3D PRINTING
FUME EXTRACTION SOLUTIONS

BOFA™

THE WORLD LEADER IN FUME EXTRACTION TECHNOLOGY

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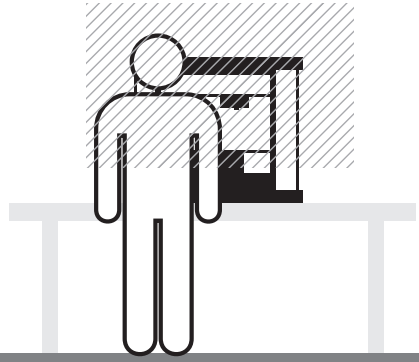
THE NEED FOR FUME EXTRACTION...



3D printing processes that heat materials cause particles, droplets and gases to be released that can be harmful if inhaled.

HEALTH & SAFETY

A current report* suggests a growing awareness of potential Health & Safety issues and, in particular, the harmful presence of 'nano particles' within the fume. These particles and droplets are too small to be seen by the naked eye, but just because you can't see them, doesn't mean the dangers for operatives don't exist.

In addition, ABS fume has a particularly unpleasant odour, and other plastics generate fumes that are equally toxic, but less noticeable.

Plus, curing processes associated with using liquid resins also cause potentially harmful solvent gases to be released into an operator's breathing zone.

PRODUCTIVITY & QUALITY

The prolonged release of sticky plastic droplets from the printing process can lead to a build-up of material on the printer's moving parts, requiring additional maintenance and potentially causing reliability issues.

The BOFA **Solution...**

The use of an effective fume extraction and filtration system protects operatives from potentially harmful fumes; avoids the risk of costly Health & Safety litigation for the employer; and maintains the reliability of the printer.

Having carried out a detailed study of the 3D printing industry, we have developed three fume control solutions to cover each of the main 3D printing formats.

Each system has been designed to effectively capture and filter out harmful airborne toxic gases and particulate without affecting the printing processes.

All units have HEPA grade particulate filter media which has an efficiency of 99.997% at 0.3µm, and deep bed activated carbon filters to remove organic gases and vapours.

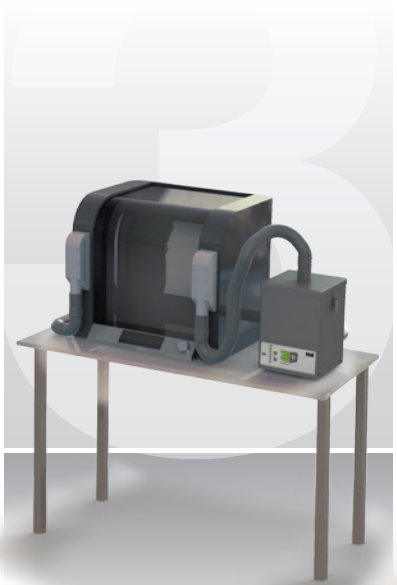
* "Ultrafine particle emissions from desktop 3D printers". Department of Civil, Architectural and Environmental Engineering, Illinois Institute of Technology, Chicago, IL, USA

3D PrintPRO 2

for **open framed** 3D printers

The BOFA 3D PrintPRO 2 is a low cost unit which extracts fumes generated by the printer without causing the filament deposition area to be cooled.

It has the benefits of low noise level and minimal power consumption. Each unit is supplied with a connection hose, ‘Stay Put’ arm and conical shaped nozzle.



3D PrintPRO 3

for **table top enclosed/partially enclosed** 3D printers

The BOFA 3D PrintPRO 3 incorporates an externally mounted plenum system which effectively captures fumes generated during the printing process and returns ultra clean, filtered air to the operator’s breathing zone.

The BOFA 3D PrintPRO 3 has the benefits of low cost, low power consumption and integral speed control. Each filtration unit is supplied with connection hoses and ‘print your own’ plenum instructions.

3D PrintPRO 4

for **large enclosed** 3D printers

The BOFA 3D PrintPRO 4 provides a high fume evacuation and filtration rate when connected to the printer via its extraction offtake point. The system can also return the filtered clean air either back to the printer enclosure for a cleaner print area or to the operator’s breathing zone.

The BOFA 3D PrintPRO 4 combines high flow rate with speed control within a compact free standing unit.

BOFA™

World leaders and your **Solutions Partner** for 3D printing...

BOFA International is acknowledged as the world leader in the design, manufacture and supply of fume extraction and filtration units and systems. BOFA products are used in a wide range of manufacturing processes, including printing, electronics, laser, mechanical engineering, dental, pharmaceutical, beauty and 3D printing.

> **“In all industry markets in which we operate, we develop close working partnerships with OEMs and distributors. Please contact us if you would like to discuss such a partnership in the 3D printing industry.”**

Tony Lockwood
Managing Director

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