

# AD051, AD101, AD151

## Modular Industrial Dust and Fume Filters



- Optimized design for performance, energy consumption and filter lifespan
- Modular construction enables short lead times
- Unique innovations including clean side, tool free, filter change clamping mechanism\* ensure ease of use
- Low running costs thanks to True Downflow technology and inverter driven fan options
- Galvanneal pre-coated steel as standard for extended service life

### Flexible filter unit for dust and fume applications

Modular dust filter that can be configured to meet specific performance requirements and customer needs.

Absolent's unique 'True Downflow' technology enables 'High Filtration Power Density' – optimum performance in a small footprint.

The innovative CleanChange™ filter change mechanism is located in the clean air section, making filter change cleaner, easier and safer. The filter retention system is positioned away from the contaminated air and the filter elements are securely linked together. This design provides easy access to the filters, eliminates the need for special tools, and removes the need for operators to enter the unit for maintenance.

## Function

Modular dust filter that can be configured to meet specific performance requirements and customer needs.

True Downflow technology, which combines a downflow air pattern with vertical filter elements, forces the separated dust down into the dust disposal solution and ensures that following pulse jet cleaning, the dust is directed downwards. The incoming air stream 'washes' dust from the vertical filter elements enabling a two-stage cleaning system for optimized efficiency. Vertical filter elements allow this washing due to their orientation - traditional horizontal filter elements can compact dust on the top. Using vertical filter elements also means that the dust that is cleaned from each element is directed straight into the dust disposal solution, not onto filters below as with a horizontal arrangement.

The cartridges can be monitored by a differential pressure sensor that measures the cleanliness of the filter elements and only cleans on demand to ensure optimal filtration efficiency and reduced energy consumption.

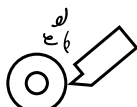
## Applications



Welding



Laser cutting /  
Plasma cutting



Dry machining



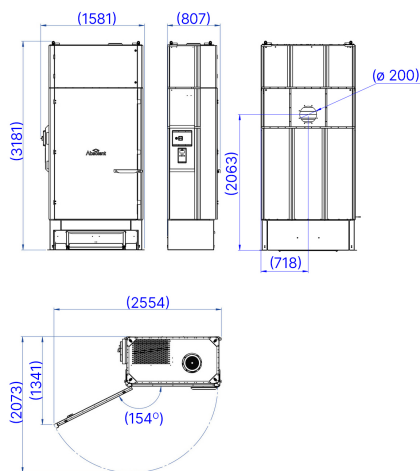
Grinding



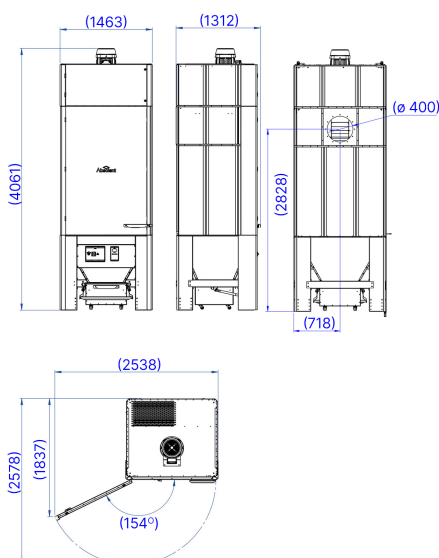
And more

## Dimensions

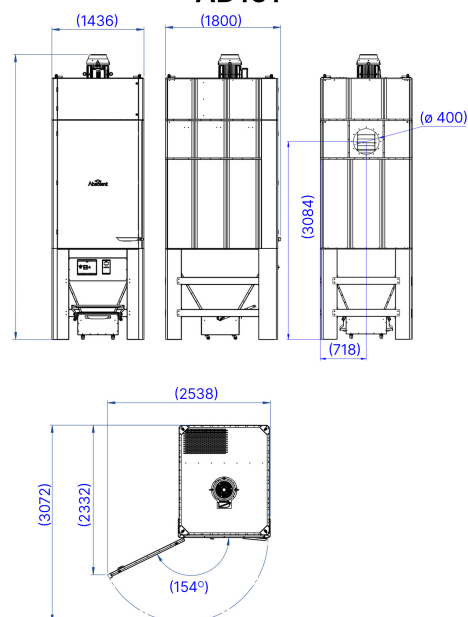
AD051



AD101



AD151



## Technical specifications

### Technical specifications AD051, AD101, AD151

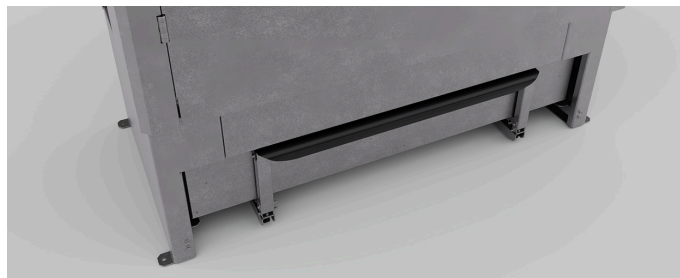
	AD051	AD101	AD151
<b>General</b>			
Application	Hot & Abrasive Metal Fumes & Dust	Hot & Abrasive Metal Fumes & Dust	Hot & Abrasive Metal Fumes & Dust
Airflow range	1 200-3 600 m <sup>3</sup> /h	2 400-7 200 m <sup>3</sup> /h	3 600-10 800 m <sup>3</sup> /h
Maximum external pressure	3 000 Pa	3 000 Pa	3 000 Pa
Pressure drop of the unit	2 000 Pa	2 000 Pa	2 000 Pa
Fan motor power			
Fixed speed	4,0 kW, 7,5 kW (floor mounted)	7,5 kW, 11 kW (integral)	7,5 kW, 11,0 kW, 15,0 kW, 18,5 kW (integral)
Inverter Driven	4,0 kW, 5,5 kW, 7,5 kW (integral)	7,5 kW, 11,0 kW, 15,0 kW (integral)	11,0 kW, 15,0 kW, 18,5 kW (integral)
Energy class	IE3	IE3	IE3
External Finish	Galfan pre-coated steel, high corrosion resistance	Galfan pre-coated steel, high corrosion resistance	Galfan pre-coated steel, high corrosion resistance
Material Thickness	2,5-3,0 mm	2,5-3,0 mm	2,5-3,0 mm
Location	Without integrated fan: indoor and outdoor use, with integrated fan: indoor use only	Without integrated fan: indoor and outdoor use, with integrated fan: indoor use only	Without integrated fan: indoor and outdoor use, with integrated fan: indoor use only
<b>Connections</b>			
Inlet type	DIN 24154/T2	DIN 24154/T2	DIN 24154/T2
Inlet diameter	200 mm	400 mm	400 mm
Inlet placement	Rear with option for universal direction inlet module	Rear with option for universal direction inlet module	Rear with option for universal direction inlet module
Outlet type	Via integral fan or open DIN 24154/T2 connection	Via integral fan or open DIN 24154/T2 connection	Via integral fan or open DIN 24154/T2 connection
Outlet diameter	250 mm	450 mm	450 mm
Outlet placement	Top	Top	Top
Compressed air supply	12 mm connection - 6 Bar Clean & Dry Supply	12 mm connection - 6 Bar Clean & Dry Supply	12 mm connection - 6 Bar Clean & Dry Supply
Electrical information	400V, 3 phase, 50 Hz	400V, 3 phase, 50 Hz	400V, 3 phase, 50 Hz
<b>Dust collection</b>			
Dust collection system	Drawer	Bin	Bin
<b>Filter</b>			
Diameter Primary filter elements	324 mm	324 mm	324 mm
Number of Primary filter elements	2 pcs	4 pcs	6 pcs
Filter efficiency	All filter elements are in accordance with EN 60335-2-69:AA Dust Class M Rating. Dust Class M relates to an efficiency of > 99.9% under conditions given in EN 60335-2-69:AA.		
Filter media	Polyester & Polyester Nano Fibre	Polyester & Polyester Nano Fibre	Polyester & Polyester Nano Fibre
Total Filter area	40 m <sup>2</sup>	80 m <sup>2</sup>	120 m <sup>2</sup>
Filter Cartridge length	1 200 mm	1 200 mm	1 200 mm
Secondary filter	Separate	Separate	Separate
Pre-treatment (Pre-coating Powder)	Yes, as option	Yes, as option	Yes, as option
<b>Physical properties</b>			
Width	1 581 mm (62.24 in)	1 436 mm (56.54 in)	1 436 mm (56.54 in)
Height	3 181 mm (125.24 in)	4 061 mm (159.88 in)	4 443 mm (174.92 in)
Depth	807 mm (31.77 in)	1 312 mm (51.65 in)	1 800 mm (70.87 in)
Weight with fan	802 kg (1769 lbs)	1 188 kg (2619 lbs)	1 800 kg (3968 lbs)
<b>Sound level</b>			
Sound level Continuous (fan) <sup>1</sup>	75 db(A)	75 db(A)	75 db(A)

<sup>1</sup>The sound level is measured 1 m from the filter unit under free field conditions. Contact Absolent or dealer/distributor for sound calculation on specific location.

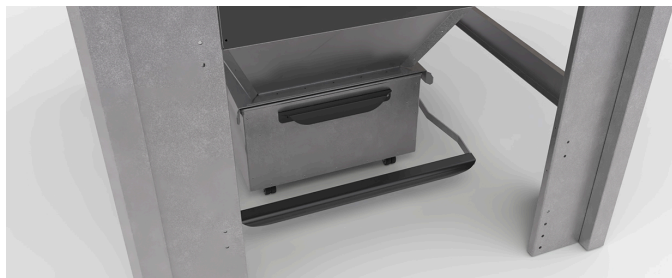
## Description of the concept

AD filters are designed with a modular architecture and state-of-the-art technology to provide the most advanced industrial filter on the market today. Our 'True Downflow' technology enables us to provide the highest performance in all aspects, and full flexibility to ensure our customers' unique requirements are met.

## Dust Disposal Options



Drawer



Bin

## Fan Options - Integral or Floor Mounted

A range of integral and floor mounted fans are available to cover multiple airflow volume and pressure requirements to suit each individual application. Integrated fans include a noise reduction chamber - if a floor mounted fan is required, the top of the unit is provided with an interface to connect ductwork systems. All fans are high efficiency, backward bladed and options include a range of fixed speed fans along with an alternative inverter driven model for optimal flexibility and energy efficiency.

## Filter Elements

Industrial processes generate particles of various sizes and concentrations. Absolent's filter cartridges are available in several different materials and finishes, specially developed to cope with the variation in particulate characteristics.

### AD Filter Elements

Technical information AD Filter Elements	
Filter Cartridge length	1200 mm
Diameter	324 mm
Filter media	Polyester / Polyester Nano Fibre
Removal	Outside of unit, no confined space working
Mechanism	In clean section, no exposure to contaminant
Total Filter area	20 m <sup>2</sup>