AD 4000 iQ delivers superior and measurable performance, ensuring airflow and filtration is maintained even when particulates start to build up from the triple DeepPleat DUO and combined filter setup. This makes it suitable for the most demanding and complex installations, so you can rely on extended filter life, together with effective removal of fumes and particulates.

The AD 4000 iQ's design also permits greater flexibility of different exhaust installations. Different exhaust configurations allow recirculation via the rear panel or externally vented hose connection systems.

Dimensions

1955 x 1100 x 1300mm

77 x 43.4 x 51"

Airflow/Pressure 3600m³/hr / 44mbar 2119cfm / 44mbar

Technology

































#### **AD PVC iQ**

The AD PVC iQ extraction system has been designed to effectively deal with the corrosive nature of the fumes generated when lasering PVC materials.

It incorporates many of the AD Oracle iQ features as standard but in addition all internally exposed surfaces have been coated to resist the corrosive nature of the fume and each unit is fitted with HCL and VOC sensors which continually monitor the exhaust air of the unit giving added safety assurance.

1090 x 570 x 640mm Dimensions

43 x 22.4 x 25"

Airflow/Pressure 350m<sup>3</sup>/hr / 96mbar

206cfm / 96mbar

Technology





































#### **AD GoldSEAL RS**

The AD GoldSEAL RS is a fume and dust extraction system designed for the jewellery industry that recovers and collect precious metals. The metal particles are collected in an easy to remove tray and the HEPA filter can be incinerated to reveal the metal collected in the filtration process.

This unit also benefits from a lock and a lockable filter inside.

Dimensions

615 x 377 x 470mm

24.2 x 14.8 x 18.5"

Airflow/Pressure

267m<sup>3</sup>/hr / 96mbar 157cfm / 96mbar

Technology













**Datasheet download** 

bofa.co.uk/ad-goldseal-rs

















#### **AD Base 1 Oracle**

Suitable for a range of lasers, the AD Base 1 Oracle contains DeepPleat DUO pre filter and auto-voltage blower in a compact base system. BOFA's easi-seal filter location makes filter change easy, quick and safe.

As with all our Base systems, this unit has the option of an onboard compressor for a compact installation.



Airflow/Pressure 380m<sup>3</sup>/hr / 96mbar 223cfm / 96mbar

Technology

**Dimensions** 



















**Datasheet download** bofa.co.uk/ad-base-1-oracle













#### **AD Base 2 Oracle**

Adapting the AD Base 1 Oracle, this unit sits lower to allow larger bed lasers to be placed securely on top whilst giving a direct extraction system. This system also benefits from a DeepPleat DUO and MVS.

As with all our Base systems, this unit has the option of an onboard compressor for a compact installation.

Dimensions

550 x 1060 x 745mm

21.6 x 41.7 x 29.3"

Airflow/Pressure

380m<sup>3</sup>/hr / 96mbar

223cfm / 96mbar

#### Technology



















#### **Datasheet download**

bofa.co.uk/ad-base-2-oracle

















#### AD Base 3

The AD Base 3 is designed for the smaller Universal Versa Laser. The optional onboard compressor makes this a compact installation.



770 x 680 x 470mm **Dimensions** 

30.3 x 26.8 x 18.5"

Airflow/Pressure 180m<sup>3</sup>/hr / 30mbar

105cfm / 30mbar

Technology





























#### AD Base C180

Bespoke unit tailored to match the GCC C180 laser engraver. The dimensions of the unit allow the C180 to fit perfectly onto the extractor, effectively doubling it up as a work station. The unit is also offered with an onboard air compressor to provide the laser with its air assist requirements and comes complete with extraction hose kit and compressor link up on compressor models.

Dimensions

795 x 720 x 675mm

31.3 x 28.3 x 26.6"

Airflow/Pressure

180m³/hr / 30mbar

105cfm / 30mbar

Technology











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bofa.co.uk/data/ad-base-c180















#### **AD Base Z**

The AD Base Z has been designed specifically for the Epilog Zing laser engraver. The dimensions of the unit allow the Zing to fit perfectly onto the extractor, effectively doubling it up as a work station. The distinctive blue finish has been matched with the blue ends of the laser to give a stylish installation.

The unit is also offered with an onboard air compressor to provide the laser with its air assist requirements. All units come complete with extraction hose kit and compressor link up on compressor models.

Dimensions 770 x 760 x 560mm

30.3 x 29.9 x 22"

Airflow/Pressure 180m³/hr / 30mbar 105cfm / 30mbar

105ctm / 30m

Technology











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#### **Mobile FumeKART**

The FumeKART is the ideal portable air extraction and filtration unit and can be applied to a variety of applications.

Designed to filter dust particles, weld fumes, mold spores, solvent vapours and other pollutants from the work environment, the FumeKART is easy to operate and maintain and provides the additional benefit of being fully portable.

User will have flexibility and the assurance of high performace filtration. A filter condition indicator is included as a standard feature, together with three-stage filtration: pre filter, HEPA and gas filter.

**Dimensions** 

875 x 475 x 430mm

37.4 x 18.7 x 17"

Airflow/Pressure

380m³/hr / 100mbar 223cfm / 100mbar

Technology











Datasheet download

bofa.co.uk/mobile-fumekart











#### ACCESSORIES Dust and fume extraction products





#### **INLINE FILTERS**

Laser marking generates a range of particle sizes from 0.1 micron upwards so standard cyclone separators are not suitable.

#### **AD Cyclone**





BOFA's inline cyclone is designed to operate more efficiently at these lower particle sizes.

The cyclone separator has been designed specifically for use with the AD Oracle iQ and is installed between the laser extraction point and the extractor. The airflow generated by the extraction unit powers the cyclone.

#### FireBOX - self extinguishing inline pre filter









In the rare event that a burning ember or spark is drawn into the fume extraction unit, there is the possibility that debris in the filters could ignite. Although any resultant fire would typically be retained within the fume extraction unit, this would cause significant damage and in extreme circumstances the risk may extend beyond the extraction unit. For processes where such risks have been identified, additional protection in the form of an in line firebox is an additional precaution.













#### **INLINE FILTERS**

The BOFA inline pre filters have been designed specifically for applications that generate high amounts of dust or particulate.

#### ILF 300/600





The filter unit is positioned alongside the main BOFA fume filtration system to increase the overall filter capacity and extend the life of the main, more expensive filters.

A range of application dependent filter types and configurations are available on request.

The BOFA inline pre filter 1000 has been designed

specifically for applications that generate high

amounts of dust or particulate.

#### **ILF 1000**









This inline filter unit has a large DeepPleat DUO and is positioned alongside the main BOFA fume filtration system to increase the overall filter capacity and extend the life of the main filters.

#### **ILF Spark** Arrestor





BOFA's ILF Spark Arrestor unit effectively prevents potentially damaging burning particulates, generated during laser marking processes, from entering the fume extraction system.

Hot burning particulate is trapped by the unit's special metal filter pads, where it remains and burns out, so protecting the fume extraction system.

















#### Laser cutting system with powder dosing unit

Our AD 1000 iQ partners with the AD Storm and AD DU1 to produce a complete extraction solution for laser cutting applications. The setup combines with high airflow and pressure rates, making it the ideal choice for heavy duty applications that generate large amounts of particulate and gaseous organic compounds.

The AD Storm has been designed to extend filter life in applications where large amounts of

particulate are generated that quickly block the standard pre filters. The unit pulses a jet of air into a cylindrical filter clearing the filter surface of particulate. This particulate is then collected in a collection tray in the base of the unit.

The AD DU1 is designed to work in conjunction with the AD Storm. It contains powder which is dispensed into the airstream, coating sticky particles before they pass into the AD Storm.















### ACCESSORIES Dust and fume extraction products



#### LASER COOLING UNITS

| AD 200 CU | cooling air unit. It supplies cool, filtered air to both the laser and power supply module. This clean, cool air ensures optimal laser performance and reliability.  |
|-----------|--|
| AD 350 CU | Designed to supply cool, filtered air to both the laser and power supply module. This clean, cool air ensures optimal laser performance and reliability. It can also be used as a seal to increase the IP rating of the laser. |



#### **PIPEWORK**

We offer a wide range of pipework available in 50mm, 75mm, 110mm, 125mm.

Speak to your sales representative to ensure you get the right pipework for your system.





# Can't find an accessory that fits your requirements?

We have an extensive range of accessories available. On request we can create bespoke accessories to complement our full range of BOFA dust and fume extraction systems.

Call **UK**: **+44 (0)1202 699 444** Visit **bofa.co.uk** Email **info@bofa.co.uk** 

Call **Germany**: **+49 (0)40 7393735-15** 

Call USA: (618) 205-5007 Visit bofaamericas.com Email sales@bofaamericas.com





Speak to our experts today to find the perfect solution for your specific requirements.

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