ALVEO3D

SAFETY & AIR FILTRATION PARTNER

CONTACT

CONTACT DETAILS AND TEAM

Location
460 Rue de la Leysse
73000 Chambéry, France

Email
contact@alveo3d.com

Reseller
support@alveo3d.com

Reseller
09 78 80 93 94

Customer support
+33 978 809 394

English request
+33 616 806 403

Design	Production	Testing

AIR FILTRATION & AIR-QUALITY EXPERT

Products, consulting and services

Products:
Air-quality solutions and bespoke make

Consulting:
Installation, standards and compliance

Services:
Custom design, integration, studies

Schneider Electric · Université Gustave Eiffel · MBDA Missile Systems · Enedis
All3DP · INRAE · cnrs · SAFRAN Aerospace · Defence · Security
ENGIE · MINES Saint-Étienne · Fresenius Medical Care · Renault Trucks
EDF · Bericap · Thales
Umeå Universitet · Airbus · Technische Universität Dresden
BAUD Industries

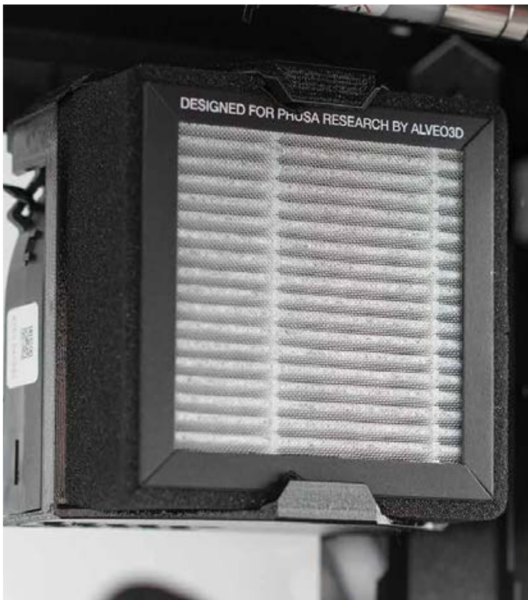
3D PRINTING MANUCTURER SOLUTIONS

Products, consulting and services

Alveo3D helps 3D printer manufacturers integrate effective air-filtration solutions directly into their machines.

- Large-format machines, consumer printers, or professional-only models.
- Using standard or customized filters to ensure the most cost-effective, best-fit, and highest-efficiency solutions possible.

Fabbrix



Prusa Research

CR-3D

RatRig

Cosmyx

Custom enclosure

Industrial guarding FDM / SLA resin / Laser cutting

- Custom enclosure for resin / FDM 3D printer
- Laminar-flow filtration unit for resin 3D printer

CUSTOM ENCLOSURE

CAISSON SUR MESURE AVEC SÉCURITÉ

Caisson sur mesure pour imprimante 3D résine / FDM

Assembled Custom-made

Custom enclosure

Industrial protection
Tailored dimensions
FDM & resin 3D printer
Operator safety
Machine safety
Environmental safety
ISO 7 clean room

Design

Aluminum profiles
30×30 mm, grey or black

Panels of choice
4 mm polycarbonate (UV option)
8 mm white HPL
Colored Dibond possible

Custom design
to match your equipment and space constraints.
3D rendering available

French manufacturing
All custom enclosures are designed, manufactured and shipped from Chambéry, France

Enclosure modularity
Single (box)
Stackable (cabinet)
Bell (open bottom)

Door modularity
Simple (sans cadre)
Simple (avec cadre)
Battantes (avec cadre)
Coulissantes

Support/chassis modularity
None, simple corner protectors
On adjustable feet
On casters

With frame
Custom height
Shelves
Enclosed frame

Side tool-holder support
AlveoPRO mount

Air-quality accessories
AlveoONE + V2 (FDM)
AlveoPRO 2
Air extractor

Enclosure accessories
Air intake grilles
Cable passthrough
Simple handle
Magnetic latch
Compression handle
Locking T-handle
Profile-mount bracket
LED bar light

Fire-safety accessories
Smoke detector with smart plug
Amulette automatic fire extinguisher

Acoustic accessories
Sound-damping foam
Anti-vibration mat

Find out More
alveo3d.com/en/enclosures/

CUSTOM FUME HOOD

FUME HOOD WITH AIR FILTRATION

Laminar-flow filtration unit for resin 3D printer

Assembled Custom-made

Fume hood

Designed to allow safe work under this unit. Intended for resin 3D printers and resin cleaning.

Applications

Resin 3D printing
Resin cleaning
Aerosol application

Containment enclosures & filtration cabinets for 3D printers

Cleanrooms and environments ISO 5 to ISO 7

Safety cabinets and controlled workstations

Industrial solutions requiring laminar flow and strict particle control

Reference	Fume hood on custom chassis	Fume hood with standardized enclosure
Unit dimensions	1175 × 575 × 230 mm	1175 × 575 × 230 mm
Filter dimensions	1170 × 570 × 150 mm	1170 × 570 × 150 mm
Dimensions with enclosure	< 1170 × 570 × 1280 mm	1170 × 570 × 1280 mm
Filter composition	H13 & ≥ 10 kg activated carbon	H13 & ≥ 10 kg activated carbon
Air velocity	0,45 m/s ± 20 %	0,45 m/s ± 20 %
Power	200 W	200 W
Power supply	220 V / 50 Hz (EU plug)	220 V / 50 Hz (EU plug)
Airflow	~ 900–1100 m³/h	~ 900–1100 m³/h
Noise level	55–63 dB (at 1 m below the filter)	55–63 dB (at 1 m below the filter)
Weight (with filter)	≈80 kg (filtre : 31 kg)	≈ 70 kg (filtre : 31 kg)

PROTECTIVE ENCLOSURE WITH COMPACT AIR-FILTRATION SYSTEM

- PrinterCase Series: Enclosure for FDM 3D printer
- PrintBOX: Enclosure for resin 3D printer

PROTECTIVE ENCLOSURE WITH AIR FILTRATION

Enclosure for FDM 3D printer

Delivered kit Available

PrinterCase Series

3 standard sizes
Aluminum structure
3 mm PMMA panels
P3D filtration system
Rear doors option
Stackable

Accessoires

AlveoZERO / AlveoPRO
air-filtration system

P3D filter
HEPA 13 & activated carbon

V2 control board
Timer, temp. sensor, alert

LED lighting
White LED strip

Filament passthrough
Guides for external filaments

Air intake grilles
Calibrated intake surface

Reference	Series 600	Series 800	Series 900
Composition	PMMA panels, aluminum profiles	PMMA panels, aluminum profiles	PMMA panels, aluminum profiles
Internal dimensions	598x597x600 mm	662x661x800 mm	765x763x900 mm
External dimensions	616x616x606 mm	680x680x806 mm	780x780x906 mm
Package weight	22 kg	25 kg	29 kg
Door width	536 mm	600 mm	700 mm
Door height	570 mm	770 mm	870 mm

Find out More
alveo3d.com/en/product/printercase-enclosure-3d-printer/

PROTECTIVE ENCLOSURE WITH AIR FILTRATION

Enclosure for resin 3D printer

Pre-assembled Available

PrintBOX

3 sizes
Light, compact dome
Resin 3D printer
P3DL filtration
Optional V2 control board
Riser available

Accessoires

AlveoZERO
air-filtration system

P3DL filter
HEPA 13 & activated carbon

V2 control board
Electronic control: timer, temp., service life

Compact and lightweight
Under 10 kg

Filament passthrough
Guides for external filaments

Standard version
Without the V2 option, the noise level does not exceed 47 dB

Reference
PrintBox 440
PrintBox 500
PrintBox 550

Composition
Panneau PMMA
accessoires PETG

Dimensions & Weight
Printbox 440
308x308x404 mm
6 kg
Printbox 500
388x388x454 mm
7.2 kg
Printbox 550
388x388x504 mm
9.8 kg

Version standard (sans V2)
ALHP-H6 axial fan

Débit d’air
25m³/h

Niveau sonore
47 dB

Reference
With V2 option

Compatible
PrintBox 440
PrintBox 500
PrintBox 550

Fonctions
-TFT display
-PWM: fan speed
-Timer -Monitoring: filter wear

-Customization options
-Filter-change reset
-Sleep mode
-Electronic safety
-Temperature sensor

Version standard (sans V2)
ALHP-H8 axial fan

Débit d’air
10 à 40 m³/h

Niveau sonore
40 à 60 dB

Reference
Riser

Compatible
PrintBox 440
PrintBox 500
PrintBox 550

Height
5 / 10 / 12 cm

Material
Black Galaxy PETG

Mounting
To be assembled

Find out More
alveo3d.com/en/product/printbox-sla-enclosure/

Industrial air-filtration system

- High-performance air extractor for resin / FDM 3D printer
- High-performance air extractor for CNC, milling, cutting & laser engraving
- Air filter for high-performance air extractor
- CE-marked products

INDUSTRIAL AIR FILTRATION SYSTEM

High-performance air extractor

New

Assembled

AlveoPRO-M100

référence
AlveoPRO-M100
AlveoPRO2-M100
AlveoPRO2.1-M100

Application
FDM 3D printers
Resin 3D printers

Dimensions & Weight
197x260x260 mm
8 kg

Filtration
HEPA H14 (99.995% at 0.3 µm) Activated carbon

Filter service life
Power

Power
24 V - 60 W

Débit d'air
Airflow, PWM control from 15 m³/h to 85 m³/h

Features
Display: speed (RPM), pressure (Pa), temperature (°C), saturation (%); Menu: FAN, TIMER, SETTINGS

Find out More
alveo3d.com/en/product/alveopro-3d-printer-fume-extractor/

New

Assembled

FE150

Reference
Fume extractor 150

Application
FDM/resin 3D printers, laser engraving, CNC dust

Dimensions & Weight
280 × 250 × 340 mm
10 kg

Filtration
HEPA H14 (99.995% at 0.3 µm), activated carbon, prefilter (anti-dust)

Filter service life
1500 h

Power
220 V - 150 W

Airflow
variable up to 258 m³/h

Features
speed, timer, panel lock, alarm reset

Noise level
< 55 dB

Assembled

FE350

Reference
Fume extractor 350

Application
FDM/resin 3D printers, laser engraving, CNC dust

Dimensions & Weight
400 × 300 × 560 mm
28 kg

Filtration
HEPA H13/H14, activated carbon, prefilter (anti-dust)

Filter service life
1500 h

Power
220 V - 350 W

Airflow
variable up to 460 m³/h

Features
speed, timer, panel lock, alarm reset

Noise level
< 68 dB

FILTER FOR INDUSTRIAL AIR FILTRATION SYSTEMS

Single or multi-stage filter

New

New

Assembled

M100

Application
Desktop FDM printing
Desktop resin printing

Composition
Filtration category:
HEPA H14
(99.995% @ 0.3 µm – MPPS)
Activated carbon

Filter media
Fiberglass, cotton,
PP & PET + activated carbon
(granules 1–3 mm)

Dimensions extérieures
175 × 175 × 106 mm

Caractéristiques techniques
Silicone gasket
Max airflow: 85 m^3/h
Max air speed: 0.92 m/s
(filter outlet)
Air resistance: 450 Pa
Service temperature:
0–60 °C
Weight: ~1.1 kg

Durée de vie
1500 h

Assembled

FC150-filter

Application
Desktop FDM printing
Desktop resin printing Laser
engraving, CNC dust

Composition
Cotton prefilters (×5 included)
Combined HEPA filter
(H14, 99.97% @ 0.3 µm)
Activated carbon

Filter media
Fiberglass, cotton,
PP & metal,
activated carbon granules
(2 4 mm)

Dimensions extérieures
250 × 195 × 180 mm

Caractéristiques techniques
Service temperature:
0–90 °C
Weight: ~1.5 kg

Durée de vie
1600 h

Assembled

FC350-filter

Application
FDM / resin 3D printers Laser
engraving, CNC dust

Composition
Spark filter (anti-spark)
Cotton prefilters (×5 included)
Intermediate HEPA filter
(H13/H14 fiberglass,
height 100 mm)

Double activated-carbon filter
(2 × 100 mm)

Filter media
Fiberglass, cotton,
PP & aluminum,
activated carbon granules
(2–4 mm)

Dimensions extérieures
368 × 286 × 100 mm × 3 stages

Caractéristiques techniques
Service temperature:
0–90 °C
Weight: ~12 kg

Durée de vie
2200 h

Find out More
alveo3d.com/en/product/m100-hepa-filter-3d-printer/#pll_switcher

COMPACT AIR-FILTRATION SYSTEM

- Compact filtration kit with axial fan compatible with electronic control board
- Universal filtration kit for 3D printers, machine-mounted
- Compact filtration kit with radial fan

COMPACT FILTRATION KIT WITH AXIAL FAN

AlveoONE / AlveoONE-R / AlveoZERO / AlveoZERO - Extractor

Kit & Assembled In stock

AlveoONE and -R

AlveoONE: wall-mounted filtration designed for non-sealed enclosures.
AlveoONE-R: “recycling” (recirculating) version for sealed enclosures.

Caractéristiques techniques :

Filter used: P3D
(HEPA H13 + activated carbon)
Airflow: 34 m³/h
Power supply: 24 V / 10 W
Noise level: 57 dB at 1 m
48 dB inside the enclosure

Dimensions (H × L × P)
AlveoONE :
172 × 154 × 90 mm
AlveoONE-R :
152 × 132 × 90 mm

Power board V1

Compatible fan:
ALHP2425-H8

Compatible with V2 control board

Find out More
alveo3d.com/en/product/alveoone-kit-2/

The AlveoZERO and Air Extractor variants are available on request

On request

Reference
AlveoZERO
AlveoZERO Printbox
AlveoZERO PrinterCase

Mounting
Panel mounting

Ventilateur
ALHP2425-H8
ALHP2425-H6

Compatibilté PrintBox
V2 control board

Compatibilté PrinterCase
V2 control board
LED strip

Filtre
P3D / P3DL

Carte d'alimentation
Carte V0

Caractéristiques techniques
Airflow:
34 m³/h with P3D
25 m³/h with P3DL
Power supply: 24 V / 10 W
Noise level: 57 dB at 1 m
48 dB inside the enclosure

Available

Reference
AlveoZERO- Extracteur

Mounting
Panel mounting

Ventilateur
ALHP2425-H8

Compatibilté
V2 control board

Fonction
Air extraction

Extraction
Semi-rigid hose

Adaptateur
90 mm plate
120 mm plate
Window plate

Caractéristiques techniques
Airflow: 216 m³/h
Power supply: 24 V / 10 W
Noise level: 57 dB at 1 m

NEW FILTRATION SYSTEMS

AlveoKIT: compact system | AlveoX2: system with P4D filter

New

Delivered kit In stock

AlveoKIT

AlveoKIT: wall-mounted filtration designed for non-sealed enclosures.
AlveoKIT-R: “recycling” (recirculating) version for sealed enclosures.

Technical specifications:

Filter used: P3DR
(HEPA H13 + activated carbon)
Airflow: 34 m³/h
Power supply: 24 V
Noise level: 48.5 dB at 1 m
45 dB inside the enclosure

Dimensions (H × W × D)
AlveoKIT:
156 × 156 × 90 mm
AlveoKIT-R:
132 × 132 × 90 mm

Controlled by IR remote and receiver Compatible fan: BLHP2432-H10 (24 V / 8 W)
Existing variant with ALHP2425-H8 fan

Pre-assembled In stock

AlveoX2

Wall-mounted and freestanding system with P4DR filter.
Delivered pre-assembled.
Several variations available.
Use: 3D printing, welding fumes, CNC dust.

Technical specifications:

Filter used: P4DR
HEPA H14 + activated carbon)
Airflow: 40 m³/h
Power supply: 24 V
Noise level: 57 dB at 1 m
48 dB inside the enclosure

Dimensions (H × W × D)
194 × 194 × 105 mm

AlveoX2-V3: wall-mounted, V3 control board (PWM control, automatic start/stop), BLHP2432-H24 (24 V / 24 W)

AlveoX2-FS: freestanding, controlled by IR remote and receiver, compatible (BLHP2432-H10 24 V / 8 W)

UNIVERSAL FILTRATION KIT FOR 3D PRINTER

Filtration system based on AlveoKIT

Delivered as a kit In stock

BambuLAB-Kit

Filtration module designed specifically for Bambu Lab printers (P1S, X1 / X1C, Combo with AMS)
Free STL and STEP files

Benefits & uses

High-performance filtration: captures fine particles and removes harmful gases via activated carbon

Plug-and-play integration: no structural modifications required Modularity & maintenance: printable parts, easy filter replacement

Remote included: control the kit at a distance

Optimized for enclosed printers: machines with or without AMS, CFS, tool changers, etc.

Compatibility

BambuLab P1S (AMS / HUB)
BambuLab X1 (AMS / HUB)
BambuLab X1C (AMS / HUB)

Creality K1C
Creality K1 Max
Creality K2PLUS

Anycubic Kobra S1
Elegoo Centauri

Carbon Qidi pro 1 tech

Composition

P3D-R filter (
HEPA 13 + activated carbon)

Quiet H10–H12 fan
(120 × 120 mm, 24 V)
24 V DC power supply

IR remote and receiver

EPDM sealing gasket

Screws, magnets
(30 × 10 × 2 mm ×3)

STL files
Manual / mounting support

Accessories

Waste catcher

Air recycler: sends hot air back into the print chamber

Free files: STL & STEP

Printable TPU gaskets

Safety

The majority of enclosed 3D printers use their built-in ventilation or filtration to regulate internal temperature, at the expense of safety.
Filtration is often disabled with high-temperature filaments (ABS, ASA, PC, Nylon) even though they are the most emissive.

It is therefore essential to have an additional system, independent of the machine's ventilation, equipped with a tested and truly effective filter.

Find out More
alveo3d.com/en/product/kit-bambu-lab-activated-carbon-hepa13-air-filter/

COMPACT AIR FILTER FOR FDM 3D PRINTER

- P2D, P3D and P4D ranges for FDM 3D printers
- Variants: size, performance, composition
- Standardized air filters, performance tested

AIR FILTER: COMPACT 120×120 MM

P3D range for FDM printers

The P3D range is intended for desktop FDM 3D printers.

For all filaments from PLA to ABS printed in an environment from 0 to 90 °C. For occasional use.

In stock Available

P3D range

Compact 2-in-1 filter
Designed for desktop FDM 3D printing
HEPA 13 and activated carbon
Filters tested below 200 nm

Specifications

Filtration category:
HEPA H13
(99.95% at 0.3 µm – MPPS)
granular activated carbon
(1–3 mm)

Composition:
PET protective grid, cardboard frame, PP honeycomb structure, HEPA 13 pleated cotton, PU foam, pull tab

Max air speed:
1.4 m/s (filter outlet)

	P3D	P3D-L	P3D-R
Reference	P3D	P3D-L	P3D-R
Compatible	AlveoONE-kit AlveoONE AlveoONE-R AlveoZERO (PrinterCase PrintBox)	AlveoONE-kit AlveoONE AlveoONE-R AlveoZERO (PrinterCase PrintBox)	AlveoMINI AlveoKIT
Feature			Inverted foam and handles
Operating temperature	0-60°C	0-60°C	
Pressure drop	40 Pa	70 Pa	
Maximum airflow	40 m³/h	40 m³/h	
Dimensions & Weight	124x124x44mm 0.150 Kgs	124x124x44mm 0.270 Kgs	
Applications	Impression 3D Filament basse température PLA/PETG/TPU...	Impression 3D Filament haute température ABS/ASA/PC/PA...	

Find out More
alveo3d.com/en/product/filter-hepa-p4d-r-3d-printer-filament/

Reference
P3DR-HT

Compatible
AlveoMINI
AlveoKIT

Operating temperature
0-90°C

Find out More
alveo3d.com/en/product/hepa-h13-filter-p3d/

Find out More
alveo3d.com/en/product/p3dl-hepa-filter/

AIR FILTER: MEDIUM 150×150 MM

P4D range for FDM printers

In stock | Available

P4D & P4D-R

Compact 2-in-1 filter
Designed for desktop FDM 3D printing
HEPA 14 and activated carbon
Filters tested below 200 nm

Specifications

Filtration category:
HEPA H14
(99.995% at 0.3 µm – MPPS)
Granular activated carbon
(1–3 mm)

Composition:
PET protective grid, cardboard frame, PP honeycomb structure, HEPA 14 pleated cotton, PU foam, pull tab

Max air speed:
1.2 m/s (filter outlet)

Service temperature:
0–60 °C

Find out More
alveo3d.com/en/product/filter-p4d/

In stock | Available

P4D-HT & P4DR-HT High Temperature

The P4D range is suitable for industrial use with HEPA 14 filter media. This filter is intended for desktop FDM printers for heavy-duty use.

Features

High temperature
Metal frame for heated enclosure up to 120°C

Service temperature:
0°C – 120°C

Find out More
alveo3d.com/en/custom-filter/

AIR FILTER: ULTRA COMPACT 80×80 MM

P2D range for FDM printers

In stock

Available

C2X

HEPA 13 filter impregnated with activated carbon For small FDM 3D printers in occasional use HEPA 13 and activated carbon Filters tested below 200 nm

Specifications

Filtration category:
HEPA H13 (99.95% at 0.3 µm – MPPS) Activated carbon-impregnated media

Composition:
PET protective grid, cardboard frame, HEPA 13 pleated cotton, PU foam, pull tab

Max air speed: 1.2 m/s (filter outlet)

Operating temperature:
0–60°C

In stock

Available

P2D

Compact 2-in-1 filter For small FDM 3D printers in occasional use HEPA 13 and activated carbon Filters tested below 200 nm

Specifications

Filtration category:
HEPA H13 (99.95% at 0.3 µm – MPPS), granular activated carbon (1–3 mm)

Composition:
PET protective grid, cardboard frame, PP honeycomb structure, HEPA 13 pleated cotton, PU foam, pull tab

Max air speed: 0.8 m/s (filter outlet)

Operating temperature:
0–60°C

Filtre à air à la demande

Dedicated on-demand air filter, compact and large sizes

- Custom air-filter design: prototyping and small series
- Air filter for 3D-printer manufacturers, testing and production
- EN 1822 & RoHS certification

AIR FILTER: ALTERNATIVE TO OEM FILTERS

UM55 filter for UltiMaker AirManager

In stock Available

UM55 filter

UM55 filter compatible with Air Manager. HEPA H13 (99.95% at 0.3 μm) filtration and activated carbon

Compatibility

Alternative filter
This model was custom-designed for an existing range of printers (compatible with UltiMaker Air Manager).
Simple, quick installation in the designated slot

Specifics

Related services
Alveo3D helps 3D-printer manufacturers improve their offerings, especially safety, by developing specific filters without modifying the printers

Reference
UM55

Compatible
Air Manager S3, S5, S6, S7, S8

Operating temperature
0–60°C

Pressure drop
50 Pa

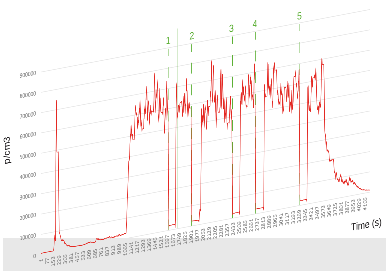
Maximum airflow
50 m^3/h

Dimensions & Weight
225 × 145 × 58 mm
0.420 kg

Applications
3D printing
High-temperature filament
ABS/ASA/PC/PA...

Service life
900 h (≈ 3 months heavy use)
Up to 6 months (light PLA/PETG use)

Service offered



Efficiency testing service
Before/after filter efficiency comparative study
Original filter vs. alternative

Conditions
Provided equipment
3D printer + filament

UM55 results compared with the original AirManager filter
Filter efficiency test below 200 nm:

+60% additional efficiency
ASA test:
move from an E11 filter (~60.46%) to an H13 (≥ 96.01%)

Dual action:
fine particles + VOCs (vs. particles only for E11).

Airflow:

Ultimaker E11: 197 m^3/h
UM55: 50 m^3/h (resistance 75 Pa)

Find out More
alveo3d.com/en/product/upgrade-ultimaker-air-manager-replacement-filter/

AIR FILTER: LARGE METAL

Large flat filter with metal frame

On request

FM-HEPA

Application
3D printing
Dust
Overall filtration

Use
This type is intended for industrial use, for filtering large air volumes.

Dimensions
Minimum dimensions:
150×150×30 mm

Maximum dimensions:
500×500×350 mm

Composition & alternatives
Filtration category:
HEPA H13
(99.95% at 0.3 µm – MPPS)
HEPA H14
(99.995% at 0.3 µm – MPPS)
Fiberglass or pleated cotton

G7 prefilter
PET protective grid, aluminum frame, PU foam, pull tab

Specifications
Max air speed: 1.2 m/s (filter outlet)

Service temperature:
0–90 °C

On request

FM-CARBON

Application
3D printing
Chemicals

Use
This type is intended for industrial use, for filtering large air volumes.

Dimensions
Minimum dimensions:
150×150×40 mm

Maximum dimensions:
500×500×300 mm

Composition & alternatives
Filtration category:
HEPA H13
(99.95% at 0.3 µm – MPPS)
HEPA H14
(99.995% at 0.3 µm – MPPS)
Fiberglass or pleated cotton

F7 prefilter
PET protective grid,
PP honeycomb structure,
aluminum frame, PU foam,
pull tab

Specifications
Max air speed: 1.2 m/s (filter outlet)

Service temperature:
0–90 °C

On request

FM-2in1

Application
3D printing
Laser/CNC milling
Dust

Use
This type is intended for industrial use requiring a broader filtration spectrum.

Dimensions
Minimum dimensions:
150×150×50 mm

Maximum dimensions:
600×600×450 mm

Composition & alternatives
Filtration category:
HEPA H13 / HEPA H14

Fiberglass or pleated cotton Activated carbon (2–4 mm granules)

F7 prefilter
PET protective grid,
aluminum frame,
PU foam, pull tab

Specifications
Max air speed: 1.2 m/s (filter outlet)

Service temperature:
0–90 °C

On request

Prefilter

Application
Milling, cutting,
engraving,
coarse dust

Application
This type is intended for industrial use for coarse-dust filtration.

Dimensions
Minimum dimensions:
150×150×20 mm

Maximum dimensions:
600×600×220 mm

Composition & alternatives
Filtration category:
G4 to F7

Final pressure drop (Pa) from 250 to 450

Efficiency at 0.4 µm particles: 40% to 80%

Metal retaining grid, aluminum frame

Specifications
Max air speed: 1.6 m/s (filter outlet)

Service temperature:
0–90 °C

Find out More
alveo3d.com/en/custom-filter/

AIR FILTER: CUSTOM-MADE

Custom filter: flat, cylindrical, or V-shaped

New

Custom-made

Cylindrical filter

Application
Integration on 3D printers
Industrial machining, cutting, laser engraving

Composition
Metal frame
Perforated surface
PU foam sealing
Prefilter
EPA / HEPA
Activated carbon

Dimensions & Weight
Cylindrical shape
Minimum diameter: 80 mm
Maximum diameter: 350 mm

Height from 40 to 500 mm
Choice of airflow direction

Cylindrical filters offer a more favorable contact area/volume ratio than flat filters, especially for filters mainly using activated carbon.

Custom-made

Tailored shape

Application
Integration in existing machines, constrained spaces, specific environments (hot, cold, etc.).

Composition
Use-specific frame (cardboard, metal, plastic)
Top/bottom sealing
Silicone seal or PU foam
Prefilter
EPA / HEPA
Activated carbon

Dimensions & Weight
Freeform shape
Min size: 60×60 mm
Min thickness: 20 mm

Max size: 1000×1000 mm
Max thickness: 440 mm

This design makes it possible to adapt filters to existing equipment with minimal alteration.
Generally paired with ventilation also adapted to the environment.

Custom-made

Custom frame

Application
Integration into CNC machines,
3D printers, safety enclosure

Composition
3D-printed frame
Top/bottom sealing
Silicone seal or PU foam
Prefilter
EPA / HEPA
Activated carbon

Dimensions & Weight
Flat filter shape
Min size: 60×60 mm
Min thickness: 20 mm

Max size: 480×480 mm
Max thickness: 480 mm

Custom frames allow prototypes or small series at limited cost.
They offer great flexibility to adapt to constraints (dimensions, fastenings, ventilation, etc.).

Find out More
alveo3d.com/en/custom-filter/

24 V AXIAL AND RADIAL FAN FOR COMPACT AIR FILTER

- Axial and radial fans from 40×40 mm to 120×120 mm, from 5 V to 48 V
- Customizable high-performance radial fan
- Standardized fans H6, H8, H10, H12, H20, H24

Ventilateur pour filtre comapct

Fan range

Multi-purpose high-pressure axial or radial fan

In stock Customizable

High-pressure fan

Axial fan
Radial fan
Wide range of sizes
Customizable speed, airflow, functions and connectors from 5 to 48 V

Application

Axial fan
Basic air-filtration system or air extractor requiring high airflow

Ideal for fume extraction and thermal management

Radial fan
Air-filtration system with HEPA filter requiring very high static pressure and moderate flow

Suitable for custom, very compact and industrial systems

Axial fan — high airflow, moderate static pressure
Available in the catalog and online store

In stock Standardized

Reference	ALHP2425-H8	ALHP2425-H6
Type	DC axial fan	DC axial fan
Dimensions	120 × 120 × 25 mm	120 × 120 × 25 mm
Rated power	7,44 W	5.84 W
Rated voltage	24 V DC	24 V DC
Noise level	57 dB(A)	51 dB(A)
Maximum rotational speed	4000 RPM	2800 RPM
Airflow	126 CFM (≈ 214 m³/h at 0 Pa)	102 CFM (≈ 173 m³/h at 0 Pa)
Service life	50 000 h at 40 °C	50 000 h at 40 °C
Functions	PWM, FG (speed feedback)	Polarity protection
Connector	Molex KK254 4-pin	Molex KK254 2-pin

Find out More
alveo3d.com/en/custom-radial-blower/

HIGH-PRESSURE RADIAL BLOWER

Centrifugal fan: moderate flow – high static pressure

Available in the catalog and online store

In stock | Standardized

Reference
BLHP2432-H10

Type
DC radial blower

Dimensions
120 × 120 × 32 mm

Rated power
7,7 W

Rated voltage
24 V DC

Noise level
48.5 dB(A)

Maximum rotational speed
2000 RPM

Airflow
36 CFM (≈ 61.2 m³/h at 0 Pa)

Service life
50 000 h at 40 °C

Functions
Polarity protection

Connector
DC jack 5.5 × 2.1 mm

Reference
BLHP2432-H12

Type
DC radial blower

Dimensions
120 × 120 × 32 mm

Rated power
9.6 W

Rated voltage
24 V DC

Noise level
52 dB(A)

Maximum rotational speed
2800 RPM

Airflow
43.5 CFM (≈ 74 m³/h at 0 Pa)

Service life
50 000 h at 40 °C

Fonctions
PWM, FG (speed feedback)

Connector
Molex KK254 4-pin

Find out More
alveo3d.com/en/product/quiet-powerful-120-mm-fan-3d-printers/

Reference
BLHP2432-H24

Type
DC radial blower

Dimensions
120 × 120 × 32 mm

Rated power
25,2 W

Rated voltage
24 V DC

Noise level
59 dB(A)

Maximum rotational speed
4000 RPM

Airflow
70 CFM (≈ 118.9 m³/h at 0 Pa)

Service life
50 000 h at 40 °C

Functions
PWM, FG (speed feedback)

Connector
Molex KK254 4-pin

Find out More
alveo3d.com/en/product/h24-120-mm-high-pressure-3d-printer-powerful-fan/

FAN FOR COMPACT FILTER

Ventilateur Radial Haute Pression

New

Centrifugal fan: moderate flow – high static pressure

Available on request and customizable

On request Customizable

	Ultra-compact	**Compact & powerful**	**High temperature**	**Very high temperature**
	75mm*20mm	97mm*33mm	< 90°C	< 120 °C
Reference	BLHP2420-H35	BLHP9733-H28	BLHP2432-HT90	BLHP2432-HT120
Type	DC radial blower	DC radial blower	DC radial blower	DC radial blower
Dimensions	75 × 75 × 20 mm	97 × 97 × 33 mm	120 × 120 × 32 mm	120 × 120 × 32 mm
Rated power	5,28 W	13,2 W	16,8 W	24 W
Rated voltage	24 V DC	24 V DC	24 V DC	24 V DC
Noise level	53 dB(A)	54,5 dB(A)	53,8 dB(A)	53,8 dB(A)
Maximum rotational speed	4500 RPM	5500 RPM	3800 RPM	3800 RPM
Airflow	16,6 CFM (≈ 28 m³/h)	29,7 CFM (≈ 50,5 m³/h)	38,6 CFM (≈ 65,6 m³/h)	38,6 CFM (≈ 65,6 m³/h)
Service life	50 000 h at 40 °C	50 000 h at 40 °C	50 000 h at 90 °C	~2 years at 120 °C
Functions	PWM, FG (speed feedback)	PWM, FG (speed feedback)	PWM, FG (speed feedback)	PWM, FG (speed feedback)
Connector	Molex KK254 4-pin	Molex KK254 4-pin	Molex KK254 4-pin	Molex KK254 4-pin

Find out More
alveo3d.com/en/custom-radial-blower/

PROTECTIVE ENCLOSURE WITH COMPACT AIR-FILTRATION SYSTEM

- Smoke detector and radio-controlled smart plug
- Amulette Fire: autonomous extinguisher for electrical cabinet

FIRE SAFETY

Operator and machine protection

In stock Available

Smoke detector and smart plug

Fire safety and prevention system for electrical fires, consisting of a wireless photoelectric smoke detector and a radio-controlled smart plug

Technical specifications

A500 smoke detector
Photoelectric detector
Standard: EN 14604:2005

Power: 2 AA batteries (DC 3 V) included
Battery life: 2–3 years (standby ≤ 5 µA)
Alarm current: ≤ 100 mA
Sound level: ≥ 85 dB at 3 m
Radio frequency: 433.92 MHz

Type: Radio-controlled smart plug (EU – Type E)
Radio frequency: 433.92 MHz **Max load:** 10 A
Function: automatic power cut-off on signal from the detector

Find out More
alveo3d.com/en/product/wireless-smoke-detector/

Amulette Fire is a standalone extinguishing system designed to protect small enclosed volumes

On request Available

Reference: Amulette Fire 68
Activation thresholds: 68 °C

Available protected volumes
0,19 m³ -> L.205 × Ø 35 mm
0,32 m³ -> L.237 × Ø 40 mm
0,64 m³ -> L.302 × Ø 51 mm
0,96 m³ -> L.407 × Ø 51 mm
1,61 m³ -> L.431 × Ø 60 mm

Technical specifications
Extinguishing agent: Novec™ 1230 (90% fluid + 10% nitrogen at 60 bar). This fluid is non-conductive, leaves no residue and does not degrade protected equipment. Installation: mounted high, nozzle facing downward.

Service life: 10 years (replacement recommended thereafter). No overhaul required, simple maintenance.

Application
Electrical cabinets and enclosures
Data racks and servers
Small enclosed technical volumes
Protection of sensitive machines

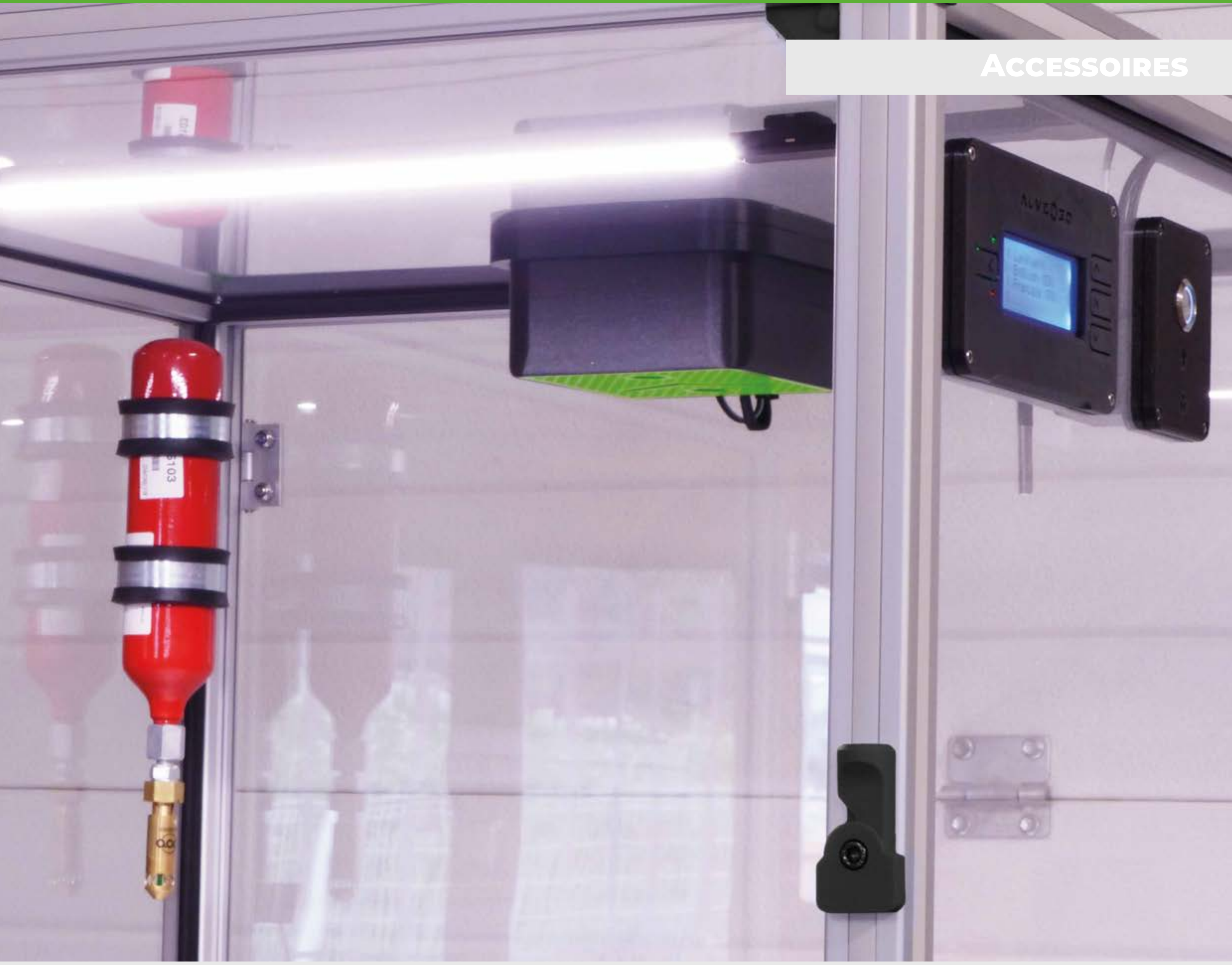
Reference: Amulette Fire 93
Activation thresholds: 93 °C

Available protected
0,19 m³ -> L.205 × Ø 35 mm
0,32 m³ -> L.237 × Ø 40 mm
0,64 m³ -> L.302 × Ø 51 mm
0,96 m³ -> L.407 × Ø 51 mm
1,61 m³ -> L.431 × Ø 60 mm

Technical
Extinguishing agent: Novec™ 1230 (90% fluid + 10% nitrogen at 60 bar). This fluid is non-conductive, leaves no residue and does not degrade protected equipment. Installation: mounted high, nozzle facing downward.

Service life: 10 years (replacement recommended thereafter). No overhaul required, simple maintenance.

Applicatio
Electrical cabinets and enclosures
Data racks and servers Small enclosed technical volumes
Protection of sensitive machines



Electronic boards, tools and accessories

- Control and power-supply board for 24 V filtration system
- 24 V fan control
- Calibration tools and airflow management
- Cleaning and storage

Control and power-supply board

V2 control board and V1 / V0 power boards

In stock | Available

V2 control board

The V2 control board can drive and monitor modules that use the V1 and V0 boards

Features

Fan speed control, temperature sensor, filter saturation, programming, timer, PWM control of fans, tachometric (FG).

Compatibility: V0.x and V1.3.x have a dedicated V2.x port to receive this board.

- Max supported power: ~36 W
- Voltage: 24 V
- Connectors: Molex KK254 series

Find out More
alveo3d.com/en/product/v2-controller/

Reference
Board V1.3.x

Embedded system
AlveoONE-KIT
AlveoONE
AlveoONE-R

Dimensions
52 × 39.4 mm

PCB thickness
1.6 mm

Max power
36 W

Operating voltage
24 V

Max current
1.50 A

Connectors
- Power: DC jack female 5.5 × 2.1 mm
- FAN (fan): Molex KK254 series (4P)
- V2.x: Molex KK254 series (4P)
- PWR EXT: Molex KK254 series (2P)

Find out More
alveo3d.com/en/product/electronic-card-v1/

Reference
Board V0.x

Embedded system
AlveoZERO
(PrinterCase PrintBox)

Dimensions
98.82 × 70.35 mm

PCB thickness
1.6 mm

Max power
36 W

Operating voltage
24 V

Max current
1.50 A

Connectors
- Power: DC jack female 5.5 × 2.1 mm
- FAN (fan): Molex KK254 series (4P)
- LED: Molex KK254 series (2P)
- V2.x: Molex KK254 series (4P)
- PWR EXT (external power): Molex KK254 series

Find out More
alveo3d.com/en/product/alveo-electronic-board/

Accessories for 3D printer enclosures

LED pack / IR receiver & remote / universal cable passthrough

In stock

Standard LED kit

Use

LED lighting kit designed to be integrated into a 3D printer enclosure or any other cabinet, with wireless control via infrared remote.

LED strip length

300 mm

Maximum power

12 W

Operating voltage

24 V DC

LED strip cable

270 mm

Connector

DC jack 5.5 × 2.1 mm

Remote control

CR2025 battery

Functions

On / off,
brightness adjustment

Find out More
alveo3d.com/en/product/kit-led-light-3d-printer-enclosure/

In stock

IR remote control

Use

This infrared control module includes a compact IR remote and a receiver that can be connected to a fan and the 24 V power supply.

Compatibility

AlveoKIT
BLHP2432-H12
AlveoX2-FS

Communication frequency

38 kHz (standard IR)

Control distance

Up to 5 m line of sight

Connector

DC jack 5.5 × 2.1 mm female

Remote control

CR2025 battery

Dimensions

Remote: 85 × 40 × 6 mm
Receiver: 250 mm cable + Ø 8 mm head

In stock

Cable passthrough

The cable passthrough is a module designed to route cables neatly from inside to outside an enclosure/box while minimizing openings and maintaining sealing. Wide opening possible (large enough for a mains plug).

Sliding blade system to adjust the opening precisely to the cable cross-section.

Technical specifications

Connector type:
T-Lock male/female for DC power
Connector: DC 2.1 × 5.5 mm (male and female)
Max. current: 2.5 A
Supply voltage: 24 V
Weight: ~200 g
Material: printed PETG (black)
Cable length: 1.5 m
Panel mounting:
cutting template provided (STL file or drawing)

Find out More
alveo3d.com/en/product/cable-entry/

ACCESSORIES FOR 3D PRINTER ENCLOSURES

Custom enclosure for resin / FDM 3D printer

Assembled
Air intake grilles

Reference
Two printed, pre-assembled air intake grilles designed for 3D-printer enclosures. Their purpose: manage incoming airflow and maintain a stable negative pressure in the enclosure while limiting dust.

Material
Printed PETG “Black Galaxy”

Dust filter grille
Micro-perforated nylon

Overall dimensions (with 8 mm panel)
114 × 114 × 20 mm

Supported panel thickness
3 to 8 mm

Operation
Sliding door: allows adjusting the opening (fully open, partially open, or fully closed) to modulate incoming airflow.

Find out More
alveo3d.com/en/product/air-intakes-grids/

Assembled
Semi-rigid hose

Reference
Semi-rigid, flexible air-extraction hose designed to create an exhaust duct with bends (without excessive friction) while maintaining a smooth internal surface to limit pressure drops.

Material
Black polypropylene (PP)

Inner diameter
76 mm

Outer diameter
78 mm

Length
75 cm folded, up to 3 m

Weight
650 g

Operating temperature range
from –10 °C to +120 °C

Connectors / compatibility
STEP/STL files provided

Find out More
alveo3d.com/en/product/flexible-air-duct/

Assembled
Cleaning Kit

Use
Designed to maintain both the enclosure (cabinet) and the 3D printer’s build surfaces.
It combines gentle, effective items to remove dust, residue and impurities without damaging sensitive surfaces.

Composition
500 ml spray bottle

Squeegee head with ergonomic handle

3 microfiber cleaning bonnets

Large ultra-absorbent microfiber towel

Compatible materials
Glass, acrylic, metal, 3D-printed panels

Find out More
alveo3d.com/en/product/complete-cleaning-kit-3d-printer-enclosure/

TOOLS & ACCESSORIES

Accessories on request

On request Available

Differential air pressure sensor

Portable differential pressure meter (Sensirion SDP610 sensor), ideal for checking filter clogging and monitoring air pressure in a safety enclosure.

Technical specifications

Measuring range: ±125 Pa

Accuracy: ±3% of reading

Operating temperature:
0 to +50 °C

- Automatic compensation for temperature and air density
- Battery-powered (rechargeable)
- Backlit display
- Built-in magnets for hands-free use
- Carrying case
- Silicone hose kit Ø4/5 mm

On request Available

Dehumidifier cabinet

5 sizes: 230 to 850 L
Automatic dehumidifying storage cabinets, ideal for storing 3D filaments, resins, and sensitive devices

Technical specifications

Function:
humidity reduction / control

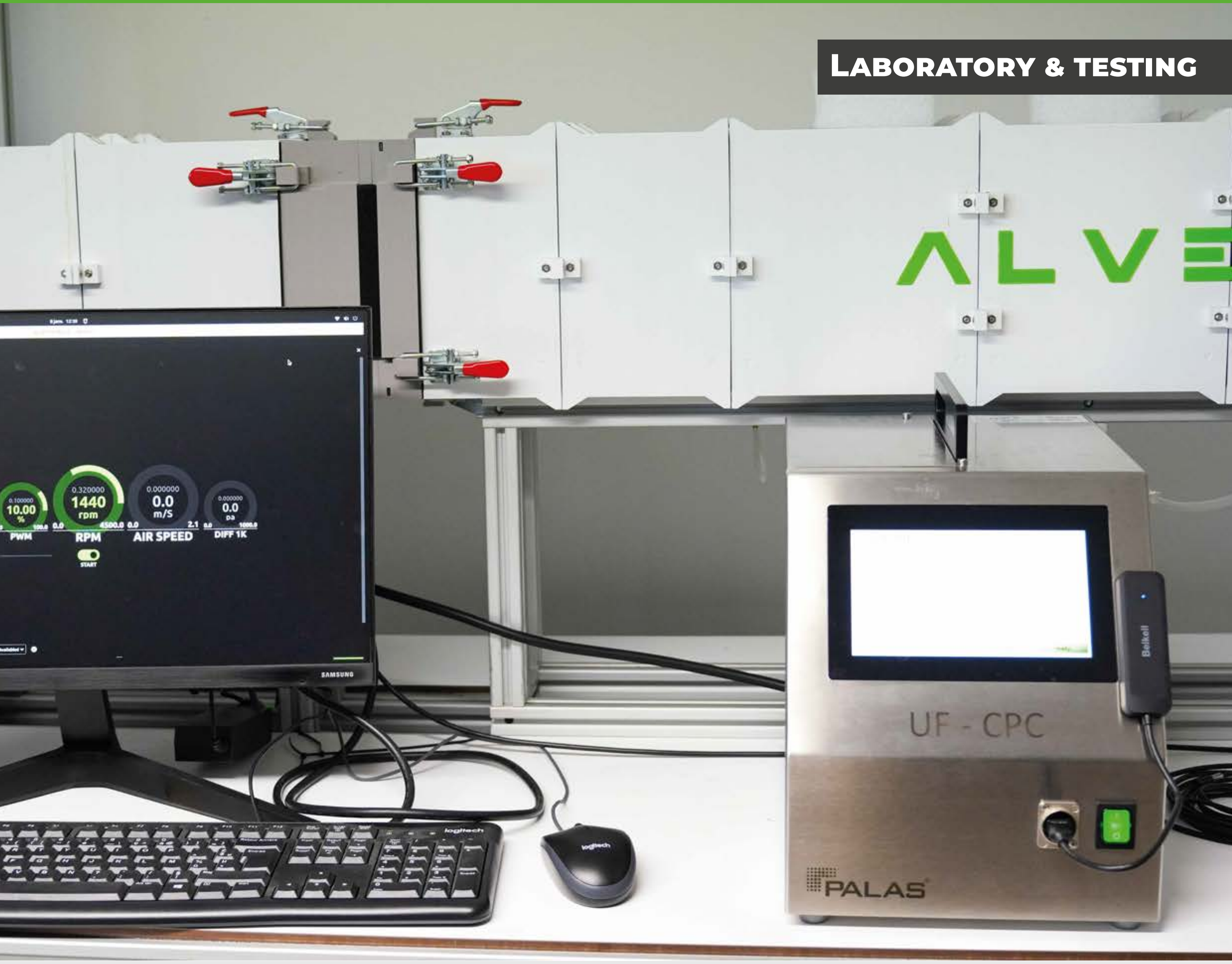
Material:
SPCC steel + glass panels

Dimensions:
from 600 × 480 × 860 mm
to 850 × 550 × 1835 mm

Control:
digital, automatic

Power:
100–240 V AC / 12 V DC output

Consumption:
GN-230 / GN-360: < 50 W;
GN-460 / GN-720: < 100 W



LE LABORATOIRE ALVEO3D

- Emissivity tests & studies of filaments / 3D printers
- Efficiency testing of filters and proposed solutions
- Overall exposure measurements
- Documentation and sharing of results, contribution to domain knowledge

ALVEO3D LABORATORY SERVICES

Analysis of particulate and VOC emissions from 3D printers

Service objective

Assess the filtration efficiency, **ultrafine particle (UFP)** and **volatile organic compound (VOC)** emissions generated by additive manufacturing processes (FDM, SLA, SLS). Our tests enable manufacturers, integrators and professional users to:

- characterize the health and environmental impact of their products
- validate compliance with INRS recommendations and the French Labour Code (articles R.4222-1 to R.4222-12).
- and optimize their filtration and ventilation systems.

Why test filters?

- In FDM, most emissions are between 10 and 200 nm (ultrafine).
- EN 1822 classifies filters on their MPPS (Most Penetrating Particle Size), generally ~100–300 nm depending on the media, not across the entire < 100 nm spectrum.
- Result: a “HEPA” filter may be compliant without guaranteeing sufficient efficiency on UFPs < 100 nm. Only before/after tests performed during printing (part./cm^3) validate protection where it matters.

Conclusion:

EN 1822 remains essential to classify a media, but is not enough to guarantee protection against the UFPs from 3D printing.

Our advantages

- Real-world tests: before/after filter protocols, same machine, same G-code, same materials ABS/ASA/PC/Nylon).
- Real-world tests: before/after filter protocols, same machine, same G-code, same materials (ABS/ASA/PC/Nylon).
- Beyond EN 1822: validation of the complete system (enclosure + fan + filter), not just the media.
- Actionable results: clear report (efficiency %, curves, flow rate, ΔP) + optimization recommendations.
- Credibility & compliance: methods aligned with HSE/INRS best practices; comparisons of OEM filters vs H13/H14 + carbon solutions.

PORTABLE MEASURING INSTRUMENTS

On-site analysis with our instruments

Particles On request

Palas UF-CPC 100

Butanol ultrafine particle (UFP) counter with integrated pump and 7" touchscreen, intended for exposure measurements, process control, aerosol research, filter and purifier testing, environmental measurements and workplace exposure, health/inhalation effects, printer-emission studies.

Key features

Size range: 4–5,000 nm
Concentration range:
up to 1×10^5 part./cm³
(single-particle counting mode)
Accuracy: ±5%
1×10^5 to 2×10^7 part./cm³
(nephelometric mode)
Accuracy: ±10%
Dimensions:
290 × 240 × 350 mm
Installation conditions:
+10 to +30 °C
Working fluid: 1-butanol

VOCs On request

mPower NEO M184

High-sensitivity photoionization (PID) detector for VOCs, down to ppb, 3 s response, built-in pump, long-term logging and ATEX/IECEx/UL certifications. Models and ranges suitable for industrial hygiene, environmental monitoring and HAZMAT response

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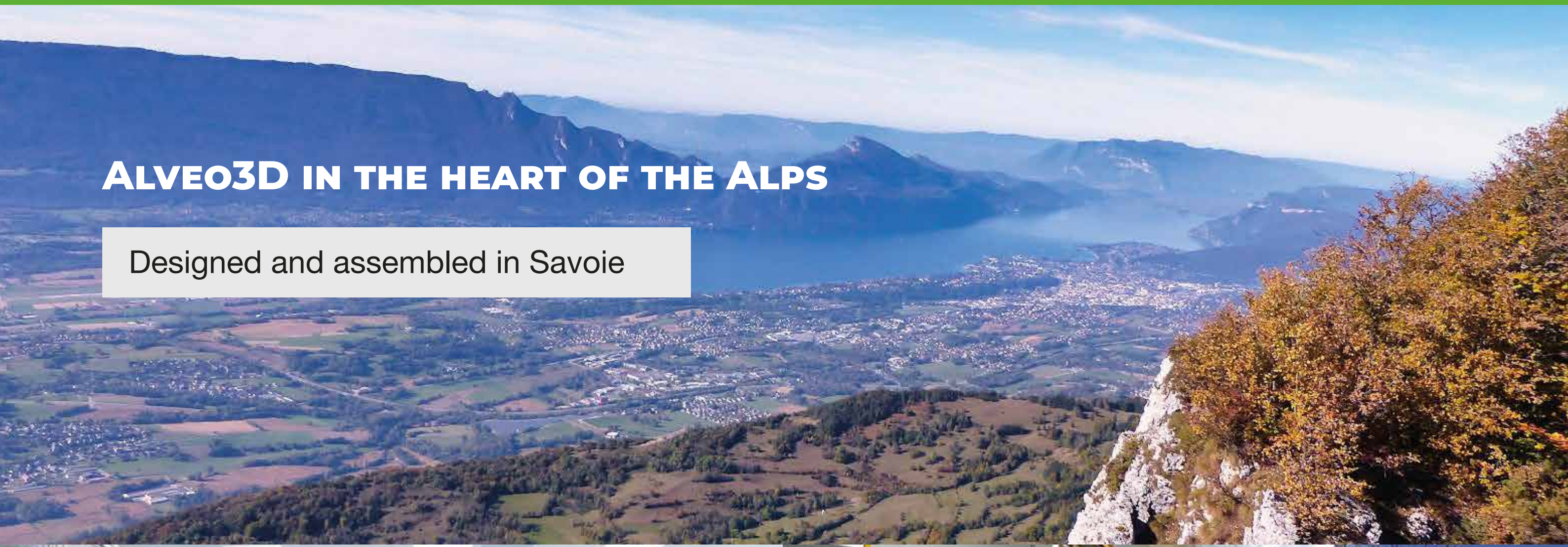
Key features

Measuring range:
0.001–15,000 ppm
Sensor: 10.6 eV PID
Accuracy: ±3%
Power & runtime:
Li-ion, ~24 h operation
Protection: IP66/67
Temp/RH range: –20 to +50°C 0–95% RH
(non-condensing)
Ergonomics:
230 × 74 × 55 mm,
708 g (rubber housing)



ALVEO3D IN THE HEART OF THE ALPS

Designed and assembled in Savoie

THE ALVEO3D TEAM

CEO
Laboratory manager

CTO
IT & electronics developer

Product Manager
Designer

Workshop management
& logistics

Administrative
& client relations

Production
& 3D division manager

Marketing
& communications officer

ALVEO3D
AIR FILTRATION EXPERTISE

3D PRINTING

TECHNICAL SERVICE & ADVICE
SAFETY PARTNER

AIR FILTRATION SYSTEM
CATALOG / CUSTOM-BUILT

CUSTOM ENCLOSURE
FDM / RESIN / LASER

COMPLIANCE & CERTIFICATIONS
INRS RECOMMENDATIONS

TEST LABORATORY
EMISSIONS & EFFICIENCY

contact@alveo3d.com www.alveo3d.com