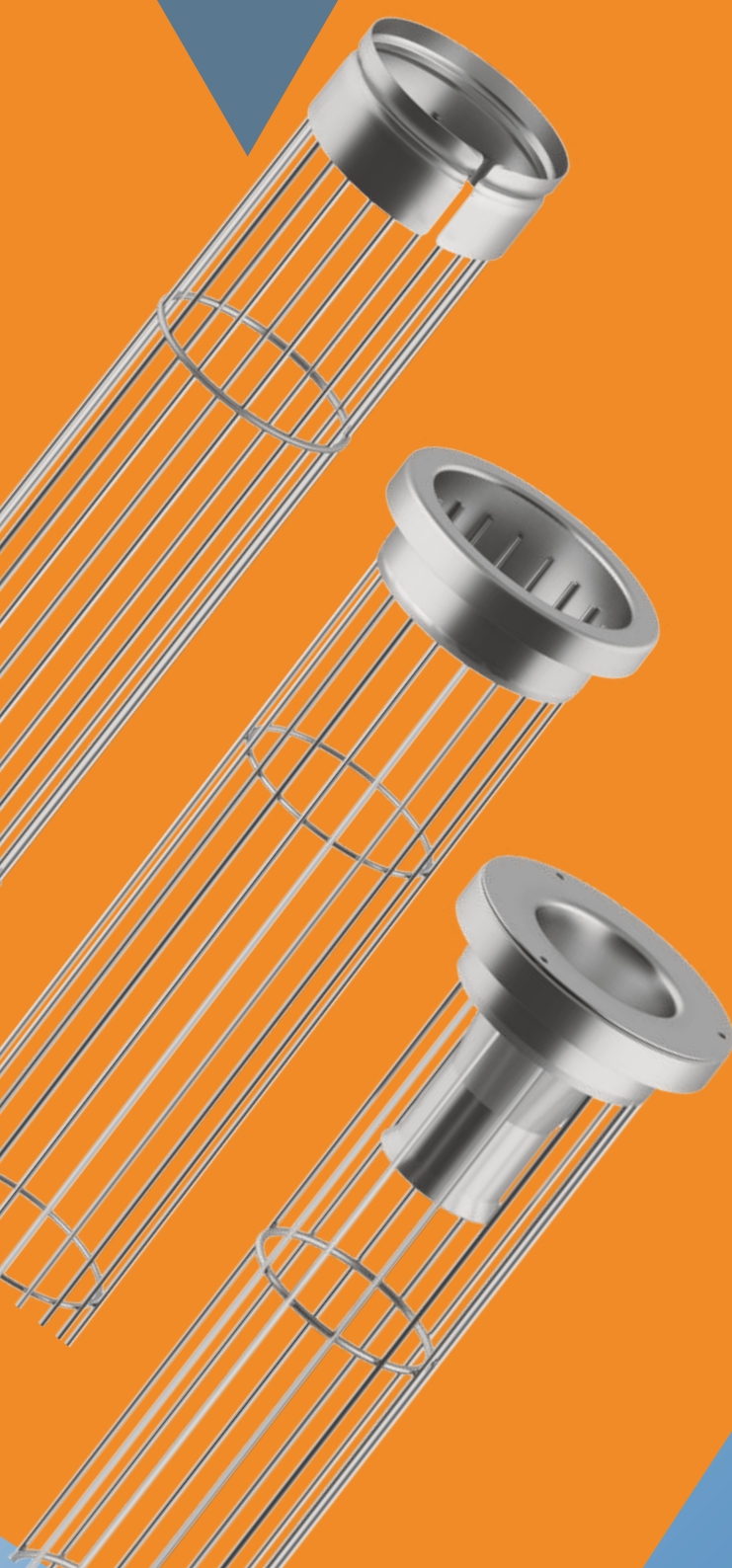


# CleanAir



Your filtration's support

## Filter bag cages



# FILTER CAGES AND ACCESSORIES

for filter bags

for industrial air collectors



# CleanAir

CleanAir is the industrial reality born from Defim, specialized in the manufacture of filter cages for filter bags for the abatement of industrial dust. Constant research and targeted investments to create a highly specialized and agile structure in providing consultancy, services and products for the world of air filtration and separation.

The primary objective of CleanAir Europe was the creation of a production process managed entirely within the company, to have full control and full responsibility for each stage of production and the relative quality of the product. Following this goal, CleanAir Europe has production lines entirely built and designed in-house, fully automatic machines capable of producing any type of support for filter bags.

CleanAir Europe Srl is located in the industrial area of the province of Lecco, in a factory of 6000 m<sup>2</sup> covered and a large outdoor space suitable for the storage of materials ready for shipment of over 3000 m<sup>2</sup>.

Constant quality, production speed, experience and customer service work in synergy to guarantee our customers reliability and trust over time.



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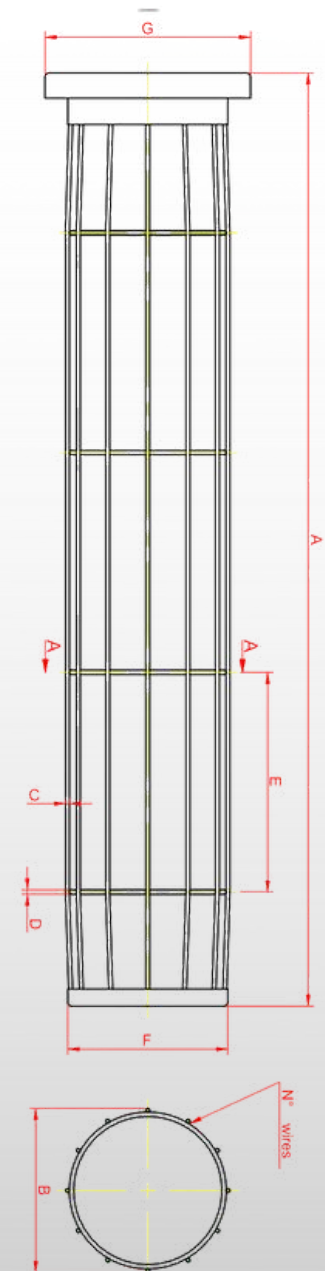
# Quality

Thanks to the experience and passion of our staff, we can study, design and manufacture high-quality filter cages for all types of industrial baghouse air collectors.

The company can accompany its customers from the earliest stages of designing the cages to its realization.

We focus on the needs and requirements of customers

Many ideas and suggestions that result in new products or specific variants arise from the experience acquired over the years and from the fundamental talks and suggestions of our customers engaged daily in facing different types of applications.





# Fields of application

Protecting our planet is of vital importance to us all.

At CleanAir, we strive to understand the challenges you face every day in your industry for abatement and control of emissions. Our goal is to provide solutions to help you face and solve the challenges of today and tomorrow.

For over 60 years we have been producing filter cages for the abatement of industrial dust and fumes, with installations in multiple and diverse industrial environments.

Our experience is enriched with the study of your processes and procedures to find the best solution for your filtering needs.



# Fields of use

Some of the industries we serve for emissions control

## Agriculture and farming

Grains, tea, spices, coffee, animal farms



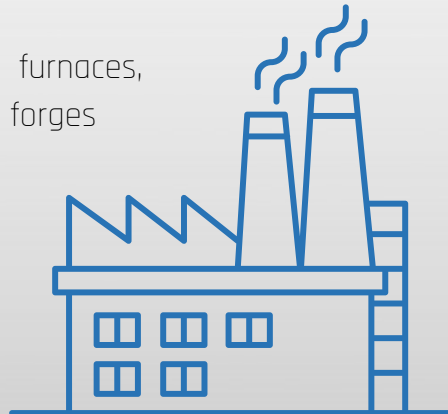
## Food and Beverage

Flours, malts, emulsifiers, cocoa, powders for food use



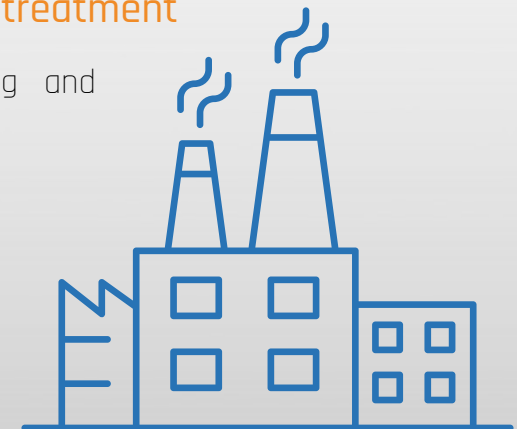
## Mines and metals

Steel mills with blast furnaces, rolling mills, foundries and forges



## Incinerators and waste treatment

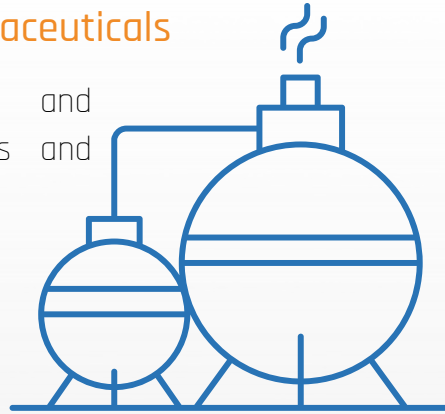
Waste recycling, composting and incineration plants



# Fields of use

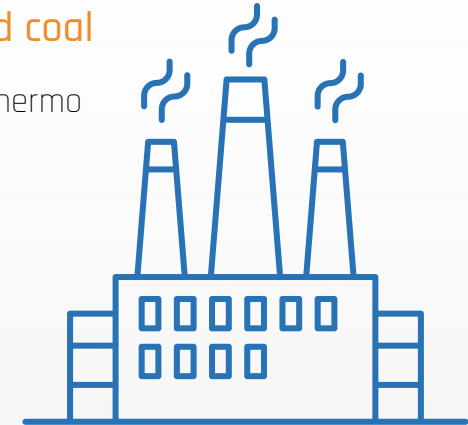
## Chemistry and pharmaceuticals

Fertilizers, sulphates and phosphates, salts, oxides and pharmaceuticals



## Electric power plants and coal

Combustion plants for the thermo production of electricity



## Cement factories

Cement, lime, gypsum, conglomerates and asphalts



## Oil & Gas

Mining and quarrying industry, refineries









# Filter bag cages

The technologies used offer perfect adherence between the filter bag and the cages, offering optimal cleaning.

## Filter cages technology for filter bags

When the filter bag does not fit perfectly to the cages or the filter cages are not replaced even when the oxidation processes have started, the filter system is compromised. Neglected filter bag cages are often the root cause of numerous plant operational problems.

Our filter bag supports are designed and manufactured to ensure optimal performance and easy maintenance.

An important feature is the correct coupling between the filter bags and the cage, which ensures proper adhesion and long service life. The filter cages made by CleanAir Europe are built to withstand cleaning cycles, bag changes and different environments of use. They are also designed to offer uniform support over the entire length of the filter cloth.

CleanAir Europe cages are resistant to the pressure exerted by the filter bag during the particulate collection cycle. The working environment and gas flows can determine the cage materials or treatments to reduce or prevent corrosion from the metal surfaces of the cages.

Each cage, regardless of design, is produced consistently to its specifications:

diameter, total length and other tolerances are maintained consistently with our unique state-of-the-art automated manufacturing equipment.



# Filter bag cages

The cages produced by CleanAir Europe are used to adapt to bag filters to offer a fundamental contribution to the dedusting of the air inside industrial environments and reduce emissions to the outside.

They are designed and built to meet different performances and functions: each sector served has the professionalism and competence of the CleanAir Europe team at its disposal to create the filter bag cages that best suits its filtration needs.

Shapes, sizes, materials, treatments and finishes characterize the filter cages differently and define the best use area.

CleanAir Europe cages are available in a wide variety of shapes, materials and finishing treatments; they can be used in numerous industrial applications and the most severe operating conditions.

Our supports are produced according to all the most common OEM designs or made to measure specific needs.

## Shapes available

They are made with round, elliptical, rectangular, rhomboid, star, square section.

## Available sizes

The length of the cages starts from 0.5 meters up to 7 meters in one piece.

The cages are made up of different longitudinal wires: 6, 8, 10, 12, 16, 18, 20, 24.

The distance between the rings can vary by 50, 100, 150, 200, 250

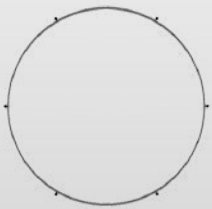
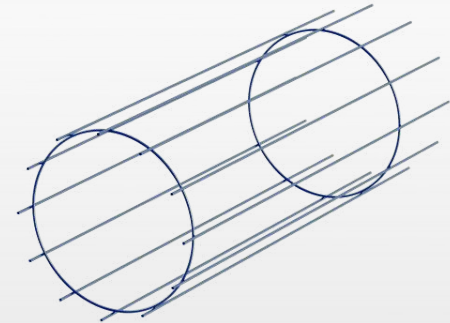
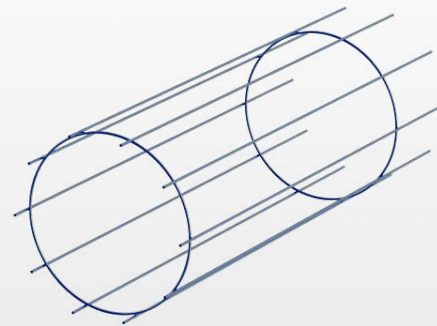
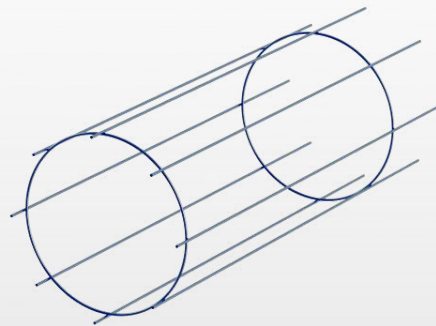
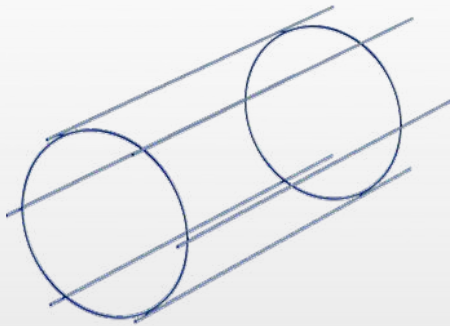
## Accessories available

The cages can be supplied complete with bottom pan, collars (top part), joints and venturi, the latter also made and assembled according to specific needs.

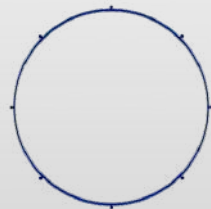
# Filter bag cages

## Round section

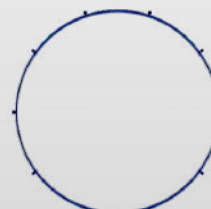
The round-shaped cages for filter bags can be made with a different number of longitudinal wires 6-8-10-12-16-18-20-24 according to the specific needs of the customer.



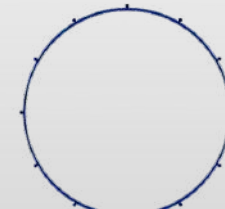
**6**



**8**



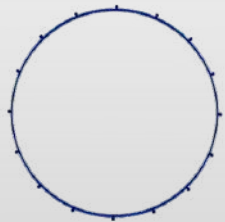
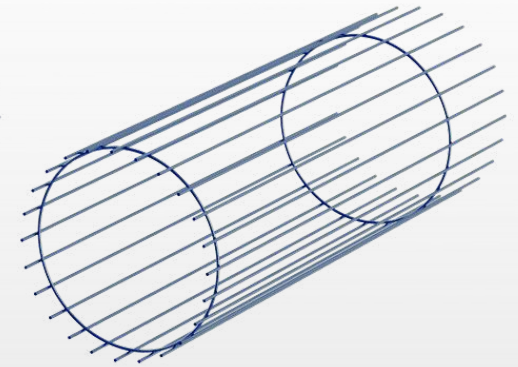
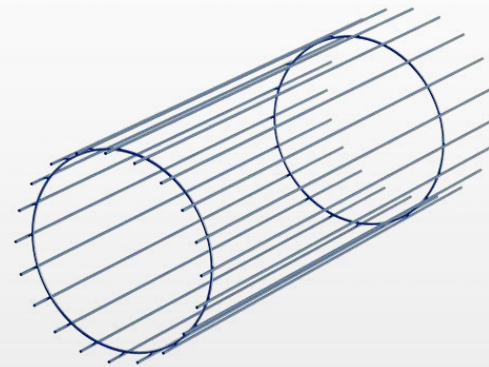
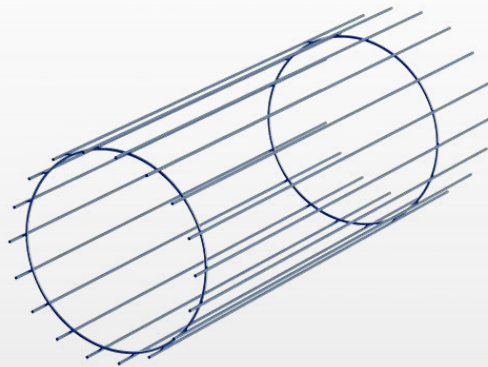
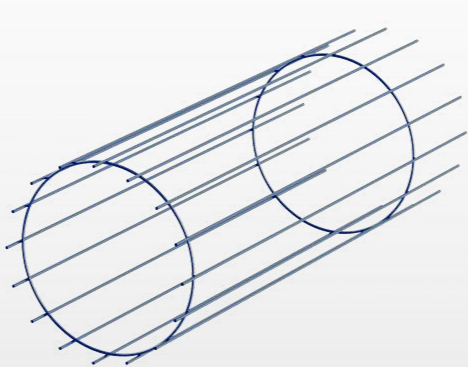
**10**



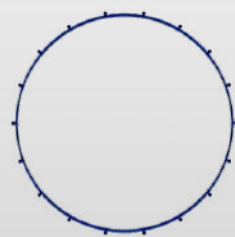
**12**

# Filter bag cages

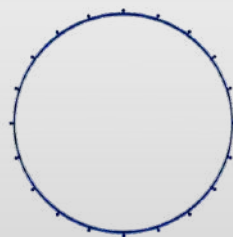
Round-shape section



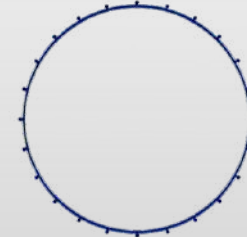
16



18



20

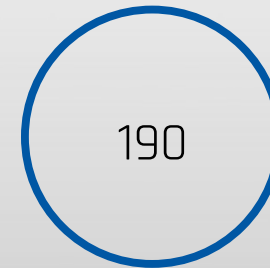
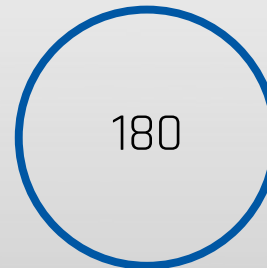
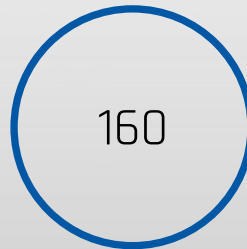
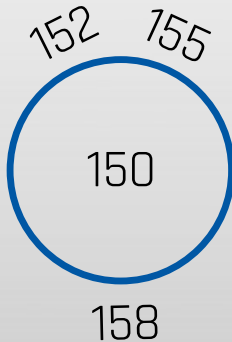


24

# Filter bag cages

## Diameters available

Here are some of the main diameters that can be produced, others are available on request.



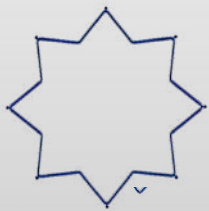
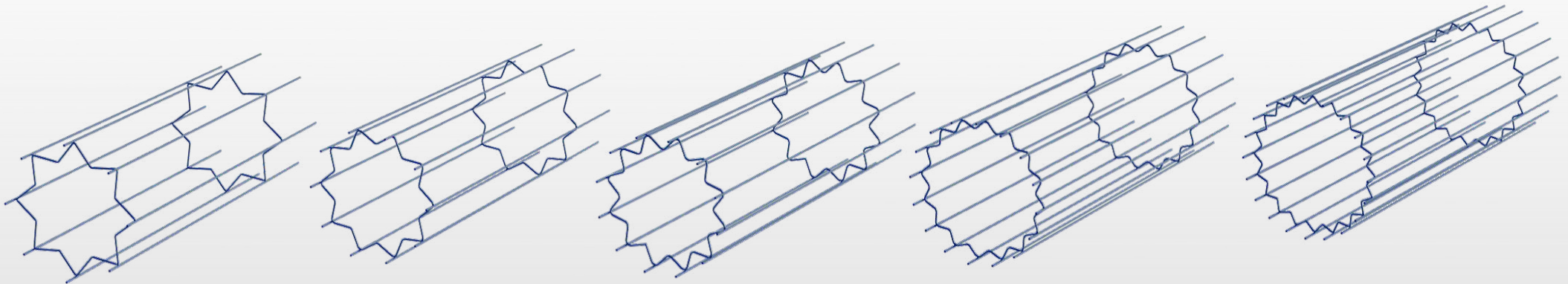
# Filter bag cages

## Star-shaped section

The cages for filter bags with a star-shaped section can be made with a different number of longitudinal wires 8-10-12-16-20 depending on the specific needs of the customer.



Diameters from 121 to 153 mm



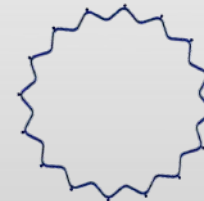
8



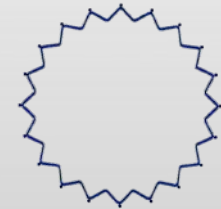
10



12



16

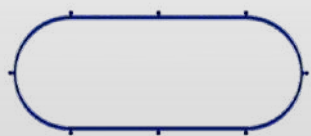
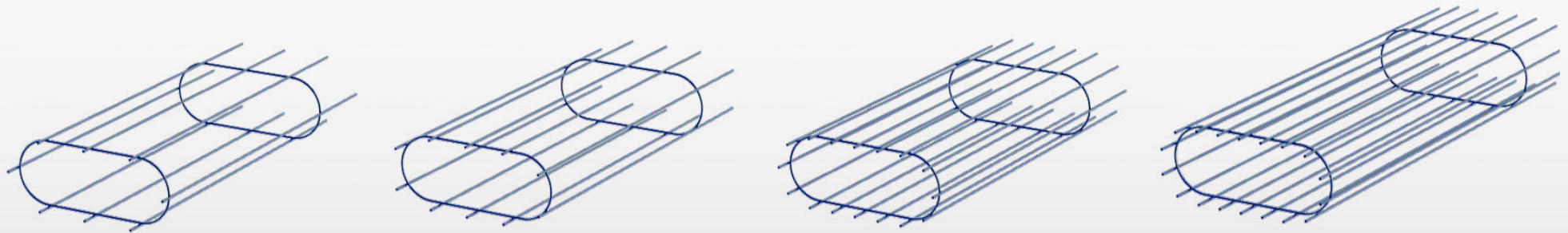


20

# Filter bag cages

## Oval-shaped section

The baskets in the standard version have a round section, they can be produced with a different number of longitudinal wires 8-10-16-18 mm, depending on the customer's needs.



8



10

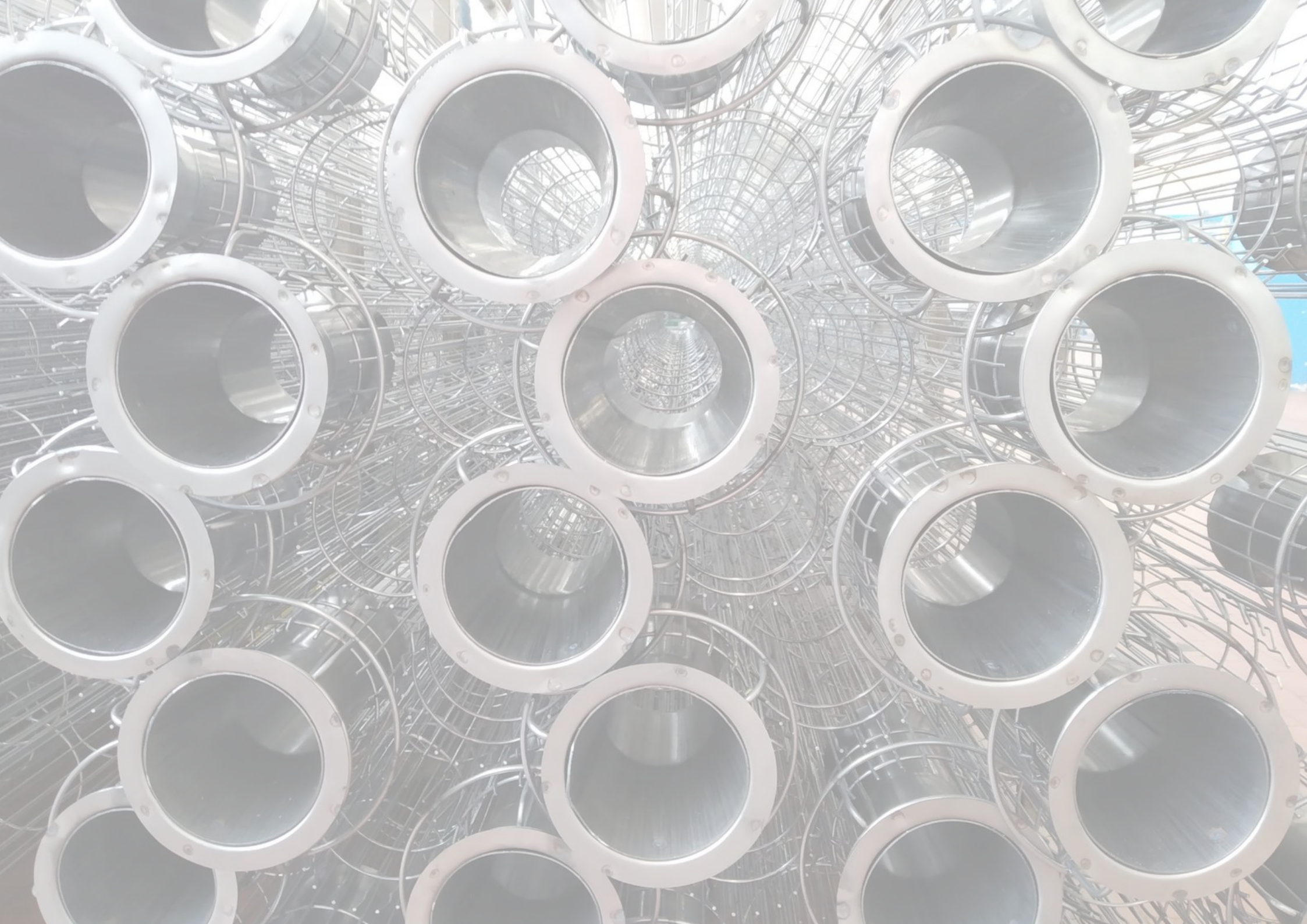


16



18





# Collars

The collar is one of the parts that make up the bag filter cage, positioned on the top of the cage.

The range offered by CleanAir is made using high-quality materials and innovative technology in full compliance with the norms and standards established by the sector.

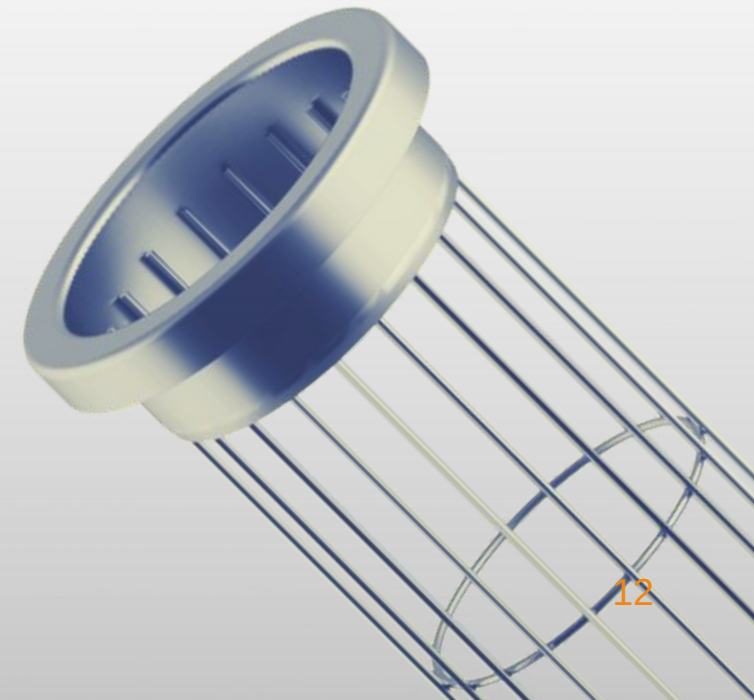
In addition to the offered range of collars, are available different types of cages suits any type of design.

The collars are produced in different materials:

- Raw steel,
- Pre-galvanized steel,
- Stainless steel.

The collars are available in 5 different types and various sizes.

Collars are made on specific customer request



# Collars

## Collar A

Roll band high groove



## Collar B

Open roll band



## Collare C

Straight flange



## Collar D

Roll flange



## Collare ovale D

Roll flange



# Bottom cup

The bottom cup is only one of the components that contribute to the realization of the filter support.

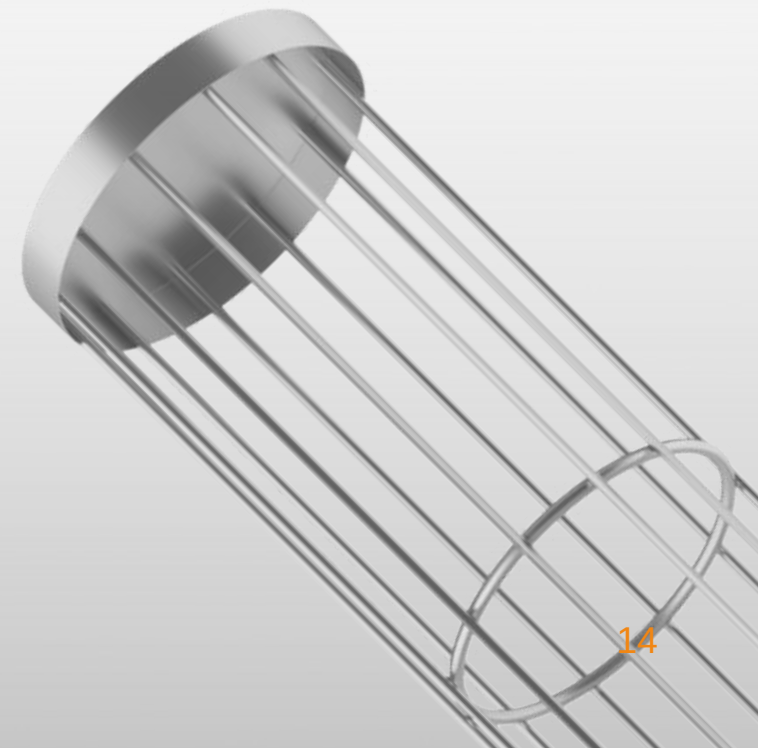
The bottom cup is used to make the lower part of the cage.

The longitudinal wires are welded inside the bottom pan to protect the filter bag and avoid premature failure.

The bottoms cup are produced in different materials:

- Raw steel,
- Pre-galvanized steel,
- Stainless steel.

The fastening of the bottom cup to the cage takes place in three different ways: riveted, welded and clamped, while for the oval cage the bottom pan is welded.



# Bottom cup

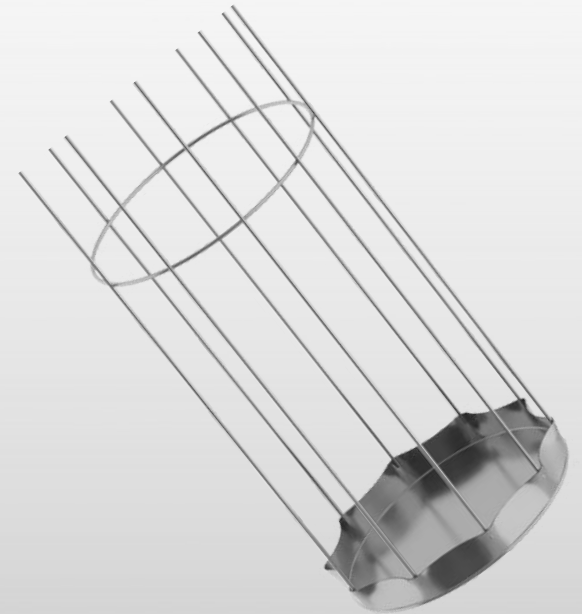
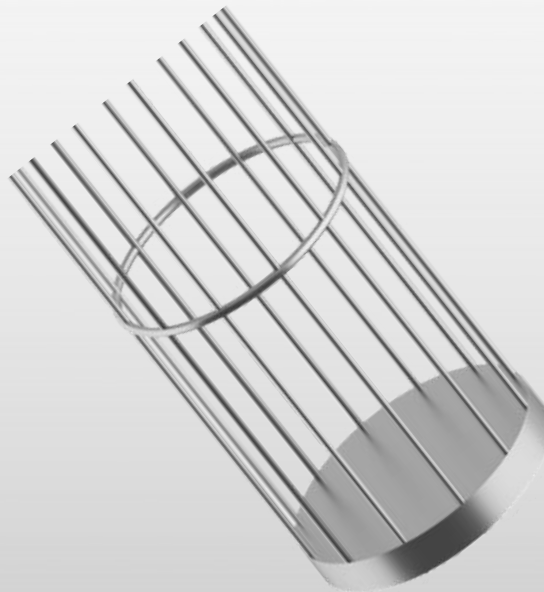
Snap cup



Welded



Crimped



# Venturi

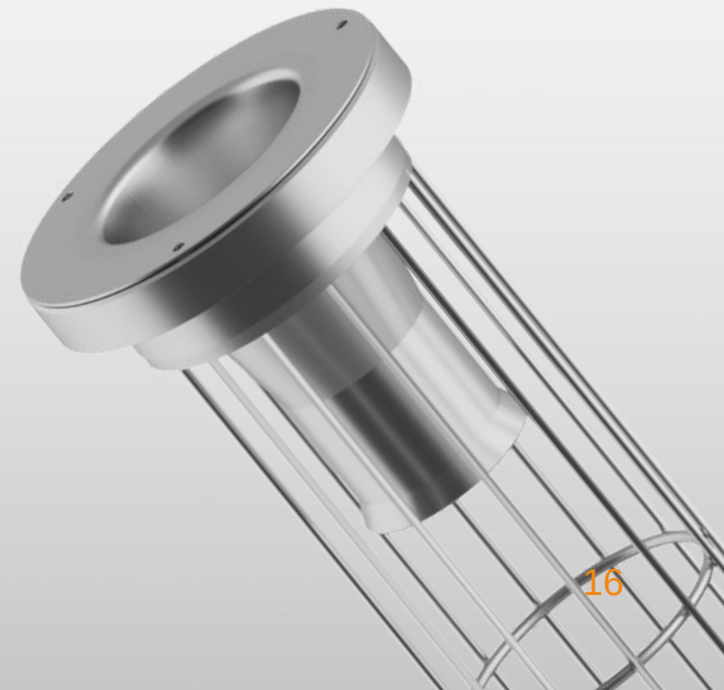
The venturi (or diffuser) is an integral component of some pulse jet collectors. It has the function of accelerating the compressed air in the centre of the cage. This device is used in filtration systems to optimize the cleaning of bag filters.

The venturi is turned and moulded and can be used inside or outside the cage. They can be welded, riveted, clinched or superimposed on the cage according to the needs of the dedusting system.

We are also able to offer tailor-made venturi and to guarantee customers the best solution in different thicknesses and at the best price.

Venturi are produced in different materials:

- Raw steel,
- Pre-galvanized steel,
- Stainless steel.
- Aluminium
- ABS



# Venturi

Venturi 1



Venturi 2



Venturi 3



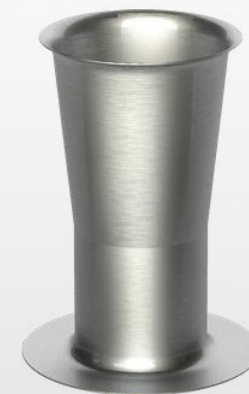
Venturi 4



Venturi 5



Venturi 6



Venturi 7



Venturi 8

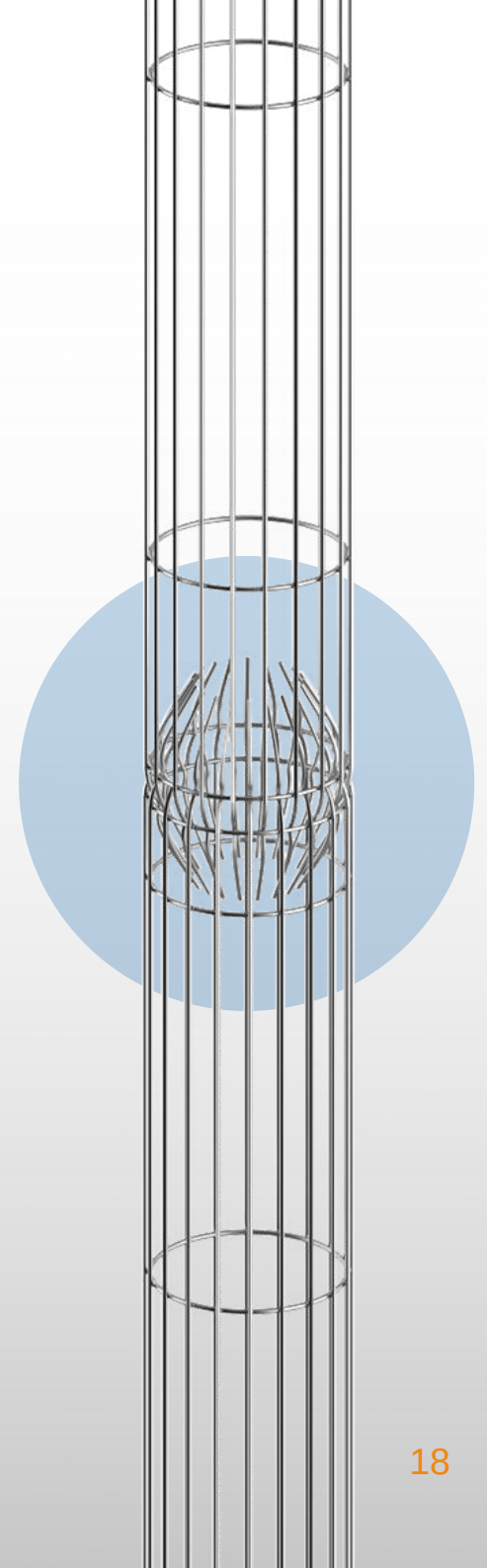


# Split cages

CleanAir Europe offers a wide range of multi-part cages equipped with high-quality joints for all industries and applications.

The cages can be made in one piece or several parts according to the specific needs of the customer, reaching a length of up to 12 meters.

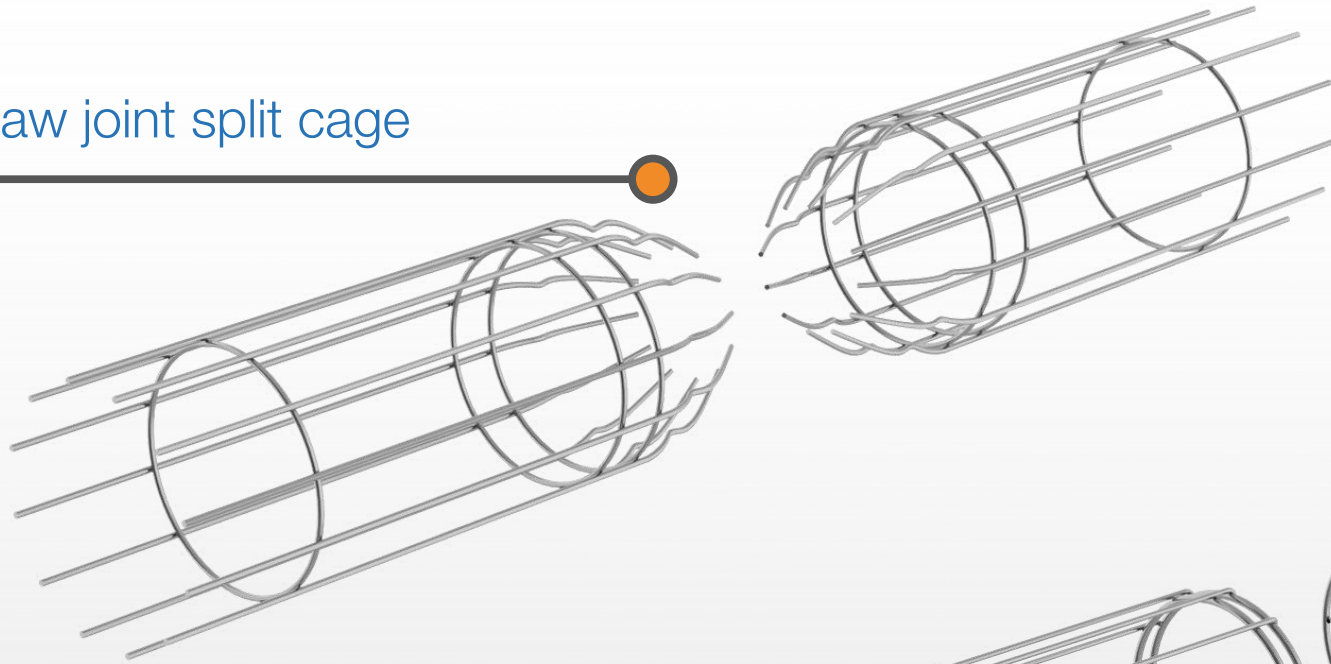
CleanAir produces round cages with 6 different types of joints.



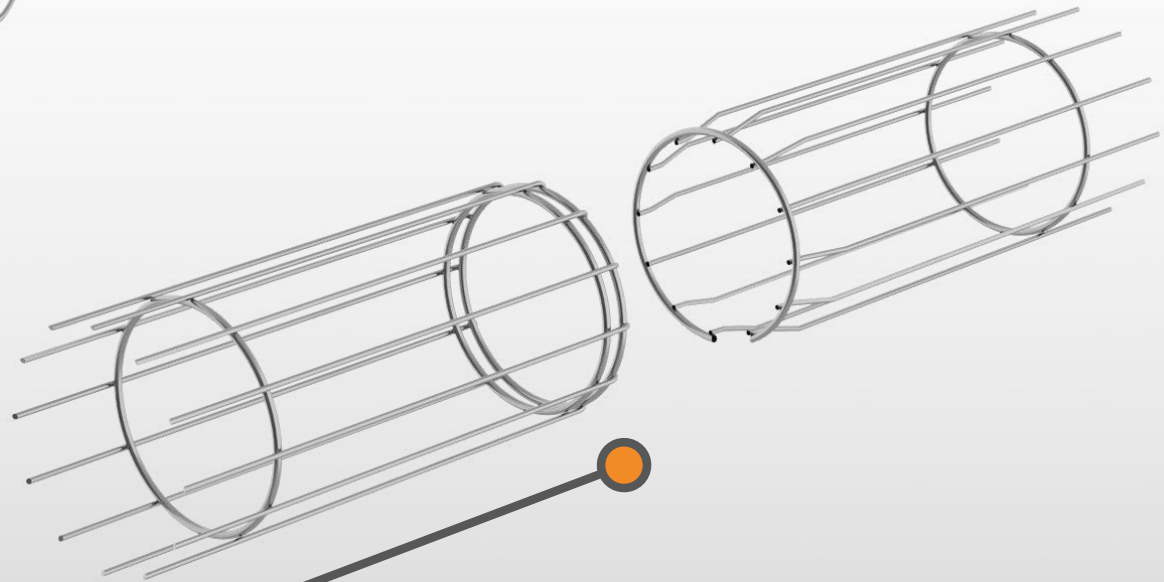


# Junctions

Claw joint split cage

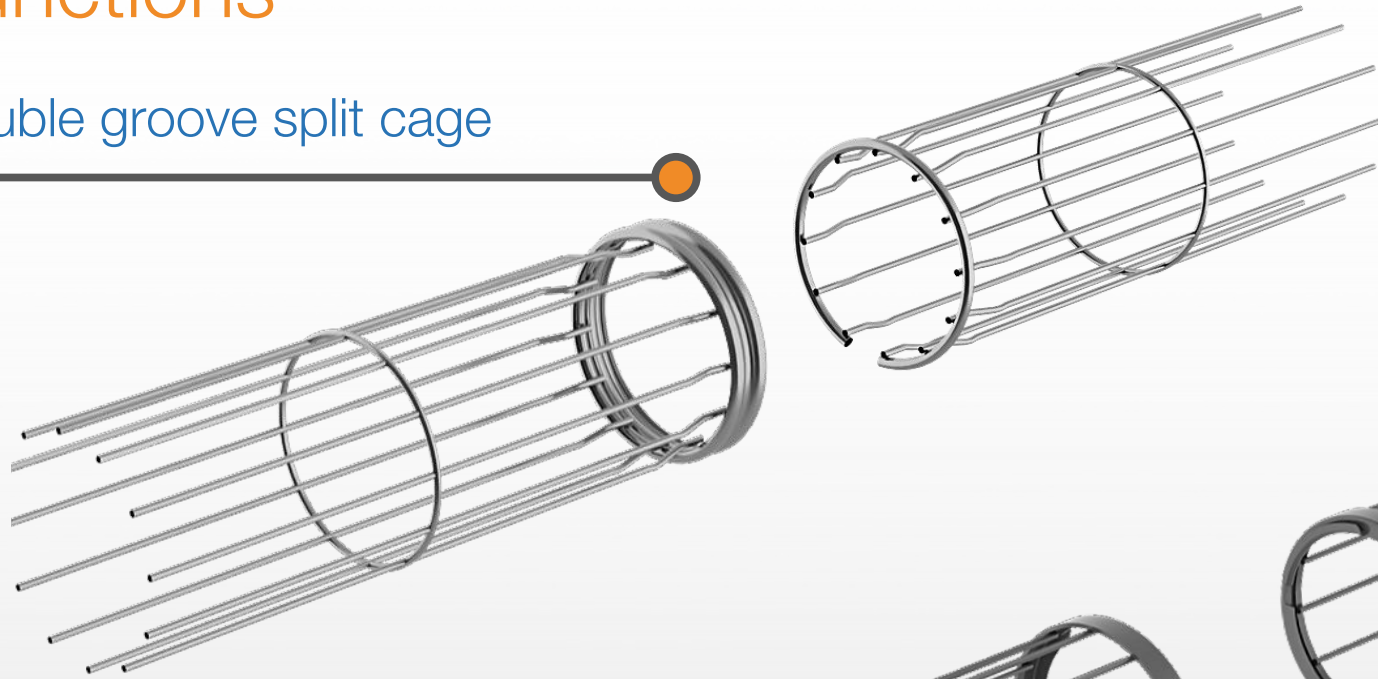


Double ring split cage



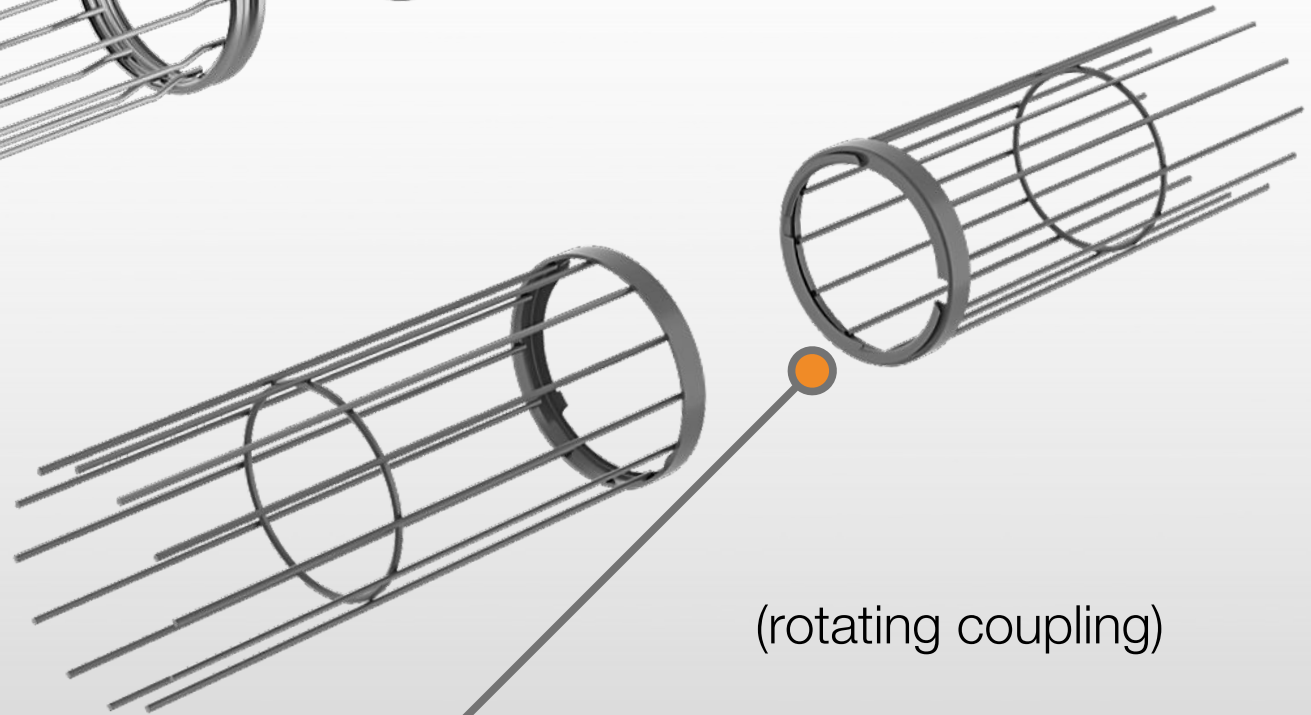
# Junctions

Double groove split cage



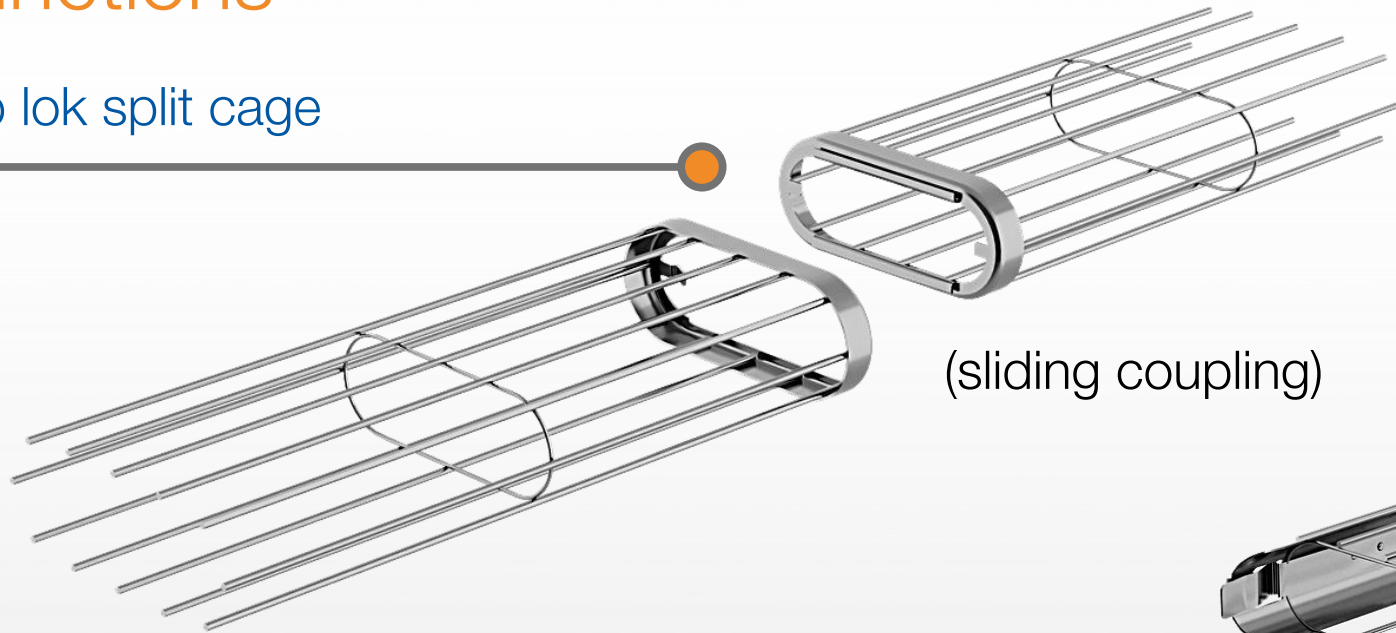
(rotating coupling)

Twist lok split cage



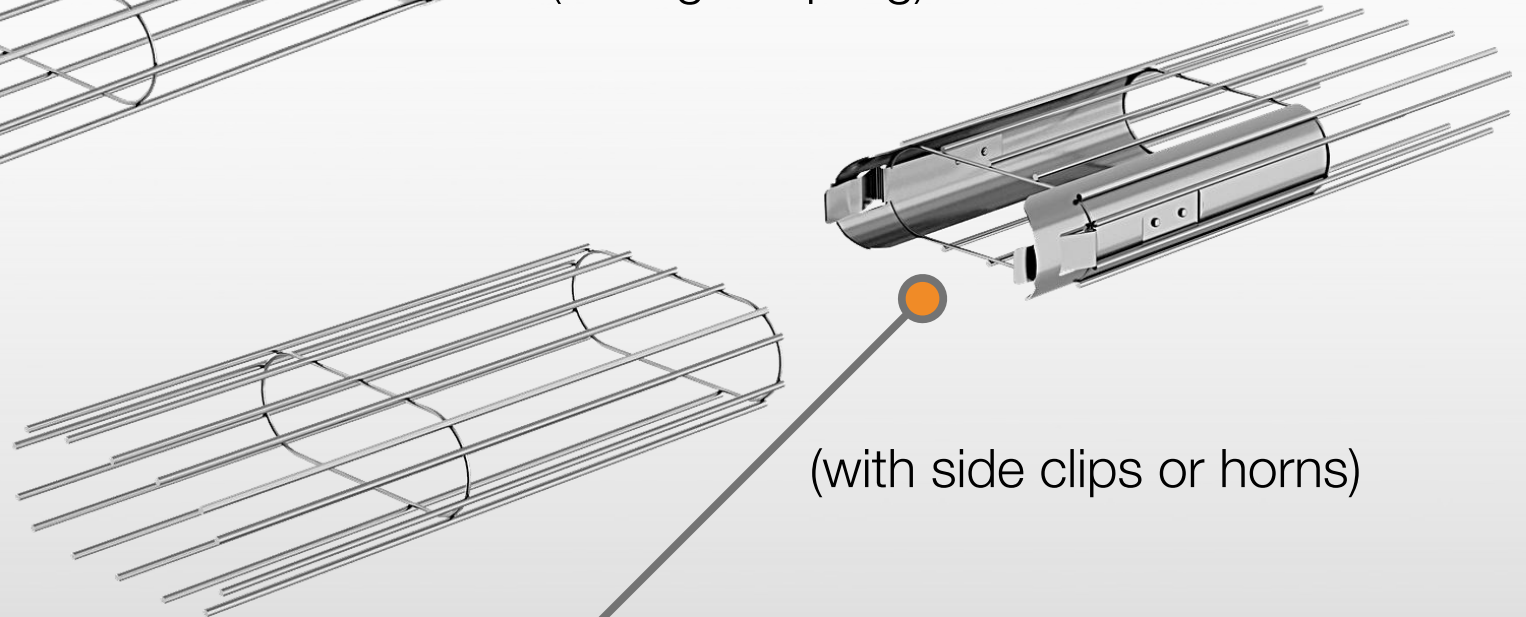
# Junctions

Slip lok split cage



(sliding coupling)

Bayonet split cage



(with side clips or horns)





## Finishes available

To make an effective choice of the surface protection treatments to which the filter cage is subjected, certain parameters must be checked, such as the initial conditions in which the metal is before applying the protection, and the characteristics of the environment.

CleanAir Europe performs the following types of finishes on its production cages:

### [EcoHpc Plus coating treatment \(Cataphoresis\)](#)

Our antistatic process in EcoHPC Plus, for example, is a surface treatment capable of giving the filter cage a corrosion resistance never reached before with high temperatures of use. CleanAir Europe's experience in this type of process derives from having been the first company in the sector to introduce electroplating treatment as early as the 1980s.

[Pickling](#)

[Passivation](#)

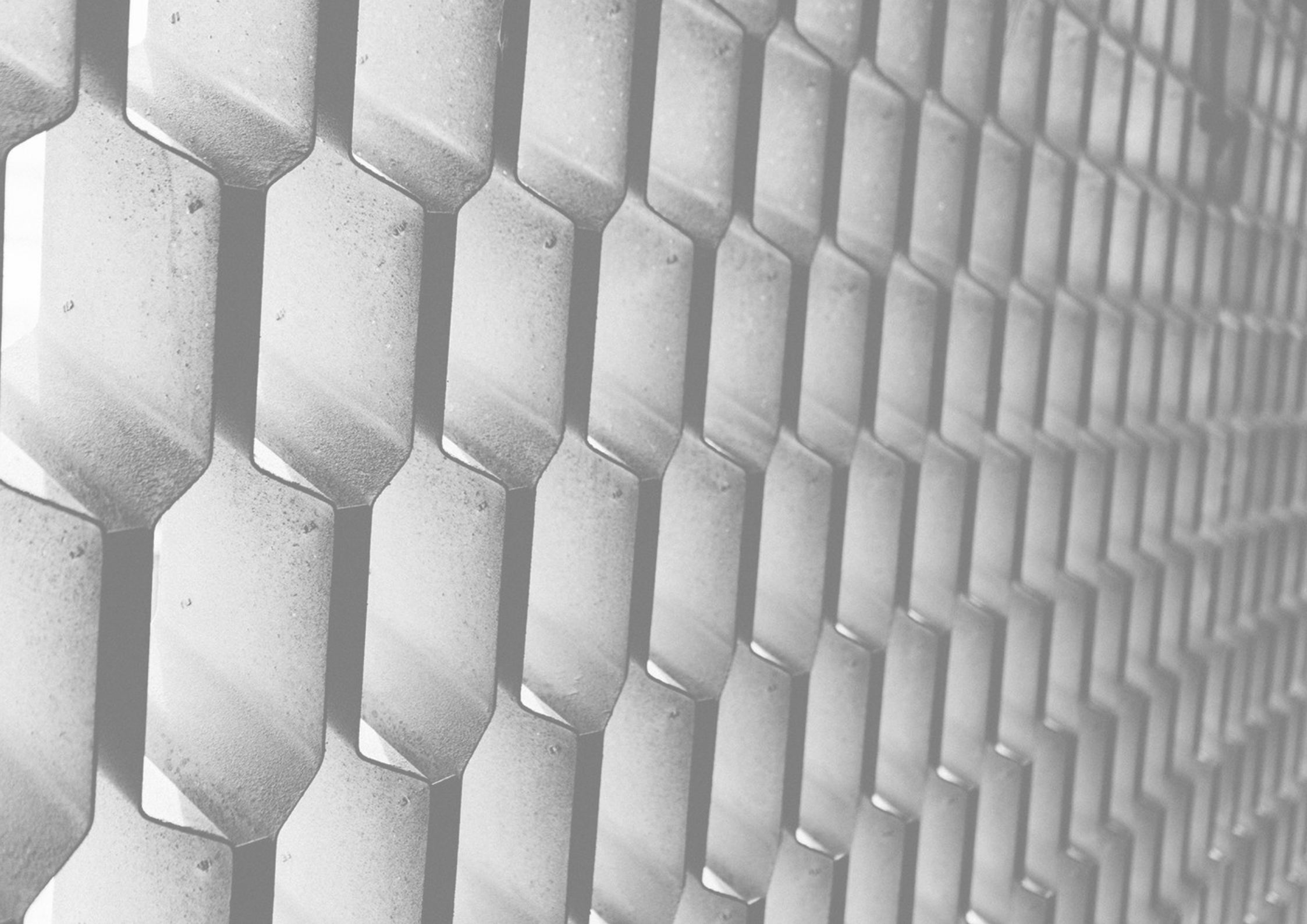
[Galvanizing](#)



## Used materials

The materials used by CleanAir Europe must meet the different filtration requirements based on the presence of the various particulates.

- Raw steel S235JR
- Pre-galvanized steel
- AISI 304L stainless steel
- AISI 316L stainless steel
- Aluminium



Over 8.2 million cages  
sold throughout the  
world



Get your  
personalized offer

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Visit our website available in 5 languages

[www.cleanairworld.it](http://www.cleanairworld.it)

# Our presence in the World

## We are specialists in air filtration.

With millions of cages installed around the world, and years of experience, we can confidently say that we have the skills and expertise to deliver products with high standards. With our dedicated team, we efficiently manage projects from the contract, to design, to construction and delivery, anywhere in the world.



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