

# Compact. Powerful. A Work of Art.

**Ekon®**

THE  
FUTURE  
HAS ZERO  
EMISSIONS

 **kappa**



**Big Revolutions  
are Rare.**







And most start with a  
small revolution.

**T O D A Y**

is one of  
those  
days

 kappa





QUESTION:

**How can higher air quality be achieved with a smaller filter unit while being more efficient?**

ANSWER:

**With Kappa Ekon<sup>®</sup>.  
The modular dedusting system that requires only half the space.**



# The Kappa Ekon<sup>®</sup> reduces the residual dust content by half. And consumes only two-thirds of the energy.

## A big step for the industry. A small unit from Kappa.

A completely new and revolutionary industrial dedusting system for the separation of coarse, fine and abrasive dusts: The intelligent design of the Kappa Ekon enables efficient filtration of large volume flows as required for the extraction of diffuse emissions and in-hall air cleaning, for example.

**Kappa Ekon<sup>®</sup>:**  
**Compact and intelligent.**

### **Half the footprint:**

The Kappa Ekon reduces the floor space required by half.

### **Half the residual dust content:**

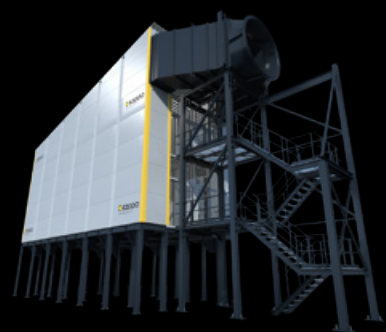
The Kappa Ekon reduces the residual dust content by half.

### **A third of the energy saved:**

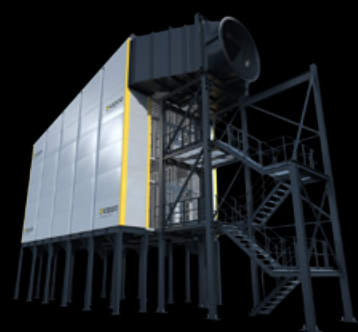
The Kappa Ekon reduces energy consumption by a third.

The information provided compares the data from a Kappa Ekon to that of a baghouse filter with a filter bag length of 8 m and corresponds to the actual results obtained from two large-scale projects. The actual values are unique for each system.

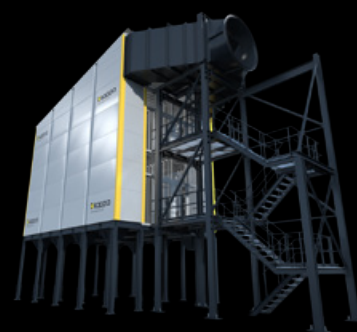




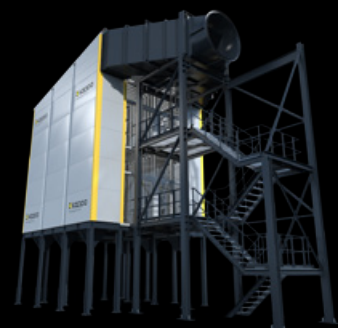
D 610



D 510



D 410



D 310



S 610



S 510



S 410



S 310



S 210



S 110



S 108



S 106

Inspiration: Lego  
Result: brilliance

30.000 to  
over 1.000.000 m<sup>3</sup>  
per hour

**Kappa Ekon®**  
**is designed modular.**

On site, the individual components are put together like Lego to construct the unit.  
Through this, we reduce the installation work and eliminate the risk of subsequent malfunctions due to leakages.

The ingenious modular system allows the creation of units of any size.  
The Kappa Ekon can be implemented as single line or double line.  
This ensures flow rates from 30,000 to over one million cubic meters per hour that are dedusted economically,  
energy efficient and with maximum separation.



# 1/2 footprint 1/2 residual dust content 1/3 energy saved

## Half the footprint

The innovative Kappa Economy filter elements are at the core of the Kappa Ekon dedusting system.

These provide a very large filter area for such a small footprint. So a Kappa Economy filter element can replace 10 filter bags of a standard baghouse filter with a filter bag length of 8 meters. The intelligent modular design consistently follows the structure of a large-scale dedusting plant and integrates the row gas distribution and clean gas chamber into the overall concept.

This design also allows both small and large units to be constructed.

The amount of space required can be reduced by half.<sup>1)</sup>

## Half the residual dust content

For the filtration of coarse and fine dusts, a pre-separation chamber is integrated within every filter tower.

Coarse particles thus pass directly into the dust funnel.

The fine particles are filtered on the surface of the Kappa Economy filter elements. They are made of a special, high-quality plastic fabric.

During the high-tech manufacturing process, the filter material is impregnated with specific nano-fibres. With this special nano-fibre surface structure, the filter elements are suited to the surface filtration of industrial dust particulates, and deliver excellent results with fine dust and smoke filtration.

The result is that residual dust is reduced by half.<sup>1)</sup>

## A third of the energy saved

The Kappa Ekon can deliver this due to careful aerodynamic calculations and simulations.

Based on these results, the entire filter system flow was optimised, and resistance due to turbulent flows and vortices was eliminated.

The row gas distribution and clean gas chamber are integrated into calculations and simulations. Coanda elements ensure uniform and flow-optimised charging of the individual filter towers. The Kappa Economy filter elements have improved cleanability and also reduce the resistance of the overall system.

The result of all optimization measures is a substantial overall reduction of the resistance of the system.

It is this system resistance that has the greatest impact on the energy consumption of a dedusting unit.

The energy cost of running the fan can amount to up to 85% of the total cost.

Overall, the Kappa Ekon ensures a reduction of energy consumption by a third.<sup>1)</sup>

<sup>1)</sup> The information provided compares the data from a Kappa Ekon to that of a baghouse filter with a filter bag length of 8 m and corresponds to the actual results obtained from two large-scale projects. The actual values are unique for each system







 kappa Ekon®

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