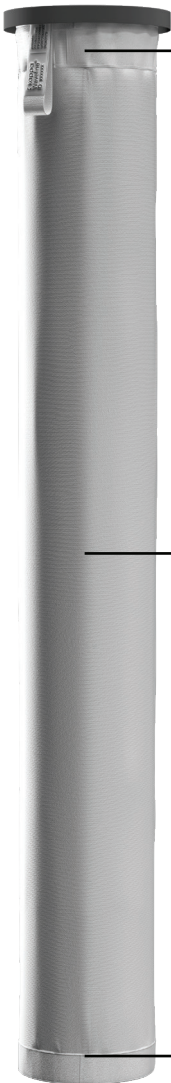




CleanAir 

Innovative filtering media solutions for the most demanding applications.

FILTER BAG CONSTRUCTION



Top construction

Many variations, customizable

Main body

Thermo sealed or sewed

Bottom construction

Many variations, customizable

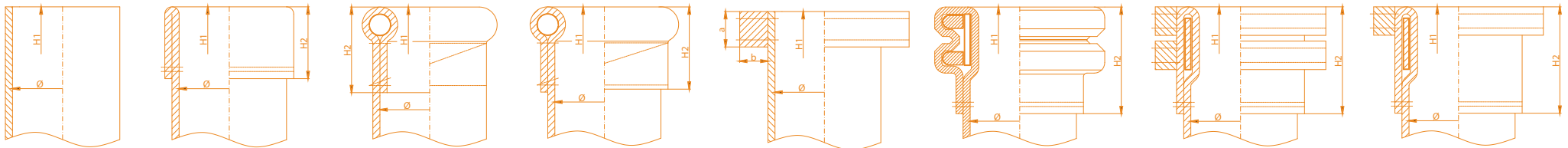
At CleanAir, we aim to provide efficient dedusting solutions by **lowering emissions, saving energy, and contributing to decarbonization**. Each sleeve is carefully manufactured, customized to customer needs, and comes with a warranty.

Particle size	Applications	Dust cake layer (g/m ²)	Pulse jet air cloth (m/min)	Felt weight (g/m ²)
Course (10-200 micron)	Grain, paper, flour, fertilizer, plastic	250	2.5 - 3.5	400
Medium (5-100 micron)	Tobacco, sugar, leather	300	2.0 - 3.0	500
Fine (3-20 micron)	Cement, asphalt, limestone, foundry	400	1.5 - 2.0	500 - 550
Very fine (0.5-20 micron)	Steel furnace, metal oxides, carbon	500	1.0 - 1.5	500 - 650 + membrane
Smoke & fume (<0.2-10 micron)	Smelting fume, alu oxides	> 600	0.75 - 1.2	> 540 + membrane

BOTTOM AND TOP DESIGN

The top and bottom parts of the filter bag often need to be customized based on the plant's construction features. Depending on the attachment method, a split ring or a rubber washer may be required.

TOP FILTER BAG CONSTRUCTION ▽



Raw edge

Hem

Inner hem

Outer hem

Snapping single felt

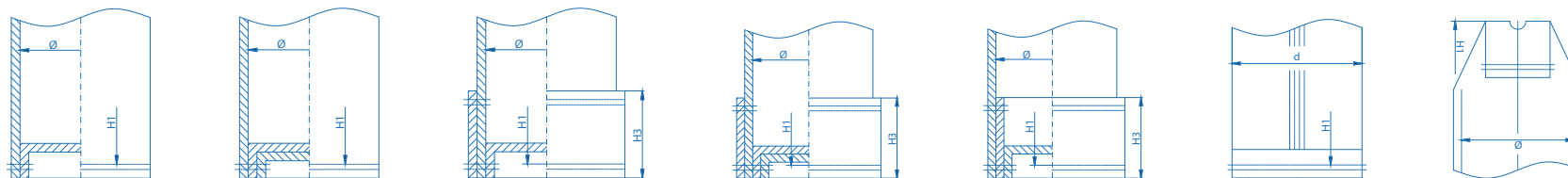
Snapping double felt

Cut edge

Snapping

The bottom construction of the bag is often reinforced, as this area is typically exposed to harsher conditions.

BOTTOM FILTER BAG CONSTRUCTION ▽



Standard

Double

Reinforced

Reinforced double

Inner reinforce

Hooked loop

Flat

FILTER BAG MATERIAL

Scrim and type fibers	Continuous temperature (Peak temperature)	Designation	Hydrolysis Resistance	Acid Resistance	Alkali Resistance	Oxidation Resistance
Polypropylene	95 °C/(95 °C)	PP	excellent	excellent	excellent	limited
Polyamide	110 °C/(115 °C)	PA	limited	limited	good	limited
Polyacrylnitrile copolymer	115 °C/(120 °C)	AC	limited	limited	good	good
Temperature-resistant olefin	125 °C/(135 °C)	RO	excellent	excellent	excellent	limited
Polyacrylonitrile homopolymer	125 °C/(140 °C)	DT	good	good	good	good
Polyester	150 °C/(150 °C)	PE	limited	good	limited	good
Polyphenylene sulphide	190 °C/(200 °C)	PPS	excellent	excellent	excellent	limited
m-Aramid	200 °C/(220 °C)	NO, NX	limited	limited	limited	good
Polyimide	240 °C/(260 °C)	PI	good	limited	limited	good
Polytetrafluorethylene	250 °C/(280 °C)	PTFE, TFL	excellent	excellent	excellent	excellent
Fibreglass fabric	260 °C/(288 °C)	GL, WG	good	limited	limited	excellent

PRICE (€) PP PE ACRYLIC Fiberglass PPS FMS ARAMID PTFE P84 →

TEMP. (C°) PP PE ACRYLIC PPS ARAMID P84 and FMS PTFE/Fiberglass →
 (130 - 150) (160 - 190) (204 - 240) (240 - 260) (260 - 280)

MOISTURE PE ARAMID PP P84 PPS FMS Fiberglass ACRYLIC PTFE →

FILTER SYSTEMS USAGE:

- Dedusting
- Process filter
- Product filter
- Combustion filter
- Silo top filter
- Jet pulse filter
- Reverse filter

FINISHINGS

⌘ CALENDERING

The calendering operation consists in squeezing the needle felt fabric into two hot rollers. Its purpose is to modify the textile surface features to adapt to the desired permeability level.

≡ MEMBRANE LAMINATION

In a special laminating machine, a PTFE membrane is bonded to the material's inner fabric layers to reduce emissions and improve dust cake release.

⚡ COATINGS AND IMPREGNATION

PTFE: a double coating on the fibers increases chemical resistance.
WOP: a special water and oil repellent is used as a protective fabric treatment, covering the fibers with a chemical shield.

🔥 FIRE PROTECTION

In case of customer demand, we offer a specialized fire retardant treatment rated "Class B1," along with a premium fireproof felt option rated "Class A" for enhanced safety and protection.

🔧 HEAT SETTING

It's a special operation performed to heat stabilize filter felts and minimize residual shrinking. This process typically involves heating the fabric to a specific temperature and maintaining it for an extended period.

ANTI STATIC PROTECTION

A stainless steel wire mesh inserted inside the core of the filter decreases the overall surface resistivity of the woven felt, reducing the risk of electrostatic sparks.

🔥 SINGEING

The singeing operation uses a controlled gas flame to burn off all residual tissue hairs. This process eliminates protruding fibers, giving the fabric a smoother appearance.

🧪 ACID PROTECTION

A special coating can be applied whenever high resistance to acidic environments is needed.

APPLICATION FIELDS

● MINERALS AND AGGREGATES

Customized applications depend on the diverse treatments of various minerals in aggregate form. From asphalt to fertilizers, and lime to coal, filtration tasks often occur in atmospheres with corrosive gas conditions and harsh environments.

● IRON AND STEEL

A large quantity of pollutants is typical in steel applications. The high temperatures of applications such as furnaces and casting operations require the best materials for fine dust emission control and long-term resistance.

● ALUMINIUM

Although part of the metal casting filter bag family, Aluminum deserves special attention. Handling, drying, calcining, electrolytic reducing, and casting can all generate significant pollutants which need to be controlled and taken care of.

● CEMENT

Cement plants typically have a high need for ventilation and filtration. From milling coals and meals to transportation, ovens, and coolers, high-temperature filters are often required to control powder emissions in aggressive gas environments.

● PLASTIC

The polymer industry requires filter bags that ensure safe conditions against fire and explosions, featuring controlled surface resistivity and antistatic properties.

● POWER GENERATION

Even though new fuel materials are emerging, coal remains the primary fuel used in power generation. The high temperatures involved often require very high-quality filter fabrics to meet strict emission limits.

● WASTE INCINERATOR

PTFE is the ultimate fiber used in these plants, which often burn various types of waste at very high temperatures. Extremely acidic or basic gases require resistant fabric media with PTFE membranes to reduce particulate emissions.

● FOOD AND DIARY

Food and dairy filtering applications face the challenge of treating powder in a clean environment with potential moisture and combustible dust. Processes such as blending, drying, milling, and roasting may all require a baghouse.

● WOOD AND BIOMASSES

Wood paste, wood dust and pellets are usually filtered in potentially dangerous and highly flammable environments. For this reason, anti static polyester filter bags are usually employed for such applications.

● PHARMA AND CHEMICALS

Expensive dust in the pharmaceutical field, for example, may necessitate sterile Teflon filter bags. Other materials and applications can also be employed based on the specific chemicals that are being processed.

ACCESSORIES

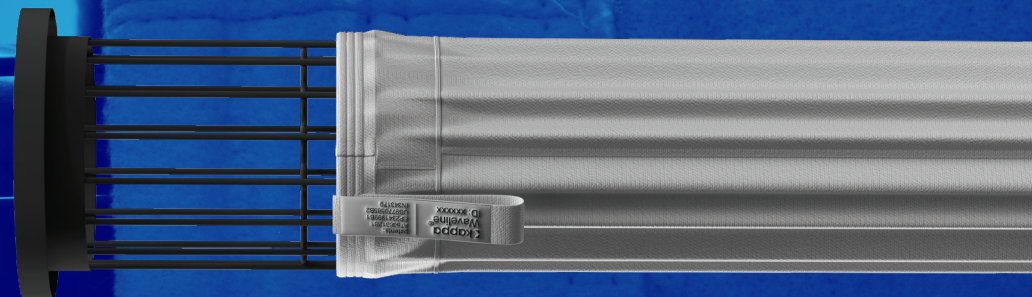
RANGE

Filter bag shapes in CleanAir can vary from round to oval, luehr, or flat. Additionally, we offer the production of customized filter bags on demand. Before placing the order in production, we provide detailed drawings and samples for confirmation. We typically request the dimensions and thickness of the cell plate hole.



COUPLING CAGE AND BAGS

As a cage manufacturer, CleanAir Europe manages to ensure the perfect coupling of the filter's cage with the outer bag. Accurate and precise play between these elements is indeed crucial, as it impacts dust cake release and filtration efficiency. Relying on us means getting a state-of-the-art coupling filter bags with their supports, achieving extremely high efficiency levels.



ACCESSORIES



ECO SMART TAG AND LABEL:

CleanAir Europe's special digital beacon helps trace cage and bag information, offering comprehensive support and details for both product and installation.



ECOTURBO:

The EcoTurbo Venturi can be chosen to enhance dust cake release performance by increasing the peak pressure wave of the injected compressed air.



CAGES:

We offer a wide range of cages in various formats, including oval, round, starred, luther, and flat sections. Custom formats are also available upon request.



LEAKAGE POWDER:

We provide fluorescent leakage powder to detect filter bag leaks in dust collectors, ensuring proper fitting and maintenance.



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