andreae®

ORIGINAL FILTERS

www.andreaefilters.com

AEREM®

TO FILTER & PROTECT

Produced by Aerem
www.aerem.com

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E. C. ANDREAE

3,075,337

GAS FILTER

Filed June 17, 1960

Fig. 1.

Fig. 2.

Fig. 4.

Fig. 3.

Andreae Filters
Inventors since 1963

Mr. Erhard Charles Andreae, 55 years old, an independent mechanical engineer in the field of surface treatment for 25 years, patents a particle filter for paint booths, collapsible, disposable, made of cardboard and operating on the principle of inertia separation.

Andreae Filters is founded. The manufacture is done by hand in a garage with a worker at a rate of 6 m2 per day. E-C. Andreae sells door to door in Switzerland.

1963

Mr. Robert Andreae purchases Andreae Filters. The production tool of Andreae Filters is modernized and the internal organization improved.

1984-1986

Extension of the Andreae Standard and HE+ filter range with the introduction of a high capacity filter (HC) and a high productivity filter (HP).

Installation of an Andreae production line in Ardmore.

1997

Andreae Filters becomes an AEREM brand.

2019

1967

The Binks Manufacturing Company (Binks), a US and World No. 1 paint booth manufacturer, buys Bullows Ltd. UK and is interested in the Andreae filter.

Exclusivity is granted to Binks for all of its subsidiaries around the world, which will give Andreae filters a lot of notoriety as Binks starts producing a line of spray booths under the “Binks-Andreae” brand.

1989-1990

Andreae Filters patents a high efficiency filter (HE+).

Acquisition of the customers and production lines of 2 copiers, in Denmark and Sweden who are granted with exclusivity for Denmark and Sweden respectively.

2013

The invention of the «Andreae» filter and the company celebrate their 50th birthday.

ORIGINAL FILTERS

Separation by Inertia How does it work?

Filtration is not restricted to capturing particles with a succession of wider to smaller meshed apertures. Our ingenious filters use another principle: separation by inertia.

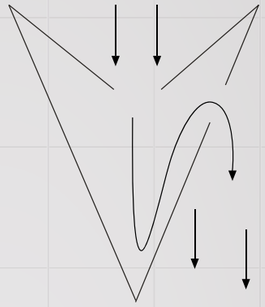
The migration phenomenon is common when slow-drying coatings are used in combination with mesh or fiberglass filters. This happens when the airflow pulls out particles previously trapped in the mesh or fiberglass. Consequently, the once deposited particles will again migrate throughout the system. However, with the Andreae Filter Separation by Inertia principle, the paint particles stay trapped in the retention pocket outside of the airstream.

Airflow loaded with paint particles (overspray) will suffer several radical changes in direction. These paint particles, heavier than air, follow tangent trajectories within the airflow. Thus paint particles will accumulate in the retention pockets, outside of the air stream, allowing the airflow to exit the filter virtually free of any overspray. As a result, our renowned high holding capacity filters hold up to 5 times more than common mesh filters.

Consequently, the static pressure within the booth increases slowly. This has two main advantages; the spray booth stays cleaner longer and the airflow around the coated parts stays uniform throughout the life of the filters.

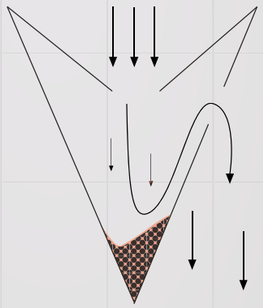
1 Airflow

Airflow enters the retention pockets and travels all the way through the twists and turns of the unique design of our accordion filter.



2 Overspray

The paint particles which are heavier than air, follow tangent trajectories within the airflow and gradually accumulate in the retention pockets outside of the airflow. This eliminates the migration phenomenon inherent to fiberglass and mesh type filters.



3 Paint deposit

The paint deposits accumulate in voluminous retention pockets, as well as on the side and front of the filter.

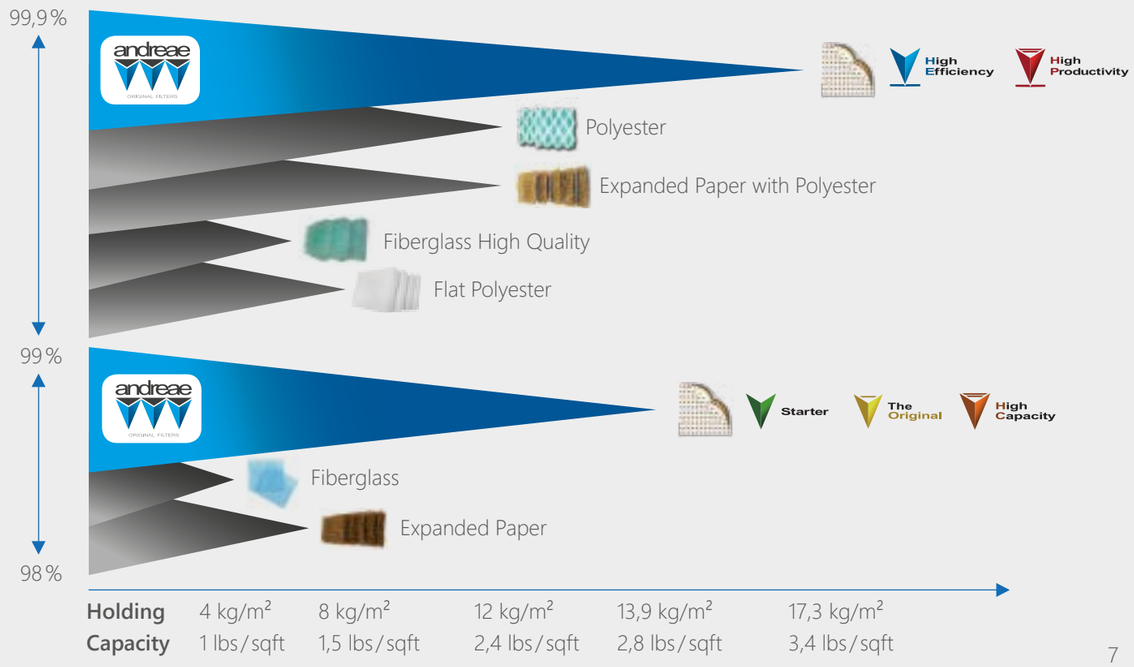
ORIGINAL FILTERS

Why choose Andreae Filters ?

TOP QUALITY BEST PRODUCT SINCE 1963

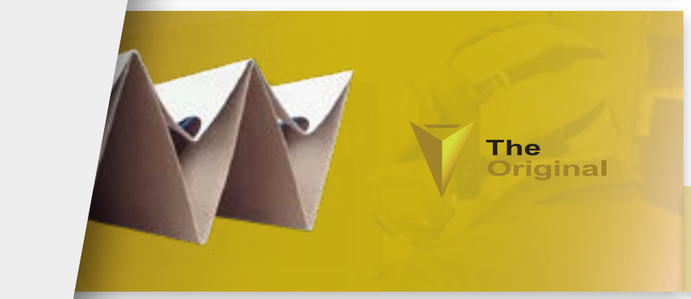
		 Polyester	 Flat Polyester	 Fiberglass	 Fiberglass High Quality	 Expanded Paper	 Expanded Paper with Polyester
Cost / Rendement	Best	Moderate	Moderate	Low	Low	Low	High
Holding Capacity	Best	High	Low	Low	Low	Moderate	High
Easy Storage	✓	✗	✗	✗	✗	✗	✗
Environmental friendly	✓	✓	✓	✗	✗	✓	✓
Healthy	✓	✓	✓	✗	✗	✓	✓

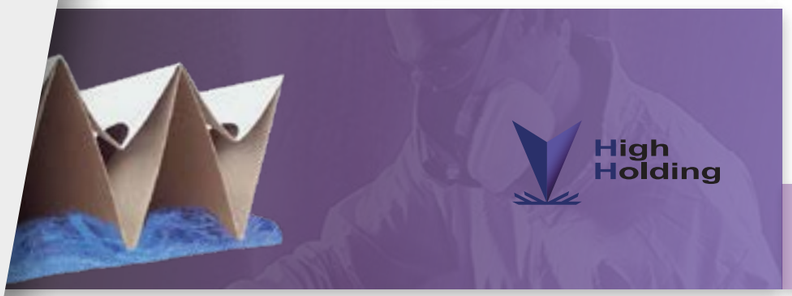
Filtration Efficiency %



ORIGINAL FILTERS

Which Filter is the Best for your Application ?





Adhesives
Air-dry enamels
Air-dry primers
Asphalts
Back-dry enamels
Clear coats
Epoxies
Fiberglass
Frit
Gel Coat
High solid enamels
Nitrocellulose Lacquers
Sealers
Stains
Tar-like coatings
Teflon
Urethanes
Vinyles

Starter

Andreae Design

The Andreae Starter is a low intensity filter intended for least demanding spray booth operations. Developed with the same expectation level as the Original Andreae filters, the Starter is made with 2 layers of "kraft" paper, punched, pleated and glued together. This product is ideal for a casual use of the spray booth and a great way to start with the Andreae filters range.

Performances

Load	Efficiency	
▼▼▼▼▼	▼▼▼▼▼	lacquers
▼▼▼▼▼	▼▼▼▼▼	High solids
▼▼▼▼▼	▼▼▼▼▼	Polyester Bi-Components

Load [kg/m²] [lbs/sqft]		
Lacquers 10kg/m² 2lbs/sqft	High Solids 12kg/m² 2,4lbs/sqft	Polyester 13kg/m² 2,5lbs/sqft

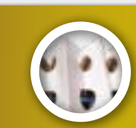
Efficiency [%]		
Lacquers 93.10 %	High Solids 98.20 %	Polyester 97.80 %

Recommended Air Velocity:
0.5 to 1 m/s

Pressure drop at/by:		
0.5 m/s 20 pa	0.75 m/s 30 pa	1.0 m/s 40 pa

Max. recommended pressure drop:
128 pa (possible up to 256)

The Original



Rigid Structure

Extension Limiter

50 YEARS

Reference Filter

Since over 50 years now, the Andreae Original has been the reference filter on the market. It remains the most universal and common filter in use. Our Original is made with 2 layers of heavy "kraft" paper, punched, pleated and glued together with 2 built-in extension limiters. Thanks to these limiters, the maximum load capacity is guaranteed. The Original is the filter for all paint types.

Performances

Load	Efficiency	
▼▼▼▼▼	▼▼▼▼▼	lacquers
▼▼▼▼▼	▼▼▼▼▼	High solids
▼▼▼▼▼	▼▼▼▼▼	Polyester Bi-Components

Load [kg/m²] [lbs/sqft]		
Lacquers 10kg/m² 2lbs/sqft	High Solids 12kg/m² 2,4lbs/sqft	Polyester 13kg/m² 2,5lbs/sqft

Efficiency [%]		
Lacquers 93.10 %	High Solids 98.20 %	Polyester 97.80 %

Recommended Air Velocity:
0.5 to 1 m/s

Pressure drop at/by:		
0.5 m/s 20 pa	0.75 m/s 30 pa	1.0 m/s 40 pa

Max. recommended pressure drop:
128 pa (possible up to 256)

High Capacity

Rigid Structure | Capacity Strips | High Capacity

The Andreae HC Original Filter has a loading capacity up to 5 times higher than any other filter type on the market. Its unique structure allows for more paint deposit areas and a more even and in depth paint loading. The HC is made with 2 layers of heavy "kraft" paper, punched, pleated and glued together with additional large paper strips on the front to offer a higher load capacity.

Performances

Load	Efficiency	
▼▼▼▼▼	▼▼▼▼▼	lacquers
▼▼▼▼▼	▼▼▼▼▼	High solids
▼▼▼▼▼	▼▼▼▼▼	Polyester Bi-Components

Load [kg/m²] [lbs/sqft]		
Lacquers 13,7kg/m² 2,7lbs/sqft	High Solids 14,7kg/m² 2,9lbs/sqft	Polyester 13,9kg/m² 2,8lbs/sqft

Efficiency [%]		
Lacquers 93.90 %	High Solids 98.30 %	Polyester 98.20 %

Recommended Air Velocity:
0.5 to 1 m/s

Pressure drop at/by:		
0.5 m/s 21 pa	0.75 m/s 32 pa	1.0 m/s 42 pa

Max. recommended pressure drop:
128 pa (possible up to 256)

High Efficiency

Rigid Structure | Polyester Layer | High Efficiency

The Andreae HE Original Filter will bring a filtration efficiency near 100% while keeping the high loading capacity of the Andreae Original filter. The HE is made with 2 layers of heavy "kraft" paper, punched, pleated and glued together completed with a polyester layer on its back increasing its filtration efficiency.

Performances

Load	Efficiency	
▼▼▼▼▼	▼▼▼▼▼	lacquers
▼▼▼▼▼	▼▼▼▼▼	High solids
▼▼▼▼▼	▼▼▼▼▼	Polyester Bi-Components

Load [kg/m²] [lbs/sqft]		
Lacquers 9kg/m² 1,85lbs/sqft	High Solids 12,2kg/m² 2,4lbs/sqft	Polyester 14,7kg/m² 2,9lbs/sqft

Efficiency [%]		
Lacquers 97.90 %	High Solids 99 %	Polyester 99.40 %

Recommended Air Velocity:
0.5 to 1 m/s

Pressure drop at/by:		
0.5 m/s 21 pa	0.75 m/s 32 pa	1.0 m/s 42 pa

Max. recommended pressure drop:
128 pa (possible up to 256)

High Holding

Rigid Structure | Fiberglass Layer | Efficiency

The Andreae HH Original filter has a higher filtration efficiency while keeping low airflow resistance. This means the filter lasts longer, ensuring a reduction in maintenance costs. The HH is made out of 2 layers of heavy "kraft" paper punched, pleated and glued together, completed with a fiberglass layer increasing both the filter's holding capacity and filtration efficiency.

Performances

Load	Efficiency	
▼▼▼▼▼	▼▼▼▼▼	lacquers
▼▼▼▼▼	▼▼▼▼▼	High solids
▼▼▼▼▼	▼▼▼▼▼	Polyester Bi-Components

Load [kg/m²] [lbs/sqft]		
Lacquers 11kg/m² 2,2lbs/sqft	High Solids 13kg/m² 4,7lbs/sqft	Polyester 15kg/m² 5,4lbs/sqft

Efficiency [%]		
Lacquers 97%	High Solids 98.50%	Polyester 98.50%

Recommended Air Velocity:
0.5 to 1 m/s

Pressure drop at/by:		
0.5 m/s 20 pa	0.75 m/s 30 pa	1.0 m/s 40 pa

Max. recommended pressure drop:
128 pa (possible up to 256)

High Productivity

Rigid Structure | Capacity Strips | Top Capacity | Polyester Layer | Top Efficiency

The Andreae HP Original filter combines the performances of the High Capacity and the High Efficiency filters. The HP is made with 2 layers of heavy "kraft" paper punched, pleated and glued together, completed with a polyester layer and additional large paper strips. It is the best-in-class choice for demanding spray booth operations.

Performances

Load	Efficiency	
▼▼▼▼▼	▼▼▼▼▼	lacquers
▼▼▼▼▼	▼▼▼▼▼	High solids
▼▼▼▼▼	▼▼▼▼▼	Polyester Bi-Components

Load [kg/m²] [lbs/sqft]		
Lacquers 13,7kg/m² 2,7lbs/sqft	High Solids 16,2kg/m² 3,2lbs/sqft	Polyester 17,3kg/m² 3,4lbs/sqft

Efficiency [%]		
Lacquers 98.50%	High Solids 98.80%	Polyester 99.70%

Recommended Air Velocity:
0.5 to 1 m/s

Pressure drop at/by:		
0.5 m/s 21 pa	0.75 m/s 32 pa	1.0 m/s 42 pa

Max. recommended pressure drop:
128 pa (possible up to 256)

Which Filter is available in your region?

Starter

	Model	Height cm	Height inch	Length m	Length feet	Surface m2	Surface sqft	pleats
Brown	AF101	100	40	10	32' 6"	10	108	260
	AF701	75	29 1/2	13,5	43' 9"	10	108	350
	AF801	90	36	9,24	30	8,35	90	240
	AF901	90	36	11,20	36' 1/2"	10	108	290
White	AF103	100	40	10	32' 6"	10	108	260
	AF703	75	29 1/2	13,5	43' 9"	10	108	350
	AF803	90	36	9,24	30	8,35	90	240
	AF903	90	36	11,20	36' 1/2"	10	108	290
Ignifuge	AF102	100	40	10	32' 6"	10	108	260
	AF702	75	29 1/2	13,5	43' 9"	10	108	350
	AF802	90	36	9,24	30	8,35	90	240
	AF902	90	36	9,144	30	10	108	290

The Original

	Model	Height cm	Height inch	Length m	Length feet	Surface m2	Surface sqft	pleats
Brown	AF111	100	40	10	32' 6"	10	108	260
	AF711	75	29 1/2	13,5	43' 9"	10	108	350
	AF811	90	36	9,24	30	8,35	90	240
	AF911	90	36	11,15	36' 1/2"	10	108	290
White	AF113	100	40	10	32' 6"	10	108	260
	AF713	75	29 1/2	13,5	43' 9"	10	108	350
	AF813	90	36	9,24	30	8,35	90	240
	AF913	90	36	11,15	36' 1/2"	10	108	290
	Pads: AF213	50	20	50cm	20"	0,25	2,8	13
	Pads: AF413	50	20	63cm	25"	0,3	3,5	16
Ignifuge	AF112	100	40	10	32' 6"	10	108	260
	AF712	75	29 1/2	13,5	43' 9"	10	108	350
	AF812	90	36	9,24	30	8,35	90	240
	AF912	90	36	11,15	36' 1/2"	10	108	290

High Efficiency

	Model	Height cm	Height inch	Length m	Length feet	Surface m2	Surface sqft	pleats
Brown	AF121	100	40	8	26' 1/4"	8	86	210
	AF721	75	29' 1/2"	10,75	35' 1/4"	8	86	280
	AF921	90	36	9,14	30	8,35	90	240
White	AF123	100	40	8	26' 1/4"	8	86	210
	AF723	75	29' 1/2"	10,75	35' 1/4"	8	86	280
	AF923	90	36	914	30	8,35	90	240
	Pads: AF223	50	20	50cm	20"	0,25	2,8	13
	Pads: AF423	50	20	63cm	25"	0,3	3,5	16

High Capacity

	Model	Height cm	Height inch	Length m	Length feet	Surface m2	Surface sqft	pleats
White	AF133	100	40	8	26' 1/4"	8	86	210
	AF733	75	29' 1/2"	10,75	35' 1/4"	8	86	280
	AF933	90	36	9,14	30	8,35	90	240

High Productivity

	Model	Height cm	Height inch	Length m	Length feet	Surface m2	Surface sqft	pleats
White	AF143	100	40	8	26' 1/4"	8	86	210
	AF743	75	29' 1/2"	10,75	35' 1/4"	8	86	280
	AF943	90	36	9,14	30	8,35	90	240

High Holding

	Model	Height cm	Height inch	Length m	Length feet	Surface m2	Surface sqft	pleats
White	AF153	100	40	8	26' 1/4"	8	86	210
	AF753	75	29' 1/2"	10,75	35' 1/4"	8	86	280
	AF953	90	36	9,14	30	8,35	90	240

	Model	Eastern Europe	Western Europe	North America	South America	Apac / mea
Brown	AF101	✓	✓		✓	✓
	AF701	✓	✓			
	AF801	✓	✓		✓	✓
	AF901	✓	✓			✓
White	AF103	✓	✓		✓	✓
	AF703	✓	✓			
	AF803	✓	✓		✓	✓
	AF903	✓	✓			✓
Ignifuge	AF102		✓			
	AF702		✓			
	AF802		✓			
	AF902		✓			
	Filters per Pallet	60	60		60	60
Brown	AF111	✓	✓			
	AF711	✓	✓			
	AF811	✓	✓			
	AF911	✓	✓			
White	AF113	✓	✓	✓	✓	✓
	AF713	✓	✓			
	AF813	✓	✓	✓	✓	✓
	AF913	✓	✓			✓
	Pads: AF213			✓	✓	✓
	Pads: AF413			✓	✓	
Ignifuge	AF112		✓			
	AF712		✓			
	AF812		✓			
	AF912		✓			
	Filters per Pallet	60	60	60/56	60	60 (pads: 56)
Brown	AF121	✓	✓			
	AF721	✓	✓			
	AF921	✓	✓			
White	AF123	✓	✓	✓	✓	✓
	AF723	✓	✓			
	AF923	✓	✓	✓	✓	✓
	Pads: AF223			✓	✓	✓
	Pads: AF423			✓	✓	
	Filters per Pallet	56	56	56	56	56
White	AF133	✓	✓	✓	✓	✓
	AF733	✓	✓			
	AF933	✓	✓	✓	✓	✓
	Filters per Pallet	60	60	60	60	60
White	AF143	✓	✓	✓	✓	✓
	AF743	✓	✓			
	AF943	✓	✓	✓	✓	✓
	Filters per Pallet	60		56	56	56
White	AF153	✓	✓	✓	✓	✓
	AF753	✓	✓			
	AF953	✓	✓	✓	✓	✓
	Filters per Pallet	52		56		52

Channel Frame Installation

① Cut filter length to fit frame opening:

Count marks to length the frame opening and cut. (i.e. 10 ft wide frame opening, count 10 marks and cut on the 10th mark; i.e. 3m wide frame opening, count 9 marks and 6 pleats, then cut).

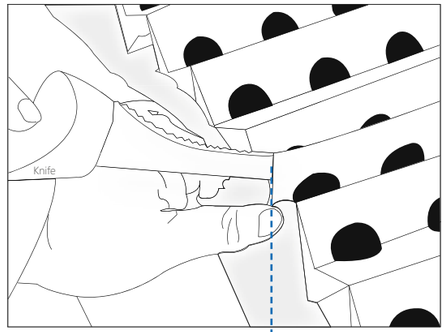
To cut, slide knife under pleat (and polyester if cutting the HE). After knife is in position, firmly grasp the filter and lift knife.

② Gather filter:

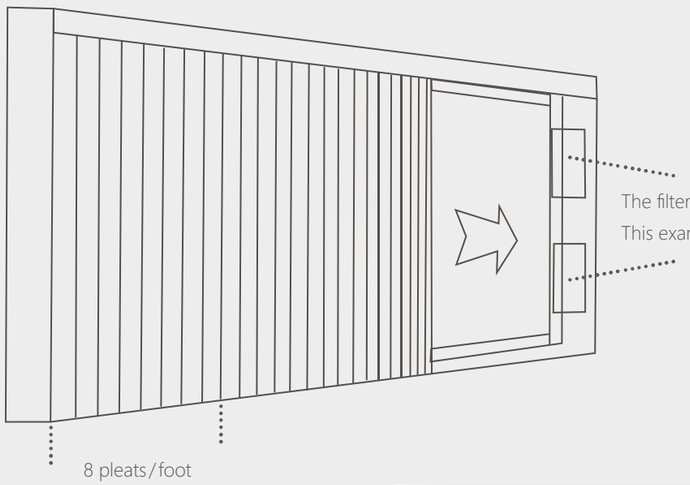
Gather filter into a tight accordion for easy transport. Slide filter into frame, white side facing toward spray gun. Release.

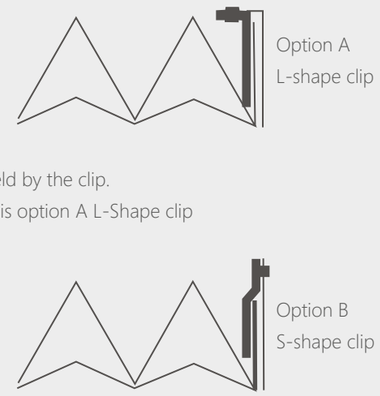
③ Tuck first and last pleats:

Behind clips on each end of exhaust frame.



You will cut through two paper layers (plus synthetic material in the High range). Pinch the pleats on either side beneath the knife for additional control while cutting.





Do not over-extend the filter.
Over-extension reduces arrestance efficiency and filter life.

Exhaust frame construction

Three simple elements constitute the Andreae Filter frame:

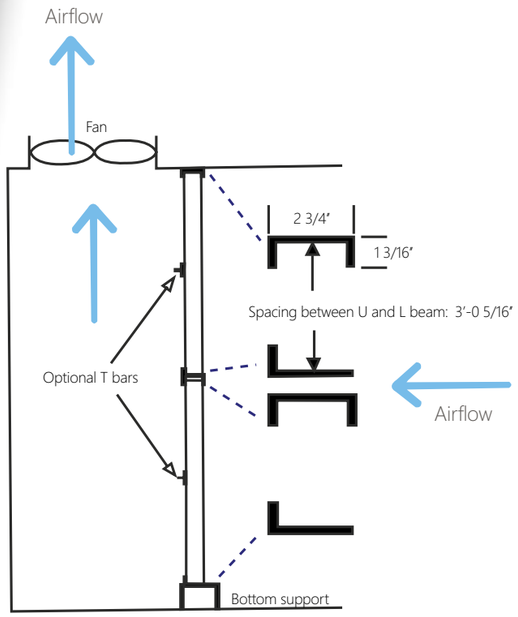
① An L-shaped channel is positioned at the side and bottom of the frame to create the filter stand support.

Dimensions:
Outside height 1 1/2 (3,81 cm) width 3" (7,62 cm), Length as required. Inside 2 13/16" (7,14 cm)

② The side clips secure the first and last filter pleat in place and seal the exhaust wall

③ A U-shaped channel is positioned upside down to create the upper part of the frame. This seals the top of the filter and prevents the filter from falling forward when the ventilation is turned off.

Dimensions:
Outside height 1 1/2 (3,81 cm) width 3" (7,62 cm), Length as required. Inside width 2 5/8" (6,66 cm)



Andreae Filters are held in place by an inverted U-beam on top and an L-beam on bottom. If the booth has several rows of filters, each row is installed on top of the adjoining beam.

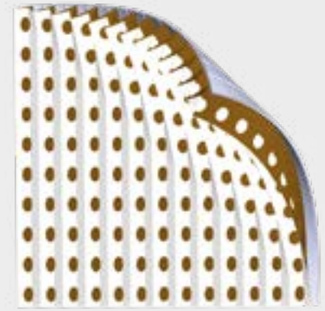
The inner dimensions between the U and L beams must be sized ~0.2"" more than the actual filter height to allow room for the filter to slide into the frame.

The Pad Frame Installation

Andreae Wire Supports is necessary for the installation of Andreae pad size filters: 20 x 20 inch and 20 x 25 inch (50 x 50 cm and 50 x 63.5 cm).

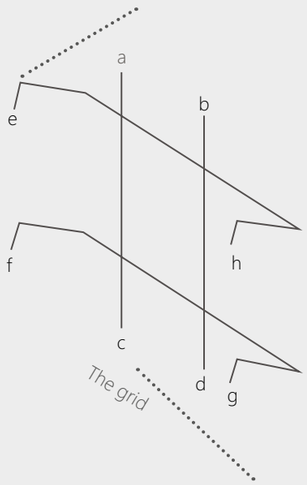
An initial adjustment of the wire supports is required for proper fit. Over bend wires to allow 1/8 in (0.32 cm) gap between wire support arm and frame wall.

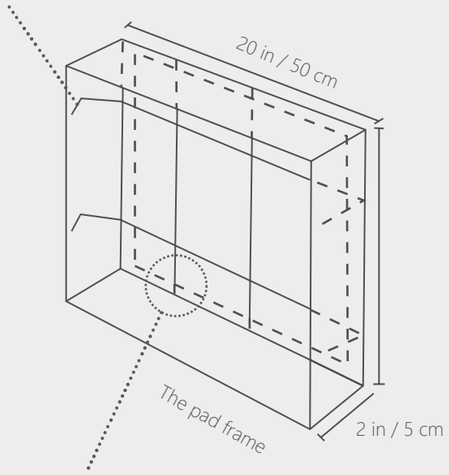
The pad is already cut



Example of 20 x 20 inch (50 x 50 cm) pad (14 pleats)

Insert pleat e, f, g & h between the grid and the frame in e/f and g/h





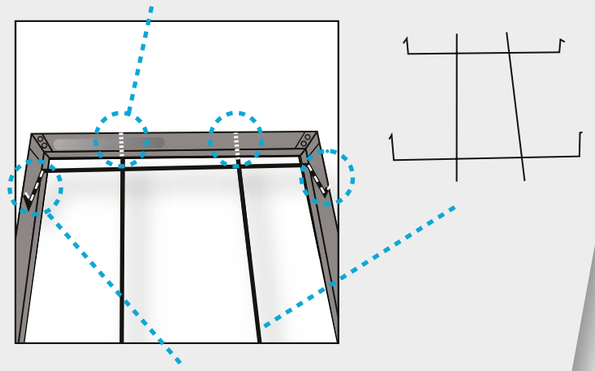
Tines a,b,c & d go behind the back of the frame to secure wire support while removing loaded filter

One time installation

If you are changing from other media, we will provide Andreae Filter Supports free of charge.

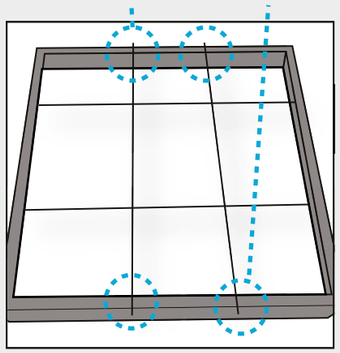
The pad filter support Installation

Front view cell frame
Straight tines behind the filter frame

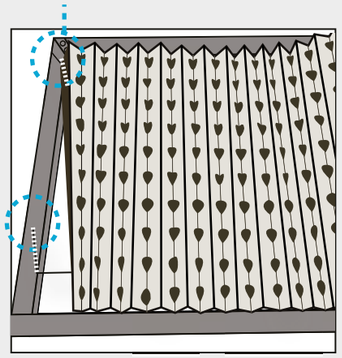


Wire support grid into filter frame

Back view cell frame
Four straight tines positioned behind the filter frame



Front view cell frame
Filter is held between the bent tines and the filter frame.



① Insert two straight tines behind the filter frame. (Frame shown depicts a cell opening in an existing spray booth exhaust bank.)
The straight tines must run vertically in order to be able to extend properly the Andreae Filter from side to side.

You may insert either the top or bottom pair, it does not matter which end is inserted first.

② Push the wire support grid into filter frame, sliding grid up or down so that the remaining two straight tines can also be positioned behind the filter frame.

③ Once all four straight tines are behind the frame, slide the support to center it within the frame. It is not necessary to position the support perfectly.

Rear view of filter frame showing all four straight tines positioned behind the filter frame. These may overhang the frame more on one end or the other, depending on how well the support is centered within the frame.

It is not necessary to perfectly center the wire support.

④ Secure Andreae Filter within frame: tuck first rear pleat of the filter between bent tines and filter frame.

The tines will puncture the polyester backing of the filter when installing the Andreae High Efficiency Filter, but this does not affect the filter's performance.

OUR MISSION

AEREM focuses on its customers and partners needs in the finishing industry. Every relationship is a privileged partnership based on professionalism, dialog and trust. Delivering the best service with performant, environmentally friendly quality products easy to dispose of is our commitment since 1963.

Our mission is to develop, manufacture and supply high performant filtration and protection products for spray booths that aim to keep a clean and safe working environment while enhancing the spray booths productivity.

OUR VISION

AEREMs ambition is to affirm its position by becoming an international multi-brand company focused on the global finishing industry with a wide variety of renowned and innovative filtration and protection products.

OUR VALUES

AEREM is above all a work of men and women united around the world for the success of the Group.
They all share the same values in a solidarity and caring climate.

ENVIRONMENT

Protecting the environment is the responsibility of everyone. AEREM uses recycled raw materials in all of its products. Our sharply tuned and performant production processes results in low waste and low energy consumption.

CUSTOMER CARE

Because all our customers are important, our priority is to support them in their projects, build and maintain a long-term partnership to be able to bring the answers adapted to each need. Over 900 distributors around the world trust us.

PROTECTION

We seriously consider the need to protect the operator and provide a secure working environment through our products and services. This is why our filters are free of polluting or toxic products. They can be stored, handled and incinerated or landfilled safely.

MULTICULTURALISM

Aerem is a selfie of multiculturalism and diversity. Our teams are made of men and women of different languages, cultures and origins. It is in this spirit of openness and diversity that we seek to build a partnership with you.

RESPECT & INTEGRITY

We treat others with respect and comply with all internal and external norms and regulations. We strive to always act with transparency and honesty.

Please, visit the toolbox section on our website for all your technical questions:
www.andreaefilters.com

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