



A Donaldson Company

A WORLD LEADER IN FUME  
EXTRACTION TECHNOLOGY

# FILTRATION AND ATMOSPHERE MANAGEMENT FOR ADDITIVE MANUFACTURING AND 3D PRINTING

- Fused deposition modeling
- VAT polymerization
- Material jetting
- Directed energy deposition
- Powder bed fusion
- Binder jetting
- Sheet lamination
- Post-processing

METALS

POLYMERS

HIGH TEMPERATURE PROCESSES





3D printing is a rapidly growing industry, with new applications and materials being processed every day. With more affordable solutions on the market, 3D printing is fast becoming part of everyday small scale and mass manufacturing.

The use of an effective atmosphere management and filtration system is an important part of your overall strategy to help protect employee safety and maintain reliability of the equipment to help safeguard the quality.

Our 3D PrintPRO and AM ranges have been developed specifically for the 3D printing and additive manufacturing markets, applying our 35 years of experience designing, developing and manufacturing cutting-edge fume extraction for a range of industries. We work with customers to understand individual requirements and help ensure you have the most appropriate system for your process.

## FOR MORE INFORMATION

**Speak to our knowledgeable team today!**

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**Tel.** +1 (618) 205 5007

**Web.** [bofainternational.com/us](http://bofainternational.com/us)

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# 'Print your own' connectors

- for small to medium format 3D printers

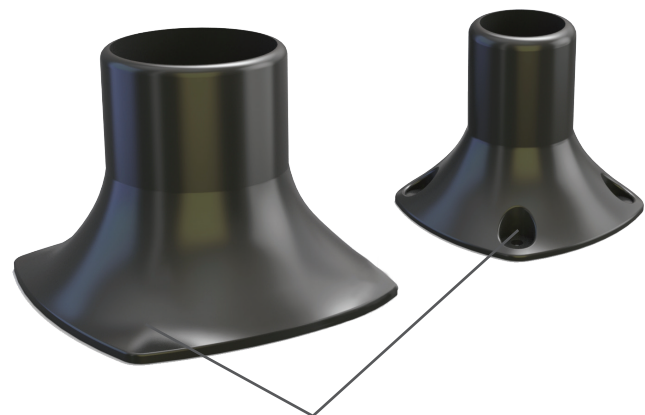
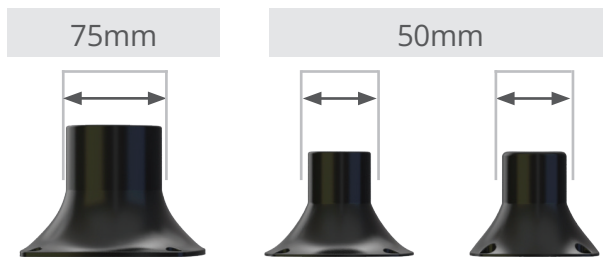
Don't have a way to connect your extractor to your 3D printer? The print your own connector files are **free of charge** and available from our website - [bofainternational.com/us/print-your-own](http://bofainternational.com/us/print-your-own)

Suitable for:  
**3D PrintPRO 3**  
**3D PrintPRO 4**

There are five different sizes available with a choice of adhesive or bolted options.

Spigot sizes:	50 / 75 mm
Axial fan sizes:	60 / 70 / 92 / 120 mm

- 60 mm – 50 mm
- 70 mm – 50 mm
- 92 mm – 50 mm
- 92 mm – 75 mm
- 120 mm – 50 mm
- 120 mm – 75 mm



Designed with or without screw holes

For connection types not shown here, contact us.

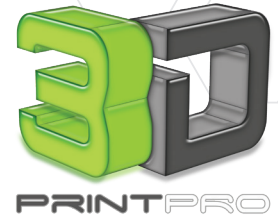
[bofainternational.com/us/print-your-own](http://bofainternational.com/us/print-your-own)



# 3D PrintPRO 2

- for small format 3D printers (build volume < 0.03m<sup>3</sup>)

Suitable for: FDM; SLA; DLP



Filters fume	✓ Filtered air, environment and printer chamber ✓ Helps protect people and equipment ✓ Reduces odor
Long filter life	✓ Maximum uptime
HEPA filter status indicator	✓ Accurate and timely filter changes
Remote start / stop	✓ Integrated to turn on / off with host unit
Moves air	✓ Ability to help manage heat
Low noise	✓ Less aural disruption
Compact and lightweight	✓ Easy to maneuver ✓ Small footprint
Simple set up	✓ Quick, intuitive installation
Universal voltage	✓ Single part number for global use
Detachable power lead	✓ Easy part set up for multiple locations



Dimensions	12.99 x 11.42 x 10.63"
Airflow	26cfm / 9mbar
Approvals	CE and UKCA



# 3D PrintPRO 3

- for medium sized 3D printers (0.03m<sup>3</sup> < build volume < 0.2m<sup>3</sup>)

Suitable for: FDM; SLA; DLP; material jetting

Filters fume *	✓ Filtered air, environment and printer chamber ✓ Helps protect people and equipment ✓ Reduces odor
Long filter life	✓ Maximum uptime
HEPA filter status indicator	✓ Accurate and timely filter changes
Remote start / stop	✓ Integrated to turn on / off with host unit
Variable air movement (speed control)	✓ Ability to help manage heat ✓ Better part quality ✓ Adjust to fit ideal flow rate ✓ Adjust to change settings between processes
Low noise	✓ Less aural disruption
Compact and lightweight	✓ Easy to maneuver ✓ Small footprint
Simple set up	✓ Quick, intuitive installation
Universal voltage	✓ Single part number for global use
Detachable power lead	✓ Easy part set up for multiple locations



Dimensions	15.75 x 11.42 x 11.81"
Airflow	88cfm / 18mbar
Approvals	CE and UKCA (available with UL** approval: 3D PrintPRO 3+)

\* Supplied with connection hoses and print your own plenum instructions.

\*\* Tested to UL and cUL standards, but testing may be provided by alternate nationally recognized test laboratories. Certain product configurations may affect the UL certification. Please speak to your sales representative.



# 3D PrintPRO 4

- premium system for large scale 3D printers; print farms with multiple 3D printers within a cabinet (build volume > 0.2m<sup>3</sup>)

Suitable for: FDM; SLA; DLP; material jetting

Filters fume	<ul style="list-style-type: none"> <li>✓ Filtered air, environment and printer chamber</li> <li>✓ Helps protect people and equipment</li> <li>✓ Reduces odor</li> </ul>
Extra long filter life	<ul style="list-style-type: none"> <li>✓ Large carbon bed</li> <li>✓ Maximum uptime</li> </ul>
HEPA and optional gas filter status indicator	<ul style="list-style-type: none"> <li>✓ Accurate and timely filter changes</li> </ul>
Optional remote start / stop	<ul style="list-style-type: none"> <li>✓ Integrated to turn on / off with host unit</li> </ul>
Variable air movement (speed control)	<ul style="list-style-type: none"> <li>✓ Ability to help manage heat</li> <li>✓ Better part quality</li> <li>✓ Adjust to fit ideal flow rate</li> <li>✓ Adjust to change settings between processes</li> </ul>
Override switch	<ul style="list-style-type: none"> <li>✓ Extractor can operate without host machine</li> <li>✓ Easier to test unit function</li> </ul>
Low noise	<ul style="list-style-type: none"> <li>✓ Less aural disruption</li> </ul>
Compact	<ul style="list-style-type: none"> <li>✓ Small footprint</li> </ul>
Lockable castors	<ul style="list-style-type: none"> <li>✓ Easy to maneuver</li> </ul>
Simple set up	<ul style="list-style-type: none"> <li>✓ Quick, intuitive installation</li> </ul>
Universal voltage	<ul style="list-style-type: none"> <li>✓ Single part number for global use</li> </ul>
Detachable power lead	<ul style="list-style-type: none"> <li>✓ Easy part set up for multiple locations</li> </ul>



Dimensions	24.61 x 15.16 x 20.67"
Airflow	159cfm / 96mbar
Approvals	CE and UKCA   cUL   UL**

\*\* Tested to UL and cUL standards, but testing may be provided by alternate nationally recognized test laboratories. Certain product configurations may affect the UL certification. Please speak to your sales representative.



# 3D PrintPRO HT

- for medium sized high temperature 3D printers (0.03 m<sup>3</sup> < build volume < 0.2m<sup>3</sup>)

Suitable for: High temperature FDM; SLA; DLP; material jetting

Continuous high temperature particulate removal	<ul style="list-style-type: none"> <li>✓ Filtered air, environment and printer chamber</li> <li>✓ Helps protect people and equipment</li> </ul>
End of print cycle high temperature particulate and gas removal	<ul style="list-style-type: none"> <li>✓ Reduces particulate and odor</li> </ul>
Long filter life	<ul style="list-style-type: none"> <li>✓ Maximum uptime</li> </ul>
HEPA filter status indicator	<ul style="list-style-type: none"> <li>✓ Accurate and timely filter changes</li> </ul>
Automated circulation to purge function	<ul style="list-style-type: none"> <li>✓ Extractor can tell host machine when maintenance is required</li> </ul>
Remote start / stop	<ul style="list-style-type: none"> <li>✓ Integrated to turn on / off with host unit</li> </ul>
Low noise	<ul style="list-style-type: none"> <li>✓ Less aural disruption</li> </ul>
Compact and modular	<ul style="list-style-type: none"> <li>✓ Easy to maneuver</li> <li>✓ Small footprint</li> </ul>
Simple set up	<ul style="list-style-type: none"> <li>✓ Quick, intuitive installation</li> </ul>
Detachable power lead	<ul style="list-style-type: none"> <li>✓ Easy part set up for multiple locations</li> </ul>



Dimensions	15.75 x 15.75 x 23.5"
Airflow	35cfm / 18mbar
Approvals	CE and UKCA



# AD 350

- for print farms with multiple 3D printers within a cabinet

Suitable for: Versatile for large scale 3D printers; printing farms



Filters fume	✓ Filtered air, environment and printer chamber ✓ Helps protect people and equipment ✓ Reduces odor
Long filter life	✓ Increased uptime
HEPA filter and optional gas status indicator	✓ Accurate and timely filter changes
Optional remote start / stop	✓ Integrated to turn on / off with host unit
Variable air movement (speed control)	✓ Ability to help manage heat ✓ Better part quality ✓ Adjust to fit ideal flow rate ✓ Adjust to change settings between processes
Compact	✓ Small footprint
Simple set up	✓ Quick, intuitive installation
Universal voltage	✓ Single part number for global use
Detachable power lead	✓ Easy part set up for multiple locations



Dimensions	23.23 x 15.94 x 18.31"
Airflow	223cfm / 96mbar
Approvals	CE and UKCA   cUL   UL**



# AD Oracle SA iQ

- for large scale production processes

Suitable for: Material jetting; binder jetting; SLM and PBF of polymers

Filters fume	✓ Filtered chamber environment and clean laser lens ✓ Higher quality process ✓ Helps protect people and equipment
Long filter life	✓ Maximum uptime ✓ Less disruption
Flow control	✓ Adjust to fit ideal flow rate ✓ Constant flow, despite filter saturation ✓ Airflow measured and displayed ✓ Better part quality
System status indicator	✓ System alarms shown on screen / through signal wires ✓ Easy identification of extraction problems ✓ Easy download of log file to assess issues
Filter status indicator	✓ Accurate and timely filter changes
Remote start / stop	✓ Integrated to turn on / off with host unit
HEPA and gas filter status indicator	✓ Accurate and timely filter changes
Override switch	✓ Extractor can operate without host machine ✓ Easier to test unit function
Low noise	✓ Less aural disruption
Compact	✓ Small footprint
Lockable castors	✓ Easy to maneuver
Simple set up	✓ Quick, intuitive installation
Universal voltage	✓ Single part number for global use
Detachable power lead	✓ Easy part set up for multiple locations
Optional Cyclone inline filter	✓ Extends filter life and extraction performance



Dimensions	29.33 x 17.72 x 20.28"
Airflow	223cfm / 96mbar
Approvals	CE and UKCA   cUL   UL**

\*\* Tested to UL and cUL standards, but testing may be provided by alternate nationally recognized test laboratories. Certain product configurations may affect the UL certification. Please speak to your sales representative.





# AM 400

- for inert particulate filtration - powder bed fusion processes

Suitable for: Inert atmosphere powder bed processes



Remote isolated ergonomic filter housing	<ul style="list-style-type: none"> <li>✓ Filter kept under inert conditions when housing removed</li> <li>✓ Ability to move un-processed filter to remote, safe area for passivation</li> <li>✓ Easy to move and use</li> </ul>
Filters fume	<ul style="list-style-type: none"> <li>✓ Clean chamber environment and laser lens</li> <li>✓ Higher quality process</li> <li>✓ Helps protect people and equipment</li> </ul>
Long filter life	<ul style="list-style-type: none"> <li>✓ Maximum uptime</li> <li>✓ Less disruption</li> </ul>
Low leakage	<ul style="list-style-type: none"> <li>✓ Less oxygen ingress</li> <li>✓ Higher quality of printed parts</li> <li>✓ Less inert gas loss</li> </ul>
Quick filter change	<ul style="list-style-type: none"> <li>✓ Reduced time to change filter</li> </ul>
Flow control	<ul style="list-style-type: none"> <li>✓ Adjust to fit ideal flow rate</li> <li>✓ Constant flow, despite filter saturation</li> <li>✓ Airflow measured and displayed</li> </ul>
System status indicator	<ul style="list-style-type: none"> <li>✓ System alarms shown on screen / through signal wires</li> <li>✓ Easy identification of extraction problems</li> <li>✓ Easy download of log file to assess issues</li> </ul>
Filter status indicator	<ul style="list-style-type: none"> <li>✓ Accurate and timely filter changes</li> </ul>
Remote start / stop	<ul style="list-style-type: none"> <li>✓ Integrated to turn on / off with host unit</li> </ul>
Easy to clean internals	<ul style="list-style-type: none"> <li>✓ Enables complete and thorough cleaning of gas path</li> </ul>
High performance pump	<ul style="list-style-type: none"> <li>✓ Able to overcome complicated installations</li> <li>✓ Consistent high volume flow</li> </ul>
Lockable castors	<ul style="list-style-type: none"> <li>✓ Easy to maneuver</li> </ul>



Dimensions	31.10 x 33.74 x 65.75"
Airflow	224cfm / 250mbar
Approvals	CE and UKCA





# Post-processing

Dusts and powders from mechanical finishing, solvents (IPA) from vapor finishing and support material removal



## FumeCAB 250

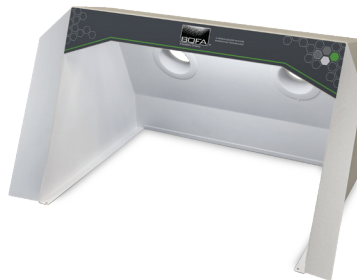
A small but versatile fume cabinet which can be used for an array of 3D printing / AM post-processing applications.

Partial enclosures are steadily becoming the preferred option for greater protection on processes that produce potentially harmful fumes.

Suitable for manual post-processing of parts from AM processes.

[bofainternational.com/fumecab-250](http://bofainternational.com/fumecab-250)

Dimensions	1.42 x 15.75 x 11.81" (290 x 400 x 300mm)
Opening dimensions	10.4 x 15.7" (265 x 400mm)



## FumeCAB 600

Providing a larger working area with higher airflow for use in 3D printing / AM applications, the FumeCAB 600 boasts the same features as the FumeCAB 250 and works alongside the DustPRO 400 extraction system to help protect the operator and process.

Suitable for manual post-processing of parts from AM processes.

[bofainternational.com/fumecab-600](http://bofainternational.com/fumecab-600)

Dimensions	13.98 x 24.02 x 16.54" (355 x 610 x 420mm)
Opening dimensions	12.4 x 21.3" (315 x 540mm)



## FumeCAB 700

Suitable as a post-processing filtration and atmosphere management system. This is an all-in-one enclosure with three levels of filtration and integrated LED lighting.

Suitable for manual post-processing of parts from AM processes and filtering off-gassing from washing and curing baths.

[bofainternational.com/fumecab-700](http://bofainternational.com/fumecab-700)

Dimensions	30.71 x 27.56 x 19.29" (780 x 700 x 490mm)
Opening dimensions	26 x 8.8" (675 x 225mm)



## FumeCAB 1000 iQ

Suitable as a post-processing filtration and atmosphere management system with a large working area. This all-in-one enclosure has three levels of filtration, integrated LED lighting and BOFA's Intelligent Operating System (iQ).

Suitable for manual post-processing of parts from AM processes and filtering off-gassing from washing and curing baths.

[bofainternational.com/fumecab-1000-iq](http://bofainternational.com/fumecab-1000-iq)

Dimensions	39.49 x 39.37 x 25.79" (1003 x 1000 x 655mm)
Opening dimensions	11.2 x 39.4 x 25.6" (285 x 1000 x 650mm)



## DustPRO 400

This filtration and atmosphere management system fits perfectly with the smaller FumeCABs and is compact enough to fit under a desk. It can also be used on its own with two arm connections and accessories.

Suitable for manual post-processing of parts from AM processes.

[bofainternational.com/dustpro-400](http://bofainternational.com/dustpro-400)

Dimensions	23.62 x 11.42 x 10.63" (600 x 290 x 270mm)
Airflow / Pressure	235cfm / 96mbar (1380m <sup>3</sup> /hr / 96mbar)



## AD Oracle SA iQ

A compact filtration and atmosphere management system designed for multiple smaller FumeCABs / accessories or a larger 3D system.

Suitable for automated post-processing of parts from AM processes and filtering gases and particles from automatic finishing stations.

[bofainternational.com/ad-oracle-sa-iq](http://bofainternational.com/ad-oracle-sa-iq)

Dimensions	29.33 x 17.72 x 20.28" (740 x 450 x 515mm)
Airflow / Pressure	223cfm / 96mbar (380m <sup>3</sup> /hr / 96mbar)

## 3D accessories

[bofainternational.com/3d-accessories](http://bofainternational.com/3d-accessories)



## WHICH PRODUCT IS MOST APPROPRIATE FOR YOU?

PRODUCT	APPLICATION					
	METAL BINDER JETTING / POWDER BED FUSION / DIRECT METAL LASER SINTERING / SELECTIVE LASER MELTING POLYMERS	FUSED DEPOSITION MODELING (FDM)	VAT POLYMERIZATION (SLA / DLP)	MATERIAL JETTING	POLYMER BINDER JETTING	POST-PROCESS
3D PrintPRO 2		✓	✓			
3D PrintPRO 3		✓	✓	✓		
3D PrintPRO 4		✓	✓	✓	✓	
3D PrintPRO HT		✓	✓	✓		
AM 400	✓					
AD 350		✓	✓			
AD Oracle SA iQ	✓*			✓	✓	✓
DustPRO 400						✓
FumeCAB 250						✓
FumeCAB 600						✓
FumeCAB 700						✓
FumeCAB 1000 iQ						✓

\* When enclosed.

We have 35 years' experience designing, developing and manufacturing fume extraction for a wide range of industries and applications, including laser, electronics, 3D printing and additive manufacturing, printing, dental and pharmaceutical. Speak to us today to discuss which BOFA products are most appropriate for your process.

### Don't see what you need?

The 3D printing and additive manufacturing industry is moving at a rapid pace with new materials and processes being tested and implemented all the time.

We already work with companies to create personalized and bespoke systems, whether they are stand-alone; ride on; or integrated systems.

Work with BOFA to create the perfect system for you.





A Donaldson Company

A WORLD LEADER IN FUME  
EXTRACTION TECHNOLOGY

For further information, please contact us

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