

The **AD** Range

Industrial Dust & Fume Filter Units

Designed for manufacturing environments where grinding, welding, laser cutting, and surface treatment generate dry particles, fumes, or explosive dust. Modular, efficient, and built to perform.

DUST & FUME EXTRACTION



The Challenge

Manufacturing processes that generate dry dust and fume create real risks for operators, equipment and regulatory compliance.

A New Standard for Dry Applications

Absolent AB has set the standard for oil mist and oil smoke filtration for over 30 years. Located in Lidköping, Sweden, with subsidiaries in the US, Germany, France and China, the company now brings the same engineering quality and clean-air expertise to industries dealing with dust and fume.

Regulatory Compliance

Stringent occupational exposure limits (OELs) and ATEX regulations require certified extraction solutions with documented filtration efficiency.

Production Downtime

Poorly maintained or undersized systems clog faster, require frequent servicing and increase unplanned stoppages on the production floor.

Energy & Maintenance Costs

Traditional horizontal filter systems accumulate dust on filter surfaces, reducing airflow efficiency and increasing both energy usage and replacement costs.



Introducing the **AD** Range

AD051

AD10

AD15

AD051 EX

AD101 EX

AD151 EX

Six models covering the full spectrum of industrial dry extraction, from compact single-source applications to large centralized systems, including ATEX-rated units for explosive dust environments.

6

Models

3

Unit sizes

>99.9%

Filter efficiency



AD units combine efficient extraction with a compact footprint. Vertical Airflow Technology guides air in a downward pattern to maximize performance while minimizing space. The patented CleanChange™ system enables safe, tool-free maintenance from the clean-air side.

Dry Application Areas

Welding & Thermal Cutting

MIG, TIG, MMA, and plasma welding. Laser and plasma cutting processes generating fine metallic fume and particulate.

Grinding & Deburring

Dry grinding, deburring and finishing operations producing abrasive metallic dust from ferrous and non-ferrous materials.

Dry Machining

Milling, turning and drilling without coolant. Dry chip and fine dust extraction directly from the machining zone.

Surface Treatment

Shot blasting, sanding and surface preparation generating high volumes of dust from coatings and base materials.

Food & Pharma Processing

Organic dust from flour, spice, tablet coating and powder processing. Compliant filtration for sensitive manufacturing environments.

Chemicals & Plastics

Chemical processing, plastic pelletizing and compounding operations. Fine, potentially reactive dust requiring high-efficiency filtration.

Textiles & Composites

Fiber dust from textile processing, carbon fiber trimming and composite manufacturing requiring Class M or H filtration.

...and more

The AD range is engineered for any dry application. Modular construction means every unit can be configured for your specific process requirements.

Vertical Airflow Technology

The AD range uses a vertical downflow air pattern combined with vertically mounted filter elements – a fundamental design difference that drives performance, filter longevity and energy efficiency.

"Vertical filter elements prevent dust from compacting on the filter surfaces. Dust released during pulse-jet cleaning falls directly into the hopper – not onto the filters below."

Filter efficiency rated to Dust Class M → 99.9% per EN 60335-2-69:AA

How it works

01. Contaminated air enters at the rear inlet

Dirty process air is drawn in via the inlet connection at the rear of the unit.

02. Airflow is directed vertically downward

The incoming airstream washes the vertical filter elements, creating a two-stage cleaning effect that captures larger particles up front and reduces the load on the media.

03. Separated dust is directed to the hopper

Gravity and airflow direct separated dust particles downward into the dust disposal drawer or bin – not back onto the filters.

04. Clean air is discharged

Pulse-jet cleaning on demand, controlled by pressure drop, reduces compressed air use. Clean air exits through the top outlet or integrated fan.

06. Innovation

Clean Change™

Patented filter change system

The CleanChange™ system positions the entire filter retention and removal mechanism on the clean-air side of the unit. Operators never need to enter the contaminated zone during servicing.

No special tools required

Filter elements are linked together and can be removed from outside the unit – clean, fast and safe.

Filter efficiency rated to Dust Class M → 99.9% per EN 60335-2-69:AA





AD051, AD101 and AD151 Specifications

Specification	AD051	AD101	AD151
Airflow Range	900 – 4,500 m³/h*	1,800 – 9,000 m³/h*	2,700 – 13,500 m³/h*
Pressure Drop of the Unit	2,000 Pa	2,000 Pa	2,000 Pa
Number of Filter Elements	2 pcs	4 pcs	6 pcs
Total Filter Area	30 / 40 / 50 m²	60 / 80 / 100 m²	90 / 120 / 150 m²
Filter Efficiency	Dust Class M → 99.9% (EN 60335-2-69:AA)		
Dust Collection	140 L drawer	280 L drawer / 115 L bin	115 L bin
Inlet Diameter	250 mm	400 mm	400 mm
Unit Dimensions (W×H×D)	1,581 × 2,527 × 807 mm	1,436 × 3,225 × 1,300 mm	1,436 × 3,480 × 1,800 mm
Weight (empty)	570 kg	810 kg	1,040 kg
Exterior Finish	Galfan pre-coated steel – indoor & outdoor use		
Fan Options	Integrated fan (IE3, inverter-driven) or external fan – both configurations available		

*Airflow Range depends on cartridge selection – see datasheet for exact airflow per configuration.



06. Innovation

Key Maintenance Benefits

01. Clean-side access only

The filter change mechanism is located in the clean-air section, separated from contaminated airflow. Operator exposure to dust and fume is reduced during maintenance.

02. Tool-free removal

Linked filter elements allow complete cartridges removal without tools. No confined-space entry required. Service time is dramatically reduced on the production floor.

03. Longer filter service life

Vertical airflow combined with pulse-jet cleaning keeps filter elements clean during operation. This extends filter lifespan and reduces replacement frequency and cost.

04. Differential pressure monitoring

Integrated differential pressure sensor monitors filter condition in real time. Pulse-jet cleaning activates only when needed, optimizing compressed air consumption and maintaining stable performance.



ATEX-Rated

The EX Range

For environments where combustible or explosive dust is present, the AD EX range provides fully certified extraction compliant with ATEX Directive 2014/34/EU - available in three modular sizes.



ATEX Classification (Internal)	II 2/3D Ex h IIIC T125°C Db/Dc
Zone Suitability	Zone 21 / Zone 22
Dust Group	IIIC – Conductive dust
Max Surface Temperature	T125°C

Three explosion protection options available:
Explosion panel, panel with diverter or flameless vent.
Configured per site risk assessment and available floor space.

AD051 EX

900 – 4,500 m³/h*

2 filter elements 30 / 40 / 50 m², filter area.
Explosion panel/diverter/flameless vent

AD101 EX

1,800 – 9,000 m³/h*

4 filter elements 60 / 80 / 100 m², filter area.
Up to 3× explosion protection devices

AD151 EX

2,700 – 13,500 m³/h*

6 filter elements 90 / 120 / 150 m², filter area.
Up to 3× explosion protection devices

*Airflow depends on cartridge selection – see datasheet for exact range per configuration.

Other features

- ✓ All EX models are also available in integrated and external fan configurations.
- ✓ Galfan pre-coated steel as standard. Suitable for indoor and outdoor installation.

AD051 EX Specifications

Specification	AD051 EX with Integrated fan	AD051 EX with External fan
Airflow Range	900 – 4,500 m³/h*	900 – 4,500 m³/h*
Pressure Drop of the Unit	2,000 Pa	2,000 Pa
Number of Filter Elements	2 pcs	2 pcs
Total Filter Area	30 / 40 / 50 m² (dependent on specification)	30 / 40 / 50 m² (dependent on specification)
Filter Efficiency	Dust Class M > 99.9% (EN 60335-2-69:AA)	Dust Class M > 99.9% (EN 60335-2-69:AA)
Dust Collection	140 L drawer	140 L drawer
Inlet Diameter	250 mm	250 mm
Unit Dimensions (W×H×D)	1,581 × 3,153 × 894 – 1,502 mm	1,581 × 2,500 × 894 – 1,502 mm
Weight (empty)	864 – 1,019 kg	629 – 762 kg
Exterior Finish	Galfan pre-coated steel, high corrosion resistance	Galfan pre-coated steel, high corrosion resistance
Fan Options	Integrated (IE3, inverter-driven, 4.0–7.5 kW)	External fan (N/A)

*Airflow Range depends on cartridge selection - see datasheet for exact airflow per configuration.

AD101 EX Specifications

Specification	AD101 EX with Integrated fan	AD101 EX with External fan
Airflow Range	1,800 – 9,000 m³/h*	1,800 – 9,000 m³/h*
Pressure Drop of the Unit	2,000 Pa	2,000 Pa
Number of Filter Elements	4 pcs	4 pcs
Total Filter Area	60 / 80 / 100 m²	60 / 80 / 100 m²
Filter Efficiency	Dust Class M > 99.9% (EN 60335-2-69:AA)	Dust Class M > 99.9% (EN 60335-2-69:AA)
Dust Collection	115 L bin	115 L bin
Inlet Diameter	400 mm	400 mm
Unit Dimensions (W×H×D)	1,518-2,213 × 4,061 × 1,392 – 2,000 mm	1,518-2,213 × 3,197 × 1,392-2,000 mm
Weight (empty)	1,243 – 1,567 kg	912 – 1,178 kg
Exterior Finish	Galfan pre-coated steel, high corrosion resistance	Galfan pre-coated steel, high corrosion resistance
Fan Options	Integrated (IE3, inverter-driven, 7.5–15 kW)	External fan (N/A)

*Airflow Range depends on cartridge selection - see datasheet for exact airflow per configuration.

AD151 EX Specifications

Specification	AD151 EX with Integrated fan	AD151 EX with External fan
Airflow Range	2,700 – 13,500 m³/h*	2,700 – 13,500 m³/h*
Pressure Drop of the Unit	2,000 Pa	2,000 Pa
Number of Filter Elements	6 pcs	6 pcs
Total Filter Area	90 / 120 / 150 m²	90 / 120 / 150 m²
Filter Efficiency	Dust Class M > 99.9% (EN 60335-2-69:AA)	Dust Class M > 99.9% (EN 60335-2-69:AA)
Dust Collection	115 L bin	115 L bin
Inlet Diameter	400 mm	400 mm
Unit Dimensions (W×H×D)	1,518–2,213 × 4,424 × 1,894–2,500 mm	1,518–2,213 × 3,453 × 1,894–2,500 mm
Weight (empty)	1,578 – 1,934 kg	1,141 – 1,403 kg
Exterior Finish	Galfan pre-coated steel, high corrosion resistance	Galfan pre-coated steel, high corrosion resistance
Fan Options	Integrated (IE3, inverter-driven, 11–18.5 kW)	External fan (N/A)

*Airflow Range depends on cartridge selection - see datasheet for exact airflow per configuration.

Key Advantages of the AD Range

1

Vertical Airflow Technology

Downward airflow combined with vertical filter elements directs dust into the hopper – improving separation efficiency and extending filter life compared to horizontal designs.

2

Compact Footprint

High filtration power density means the AD range delivers industry-leading airflow capacity in a significantly smaller floor area than equivalent competing units.

3

CleanChange™ Patented System

Tool-free, clean-side filter replacement. No confined space entry. Faster service with zero operator contamination exposure – a unique Absolent innovation.

4

Modular Architecture

Configurable to application requirements. Fan type, dust disposal, HEPA secondary filters and ATEX explosion protection can all be specified at point of order.

5

Low Running Costs

IE3 inverter-driven fans, on-demand pulse-jet cleaning and extended filter life combine to minimize energy consumption and total cost of ownership over the unit's lifespan.

Why Absolent

30+

Years of filtration
expertise

M

Dust Class M certified
>99.9% efficiency

50+

Countries served
globally

IE3

Premium energy class
motor standard

OUR COMMITMENT TO YOUR OPERATION

Purpose-built for industrial environments

Every component, from Galfan pre-coated steel housing to anti-static filter media, is specified for long-term reliability in demanding production settings.

Modular design – short lead times

Standardized modules and configurable architecture allow bespoke solutions without extended lead times. Fast delivery from specification to installation.

ATEX certification where required

The EX range meets ATEX Directive 2014/34/EU across all models. Explosion protection devices are pre-engineered and risk-assessed for each configuration.

Global service network

Absolent partners and service engineers across Europe and beyond ensure support throughout the equipment lifecycle, from commissioning to filter maintenance.

There are filters. And there is Absolent.

Protecting operators, maximising uptime
and minimising maintenance since 1993.

Absolent

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